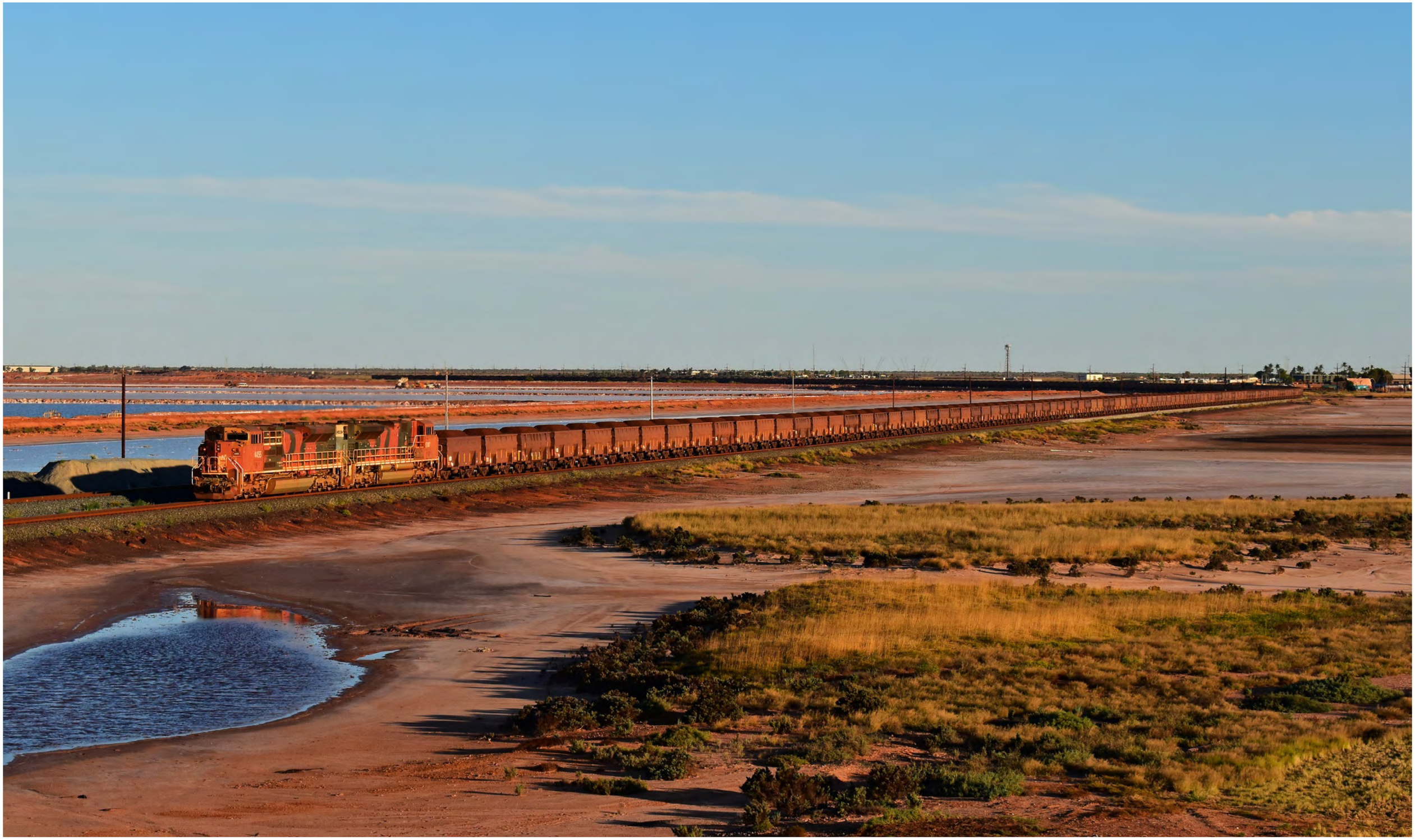


Railtalk Magazine *Xtra*

Issue 177x
June 2021
ISSN 1756 - 5030

Contact Us

Editor

david@railtalkmagazine.co.uk

Content Submissions

entries@railtalk.net

Technical & Subscription Support

admin@railtalk.net

Content

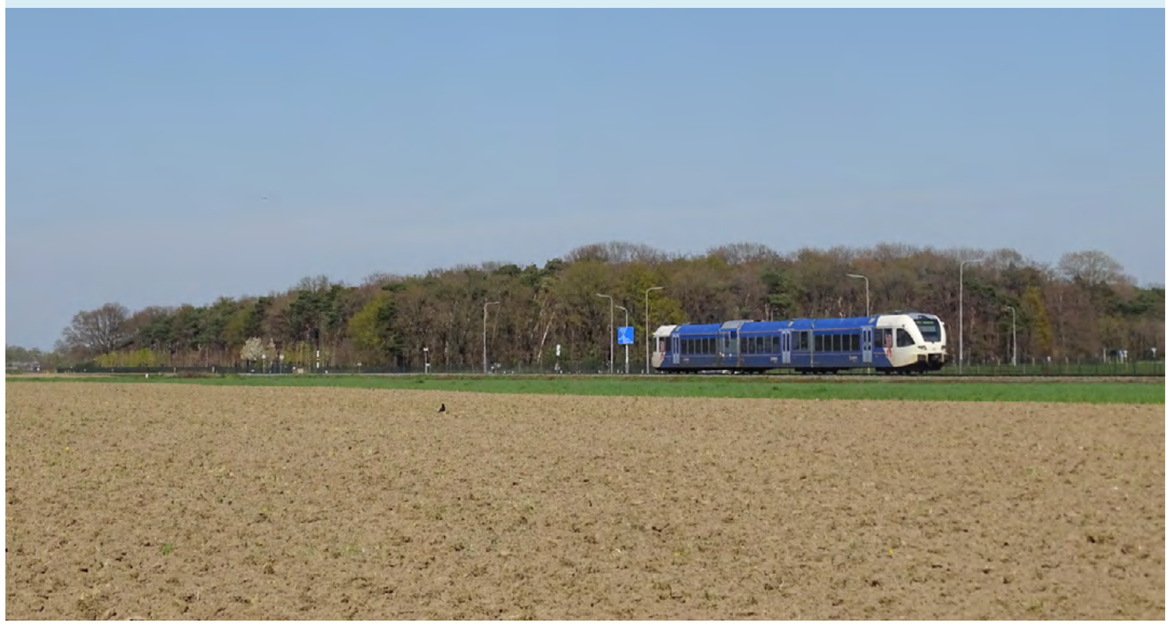
Submissions & Contributions

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

Photographic Contributions

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

All images should be provided at a resolution of at least 2400px x 1700px at 240dpi.



Welcome to Issue 177Xtra

As Europe and most of the world comes out of hibernation after various lockdowns, it is interesting to see how different countries are handling the 'new normal' as it has been called. Here in the UK, rail services have started to steadily increase in numbers and some fine warm weather has brought large numbers of tourist travellers but the business sector has still a long way to recover.

In France, the government handed a report to parliament on May 20th, the same day as reintroduction of the Paris – Nice overnight service, on the potential of introducing new cross-country inter-regional train services and overnight trains. In the case of daytime trains, the report examined the potential for eight daytime routes and identified three routes for possible development: Metz – Dijon – Lyon – Grenoble, Toulouse – Montpellier – Lyon and Nantes – Le Mans – Rouen – Lille. These would operate two or three times a day, using Coradia Liner bi-mode trains or CAF EMUs similar to those ordered for the Paris – Limoges – Toulouse route. As far as night trains are concerned, the report studies the opportunity for creating a network of overnight services and examines the potential for 20 domestic and five international routes. The experience of Austrian Federal Railways (ÖBB), which has recently expanded its network of international overnight trains, is examined in the report, in order to identify methods of operation which are financially sustainable.

Also from France is the news that the first TGV M fourth-generation power car for SNCF was unveiled at Alstom's Belfort plant on May 26th. "This eco-designed TGV, the first trains of which are scheduled to enter service in 2024, has benefited from the know-how of the best experts from Voyages SNCF and Alstom, brought together on a common platform during the definition and co-specification phases of the project," Alstom says. "This new way of designing a more innovative and efficient train is a first in Europe." Thanks to a more compact, simplified and streamlined architecture, TGV M will have lower acquisition and maintenance costs compared with the existing TGV Duplex double-deck train whilst gaining 20% in capacity. The return of energy to the catenary during braking, eco-driving and the aerodynamic shape of the nose allow overall energy savings of around 20%.

Meanwhile over in Germany, the ICE train celebrated its 30th birthday, as on May 29th 1991, six ICE 1 trains converged in Kassel-Wilhelmshöhe from different directions and officially inaugurated the era of high-speed rail travel. A few days later, on June 2nd 1991, the first ICE trains officially inaugurated high-speed service in Germany. The new Hanover-Würzburg and Mannheim-Stuttgart high-speed lines slashed travel times on north-south connections by up to two hours. Over the following years, the ICE 'family' was further developed and expanded: The ICE 2 debuted in 1996, followed by the ICE 3 four years later.
While the ICE 1 and ICE 2 were developed and built with the participation of Siemens, the ICE 3 was a complete Siemens in-house development. It was also the first high-speed train used for cross-border service to the Netherlands, France and Belgium, being designed for four different operating voltages and the various train protection systems. The ICE 3 was Germany's first high-speed train to reach a top speed of over 300km/h. All drive components were distributed completely beneath the floor, allowing the seating capacity to be significantly increased. In 2016, the ICE 4 from Siemens Mobility ushered in a new era in ICE service for Deutsche Bahn. With its flexible configurations and generous interior space (918 seats in a 13-car unit), the ICE 4 has become the new backbone of Germany's long-distance system. The trains have a top speed of 250km/h (up to 265km/h in the future). The ICE 4 order was the largest in the history of Siemens Mobility. A new ICE 4 is currently being added to DB's long-distance fleet every three weeks, and by 2024, Siemens Mobility will have delivered a total of 137 ICE 4 trains.

Until next month

David

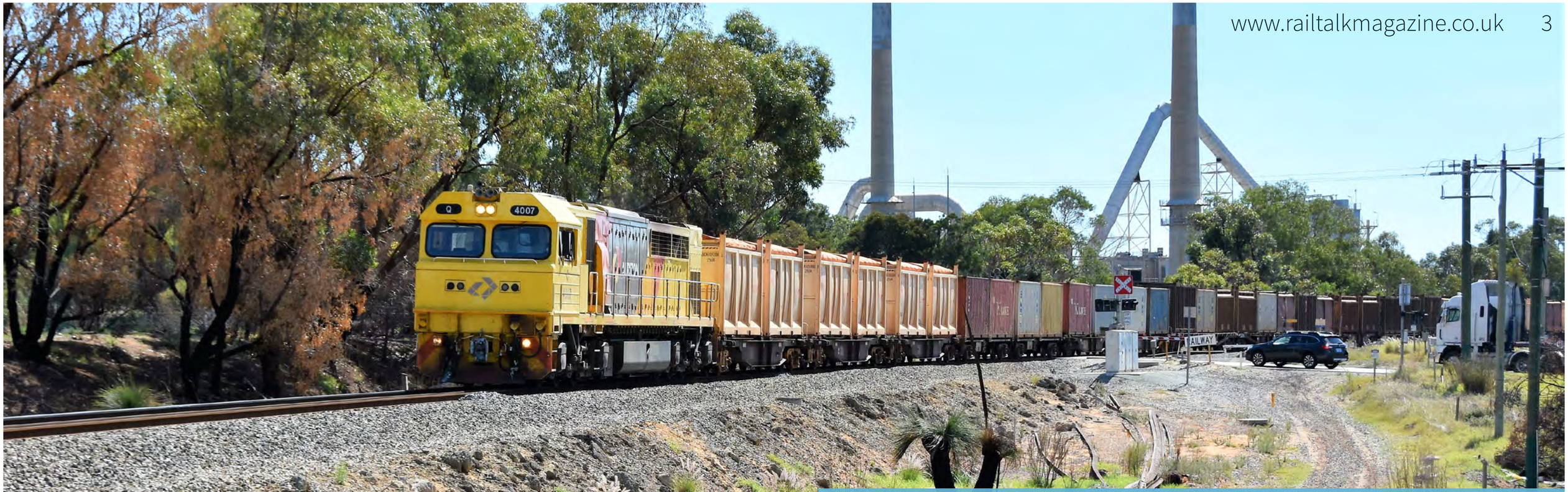
This Page

Arriva GTW-DMU No. 386 heads between the fields near Reuver on April 26th. *Mathijs Kok*

Front Cover

On May 9th, BHP Nos. 4455 and 4387 arrive with a loaded iron ore train outside Port Hedland Yard.

Mark Bennett



Aurizon's standard gauge No. Q4007 passes the Cockburn Cement works as it approaches its destination of Kwinana with train No. 5430 with empty containers from a mine site at Malcolm, approximately 900 kilometres to the east. *Colin Gildersleve*

Terms & Conditions

Railtalk Magazine is a free monthly online digital magazine (e-mag), provided in PDF format.

Railtalk Magazine takes no responsibility for any information provided or printed in this magazine. Best efforts are made at the point of going to publish, to effect all information is correct, however no guarantees are given or implied.

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

HAD-PRINT
Unit 2-4, France Ind. Complex,
Vivars Way, Canal Road, Selby
North Yorkshire YO8 8BE

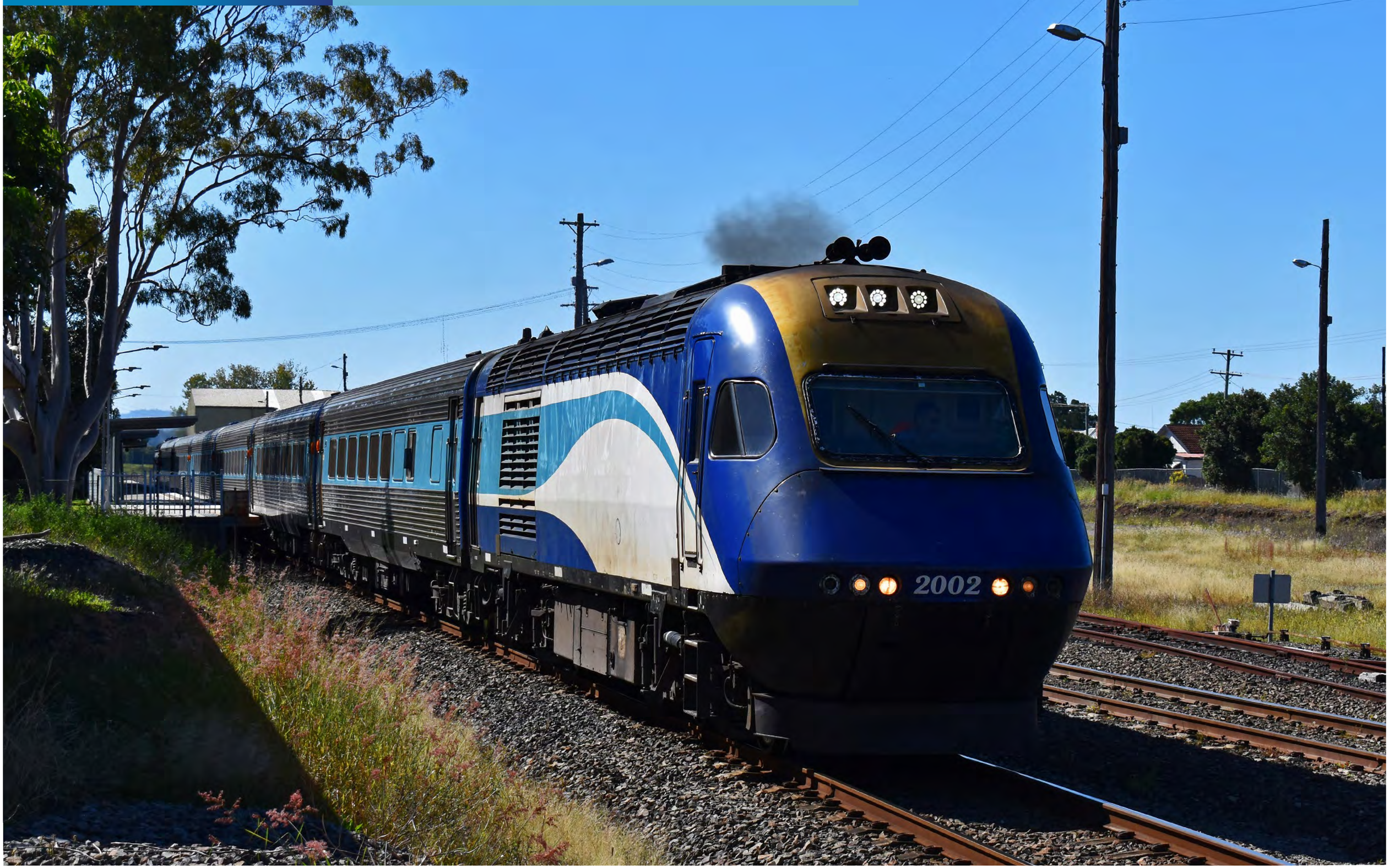
info@had-print.co.uk | 01757 600211

With Thanks

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

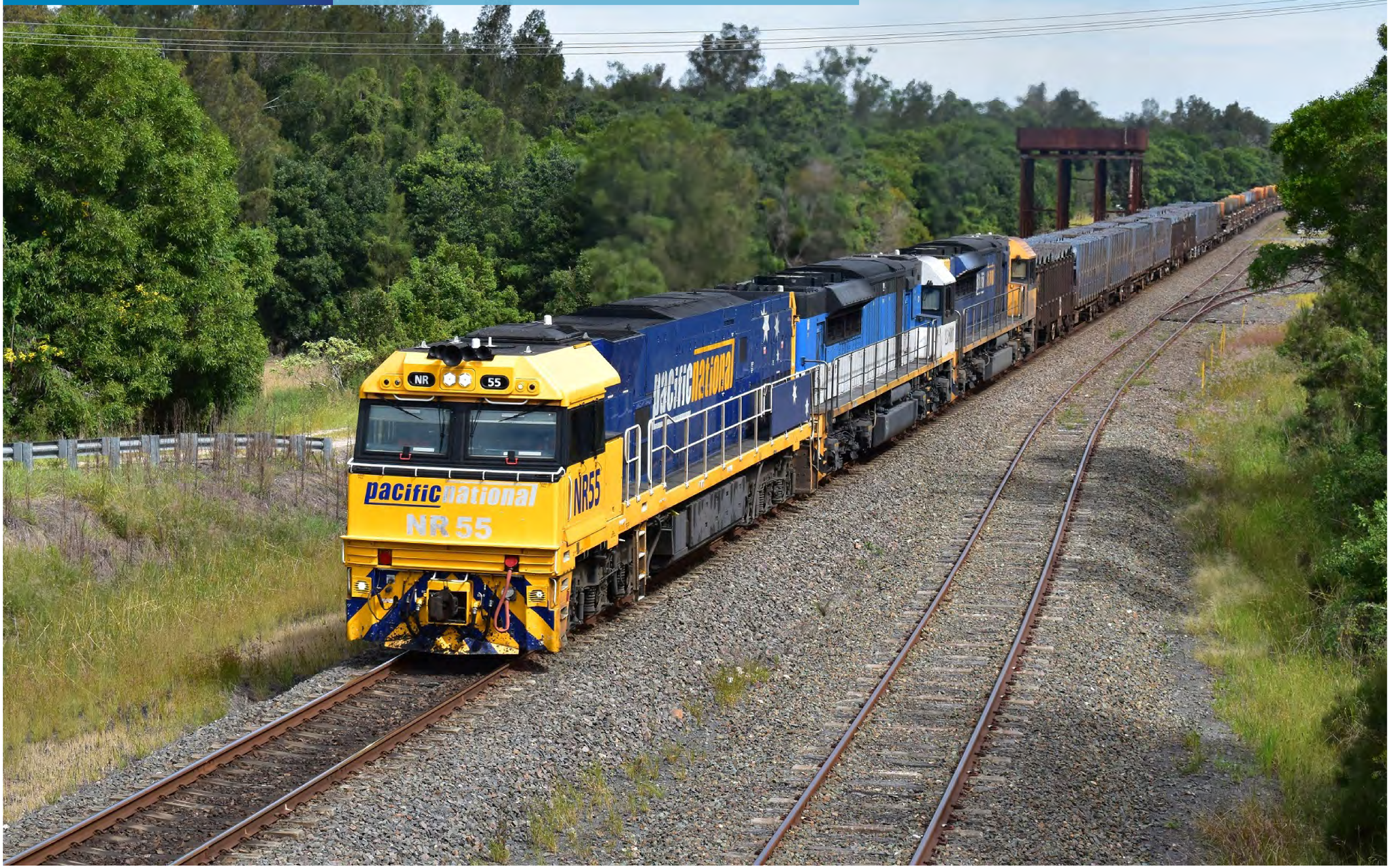
These issues wouldn't be possible without: Ray Anslow, Brian Battersby, Mark Bearton, Mark Bennett, Tim Blazey, Rob Boyce, Keith Chapman, Julian Churchill, Nick Clemson, Derek Elston, Mark Enderby, Tim Farmer, Dave Felton, FrontCompVids, Paul Godding, Richard Hargreaves, Jim Haywood, Keith Hookham, Colin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

NT32, the Brisbane to Sydney XPT service departs Kempsey on April 23rd with power car No. 2002 leading. *Mark Bennett*



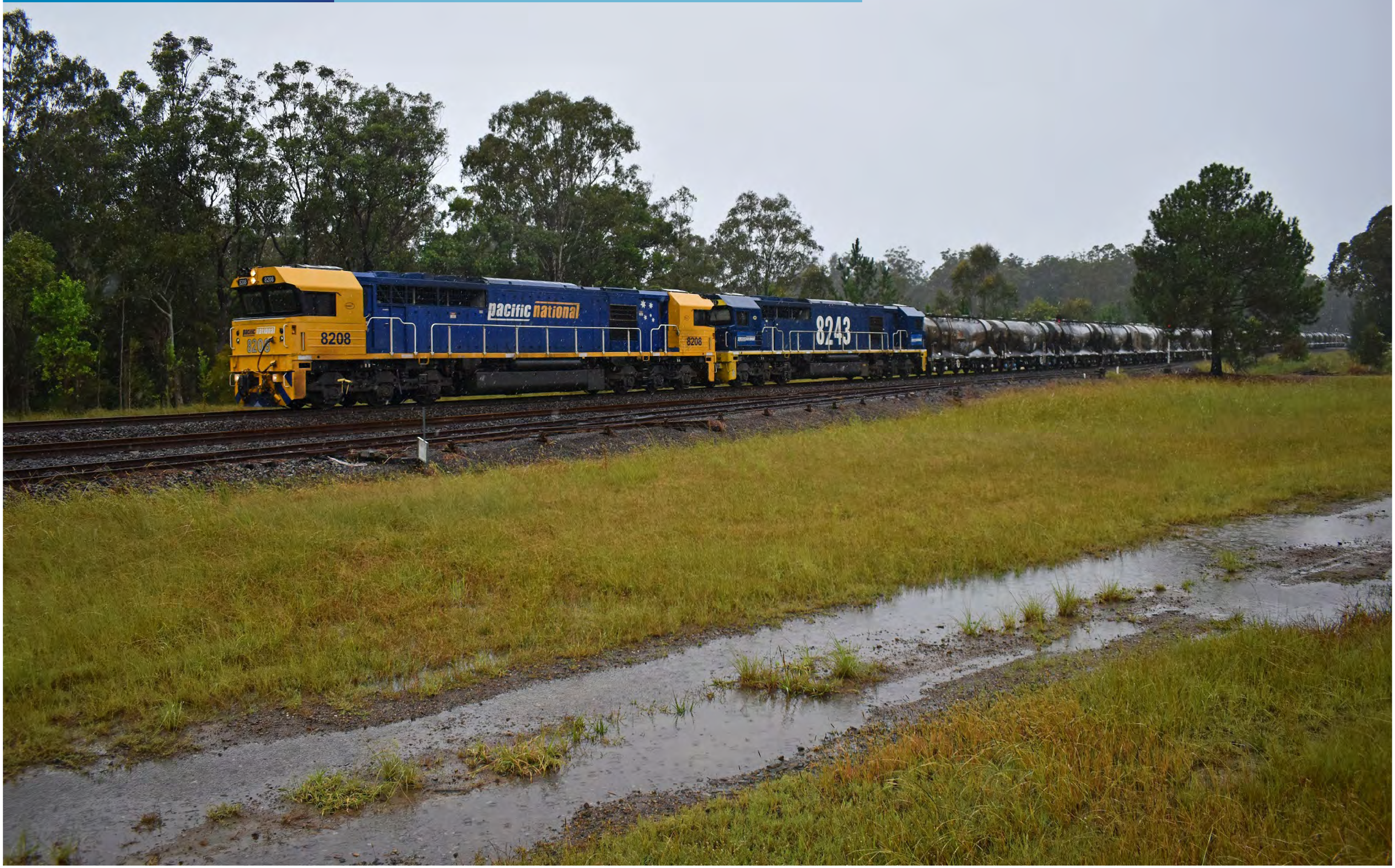
Australia

The 5WB3 Port Kembla to Brisbane steel products service is seen at Telegraph Point on April 16th, hauled by freshly overhauled and repainted Pacific National No. NR55 leading LDP001 and TT111. *Mark Bennett*



