

Railtalk Magazine Xtra

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Submissions

Should you fancy getting involved with the magazine, then please send any photographs, videos or articles, to us at the below email address:

entries@railtalk.net

Please include a detailed description and credits of the author.

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From the Editor...

The start of a new year and a new look for Railtalk Magazine Xtra. We start January 2015 with Issue 100, and who could have believed that nearly 9 years have passed since we started the original Railtalk magazine. Both Andy and myself have been amazed how well it has been received all over the world, and it can only be said that this is all thanks to you the readers and especially all of you who have contributed over the years.

As we enter 2015 there are plenty of 'must go to' places on the agenda for this year. Surely this will be the last year for those Czech Class 749's, with only a few examples now still in traffic. 2015 should also see the number of DB Class 218s in decline along with the SNCF Class 67XXX's working out of Strasbourg. So bad news for diesel lovers. The major news this month though, and I know that it will probably affect quite a few locos, is the purchase of AWT by PKP Cargo. AWT will be remembered for those lovely orange liveried 'Goggles' in Czech.....Will they be kept and if so, will a coat of blue PKP Cargo livery be forthcoming.?

Anyway 'till next month and as always keep sending in the photos. If you are going on holiday please don't forget to take the camera.

David

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: Brian Battersby, BVT, Mark Bearton, Mark Bennett, FrontCompVids, Paul Godding, Richard Hargreaves, Dave Harris, Brian Hewertson, Keith Hookham, Colin Irwin, Anton Kendall, Michael Lynam, Steve Madden, David Mead, Ken Mumford, Chris Perkins, Mark Pichowicz, Railwaymedia, Laurence Sly, Steamsounds, Alex Thorkildsen, and Tim Ward.

Front Cover: When delivered to BoxXpress, Vectron Class 193.840 was in full livery, but it is now in this plain livery. Seen heading a container service southbound past Himmelstadt on September 26th. Chris Perkins

This Page: The only member of Class ST46,



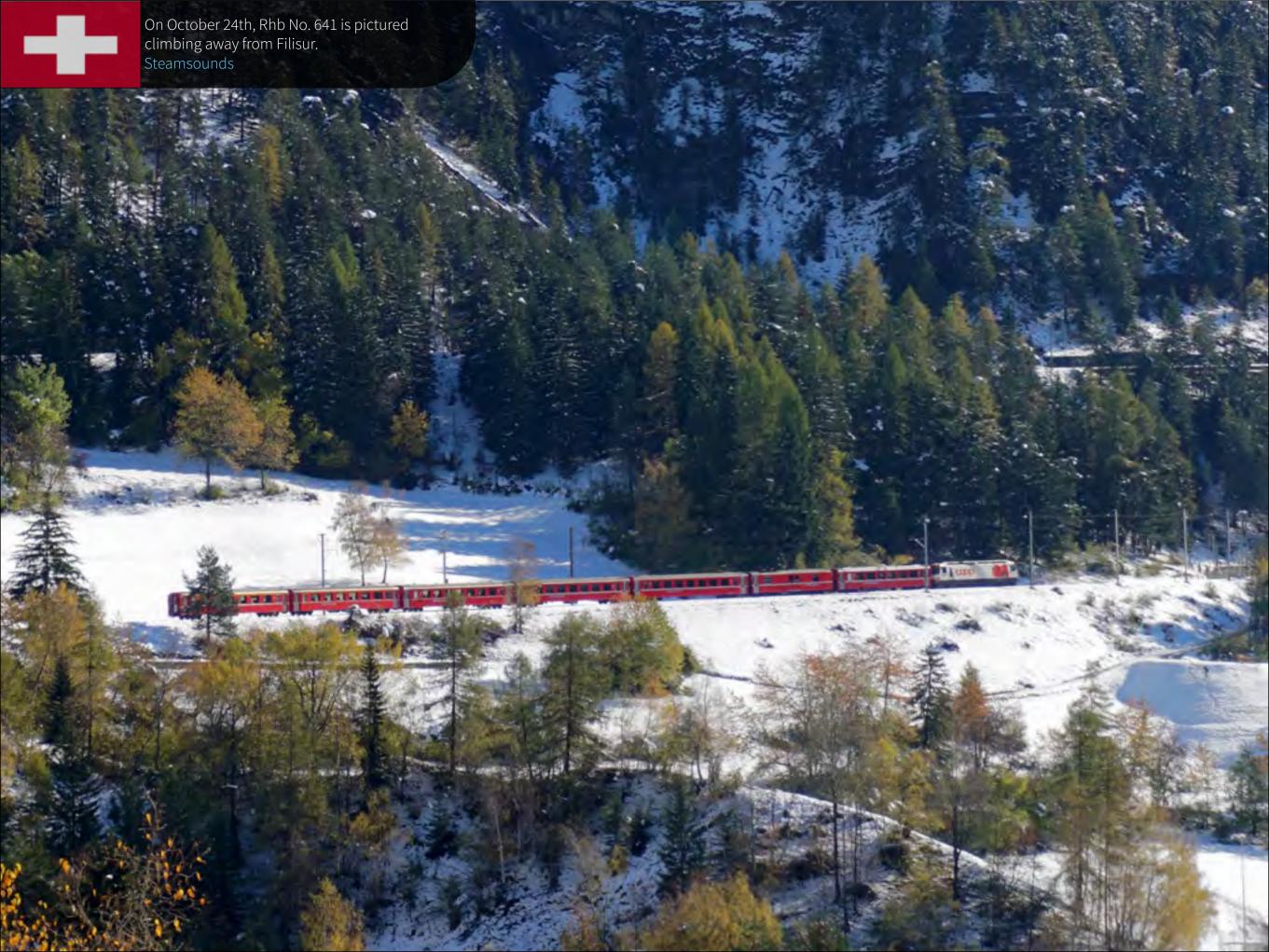
Pictures Fortescue Metals Group (FMG) operate a 280km railway in the Pilbara region of Western Australia to haul iron ore from their Cloudbreak mine to the port at Port Hedland. They operate a fleet of GE Dash 9-44CW's, EMD SD70Ace's and EMD SD90's hauling 33,000 tonne trains. Here SD70s Nos. 720 and 714 are seen hauling a loaded train through the double track section at Forrest on November 26th. Mark Bennett



















