

# Railtalk — — Magazine *Xtra*

Issue 118x July 2016 ISSN 1756 - 5030

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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...

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

This month I travelled to Slovakia and in particular to see the broad gauge operation bringing Iron Ore from Ukraine to Haniska pri Košiciach (which is near Kosice), a fascinating operation, although the trains, which are some of the longest in Europe, only run every couple of hours or so.

Now I should like to move on to 'Flag' issue that was mentioned last month. Many thanks to all those who responded, and we have had several suggestions, however the majority of the emails received were in favour of adding the country name to the start of the description, so there we go. I hope that this is acceptable to our readers and if anyone want to comment on this change, then please do get in touch. Both Andy and myself are always ready to listen to your views.

Thanks for all the excellent photos we've received this month, as always please keep sending them in, and remember if you are going on holiday, don't forget to take your camera.

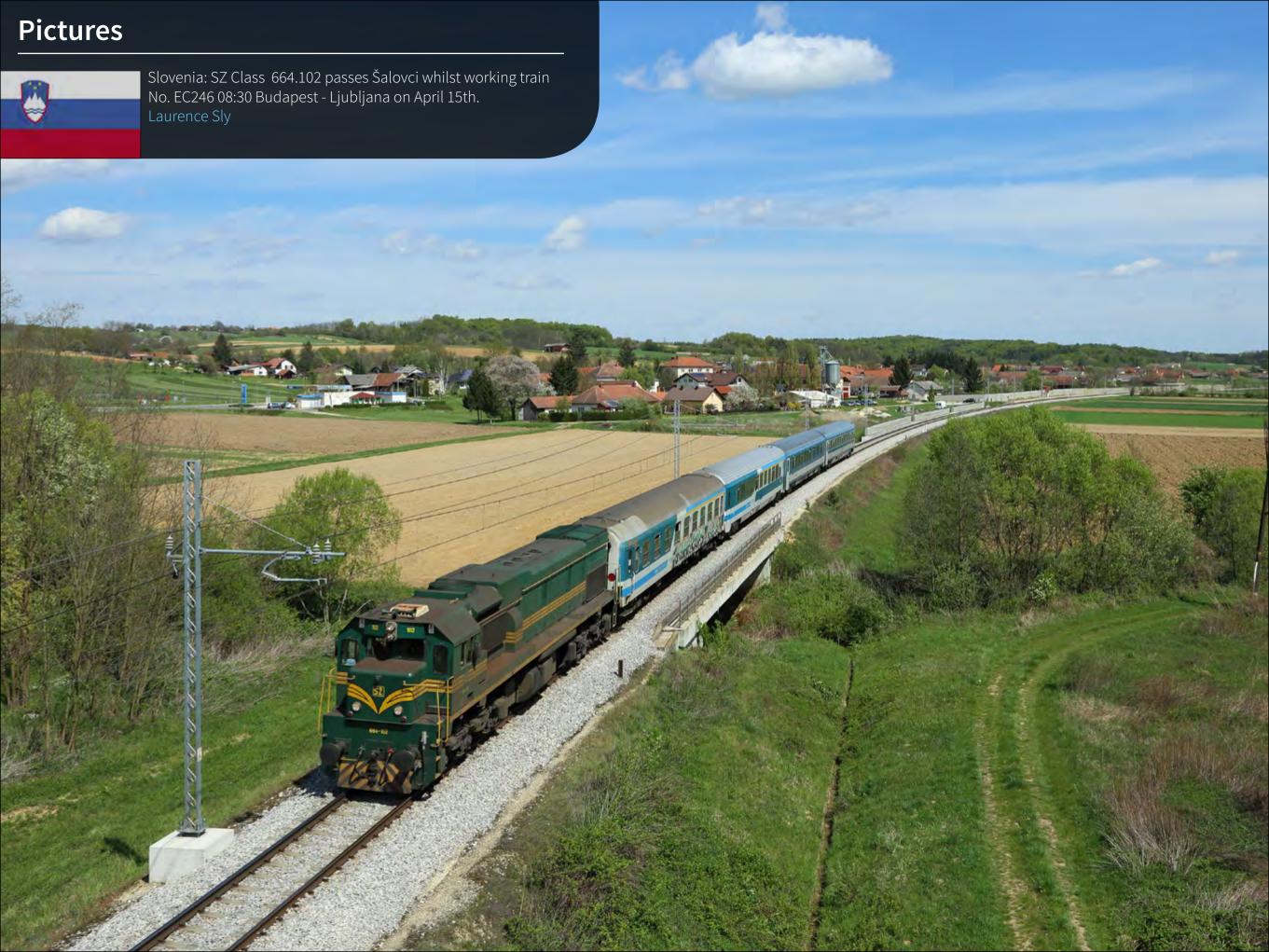
Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos. These issues wouldn't be possible without: Brian Battersby, Mark Bearton, Mark Bennett, Keith Chapman, Nick Clemson, Derek Elston, Mark Enderby, Tim Farmer, FrontCompVids, Paul Godding, Richard Hargreaves, Keith Hookham, Colin Irwin, John Johnson, Anton Kendall, Michael Lynam, Peter Marsden, Phil Martin, Denzil Morgan, Peter Norrell, Chris Perkins, Mark Pichowicz, David Pollock, Andy Pratt, Railwaymedia, Neil Scarlett, Laurence Sly, Stewart Smith, Steamsounds, Steve Stepney, Mark Torkington, and Andrew Wilson.

Front Cover: Hungary: ÖBB's Class 1116.222-1 carrying the 'Red Bulletin' advertising livery, leads its Railjet set out of Budapest towards Vienna through Budapest Kelenföld on May 9th. Anton Kendall

This Page: Germany: On June 10th, DR No. 99.7241 crosses the Hirtensteig crossing shortly after departing from the Brocken. Steamsounds

