

## Volume 180 No 4



**BIG DATA & IOT**  
Assessing the potential of quantum train location  
Page 22

**SPAIN & PORTUGAL**  
South International Corridor passenger train  
Jamsil-Kanada freight  
Page 33

**IN FOCUS**  
Japan's Shinkansen  
Passing 100,000  
extension to Tsuruga  
Page 36

The Spanish government has committed up to €25bn to modernise and enhance suburban rail services across the country's principal conurbations, allocating funds for both infrastructure enhancements and rolling stock renewals. The initiative is expected to revitalise the **Cercanías** networks, which have experienced a gradual decline over the past three decades while most rail spending was pumped into the expanding high speed network (p28).

Photo: Vivvi Smak / Shutterstock

## CONTACT

Railway Gazette International

1st Floor, Chancery House, St Nicholas Way, Sutton, SM1 1JB, Great Britain

Tel +44 20 8652 5200

editor@railwaygazette.com

See p48 for full details

 [www.facebook.com/railwaygazette](http://www.facebook.com/railwaygazette)

 @railwaygazette

Annual subscription in USA \$395.

Railway Gazette International (ISSN Number 0373-5346, USPS 5845) is published monthly by DVV Media International Ltd, 1st Floor, Chancery House, St Nicholas Way, Sutton, SM1 1JB, UK. Airfreight and mailing in the USA by agent named World Container INC 150-15, 183rd St, Jamaica, NY 11413, USA.

Periodicals postage paid at Brooklyn, NY 11256.

US Postmaster: Send address changes to Railway Gazette International, Air Business Ltd, c/o World Container INC 150-15, 183rd St, Jamaica, NY 11413, USA

Subscription records are maintained at Abacus E-Media, 107-111 Fleet Street, London, EC4A 2AB, UK

Worldnet is acting as our mailing agent.

## IMAGE OF THE MONTH

- Hairatan – Mazar-i-Sharif upgrading starts

## COMMENT

- Multilateral initiatives still matter

## INTELLIGENCE

- CRRG grouping wins Sao Paulo – Campinas inter-city concession
- Alstom and SLC bid to enter open access market
- Kevin Speed signs access agreement
- President opens Lagos Red Line
- Metro to the Taj Mahal inaugurated
- Luxembourg Protocol comes into force
- Enno Wiebe named as next UIC Director General
- Market

## INNOVATIONS & RESEARCH

- Aurizon wins grant to develop battery electric tender
- Dubai metro, Keolis MHI and University of Birmingham establish strategic partnership

## BIG DATA & IOT

- Getlink adopts AI and digital twins** As Channel Tunnel operator Getlink prepares for its future role in providing more and better services between the UK and France, it is making a transition to a data-driven company, seizing the opportunities offered by data management and artificial intelligence
- Assessing the potential of quantum train location** Quantum train location technology is to be tested on the London Underground to see how far the technology could be used to provide geolocation without using satellites or lineside assets. Andrew Grantham reports
- IoT tools help to ensure a rapid response** German IoT specialist Optimeas is working with infrastructure manager DB InfraGo to enhance the availability of its electrification inspection and repair vehicles as part of efforts to reduce the impact of power supply failures across the network

- 'Understand the pain points before you discuss technology'** Swedish start-up Strainlabs is one of the founding participants in the Vossloh Connect digital ecosystem. Vossloh's Head of Digital Pierre-Henri Bougeant and Strainlabs' CEO Csaba Madru explain the partnership and why in rail digitalisation, simplicity is key

## SPAIN & PORTUGAL

- Plan de Cercanías promises an end to inaction** Over the past three decades, much of Spain's rail investment has been channelled into its expanding high speed network. Government plans now envisage a substantial boost for suburban services
- South International Corridor nears completion** Trains have started running on the first section of the 80 km Évora – Elvas direct line, shortening the TEN-T corridor serving ports in southern Portugal and paving the way for a revival of international passenger services. Andre Pires reports

## IN FOCUS

- Hokuriku Shinkansen reaches Tsuruga** JR West and JR East inaugurated the 125 km extension of the Hokuriku Shinkansen from Kanazawa to Tsuruga on March 16. Mike Bent reports
- Adapting to a changing market** Eurofima Chief Executive Dr Christoph Pasternak explains to Nick Kingsley how the supra-national rolling stock financing body is tweaking its strategy
- Derailments halt Malmaban iron ore shipments** Two derailments in quick succession on the single-track railway between Kiruna and Narvik have raised serious questions and fuelled calls to double-track the line, writes Toma Bačić