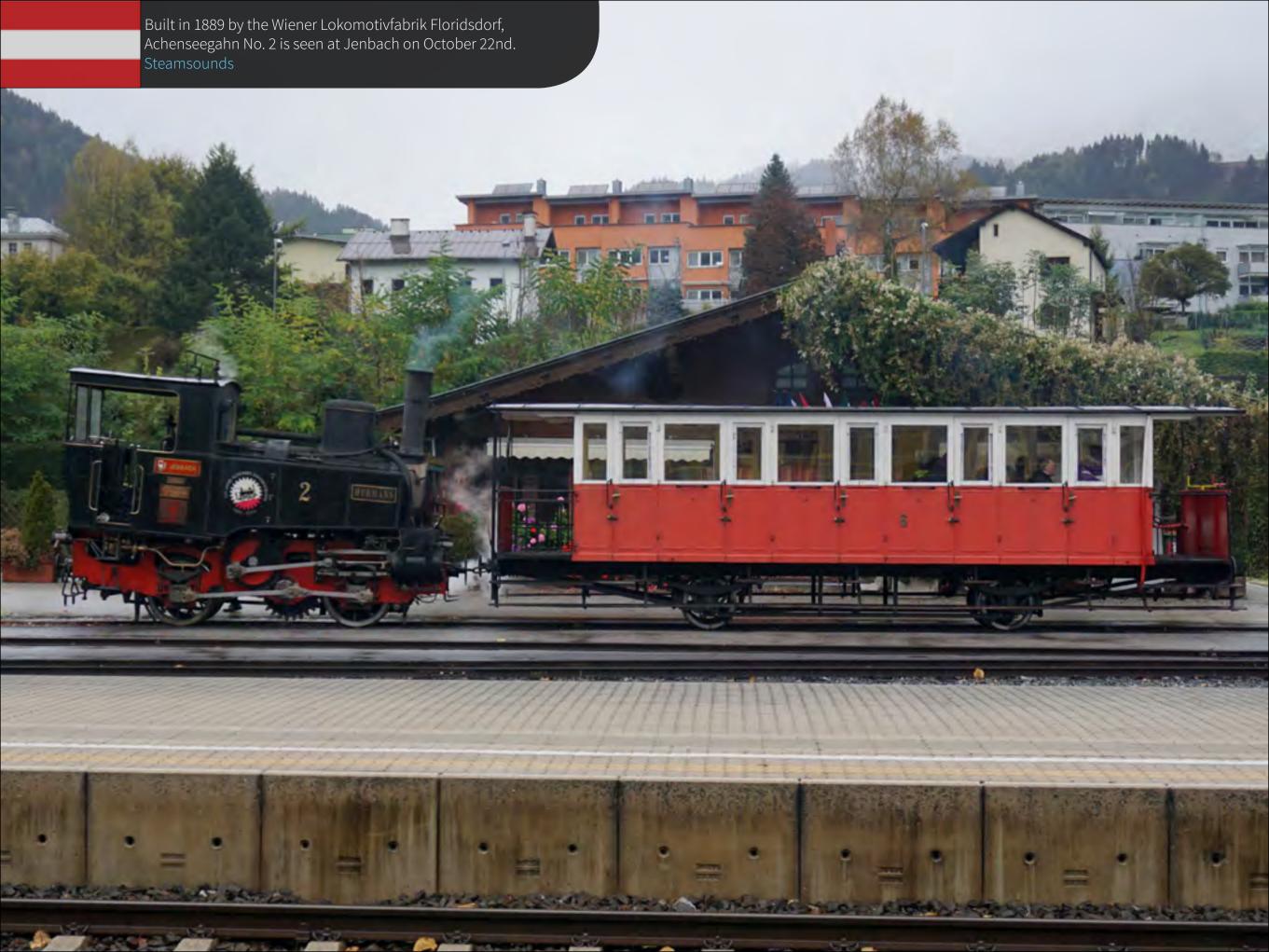


























































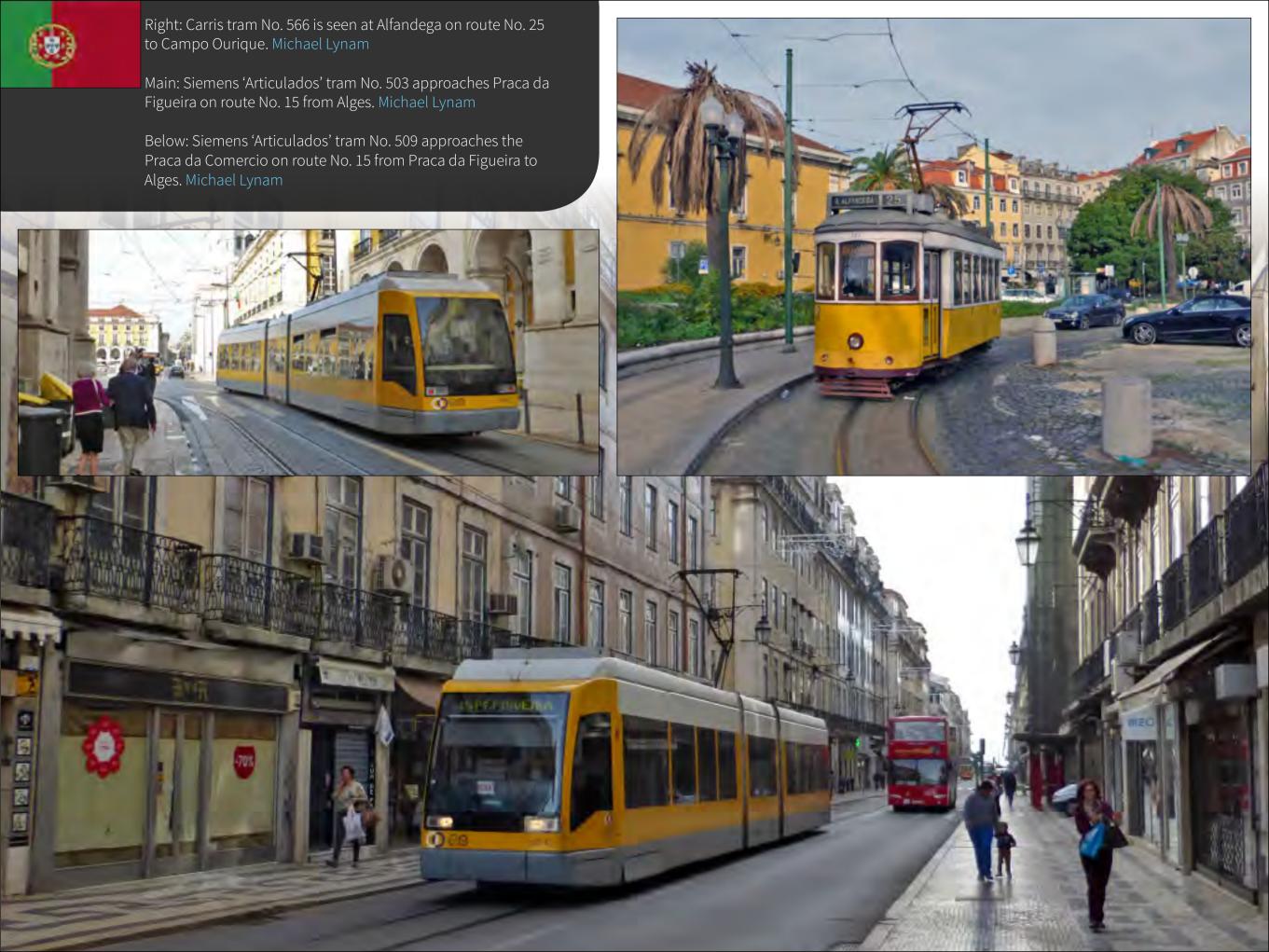




























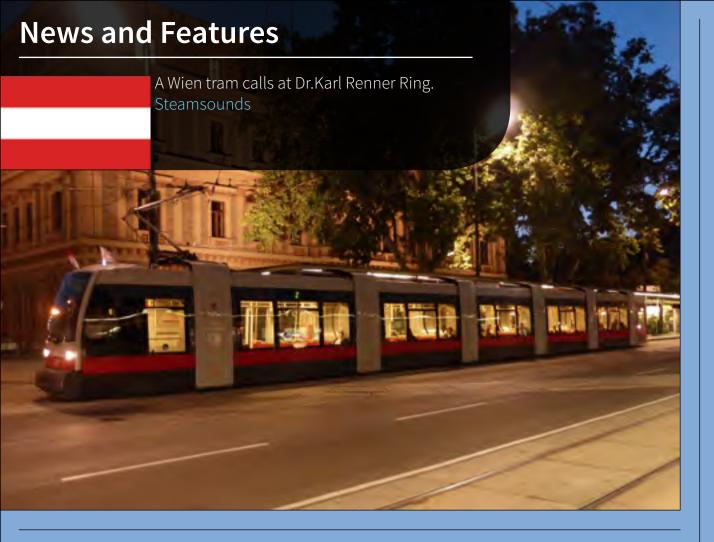












CAF SIGNS THE RECENTLY AWARDED CONTRACT FOR THE SUPPLY OF COMMUTER UNITS IN THE NETHERLANDS

The contract amount is over €500M with extension options for additional trains. This project is the largest contract secured by CAF in Europe both as regards the number of cars and the contractual amount, and one of the largest in the history of the Company.

NS is the Dutch government owned Operator and one of the largest railway companies in the European continent. This project embodies the success of the Civity platform developed by CAF.

The trains will run all across Holland in the so called "Sprinter" services, and feature all the latest technical developments for energy saving, environmental friendliness, safety features and ease of access, being fully prepared for Persons with Reduced Mobility. It is estimated that the first trains will start to run on Dutch tracks in 2018.

Alstom awarded 2 contracts for the maintenance of 82 regional trains in Sweden



Alstom has been awarded a 9-year maintenance contract by SJ for Västtrafik commuter and regional trains, starting in December, and a 10-year maintenance contract by Arriva for Östgöta Trafiken commuter trains to start from June 2015.

The Västtrafik fleet consists of a total of 63 Electrical Multiple Units (EMU) trains, 22 of which are Coradia Nordic trains manufactured by Alstom . Maintenance will be conducted in two depots in Gothenburg. The trains will circulate in the Gothenburg region. The Östgöta Trafik fleet comprises 19 EMUs, where of 13 Coradia Nordic made by Alstom. Maintenance will be conducted at a depot in Boxholm.

The trains will operate in the regions of Norrköping – Mjölby and Motala – Tranås. Each fleet will cover approximately 6 million kilometres per year.