### David









































































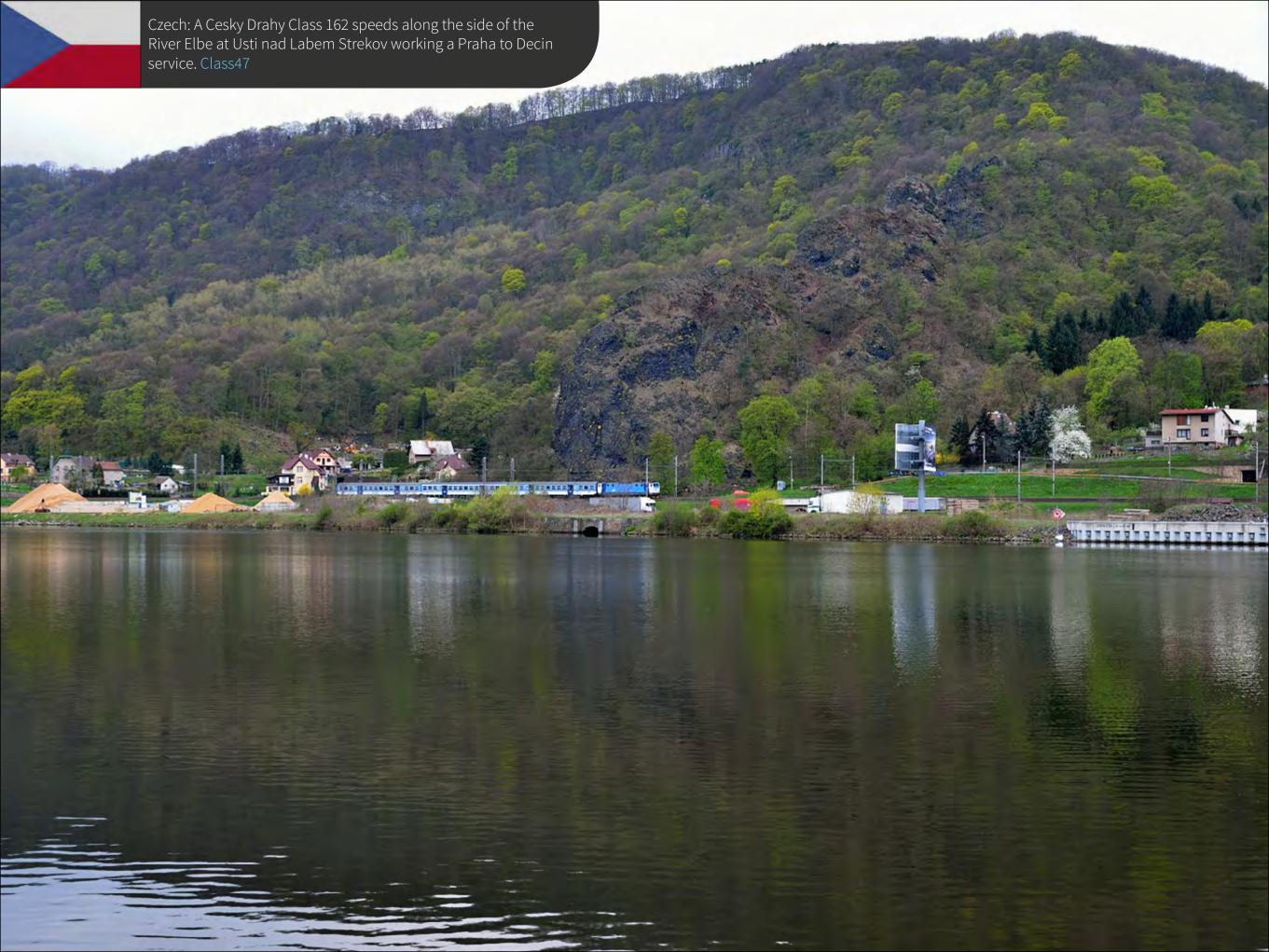






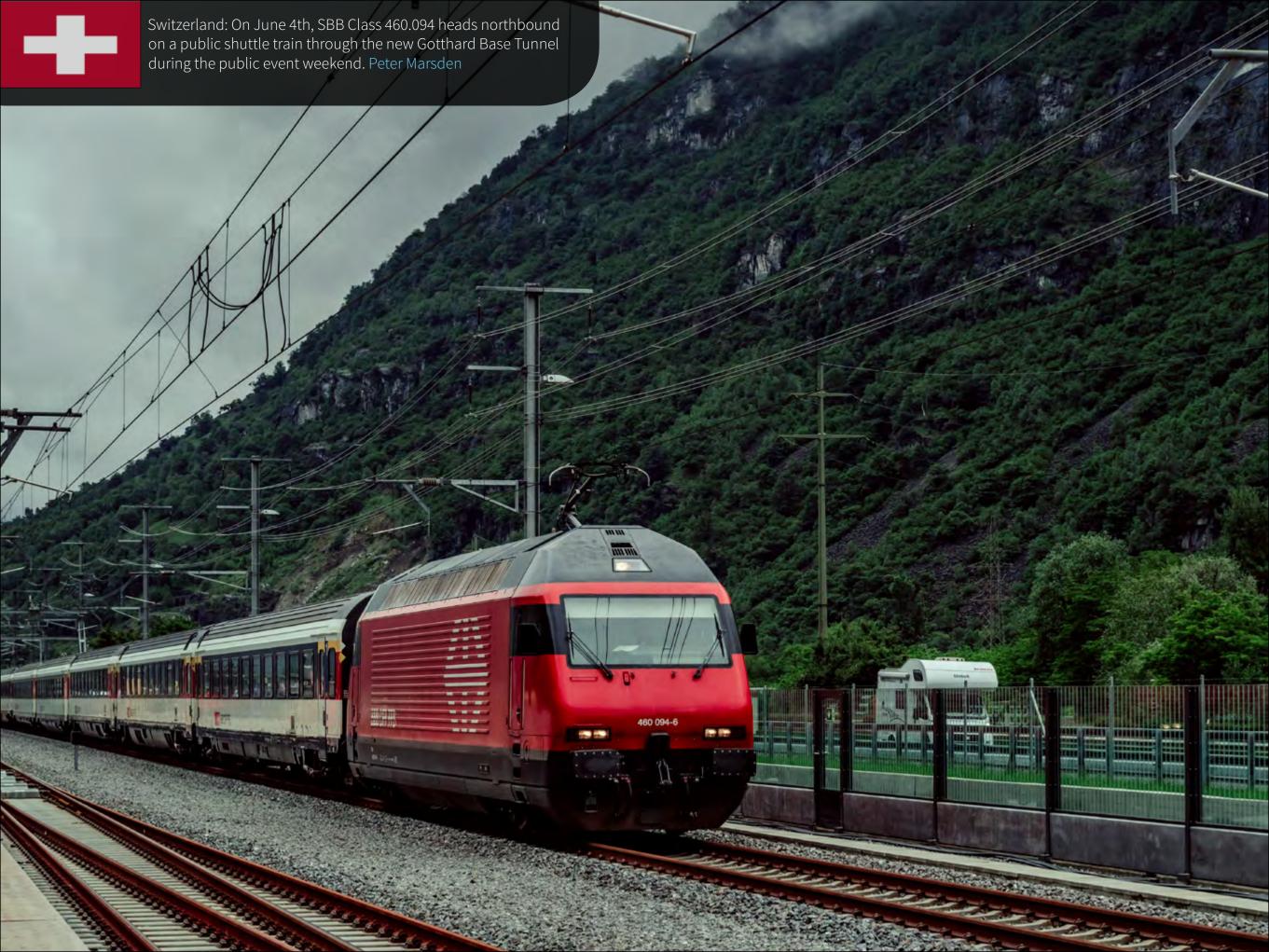




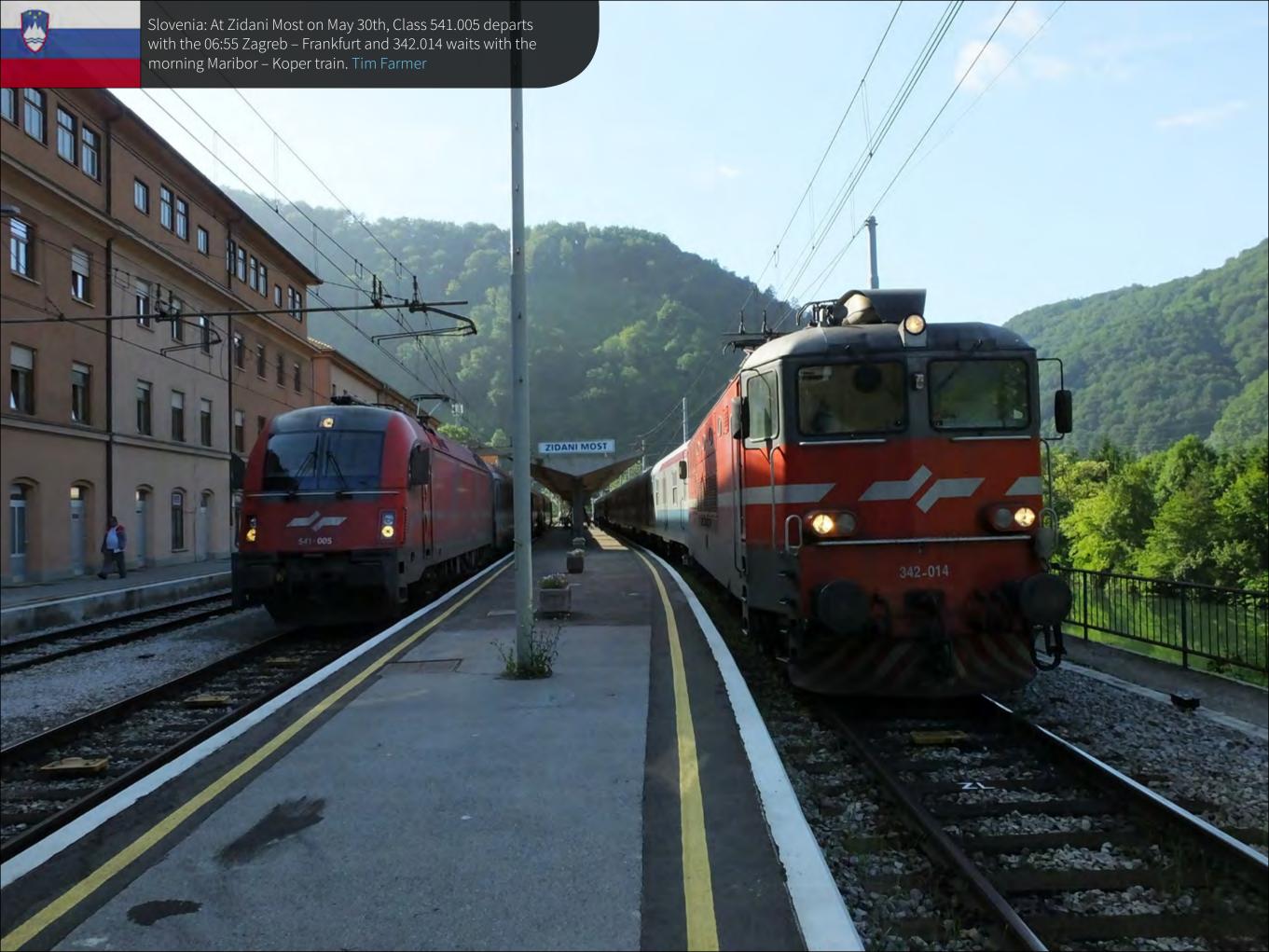
































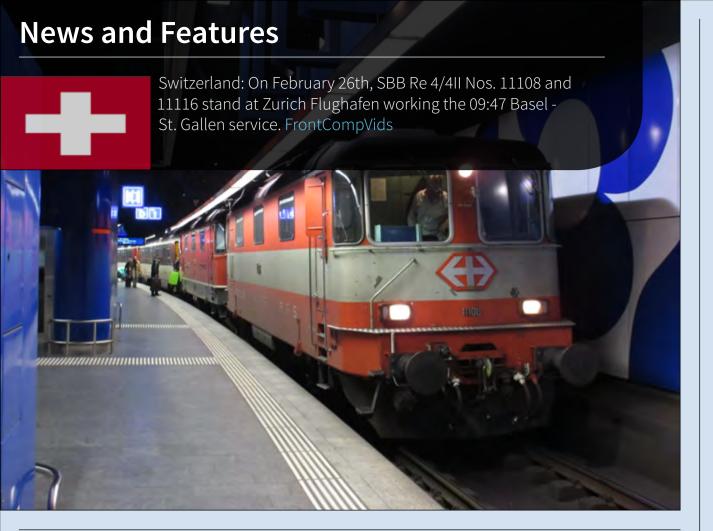














### Deutsche Bahn intensifies its involvement in China

Deutsche Bahn (DB) and China Railways (CR) are stepping up their collaboration with each other. The two companies signed a memorandum of understanding (MoU) in Beijing on March 18th. They resolved to cooperate more closely in three areas: rail freight transport between China and Germany, DB's consulting services for CR relating to high-speed train maintenance, and support for CR's infrastructure projects in other countries. DB's engineering expertise in particular is needed in this area.

"The People's Republic of China intends to invest over EUR 300 billion in its transport infrastructure," said Ronald Pofalla, Member of the Management Board of DB and responsible for international relationships. "As its partner, we can benefit from China's impressive growth story. Our commitment to the country will also strengthen our Group in our home market of Germany and will serve as an example of the worldwide demand for our expertise," he continued while at the MoU signing in Beijing.



#### CAF AWARDED SUPPLY OF 26 LRVs FOR MARYLAND IN THE USA

CAF has been selected to manufacture 26 5-module Light Rail Vehicles (LRV) units for the Purple Line Project located in Maryland, USA. This contract includes capital spares, special tools and test equipment, and it will be managed by the company's subsidiary CAF USA, Inc. The contract value exceeds USD 200 million for the supply of rolling stock. Additionally, CAF USA participates with a 20% share in the company that will manage the operation and maintenance of the Light Rail System for 30 years. Passenger service is scheduled for early 2022. The Purple Line is a Private Public Partnership (P3) Project to design, build, finance, operate and maintain the Purple Line with a United States Dollar (USD) value of 5.6 billion, including the construction valued at USD 2 billion and is one of the largest public transit project contracts ever granted in the USA.

The Purple Line is a light rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George's County. It will provide direct connections to the Washington Metro Red, Orange and Green Lines, in addition to connections to MARC and AMTRAK commuter lines and local bus routes. A total of 21 stations have been planned along the 16.2-mile route, providing safe and rapid light rail transit in Maryland. CAF USA will manufacture the LRVs for the Purple Line at its plant in Elmira, New York, USA, this plant was also used for a good number of its U.S. projects in the last few years. Highlights of the CAF USA's projects are the 96 units for the Washington Metropolitan Area Transit Authority, 40 Light Trains for the California Capital of Sacramento, and projects for the manufacturing of 28 new light trains and the refurbishment of 55 existing trains for PAAC in Pittsburgh, Pennsylvania.

At present, CAF is manufacturing 130 passenger cars for Amtrak and LRV units for Boston's MBTA. It has also recently completed the delivery of LRV units for Houston Metro and Streetcars for Cincinnati, OH and Kansas City, MO. All in all, this new contract adds to a total value of projects undertaken by CAF in the USA close to USD 1.8 billion.

#### **NEW PROJECT IN AUSTRALIA**

In addition to this contract, CAF has also secured a recent agreement with Transport for New South Wales (TfNSW) for the supply of 6 trams that will operate on a new network that will be constructed in the Australian city of Newcastle, the delivery of which is planned for 2018. This project builds on the project previously developed by CAF for the same customer under which 12 trams were supplied for the neighbouring city of Sydney that are currently in revenue service. These trams are part of the URBOS tram family and combine modern aesthetics with cutting-edge equipment and maximum accessibility without compromising comfort, performance and ease of operation, as well as maintenance. Vehicles of this platform already operate in countries such as Germany, Brazil, United States, France, United Kingdom, Hungary, Serbia, Sweden and Taiwan.