On May 9th, BHP iron ore trains pass outside Port Hedland Yard. Nos. 4455 and 4387 arrive on a loaded service and are held as Nos. 4342 and 4467 depart with an empty working.
Mark Bennett

On April 17th, a wet Kundabung on the NSW mid-North Coast sees the No. 4621 cement train to Grafton passing through behind Pacific National Nos. 8208 and 8243.
Mark Bennett

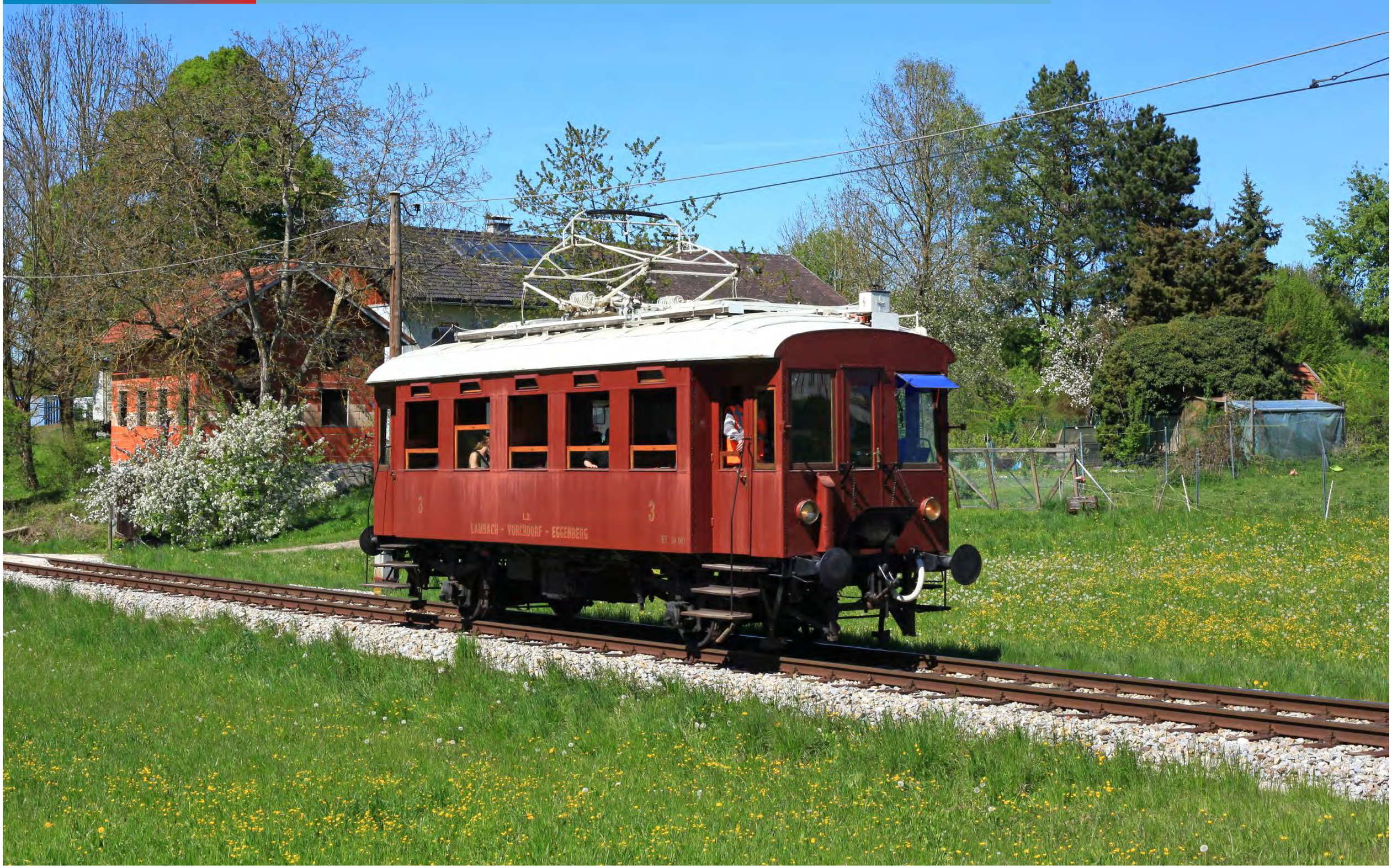


Two of Transperth's 3-car B series EMUs cross the Swan River and slow for the sharp 'S' bends as it enters the underground section of the Perth to Mandurah line.
Colin Gildersleve

The No. 4621 cement train from Newcastle to Grafton is seen at Telegraph Point on the NSW Mid-North Coast behind Nos. 8257, 8183 and 48101 on May 15th. *Mark Bennett*

Aurizon's narrow gauge No. S3303 passes by, high up on an embankment with cement tanks from the Cockburn Cement works to Kwinana yard, they will then be formed into a mixed freight and head to Kalgoorlie later that night. *Colin Gildersleve*

There was an anniversary at the beginning of May to celebrate 90 years ago the company Stern & Hafferl took over the operation of the branch line from Lambach to Vorchdorf-Eggenberg. Unfortunately, due to COVID, no large event could be held. It was therefore decided on Sunday, May 9th, to run two pairs of trains with the historic ET24.101 electric multiple unit from 1931. Here No. ET24.101 arrives the halt of Feldham working train No. R8223. *Thomas Niederl*

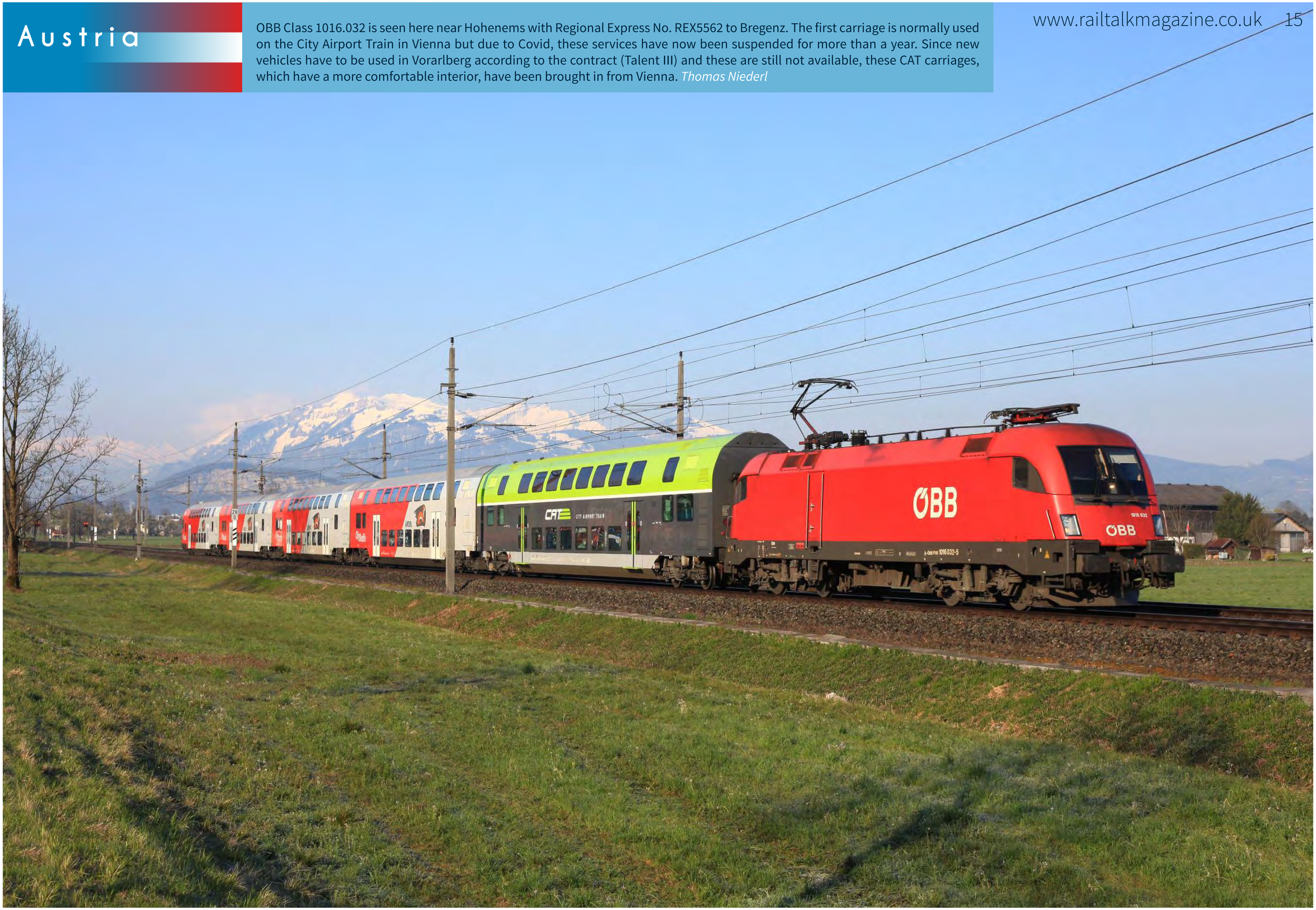


On May 9th, to celebrate the 90th anniversary of Stern & Hafferl, as well as the historic railcar on the previous page, another, even older railcar in the Stern & Hafferl fleet, the ET24.103 which was built in 1912 for the Linzer Lokalbahn, was also in operation. The vehicle was sold by Stern & Hafferl to a private person, but on this special day two special trips were made using the railcar. Here you can see the more than 100 year old railcar near Bad Wimsbach-Neydharting. *Thomas Niederl*

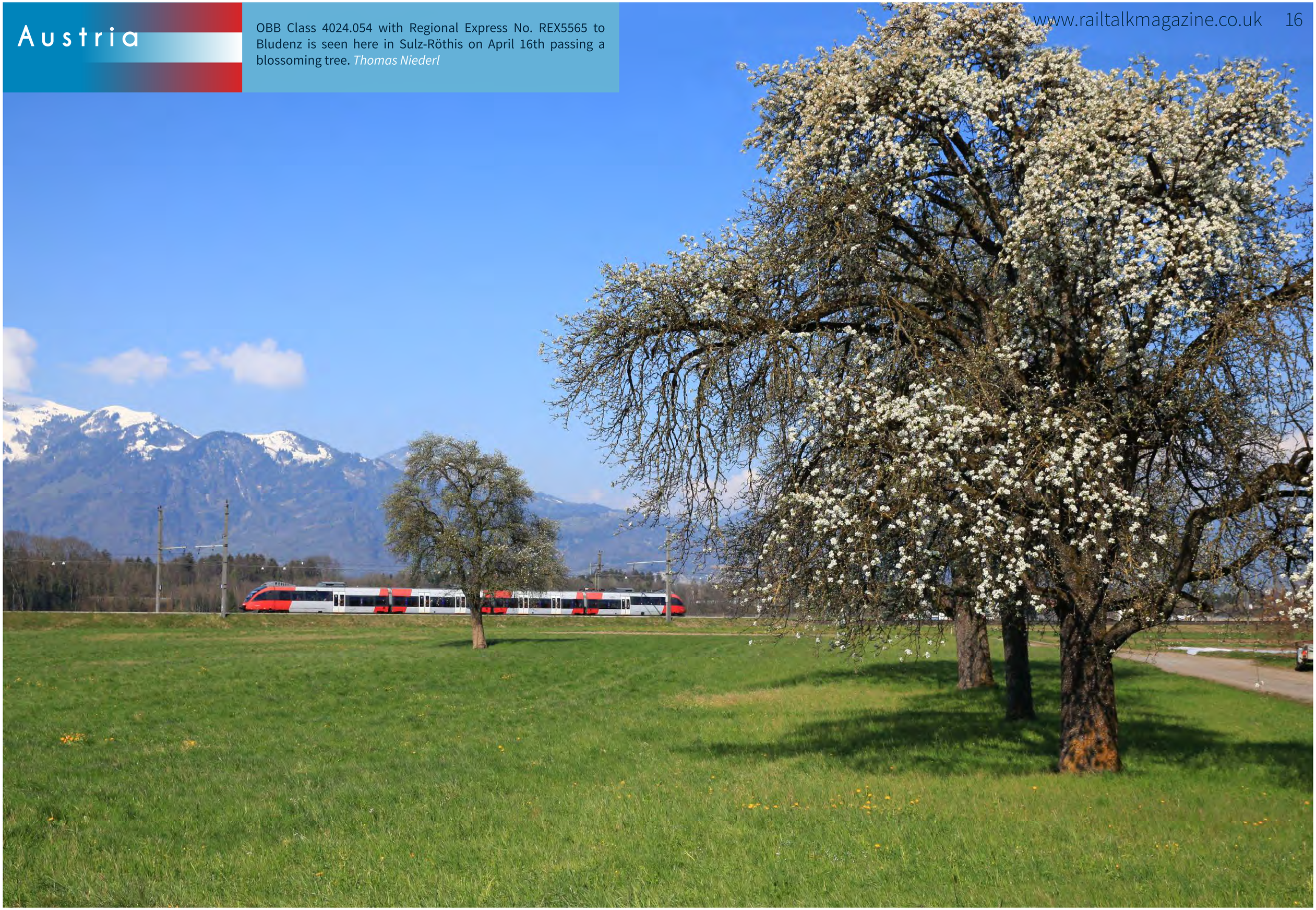
On May 9th, during the Stern & Hafferl 90 years celebrations, regular service train No. 8218 is seen here near Blankenberg led by No. ET22.136. This is the reserve vehicle and is only planned to be used for school trains but to the delight of the rail enthusiasts, this vehicle was in use on normal services. *Thomas Niederl*

On May 9th, during the Stern & Hafferl 90 years celebrations, a second special working with 100 year old railcar No. ET24.103 and 100 year old electric loco No. E20.010, which was bought second hand from Wuppertal, is seen here near Feldham.
Thomas Niederl

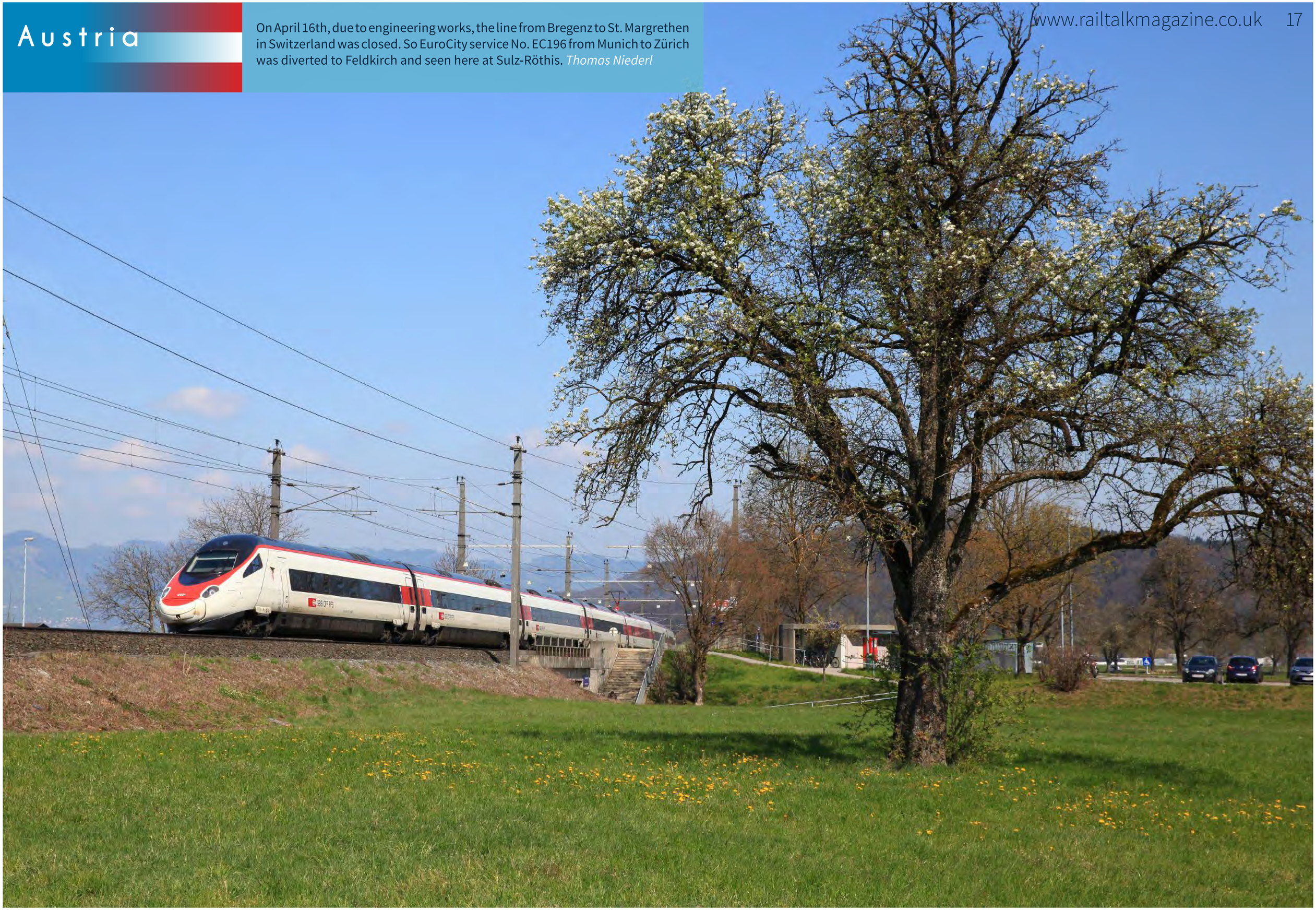
OBB Class 1016.032 is seen here near Hohenems with Regional Express No. REX5562 to Bregenz. The first carriage is normally used on the City Airport Train in Vienna but due to Covid, these services have now been suspended for more than a year. Since new vehicles have to be used in Vorarlberg according to the contract (Talent III) and these are still not available, these CAT carriages, which have a more comfortable interior, have been brought in from Vienna. *Thomas Niederl*



OBB Class 4024.054 with Regional Express No. REX5565 to Bludenz is seen here in Sulz-Röthis on April 16th passing a blossoming tree. *Thomas Niederl*

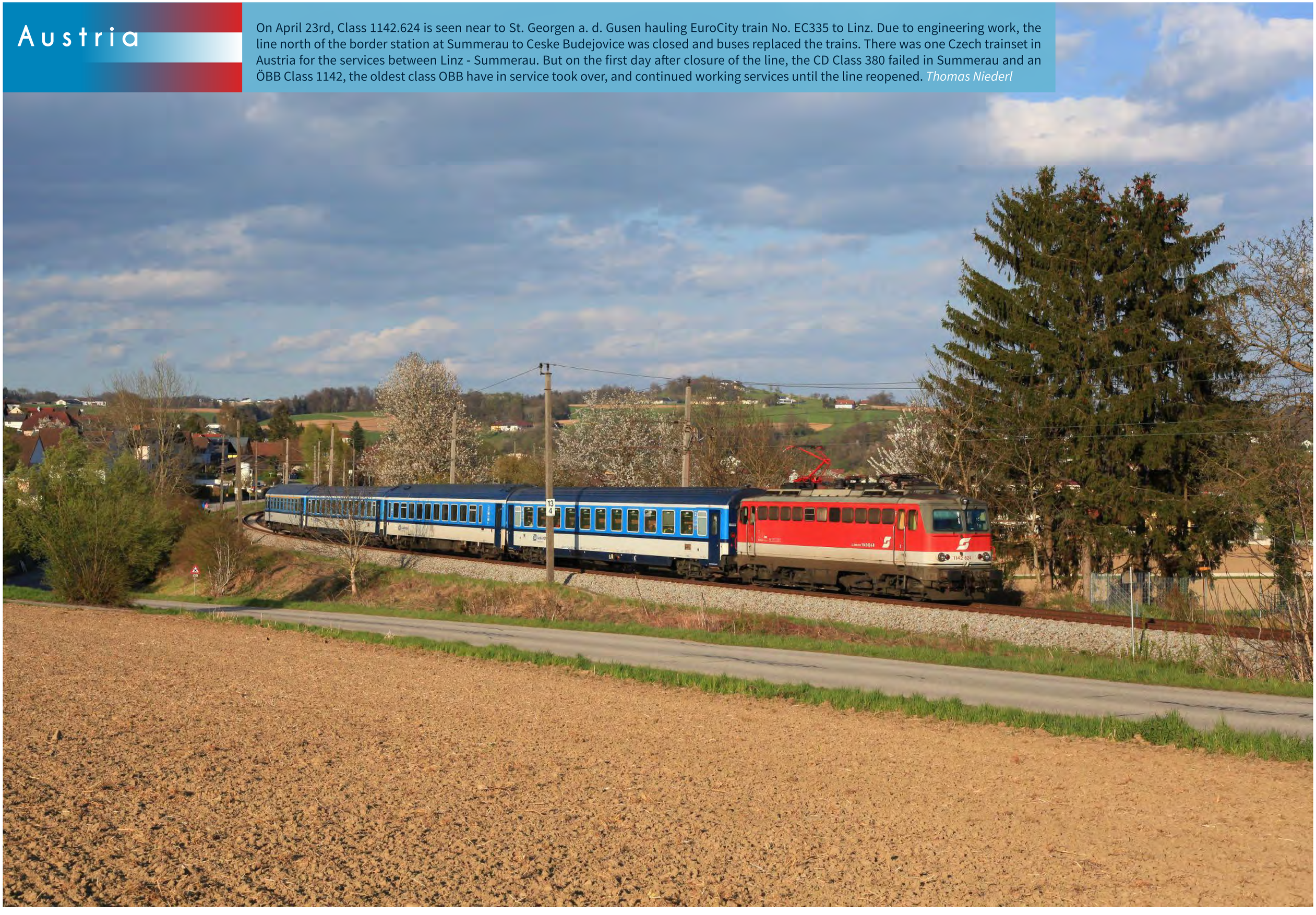


On April 16th, due to engineering works, the line from Bregenz to St. Margrethen in Switzerland was closed. So EuroCity service No. EC196 from Munich to Zürich was diverted to Feldkirch and seen here at Sulz-Röthis. *Thomas Niederl*



Austria

On April 23rd, Class 1142.624 is seen near to St. Georgen a. d. Gusen hauling EuroCity train No. EC335 to Linz. Due to engineering work, the line north of the border station at Summerau to Ceske Budejovice was closed and buses replaced the trains. There was one Czech trainset in Austria for the services between Linz - Summerau. But on the first day after closure of the line, the CD Class 380 failed in Summerau and an ÖBB Class 1142, the oldest class OBB have in service took over, and continued working services until the line reopened. *Thomas Niederl*



On May 9th, Stern & Hafferl EMU No. 22.136 is seen working service No. R8219 near Bad Wimsbach. *Thomas Niederl*

New connection between Turkey, Hungary and the Czech Republic

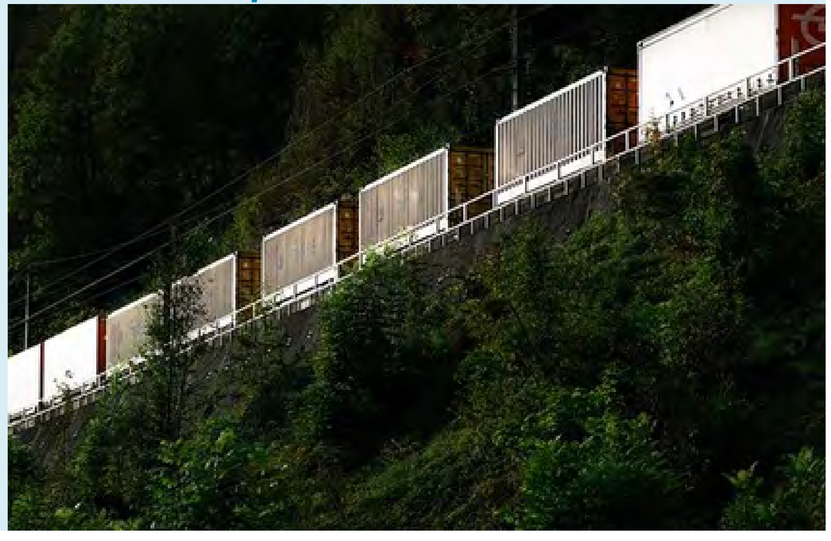
The ÖBB Rail Cargo Group is expanding its intermodal network by combining its new TransFER Budapest–Brno with increasing the frequency of its existing Budapest–Köseköy TransFER service. Combining the new TransFER between Budapest and Brno with increased frequency of services between Budapest and Köseköy means it will be possible to transport goods directly from the Asian side of Turkey to Hungary and on from there to the Czech Republic twice a week. Customers benefit from a new high-performance, stable connection between the Czech Republic and Turkey. DSV in particular will be availing of this for its customers. Both services are part and parcel of the TransNET, which facilitate onward distribution to all RCG destinations.

