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Annual subscription in USA $305.

Railway Gazette International (ISSN Number 0373-5346, USPS 5845) is published monthly by ProMedia Group UK Ltd, 4th 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 Promedia UK, 4th Floor, Chancery House, St Nicholas Way, Sutton, SM1 1JB, UK

Worldnet is acting as our mailing agent.

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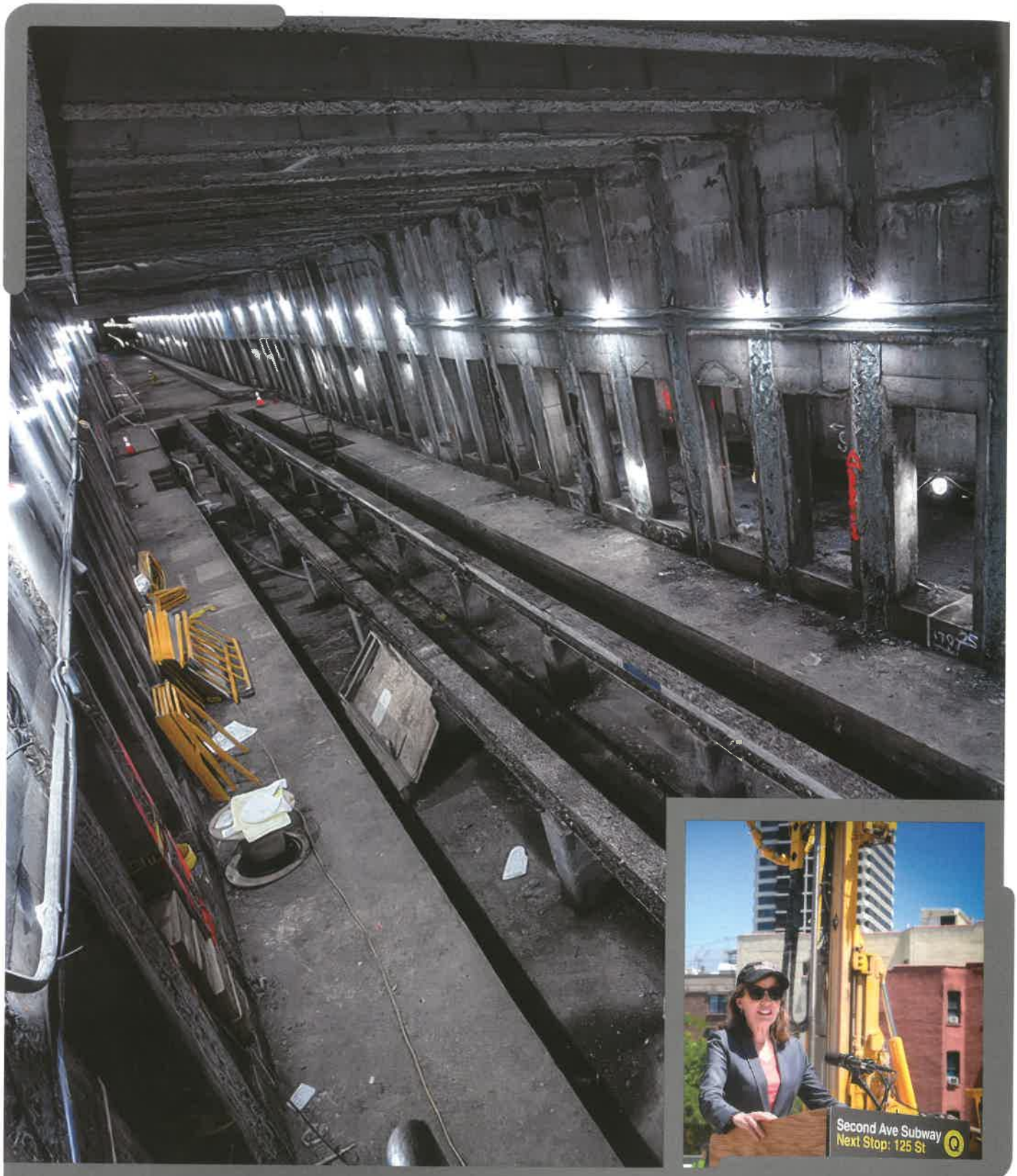

New York Governor Kathy Hochul joined leaders from the Metropolitan Transportation Authority, local politicians and Harlem community leaders on June 8 to break ground for the second phase of the Second Avenue Subway. This will take the long-planned line north from 96th St to 125th St & Malcolm X Boulevard, adding 2·4 km and three stations. Interchange will be provided at 125th St with the Lexington Avenue lines and Metro-North commuter services. Tunnel boring is expected to begin in early 2027, and the extension will make use of some part-completed tunnels built in the 1970s.