Thus, these two new contracts increase the backlog of the Company by approximately €200 million.



# Alstom to supply traction to Line 3 of the Chengdu metro

Alstom has been awarded a contract by Chengdu Metro Corp Ltd to supply the traction systems for 288 metro cars due to circulate on Line 3, the city's new metro line. The line is being built in three phases, with a first phase to open in August 2016. The contract, worth around €40 million, is for phases 2 and 3 of the line, expected to start its trial run in 2018. When complete, Line 3 will be 50 km long and include 37 stations, connecting the suburbs of Chengdu to the centre of the city.

Through its Chinese joint venture SATEE (Shanghai Alstom Transport Electrical Equipment Co. Ltd.), Alstom is supplying its metro traction system OptONIX, specifically designed and developed for the Chinese market. OptONIX is Alstom's high performance, high reliability traction system specifically developed to improve operational performance and reduce life cycle cost. Alstom was also in charge of supplying the traction systems for the 144 metro cars that will circulate on the first phase of Line 3. The traction systems for all three phases are being manufactured by SATEE in China and Alstom in France and Belgium, with components supplied by Tarbes and software supplied by Charleroi.

"We are pleased to be awarded a new contract by the city of Chengdu to participate in the extension of its metro network, which will significantly shorten the commuting time of its passengers through a transport solution that is reliable, efficient and environmentally friendly. With the objective of developing greener transport solutions, the city of Chengdu can rely on Alstom's urban mobility solutins, and its proximity to China through its valuable local JV SATEE, to achieve this aim," said Ling Fang, Managing Director of China & East Asia, Alstom.

Alstom has supplied traction solutions for 750 metro cars on the Chengdu metro lines, and for 3,400 metro cars of 18 metro lines in 8 cities in China including Beijing, Shanghai, Nanjing, Qingdao and Hong Kong. Alstom and SATEE have been supplying traction for metro cars in China for more than 15 years



### Deutsche Bahn intensifies cooperation with railroad and vehicle manufacturers in China

Deutsche Bahn is increasing its general presence in China. In the course of Chancellor Dr Merkel's visit to the country, agreements were signed in Beijing with the aim of expanding projects in the rail sector.

Speaking in Beijing, Chairman of the Management Board and CEO of Deutsche Bahn AG Dr. Rüdiger Grube said, "The People's Republic of China is an important market for us and will remain so in future. In view of the plans to invest more than 300 billion euros in transport infrastructure, we wish to benefit from the growth and potential in China. Our expertise is in high demand and our successful international activities also strengthen our position in our home market of Germany."

Two Memoranda of Understanding were recently signed, one of which was with the Chinese rolling stock manufacturer CRRC (China Railway Rolling Stock Corporation) confirming continuation of the parties' cooperation in the establishment and optimization of a maintenance system for high-speed multiple units and

the provision of mutual support in remedying operating problems related to wheel-on-rail contact. CR operates an approx. 19,000-km long high-speed network with a fleet of 1,400 trains. DB will provide maintenance and repair support for the company.

"There is a second project of which I am particularly proud: Our experts from DB Engineering & Consulting are the first foreigners to work on a regional transport project in China. As part of a consortium, they have a consultancy contract for the operation of regional transport routes in Dalian, a city with a population of 6 million," said Dr. Grube.

DB has been active in China since 1966. DB Schenker alone has more than 5,000 employees in the country. Amongst other things, DB was involved in the construction of Metro Shanghai, the development of the high-speed network and the Transrapid in Shanghai. As China meanwhile also offers good products for the rail sector, DB has had a procurement office in Shanghai since the end of 2015.