New TransFER Budapest–Brno

The RCG's new Budapest–Brno TransFER connection was launched on May 5th. It will provide efficient and eco-friendly transport services between Hungary and the Czech Republic for maritime and continental supply chains. This connection between the Container Terminal Brno and the Terminal BILK in Budapest provides a fast transit time of 12 hours and two round trips a week. The TransNET provides a link to Koper as part of the service running between these two destinations, with a fast, reliable and affordable connection between this Adriatic port and the Czech Republic as well as neighbouring Slovakia.

More round trips for the TransFER Budapest–Köseköy

The route on into Turkey will be bolstered with the launch of this new service. The RCG is going to increase the frequency of its TransFER Budapest–Köseköy to two round trips a week. The possibility of connecting the new TransFER Budapest–Brno with Anatolia and Central Asia / China provides opens up the possibility of linking up with economic hubs across all of Western Europe and connecting all of Eurasia to the RCG network. Strengthening the new partnership with the TCDD (Turkish State Railways) operator Pasifik Eurasia (Pacific Eurasia) at the Köseköy terminal provides a vital link for transport to and from Turkey and on into the CIS countries and China.



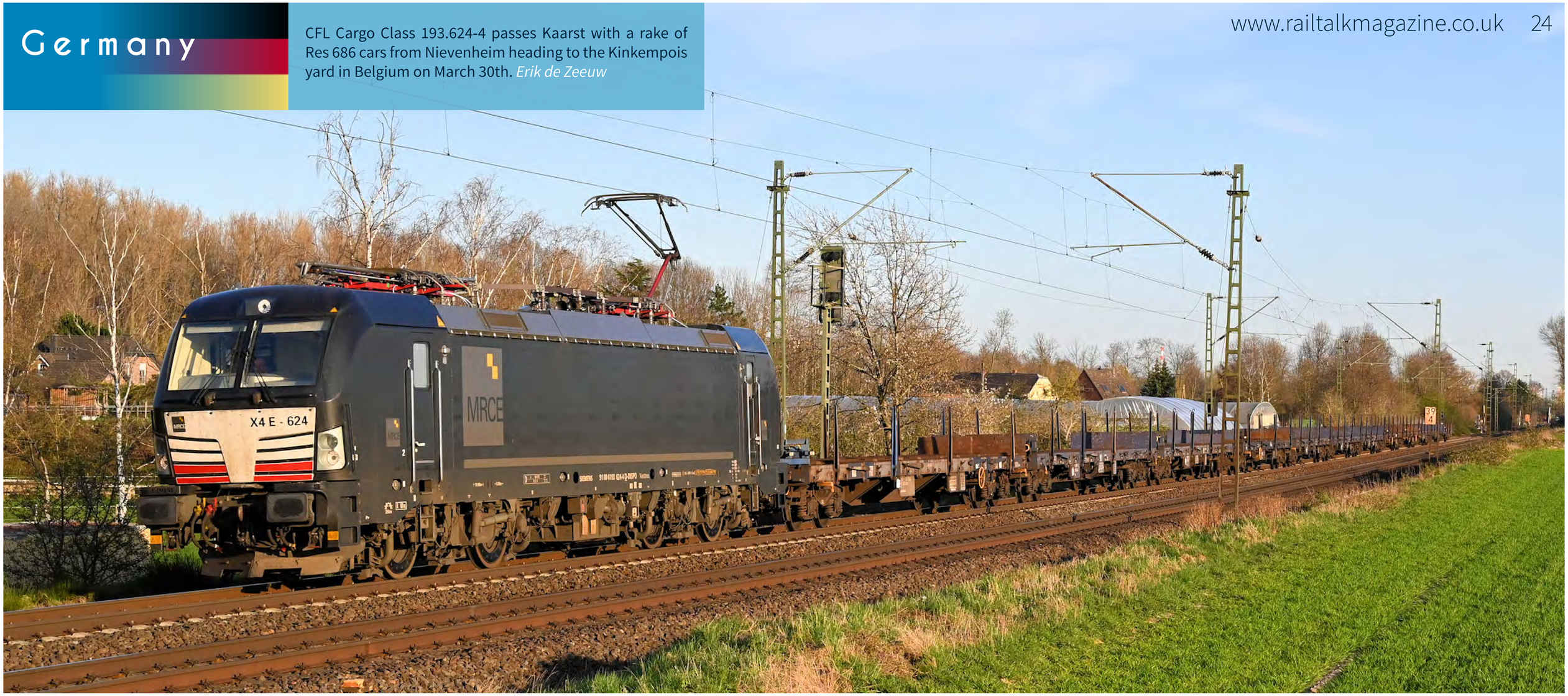
On March 19th, SNCB/NMBS No. 2745 has just departed Essen working IC service No. 4537 to Charleroi-Sud.
Erik de Zeeuw

On May 7th, near Wonck, Lineas Class 186.234-1 and a rake of Ea(n)os cars (empty scrap) are on the way from Genk to Germany. The signs on the masts are the first in a sequence, it means ‘start brake test’. In addition, the driver must perform a service braking to 30 km/h. This must be achieved before reaching the ‘end of braking test’ sign (further along). This is because the line heads downhill here. *Erik de Zeeuw*

At the height of Tiefenbroich, DB Class 232.669-4 leaves the main line to enter the Angerbach Valley line leading to the Rheinkalk calcium quarry in Wülfrath on March 24th. *Erik de Zeeuw*

On March 24th, duisport rail No. DE18 returns from Oberhausen West to Krefeld and passes Rheinhausen.
Erik de Zeeuw

CFL Cargo Class 193.624-4 passes Kaarst with a rake of Res 686 cars from Nievenheim heading to the Kinkempois yard in Belgium on March 30th. *Erik de Zeeuw*



Alstom to supply 32 Coradia Continental regional trains to Hessische Landesbahn

Alstom has received an order from Hessische Landesbahn GmbH (HLB) to supply 32 Coradia Continental electric multiple units. The order is divided into a total of twelve 4-unit and twenty 5-unit trains and has a total value of around €200 million. The trains will be deployed on the Central Hesse subnetwork operated by HLB starting in December 2023 and will operate on the following lines:

- Line RB37: Kirchain to Frankfurt Central Station via Marburg and Giessen
- Line RB40: Dillenburg to Frankfurt Central Station via Gießen
- Line RB41: Schwalmstadt to Frankfurt Central Station via Treysa and Giessen
- Line RB49: Giessen to Hanau Central Station via Freidburg

“We are delighted that Hessische Landesbahn has once again opted for our state-of-the-art electric multiple units. The Coradia Continental is the perfect solution for regional transport in Central Hesse. Reliable, fast, and quiet, it offers maximum passenger comfort and generous space for bicycles and luggage. I am particularly pleased that HLB has once again put its trust in Alstom, 35 identical trains have been running very reliably on HLB’s Southern Hesse-Untermain subnetwork since 2018”, says Müslüm Yakisan, President of Alstom in Germany, Austria and Switzerland.

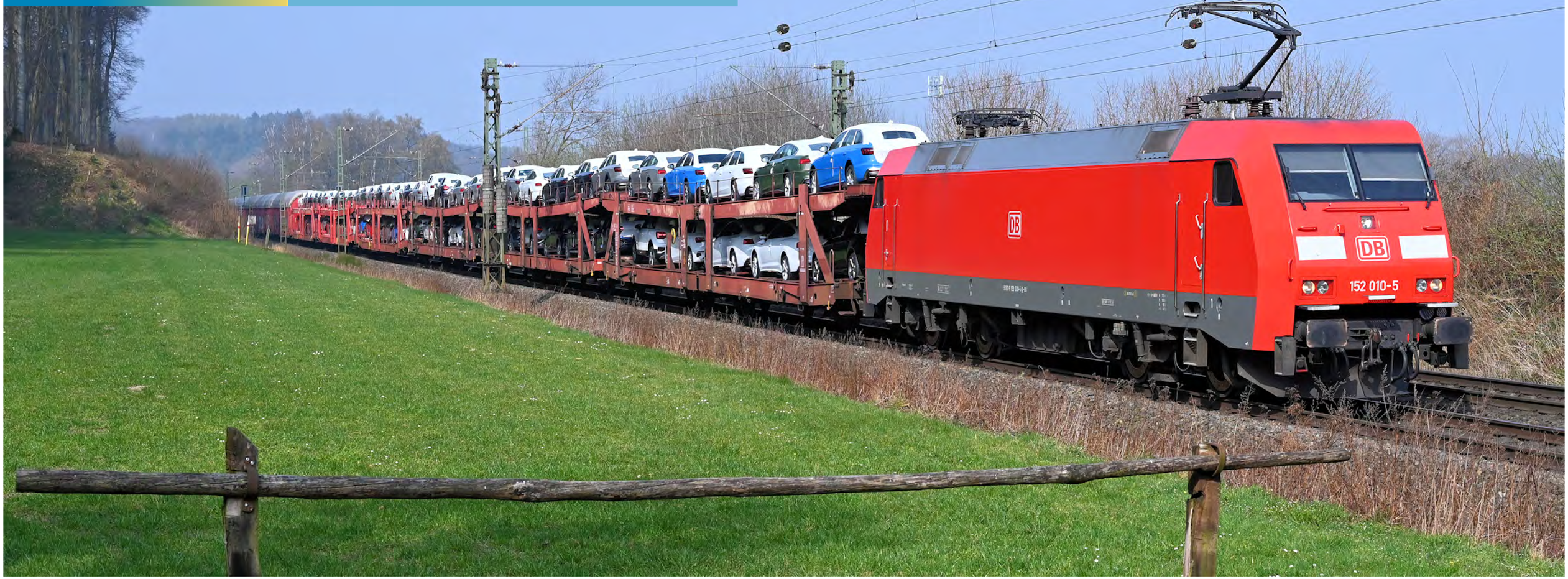
The Coradia Continental reaches an operating speed of up to 160 km/h and offers 200 and 280 seats respectively as four- and five-section units. Various multi-purpose areas keep sufficient space available for wheelchairs, bicycles, and baby carriages. The trains’ drive equipment is located on the roof, so the interior is generously proportioned, including a wide, step-free aisle for better passenger flow. In particular, an adapted boarding height, combined with additional sliding steps, also ensures very comfortable vehicle access. The Coradia Continental is equipped with Wi-Fi, electrical outlets for charging devices, as well as video surveillance and a real-time passenger information system that displays rail connection info.

“We have had a great experience with this vehicle in southern Hesse in terms of maintenance, reliability and passenger comfort. Therefore, we are pleased to begin using the Coradia Continental trains in our new Central Hesse network starting in December 2023,” says Veit Salzmann, Managing Director of Hessische Landesbahn.

Alstom’s Coradia series of modular trains benefit from more than 30 years of continuous development and proven technical solutions. More than 3,300 Coradia trains have been sold to date and around 2,900 are currently operating in Denmark, France, Germany, Italy, Luxembourg, the Netherlands, Sweden and Canada.

SNCB/NMBS EMU No. 662 is ready for departure at Aachen Hbf for a service to Spa-Géronstère (Belgium) on May 7th.
Erik de Zeeuw

DB Class 152.010-5 passes Bohmte with an ARS Altmann car train from Neckarsulm to Bremerhaven on April 1st.
Erik de Zeeuw



Alstom to equip DB Cargo freight locomotive with state-of-the-art ETCS technology for service in Belgium and the Netherlands

Alstom is further expanding its onboard signalling presence in Europe by signing a contract to equip yet another locomotive with the latest ETCS[1] signalling technology. This latest project, subsidized by the European Union's Connecting Europe Facility and the Dutch Ministry of Infrastructure and Water Management, will see Alstom's proven Atlas ETCS Baseline 3 Release 2 solution installed into one of DB Cargo's DE6400 freight locomotives. The new signalling technology will furthermore enable Belgian-Dutch freight traffic when the lines are converted to ETCS for the 2024/2025 timetable change in Belgium and the 2026/2027 timetable change in the Netherlands.

"We are delighted that DB Cargo has once again placed its trust in us for their modifications. Alstom is the first company to be fully certified in the latest rolling stock and trackside ETCS standards and our state-of-the-art signalling solutions adapt to the specific requirements of each operating environment, ensuring the highest standards for safe, trans-European freight transport," said Michael Konias, Head of Digital & Integrated Systems at Alstom for Germany, Austria and Switzerland.

Under the contract, the existing Dutch ATB-EG and ATB-NG systems, as well as the Belgian national system (TBL1+), will be integrated with the ETCS system. Among the most efficient train control systems in the world, this signalling technology modernisation will significantly improve Belgian-Dutch freight operations while increasing its safety, reliability, and punctuality - in addition to cutting maintenance costs. Retrofitting work for the first prototype will be carried out by freight locomotive maintenance expert Shunter, whom Alstom signed an acquisition purchase agreement with in March 2021. With the acquisition, Alstom will strengthen its expertise in the service sector and expand its presence in the Benelux countries.

Modifying this locomotive prototype is the latest step in Alstom's expanding position in on-board signalling technology withing the European freight traffic market. In January 2020, Alstom and DB Cargo announced a project to retrofit a total of 13 EG3100 freight locomotives with the latest ETCS signalling technology standard (Baseline 3 Release 2) for trans-European freight traffic between Germany, Denmark, and Sweden.

Worldwide, Alstom has over 13,000 employees working on digitalisation in the rail sector in the areas of signalling technology, smart mobility and cybersecurity with many of them based in Germany.

[1] European Train Control System

Germany

Metrans doubles number of container trains on the New Silk Road

HHLA rail subsidiary Metrans is one of Europe's leading provider of intermodal container transportation in seaport-hinterland traffic and is one of the pioneers of the rapidly growing railway transport along the New Silk Road. In the past year, Metrans has increased the number of container trains travelling between Europe and China by 114 percent.

The volume and frequency of rail freight traffic between Asia and Europe has increased significantly in recent years. The coronavirus pandemic and resulting capacity bottlenecks in shipping have given an added boost to rail transport links. According to the estimates of management consultancy Roland Berger, around 878,000 standard containers (TEU) were transported along the various rail corridors of the New Silk Road in 2020. The international railway organisation UIC assumes this number could double by 2025.

HHLA subsidiary Metrans is also benefitting from this trend. The intermodal company operated 913 trains in 2020 (2019: 426 trains) that originated in or went to China. This is an increase of 114 percent, with imports recording the largest growth (+131 percent). The transport volumes of Metrans on the New Silk Road are thus approximately 30,000 TEU.

Metrans CEO Peter Kiss: "30 years ago we began transporting sea freight containers to the European hinterland. Metrans offered the first regular shuttle train connection between Hamburg and Prague. Since this time, our network between European ports and its hinterland has grown every year. Additionally, we are one of the largest providers in the fastest growing market: rail transport between Europe and China."

Customers can now select numerous destinations across China as their start and end points. Currently, 60 to 80 Metrans trains per month connect Europe with key economic centres in the People's Republic, including Zhengzhou, Xi'an and Jinhua. Together with partners, Metrans assembles the block trains in China that are taken over by traction operators at the various hubs of the Eurasian rail corridor. These hubs are the Polish border terminal Malaszewicze (near the Belarusian city of Brest) and the Slovakian terminal in Dobra (near the Ukrainian border). The containers are then distributed throughout the entire Metrans network. The key hubs for the rail cargo flows between Europe and China by Metrans are its hub terminals in Budapest, Prague, Ceska Trebova, Poznań and Dunajska Streda.

The Port of Hamburg represents the central hub of Sino-German trade, for both the continental and maritime Silk Road. More than half of Germany's foreign trade with China is handled via the Free and Hanseatic City of Hamburg. The lion's share of this figure is seaborne. In 2020 alone, more than 2.4 million TEU were handled on the quaysides of Germany's largest seaport. 15 liner services connect the Free and Hanseatic City of Hamburg with Chinese ports. In Hamburg, the quayside and rail facilities are in close proximity to one another. As Europe's largest railway port, Hamburg also offers a dense network of wagon load traffic as well as shuttle and block train connections. Every week, almost 1,960 train departures to and from Hamburg are offered, including more than 230 weekly connections with China.

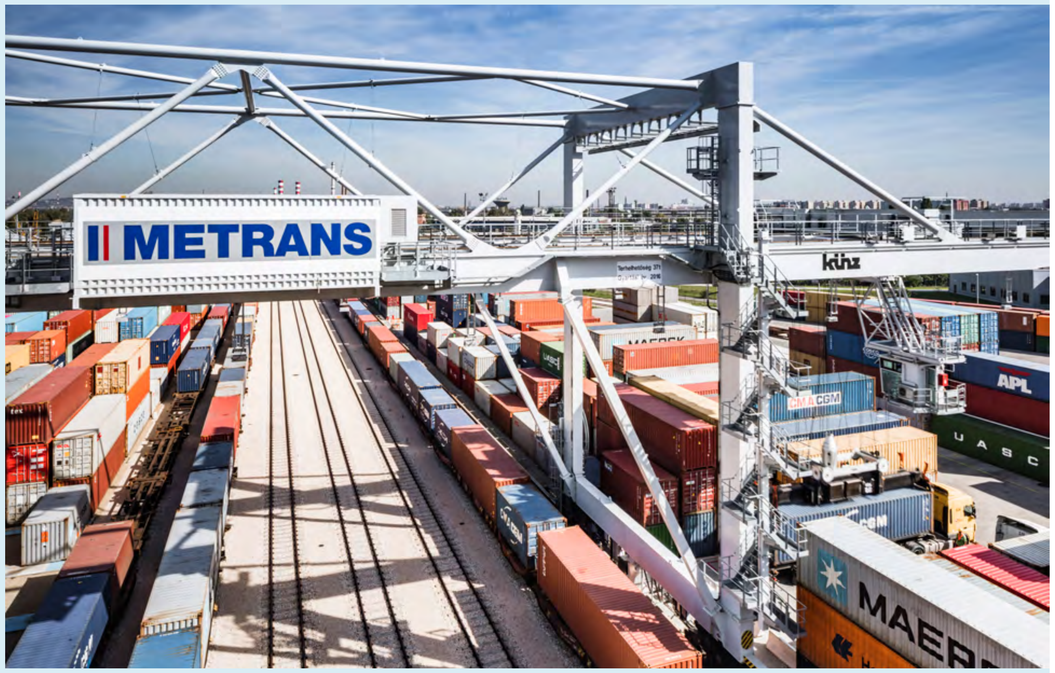


Photo: Metrans rail terminal in Budapest ©HHLA/Thies Rätzke

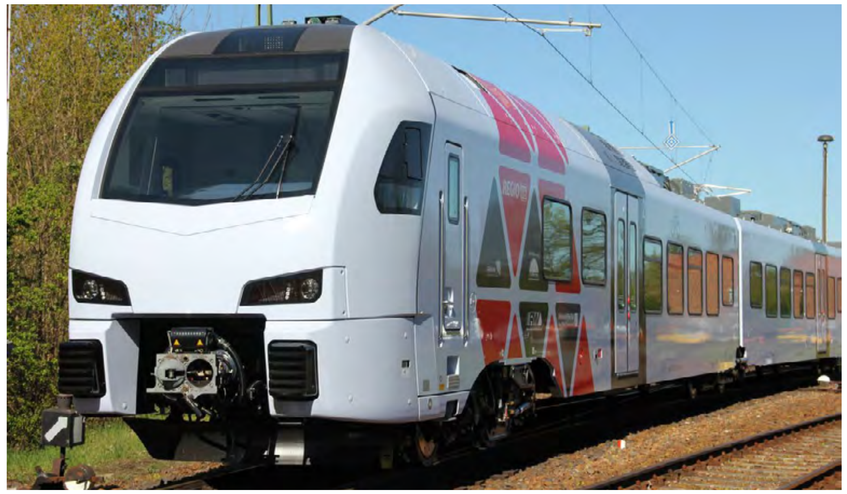
A "digital twin" makes trains more reliable

Deutsche Bahn and Stadler are developing the first virtual image of a complete train. Real-time data should help to maintain the air conditioning and doors in time so that they no longer malfunction.

A milestone for the digitalisation of rail operations: Deutsche Bahn and train manufacturer Stadler are developing the first virtual image of a complete train. It processes data from the real vehicle in real time, therefore preventing disruptions or breakdowns.

Representatives of both companies have signed a relevant cooperation agreement. In doing so, they are establishing a partnership between a rail company and a vehicle manufacturer that is unique in this form. Both parties see the cooperation as a model for other rail companies and manufacturers. For Deutsche Bahn, the virtual image of the train – a so-called "digital twin" – is the key to more reliable vehicles and more capacity on the rails. With the help of digital twins, it will be possible to send trains for repair when it becomes necessary. This reduces the number of disruptions because they can be prevented beforehand. This will make rail transport more punctual and more attractive, supporting the climate-friendly mobility transition. The first train to get a digital twin is Stadler's 429.1 series. DB operates 28 of these multiple unit trains in regional transport in Rhineland-Palatinate, Hesse, parts of Baden-Württemberg and Saarland. A prototype is currently being equipped with the technology for recording and transmitting data. The other trains in the series will follow. The digital twin should be fully functional for the first time by the end of 2021. The virtual image will initially focus on the train's air conditioning, doors and wheel sets. The data sent by these components is processed with the help of artificial intelligence to create an increasingly perfect simulation of the real train. Its physical behaviour will be taken into account in addition to the vehicle's mechanics, electrics and software.

Sabina Jeschke, Member of the Management Board for Digitalisation and Technology: "The cooperation with Stadler is a big step for the digitalisation of rail operations. We are showing that exchanging data with train manufacturers benefits both sides. It is primarily passengers that are helped by trains becoming more punctual and reliable. Only by digitalising rail operations can the climate-friendly mobility transition succeed."



Jure Mikolčić, CEO Stadler Deutschland: "By creating a digital twin of an entire vehicle fleet, both Deutsche Bahn and we as the vehicle manufacturer obtain relevant data material. Thus we can ensure proactive maintenance and the constant optimisation of obsolescence management. This helps both sides to sustainably improve vehicle availability and to reduce breakdowns caused by faults to a minimum."

Germany

The undercover duo from Berlin Central Station

Berlin Central Station celebrated its 15th birthday at the end of May. Technicians Volkmar Strupat and Udo Schwarten from DB Services were on the job right from the start. We visited the two strong makers - and took a look behind the facade of the station. From unknown places in the train station and tango evenings under the glass roof.