"We are pleased that SJ and Arriva have selected Alstom to contribute to delivering

safe, reliable and efficient railway services in Sweden.

Since 2011, Alstom has successfully grown its presence on the Swedish maintenance market and these new contracts are a clear demonstration of Alstom's leadership in this area," said Per Öster, Management Director of Alstom Transport in Sweden.

With these new contracts, the number of trains maintained by Alstom in Sweden is 219. Alstom is a leader in train maintenance with over 20 years of experience and more than 200 clients worldwide.

Moreover, 20% of the trains maintained by Alstom were built by other manufacturers.

Alstom's regional train for Trenitalia, Jazz, has been delivered to the Abruzzo region

On December 17th, Alstom delivered the new train Jazz to the Abruzzo region, at the Pescara railway station. This train is part of the 70 regional trains ordered by Trenitalia to Alstom in November Its concentrated traction system with two motor bogies optimises the electrical braking capability of the train allowing energy consumption and brake wear to be reduced.



2012, among which four are intended for Abruzzo region. All the trains will be delivered by the end of 2015.

The delivery ceremony took place in the presence of Pierre- Louis Bertina, Alstom Transport Italy Managing Director, Vincenzo Soprano, Trenitalia CEO and Luciano D'Alfonso, President of the Abruzzo region.

Jazz is the latest train coming from the Alstom's Coradia Meridian range which is designed for regional operators in Southern Europe, mainly Italy. It is an EMU (Electric Multiple Unit) type train that can run at a maximum speed of 160 km/h.

It is an environmentally friendly train with a 95% rate of recyclability.

Coradia Meridian regional trains are designed and manufactured in Italy.
Project development, most of the manufacturing as well as the certification, are done in Savigliano site in Cuneo.