## PKP CARGO has a freight forwarder in Germany

Since the beginning of June PKP CARGO has a freight forwarder in Germany – the PKP CARGO Connect GmbH with its headquarters in Hamburg. Its main task is to focus on intermodal, maritime and road freight transport. The new company covers also the operation of a customs office. The German PKP CARGO Connect division is already operational, has already customers and is actively searching for new orders.

"Running your own shipping company in the country with the biggest economy in the European Union is for the PKP CARGO Group an unprecedented event" says Grzegorz Fingas, member of the PKP CARGO Board for trade matters. "This way we want to develop the Group's activities on subsequent markets and gain customers. The new company will naturally use the transport potential of PKP CARGO" adds Grzegorz Fingas.

Initially, the German freight forwarder from the PKP CARGO Group will focus on attracting customers in Europe. Its key markets will be Poland, Germany, Czech Republic and Slovakia, however the experiences in freight forwarding and competencies of the Group give strong predispositions to expand the activity on the whole area of the old continent.

Hamburg is an important city on the logistics map of Europe, with the largest sea port in Germany and at the same time, the second largest in Europe. Having its registered seat precisely in this city will help acquire new customers and expand into new markets



### New train app turns drivers into climate protectors

Deutsche Bahn (DB) is launching its first in-house train simulator app that turns driving a train into a ton of fun. All you need to do is get in and get going. The special thing about DB Train Simulator is how users can adapt their driving style to cut energy consumption and so become a crusading climate protector in their own right. The app is based on real train data and the program that DB has used for ten years to teach energy-efficient train driving techniques. Careful driving can save up to 4,000 kilowatt hours of electricity during just one ICE round trip between Hamburg and Munich. This is as much power as a family of four uses in a single year! Apart from focusing attention of energy-efficient driving, the app is true to life in another way: The objective is getting to the destination on time. Players can select one of four train types (ICE, IC, RB, RE) and three different routes to try out their energy-efficient driving skills. Some tips: Pick up speed fast when starting out, use momentum to take inclines or enter stations, and feed energy back into the power grid when braking.

The DB game features three different difficulty levels. Once users successfully steer their train to its destination, they get to see how much energy they saved in addition to the highest scores, and they can then progress to the next level. Until August 31, players who negotiate all three routes and beat the high-score levels are in with a chance to win great prizes. The best drivers will be entered in a draw for an excursion through the rich natural environment of the scenic Saxon Switzerland region near Dresden. One BahnCard 50 and two BahnCard 25s are also up for grabs. The app is available for free in German and English from the App Store and Google Play. Photos will be available for download at www.deutschebahn.com/mediathek ("Blickpunkt" section). Further information about the app, along with a desktop version, are available at www.deutschebahn.com/zugsimulator.



#### Another significant success for Škoda Transportation as trams from Plzen head for Germany

Skoda Transportation has won the tender for the delivery of trams for the City of Chemnitz

transport authority. In total, the Pilsen Company will deliver 14 modern vehicles of the ForCity family to the German city. The total price of the contract is about 950m Czech crowns.



"The passengers were travelling in our ForCity Alfa tram during the in a unique trial rides in Chemnitz, 2012. Within the customer's survey, the then operation has been evaluated as being very successful. We would like to acknowledge the results of many years of work of our businessmen, technicians, designers and other experts," says Tomas Ignacak, Chairman of the Skoda Transportation Board of Directors.

Skoda Transportation will deliver to Chemnitz the 100% low-floor ForCity Classic trams, equipped with a stainless steel case with an axle-support chassis and gearless drive. The first tramcar will be delivered for a trial operation for several months in the summer of 2018. The entire fleet will be delivered by the summer of 2019. "The Chemnitz transport authority has shown a great confidence in the Skoda Transportation products which we regard as an enormous success and also commitment. After the contract for trains for the Deutsche Bahn and after the successful tender for the National Express (S-Bahn Nuremberg), it is the first Skoda Transportation contract for trams in Germany, "adds Zdenek Majer, vice president of Skoda Transportation. The Pilsen Company has won the tender in the context of a very challenging competitions against other major tram manufacturers.

"This success proves that our ForCity trams can compete successfully against the world's biggest manufacturers in one of the most demanding markets; therefore, they can successfully serve in Western European cities' public transport. This also confirms our long-standing strategy to consolidate the position of the company in Western Europe, "adds Zdenek Majer.





## Alstom's Pendolino high speed trains reach 10 million kilometres in Poland

Alstom's Pendolino high speed trains owned and operated by PKP Intercity have covered 10 million kilometres in revenue service since the service started in December 2014. The trains have made over 21,000 journeys and carried 5.7 million passengers. Pendolino for PKP is the first high speed train in Poland, linking the country's key metropolitan areas. It has set a new standard for railway travel, offering passengers enhanced comfort, safety and shorter travel times between cities. In December 2015, PKP Intercity extended the routes of the trains to Rzeszów, Bielsko Biała and Gliwice. Regular maintenance is conducted at Alstom's Train Technical Service Centre in Olszynka Grochowska (Warsaw). Over the last 18 months, Alstom's professional team have conducted over 1,300 regular check-ups, working 50,000 hours, to ensure 100% availability in line with the PKP IC commercial programme. Alstom focuses on the highest EHS standards. There have been no accidents at the Pendolino Service Centre for over 1,000 days, i.e. since the start of operations.

"Alstom is proud of the success of this project in Poland. Pendolino trains have proven their

reliability over the last 18 months, operating in all kind of weather conditions regardless of heat, snow or sub-zero temperatures, and always providing comfort and safety to passengers," said Artur Fryczkowski, Services Director for Alstom in Poland.

Pendolino is one of the most proven high-speed trains in the world, crossing today seven European borders and operating countries 14 worldwide: Italy, Austria, Germany, Czech China, Republic, Finland,



Portugal, Russia, Spain, Slovakia, Slovenia, Switzerland, United Kingdom and Poland. As part of Alstom Avelia range, Pendolino benefits from four decades of experience in high speed with more than 1,400 trains sold. Today, more than 1,200 of these trains are in commercial service which represents around one third of the world's high speed fleet.



## Alstom's Regiolis: excellent reliability marks the first end of warranty

Alstom has just reached a new milestone with the signature of the first end of general warranty of a Regiolis (Coradia Polyvalent) trainset, two years after the first deliveries. In addition to this important step in the project, which confirms the reliability and the availability of the trains, Regiolis is celebrating over 10 million kilometres covered in commercial service.

This first end of warranty concerns a Regiolis Picardy dual-mode trainset consisting of 6 cars. To date, 137 Regiolis have been delivered to eight French regions . Alstom's after-sales teams have been assigned to the customers' sites to ensure corrective maintenance, as well as the availability and reliability of the trains.

"This first end of warranty two years after the delivery of the first trains is a great success which attests to the reliability of our train and the excellent cooperation between the teams of SNCF and Alstom. Train availability for the operator and passenger comfort are our priority. Regiolis has demonstrated that it is perfectly adapted both to daily journeys and long trips" says Jean-Baptiste Eyméoud, Senior Vice-President of Alstom France.

Coradia Polyvalent belongs to Alstom's Coradia range of trains. Thanks to its modular design, it can be adapted to the needs of every organising authority as well as different types of use: suburban, regional and intercity. It offers optimal comfort for passengers, whatever the length of the journey. The production of Coradia Polyvalent creates over 4000 jobs in France with Alstom and its suppliers. Six of Alstom's twelve sites in France are involved in the project: Reichshoffen for the design and assembly, Ornans for the motors, Le Creusot for the bogies, Tarbes for the traction, Villeurbanne for the onboard electronics and Saint-Ouen for the design.



#### Bombardier Wins Contract to Provide 43 TALENT 2 Trains to Abellio

Rail technology leader Bombardier Transportation has won a contract to supply European rail operator Abellio Rail Südwest GmbH with 43 BOMBARDIER TALENT 2 multiple unit trains. The order is valued at approximately 215 million euro (\$244 million US).

Starting in June 2019, the new electric multiple units will gradually enter passenger operation on the Stuttgart regional network in Baden-Württemberg's



Neckar Valley region in Germany. Bombardier will supply all 43 trains to Abellio by June 2020. The multiple-unit trains will be built at the Bombardier site in Hennigsdorf, Germany and the bogies are to be produced at the Bombardier plant in Siegen, Germany.

"Abellio has already established a long-standing successful collaboration with Bombardier, which we will now continue in the Neckar Valley region network. We consider the company a reliable partner and together with them we will happily provide our passengers with a comfortable and safe travel experience on the way to their destination," said Abellio CEO Stephan Krenz at an event to mark the contract signing. "With these new vehicles, we also want to set new standards in Baden-Württemberg that attain the same quality of leadership as we have achieved on the North Rhine - Westphalia networks," explained Krenz.