Volkmar Strupat has the main station as a map in his head. Which of the thousands of water pipes go where? Where are the shut-off valves? What looks like a complicated tangle on the blueprints is the technician's day-to-day business. After all, the heating and plumbing technician worked here as early as 2003, when the 160-meter-long and 45-meter-wide hall was still a shell - and the pipes were not plastered. "If there is a problem with the water pipes somewhere in the building, I usually don't have to study the plans for a long time, but know exactly where to go."

Strupat is one of the longest-serving railway employees in the main station and a strong doer. He knows every corner here. The 57-year-old can still remember exactly how Europe's largest crossing station was gradually completed on the huge area opposite the Federal Chancellery. "There wasn't much here yet, you had a clear view because the border used to run here." At that time, he was the contact person for the many companies on the huge construction site.

Opening of the Berlin Central Station on May 26, 2006 in green, yellow, red and blue

Then on May 26th, 2006 the grand opening ceremony. "In the evenings, an incredible number of people came to see our new train station," recalls the electrician Udo Schwarten. A rush of crowds on the bridges around the station. Just before 11 p.m. on the dot, Schwarten and his colleagues turn off the lights in the train station. Clear the stage for a unique spectacle: the building lights up in green, yellow, red and blue. Illuminated trains drive into the hall as a symbol of the growing together of East and West Berlin. And finally, the railway logo shines red in the night. "The Chancellor was there too, that was a really great thing," enthuses Strupat.

In the summer of 2006, thousands of football fans got off at the main station and flocked to the capital for the World Cup. An endurance test for the station. And for the colleagues at DB Services. "The 38 elevators and 54 escalators were in continuous operation - and we had a lot to do," says Schwarten. "There was a great atmosphere in the station. Guests from all over the world were impressed by the construction made of steel, concrete and glass. "You don't always speak the same language, but it usually works with your hands and feet. "For example, I showed police officers from all over the world through the building, and the Sheikh of Qatar was also a guest at the main station," says his colleague Struptat.

The technology world behind the shopping world

Today, with 330,000 travellers (2019), the station is one of the most visited train stations in Germany. And Strupat and Schwarten are still on board. Together with their colleagues from DB Services, they work day and night to ensure that the technology behind the colorful shop displays and the platforms is running. If there is a problem, the two of them are always ready to listen - whether for the shop owners or the colleagues from the 3-S headquarters. Because the lifelines of the train station always have to work - from pipes to heating or lighting. Without it there is no water, no heat, no air or light.

The heating and ventilation technology of the station is controlled on the fourth floor: only those who are familiar will find the small room without windows, which is hidden behind long corridors. The trains rumble above its ceilings, and the jackhammers on the construction sites knock from outside. The operations room is one of many behind the high-gloss facade of the station. Only the technicians have access there. From here, DB Services monitors the 78,000 square meters of the station area - the size of almost eleven soccer fields. If the sensors indicate a problem, the computer monitors light up red - and the colleagues set off for their next assignment. There is always something to do in the big building.

Strupat's team has to check 2,700 fire dampers every year to prevent the smoke from spreading throughout the building in the event of a fire. It takes three to four months. The lever on each flap is thrown: Does the mechanism close smoothly? "If the TÜV then comes, let's do the same game again and show that we have maintained everything well," says Strupat. After all, safety comes first. And not only ventilation and heating have to work, the sewage system also needs regular maintenance. "With the help of a total of 60 lifting systems, we collect the process water and gradually pump it into the Berlin sewer system," explains Strupat.

In the depths of the station

In order for the technology to work reliably, he must regularly descend into the depths of the station. A 15 meter long ladder leads to the pumps. A job that one cannot do alone. "There's no cell phone reception down there. Nobody would ever find you there. "A rescue stretcher is also available there in case of an emergency. "We are trained in rescue at height and depth. Fortunately, nothing has ever happened. "

Live: The lights above the tracks on the lifting platform can only be replaced when the overhead line is switched off.
The technicians also have to be free from giddiness when doing their job in the train station. If you want to replace the lights on the ceilings of the hall, you can use a lifting platform that has been specially developed for the building. If something needs to be repaired on the 46-meter-high office towers, Strupat climbs up there too. Of course, only buckled up with a seat belt.

His colleague Udo Schwarten likes the high ceilings and the architecture of the station. "In the last 15 years the station has grown closer and closer to the city, many houses have been built nearby. The train station is now right in the middle of life. "The electrician is also enthusiastic about events or art installations for which the train station offers an extraordinary stage. "A tango evening in the middle of the building is a great experience." A little pride resonates when he talks about his very special workplace.

Almost everyone at the station knows him and his colleagues - whether they are the employees of Station & Service, the Federal Police or the shopkeepers. When the two are out in the building, there is a friendly hello everywhere. Their phone rarely stands still, help is always in demand. Strupat with a smile: "If I retire in a few years, I will have to be available for a while."
Happy Birthday Hauptbahnhof!

Germany

FlixTrain launches biggest German expansion so far

FlixTrain is taking off in Germany. As of May 11th, Germany's first privately operated long-distance train network is larger than ever and includes the Hamburg - Berlin route for the first time. Furthermore, for the first time Munich, where FlixMobility is headquartered, will be connected to the green train network. In addition to the Munich - Frankfurt connection, FlixTrain is also launching its first night line from the Bavarian capital to Hamburg via Berlin. FlixTrain is thus doubling the number of routes and connecting a total of 16 new cities. The Hamburg - Cologne and Cologne - Berlin lines will also remain part of the service and will already be running in time for Pentacost on May 20th. The Stuttgart - Berlin route will follow in June. With these exciting developments, FlixTrain is not only significantly expanding its network to a total of around 40 cities, but is now giving people in all regions of Germany a choice of which train they want to travel with. Furthermore, the company is putting an exclamation mark on green mobility: All FlixTrain trains are powered 100% by green electricity.

FlixTrain uses new modern trains on all connections and, unlike its competitors, guarantees every passenger a seat. Tickets for all lines can already be booked from EUR 4.99, an overview of the start dates can be found here:

Connection	Daily trips as of …	Trips per day
Berlin – Cologne	May 20th 2021	Up to 4
Hamburg – Cologne	May 20th 2021	Up to 4
Hamburg – Berlin – Leipzig	May 27th 2021	Up to 8
Hamburg – Berlin – Munich (night)	June 17th 2021	Up to 2
Munich – Frankfurt	June 18th 2021	Up to 2
Berlin – Stuttgart	June, 2021 (tbd)	Up to 4

From Berlin to Hamburg
From May 27th, FlixTrain will start operating between Hamburg and Berlin. This means that the green long-distance trains will be part of the regular service between Germany's two largest cities for the first time. "Our trains are about as fast as our competitor's ICEs on this route," says André Schwämmlein, CEO and co-founder of FlixMobility. "We are putting additional trains on the tracks and want to send a clear signal: Train travel must be accessible for everyone. And people should have a choice about which train they want to take! So it's all the better that we're providing an excellent alternative with modern trains, affordable prices and fast travel times."

Coming Home: Munich is now also served by FlixTrain
Starting in June, FlixTrain will also be serving Munich for the first time, adding its birthplace city to the network: The Bavarian capital is home to FlixMobility and will be served by two lines at the start. In addition to the Munich - Frankfurt connection via Augsburg, Würzburg, Aschaffenburg and Hanau, the first night line between Berlin and Munich will also begin operation on June 17th. This means that not only is there now an independently operated train connection between Berlin and Munich, but numerous new cities will also be connected to the FlixTrain network on this line, including Nuremberg, Erlangen, Bamberg and Jena. "We want to make green mobility accessible to as many people as possible. For us, it is a milestone that we are now bringing FlixTrain to Bavaria and have thus connected all regions of Germany to our train network," said Schwämmlein. The new service is rounded off by the well-known routes Berlin - Cologne and Hamburg - Cologne, starting as early as May 20th, and Berlin - Stuttgart, starting in June. Tickets for the entire network, including the new routes, are already available from EUR 4.99.

Overbooked is outdated: With FlixTrain, every passenger sits comfortably
All FlixTrain trains have a completely redesigned interior with new seats, power outlets at the seat, modernized WCs and Wi-Fi technology including free entertainment services. Furthermore, FlixTrain guarantees every passenger a seat - at no extra charge.

The company is setting new standards for train travel and is set apart by its affordable, modern and comfortable mobility. Best of all, passengers travel with a clear conscience, as all FlixTrain trains are powered by 100% green electricity. For a safe journey during COVID-19, FlixTrain has also implemented extensive hygiene measures. Passengers can find an overview of the current measures on the homepage.

More offers, more travellers, more sustainability
Making particularly sustainable and future-proof means of transportation accessible to as many people as possible is part of FlixMobility's corporate philosophy. In this context, the expansion of the FlixTrain network is a decisive step towards a green mobility turnaround. "We need to convince as many people as possible of sustainable means of transport. To do this, healthy competition is crucial: attractive offers only emerge when several providers compete for passengers and keep improving themselves. We do this because FlixTrain is environmentally friendly, affordable, comfortable, and modern. This is now benefiting travellers throughout Germany," continues Schwämmlein.

Germany

250,000 travellers benefit: construction starts on the S4 in Hamburg

The construction of the new local traffic artery S4 between Hamburg and Schleswig-Holstein has begun. Starting in 2029, it will connect Altona and Bad Oldesloe directly by train for the first time, enabling a quarter of a million commuters to leave their cars behind. DB Infrastructure Board Member Ronald Pofalla, Federal Transport Minister Andreas Scheuer, Hamburg's First Mayor Dr. Peter Tschentscher and Schleswig-Holstein's Prime Minister Daniel Günther gave the official starting signal in Hamburg on May 10th. In the future, connections between Hamburg and Ahrensburg will triple during rush hour. The S4 makes train travel even more attractive and thus makes an important contribution to the mobility transition. 45 kilometres of noise protection walls also relieve the residents: inside.

DB Infrastructure Board Member Ronald Pofalla: "Fast, frequent, environmentally friendly - the new S4 will be the ideal means of transport between Hamburg and Bad Oldesloe. We are investing 1.8 billion euros in the new connection and the associated noise protection. The new S4 is good for people and the environment."

Federal Transport Minister Andreas Scheuer: "My promise held and implemented. With our commitment for around 1.6 billion euros in investment by the federal government, Hamburg and Schleswig-Holstein were able to tackle the project together with Deutsche Bahn. This is the start of construction. The project is huge profit for commuters and travellers. Local public transport in and around Hamburg is becoming more direct, easier and more punctual. We relieve the main station and we create more space for long-distance and freight traffic."

Dr. Peter Tschentscher, First Mayor of the Free and Hanseatic City of Hamburg: " The S4 between Altona and Bad Oldesloe creates a fast and comfortable rail connection for up to 250,000 citizens in Hamburg and Schleswig-Holstein. It relieves traffic and improves the situation in the main train station as a central hub for local and long-distance rail transport. In addition to the groundbreaking of the S4, two other major rapid transit projects are starting this year: The U5 in the east of Bramfeld to City Nord and the extension of the U4 to the Horner Geest. The expansion of our underground and S-Bahn network is the decisive step in Hamburg's mobility transition."

Daniel Günther, Minister President Schleswig-Holstein: "The new S4 will be one of the most important rail connections in our state. That is why it is a very important day for Schleswig-Holstein. People in the region have waited a long time for today's groundbreaking. Now the beginning has been made for noticeable improvements on this route. The new fast rail connection relieves road traffic and thus ensures a better quality of life in our country and for the people in the metropolitan region."

Andreas Boschen, Head of the Executive Agency for Innovation and Networks (INEA) at the EU Commission: "The upgraded line makes a significant contribution to eliminating capacity bottlenecks in the Hamburg transport hub. Due to Hamburg's central role in the European core network, the unbundling of traffic flows has an important added value - also at European level."

With the start of construction, the following main work is on the agenda in the coming months: DB is laying the first tracks between Hasselbrook and Hammer Straße. From the end of the year it will be the turn of the noise barriers in this sub-area. At the level of the freight bypass near Hammer Straße, DB is building two railway bridges this year.

For the new S-Bahn line, DB is building a total of five new stations, 45 kilometres of noise protection walls, 32 railway bridges and six road and pedestrian overpasses. With a total length of 36 kilometres, it connects Hamburg-Altona with Bad Oldesloe in Schleswig-Holstein. This gives 250,000 people a connection to the Hamburg S-Bahn and U-Bahn network. The new S4 relieves the main train station by replacing regional trains and using the S-Bahn tracks. This creates capacities on the regional train track. The project includes a new double-track line 17 kilometers long (as far as Ahrensburg). It continues on a single track to Ahrensburg-Gartenholz.

One third of the upgraded line is in Schleswig-Holstein, two thirds in Hamburg. Four new stations are planned in the Hanseatic city. The DB is building a new stop in Schleswig-Holstein. In Schleswig-Holstein it rolls to Bargteheide every 20 minutes and to Bad Oldesloe once an hour.

ICE tickets at pocket money prices

Good for the climate, good for the wallet: two offers especially for young travelers • Inexpensive BahnCard 100 for everyone under the age of 27 • Super saver price Young available until June 30th

There is also a new offer for young people who travel a lot! From May 18th to August 31st young travellers under the age of 27 can buy a BahnCard 100 for the first time at a particularly low price .

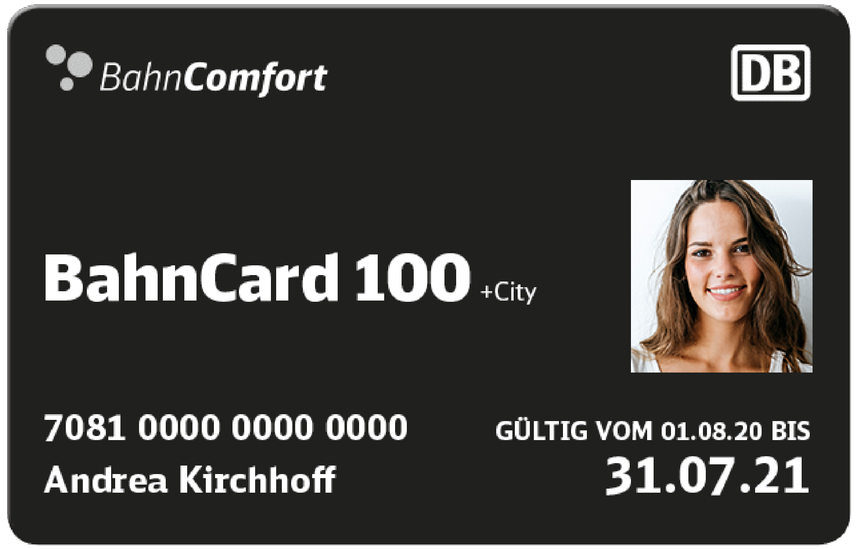
For less than 200 euros per month, you can travel for a year on DB trains and in many associations - across Germany as often as you want .

The action BahnCard costs EUR 2,399 once for one year and is available at bahn.de/bc100-aktion. It does not go into a subscription after it expires.

The popular offer especially for young travellers is available again: With the super saver price Young there are ICE and Intercity trips from 12.90 euros.

For young BahnCard holders: it will be even cheaper inside. With the My BahnCard there are long-distance tickets for less than 10 euros. This is ICE driving for the price of pocket money.

The Super Sparpreis Young can be booked through bahn.de/young until June 30th - for trips up to and including December 11th.



Germany

Mouse-drawn future prospects

Berlin is getting new subways. A virtual 360 ° model now invites you to discover and experience future trains. In cooperation with the German Museum of Technology and the manufacturer Stadler, when the museum reopens on June 1st, a life-size model will also be on view in an exhibition - side by side with one of the oldest subway cars in Germany. Fans of the Berlin subway can now go on a journey through time into the future. The trains of tomorrow can be explored today in a virtually accessible 360 ° model. From the passenger compartment through the multifunctional compartment to the driver's cab - the JK series vehicle can be navigated with the mouse. Thanks to the high resolution, you can zoom into every corner. Multimedia info points convey information on various aspects such as passenger information, lighting design or accessibility in texts, audio or video clips.

The 360° model was created by TeamOn GmbH. The basis is formed by around 200 individual photos from a mock-up, a 1: 1 model of the new J / JK subway series, which BVG ordered from Stadler in spring 2020. More than 161 million pixels ensure spectacular sharpness of detail.

Dr. Rolf Erfurt, Chief Operating Officer of the Berliner Verkehrsbetriebe: "The new subways will shape the image of our city for decades. We are very pleased that we can share our enthusiasm for the new subway generation with all fans of our subway and that everyone can get a realistic first impression of the eagerly awaited vehicles with this great instrument."

The mock-up of the new subways is already in the museum. The virtual train is only the first step. To inspire the anticipation of the new trains, there will be another premiere in the German Museum of Technology. As soon as the pandemic situation opens up the Museums are allowed again, the said mock-up can also be seen publicly for the first time. And it won't be alone. In cooperation with the BVG, the Museum of Technology draws a wide arc from the beginnings of the Berlin subway in 1902 to the present and into the future in the historic locomotive shed. Directly next to the mock-up on platform 15 is car 86 from the A1 series from 1908, the oldest preserved underground vehicle in Germany. The presentation is rounded off by a double multiple unit of the F79 series from 1980, which is shown in the open-air area of the museum.

The title of the exhibition is "From A to J - Berlin U-Bahns from 1902 to 2072". The subway series are designated with consecutive letters, now Berlin has arrived at "J", and the new trains, which will be delivered by 2032, are expected to be in use for 40 years.

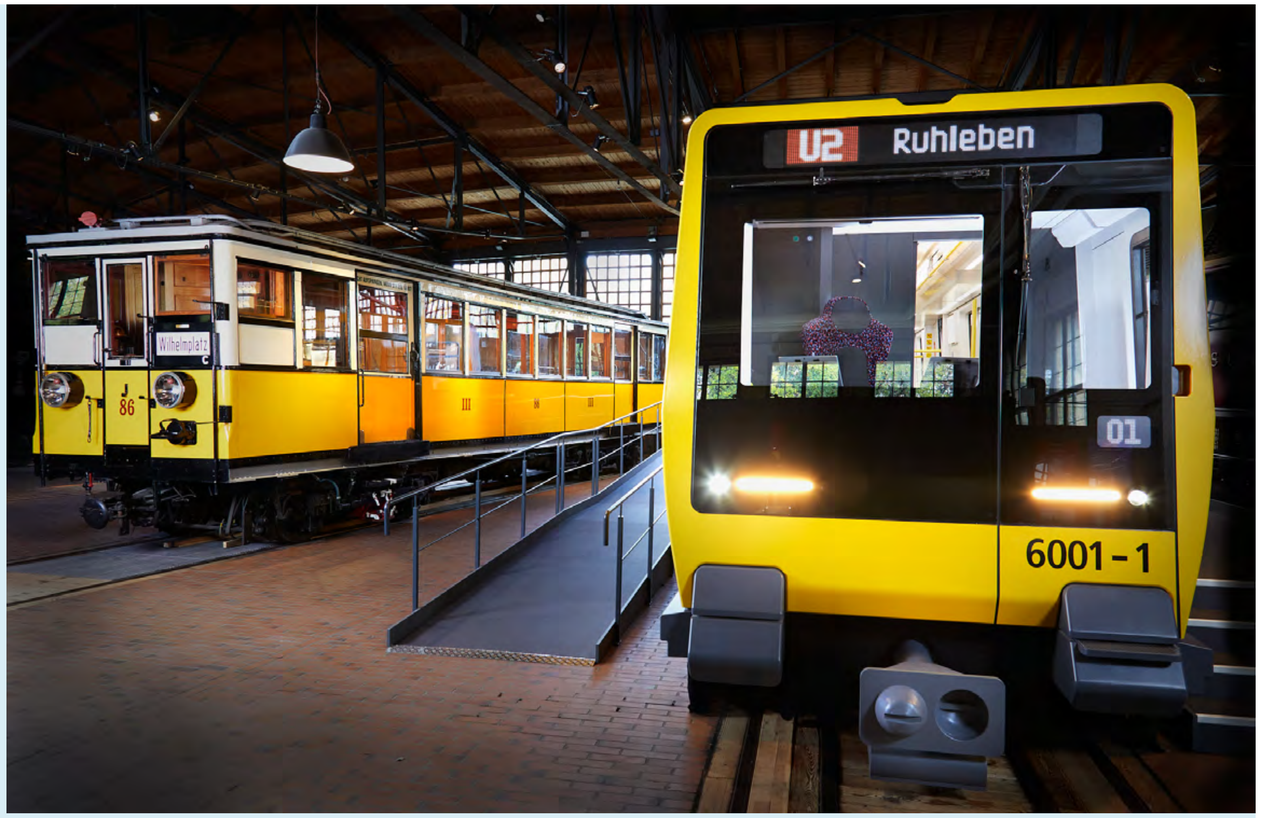
Joachim Breuninger, Chairman of the Deutsches Technikmuseum Berlin Foundation: "We look forward to being able to present the future and the past of the Berlin subway under one roof after the lockdown has ended. This piece of mobility history of a growing metropolis is in good hands in our historic engine shed. Immediately after the corona-related closure, it will be a special highlight for our visitors."

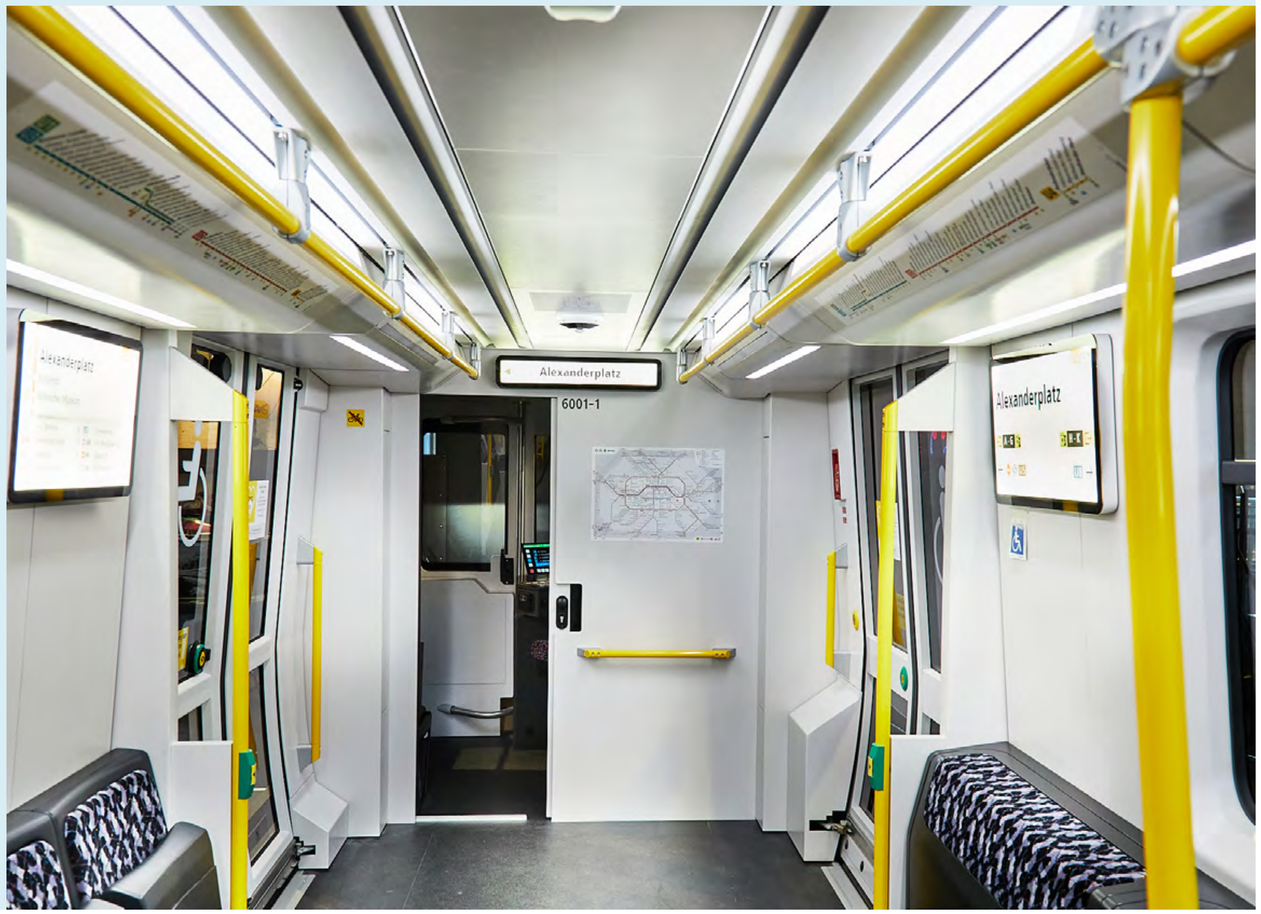
From the model to the finished train: the subway from Berlin for Berlin

The first vehicles of the new subway series are expected to be available for test drives in the fourth quarter of 2022. BVG has the option of purchasing up to 1,500 cars of the new J / JK series by 2032 from Stadler in Berlin-Pankow. By way of comparison: BVG currently has a total of 1,300 subway cars of various series.