The plant in Sesto San Giovanni (Milan) is responsible for the design and manufacturing traction systems and auxiliary switchers. Trainborne signalling systems are delivered by the Bologna site.



CAF WINS TRAM PROJECT FOR THE CITY OF ST. ETIENNE, FRANCE

The amount of the contract is €42m, and the first vehicles are scheduled for delivery in the spring of 2016. The trams will be 100% low floor with a total length of 33 metres across 5 modules. These vehicles belong to the Urbos Tram family but are adapted to the special characteristics of the Saint-Etienne network: metric gauge track and a 2.15m wide carbody. Moreover, the new units boast new features compared to the units currently in operation, as they are bi-directional and have doors on the ends for added operating flexibility. The new vehicles combine modern aesthetics with state-of-the-art equipment and maximum accessibility without comprising comfort, performance andease of operation and maintenance. They provide sound evidence of CAF's capacity to cater for the specific requirements of each customer.

This project builds on the latest projects of the Company in France, including highlights like the supply of trams for the city of Nantes and Besançon, already in revenue service, as well as the recently contract awarded to CAF for the rehabilitation of 35 Lyon Metro trains, for an amount close to 25 million euros. Thus, the long list of countries where CAF supplies light railway vehicle projects keeps growing with Germany, Brazil, United States, Australia, Sweden and Taiwan.

PKP CARGO's new container flat wagons, constantly on the go

Duisburg, Hamburg, Pardubice – these are only some of the destinations of PKP CARGO's new container flat wagons. At the end of 2013, the company ordered 330 wagons of 80 feet in length. All of them will have been delivered by early 2015. Those that have already reached PKP CARGO are constantly on the go, and the longest routes covered by them are over one thousand kilometres long.

The new flat wagons are mainly used to transport containers from the Polish ports on the Baltic Sea. The containers transported on these wagons come to Poland from ports all over the world. Later, they go their separate ways in all directions across the country. Some of them are transported further abroad, e.g. to the Czech Republic and Germany. The longest connections covered by the new wagons are nearly 1,300 kilometres long.

"Intermodal operations are a huge opportunity for the rail, and this is why we have been actively investing in this sector, both in rolling stock and reloading infrastructure," says Jacek Neska, Member of the Management Board in charge of Commercial Operations at PKP CARGO. "The rail is dedicated to the transport, especially long-distance transport, of containers. It is a proven, reliable and predictable means of transport. Considering that the investment in Polish railway lines will result in increased commercial speed, intermodal will still be developing in a dynamic way, and PKP CARGO already is the unquestionable leader of this market," adds Jacek Neska. The new flat wagons are 80-feet long and are the most universal container wagons. They

are the most popular with our clients,

because they can carry different types of

containers in several configurations: two 40-feet containers; one 40-feet container

and two 20-feet containers; or four 20-feet containers. The wagons of this type also enable the transport of more containers on one train. Due to a high demand for these new wagons, they are constantly on the move. To date, PKP CARGO has received 240 of the 330 ordered flat wagons. All of them will be delivered within next weeks.

Apart from PKP CARGO, also CARGOSPED – a logistic operator from PKP CARGO Group – is engaged in intermodal operations.

The company offers comprehensive door-to-door services. CARGOSPED plans and organises complete routing from consignor to consignee.

PKP CARGO's share in intermodal operations in Poland

PKP CARGO is the leader of intermodal operations in Poland. After the third quarter, PKP CARGO had a nearly 48% share in the intermodal rail operations in Poland by mass and a 52% share in terms of rail traffic. PKP CARGO is constantly increasing its possibilities – apart from the purchase of new container flat wagons, last year in December the company put into service a modern intermodal terminal in Poznań-Franowo. Thanks to its rolling stock, know-how and broad experience, the company offers its clients comprehensive services in the sector of intermodal operations. The company has its own infrastructure permitting the storage, warehousing and reloading of goods at container yards and terminals. The total storage capacity of PKP CARGO's terminals is ca. 11,500 TEU, and the maximum technical reloading capacity is nearly 890,000 TEU per year.

Citadis tram enters into service in the Ile-de-France region

On December 16th at the Saint-Denis Porte de Paris station, the Alstom Citadis tram entered service on line 8 of the Ile-de-France tram network, linking Saint-Denis with Epinay-sur-Seine and Villetaneuse. Attending the event were Jean-Paul Huchon, President of STIF and of the Ile-de-France region, Pierre Mongin, CEO of RATP and Ana Giros, Managing Director of Alstom Transport France. This new service is a result of the contract between RATP and Alstom, signed in 2010, for the supply of 19 trams for line T72, with an option on 20 trams for line T8.

This option was exercised in April 2013. The trams for the Ile-de-France region are financed by STIF. The line serves 17 stations and covers a distance of more than 8 kilometres. It improves transport services to the north-western Seine-Saint-Denis area and provides easier access to centres of learning and business parks. "Since the Citadis is modular, Alstom has been able to offer RATP and STIF a product with a personalised design, both for the exterior and the interior of the trams. These integrate our latest improvements in terms of accessibility - wider seats and door control buttons

more suited to people with reduced mobility," said Ana Giros, Managing Director of Alstom Transport France. At 32 metres long and 2.4 metres wide, the Citadis T8 trams can each hold around 200 passengers, the equivalent of more than 3 bus loads. Citadis offers optimum on-board comfort, with low flooring throughout, air conditioning, CCTV, a passenger counting system and audio and visual passenger information. Being up to 90% recyclable, Citadis also helps protect the environment. The operator of the line, RATP, will have the benefit of tried, tested and proven equipment, the performance of which has become a benchmark in the sector. To date, orders have been placed for more than 1,800 Citadis trams, by 47 towns and cities worldwide.

Just like the 19 trams on line T7 of the tram network, which have been in service since November 2013, the T8 trams have been made in Alstom factories in France: La Rochelle for the design and assembly, Ornans for the engines, Le Creusot for the bogies, Tarbes for the traction chain elements and Villeurbanne for the embedded electronics.



PKP CARGO buys AWT, one of the biggest private rail freight operators in Europe, for over PLN 445m

On December 30th, PKP CARGO signed an agreement to buy an 80% stake in Advanced World Transport, the second largest rail freight operator in the Czech Republic active in Central and Southern Europe. The transaction is worth



EUR 103.2m (PLN 445m). The acquisition will be finalised after authorisations are obtained from Polish, Czech, German and Slovak antitrust authorities. The purchase of AWT is the first ever foreign acquisition of this type made by a PKP Group company. The acquisition of one of the biggest private rail operators in Europe will strengthen PKP CARGO's position in Central and Southern Europe, in particular boosting its capacity to service the north-south transportation corridor.