"This order is a great achievement for Bombardier's rail business and it also signifies the continuation of our successful and cooperative relationship with Abellio," said Germar Wacker, President of Mainline and Metros, Central/Eastern Europe at Bombardier Transportation. "We are pleased that Abellio relies on our modern TALENT 2 trains to further expand its mobility offering in Germany. These vehicles feature a high degree of passenger comfort and score points with their strong performance in terms of energy efficiency and reliability."

The TALENT 2 trains for Abellio will be configured into 24 three-car and 19 five-car train sets, each with 163 or 273 seats respectively. These vehicles will be equipped with Wi-Fi and provide easy access for travellers with limited mobility as well as space for either 24 or 39 bicycles. In total, more than 350 of Bombardier's TALENT 2 trains are already in service on Germany's rail network. These trains form the backbone of the German national rail operator Deutsche Bahn's regional fleet and are also in use by private transport companies such as Abellio, National Express and the Southwestern German Transport Company (SWEG). Thanks to their modular design principle, the TALENT 2 train can be flexibly adapted and used as both commuter and regional transport.

The contract with Abellio is another achievement for Bombardier in the most recent tenders in Baden-Württemberg. The company asserted itself last year as a train supplier for Deutsche Bahn Regio AG with the TALENT 2 trains during the tender for the regional network Gäu-Murr. The so-called "Baden-Württemberg Model" is supporting the vehicle financing for both networks. This arrangement sees the transport company selling the vehicles to the regional rail authority of Baden-Württemberg (Landesanstalt Schienenfahrzeuge Baden Württemberg, SFBW) with the regional rail authority leasing them back to the transport company.





## Digitisation: progress that benefits customers

"We view digital technologies, new customer needs and market changes as drivers of progress. We are aggressively working on three areas for action in our DB 4.0 campaign. First, we are working at the interface with customers to make travel more convenient, comfortable, flexible and personal. Second, our campaign is focusing on digitalizing processes and workflows, and third, we're promoting the smart use of new data-driven business models," says DB's CEO and Chairman of the Management Board Dr. Rüdiger Grube.

### Travel made more convenient, comfortable and flexible: digitisation at the interface with customers

The growing importance of the customer interface has clearly shown that digitisation isn't just about technological progress. First and foremost, it's progress that benefits customers. After all, the customer interface is where we can make travel more convenient, comfortable, flexible and personal. What customers want is seamless, door-to-door travel chains.

One fundamental tool for achieving this is DB Navigator, which is already Europe's most popular travel app, providing four million pieces of travel information a day. The Qixxit app, which also includes non-DB products and services, now covers all modes of transport. It can map out seamless travel chains, meeting the individual needs of different customers when it comes to choosing modes of transport. The app also links to DB's door-to-door services, such as its Flinkster carsharing service and its Call a bike bicycle rental service.

DB already sells some 3.5 million online and mobile phone tickets a month, and that figure is on the rise. Over half of long-distance tickets are now bought online. For a growing number of customers, smartphones are a source of timetable information, a ticket window and a travel planner in one.

All of these services lay the foundation for the next step: DB's vision of a multimodal full-service mobility platform 4.0, which will make searching for, finding, using and paying for transportation fast and easy in just a few clicks.

Wireless internet access will be expanded to second class on ICEs by the end of 2016. The first pilot projects are being conducted simultaneously in regional and local rail passenger transport. For the WiFi rollout to succeed, DB needs close cooperation with local authorities that contract for transportation services, Grube says. To enable seamless internet access during train travel, from start to finish, DB aims to install "WLAN@DB", a standardized network on trains, at stations and in DB Lounges. The latest on-board improvement is the ICE Portal, which offers digital newspapers, games and audiobooks and will include movies, TV series and documentaries by the end of the year.

Autonomous driving for cars, buses and trucks is another issue DB is working on. It is developing its own pilot projects and new business models in the form of digital customer platforms. "Self-driving cars will create a brand new market. Traditional private motorized transport and public transport will merge to create individualized public transport," Grube says. "Mobility services will be produced on demand, and passengers and mobility providers will interact digitally. The transportation system will become increasingly smart as providers adjust their services based on user behaviour." Digitisation's role in improving processes – for better quality DB is digitalizing a growing number of its systems to make rail operations more reliable and customer-friendly. All 2,100 elevators and 1,000 escalators at some 1,000 stations will be equipped with sensor and telematics technology for remote monitoring. In the future, systems will be able to report malfunctions themselves, reducing the number of repairs and speeding up repair time. Customers will benefit from much greater availability of escalators and elevators. Remote diagnostics will be used to determine the condition of 30,000 switches in the rail network, which will cut downtime in half and increase punctuality. Digitalization in the context of DB's "Zukunft Bahn" quality program also includes predictive

The first 250 freight locomotives have been equipped with technology that enables them to know what's best for themselves when it comes to maintenance. By the end of 2020, a total of 2,000 locomotives will be able to detect when maintenance is necessary. Sensor and telematics technology makes it possible for operations control centres to connect directly to the locomotives. If malfunctions are detected, they are repaired immediately as a preventive step, which increases operating quality for customers.

maintenance.

The next major development in rail will be fully automatic driving on rail. Pilot projects are already under way, with

passenger transport testing being conducted by the Erzgebirgsbahn. In freight transport, automatic driving is being tested using a main-line locomotive in Wildenrath, and the necessary camera and control systems are being tested during shunting operations. Fully automatic driving on rail will be supported by the digital timetable of the future, which will be generated automatically instead of manually, as is done now. The digital timetable will make it possible to access available train paths directly online and to increase rail capacity considerably.

"Fully automatic driving will greatly improve rail's performance, make it more reliable and make it more efficient. Rail will become a stronger competitor as a result," says Grube. "It's not a process that will be implemented overnight, but we're taking concrete steps to prepare for the time when we can implement fully automatic driving. We want to be a pioneer – of course working closely with our partners in the industry and other rail companies in Germany and the rest of Europe – and in close cooperation with policy makers and our employees." Smart use of data for digital innovations and new data-driven business models

At DB, big data also means open data. The open data platform already makes infrastructure and timetable data available to programmers and developers. DB is taking the next step in continuing to secure the enormous amount of data and promote even more innovation by establishing a dedicated company, DB Digital Ventures GmbH. The unit, which falls under the direct responsibility of the Chief Digital Officer, will develop its own innovative projects and network with the start-up world to a greater extent than DB does now. These efforts will be closely intertwined with units that have already been successfully established at the Group, including the mindbox accelerator, d.lab for passenger transport and skydeck at DB Systel. Deutsche Bahn and the Federal Ministry of Transport and Digital Infrastructure (BMVI) have agreed to allow developers to use data from both entities. DB has networked its open data platform with the BMVI's mCloud, the first company to do so. It has uploaded over 12 Gigabytes of data to the cloud in the last 18 months, including car sequence plan data, reporting data on vehicles and stations, and capacity utilization data for Call a Bike and Flinkster. Uploads like these give developers and entrepreneurs open access to a vast treasure trove of data - an incentive for start-ups in particular to tackle the further development of rail transport and create new services that will make the rail mode even more attractive to customers in the future.





#### MRCE orders 10 Vectron locomotives

Mitsui Rail Capital Europe (MRCE), a full-service locomotive leasing company, has ordered ten additional Vectron type multisystem locomotives from Siemens. With this order, MRCE will expand its Vectron fleet to 66 locomotives. The locomotives will be built in the Siemens plant in Munich-Allach, Germany.

"Based on our positive experience with the Vectron locomotives so far, we have decided to make this additional purchase. They offer a high degree of flexibility. These locomotives will also have the possibility to operate in double traction with our existing ES64F4/E189 fleet," explains Junichi Kondo, CEO of MRCE.

"We have successfully partnered with MRCE for a number of years. MRCE not only orders the locomotives, but works closely with us to ensure that their service and maintenance is as efficient as possible with the help of data analytics," says Jochen Eickholt, CEO of Siemens Mobility Division.



# Alstom site in Barcelona to become the first factory 4.0 of the railway sector in Spain

Alstom intends to transform its industrial site of Santa Perpètua de Mogoda (Barcelona) into the first factory 4.0 of the railway sector in Spain. The company will implement the latest technologies and train its workforce to the use of these new tools.

"We are witnessing a great change called Industry 4.0 or the Fourth Industrial Revolution, driven by the confluence of new technologies that have matured in recent years, by new business models derived from those technologies and by the transformation of existing value chains. We are facing a great opportunity for companies, for people and for economies. As a company that has always been a pioneer, Alstom wants to be one of the architects of this new industrial era in Spain", indicates Antonio Moreno, President of Alstom in Spain.