COMMENT

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Capacity battle hots up

That many of Europe's networks are facing a growing capacity shortfall is not news. Across the continent, every path on the principal corridors is now a precious resource. Slots are being duelled over as competing players emerge and seek to shape how access rights are prioritised.

The most high-profile arguments have centred on the rise of new entrants seeking to grow the market as much as taking share from the incumbents. Italo's struggle to enter the German long-distance segment is but the latest example (RG 7.26 p28). A determination by the federal networks agency Bundesnetzagentur proposing changes to DB InfraGO's train path allocation rules for 2028 allowed Italo to place its order with Siemens Mobility for a fleet of 26 Velaro high speed trains on July 20.

But there are also signs that the battle for capacity is becoming far more complex. Czech national passenger operator České Dráhy explored this conundrum last month, when Head of International Affairs Jan Ilík explained that new entrants and incumbents alike were facing a shifting set of pressures (RG 7.26 p44). 'While everybody agrees that we need more trains, freight trains, passenger trains, night trains, regional and suburban too, it is not easy to manage so many trains on the network', he pointed out. Like many of his counterparts, Ilík hoped that the recently approved EU Capacity Regulation and the emerging European Railway Platform would help, especially in expanding cross-border operations. But as he pointed out, 'if capacity is already largely consumed, how can new entrants be guaranteed access to train paths without reducing the services operated by those who are already in place?'

This is the crux of the Italo case in Germany. Some *Länder* transport authorities may seek to appeal the regulator's ruling, because they perceive a risk that their locally specified services could be pushed off the network. However, the BNetzA proposal is specifically aimed at sharing out the paths allocated for long-distance passenger services, rather than changing the agreed proportions allotted to inter-city, regional and freight trains.

26 Velaro trains

Italo's rolling stock order for its German business, announced on July 20

In the Netherlands, the fault lines are international versus domestic. In early July, the European Commission informed the Dutch government that it might be in breach of EU anti-trust regulations regarding its rules for rail capacity allocation. The Commission believes the Netherlands is prioritising state-owned operator NS when network capacity is insufficient to meet all demand. This creates 'unequal access' between NS and international operators, 'allowing NS to maintain or strengthen its dominant position'. These allocation rules, which reflect the incumbent's status as holder of the main passenger rail concession, have been in effect since 2024.

The Dutch government now has two months to respond to the Commission's Letter of Formal Notice. The Ministry of Infrastructure told our sister publication *SpoorPro* that the country was working on the implementation of the new European regulation on railway infrastructure capacity, which would 'create more uniform priority rules across Europe when rail capacity is scarce'. It accepted that 'under this regulation, priority cannot simply be given to all concessioned transport services from 2031 onwards'.

It is far from clear whether EU regulations can ever be nimble enough to address the panoply of issues that market liberalisation is throwing up. Indeed, capacity pressures are prompting national authorities to look again at the integrated timetable structure famously pioneered by the Swiss *Taktfahrplan* in the 1990s.

> 'It is not hard to see rigid timetabling rules becoming a form of state control over what should be a fully commercialised market'

The Polish government is the latest to propose a more structured approach to service patterns across the country as part of work to integrate the emerging Port Polska high speed lines with the legacy network under a programme known as *Zintegrownana Sieć Kolejowa* (RG 7.26 p18). On June 30, the government and project delivery body CPK confirmed that a national timetable structure — *Horyzontalny Rozkład Jazdy* — would be developed as a basis for opening up the long-distance passenger market after 2030, explicitly referencing the Swiss approach as its inspiration.

It is not hard to see rigid timetabling rules becoming a form of *de facto* state control over what should, in theory, be a fully commercialised market. A particular flashpoint could be stopping patterns; if a *Taktfahrplan* structure mandates serving smaller stations that might not be commercially viable for open-access players, does this constitute a restraint of trade? French Transport Minister Philippe Tabarot floated ideas earlier this year that future contracts for operating conventional inter-city services should include clauses mandating the winning bidders to serve rural stations, but it is not clear how this might be enforced in practice (RG 5.26 p36).

In the final analysis, much of the tension stems from a laudable desire among stakeholders to grow rail use, both passenger and freight. But in an era where the cost and complexity of adding infrastructure capacity appears more daunting than ever, delivering growth risks becoming a zero sum game, where one set of users gets favoured over another. Settling the resulting squabbles, whether on a timetable graph or in a regulatory hearing, risks becoming a core task for Europe's rail sector in the years ahead.