With the exhibition of the mock-up, an end car from the JK series, the German Museum of Technology will give its visitors the opportunity to get a tangible impression of the new subways after the virtual tour that is already possible. The car body of the accessible model on a 1: 1 scale was made of wood. In the interior with seats, handrails, lighting and a functional driver's cab, original parts were largely installed. The mock-up thus creates an authentic impression of the future vehicle and enables functionality, accessibility and aesthetics to be checked and improved on the property before production of the first vehicles begins.

"As the manufacturer of the vehicles, we attach great importance to checking with our customers whether our train meets the requirements and expectations. In the case of so-called tailor-made vehicles, i.e. trains that are precisely tailored to a network and specially developed for this purpose, this includes the construction of a mock-up so that the results of the joint tests on the model can be incorporated into the further development process," explains Jure Mikolčić, CEO Stadler in Deutschland.





On March 24th, National Express Desiro Class 462.081 is seen in Wuppertal-Oberbarmen working a Rhein Ruhr Xpress service from Dortmund Hbf to Aachen Hbf on line Re4. *Erik de Zeeuw*

Germany

DB makes its navigator an all-rounder

Have you ever missed the S-Bahn because the line at the ticket machine was too long? Or had to turn back halfway to the bus stop - the coin pocket in the wallet was empty? If your bus drives through North Hesse, Upper Lusatia-Lower Silesia, Freudenstadt or the Bavarian Lower Main, that is now a thing of the past. Because these are the four new transport associations whose tickets can be bought in the DB Navigator since April 28th. In total, almost 50 transport associations nationwide are integrated into the app. Why do you still have to stand in line in some places? Jörg Wiedelbach and Christoph Keller from “PUNK” explain this.

Many passengers are familiar with this: a long queue has formed at the ticket machine, everything takes forever and feels annoying. This is exactly where PUNK comes into play. But first asked: What does this term actually mean?

Jörg Wiedelbach: “PUNK” is the program for the digitization of local transport. We make the networks for our customers digital, both in the DB Navigator and on bahn.de, ie we take care of the digitalization of ticketing in local transport. This includes, above all, the technical preparation and integration of the ticket offerings of the associations in our systems, so that customers can buy their tickets on our platforms while on the move.

What are the advantages of digital tickets compared to the conventional paper version - apart from the fact that paper is saved?

Christoph Keller: The big advantage for customers is that they don’t have to download ten different apps to their cell phones when they are in different transport associations. Because no other app combines as many transport association tariffs and ticket types under one roof as the DB Navigator. Travellers can travel all over Germany and book their entire travel chain in just one app.
Jörg Wiedelbach: Booking is very easy, quick and convenient. Queuing at the ticket machine and looking for change has become obsolete in the context of digitization. With the DB Navigator, customers have their own ticket machine available 24/7 on their smartphones. It is the ideal digital travel companion for anyone who chooses to travel by train.

Since April 28, tickets from four new associations can be booked in the Navigator - there are almost 50 in total. In addition: the Zweckverband Verkehrsverbund Oberlausitz-Niederschlesien (ZVON), the North Hessian Transport Association (NVV), the Verkehrs -gemeinschaft Landkreis Freudenstadt (VGF) and the transport company on the Bavarian Lower Main (VAB). A reason to celebrate?

Christoph Keller: For a long time, local public transport was only very rudimentary digitized. Many associations did not even have their own website and only sold their tickets at the counter or at machines. This is hardly conceivable nowadays. Because around 65 million people live within transport associations: potential digital ticket buyers: inside who were not even considered for a long time! It is important that they too have access to digital tickets. We are of course very pleased that our customers can now buy tickets from almost 50 associations in the DB Navigator.

Why should a network decide to integrate it into the DB Navigator? Wouldn’t your own - perhaps even cheaper - solution make more sense?

Christoph Keller: The DB brand is known to customers. Over nine million people use the DB Navigator every month. This makes it the number one travel app in Germany and has therefore already established itself in the market. In addition, the basic infrastructure is in place. We know how digitization works. Everything in one app: the network tickets in the DB Navigator.

From the first conversation to the digital ticket purchase - which steps are necessary?

Jörg Wiedelbach: The associations have now recognized the importance of digital sales and contactless ticketing and are asking DB Vertrieb as a partner. Together with our colleagues from the marketing department, we take care of establishing contact with the associations. We advise the association on what a tailor-made digital solution in DB Navigator and on bahn.de can look like, which options exist with regard to the barcode and ticket layout and which would be suitable for the respective association. After we have defined the framework, we create a technical concept that is then implemented by our service providers. It’s always exciting when the network is imported into our test environments and the first digital bookings are made. After a successful test phase, we go live.

Christoph Keller: One important step in advance: the association must have digitized all tariffs. It must therefore have a suitable interface via which the navigator can call up the tariffs. We take care of ticket creation, payment processing and customer support, we do not digitalize the ticket offers.

Are there still associations whose tickets can only be bought at the machine or counter?

Christoph Keller: Yes, especially with small associations. We have already integrated most of the large ones in the Navigator, so we are now concentrating on the smaller ones.

Which tickets can be booked in the Navigator?
Jörg Wiedelbach: We basically cover the product groups of single tickets, day tickets, 24-hour tickets, multi-trip tickets and season tickets. Which products we sell depends on the applicable tariff regulations - the association decides. It is often the case, for example, that season tickets are only taken live in a second step.

Christoph Keller: An important topic for our customers is access to digital subscriptions. Here we were able to supplement the subscription products in the DB Navigator product range at Verkehrsverbund Stuttgart and thus simplify booking. Further alliances will follow this year. No network is like the other, but we strive to build the perfect digital solution for each network.

DB increases summer schedule

Deutsche Bahn has completed its planning for the 2021 summer timetable. From the beginning of July, DB will be offering its travellers numerous additional connections to popular holiday regions in Germany and Austria. Holiday destinations such as Rügen, the East and North Frisian Islands, Tyrol and Lake Constance can be reached more often, more conveniently and more quickly. Together with other seasonal connections, more than 10,000 additional seats are available on the ICE and IC trains every day. All connections can be booked from May 13th.

DB long-distance transport manager Michael Peterson: “The Germans’ desire to travel is unbroken. Holidays in your own country will also be very popular again. We are preparing for this and will be putting more than 330 ICE trains on the rails this summer, more than ever before.”

More service for guests of long-distance transport will be available from the weekend of Pentecost within the framework of the official requirements. DB is once again serving food and drinks personally, in the on-board restaurants and at the seat. In the 15 DB lounges at the major train stations, visitors will again receive coffee and cold beverages.

The Premium Lounge for 1st class travellers, which opened at the beginning of May in Berlin Central Station and spoils guests with a new range of dining options, offers even more service and comfort.

“Travel safely. We can do it together”, remains the motto for traveling by train even with growing demand. Furthermore, the mask requirement and the known safety and distance rules apply. DB is continuing its tried and tested hygiene and cleaning concept and promoting considerate cooperation.

When booking a ticket, customers can find out in advance about the expected capacity utilization of the connections. The convenience check-in enables contactless control.

On May 8th, Railexperts No. 9903 with brand-new ICNG No. 3204 is seen near Soest. Many photographers came to see this working (their cars are on the right in the picture). Recently, Railadventure became a majority shareholder of Railexperts, and to show that, No. 9903 (former DB 1611) has been reliveried into the Railadventure colours. *Mathijs Kok*

IRP's Vossloh G2000 No. 2101 with a Pannonia-ethanol tanker train is seen in the harbour of Amsterdam, underneath the A5 highway on May 13th. *Mathijs Kok*

Netherlands

Volkerrail No. 7178 (an ex NS Class 1700) with a Vossloh engineers train and No. V100 203-5 on the rear pass Baarn on May 12th. *Mathijs Kok*

DB Cargo No. 6455 with a short tanker train is seen near Boxtel on May 7th, heading for Kijfhoek. *Mathijs Kok*

Railtraxx Class 66 No. 266.035 with Ermewa tank train No. UN1184 is seen near Boxtel, heading for Millingen (D) on May 7th. *Mathijs Kok*

Rail Force One No. 1831 and Class 189.213 are seen hauling a rake of tanks near Amersfoort on May 3rd. *Mathijs Kok*

Eurailscout ex-'Motorpost' No. BRT-91 (named Jules), and now a measuring train, passes through Amersfoort on May 3rd. *Mathijs Kok*

Rail Force One No. 1572 with a bio-diesel train heads through Botlek harbour on May 1st. *Mathijs Kok*

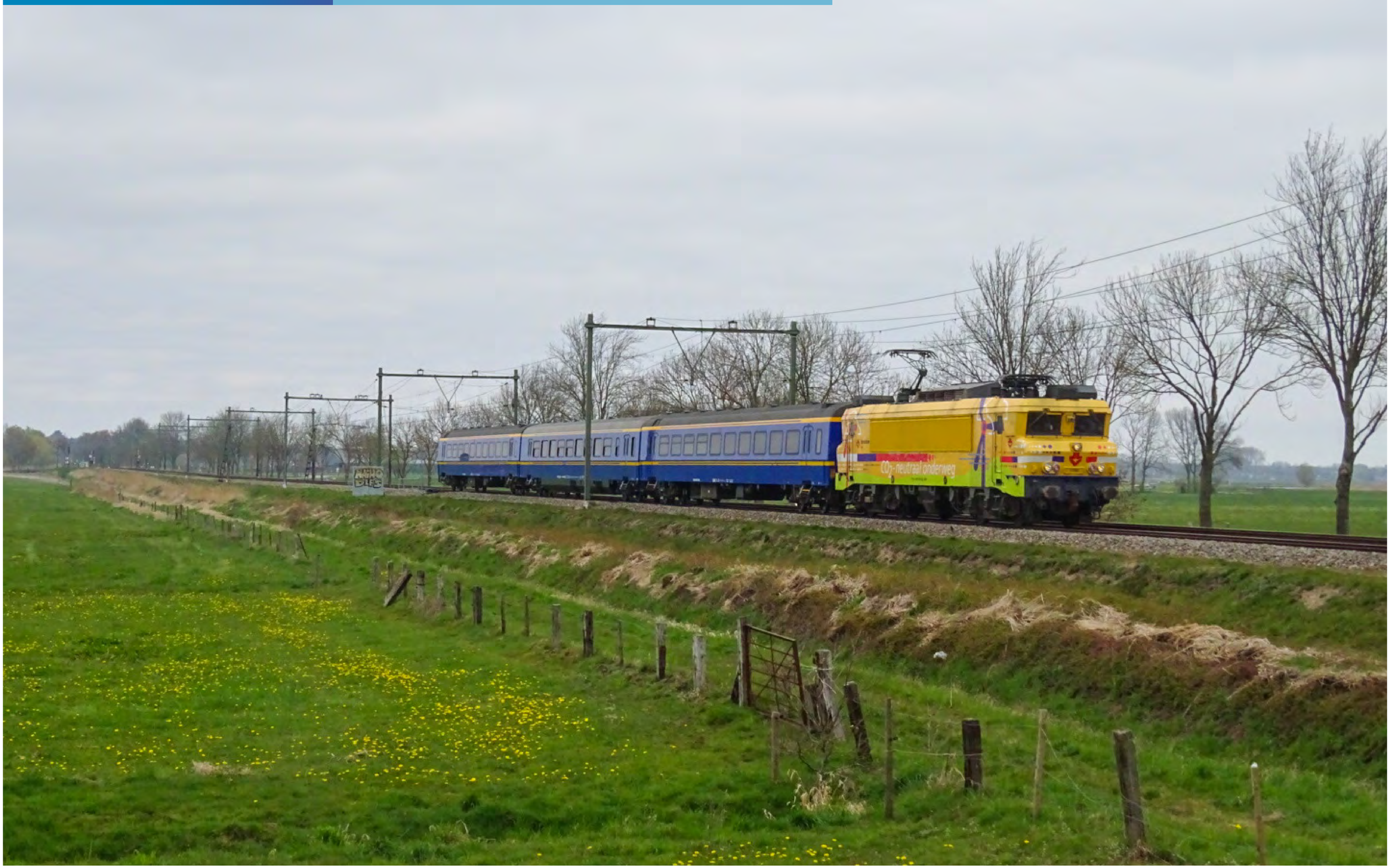
Netherlands

DB Cargo No. 6464 with a train of empty gas tanks heads to be loaded by Vopak in the harbour at Vlissingen on April 29th. *Mathijs Kok*

On May 27th, NS Class 193.759-8 passes Baambrugge with ÖBB nightjet train No. NJ421 from Amsterdam to Austria. In Nürnberg (Germany) the train splits up with one part to München and Innsbruck and the other part goes to Vienna. *Erik de Zeeuw*

Rail Force One No. 1837 with a rake of new Eanos wagons for transporting coal from the Dutch Maasvlakte to Ostrava (Czech Republic) heads through Amersfoort on May 3rd. *Mathijs Kok*

Strukton's No. 1756 with the Dutch royal train is seen near Soest on April 21st, returning from its annual maintenance. *Mathijs Kok*



Museal Plan No. U151 heads between the bulb fields near Hillegom on April 18th. The bulb fields here are a tourist attraction. *Mathijs Kok*

On April 8th, SBB Class 193.516-2 arrives in Venlo with the Novara shuttle from Italy to Rotterdam. *Erik de Zeeuw*

Netherlands

At the height of Hoog Soeren, train No. IC149 from Amsterdam to Berlin passes IC146 heading from Berlin to Amsterdam on April 12th. *Erik de Zeeuw*

On April 28th, Lineas Class 186.502-1 passes Barneveld with the Green Xpress Network Silesia-Xpress from Gliwice (Poland) to Genk and Antwerpen (Belgium). *Erik de Zeeuw*

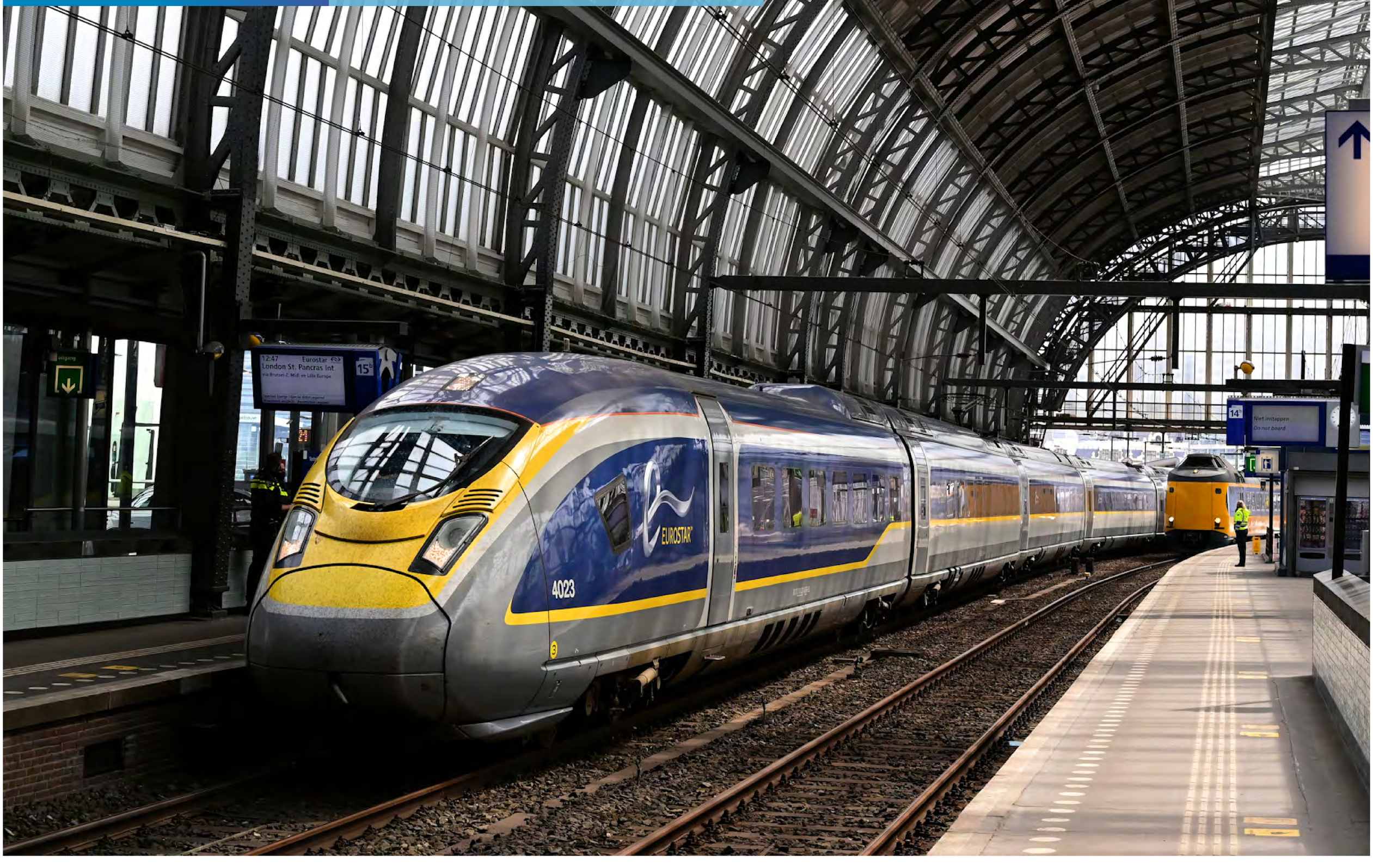
After maintenance in Zutphen, Strukton No. 303.008 ‘Danique’ is transferred to Amersfoort by Strukton No.1824 ‘Nicole’ and the pair are seen at the height of Hoog Buurlo on April 28th. *Erik de Zeeuw*

Netherlands

On April 8th, SBB Cargo Class 193.517-0 climbs the mountain in Venlo with a shuttle from Rotterdam to Scalo Intermodale in Melzo (Italy). *Erik de Zeeuw*

Netherlands

Eurostar No. 4023 arrives on track 15 in Amsterdam Centraal station for a journey via Brussels and through the Channel Tunnel to London St. Pancras (UK) on May 3rd. *Erik de Zeeuw*



Netherlands

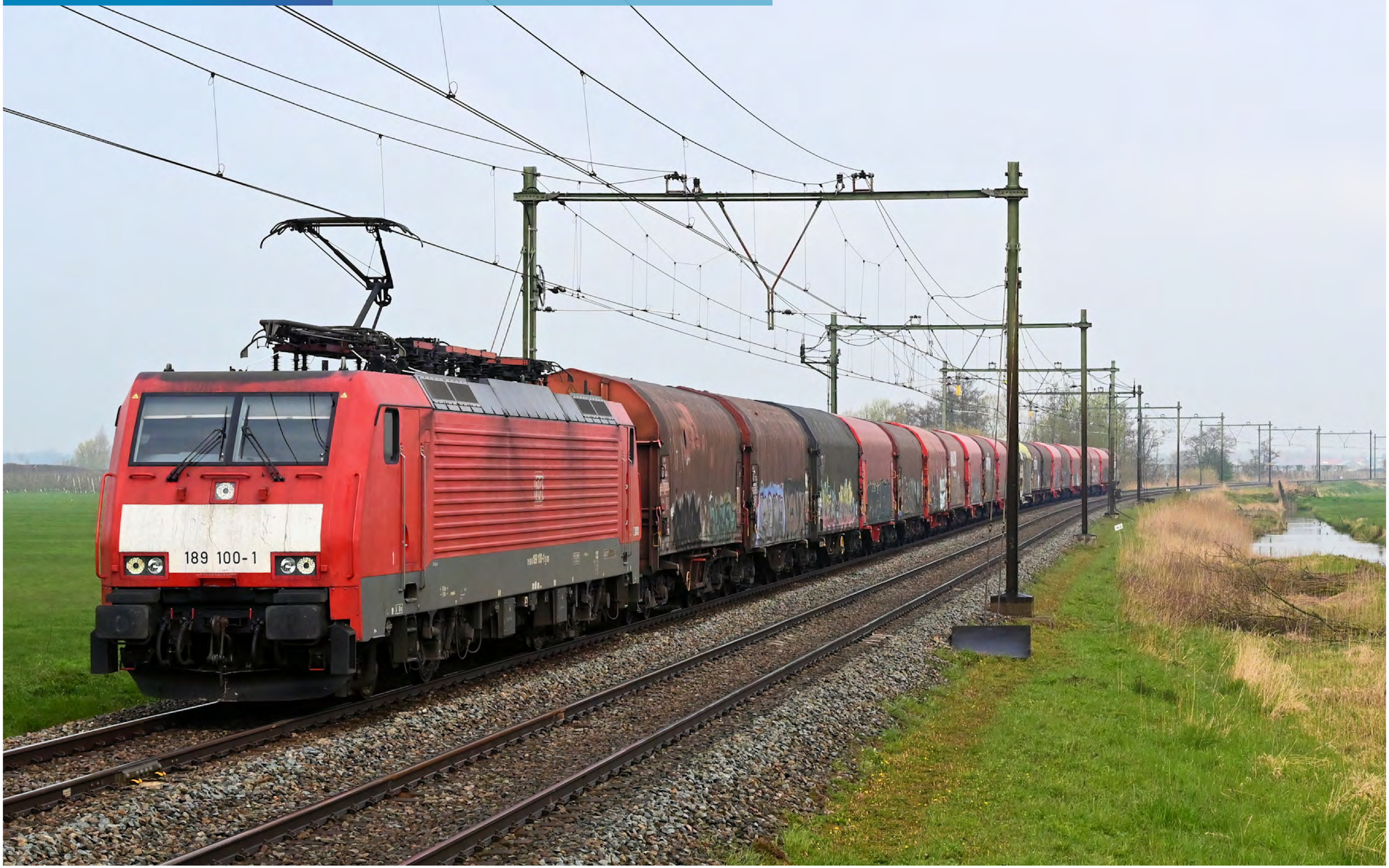
On April 24th, NS VIRMm No. 8633 is seen near Hillegom working an InterCity service from Amsterdam Centraal station to Den Haag Centraal station. *Erik de Zeeuw*

boxXpress Vectron Class 193.836-4 passes Hulten with a container shuttle from the Contargo Terminal in Wörth am Rhein/Karlsruhe (Germany) to Rotterdam. *Erik de Zeeuw*

On April 13th, DB Cargo Class 193.364-7 has just commenced its trip from EBS Rotterdam Botlek to Žiar nad Hronom (Slovakia) with a rake of Uacs cars loaded with aluminium oxide. *Erik de Zeeuw*

On April 13th, MRCE No. 653-03, under license from RFF, hauls a loaded coal train from EECC ore transfer company to the Europoort yard where a Captrain Duo Class 186 will takeover and continue to Bottrop in Germany. *Erik de Zeeuw*

DB Class 189.100-1 and a rake of Shimmns pass through Schalkwijk and are on their way from Tata Steel Beverwijk to the Oberhausen West yard (Germany) on April 19th. *Erik de Zeeuw*