The Alstom site in Santa Perpètua has already started to integrate intelligent systems into industrial processes, using big data, 3D technologies, robotics and augmented reality, among others. These new technologies will allow Alstom to improve its production chain and processes in order to be more competitive, to design and manufacture trains adapted to the

future needs of passengers, drivers and operators.

As part of the factory development, Alstom has also announced that a new 30,000 square metres warehouse space will be made available for its suppliers, with the aim to streamline processes, collaborate on innovation and development and favour integration between suppliers and

the manufacturer.

In October 2015, Alstom acquired the industrial facilities of Santa Perpetua plant which were under leasing since its opening in 1994. The plant is located on a 36-hectares site, 20 far from Barcelona.



#### ELL continues to rely on Siemens Vectron

Siemens and European Locomotive Leasing (ELL), a provider of full-service leasing of locomotives, have again signed a framework agreement for the delivery of 50 Vectron locomotives. The first locomotives from this new agreement have already been ordered and delivery will begin in the second quarter of 2016. In 2014, ELL had signed a first framework agreement with Siemens for 50 locomotives, and all these locomotives have already been delivered or ordered.



"We are providing greater value for our customers by making available state-of-theart alternating-current (AC) and multisystem locomotives that ensure the highest reliability. With this order for an additional 50 locomotives, we will also be able to support our customers' growth in new national markets," said Christoph Katzensteiner, CEO and founder of ELL.

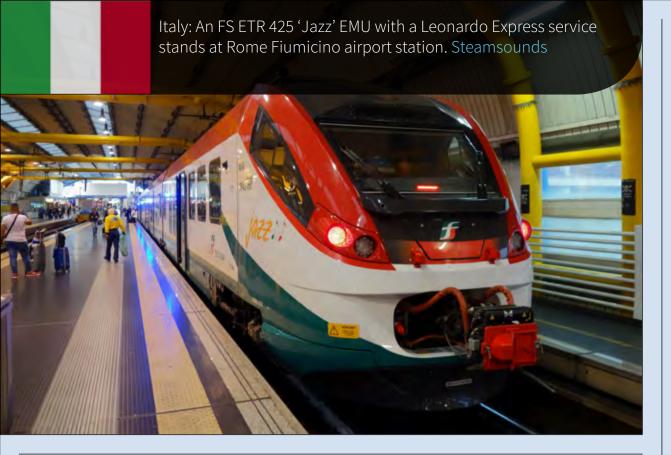
"This renewed framework agreement with ELL shows that our Vectron locomotives have been convincing performers. The flexibility of our locomotive platform enables ELL to order tailored variants for cross-border service in Europe," explains Jochen Eickholt, head of Siemens rail business.

The Vectron locomotives will be used for both freight and passenger service. The first Vectrons called up in this new agreement are planned for cross-border operation between Romania and the Netherlands, along the western corridor from the Netherlands



to Italy, from Germany to Romania via Austria and Hungary, as well as within Germany, Austria and Hungary. The new framework agreement enables ELL to also order locomotives for the corridor to Scandinavia in addition to the previously ordered variants. All locomotives will be equipped with the European Train Control System (ETCS) along with national train control systems. The locomotives have a maximum output of 6,400 KW and a top speed of 200 km/h. The agreement also includes an option to order the electric locomotives with Diesel Power Modules.

The Vectron fleet has already accumulated more than 35 million kilometres of service. The locomotives are authorized for operation in Germany, Bulgaria, Italy, Croatia, Norway, Austria, Poland, Romania, Sweden, Slovakia, Slovenia, the Czech Republic, Hungary and Turkey.





## The first Chinese container train under the brand name "China Railway Express"

On Monday, June 20th at the PKP CARGO Group handling terminal in Warsaw stopped the Chinese container train, which comes to Europe for the first time under a unified brand: China Railway Express. The President of the People's Republic of China Xi Jinping, President of Poland Andrzej Duda and Minister of infrastructure and construction Andrzej Adamczyk were present at the event. The train from China to Warsaw departed from Chengdu, a metropolis in the Sichuan province in central China with more than ten million of inhabitants. The train consisting of 22 modern 80-foot six-axle container platforms type Sggrs was run by a modernized locomotive EU07. Two 40-feet containers can be loaded on each of these wagons; they are mostly used in the transport of goods by rail from China. Among the articles carried were electronics and auto parts.

"Depending on the dynamics of development of the rail link with China, we will invest in the rolling stock and the infrastructure to support these traffic services. Currently we receive 15 modern multi-system locomotives for connections abroad, we will also invest in platforms for the carriage of containers" says Maciej Libiszewski, Chairman of PKP CARGO. - In the development of the New Silk Road, Poland could play an important role. Our geographical position is favourable, thanks to that we could become a hub supporting trade between China and Western Europe. It's an opportunity for PKP CARGO Group that we want to seize - added Maciej Libiszewski



### Objection in Sweden has been dismissed – green light for Stadler

The competent court in Stockholm has dismissed a competitor's objection. This means Stadler has received the green light to supply 33 four-carriage double-decker trains to the Swedish railway company Mälab. The total volume of the order amounts to SEK 3.5 billion. Furthermore, the order includes an option for an additional 110 vehicles. In mid-June 2015, Stadler was awarded the order for 33 KISS trains. The rail vehicle manufacturer was thrilled; however, the celebrations were somewhat short-lived. One of their competitors had raised an objection against the tendering process. The competent Swedish court has now dismissed this objection. This means that Stadler and Transitio can sign the agreement, and the contract between the two companies can now go into effect. "We are very pleased about the court's decision and are proud that we are able to continue supplying trains to Sweden", said owner and CEO of Stadler Rail Group, Peter Spuhler.

The first vehicle will be delivered in 32 months. The trains will run in the area around Lake Mälaren, to the west of Stockholm. They are approved for a maximum speed of 200 kilometres per hour. The order for Mälab is the first call-off from the framework agreement that the Swedish leasing company Transitio concluded in 2014 with three suppliers for the procurement of regional railway vehicles. The framework agreements will be in effect for a period of seven years. Stadler is the only supplier that was permitted to sign the framework agreement to provide two different types of vehicles: the single-decker FLIRT and the double-decker KISS trains.

One special aspect of the Stadler offer is the fact that the 33 KISS vehicles are compatible with Stadler's FLIRT trains. This allows for a mixed fleet of single- and double-decker trains.

Furthermore, the Stadler vehicles also feature excellent resistance to severe winter weather – something it has proven with its trains in Norway, Finland, Estonia, Russia and Belarus, where extreme conditions occur regularly in the winter. This exceptional winter weather resistance is a result of the closed engine rooms, double-wall intercar gangways, snow scrapers between the bogies and carriage bodies, a heat recovery system, floor heating and high-quality insulation. Thanks to the lightweight aluminium design of the carriage bodies, the trains can accelerate more quickly, which results in a significant decrease in the energy required as well as lower operating costs compared to conventional vehicles. KISS trains are currently in operation in a total of six different European countries.

The new generation of the double-decker vehicles features an open, fluid architectural design. The passenger flow in the entrance area has been optimized – a change that makes a positive difference in particular in railway systems in urban regions with a large number of commuters, such as the commuter railway systems in Zurich and Berlin. The new KISS trains offer more legroom for passengers, and the train also provides a more open, spacious feeling. Stadler adapts the KISS vehicle bodies for Mälab so that the trains fit the Swedish clearance profile, which is higher and wider than the Swiss standard.

MTR Express ordered six intercity FLIRT trains from Stadler for the Stockholm–Gothenburg route already in November 2013. These trains went into operation in March of this year. Since the beginning of the year, Stadler has operated a maintenance site in Stockholm. As part of this current order, Stadler will of course once again involve the Swedish supply industry. The company has already worked together with a Swedish designer on the interior design of the trains.



# PKP CARGO and local authorities signed a contract on the establishment of an institute of culture in Wolsztyn

On Wednesday, June 29th, the Chairman of the Board of PKP CARGO Maciej Libiszewski and representatives of the Marshal's Office of Wielkopolska Region, District Wolsztyn and the town of Wolsztyn signed an agreement on the establishment of an institute of culture on the basis of the Steam Locomotive Depot Wolsztyn. Thanks to this, this almost 110-year-old historic property will continue to develop its activities and be a sign of the railway heritage in Poland.