The sellers of the 80% interest in AWT are Mr Zdenek Bakala and his The Bakala Trust. The remaining 20% will still be held by a Czech company Minezit SE, with which PKP CARGO has signed a shareholders agreement that regulates in detail mutual relations between the shareholders as well as how and when PKP CARGO is to potentially purchase the remaining shares in AWT. "This is a historic moment for PKP CARGO and the entire PKP Group, and at the same time one of the largest transactions involving the purchase of a foreign business by a Polish company in recent years. The acquisition of AWT will cause our share in the Czech market to grow by leaps and bounds and will significantly strengthen the strategic position of PKP CARGO in Central Europe. The Czech market is of key importance for us, because of the numerous links with the Silesian region. The Czech Republic is also the gate to Southern Europe, towards the Adriatic Sea. Our presence in this country is a perfect opportunity to extend our train routes. Considering AWT's growth prospects in the near future, the participation of a Czech partner as AWT's shareholder is also important for us," says Adam Purwin, President of PKP CARGO's Management Board.

The agreement, which was signed on Tuesday, December 30th, contains conditions precedent whereby its execution is suspended until authorisation of the change of control is obtained from financial institutions providing funding to AWT, from antitrust authorities in Poland, the Czech Republic, Germany

and Slovakia as well as until the transfer of one share certificate issued by Advanced World Transport a.s. is remedied. The agreement may be terminated if all the conditions precedent are not satisfied (or waived) before a long stop date set out in the agreement. "The PKP CARGO group is one of the biggest players on the European rail freight transport market. AWT will gain a strong strategic partner with both firms sharing not only linked rail networks but also shipping terminals that are advantageously positioned on continental transport routes. PKP CARGO is the company that will enable AWT to not only enjoy significant trade synergies but also to progress towards further development in the Central and Eastern Europe region," says Kamil Čermák, Chair of the AWT Board and BMM Managing Partner, while appraising the transaction.

Czech Republic – the gate to the south of Europe

The Czech Republic is the ninth biggest rail freight market in Europe. It is there that major European transportation routes intersect. PKP CARGO's strong presence on this market will provide an opportunity to attract new customers and ensure better handling of freight operations into the Czech Republic and beyond, to the south of Europe. "We are convinced that there is a possibility to further increase our share in the Czech market and we recognise the enormous potential of the Ostrava-Paskov terminal, whose strategic location makes it highly suitable to serve as a hub for ports in Hamburg and Gdańsk," says Jacek Neska, Member of PKP CARGO's Management Board responsible for commercial affairs.

The terminal in Paskov, which is situated only 25 km away from the Polish border and 60 km away from the Slovak border, fits in perfectly within the network of strategically located handling sites of PKP CARGO in Poland.

Rolling stock synergies

The acquisition of AWT generates numerous synergies with regard to the operation of rolling stock. AWT has approximately 160 locomotives, including 10 multi-system engines, and five thousand freight wagons. AWT leases a third of the wagons it uses. PKP CARGO's sizeable pool of rolling stock and technical will make it possible to considerably reduce the costs incurred by AWT to lease and service its rolling stock, by using the technical

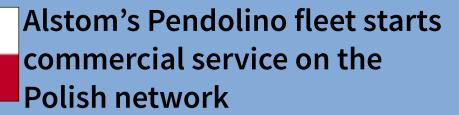
facilities of the Polish operator. For PKP CARGO this means an even better utilisation of its rolling stock and its service workshops. "PKP CARGO will be able to replace AWT's rolling stock with its own wagons. We will also be able to use multisystem locomotives. What is also very important is that our technical facilities will be more effectively used. Operationally, we are fully ready to handle increased traffic generated due to the acquisition of a nearly 10% share in the Czech market," says Wojciech Derda, Member of PKP CARGO's Management Board responsible for operations.

Attractive price

PKP CARGO will finance the transaction, which is worth EUR 103.2m, with its own funds. "Looking at the parameters of this transaction, EBITDA and the book value, we have secured a very attractive price, commensurate with the current value of the company and its potential. At the same time, PKP CARGO's financial situation allows us to easily service the transaction and does not restrict our development plans for next years in any way," says Łukasz Hadyś, Member of PKP CARGO's Management Board responsible for financial affairs.

About AWT

AWT Group is one of the biggest private rail freight operators in Europe and the second biggest rail operator in the Czech Republic, with a nearly 10% market share in 2013 as measured by transport performance. In 2013, AWT Group transported 12 million tonnes of goods, delivered 1.54m tkm and generated revenues amounting to EUR 282m. For five years, the company has consistently been reporting a growth in EBITDA margin profitability. AWT Group provides services in the Czech Republic, Slovakia, Slovenia, Hungary, Germany, Romania, Bulgaria, Poland and Croatia. With a workforce of over two thousand employees, AWT Group services comprehensively large industrial plants in Central and Eastern Europe. The Group specialises in the transportation of heavy and bulk goods, including coal, steel and auto parts. AWT Group manages an extensive pool of rolling stock consisting of approximately 160 locomotives and over five thousand wagons (of which 65% are owned by the company). AWT also operates 60 railway sidings in the Czech Republic, has a company providing rolling stock services (maintenance and lease of wagons), as well as a company specialising in construction works, land reclamation and waste management services.



Alstom's Pendolino, the first high-speed train to operate in Poland, entered in service on December 14th. This inauguration opens a new era for railway travels in Poland, offering passengers enhanced comfort, safety, new standards and shorter travel time between the northern and the southern parts of the country. The Pendolino trains will be operated on existing lines by PKP Intercity to connect the main cities of Warsaw, Gdansk, Gdynia, Krakow, Katowice and Wroclaw.