On May 15th, a number of RFO locomotives were transported from Kijfhoek to Bad Bentheim via Dordecht, Den Bosch, Utrecht, Amersfoort, Apeldoorn and Deventer . Here at Barneveld Noord, RFO Nos. 1829, 1837, 1830 and 186-210 pass with a bio-diesel working on the way to Bad Bentheim. Bad Bentheim is a interchange station for cargo and passenger trains in Germany and just a few miles from the Dutch border crossing where because of the difference between overhead power lines between Germany and Netherlands, it is common to change the German locomotive for a Dutch locomotive. In Germany the main overhead power is 15kv AC and uses the Indusi system for security, whereas in the Netherlands it is 1500V DC with ATB or ATBvv security. *Andre Pronk*

Netherlands

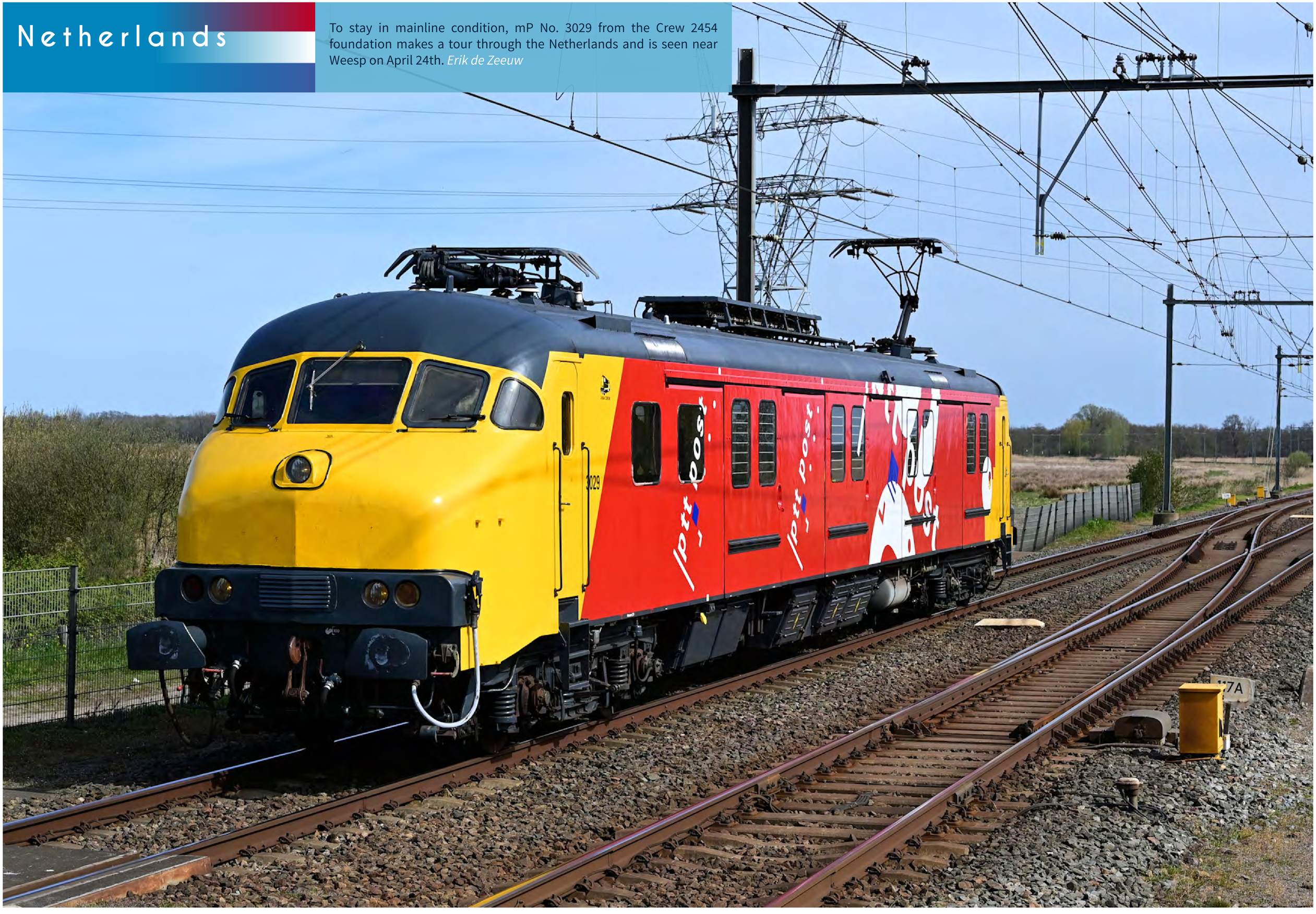
On May 30th, two Motorpost ran a round trip through the Netherlands. Here Motorpost Nos. mP3029 (owner 2454 Crew) and mP3031 (owner Dutch Railway Museum) pass Barneveld on their way to Blerick. In 1965, 35 new Motorpost trains were built and put into service and were used for the PTT to deliver mail between major mail centres. There are three subsets of the Motorpost mP1: 3001 - 3010 / mP2: 3011 - 3020 /mP3: 3021 - 3035. In some cases, a separate postal carriage was also carried along, so that the mail could be sorted enroute. From 1979, the Motorpost vehicles were coupled with a Hbbkkss type freight car built by Talbot which allowed the Motorpost to pull up to a maximum of 200 tons. From 1994, some redundant motor vehicles were used in the star network between the various workshops of the Dutch Railways and a number of motor mail carriages operated for NS Cargo. In 1995, a number of motorposts were used in workshop transport, operating trains between the various maintenance and overhaul companies of the NS, often vehicles for maintenance were transported with them. In 1996 EKP Roosendaal was closed reducing the need for mP's and in 1997 the transport of mail by rail was terminated with all mail travelling by road. After 1997 several Motorpost found new users, Eurailscout has two for rail maintenance, Nos. 3032 and 3024, but No. 3024 ended its service in 2019 with just 3032 still used. No. 3029 had been used for spare parts when transferred to the 2454 Crew but the new owners have restored it. *Andre Pronk*

On April 19th, NS Class 1700s Nos. 1752 and 1746 are seen at the height of Schalkwijk on their way to the workshops in Maastricht.
Erik de Zeeuw

On May 14th, NS No. 1750 transported two DDZ trains, Nos. 7538 and 7646 from Amersfoort to Onnen, seen here passing Putten at the Beekweg, Onnen is one of the maintenance shops for NS. The DDZ trains have been out of traffic since December 3rd 2020 due to safety issues. First some trains separated mainly due to poor coupling of the carriages and there are also issues with instability on the track. *Andre Pronk*

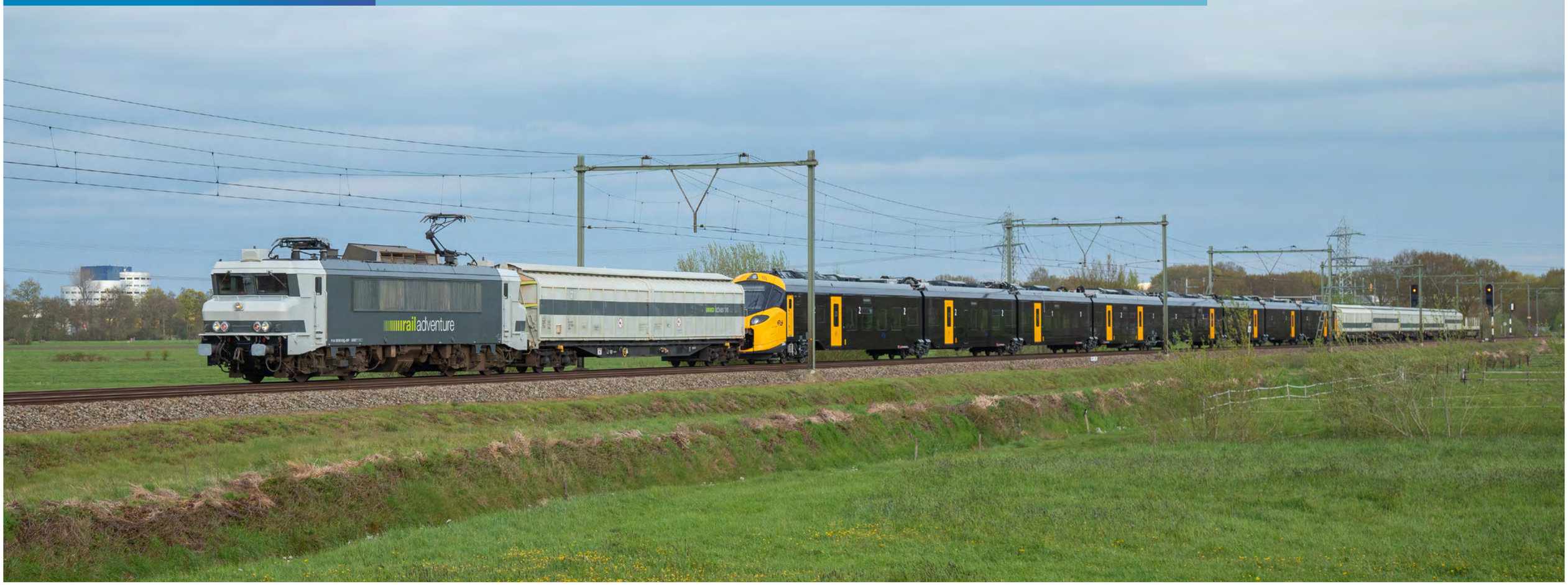
Netherlands

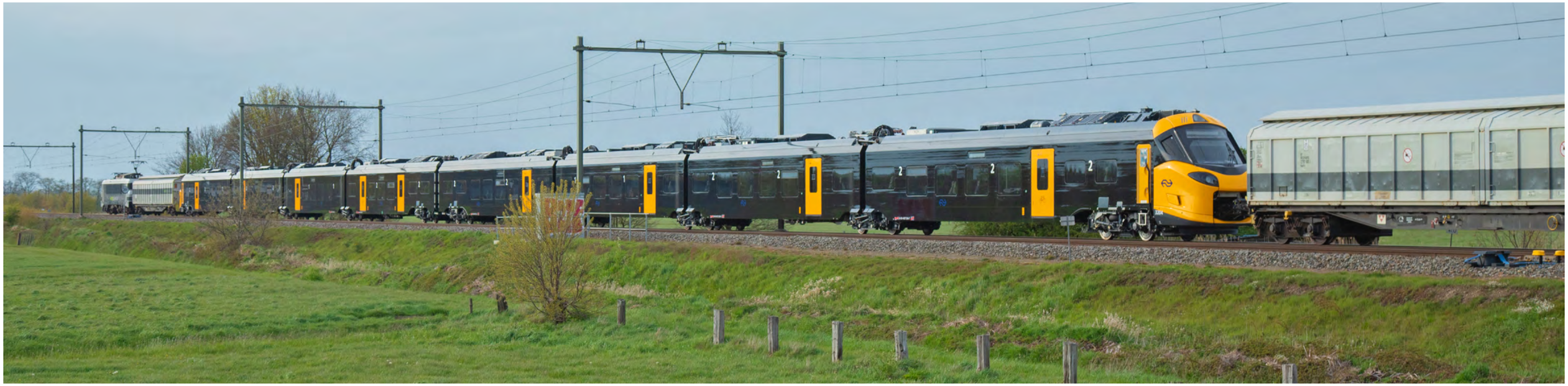
To stay in mainline condition, mP No. 3029 from the Crew 2454 foundation makes a tour through the Netherlands and is seen near Weesp on April 24th. *Erik de Zeeuw*



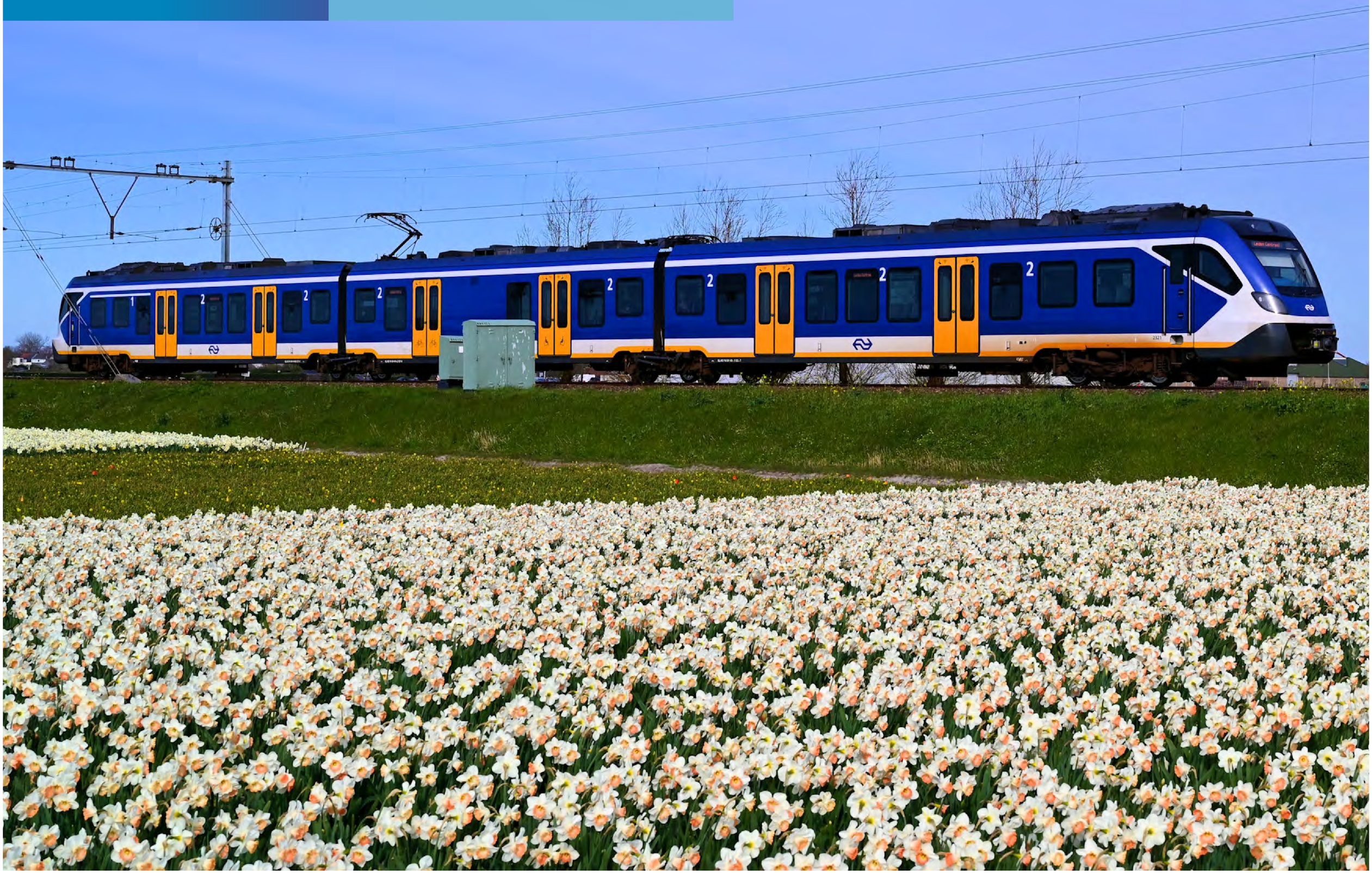
Netherlands

On May 8th, another transport with the new ICNG for Dutch Railway's (NS) took place. The train was hauled by recently painted RXP No. 9903 which now carries Railadventure livery. Railadventure has taken a 40% share in RailExpert to combine transport companies. The transported ICNG-8 No. 3204 will not carry this black livery when in traffic, and is seen here passing the Soesterweg (Soest). *Andre Pronk*





NS SNG CAF Civity No. 2321 works a sprinter service from Haarlem to Leiden Central Station and passes the bulb fields near 'The Keukenhof' in Lisse on April 24th. *Erik de Zeeuw*



Netherlands

Siemens Mobility to modernize the largest freight rail yard in the Netherlands

Siemens Mobility has been awarded a €110 million contract by ProRail B.V. to modernize and optimize the Kijfhoek freight rail yard, the largest yard in the Netherlands and a vital link between the Rotterdam ports and major industrial areas in Europe. This contract includes providing a state-of-the-art fully automated system to manage yard operations and 15 years of maintenance services. Located south-east of Rotterdam, the Kijfhoek marshalling yard encompasses 50 hectares, with 14 arrival tracks, 41 classification tracks and 12 stabling tracks.

“The increased automation of freight rail yards, systems and processes is having a considerable impact on the economic efficiency of freight transport, as intelligent systems are allowing for goods to be delivered faster, more reliably, and in a far more sustainable manner,” said Andre Rodenbeck, CEO of Rail Infrastructure at Siemens Mobility. “As a global market leader in cargo automation and maintenance services, our sophisticated Trackguard Cargo MSR32 solution and highly digitalized customer services will enable Kijfhoek to safely enhance the efficiency and reliability of its operations.”

Siemens Mobility will provide its Trackguard Cargo MSR32 automation solution, which will allow the yard to operate its marshalling and humping operations with a high degree of efficiency, reliability, and safety.

In addition, the highly digitalized maintenance services will improve general operations and reduce the overall life cycle costs. The project is intended to be completed in 2024 and Kijfhoek will continue to operate at least 50% of capacity during this work.

Trackguard Cargo MSR32 is a proven system specifically designed to efficiently manage and organize the movement of rail cars in freight yards. It allows for the rationalization of operational sequences at all levels, from train arrival to train departure, and provides the maximum possible automation of all work cycles and humping operations. This includes the route and speed control units for all points, retarders, and propelling systems, as well as the radio-based integration of the humping locomotive to closely manage the humping speed.

This project, as well as the 15-year customer service commitment, builds on the already longstanding relationship between Siemens Mobility and ProRail B.V. Siemens Mobility has previously partnered with ProRail to deliver class B signalling systems, rail electrification, track outdoor elements, passenger counting systems, and station displays. Siemens Mobility is also one of the finalists for a running tender to implement ETCS nationally across the Netherlands.

Italy

FS Italiane, Rfi: total refurbishment of the Villa Opicina station gets underway

Seven tracks of the ‘Arsenale’ and ‘PMC’ stretches have been reactivated in the station bordering Villa Opicina.

The operation, which lasted seven months, was financed with 1.5 million euro allocated as part of the ‘Last Mile’ project.

The restored tracks will be utilised as a pit-stop for locomotives. The tracks can be accessed independently, reducing manoeuvres thanks to the new overhead line for electric traction installed on four of them. This will free up some of the tracks in the station and consequently, the holding capacity of the rail yard shall be increased.

Throughout this year, further works will get underway to upgrade the station. A new Computerised Interlocking structure will be created to manage more tracks. With the appropriate modifications to the general regulatory plan, the 750-metre module will be implemented, as the European standard of reference for the length of freight trains, and thus for the TEN-T Mediterranean Corridor of which Villa Opicina is a strategic cross-border set-up between Italy and Slovenia.

The station also falls under the “TriHub” project that foresees the infrastructural development and the systemic connection with Cervignano Smistamento and the Port of Trieste, acting as a rail yard of reference for goods heading towards Central and Eastern Europe.

This series of operations aims to improve the services needed for cross-border transit. Minimising costs means increasing the competitiveness of rail transport and contributing to the ecological transition.

The desire to combine the environment and development of transport is one of the Rete Ferroviaria Italiana (FS Italiane Group) missions. All the works taking place in the Friuli Venezia Giulia area are a demonstration of this strategy. Respect for the scheduled times and the quality of the achievements confirm the objective of placing the Venezia Giulia territory amongst the main references for European logistics.

France

SNCF Voyageurs & Alstom launch TGV M “power car”

Following the presentation of a TGV M body shell on July 16th 2020, Jean-Baptiste Eyméoud (President of Alstom France), Christophe Fanichet (Chairman and CEO, SNCF Voyageurs), and Alain Krakovitch (Managing Director, Voyages SNCF) have now unveiled the first TGV M power car in Alstom’s Belfort workshops.

This eco-designed TGV, the first trainsets of which are scheduled to enter service in 2024, has benefited from the know-how of the best experts from Voyages SNCF and Alstom, brought together on a common platform during the definition and co-specification phases of the project. This new way of designing a more innovative and efficient train is a first in Europe. Thanks to a more compact, simplified, and streamlined architecture, the TGV M boasts reduced acquisition and maintenance costs whilst gaining 20% in capacity. The return of energy to the catenary during braking, eco-driving and the increasingly aerodynamic shape of the nose allow overall energy savings of around 20%.

4th generation TGV features

These new vehicles, which will also contribute to the OUIGO offer, introduce a number of major advancements:

- unprecedented modularity, making it possible to adjust the number of carriages according to precise market needs (7, 8, or 9), to transform 1st class seating areas into 2nd class areas and reconfigure them by adding or removing seats or bicycle and baggage storage areas, etc.
- on-board floor space increased by 20%, amounting to 740 seats compared to 600 in current duplex carriages.
- ultra-competitive energy efficiency and carbon footprint per journey: with a 97% carbon recyclability objective, the TGV M’s carbon footprint is the lowest on the market.
- access to online scalable services to meet passenger needs, such as on-board WiFi and complete real-time information across train areas.
- real-time provision of information on train parts, allowing preventive maintenance.
- 100% accessibility across carriage areas for all passengers. From the start, TGV M was the first TGV to be designed in close collaboration with wheelchair user (WU) associations and will be the first TGV to provide fully autonomous train accessibility for people with reduced mobility.

Design competition results for the two trial trains

Launched in late September 2020 to create the livery for the two trial trains, the event was also an opportunity for SNCF Voyageurs and Alstom to unveil the internal competition winners amongst 210,000 SNCF employees and Alstom France’s 12,500 employees.

The two winners will be invited to participate in trials to be held in the Czech Republic and in France in 2022.