Briefing

California High-Speed Rail Authority has announced a Co-Development Agreement with Momentum Alliance Partners as part of its efforts to help finance future high speed rail expansion through public-private partnership models and long-term infrastructure investment opportunities.. The consortium of companies includes Plenary Americas, CDPQ Infra, Keolis, SNCF Voyageurs, Jacobs, Sener, Systra, Setec, Arup and Steer.

Hauts-de-France région has awarded SNCF Voyageurs the Dessertes Parisiennes contract to operate regional services from Paris Nord to Laon, Beauvais, Creil, Amiens, Calais, Compiègne, St-Quentin, Maubeuge and Cambrai for nine years from December 2027. The services carry around 70 000 passengers/day on 250 trains serving 70 stations.

Alstom has been awarded the first contract to equip Queensland's main line network with ETCS. The A$114m package will support Level 2 operation on a section of QR's North Coast line and the 19 km first phase of the Sunshine Coast line from Beerwah to Caloundra.

Ile-de-France-Mobilités has awarded SNCF Voyageurs a €3bn contract to operate Transilien Line J commuter services for nine years from December 2027. RATP Cap IDF had also bid for the contract, which covers a 174 km network of suburban routes feeding into Paris St-Lazare.

Israel Railways has opened the first section of its Eastern Line for passengers, serving new stations at Hadera East, Hashomron-Raibe, and Tira-Kokhav Yair. Journey time between Hadera East and Tel-Aviv is around 60 min, including a change of trains at Rosh Na-Ayin North. Eastern Line services are expected to be extended north to Binyamina and south to Lod in the near future.

Read the latest news at www.railwaygazette.com

Passenger service starts

UAE

The UAE's first main line passenger rail service began on June 30 with the start of introductory operations between Abu Dhabi and Fujairah. Services are operated by the Etihad Rail Passenger Services joint venture of Etihad Rail and Keolis, using a fleet of 13 trainsets supplied by CAF and CRRC Qingdao Sifang.

The 200 km/h trains operate on the existing freight network, which now covers 900 km from Ghuwaifat on the border with Saudi Arabia to Fujairah, and is being extended by a further 238 km to Oman under the Hafeet Rail project.

Mohamed bin Zayed City station in Abu Dhabi was inaugurated by Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi & Chairman of the Abu Dhabi Executive Council, on June 23. Additional stations in Dubai and Al Dhaid are to open with the official launch of the passenger network on September 30, followed by a station in Al Dhafra on December 30. The passenger network will be completed with the opening of Sharjah station on March 30 2027.

Etihad Rail said the partnership combined international expertise in railway operations with national capabilities in transport management to deliver 'an exceptional operating model that enhances service quality and provides passengers with a world-class travel experience'.

Work begins at Barking Eurohub

UK

Work has begun on a £15m project to modernise the Barking Eurohub freight terminal in east London to enable it to handle containers and liftable lorry trailers arriving and departing by rail through the Channel Tunnel.

The three-year redevelopment being undertaken through a partnership of Network Rail's property arm Platform4 and Legal & General, with the aim of re-establishing direct cross-Channel freight services to markets including France, Germant, Italy and Spain.

The work will include removing some old sidings to free up more than 2 ha of land and the creation of berthing sidings. The connecting tracks and intermodal terminal sidings will be reconfigured to handle trains up to 700 m long, compared with the current limit of 350 to 400 m.

Freight sector insiders report that at least five operators have already expressed interest in running cross-Channel services to and from Barking. Also under discussion is the potential for transhipping containers and swap bodies from European wagons to UK compatible vehicles for onward movement to terminals in northern England, Wales or Scotland.

Regional takeover agreed

DENMARK

The Ministry of Urban & Rural Affairs & Transport has reached an agreement to ensure the continued provision of regional passenger services which are currently operated under contract by private sector operator GoCollective. These will be transferred to state-owned operator DSB on September 1.

GoCollective was formed from Arriva's Danish rail, bus and ferry activities, which were acquired by Mutares in 2023. It currently serves 117 stations across 665 roue-km in Jylland and the Svendborg line, carrying 10 million passengers/year. Its contract was due to run until the end of 2028, with an optional extension to 2030.

The operator said that its rail business faced greater complexity and higher costs than expected, and on June 26 the ministry warned that GoCollective was at risk of bankruptcy, as it would not be able to pay expenses of DKr100m. The ministry agreed to pay GoCollective an extra DKr60 to ensure continuity of operations until the end of August, enabling an orderly transfer.