The PKP Pendolino has seven cars and can carry up to 402 people in three classes: first, second, and dedicated close compartments for families. The cars are all equipped with air conditioning, passenger information on LED screens, table and sockets for each passenger, high luggage capacity, and bicycle storage. Other services provided on the trains are a wide restauration area with bar and tables, and universal accessibility including external elevator and a wide toilet accessible on wheelchair. In cooperation with Alstom's Design & Styling center, the Polish designer maradDesign has created the graphic design and colours, and the Italian designer Giorgetto Giugiaro has conceived the aerodynamic front end that covers the crash absorption system.

"With this commissioning, Alstom confirms its expertise in the high-speed sector and the success of one of the best-seller high-speed trains in the world, the Pendolino, which has been optimised to fit the needs of the country's railway network. Alstom is proud to take part in this breakthrough in the history of Polish railways" said Andreas Knitter, Alstom Transport Senior Vice President Europe. This commissioning follows the contract worth € 665 million awarded by PKP Intercity in 2011 to supply 20 high speed trains, the full maintenance of the

fleet for up to 17 years and the construction of a maintenance depot, in Warsaw. The 12 000 m2 newly-built depot is equipped with the most high-tech servicing tools. Alstom employs today 92 people in the depot. This figure will reach 130 at full capacity. In September 2014, the Polish Office of Rail Transport, responsible for the supervision of the railway sector's safety in Poland, certified the Pendolino trains. During the tests performed, the Pendolino beat its own speed record with 293 km/h, establishing also Poland's highest ever speed record on rail. The trains have been manufactured in Savigliano, Italy, the Alstom centre of excellence for Pendolino. The traction and auxiliary have been manufactured in Sesto, Italy, the bogies and motors, have been respectively produced in Le Creusot, Ornans, France and the on-board electronics come from Villeurbanne, France and Charleroi, Belgium.

The European Union is supporting sustainable transportation initiatives and allocated €74 million for this high speed project in Poland. An additional €10 billion will be granted within the EU cohesion fund 2014- 2020 to further support the development of the Polish railway network. With 20,000km of tracks, Poland has the 3rd biggest railway network in Europe.



Bombardier Wins 10-Year FleetMaintenance Contract with Trenitalia

Rail technology leader Bombardier Transportation has won a 10-year contract to maintain Trenitalia's fleet of 50 V300ZEFIRO very high speed trains, known in Italy as the Frecciarossa 1000. One of the most important fleet maintenance contracts awarded in Italy in recent years, the contract will be executed in association with Bombardier's consortium partner AnsaldoBreda, an Italian rail transport engineering firm. Bombardier

Transportation's share of the contract is valued at approximately 154 million euro (\$191 million US). Jean Baptiste Eymeoud, Head of Services Execution, Bombardier Transportation, Western Europe, Middle East, Africa (WMA) said, "Our target is to optimise the availability

and reliability of the new vehicles with the adequate preventive and corrective maintenance program once the vehicles enter revenue service by mid-2015. This contract and its duration represent a great achievement for the Frecciarossa 1000 and will reinforce Bombardier's long-term commitment to Italy." Bombardier's services execution team in Italy is already responsible for the maintenance of more than 200 vehicles in the country. Manufactured in partnership with AnsaldoBreda, the Frecciarossa 1000 is the newest member of the BOMBARDIER ZEFIRO family of high-speed trains. With a top commercial speed of up to 360 km/h, the V300ZEFIRO is the fastest train in Europe and its advanced, high acceleration delivers excellent travel times, even on winding routes. It is also fully interoperable, meaning passengers can cross European borders without having to change trains. The V300ZEFIRO can also be adapted for use on networks in many other non-European countries. Bombardier is a leading rolling stock manufacturer in Italy and is involved in many of the country's most important rail projects. These include Trenitalia's various electric locomotives such as the E464, the ETR500/FRECCIAROSSA high speed trains, the BOMBARDIER INNOVIA automated people mover 100 for Rome-Fiumicino airport, the BOMBARDIER FLEXITY trams for Milan and Palermo, propulsion systems for Rome's new metro vehicles, and the traffic management systems installed in various sections of Italy's rail network.

PKP CARGO will implement Lean Management in

all its rolling stock repair workshops

After completing the pilot project aimed at testing Lean Management – a manufacturing management method known, among others, from Toyota – PKP



CARGO decided to implement this solution in all rolling stock repair workshops in the Group. Lean Management speeds up the manufacturing process and enhances the standard of work. Thanks to this solution, the comfort of work will be higher, and PKP CARGO will save several million zlotys per month by reducing the number of outsourced repairs.

The pilot project consisting in increasing the efficiency of maintenance of the rolling stock, implemented in the first half of 2014 in workshops belonging to PKP CARGO Group, yielded positive results. Based on this, a decision was taken to implement this solution in all rolling stock repair workshops owned by the company. This task was entrusted with a special new organisational unit established within PKP CARGO's organisational structure. Between June and September, this team carried out 22 project workshops in 20 workshops belonging to PKP CARGO and PKP CARGOTABOR – a company from the Group responsible for the maintenance of the rolling stock. To date over one thousand hours were dedicated to employees working on the maintenance of the rolling fleet in PKP CARGO Group.

Between July and October 2014, the efficiency of ongoing repairs of wagons in PKP CARGO Group grew by over 10% and the efficiency of periodic repairs of wagons by more than 5% compared with June 2014. Thanks to this, nearly PLN 15 million could be saved on outsourced repairs.

"During the workshops, members of the Lean Management implementation team met many engaged employees. It is clear that they care about this initiative. I'm very happy about it, because new solutions have real effects on people and their daily work. We can already see positive results – the organization of work is improving and the number of repaired wagons is increasing. It allows us to pursue the objective – converting PKP CARGO's rolling stock repair workshops into modern companies that set the quality standards and successfully compete on the market," says Wojciech Derda, Management Board Member in charge of Operations at PKP CARGO.

Methodology - finding bottlenecks and losses related to the repair process

During the workshops, the Lean Management implementation team trains a portion of the staff and the local management. Then the main problems related to the efficiency of repairs are diagnosed. The whole process – from the moment the rolling stock is removed from service until it is put into service again – is thoroughly analysed. The analysis consists in looking for bottlenecks. These are stages at which the repair slows down unnecessarily due to, for example, an insufficient number of employees responsible for a given activity or the lack of division into preparatory works and the main activities.