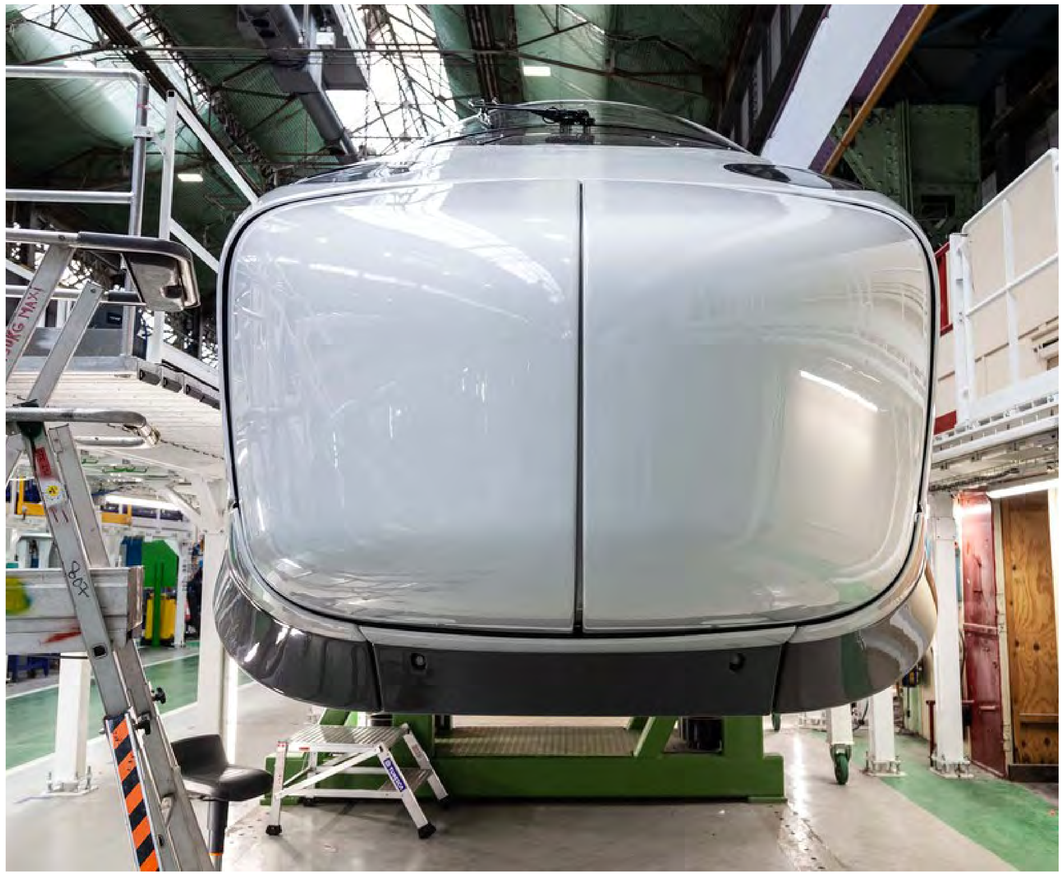


Photo: ©Alstom/SNCF – Eric Pothier

Czech Republic

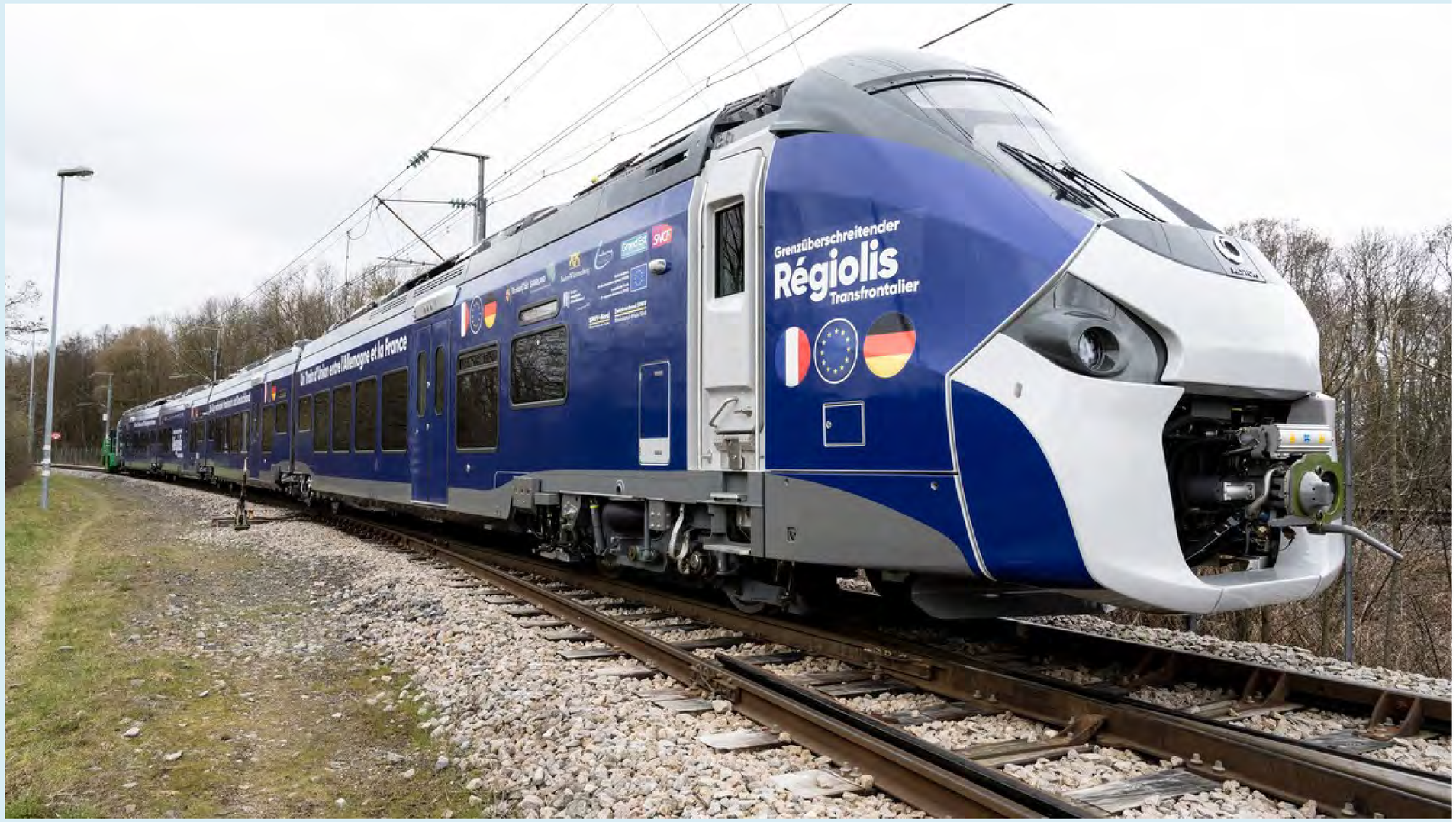
Establishment of the company - CD Cargo Adria

CD Cargo continues to fulfill one of the four pillars of its long-term strategy, to expand into foreign markets. During May, the company completed the establishment of its subsidiary CD Cargo Adria , whose main goal is to obtain all the necessary documents for the operation of rail freight transport in Croatia within a year at the latest. According to Chairman of the Board of Directors of ČD Cargo, as, Ing. Tomáš Tóth, the Balkans is an area where the carrier sees further room for expansion. He does not exclude interest in Slovenia and Serbia in the future. The great potential here is represented by the connection to the ports in Rijeka and Ploče.

“Over the last two years, ČD Cargo has significantly strengthened its orientation towards foreign markets and today it holds a ‘license’ (directly or through subsidiaries) for operation in six European countries. For example, in May we have dispatched already the thousandth train since the beginning of the year under our own ‘license’ in Germany. The basic goal is to provide international transport on behalf of ČD Cargo and to reach a situation where up to a fifth of the company’s revenue will be collected from foreign transports.” added Tomáš Tóth.

France

Alstom's first Coradia Polyvalent cross-border regional train begins approval and certification tests



The first pre-production Coradia Polyvalent France-Germany cross-border train left the Alstom Reichshoffen site on May 12th for the DB Systemtechnik test centre in Minden (Germany), where it will undergo its first tests for certification and approval. Mechanical tests will be conducted to check how the train behaves in curves. It will then go to the Velim test centre (Czech Republic), where it will undergo traction, braking, electro-magnetic and acoustic stress tests. Testing on the German commercial network will start in spring 2022.

The Certification & Validation teams at Alstom's Reichshoffen site will work closely with their partner DB Systemtechnik throughout the entire process of certification testing of the new train, which will last two years. The approval and certification documentation will then be submitted to Certifer (France) and AEBT (Certifer's German subsidiary), which will ensure that the results comply with European railway norms (Locomotives & Passengers and PRM[1] 2014TSI[2]).

In October 2019, SNCF and the Grand Est region (France) ordered 30 Coradia Polyvalent cross-border trains with financial support from the German states of Saarland, Rhineland-Palatinate and Baden-Württemberg, as well as European ERDF[3] funds from the INTERREG V Upper Rhine Programme as part of an exemplary cross-border partnership. These 4-car trains, which are dual mode (electricity-diesel), dual voltage (25 kV / 15 kV) and are equipped with the bi-standard ERTMS[4] KVB[5] system supplemented by the PZB[6] STM[7] specific to the German network, will run at speeds of up to 160 km/h, serving the three states.

The 30 Coradia Polyvalent cross-border trains will offer a first-class zone and a dedicated area for bicycles. They will incorporate the new LOC & PAS and PRM 2014 standards, notably offering more spacious toilets to facilitate travel for passengers with reduced mobility.

The first cross-border trains, designed and assembled at the Alstom Reichshoffen site, will be delivered at the beginning of 2024.

Thanks to its modular architecture, the Coradia Polyvalent product line can be adapted to the needs of each operator and to the different types of operation: suburban, regional, and inter-city.

It is available in three lengths (56, 72 or 110 metres) and offers optimal passenger comfort, whatever the length of the journey. It is an ecological and economical train thanks to its low energy consumption and its reduced maintenance costs. Coradia Polyvalent is the first French regional train that complies with all European standards, in particular for access for persons with reduced mobility.

To date, 400 Coradia Polyvalent trains have been ordered under the contract awarded to Alstom by SNCF in October 2009.

[1] Persons with Reduced Mobility
[2] Technical Specifications for Interoperability
[3] European Regional Development Fund
[4] European Rail Traffic Management System
[5] French Speed Control System using Beacons
[6] Punktförmige Zugbeeinflussung (abbreviated to PZB) is a railway safety system used in Germany
[7] Specific Transmission Modules

Photo: The first pre-production Coradia Polyvalent France-Germany

Spain

Euroduplex trains adapted by Alstom for the Spanish network are brought into service

Four Avelia Euroduplex trains from the SNCF fleet have entered commercial service on Monday May 10th on the Madrid-Barcelona route. They are operated by OUIGO España, a local subsidiary of SNCF. The trains have been converted by Alstom and SNCF to run on the Spanish high-speed rail network.

Following on from these first four trains, 10 other trains are currently being converted by Alstom to serve several high-speed routes in Spain: initially, the Madrid-Valencia and Madrid-Alicante routes and subsequently, Andalusia (Madrid-Seville and Madrid-Malaga). OUIGO España will thus have a fleet of 14 trains for 5 destinations departing from Madrid: Barcelona, Valencia, Alicante, Seville, and Malaga.

During the conversion process of the trains, Alstom developed and deployed on-board signalling equipment architecture, necessary for rail traffic safety and performance, based on its digital ERTMS[1] solution Atlas. This solution ensures that Avelia Euroduplex trains are compliant and can be approved for Spanish infrastructures.

14 Avelia Euroduplex trains
5 destinations departing from Madrid: Barcelona, Valencia, Alicante, Seville, and Malaga
17 months, the time needed to convert and approve the first four trains on the Madrid-Barcelona route

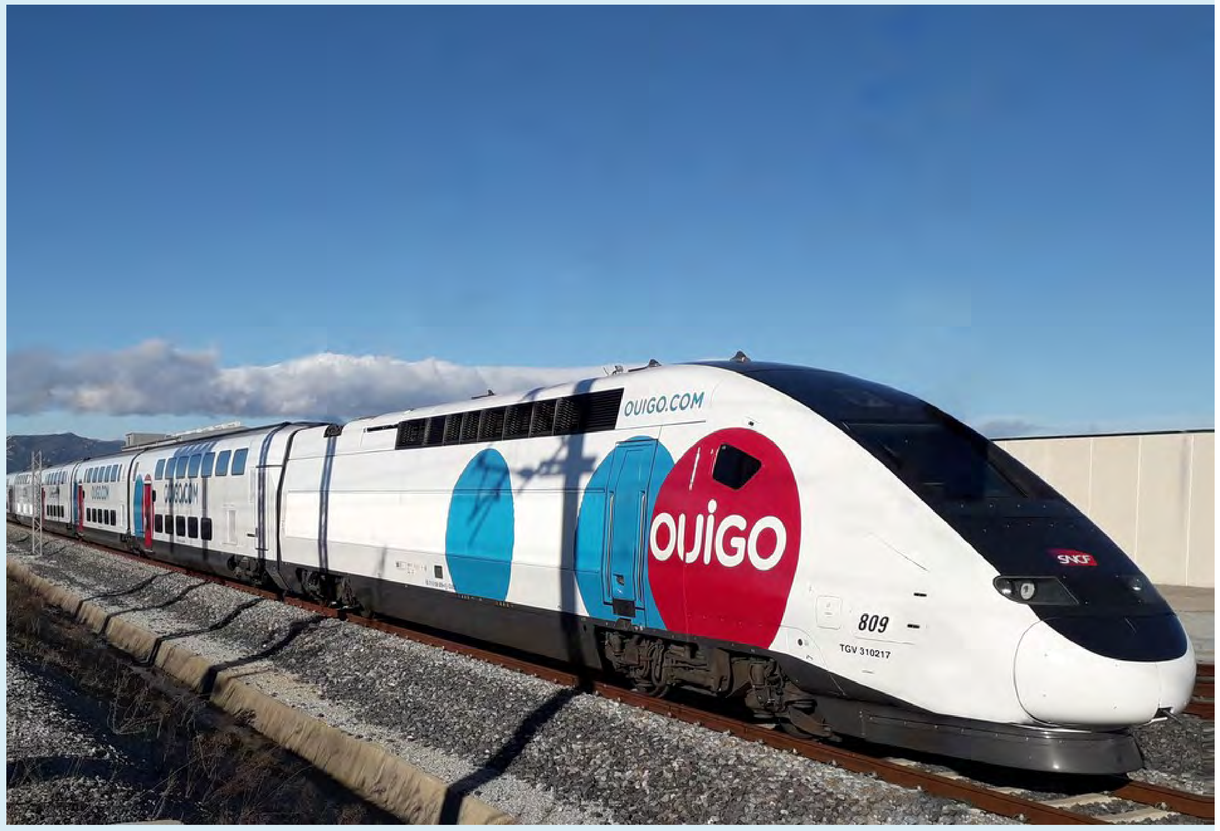
"This entry into commercial service marks another historic step for Alstom, which is committed to working alongside our customer SNCF," explains Jean-Baptiste Eymeoud, President of Alstom France. "The implementation of this project is further proof of the confidence international operators have in Alstom main line signalling system in Europe, while indicating our ability to guide these operators towards the success of their expansion plans in European rail markets that are open to competition."

The new signalling equipment architecture was developed and validated by Alstom's digital mobility experts in Saint-Ouen (France). The conversion of the power cars and train testing is being carried out at Alstom's Belfort site (in France), with the assistance of the component French sites in Villeurbanne (modification of the electronic equipment), Tarbes (modification of the wiring harnesses) and Le Creusot (adaptation of the on-board signalling sensors on the bodies).

The project is being led by Alstom's site in La Rochelle (France), which is in charge of transforming the passenger cars and assisting SNCF with the approval of the converted trains in Spain.

The teams of SNCF and Alstom share a common project workspace, as an integrated team, using innovative working methods to honour the ambitious schedule for commercial entry into service.

The project was completed in a record time of 17 months, including design, industrialisation of signalling equipment and integration into the existing train.



[1] European Rail Traffic Management System

Belgium

Vossloh wins long-term framework contract for the supply of tram turnouts

Vossloh, a world market leader in turnouts and crossings, has been awarded an important framework contract to supply tram turnouts. The subsidiary Vossloh Cogifer KIHN SA will cover all the needs for turnout and spares of the Brussels intercommunal transport company STIB (Société des Transports Intercommunaux de Bruxelles) over the next ten years. Deliveries are scheduled to start in the first half of 2021. The value of the contract amounts to nearly €40 million.

"By winning the framework contract, we successfully continue our long-standing business relationship with STIB. We have been equipping the Brussels public transport network with tram turnouts for over 35 years and are honored by the renewed trust of our customer for the next decade," explains Jan Furnivall, member of the Executive Board of Vossloh AG. "The satisfaction of our customers is always our top priority. With our technologically leading products and solutions, we reliably support available and, above all, sustainable mobility."

Vossloh Cogifer Kihn is part of the Customized Modules division within the Vossloh Group. The company, based in Rumelange, Luxembourg, employs around 160 people locally and specialises in the development and manufacturing of turnout systems.

Canada

Siemens Mobility acquires RailTerm, strengthening its footprint in Canada

Grows Siemens Mobility footprint and customer base in Canada

Enhances digital offering and commitment to service availability

RailTerm is a leading provider of rail services serving more than 70 clients

Siemens Mobility is pleased to announce that it is acquiring RailTerm, a Canadian based transportation company that is a leading provider of rail services to railroads and transit agencies.

This acquisition signals Siemens Mobility's intent to grow its Canadian business. RailTerm's familiarity across Canada's entire rail spectrum will allow Siemens Mobility to expand its existing portfolio with on-the-ground track and signalling, electrification and communication systems.

"The acquisition of RailTerm strengthens our overall Rail Infrastructure business in North America and further establishes our footprint and customer base in Canada, a market we believe has immense potential," said Michael Peter, CEO of Siemens Mobility.

Through our world-class proven expertise in technology, digitalization, and innovation, we believe we can offer real value for customers in Canada by providing them with cost-effective, sustainable and reliable transport solutions that will assist Canadian cities in modernizing and expanding their transportation infrastructure."

As a trusted partner to passenger and freight rail customers, RailTerm serves more than 70 clients around the world. They will greatly assist in enhancing Siemens Mobility's ability to deploy its in-depth knowledge and world class technologies across Canada's vast and expanding rail networks, as well as reaching key customers.

Siemens Mobility has been providing solutions to Canada's transportation industry for more than 40 years, including light rail vehicles in Edmonton and Calgary, modern trainsets that will be delivered to VIA Rail starting in 2021, the electrification of the Kitchener-Waterloo light rail system and signaling and train control for Ottawa's Trillium line. Following this acquisition, Siemens Mobility Canada will increase its number of employees by approximately 200.

Italy

Works commence on the second and last construction lot of the Verona-Bivio Vicenza high-speed line, with a value of 1,766 million euro

Through its subsidiary RFI, the FS Italiane Group has hit the accelerator on the realisation of the High Speed Verona–Padua line. With the signing of a new agreement with the Consortium Iricav Due, works can actually start a few months ahead of the planned roadmap on the second and last construction lot of the Verona–Vicenza junction route, with a total value of 1,776 million euro, to be initiated at the same time as the final design of the crossing of Vicenza. As the railway line immediately following, it constitutes the natural continuation of the line to the east and leads to the heart of the Vicenza capital. The Final Design is scheduled to be completed by 10 September 2021.

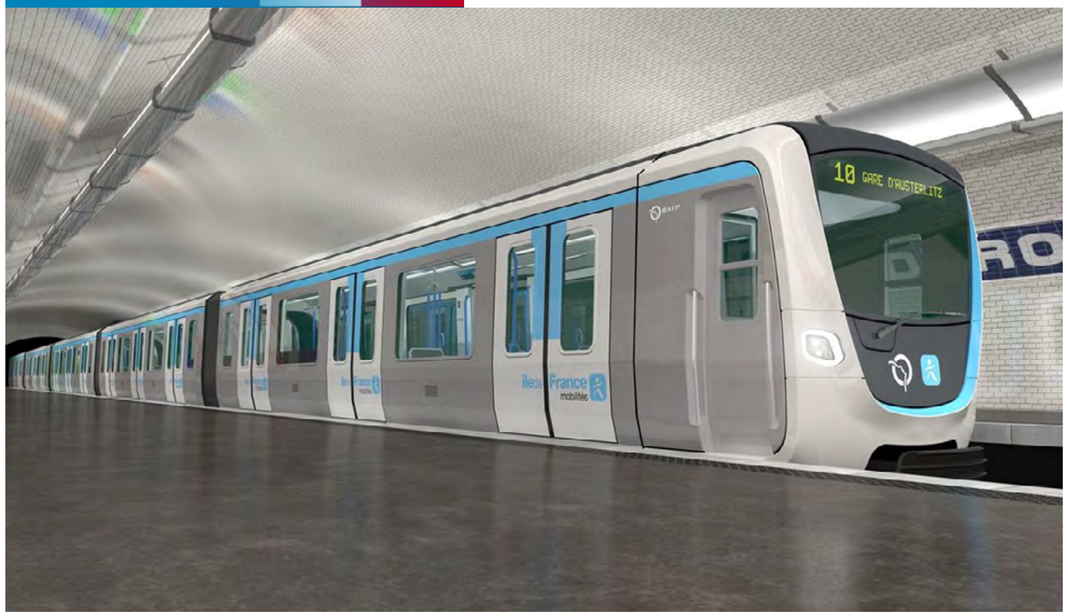
With the resources found with the Ministry of Infrastructure and Sustainable Mobility, the acceleration marked by FS is aimed at allowing activation of this "Verona–Vicenza Junction Functional Lot" by 2026, being part of the works proposed in the National Recovery and Resilience Plan sent by the Italian Government to Brussels.

Considered as a priority also in the 2020 Economy and Finance Document, the work constitutes a fundamental feature of the broader TEN-T "Mediterranean" trans-European Corridor and extends FS Italiane's current HS/CA network. This was all made possible thanks to the FS Italiane Group (through RFI) and the Iricav Due Consortium (as the General Contractor constituted by Webuild S.p.A., Astaldi, Hitachi Rail STS, Lamaro Appalti S.p.A. and Fintecna S.p.A.) having signed the Second Amendment Deed to the Supplementary Deed of August 6th 2020, which had allowed works to commence on the first of the two lots of the HS/CA Verona–Padua line, as the initial Verona–Vicenza Junction Functional Lot.

The signing of this "Modifying Deed" thus also sees works start on the second and last Construction Lot, having a lifetime value, being inclusive of all ancillary costs and totalling 1,766 million euro. Now fully under construction, the Verona–Vicenza Junction line is characterised by a lifetime cost of 2,470 million euro and works with a duration of 74 months, extending some 44 kilometres in the Veneto Region and articulated as follows:
- 1st Construction Lot, amounting to 984 million euro, which includes the realisation of part of the civil works, as well as the railway superstructure and technological facilities preparatory to the activation of the deviations along the Historical Milan–Venice Line;
- 2nd Construction Lot, amounting to 1,776 million euro, which sees the completion of civil works along with the realisation of the armament and technologies of the entire Lot.

France

Alstom to supply its on-board automatic train operation system to lines 10, 7bis, 3bis and 3 of Paris metro



Alstom has been selected by public transport operator Régie Autonome des Transports Parisiens (RATP) to provide its automatic train operation system I-CBTC to lines 10, 7bis, 3bis and 3 of the Paris metro, in France. As many as 91 carriages of the new MF19 trains, designed and manufactured by Alstom at its Valenciennes and Crespin sites, will be equipped with Alstom's interchangeable CBTC (I-CBTC) solution, developed for RATP.

The confirmed part of the contract covers adaptation of the I-CBTC solution and its rollout on lines 10, 7bis and 3bis (44 trains). RATP may award conditional phases, such as rollout on line 3 (47 trains), maintenance in working condition for 15 years, or functional upgrades. The rollout of the I-CBTC on-board automatic train operation system is part of the OCTYS program to upgrade the automatic operation system on Paris metro system. Thanks to the scalability and upgradability provided by OCTYS' interchangeability concept, the CBTC solution can be rolled out in several phases whilst guaranteeing its uniformity across the whole network. Lines 10, 7bis and 3bis will initially operate with reduced ground infrastructure and no radio communication. On line 3, interchangeability will enable the new MF19 trains fitted with Alstom's I-CBTC solution to run on existing ground infrastructure.

"It is a great honour for us once again to work on modernising the Paris metro system. Our I-CBTC solution is already in operation across 34km on lines 5 and 9, and over 80 million kilometres have already been covered since it entered into service. It is also being rolled out on lines 6 and 11 of the Paris metro. This new contract is a mark of RATP's trust in our French expertise in urban signalling and of our commitment to close cooperation over the next thirty years. It reinforces Alstom's signalling activity in France, where it is the largest employer in this particular sector with over 1,700 employees," said Jean-Baptiste Eyméoud, President, Alstom France.

I-CBTC is an interchangeable "Communication-Based Train Control" (CBTC) type automation system that meets the criteria of RATP for the OCTYS standard. Developed in partnership with RATP, I-CBTC is capable of carrying out remote operating functions, monitoring safety in operations and controlling traction and braking systems to run the metros automatically, with different levels of automation, according to the configuration chosen by RATP. It improves frequency on the line. Close to 130 Paris metro carriages (MF01) operating on lines 5 and 9 are now equipped with Alstom's I-CBTC on-board solution. The MP14 and MP89 trains due to enter circulation on lines 11 and 6 respectively will also be fitted with the Alstom solution. These two lines are also equipped an Alstom radio system to transmit data between the train and the ground, which is part of the I-CTBC solution. Alstom will be responsible for the development, validation, industrialisation, installation, testing and commissioning of its on-board I-CBTC solution.

Alstom has rolled out its CBTC automatic train operation systems on 109 metro lines in 23 countries, with 28 of those lines fully automated. This represents a total of over 1,500km of metro lines in operation. Alstom offers well-proven solutions based on 15 years of expertise in CBTC radio systems. Alstom is a trademark of the ALSTOM Group

Image: Non-contractual design of a MF19 metro. © Alstom/Avant-Première

Eurostar

Eurostar secures financial support package

Eurostar has announced that it has reached a refinancing agreement with its shareholders and banks. The refinancing package of £250m[1] mainly consists of additional equity and loans from a syndicate of banks[2] guaranteed by the shareholders: SNCF, the French state railway group and Eurostar's majority shareholder, Patina Rail LLP, a vehicle backed by Caisse de dépôt et placement du Québec ("CDPQ") and funds managed by the Infrastructure team of Federated Hermes, and SNCB, the Belgian state train operator.