## SIDETRACK & CONTACT

- Dieter; Overground rebranding; Last-mile LEAP

## VIEWPOINT

- Focus on new passengers** Transport ticketing must be more agile to attract new passengers, says Yann Chermat, COO of the Calypso Networks Association smart card organisation



**د افغانستان او اوسپنې پټلۍ پروژې د تخنیکي - اقتصادي مطالعاتو (Feasibility Study) د پیل تماشې لیک لاسلیک شو**

د افغانستان او اوسپنې پټلۍ پروژې د تخنیکي - اقتصادي مطالعاتو (Feasibility Study) د پیل تماشې لیک لاسلیک شو. د افغانستان او اوسپنې پټلۍ پروژې د تخنیکي - اقتصادي مطالعاتو (Feasibility Study) د پیل تماشې لیک لاسلیک شو. د افغانستان او اوسپنې پټلۍ پروژې د تخنیکي - اقتصادي مطالعاتو (Feasibility Study) د پیل تماشې لیک لاسلیک شو.



Representatives from the Afghanistan Railway Agency and Uzbekistan's national railway UTY participated in a ceremony at Hairaton on February 21 to mark the start of work to improve the line linking Mazar-i-Sharif to the Uzbek border for heavier trains. UTY has deployed around 120 staff to undertake the first phase of the work.

Meanwhile, the ADL-Ulanish joint venture between Uzbekistan's SEG Enera and UAE's AD Ports Group has started work on a feasibility study for the proposed Trans-Afghan Railway, following the signing of an accord in Toshkent by the acting head of ARA Bakht ar-Rehman Sharafat and Uzbek Minister of Transport Ilkhom Makhkamov. This is due to be completed by July, so that Uzbekistan, Pakistan and Afghanistan can start seeking funding for the line's construction.

# COMMENT

Nick Kingsley, Executive Editor, Railway Gazette International

nicholas.kingsley@railwaygazette.com



## Multilateral initiatives still matter

In an era when geopolitical turbulence is putting ever greater strain on the kinds of global partnerships we perhaps took for granted in recent decades, it is hard to avoid a perception that sectors such as rail could fall back into focusing primarily on domestically oriented activities at the behest of national governments.

To some extent, this pattern is already becoming visible in the supply chain. The market for railway technology is being increasingly shaped by policies such as Buy America or Make in India, under which governments are seeking to ensure that railway equipment can be procured domestically. In some cases, it is hard not to view these moves as being driven by a level of emotion — in many countries, train building in particular is seen as something which should be done 'here', rather than 'over there'. This simplistic view often ignores the complex international web of manufacturing plants and suppliers that develop and deliver key components and subsystems for modern rolling stock.

Yet even countries with relatively small rail markets today are moving in this direction. At the start of the year, plans were unveiled for a prototype 'national train' to be developed by 2025 under the Producing Railway Rolling Stock in Portugal initiative (RG 3.24 p14).

The project is being undertaken by a consortium of 13 companies and institutions led by SERMEC Group. It includes the Portuguese Railway Platform, CP, the Institute of Science & Innovation in Mechanical & Industrial Engineering and the University of Porto. The participants hope that a modular train tailor-made for the Portuguese market could reduce delivery times, with the use of mostly domestically produced materials and components contributing to the diversification of the economy, reducing imports and boosting the domestic supply industry by meeting both national and international demand for new trains. However, the funding for this initiative is not purely domestic: the

13

companies and institutions are involved in a project to develop a prototype 'national train' in Portugal

EU-backed National Resilience & Recovery Plan is providing €56m towards the anticipated €70m cost.

This rush to localisation — or 'onshoring' to use current parlance — can bring with it some familiar problems, not least the conundrum of how to manage the cyclical waxing and waning of rail investment in many countries, as highlighted by our Spanish suburban feature (p28). Perhaps nowhere is this more apparent today than in Britain's benighted rail sector, where the political backing for rail projects seen over the past 15 years or so has evaporated since the pandemic (RG 11.23 p5). Now the metaphorical chickens are coming home to roost: on March 18, the *Sunday Times* reported that 'last ditch' talks were under way to save Alstom's Derby factory, the UK's oldest surviving rolling stock manufacturing facility, amid reports the supplier could shift work to its plants in Poland and India.