The first ones can be performed by a less experienced assistant, while for the remaining ones a specialist is required. Other bottlenecks appear, for example, in consequence of an inadequate distribution of working positions, machines and equipment, or a high rate of failures of machines and equipment. All acts of waste, e.g. carrying out unnecessary activities and transportation due to inadequate distribution of working positions, making corrections or waiting for material supplies and redundant stock, are also eliminated.

The implementation of the project is based on taking up new initiatives – employees are obliged to perform certain actions contributing to the efficiency of the whole process. To date a list of more than 800 such initiatives has been created, and 75% of them have already been implemented. Active participation of staff is key to the success of the whole project, and this is why special attention is paid to it. After completing the project workshops, the Lean Management

implementation team keeps on coordinating the change management process. The implementation of tasks as well as the effects of introduced changes are monitored on an ongoing basis.

About Lean Management

Lean Management consists in finding and eliminating waste in the process of manufacturing or providing services, while at the same time maintaining high quality. This method enables obtaining, e.g. minimum costs of manufacturing and level of stock, high work efficiency, effective organization of management and high quality of manufacturing without the need to engage many employees to control quality. Thanks to a better organization of the workplace, this approach also results in an improvement in working conditions.

Daily planning, management based on a task list and tables presenting the level of plan achievement are some of the elements implemented in PKP CARGO within this project. The company is also implementing visual management. This approach consists in hanging photos presenting the most common errors in workshops. The objective is to eliminate the same errors in the future and to draw the attention of employees to keeping order in repair halls. Studies show that the use of these solutions can significantly increase the efficiency of work.

Self-servicing of the rolling stock in PKP CARGO

PKP CARGO owns in total 1.2 thousand active locomotives and over 60 thousand wagons. A large portion of repairs are carried out by companies belonging to PKP CARGO, including PKP CARGOTABOR – one of the largest rolling stock companies in Europe. This company employs over three thousand people and specializes in the repair of wagons, locomotives and wheelsets as well as in general servicing of the rolling stock. In 2013, PKP CARGO spent almost PLN 450 million on the maintenance of its rolling stock. The servicing of the rolling stock included periodic repairs as well as other repairs and inspections of locomotives and wagons. As the scope of PKP CARGO's activity is very broad, even a small improvement in efficiency translates into tangible savings for the company

Alstom delivers the first Régiolis train to the

Poitou-Charentes region of France

Alstom presented the first Régiolis train for the Poitou-Charentes region to elected representatives of the Technicentre in Saintes on December 4th. Attending the event were Jean-François Macaire, President of the Poitou-Charentes region, Stéphane Lambert Deputy Regional Director of the SNCF and Ana Giros Calpe, Senior Vice-President for Alstom Transport France. The ten trains on order will enhance the comfort of passengers on regional journeys between Poitiers, Saintes, La Rochelle and Bordeaux. During December 2014, SNCF staff in the Poitou-Charentes region will receive training for the new train, which is scheduled to enter commercial service in January 2015. The trains are 72 metres in length, with a capacity for up to 217 seated passengers in four carriages. The trains are dual mode (electric and diesel), making them extremely flexible to operate, as they can travel on electrified and non-electrified networks.

Régiolis offers unrivalled on-board passenger comfort for regional lines, offering seats fitted with individual reading lights and electric sockets, as well as space reserved for bicycles and luggage. The quality of the journey is also improved thanks to the large windows and reduced noise levels.

Low floors throughout guarantee accessibility to all, making this the first train to meet the new TSI-PRM standard. The wide corridors and passageways between carriages make it easier for passengers to move about inside the train. Régiolis trains are part of Alstom's Coradia range. This range is modular and capable of adapting to the needs of each organising authority. It is available in several lengths (three for the Régiolis regional version: 56, 72 or 110m); it can be adapted to suit various types of operation: suburban, regional and inter-city for Régiolis and main-line operations for the Coradia Liner version - and it provides a level of comfort adapted to its passengers, even on long journeys. Régiolis is both ecological and economical, thanks to its low energy consumption, its adherence to the latest standards in terms of its emissions when operating in thermal mode and its lower maintenance costs.

To date, 184 Régiolis trains have been ordered by 12 French regions. The French government, the organising authority for regional TET (Trains d'Equilibre du Territoire) trains, has also ordered 34 Coradia Liner trains, the main-line version of Régiolis which is based on the same technological platform. This brings the total number of trains ordered, as part of the framework contract for 1000 trains awarded to Alstom by the SNCF in 2009, to 218. Photo: ©Alstom





Siemens upgrades railway line in northern Algeria for double-track operation

The rail automation specialist ESTEL RA, a joint venture of the Algerian national company for rail transport SNTF (Société Nationale des Transports Ferroviaires) and Siemens, has been awarded an order to deliver rail signalling and operations control equipment for upgrading the line between Beni Mansour and Bejaia for double-track operation. For Siemens, the order is worth about 95 million euros. The customer is the Algerian railway agency ANESRIF (Agence nationale d'études et de suivi de la réalisation des investissements ferroviaires).

Siemens will equip a line section that runs 90 kilometres through the Atlas mountains and serves nine stations with its Trainguard 100 train protection system for ETCS (European Train Control System) Level 1 operation, its Vicos automatic operations control system, as well as with nine Simis W-type electronic interlockings, GSM-R (Global System for Mobile Communication Railways) digital mobile radio technology, and the RailCom Manager (RCM) communications management system.

The contract also includes equipment for an operations control center in Bejaia and programs for training personnel how to use this new technology.

The Algerian railway network covers a total of about 3,800 track kilometres. As part of the nation's five-year plan, a further 6,600 kilometres are to be added to the existing network by 2015 and another 500 kilometres upgraded for double-track operation. This double-track upgrade will enable the overall maximum speed to be raised to 160 km/h. In addition to cutting journey time between the two cities, the upgrade will also increase the frequency of trains on this commuter route.

Siemens has already provided ETCS signalling systems for the mainline railway links from Djelfa to Laghouat, from Boughezoul to M'Sila and to Tissemsilt, and from Mecheria to El Bayadh, as well as for Algeria's all-important rail freight line between Senia and the Port of Arzew. In the mass transit sector, Siemens delivered the entire Line 1 of the Algiers Metro as a turnkey system in 2006.

This line, which is being extended to total length of about 15 kilometres, is also currently being equipped with signalling systems from Siemens.