"We are committed to foster the heritage of railway technology and promote the tradition of Polish railways. This goal is to be achieved by creating an institute of culture in the Wolsztyn Steam Locomotive Depot. I am satisfied that our initiative was a success, because such formula is a good solution from the perspective of interests of PKP CARGO. It will enable at the same time to continue the operation and

development of the Steam Locomotive Depot "says Maciej Libiszewski, Chairman of the Board of PKP CARGO.

PKP took over the Wolsztyn Steam Locomotive Depot in 2003 and provides for it to this day. The company carries out inspection and main repairs of the locomotives, reconstituted the historical wagon trains and restored a large number of machines, equipment, tools and other items used on the railway. The activity of the Steam Locomotive Depot after signature of the agreement on the establishment of the institute of culture will be financed by all of its co-founders. Taking up the business by the institute of culture could mean a reopening of regular runs of trains operated by Wolsztyn Steam Locomotives, with the support of these activities by railway tourism on a commercial basis. This is a good chance for the development of the historic Steam Locomotive Depot.

As the largest freight rail operator in Poland, PKP CARGO assumes the role of the patron of railway technology monuments. For years, the company provides for the historical rolling stock in Chabowka, Małopolska Region and Wolsztyn, Wielkopolska Region. It also promotes the tradition of railways by organizing railway events – "The parade of locomotives" and "Parowozjady", attracting tens of thousands of railway fans from Poland and all over the world.



## Important contract for independent cargo services of Coke from Poland to Germany

Since the beginning of May, PKP CARGO transports Coke for the JSW Group from South Poland to a customer in North Rhine-

Westphalia. Several thousand tons of this raw material reaches per month the Western region of Germany. The largest Polish carrier realized the supplies individually throughout the entire section, in a so-called shuttle system. It is an effective way of transport – the shipment reaches the target station and then the empty wagons are returning to Poland in a compact train composition. PKP CARGO provided four such shuttle trains for the realization of this contract.



When realizing individually transports from Poland to Western Europe, we use our large potential. PKP CARGO is an experienced carrier and partner for the biggest industrial groups in Europe - says Grzegorz Fingas, member of the Board for trade matters of PKP CARGO. – We want to constantly increase our presence and activity outside Poland, in accordance with strategic provisions for the period 2016-2020 adds Grzegorz Fingas.

PKP CARGO transports Coke for the JSW Group in specialized freight cars adapted to support this particular agreement. The organization of transport within the frames of a shuttle system allows for an efficient and effective realization of deliveries, rationalizing operational costs. The handling of the new contract requires PKP CARGO to run from three to four trains per week. The highest quality of performance of the contract is ensured by the implementation of a monitoring system - the carriage is tracked from the moment of departure of the train until arrival at the destination. The transport services are very demanding, but PKP CARGO carries them out with the utmost care. This applies above all to the timeliness of deliveries and ensuring a rolling stock with the highest quality parameters.

PKP CARGO transports the exported coal and coke to the Polish sea ports and more than a dozen European countries, delivering the greatest volumes to customers in Germany, Austria, the Czech Republic, Slovakia and Ukraine. To support these transports, PKP CARGO uses mostly standard freight cars, the so-called coal wagons. Some export services are carried out in containers. In 2015, the transport of coke in intermodal system accounted for more than 5% of all the services provided by PKP CARGO.

Part of the transport of exported solid fuel PKP CARGO carries out in cooperation with other carriers, including AWT – a Czech operator within the PKP Group. The JSW Group is a leading exporter of coal and coke in Europe. Most transport services are provided by the PKP CARGO Group.



### Thameslink Programme: Siemens trains enter service in London

The first Desiro City train from Siemens for the Thameslink network in Greater London entered service in June. Operator Govia Thameslink Railways (GTR) will operate the trains between Bedford and Brighton initially, followed by the routes to and from Cambridge and Peterborough as well as other destinations in the shires of Kent and Sussex. By the end of 2018, a total of 115 trains will have been delivered. Siemens will take over the complete long-term servicing and maintenance for this new fleet of trains.

#### 24 trains per hour peak timetable across central London by the end of 2018.

"When designing our trains, passenger benefit was at the center of our considerations. We wanted trains that enhance capacity on Thameslink's lines, are reliably available to our customer and improve passenger experience," said Jochen Eickholt, CEO of Siemens Mobility Division.

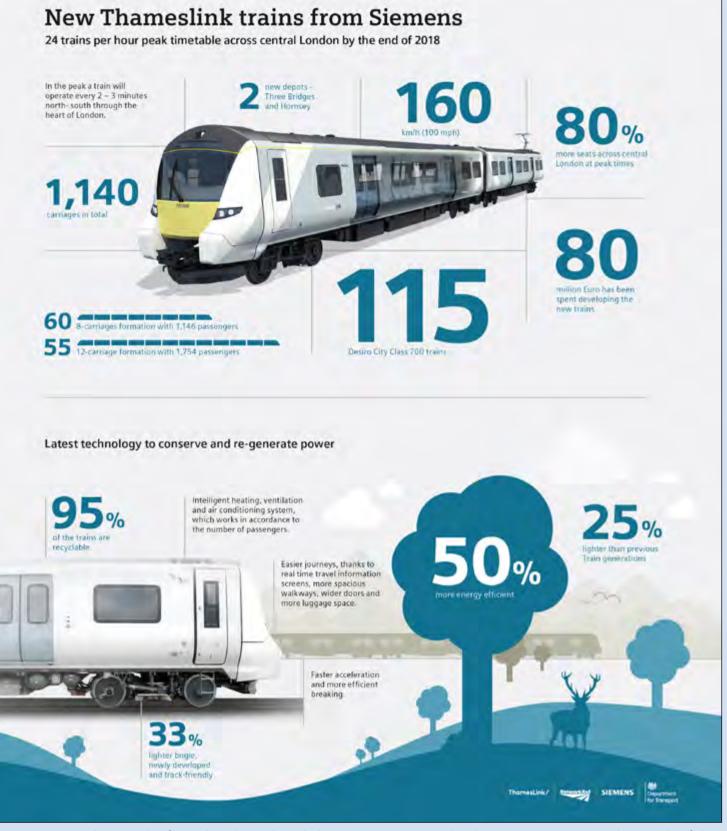
Engineering Director Gerry McFadden said: "We are thrilled that our new Thameslink train is performing well. In future, as the train continues to prove itself, we will begin running it across London to Bedford. Ultimately the train will give passengers much-needed additional capacity with longer trains throughout the rush-hour, creating at least 1,000 extra standard class seats."

Passenger numbers in the Thameslink network have grown enormously. Passenger volumes increased by 40 percent in the past ten years alone, and a further substantial increase is expected in coming years. In order to handle this growing demand for capacity and, above all, to better cover peak periods in the centre of London, the government-funded Thameslink Programme was initiated. Around six billion British pounds are flowing into the construction of new stations, the upgrading of infrastructure and the extension of rail routes, as well as in new and longer trains and signalling systems that enable underground-like service. The goal is to have trains operating every two or three minutes along the route through the city centre during peak periods. This would be equivalent to 24 trains per hour. The inauguration of service of the first Class 700 trains marks an important programme milestone.

The trains provide over 80 percent more seating through the heart of London during peak periods, are around 50 percent longer than trains in the existing

fleet, and have a capacity of 1,750 passengers. Wide doors facilitate the quick boarding and alighting of passengers, and electronic displays indicate where seats are available in the cars.

Siemens will be responsible for the trains' availability on the basis of a long-term service and maintenance contract. Two depots have been built for this purpose. Three Bridges, the depot



in the south of London, has already begun operation. The depot in Hornsey, in the north of the city, will open later this year. With the help of predictive maintenance systems, the performance and wear of individual train components will be digitally monitored. This makes it possible to exchange parts even before a problem actually occurs, increasing the availability of the trains and the overall reliability of London's public transport. All in all, Siemens has invested over 300 million GBP (390 million euros) in building and equipping the depots.

#### Alstom and NTL inaugurate the underground section of the T6 tramway line in Ile-de-France

Valérie Pécresse, President of the STIF and of the Region of Ile-de-France, Elisabeth Borne, Chief Executive Officer of the RATP, Benoît Stéphan, Director of Sales and Marketing for Alstom France and David Journet, Managing Director of NTL inaugurated on Saturday 11 June the underground section of line T6 of the Ile-de-France tramway.

28 Translohr STE6 trams on tyres (46m long) have been in circulation on line T6 since December 2014, as far as the stop Robert Wagner. The commercial



entry into service of the underground s e c t i o n, representing the final portion of the line, is a big technical challenge for NTL with the 1.6 km tunnel section at Viroflay which includes a 10% slope. This performance has

been made possible via the gradeability of Translohr's trams on tyres, which combine tyre grip with additional motorisation on two axles.