Such reports are especially frustrating when help is available to mitigate some of these 'feast and famine' risks. But doing so 'successfully means opening up to multilateral partnerships once again. In the case of the UK rolling stock market, in the wake of Brexit severing access to EU-backed finance streams, it is perhaps surprising that the British government has not made more progress in securing replacement funding options.

This argument is made emphatically on p43 by Eurofima Chief Executive Christoph Pasternak, who is urging British policymakers to use the

supra-national body as a means to access cheaper asset finance. Despite clear support from across the rail industry and wider stakeholders, the UK government needs to sign the Eurofima Convention in order to unlock that access — and with an election looming and Prime Minister Rishi Sunak doubling down on a 'plan for motorists', progress seems unlikely in the short term.

Seen in the context of this greater emphasis on national markets, the entry into force on March 8 of the Luxembourg Protocol came at an apposite time. As we report on p12, the global treaty is designed to make it easier and cheaper for the private sector to finance railway rolling stock. The protocol 'opens up new possibilities for the private sector to provide much-needed and cheaper financing for railway rolling stock around the world', according to Howard Rosen, Chair of the Rail Working Group association, which has done much to develop the protocol and lobby for its adoption.

On the suppliers' side, the potential impact of the treaty has been hailed by Stadler, which recently joined the Rail Working Group. 'However good our products are, our customers often need finance at sustainable rates before we can make the sale,' explained Dr Ansgar Brockmeyer, the Swiss manufacturer's Executive Vice-President Sales & Marketing. 'The protocol is good news for us as a leading manufacturer of rolling stock, and good news for the rail industry.'

Whether the protocol will act as a catalyst to boost intentional supply chains will only become apparent over time. But an important benchmark to assess how globally 'open' the rail sector remains will arrive in September, with the publication of the biennial World Rail Market Study commissioned by European suppliers association UNIFE. Previous editions have included a metric analysing the declining level of market accessibility around the world; the 2024 update could once again be very insightful. 🌐

“The market for railway technology is being increasingly shaped by policies such as Buy America or Make in India”

## Briefing

The European Commission has approved Mediterranean Shipping Co's planned acquisition of a 50% stake in Italian high speed operator **Italo-NTV** from Global Infrastructure Partners. The other 50% is owned by GIP and various minority shareholders, but GIP is to be acquired by BlackRock under a deal announced in January.

The federal and provincial governments have announced up to C\$60m of funding for capital works on Canada's **Hudson Bay Railway**, which serves the port of Churchill and remote communities in northern Manitoba. The 1000 km line is owned and operated by the Arctic Gateway Group, which took over from OmniTrax in 2018.

EBRD has agreed a €98.75m sovereign loan to support a €373m project to rehabilitate and electrify the 120 km line from Vorë to Hani i Hotit on the border with Montenegro, which is **Albania's** only international rail connection. The project is being co-financed by the EIB and the EU through the Western Balkans Investment Framework, which is providing €128.8m in grants and technical assistance support of up to €12.1m.

The Metrans rail freight subsidiary of Hamburger Hafen & Logistik has completed the acquisition of **Adria Rail Group**, having taken a 51% stake in March 2023. Adria Rail offers rail services from Serbia and Croatia, and manages an inland terminal at Indija near Beograd which has daily Metrans trains to the Croatian port of Rijeka as well as connections to Metrans' hub terminal in Budapest.

Open access night train co-operative **European Sleeper** is to collaborate with tour operator Flywise's rail brand **GreenCityTrip** to offer travel from the Netherlands and Belgium to Berlin, Dresden and Praha. GreenCityTrip will sell package holidays using the Brussels – Amsterdam – Berlin overnight service, which was due to be extended to Dresden and Praha from March 25.

# CRRC wins São Paulo – Campinas

## BRAZIL

The C2 Mobilidade Sobre Trilhos consortium led by local transport group **Comporte Participações** with the Hong Kong subsidiary of Chinese supplier CRRC has been awarded a 30-year concession to develop, operate and maintain inter-city passenger services on the 1600 mm gauge São Paulo – Jundiaí – Campinas route.