Jacques Damas, Chief Executive of Eurostar, said: "Everyone at Eurostar is encouraged by this strong show of support from our shareholders and banks which will allow us to continue to provide this important service for passengers. The refinancing agreement is the key factor enabling us to increase our services as the situation with the pandemic starts to improve. Eurostar will continue to work closely with governments to move towards a safe easing of travel restrictions and streamlining of border processes to allow passengers to travel safely and seamlessly. Their co-ordinated actions and decisions are crucial to the restoring of demand and the financial recovery of our business."

Over the last year, this international business dedicated to routes connecting the UK with the continent, has experienced a more severe decline in demand resulting from the global covid-19 pandemic than any other European train operator or competitor airline. With this package of support, Eurostar will be able to continue to operate this vital link and meet its financial obligations in the short to mid-term. Going forward, the focus will be on restoring demand for travel on Eurostar's core routes between London and Paris, Brussels and Amsterdam, and on maintaining rigorous cost control to ensure the repayment of loans. Eurostar will increase the number of trains on its London-Paris route to two daily return services from the 27th May, and three per day from the end of June with a view to gradually increasing the frequency over the summer period as travel restrictions are eased.

Eurostar remains committed to its role in reducing the impact of climate change, particularly in light of the COP 26 summit taking place in the UK in November this year, and the growing appetite of passengers for high-speed rail travel. This refinancing package secures Eurostar's future as restrictions ease and travel begins to gradually resume. With the refinancing in place, Eurostar will have the opportunity to recover and successfully complete its merger with Thalys, as part of the Green Speed project[3].

1. The refinancing package comprises £50m shareholder equity, £150m shareholder guaranteed loans and £50m restructured existing loan facilities.
2. Lenders include Export Development Canada, Barclays, Credit Agricole Corporate and Investment Bank, Société Générale, Natwest and BNP Paribas
3. In 2019 the shareholders of Eurostar announced the launch of the Green Speed project and their ambition to bring together Eurostar and Thalys, the French-Belgian high speed rail operator, to create one unified European high speed rail company.

South Korea

Siemens to supply control centers to Korea National Railway

Siemens Smart Infrastructure has won a contract to deliver the main control centers, based on Spectrum Power, to the Korean engineering company EntechWorld headquartered in Seoul. The end customer is the national railroad operator Korea National Railway. Starting in 2024, the main SCADA control centers will control and monitor the Korean railway system with more than 4,000 kilometers of tracks and about 3.5 million passengers daily. The control centers will ensure the reliable supply of energy to the entire rail network to meet the highest security, safety and quality standards.

“A stable and reliable power supply for the rail infrastructure is key to ensuring a safe, fast and comfortable travel or commuting experience. Our software could be described as the brain of the energy supply for the complex railway network. This helps our customer Korea National Railway optimize their business while at the same time dealing with the challenge of ensuring smooth, reliable operation of traction power supply and station facilities,” said Sabine Erlinghagen, CEO of Digital Grid at Siemens Smart Infrastructure.

The scope of supply for the end customer Korea National Railway encompasses the main control center and the backup control center, which will control and monitor general power of the railway network and ensure a smooth, reliable and economic operation of the traction power supply for the locomotives.

A special feature of the control center for Korea National Railway is the integrated network analysis system which makes sure that the entire power supply operates without interruptions and that potential faults are detected at a very early stage. In addition, Siemens offers an Operator Training Simulator (OTS) to help Korea National Railway personnel take advantage of the many different applications of the control center, including intelligent interlocking and switching procedure management with process element disposal locking.

France

Siemens Mobility acquires Padam Mobility to enhance its intermodal transportation portfolio

Siemens Mobility is pleased to announce that it has acquired Padam Mobility, a technology company that provides AI-powered platforms and applications for on-demand and paratransit services. The leading software as a service (SaaS) organization helps transit operators to provide more efficient transportation in both urban and rural areas. This acquisition enhances Siemens Mobility’s intelligent infrastructure portfolio focused on intermodal transportation. It supports transport operators in their effort to integrate and coordinate different modes of transportation which seamlessly provides travel from the first mile to the last.

“The acquisition of Padam Mobility reaffirms our commitment to offering digital mobility solutions that increase access to public transportation and intermodal travel. Padam’s proven software and intelligent solutions will expand our ability to provide travel options that integrate and coordinate on-demand and shared mobility. Having the ability to choose from the full spectrum of mobility options significantly improves the travel experience and turns the idea of seamless travel from the first mile to the last into reality,” said Andre Rodenbeck, CEO Rail Infrastructure at Siemens Mobility.

“Joining the Siemens Mobility family for intermodal travel is a tremendous opportunity. It will make Padam Mobility’s ambitions even more relevant: reconnecting territories, making mobility policies more impactful in the low and mid-density areas, and offering modern paratransit services. Siemens Mobility’s trust in our team, our vision and our agility will make our foundations stronger.” Grégoire Bonnat - Co-founder and CEO of Padam Mobility.

Padam Mobility was founded in 2014 and is headquartered in Paris, France. Padam Mobility’s demand responsive transport (DRT) platform is a software suite that is rebranded by public transportation operators to integrate microtransit and paratransit services. This software suite is based on powerful algorithms and artificial intelligence delivering superb results and efficiency gains. It offers local communities worldwide an advanced management system that improves the travel experience for all users.

The acquisition of Padam Mobility is the latest example of Siemens’ commitment to developing its portfolio of intermodal solutions. It follows the previous acquisitions of Hacon, Bytemark, and eos.uptrade, companies that are also at the forefront in developing intermodal transportation solutions. Both Siemens and Padam Mobility have agreed to maintain confidentiality regarding financial details of the deal.

Padam Mobility has successfully deployed its intelligent solutions to more than 70 localities in Europe, Asia and North America. More than one million passengers have already enjoyed a smooth ride powered by the Padam Mobility solution.

This technology allows passengers to book their shared ride easily and lets drivers see their itinerary evolve in real time, thanks to a powerful dispatch, algorithms, and traffic data integration. It provides transport operators with the ability to manage and supervise operations in real time and collect data to improve the service for users with the management interface. Furthermore, the simulation tool enables public transport authorities to determine the best solution for their needs, as it delivers data such as expected waiting times, cost estimations and filling rates.

Portugal

Siemens Mobility and Stadler consortium wins contract to modernize and upgrade the Lisbon Metro

Consortium of Siemens Mobility and Stadler win €114.5 million contract for Lisbon Metro
Siemens Mobility to install CBTC across three lines
Stadler to supply a new fleet of modern trains

The consortium of Siemens Mobility and Stadler have won a €114.5 million contract to provide the Lisbon Metro with a state of the art signaling system and a new fleet of modern trains. Stadler will supply 14 three-car metro trains, while Siemens Mobility will install its Communications-Based Train Control (CBTC) system Trainguard MT on the Blue, Yellow and Green lines, and will upgrade the existing equipment. This will include installing its on-board CBTC technology across 70 trains of the existing fleet, as well as on the 14 new Stadler trains.

“We are excited about this contract, and proud to have the chance, in partnership with Siemens Mobility, to support Lisbon Metro in its efforts to modernize the fleet. Stadler has recently won major metro projects in Europe and the US. This latest contract confirms the success of our strategy and positions us as a global reference in providing solutions for sustainable urban mobility”, states Ansgar Brockmeyer, Executive Vice President Marketing and Sales at Stadler Group.

Andre Rodenbeck, CEO Rail Infrastructure at Siemens Mobility, said: “Siemens Mobility, together with our partner Stadler, are proud to have been appointed to deliver the modernization and optimization services for Lisbon Metro. Siemens Mobility’s CBTC system will increase reliability, availability and efficiency of the service delivered by Lisbon Metro, while also complying with the high standards of quality and safety required by the operator. We are pleased to contribute our technology and know-how to this important mobility project that will increase passenger experience for the residents of Lisbon.”

The contract includes technical training for operation and maintenance, as well as preventive and corrective maintenance of all equipment for the first three years, and a supply of spares and consumables for preventive maintenance for a further two years. The supply period agreed is 77 months, with provisional acceptance planned for 2027.

Stadler will design the vehicles using a modular methodology to better facilitate maintenance. Its stainless-steel car body ensures the vehicles are lightweight and strong. Three double doors per side and carriage will enable passengers to get on and off quickly and easily.

The 14 three-car trains will initially be fitted with CBTC GoA2 but will have the ability to be upgraded to GoA4, so the service can be fully automated in future. Trains will be powered by third rail at 750 V. The 49.6m long and 2.78m wide vehicles will have 90 seats arranged longitudinally, two places for wheelchair users, and standing capacity for 450 people. The new rolling stock will increase comfort and accessibility for passengers, as well as provide enhanced communications, safety, and video surveillance systems.

Siemens Mobility CBTC signalling technology provides real-time data on vehicle position and speed conditions operating in moving block principle, allowing system operators to safely increase the number of vehicles on a rail line. This results in greater frequency of train arrivals and allows more passengers to be accommodated on the system. This is the most extensively deployed automatic train control system in the world and is currently being used in Singapore, Turkey, Brazil, Spain, and China.

Brazil

Siemens Mobility to Provide CBTC Signalling for the Extension of Metro Line 1 in Salvador, Bahia, Brazil

Siemens Mobility has been awarded a contract by Companhia de Transportes do Estado da Bahia to install a Communications-Based Train Control system (CBTC), GoA2, on the extension of Line 1 in Salvador, Bahia, Brazil. The CBTC signalling system will be fully implemented across the approximately five-kilometre extension that will connect Pirajá to Águas Claras/Cajazeiras, including two new stations. The full integration of the extension to the existing Line 1 will provide for greater availability, enhanced operations, and a better passenger experience. This contract builds on the already well-established relationship Siemens Mobility has with the Salvador Metro and CCR Metrô Bahia.

“The extension of Line 1 marks another important step in the expansion of the metro-rail system in Salvador. CTB is proud to be expanding its services together with its concessionaire CCR Metrô Bahia. We are pleased that Siemens Mobility will continue to contribute significantly to the modernization of our network”, says José Eduardo Ribeiro Copello, CTB’s President Director.

“The extension of Metrô Bahia Line 1 is excellent news for the people in the City of Salvador. It is a further step of the State of Bahia’s Administration to provide access to comfortable, safe, and sustainable transport. With the supply of state-of-the-art digital signalling systems, Siemens Mobility is proud to be part of this important innovation project”, says Andreas Facco Bonetti, CEO of Siemens Mobility in Latin America.

Siemens Mobility will provide the software update for all onboard units on the existing 40 train fleet and for both Operation Control Centres (the main one and the backup). This contract also includes the installation, testing and commissioning of a radio system, electronic interlockings, and wayside equipment.

The Salvador Metro started operations in 2014 and is managed as a Public Private Partnership (PPP) by concessionaire CCR Metrô Bahia and the State of Bahia’s Administration. The system comprises two metro lines extending 32 km, with 20 stations, 2 OCCs, 2 depots, and utilizes a 40-train fleet to move 370 thousand passengers per day.

Siemens’ intelligent solutions played a key role in the creation of this system, including the installation of the signalling, train control, catenary and telecommunications systems. The control system Trainguard MT, implemented by Siemens Mobility between March 2015 and July 2018, allows for the automatic train operation to be activated with a train operator onboard (Grade of Automation level 2). Even though the conductor starts the train manually, the system automatically takes over acceleration/braking and speed control between train stations and determines the train’s stoppage and the opening/closing of doors at stations. The system also allows for driverless manoeuvres in the turnback areas.

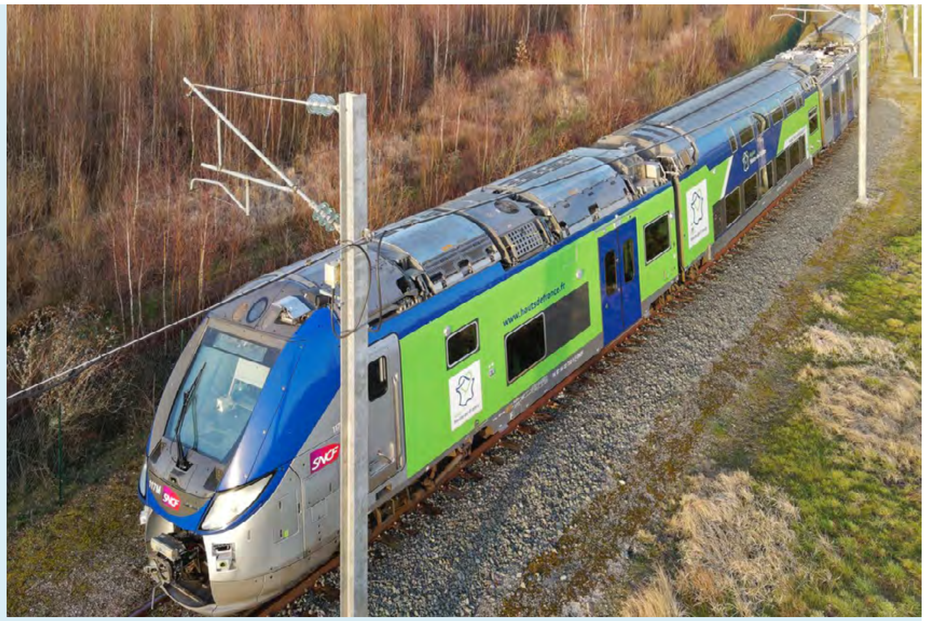
In developing the telecommunications system, Siemens Mobility successfully integrated the data transmission, fixed communications, multimedia, message panel and timing, as well as the electric monitoring and radio subsystems. Siemens Mobility was also responsible for the complete catenary supply (distribution and electrical supply system for traction) in 3 kVcc for the trains.

The radio based CBTC technology provides real-time data on vehicle position and speed conditions, allowing system operators to safely increase the number of vehicles on a rail line. This results in greater frequency of train arrivals and will allow Metrô Bahia to accommodate more passengers on its system. Additionally, the technology precisely locates each train on the tracks and controls speed, improving safety for riders and employees, while also providing the ability for continuous updates on system status that results in fewer delays and up-to-date travel information.

The Siemens Mobility CBTC solution Trainguard MT is the most extensively deployed automatic train control system in the world and is also used by many operators in Latin America, like São Paulo and Buenos Aires, and around the world, including Paris, Beijing, and New York.

France

A new step forward for the autonomous train in France



Two and a half years after a consortium was launched to develop the prototype of an autonomous regional train in France, SNCF and its partners Alstom, Bosch, Spirops, Thales and the Railenium Technology Research Institute are putting their test train into operation. At the start of the year, a Regio 2N regional train was modified and equipped for the purpose of the trials by the Alstom site in Crespin (formerly Bombardier). Various sensors, cameras, radars and lidars (laser detection) were fitted to collect essential data for the project.

Initial trials on commercial tracks, followed by a phase of tests at the railway test centre

The first trials took place over one week, in the beginning of March, between Aulnoye and Busigny and between Busigny and Calais (in the North of France). The Regio 2N regional train prototype ran on a commercial track, with the project's engineers and technicians on board.

The trials included tests of:

- The perception and recognition systems for the signals located along the track;
- The geolocation system, particularly by satellite, which provides the precise position of the train.

During this first phase of trials, the sensors and equipment of these new systems specially fitted on the train were activated for the purpose of observing how they work but did not interfere with the movement of the train. The Regio 2N regional train prototype was driven by an SNCF driver specialised in operating under test conditions. At the end of this week of trials, tests were conducted at the CEF railway test centre in Petite-Forêt, near Valenciennes, to test the train's autonomous operation system, which makes it possible to automate the acceleration and braking of the train.

A second trial phase underway to achieve semi-autonomy

From May 17th to 21st, following the tests carried out at the CEF railway test centre, a second series of trials was scheduled to fine-tune the operating system of the train prototype. These new trials took place on the national railway network at Busigny (in the North of France) and will lead, in the coming months, to semi-autonomous operation in the trial phase.
Semi-autonomous operation makes it possible to automate the acceleration and braking of the train, supervised by a driver. These trials are a key step towards achieving the consortium's ultimate objective: achieving full autonomy by 2023.

The trials, authorised by the French National Railway Safety Authority (EPSF), will help to substantiate the safety demonstration required for the train's future authorisation to operate. As an observer in the project, EPSF will be in a position to assess the understanding of the technologies developed and their impact on the railway system, as well as any possible regulatory changes needing to be made for this new type of operation. Cybersecurity issues, which are crucial for the autonomous train, have been taken into consideration from the start of the project. The project partners are working closely with ANSSI (Agence Nationale de la Sécurité des Systèmes d'Information), the French national cybersecurity authority.

Train prototype to alternate between commercial service and trials over the next two years

This Regio 2N regional train will be used over the next two years as a prototype of the autonomous passenger train. The train will be tested on the track between Aulnoye and Busigny, during the school holidays.
Outside the research and test periods, the Regio 2N regional train, an activity of SNCF Voyageurs, will be in regular commercial service, transporting passengers. During these commercial trips, in conventional driving mode, it will record data that will improve the performance of the signal recognition algorithms by detecting, for example, the colour of the traffic lights and the surrounding environment of the train. At the same time, laboratory work is being carried out on trial simulators at the sites of all the consortium partners to fine-tune the itineraries of the test train and further develop the automated system.

Autonomous train: real benefits for transporting passengers and goods

Train automation means real benefits for rail customers:

- Increased capacity, because running more trains means being able to transport more passengers and more goods;
- Greater fluidity and regularity thanks to harmonised traffic flow and optimised speed, making it easier to react to unforeseen circumstances;
- More environmental-friendly transport, thanks to reduced energy consumption and the shift from road to rail.

Autonomy thus provides rail transport with new perspectives: more flexible organisation, with the possibility of rapidly changing the number of trains in line with changing needs. These benefits will encourage a modal shift from road to rail, thereby contributing to a more environmental-friendly mode of transport.

"Our project has just passed a significant milestone with great success. Another step has been taken towards achieving autonomy in rail. The mobilisation of the SNCF teams and of our partners allows us to explore all the issues, both human and technological. With our research work and trials, we are making progress in the rail sector and preparing for its future development." Pierre Izard, Director of Technology, Innovation and Group Projects, SNCF Group "The trials conducted over the last few months represent a significant step towards our goal, that of inventing the transport of the future with the autonomous train. By providing its expertise in the domains of artificial intelligence, BIM (digital mock-up), digital modelling and operating safety, Railenium, the Technological Research Institute for the rail industry, is delighted with the work of the multi-partner teams, who are taking up the technological and scientific challenges of this pioneering project!" Eric Tregoat, CEO of Railenium

"Alstom is particularly proud to have helped reach a new milestone for autonomous operation in France, following the first run of a semi-autonomous freight train on the French national railway network last October. With more than 50 years of experience, Alstom has been offered, with this project of autonomous train for passengers, a new major opportunity to enhance its skills and innovations in the field of rail automations and autonomous transport, thereby developing its leadership in new forms of autonomous and digital mobilities." Jean-Baptiste Eyméoud, President, Alstom France

"We are pleased to see the realisation of this innovative programme after two and a half years of work by the consortium. The success of these trials confirms the pertinence of autonomous vehicle technologies when applied to the railway sector. The Bosch group, through its Bosch Engineering team in France, is proud to contribute to this research programme which is paving the way for the future of rail mobility." Heiko Carrie, President of Robert Bosch France

"It is an honour for SpirOps to put its AI expertise at the service of this collaborative adventure. This project is a fantastic laboratory for improving experience on board and developing the autonomy of future trains." Jérôme Hoibian, CTO of SpirOps

"As a major actor in rail signalling and a global pioneer in automatic metro systems, Thales has been a partner of SNCF's Autonomous Train programme since day one, with the TeleConduite Rail and Service Voyageurs projects. We are delighted to have reached this new milestone and are extremely proud of the collaboration and trust that Thales and SNCF have enjoyed for many years. This project builds on Thales' latest innovations in the field of artificial intelligence on board platforms such as trains, where safety is critical, and illustrates its expertise in key digital technologies such as AI or cybersecurity." Millar Crawford, Executive Vice-President, Ground Transport Systems at Thales

Photo © Samuel Dhote

From the Archives

Argentina

Tren Patagonico No. 7920 crosses the combined road and rail bridge over the Rio Negro at Viedma with a Barriloche to Buenos Aires long distance charter on November 10th 2004. *John Sloane*

From the Archives

Argentina

Metropolitano Alco RSD 16 No. B820 runs light out of Retiro San Martin terminus at Buenos Aires on November 12th 2004. *John Sloane*

From the Archives

Bulgaria

BDZ narrow gauge No. 75004 and 2-8-2T No. 609 double head an excursion train at Velingrad on May 1st 2011. *John Sloane*

From the Archives

Cuba

On February 19th 1985, FCC No. 61040 (a Ganz Mavag built in 1968) departs Moron with a train which includes two de-motorised Budd RDC railcars. It has just crossed a west bound service worked by an active 1951 built Budd RDC railcar seen on the right. *John Sloane*

From the Archives

Czech Republic

Class 362.166 is seen arriving at Brno hl.n. on July 6th 2008.
John Sloane

From the Archives

France

SNCF steam loco No. 231.G.558 is seen upon arrival at Paris Austerlitz with a special on October 26th 1986.
John Sloane

From the Archives

France

SNCF BB Nos. 67383 and 67362 charge through La Garenne in the NW suburbs of Paris with an express from the Caen direction heading to St. Lazare on October 28th 1992. *John Sloane*

From the Archives

France

SNCF No. 80001 stands in Boulevard Massena carriage sidings on February 21st 1996. *John Sloane*

From the Archives

France

SNCF No. CC-1110 stands between duties at Villenueve St. Georges yard on October 26th 1984.
John Sloane

From the Archives

Germany

SBB Cargo Class 421.386 passes Portz Rhein, south of Koln, on July 10th 2013 with an intermodal service.
John Sloane

From the Archives

Germany

DB Class 218.131 arrives at Koln on November 1st 2001.
John Sloane

From the Archives

Hungary

MAV No. V43.2300 passes Kobanya Felso, outside Budapest, on September 16th 2007.
John Sloane

From the Archives

Ireland

CIE Nos. 163 and 188 stand outside Drogheda shed on April 10th 1996. *John Sloane*

From the Archives

Italy

FS Class E645.022 is seen at Viareggio with a freight heading south towards Livorno on August 20th 1989. *John Sloane*

From the Archives

Italy

FS No. E656.066 runs through Caserta with a northbound train on August 5th 1986.
John Sloane

From the Archives

New Zealand

Kiwi Rail Nos. 4761 and 4513 call at Arthurs Pass with the Greymouth to Christchurch Addington 'TranzAlpine' service on November 29th 2010. *John Sloane*

From the Archives

Poland

On May 22nd 2011, in Pol-Miedz Trans colours, Russian-built M62 No. 1199 crawls through Leszno, Poland, with a train of chemical tanks. On an opposite platform, Przewozy Regionalne's Su42-536 performs station pilot duties. *Jeff Nicholls*

From the Archives

Spain

RENFE No. 313.024 and classmate blast out of Almeria with iron ore empties on April 3rd 1978. *John Sloane*

From the Archives

Spain

RENFE's Class 309-0180 pushes a cross border train into the bogie changing shed at Irun in the late 1980s. Once shunted into the gauge changing shed the train has its bogies replaced. Note that the passengers are still on board the train which has been lifted up on jacks! Health and Safety? *Jeff Nicholls*

From the Archives

Switzerland

A pair of Berner Oberland-Bahn's units, led by No. 424 roll down the valley from Grindlewald to Interlaken, seen here passing through the fields at Burglauenen on July 24th 2013. In the background, the tall peaks of the Bernese Oberland look down on the scene. *Jeff Nicholls*

From the Archives

U.S.A.

Caltrain No. 901 'San Jose' waits to depart San Francisco with a service to San Jose. *John Sloane*