Ordered in December 2007 by the RATP, the trams of line T6 can accommodate up to 255 passengers. They offer unique ease of insertion, with reduced gauge and a short turning radius. Their structure on tyres and guidance system, installed on a central rail, make for silent, comfortable trams.

On 1 June, the STIF and the RATP also confirmed their decision to order 4 new STE3 tramsets (25m long) for line T5 between Saint-Denis and Garges-Sarcelles, thereby renewing their trust in the Translohr trams supplied by Alstom and NTL. The reinforcement of the fleet will increase the capacity of the line by 25%. The delivery of the four tramsets is scheduled to take place by the end of 2017. Operated all over the world (Shanghai, Tianjin, Padoue, Venise-Mestre, Medellín) as well as in France (Clermont-Ferrand and Ile-de-France), 136 tramsets are currently in circulation and 140 have been ordered worldwide.

### Grupa Azoty and PKP Cargo strengthen cooperation

On Thursday, June 23rd at the headquarters of the Warsaw Stock Exchange in Warsaw, the Presidents of Grupa Azoty and PKP CARGO have signed a two-year contract for the carriage of more than 4 million tons of fertilizer and chemical products, as well as raw materials for the companies of Grupa Azoty. The estimated total value of the contract is close to 200 million PLN. The cooperation between PKP CARGO and Grupa Azoty is governed by a framework agreement and separate volume agreements with five companies of the chemical-fertilizer Tycoon. This is a continuation of the existing cooperation between those entities. The contract was signed in the presence of David Jackiewicz, Minister of the Treasury.

Within the frames of the new contract, PKP CARGO will provide comprehensive transport services on behalf of Azoty Group. The biggest carrier in Poland will transport among others fertilizers, chemical products and goods in containers to national recipients and will also handle international connections. The latter concern among others connections to Polish ports. Part of the shipments will include transports between companies within Azoty Group. On the basis of the new contract, PKP CARGO will for two years handle the following five companies: Grupa Azoty Zakłady Azotowe "Puławy" S.A., Grupa Azoty Zakłady Azotowe Kędzierzyn S.A., Grupa Azoty Zakłady Chemiczne "Police" S.A., Grupa Azoty Kopalnie and Sulfur Chemical Plant "SIARKOPOL" S.A. with seat in Grzybów.

"The cooperation of key companies for the Polish economy is a clear signal, indicating the realization of objectives set by the Ministry of Treasury to strengthen the economic patriotism. I'm glad that PKP Cargo and Grupa Azoty establish close cooperation and I'm confident that it will help to strengthen their market position not only in Poland, but also in Europe. Rebuilding a strong and independent native economy is a priority set by the Ministry of Treasury. I believe that the exchange of services and experiences in the framework of companies based on Polish capital, and thus keeping their financial funds within the country, will be a solid foundation in the construction of a healthy industry, as well as a prosperous society" points out David Jackiewicz, Minister of the State Treasury.

In the last 12 months, the biggest Polish freight rail operator carried for Grupa Azoty 3.5 million tons of goods. The handling of these services is associated with running an average of nearly 10 trains a day.

"For many years we successfully cooperate with PKP CARGO in the area of rail transport. This company has the biggest rolling stock, including specialized wagons for the carriage of chemicals and is characterized by a flexible approach to this huge logistics project, including transportation to and from the companies deployed throughout the country. This contract secures the carriage of 60% of our annual volumes. Through close cooperation, as in one integrated body within Grupa Azoty, we eliminate many kinds of risks related to a timely transport of high volumes of products and raw materials "summarizes Mariusz Bober, Chief Executive of Grupa Azoty.

The transports for Grupa Azoty are carried out primarily in block trains, as well as within the frames of distributed transport services (in small groups and in individual wagons). For this purpose, wagons belonging to Grupa Azoty and PKP CARGO's own rolling stock are being used. PKP CARGO initializes also for Grupa Azoty shipments of goods exported to Sweden. They combine rail, ferry and car. Fertilizers of the Polish manufacturer are transported in railway wagons to the port of Świnoujście, where they are transported by ferry to the port of Ystadt. From there, the cars were going to a freight terminal, from which trucks deliver fertilizers to final customers. On the basis of a separate agreement with Grupa Azoty, PKP CARGO also provides transports from Silesian coal mines and the mine Bogdanka in Lublin. The contract signed in March includes transport of almost 900,000 tons of this raw material.



# Leasing Company Akiem Signs Framework Agreement for 52 TRAXX Locomotives with Bombardier

Rolling stock leasing company Akiem. and rail technology leader Bombardier Transportation have signed a framework agreement for 52 BOMBARDIER TRAXX AC and MS\* locomotives with options for additional call offs. The agreement is conditional upon financial closing related to Akiem Holding. The first batch subject to the fulfilment of the condition of 26 locomotives ordered from this framework agreement is valued at a list price of approximately 95 million euro (\$107 million USD). Deliveries of the first units are scheduled to take place in 2017.

With a large selection of TRAXX AC3, and MS locomotives, this partnership allows for various technical options, such as the Last Mile and remote control feature for TRAXX AC locomotives. The TRAXX locomotives supplied will be configured for use in 13 countries and will be fully compliant to the latest European standards including ETCS (European Train Control System) Baseline 3, when required. This will give Akiem the opportunity to extend the operational range of its locomotives and offer its customers a high degree of flexibility. In addition to the above mentioned framework agreement, Akiem exercised an option for the

delivery of five TRAXX DC\* locomotives, related to a previous contract.

"This significant investment with Bombardier will extend Akiem's fleet up to 100 TRAXX locomotives by 2018. We are accelerating our positioning on German and Austrian national markets as well as major European corridors towards Sweden, Benelux, Switzerland, Italy, Poland and Central Europe" said Fabien Rochefort, CEO of Akiem: "Through this successful partnership with Bombardier, Akiem keeps developing services



combining performance, proximity and security to meet our clients' requirements." Michael Fohrer, President, Locomotives, Light Rail Vehicles and Services, Bombardier Transportation, added, "We have been working with Akiem since 2011 and we are extremely happy to continue our long term partnership under this frame contract. This agreement enables Bombardier to consolidate the TRAXX locomotive's presence in some of the most promising rail corridors." The locomotives are powered by BOMBARDIER MITRAC traction converters offering unmatched reliability. The sophisticated MITRAC control system offers safe and energy efficient traction power for sustainable mobility. MITRAC equipment drives more than 3,000 locomotives globally.



## Alstom's integrated tramway system starts operation in Rio a few months before the Olympics

Alstom celebrated, with VLT Carioca concession company and the city of Rio de Janeiro, the start of operations of its first tramway line, on time for the summer Olympic Games. The inauguration took place on Sunday 5 June in the presence of Eduardo Paes, Mayor of Rio de Janeiro and Michel Boccaccio, Senior Vice President of Alstom in Latin America.

"Alstom is proud to deliver Rio's tramway line in time for the summer Olympic Games. This is a great moment for its residents and for visitors coming from all over the world as the tramway will help to reduce congestion and pollution while offering a transport mode that is comfortable, reliable and efficiently connected to other forms of mobility," says Michel Boccaccio.

The Rio tramway network consists of three lines covering more than 28 kilometres, with 31 stations. The portion of the line that is opened covers a distance of 7 kilometres connecting Santos Dumont to Parada dos Museus (Praça Maua). The 7 other kilometres will open before the beginning of the Olympic Games. Well connected to other modes of transport, the tramway lines will significantly improve traffic in downtown Rio.

The tramway project - which was initiated by the municipality of Rio to modernise the port area - was awarded to Alstom by the VLT Carioca consortium in September 2013. Alstom is responsible for providing a full integrated tramway system which includes: 32 Citadis trams,

electrification, signalling, telecommunications and depot equipment. To preserve and restore Rio's authentic architecture, VLT Carioca has opted for Alstom's catenary-free power solution combining two innovative technologies: APS, which supplies power via a third rail on the ground and Supercapacitors, modules installed on the roof of the tram which store and regenerate energy.

Made up of seven cars, the 44 metre-long Citadis tram is able to carry up to 420 passengers at a time and up to 200,000 passengers per day. The first five trams were designed and made in La Rochelle in France while the 27 others are being manufactured in Taubaté, the first tram factory in Brazil.

Alstom masters every stage of tramway system, from design to complete validation and commissioning and maintenance. The company is leader in the supply of integrated tramway

system and was recently awarded projects in cities like: Cuenca in Ecuador, Lusail in Qatar, Ouargla, Mostaganem in Algeria, or Sydney in Australia.