State Governor Tarcísio de Freitas announced on February 29 that the group had been sole bidder in the auction for the *Trem*

*Intercidades Eixo Norte* project.

Express trains running at up to 140 km/h are expected to cover the 101 km from São Paulo's Barra Funda station to Campinas in 64 min, calling only at Jundiaí. Services will be operated by 15 trainsets with capacity for 860 passengers each. *Intermetropolitano* services over the 44 km between Jundiaí and Campinas will take 33 min including stops at Louveira, Vinhedo and Valinhos. Seven trainsets for this service will be designed to carry up to 2048 passengers.

## Gauge-changing pilot

## UKRAINE


Ukrzaliznytsia has signed a memorandum of co-operation with ADIF to pilot the use of Spanish gauge-changing wheelsets to speed the movement of freight wagons between Ukraine's 1520 mm broad gauge network and the 1435 mm standard gauge of neighbouring EU countries.

The difference between 1520 mm and 1435 mm is too small to allow dual gauging by laying a third rail. Technology developed to enable trains to run through between Spain's 1668 mm and 1435 mm gauge lines will be adapted to add a 1520 mm gauge capability.


'We are working out all possible technological solutions', explained UZ Chairman Yevhen Liashchenko,

The concessionaire will also take over suburban Line 7-Rubi between São Paulo and Jundiaí from state operator CPTM, along with a fleet of 30 EMUs. This line is expected to carry around 400000 passengers/day. Line 7 services would terminate at Barra Funda, rather than continuing on Line 10 to Rio Grande da Serra, which CPTM is currently running as cross-city route 710.

Total cost of the scheme is estimated at R\$14.2bn. The state will contribute R\$8.98bn, of which federal development bank BNDES is to provide R\$6.8bn.

CRRC is reported to be considering plans to establish a rolling stock assembly plant in Brazil, with potential sites in São Paulo state including Valinhos and Hortolândia. 

adding that implementation would be a significant step towards the integration of Ukrainian railways into the European transport network. The partners are to seek EU funding for the project.

ADIF will also assist with the development of plans for EU standard infrastructure and traffic management systems to enable the operation of faster trains. 

Read the latest news at [www.railwaygazette.com](http://www.railwaygazette.com)


## Tren Maya reaches Playa del Carmen

## MEXICO

A further section of the 1525 km Tren Maya network was inaugurated on February 29, with the start of services on the 45.6 km electrified double-track Section 5 North. This links Cancún airport to the resort of Playa del Carmen on the east coast of the Yucatan peninsula, with one intermediate station at Puerto Morelos.

President Andrés Manuel López Obrador said the

rest of the network would open after elections in June. However, on February 16 a federal court halted work on Section 5 South from Playa del Carmen to Tulum pending the submission of further scientific and environmental studies.

Limited services are operating on the 699 km route between Cancún and Palenque. In its first 70 days of operation, Tren Maya reportedly carried 64370 passengers with an average loading of 84%. 



## Joint venture to manage upgraded line

### ASIA

A 50:50 joint venture is to be established to manage the Azeri and Georgian sections of the Baku – Tbilisi – Kars railway, according to Rovshan Rustamov, CEO of Azerbaijan's ADY. At present the two state railways are responsible for the sections in their countries, while TCDD manages the 76 km in Turkey.

Rustamov made the announcement after inspecting progress with upgrading work on the 183 km section of the line in Georgia, along with his Georgian Railways counterpart David Peradze and TCDD's Veysi Kurt.

The corridor runs through Georgia's mountainous eastern region, most of which is more than 2400 m above sea level. The project includes rebuilding stations, installing new electrical equipment and signalling, and snow protection measures, and is reported to be about 95% complete.

Citing the growth of transit freight using the Middle Corridor between the Far East and Europe, Rustamov said 'our goal is to increase the volume of cargo transport over the line to 5 million tonnes per year'.

## Small-profile Series E8 enters service

### JAPAN

East Japan Railway introduced its first small-profile Series E8 high speed trainset on Yamagata mini-Shinkansen services between Tokyo, Yamagata and Shinjo on March 16.