Alstom and its subsidiary NTL open the T6 tram line in Ile-de-France

On Saturday 13 December, Jean-Paul Huchon, President of STIF and of the Ile-de-France region, Pierre Mongin, CEO of RATP, Ana Giros, President of New Translohr (NTL) and SVP of Alstom Transport France, and Olivier Bachelet, CEO of NTL, opened the T6 line of the Ile-de-France tramway, linking the towns of Châtillon and Viroflay.

28 Translohr trams, running on tyres, will operate on the new line. RATP ordered them from NTL in December 2007. The T6 line serves 21 stations over

a distance of 14 km, with 1.6 km below ground. It links six municipalities: Châtillon, Clamart, Fontenay-aux-Roses, Meudon, Vélizy-Villacoublay and Viroflay, and can carry up to 90,000 passengers per day.

The Translohr tram for the T6 line is 46 metres long and can carry up to 255 passengers. It offers unique ease of deployment: the tram installation has a small footprint whilst the trams themselves have an extremely short turning radius (10.5 metres). The additional motorisation systems enable the tram to climb steep gradients (up to 13%), such as the stretch near the Viroflay tunnel.

The central-rail guidance system makes the Translohr tram quiet and comfortable.

Photo: @Alstom/NTL





HHLA's Subsidiary HCCR Opens Longer Railway Sidings

As of November 2014, Hamburger Container- und Chassis-Reparatur-Gesellschaft (HCCR), a subsidiary of Hamburger Hafen- und Logistik AG (HHLA), offers a railway connection with a usable siding of 720 metres on its facility at the Port of Hamburg. HCCR's customers can utilise this option with significantly longer trains in comparison to the previously

limited 620 metres.
The Managing
Director of HCCR,
Georg Böttner,
explains: "With the
new 720-metre
usable siding, we



willfurther improve the attractiveness of our services. We can therefore handle the maximum carriage-set length permitted in western Germany. This means that we can now load up to 108 standard containers (TEU) on a single train. Our service has already met with a favourable response. The possibility of transporting more containers on a single

train does not only make economic sense for our customers, likewise rail operators also save time and money, since it is no longer necessary to shunt waggons. In any case, they already benefit from the siding's location on one of the Port of Hamburg's most important railway tracks leading to the hinterland.

Our service is similarly important for the environment. The greater the number of containers operated via HCCR's terminal nearby facility, the lower the overall volume of transshipments performed by truck. This relieves the often stressed road infrastructure within the port."



Bombardier to Supply 42 Regio 2N Double-Deck Trains to STIF and SNCF

Rail technology leader Bombardier Transportation has won an order to supply 42 Regio 2N

train sets to the Syndicat des Transports d'Ile-de-France (STIF) and SNCF. This order for 42 double-deck trains is an additional order in the framework of an ongoing contract signed in 2010 and is valued at approximately 397 million euro (\$484 million US). Delivery of the new trains will start from September 2017 and the trains will operate on Line R of the Parisian suburban network.

The STIF and SNCF selected the long eight-car suburban Regio 2N version from the BOMBARDIER OMNEO platform of extra-wide double-deck electrical multiple units (EMU). The 110m-trains will have five seats in each row, two seats on one side of the corridor and three seats on the other, in order to offer more seating capacity compared to conventional double-deck trains. The Regio 2N trains are designed to operate with three units coupled together, enabling it to transport a total of 3,120 passengers of which 1,746 passengers can travel seated.

Passengers will appreciate seats with arm rests and electrical sockets, wide windows, indirect lighting, a "tube"-style architecture for more transparency and security. A modern information system with sound and screens will keep passengers well informed and the intelligent air conditioning system will adjust according to the number of passengers on board. All doors provide level access from 55 centimetre station platforms. Two cars in each train set are equipped for persons with reduced mobility, with an automatically operated ramp and two areas for wheelchairs. The Regio 2N complies one hundred percent with European accessibility standards (TSI PRM).

The eight 1.6 metre access doors and the wide gangways of 2.3 metres will ease the flow of passengers boarding and leaving the train to optimise stopping time in stations. The passenger alarm and the automatic door shutting management system, a tailor-made solution for Ile-de-France operations and successfully proven with the Francilien fleet, will contribute to the punctuality of the service. The Regio 2N innovations also bring benefits in terms of operational costs with energy savings of about 20% per passenger thanks to BOMBARDIER ECO4 technologies such as the BOMBARDIER MITRAC Permanent Magnet Motor, the electrical energy reuse during braking and a light steel structure.

The Regio 2N fleet offers substantial maintenance optimization, resulting from the joint cooperation with SNCF experts. These trains will benefit from economies of scale of a platform widely spread out in ten Regions, including Ile-de-France.

"Bombardier is delighted with this breakthrough order for Ile-de-France and Paris suburban

network which is a confirmation of the benefits that the Regio 2N fleet can bring in terms of operating costs, comfort and seating capacity," said Jean-Baptiste Eymeoud, Vice President Projects, Western Europe, Bombardier Transportation. The Regio 2N train belongs to the new BOMBARDIER OMNEO double-deck train platform. The Bombardier teams in its Crespin site in the North of France have designed it to meet a wide range of needs. The version selected by the STIF for line R will benefit from all the SNCF and Bombardier expertise in Ile-de-France trains. Today, Line H, which is fully operated with a Francilien fleet, is the most punctual line



of the SNCF Transilien network in Greater Paris. As the Regio 2N is modular, it is possible to select from five train lengths from 81m to 135m, speed of 160 km/h or 200 km/h, interior configurations for suburban, regional or intercity services and from over 200 interior design options. The OMNEO premium version has been designed to meet the needs of intercity services for the Trains d'Equilibre du Territoire (Balance of the Territories Trains) government programme.

Contract data

Ten French regions have ordered a total of 201 Regio 2N trains under a contract signed in 2010 with SNCF on behalf of the regions for a maximum of 860 trains. Orders per region are as follows: Aquitaine: 24 trains, Centre: 14 trains, Brittany: 17 trains, Nord-Pas de Calais: 18 trains, Provence- Alpes-Côte d'Azur: 16 trains, Rhône -Alpes: 40 trains, Picardie: 7 trains, Pays de la Loire: 13 trains, Midi-Pyrénées: 10 trains, and Ile-de-France: 42 trains.

