Corridor upgrades

EGYPT

Egyptian National Railways has awarded four contracts worth €690m to a consortium of Alstom, Rowad Modern Engineering and Concrete Plus for the modernisation of two strategic freight corridors, backed by funding from the World Bank and EBRD.

The 6th October City – Alexandria corridor works are valued at €550m with a €240m share for Alstom. The Belbes – 10th Ramadan City project is worth €140m, of which Alstom's share is approximately €60m.

Both routes will see extensive rehabilitation of the track and civil works. They will be resignalled with ETCS Level 1, upgraded telecommunications, while the power supplies will be reinforced. Alstom will be responsible for the end-to-end engineering and the digital railway systems, while the local partners will deliver the civil and track upgrades. To support national industrial development the aim is to achieve around 50% local content.

Projects delayed as ÖBB funding plan agreed

AUSTRIA

The government has approved ÖBB's €19·5bn infrastructure framework plan for 2027–32, setting out the major projects to be delivered over the next six years. The plan keeps the Brenner northern access route in Tirol on timetable for completion by 2039, but delays other schemes.

Citing 'challenging budgetary constraints', the government has framed 2025-29 as a consolidation period, after Austria breached EU fiscal rules. The plan announced on June 17 makes available €500m less for rail expansion projects in 2027-28 than previously envisaged. Annual allocations will remain above €3bn a year from 2027 to 2029, increasing to €3·2bn in 2030, €3·3bn in 2031 and a record €3·8bn in 2032. ÖBB said the package would allow targeted investment to continue in projects that were 'crucial for stability, quality and capacity', with a further €5bn earmarked for maintenance of the network.

Minister of Mobility Peter Hanke said that delaying the Brenner access works would have sent 'the wrong signal' both to western Austria and Germany, adding that that future framework plans would be synchronised with developments in neighbouring countries.

Photo: BBT-SE

The Brenner Base tunnel.

ÖBB said 87% of its existing projects remain on schedule, adding that it had reprioritised schemes according to their strategic significance. The Wien S-Bahn upgrade is due for completion by 2027 and the Semmering Base Tunnel by 2029, with the four-tracking between Linz and Wels on course for opening in 2031. Various regional enhancement and electrification projects also remain on schedule.

However, projects have been pushed back, including the proposed Wien Airport link, four-tracking of the Weststrecke between Köstendorf and Salzburg and four-tracking between Wien Meidling and Mödling. Modernisation of the Tauernstrecke has also been moved from 2037 to 2039.

'ÖBB is contributing to budget consolidation,' said ÖBB CEO Andreas Matthä. 'However, saving doesn't mean stopping: every construction project started will be completed. And saving also means prioritising projects.'

Tunnelling agreement revives Chuo maglev

JAPAN

On July 7 Shizuoka Governor Yasutomo Suzuki gave the go-ahead for JR Central to start boring the 5·9 km central section of the 25 km tunnel that will take the Chuo maglev line under the southern Japanese Alps.

The deal ends a seven-year hiatus caused by concerns raised by former Governor Heita Kawakatsu about the impact of the tunnelling. These centred on the risk of water supplies in the Oi river basin and the Tashiro reservoir being affected by excavation work cutting across subterranean streams.

A contract for boring the 8·9 km central section of the tunnel had been awarded to a consortium formed of Taisei Corporation and Sato Kogyo in November 2017, but work was halted in October 2019.

The prefectural government says it will establish a system to monitor the impact of construction on the environment and plans to ask the central government to order JR Central to take remedial steps in the event of shortcomings, and to shoulder any costs incurred.

Boring is expected to take around 10 years to complete, suggesting that the initial section of the Chuo Linear Shinkansen between Tokyo and Nagoya could be operational by the mid-2030s, nearly a decade later than the previous target of 2027.

Flirts all set for the summer

FINLAND

National passenger operator VR and Stadler unveiled a newly delivered Sm7 Flirt trainset at Helsinki station in June, ahead of its planned entry into service later this summer. The 1 524 mm gauge Sm7 commuter EMUs are based on Stadler's established Flirt multiple-unit family. VR ordered an initial 20 four-car units in November 2022, under a €250m contract with options for up to 50 more.

VR expects to deploy the new units on the D, R, T, Z and M suburban routes by 2028, replacing older rolling stock. The 160 km/h trains being built at Stadler's Siedlce plant in Poland have capacity for up to 700 passengers, with 340 seats in the winter configuration and 320 in summer.

The trains were designed around customer feedback, particularly requests for more bicycle space, power outlets and USB charging, and work-friendly seating with tables.