JR East has ordered 15 seven-car Series E8 trainsets from Kawasaki Heavy Industries and Hitachi for delivery by 2026, replacing 25-year-old Series E3s. Able to run at up to 300 km/h, the aluminium-bodied trains have 20 m long vehicles with a width of 2945 mm; they can carry 352 passengers.

Each train is formed of five powered vehicles and two trailers, riding on bolsterless bogies with active suspensions; underfloor snow melting equipment will

facilitate operation through mountainous areas. The dual-system trains have two low-noise single arm pantographs, taking power at 20 kV and 25 kV 50 Hz.



Photo: Akihito Nakamura

## Alstom and SLC bid to enter open access market

### UK

The Wrexham, Shropshire & Midlands Railway joint venture of SLC Rail and Alstom has applied to the Office of Rail & Road to launch an open access service between North Wales and London.

WSMR is proposing to run up to five trains each way per day between Wrexham General and London Euston via Shrewsbury, Wolverhampton, Coleshill Parkway and Nuneaton. The promoters hope that services could begin in mid-2025. The wholly commercial

operation would not be linked to any franchised services. The partners expect to create around 50 jobs, mostly in North Wales and the Midlands.

Alstom's Mobilisation Director Darren Horley told *Railway Gazette International* that the supplier was 'the largest rail services provider in the UK', and it would be 'the next logical step for us to move from maintaining and providing trains into running services'.

SLC Rail Managing Director Ian Walters added that 'the way the railway is used has changed,

and 'we are now at exactly the time when this sort of operation is needed'. WSMR's services would serve growing areas with an estimated core catchment of 1.5 million people outside London.

★ ORR has approved plans for Grand Union Trains to launch an open access service between London Euston and Stirling, awarding rights for four trains each way per day from June 2025 to June 2030. Services on the electrified route would be worked by off-lease diesel trains, 'likely Class 221 Super Voyagers or Class 222 Meridians'.

## Sunshine Coast line funded

### AUSTRALIA

The Queensland state government has committed an initial A\$2.75bn to help deliver the first phase of the Direct Sunshine Coast Rail Line, with the aim of opening the railway ahead of the 2032 Olympic & Paralympic

Games in Brisbane.

The fast-growing Sunshine Coast region is forecast to be home to 600 000 people by 2046. Stage 1 covers a 19 km double-track electrified 1067 mm gauge line diverging from the Brisbane – Rockhampton main line at Beerwah, north of Caboolture,

and running east to Caloundra. Subsequent stages would extend the branch to Birtinya and Maroochydore, taking it to a total length of 37.8 km.

The cost of the first phase is estimated at A\$5.5bn to A\$7bn, and the federal government has already committed A\$1.6bn.

## 200 km/h coaches ordered

### POLAND

PKP Intercity has ordered 300 coaches for 200 km/h operation from FPS H Cegielski under a 4.23bn zloty contract that includes options for 150 more.

The deal announced on March 1

was described by PKP Intercity board member Jaroslaw Oniszczuk as 'the largest tender in the company's history'. Newag had also bid for the order, which covers a mix of first and second class coaches of various configurations, plus 38 dining cars and 26 coaches

for overnight use.

The vehicles are to be used on services linking Warszawa to cities including Gdynia, Kraków, Wrocław, Berlin and Praha. They will be approved for the Czech Republic, Germany, Austria, Slovakia, Hungary and Lithuania.

## Mälartåg hand-back

### SWEDEN

MTR Corp has agreed to hand back its last PSO contract from June 16, covering the operation of Mälartåg regional services to the west and northwest of Stockholm until December 2029.

MTR confirmed on February 22 that it had been in discussion with local transport authority Mälardalsstrafik about the future of the business. CEO Caroline Åstrand explained that 'it has not been possible to achieve a sustainable financial situation, or to deliver the traffic that the agreement requires'.

# Kevin Speed signs access agreement

## FRANCE

Aspiring high speed train operator Kevin Speed has signed a framework track access agreement with infrastructure manager SNCF Réseau, and hopes to launch its first services under the Ilisto brand by the end of 2028.

The agreement signed on

February 29 would run for 10 years, with provision for extension, and is subject to validation by regulator ART. It covers one train path per hour on the Paris-Nord – Lille Flandres, Paris-Est – Strasbourg and Paris-Lyon – Lyon Part-Dieu routes, including access to the intermediate stations.

Armed with the agreement,

Kevin Speed has launched a second financing round that aims to raise €1.2bn in debt and equity, assisted by Nomura, Santander CIB and EY, which contributed to the development of the business plan.

The company plans to buy 20 Alstom 300 km/h trainsets, with high density interiors inspired by Japan's Shinkansen and low-cost airlines. It plans to use 'innovative' yield management and offer 'affordable' high frequency services, making intensive use of the rolling stock. All trains would call at all stations, and there would be no onboard catering. 🇫🇷

# Battery train order

## USA

Chicago commuter agency Metra has ordered eight battery multiple-units from Stadler under a \$154m contract which includes options worth a further \$181.4m for eight more and up to 32 trailer cars. The single-deck trains will initially be formed of two passenger vehicles plus a traction module. Deliveries from Stadler's Salt Lake City plant

are expected to start in 2027-28.

Metra plans to deploy the battery trains on the 26 km Beverly Branch of its Rock Island Line, where they could facilitate the provision of more frequent all-day services, being more economical to operate off-peak than diesel-hauled double-deck trains. The units are expected to have a range of 70 to 100 km between charges. Recharging the batteries from 20% to 80% capacity is

expected to take 20 to 30 min.

The BMUs will be compliant with the Buy America Act, ADA and FRA standards, offering low-level boarding and wheelchair lifts. Each two-car set will have 112 seats, while each trailer car would accommodate another 46 passengers. Half of the trailer cars would include accessible toilets.

The deal is to be funded from a \$169.3m federal Congestion Mitigation & Air Quality Improvement grant, with the state of Illinois providing a 20% match. 🇺🇸

# Operail prepares for privatisation

## ESTONIA

The Estonian cabinet has backed proposals to privatise freight operator Operail, which was instructed by the government last year to prepare plans for a sale, although the timeline is still to be decided.

'Rail transport is a volume business where small quantities and short journeys do not pay off', explained board member Merle Kurvits. 'Selling the company to a private investor would allow Operail to expand its operational scope towards Europe, which is a competitive advantage. This in return would boost our industrial and logistics sectors and consequently, the overall Estonian economy.'

Operail was created from EVR Cargo in 2018 as part of a strategy to move the business away from being solely a rail operator. It was previously the freight arm of Eesti Raudtee, which was nationalised in 2007 after a period of private ownership. Operail expanded into international wagon

leasing and began rail freight operations in Finland, but following a change of government

policy these businesses were deemed non-strategic and sold off. 🇪🇪



Lithuania's LTG Cargo has operated a pilot freight train through Latvia to Valga in Estonia, using its own certification and a Siemens Mobility locomotive to avoid changes at the borders. CEO Eglė Šimė said the company aimed to start offering 'competitive green logistics services' in the three countries as a step towards launching freight services on Rail Baltica.

## Briefing

The first track has been laid near Rondonópolis for the 743 km Y-shaped **Senador Vicente Emilio Vuolo Railway** in Mato Grosso. This is being built by Rumo Logística as an extension to its Malha Norte network, connecting the south of the state with Cuiabá, Nova Mutum and Lucas do Rio Verde.

The UK government has published a **Draft Rail Reform Bill**, setting out for consultation its legislative proposals to create an 'Integrated Rail Body' — Great British Railways — which would bring together responsibility for infrastructure and train services, and to transfer franchising authority functions from the Secretary of State for Transport.

The European Commission has approved more than €425m from the Cohesion Fund to finance the modernisation of track and electrification on **Warszawa's** cross-city rail link, enabling trains to operate at up to 160 km/h.

Under an agreement with **Tunisia's** Ministry of Economy & Planning signed on February 22, the Saudi Fund for Development is providing a US\$55m loan to support renewal work on 190 km of SNCF's network in Sfax, Gafsa and Gabes, aimed at increasing capacity for the transport of phosphates.

France's **Auvergne-Rhône-Alpes** region has signed an operating contract with SNCF Voyageurs to provide local passenger services in 2024-33, targeting a 30% increase in ridership from around 220 000 passengers a day to 300 000. The region plans to invest €3bn in new and refurbished rolling stock, including up to 130 additional trainsets. The local network will be divided into five geographical groups, with a view to contracts being tendered competitively from 2029 onwards.

Read the latest news at [www.railwaygazette.com](http://www.railwaygazette.com)