Regional revival agreed

HUNGARY

Newly appointed Minister of Transport & Investment Dávid Vitézy has approved the restoration of passenger services on two regional lines where trains had been suspended by the previous administration..

Services are due to restart on August 1 on the 18·7 km non-electrified line linking Komló to Godisa on the Budapest – Pécs main line, with services running through to Dombóvár.

September 1 will see passenger trains reintroduced on the 33 km electrified Tiszaújváros – Nyékládháza line, with services to run from Tiszaújváros to Miskolc. Vitézy said a two-hourly service would be provided, offering connections with inter-city trains to and from Budapest.

Services on both lines were suspended in August 2023, along with eight other routes; the passenger trains were replaced by buses 'until further notice', although freight traffic continued. Some infrastructure works are envisaged support passenger operations at 60 km/h or more.

Vitézy said the ministry was also working to restart services on the Debrecen – Nagykereki line where trains were withdrawn in October 2025 to create space for the expansion of a nearby battery plant.

President launches work

KYRGYZSTAN

President Sadyr Zhaparov has installed a time capsule to mark the start of construction of the 86 km Balykchy – Tamchy – Cholpon-Ata railway along the north shore of the Issyk-Kul lake.

This will provide a link to Issyk-Kul International Airport, where a modern transport and logistics hub is to be established. Other large-scale investment initiatives are currently being implemented on the shores of the lake. Construction of the railway is expected to create more than 400 jobs, and once the line is operational it will provide over 200 permanent jobs.

'According to preliminary estimates, once the project reaches full capacity, it will be able to handle up to 5 million tonnes of freight per year', the President said. 'Furthermore, I hope that as the region's infrastructure develops and its economy gains momentum, this figure will continue to rise.

'"The role of railways in the country's transport system is expanding. As a result, our people's trust in railway transport is growing. Today construction of the strategically important China – Kyrgyzstan — Uzbekistan railway, which is 304 km long, is actively underway. An important part of this project is the Makmal freight transfer station. God willing, it will

provide connectivity to various lines and become one of the main logistics centres of the country.

'In parallel, work is underway on the Balykchy – Kochkor – Kara-Keche – Makmal railway project, which is of strategic importance for the development the domestic railway network and strengthening transport links between the north and south of Kyrgyzstan.'

Australind service returns

AUSTRALIA

Transwa's *Australind* passenger service between Perth and Bunbury has restarted following the delivery of the first of four Alstom DMUs. The trains had been replaced by road coaches in 2023.

The phased reintroduction of services on the 167 km route began on June 29, with one pair of daily trains on Sunday, Monday, Wednesday and Friday, taking 2½ h each way. Services will be ramped up as the rest of the DMUs enter traffic by the end of the year.

The 1 067 mm gauge X'trapolis DMUs are being built by Alstom at its Bellevue plant near Perth under a A$54m contract awarded as part of a wider A$1·3bn order for C Series suburban EMUs. Each set has 158 seats, space for up to six wheelchair users and 14 bicycles, and an accessible toilet.

Mountain line opened

CHINA

The Xi'an – Shiyan high speed line was officially inaugurated on June 30, completing a 350 km/h corridor connecting northwest and central China.

Linking Xi'an in Shaanxi province with Shiyang in western Hubei, the 257 km line with seven stations connects the Yellow River and Yangtze River basins. It follows the Han River and traverses the rugged terrain of the Qinling Mountains which has limited transport and economic exchange in the region for decades. Journey time between Xi'an and Shiyan has been cut from more than 6 h on the conventional network to about 1 h by the fastest services.

Under construction since 2021 at a total cost of 47·7bn yuan, the line has been described by local media as one of China's more demanding mountain high speed lines. More than 90% of the alignment consists of bridges and tunnels. Chief designer Mao Lei reportedly described the route as 'a railway running through a natural geological museum'. The most notable engineering structure is the Yunyang Hanjiang River Rail Bridge; this is a steel-truss cable-stayed bridge with a girder–truss composite deck and a 420 m main span.

Starting from the new Xi'an Dong station, which was opened at the same time, the line makes an end-on junction with the existing Wuhan – Shiyan high-speed line, creating a continuous 350 km/h corridor between Xi'an and Wuhan. Journey time between those two cities has been significantly shortened, from 4 h 30 min to 2 h 41 min.

According to China Railway Xi'an Group, the line will be primarily operated by 350 km/h CR400AF/BF Fuxing trainsets.

São Paulo opens Line 6

BRAZIL

The first 5·2 km section of São Paulo metro Line 6 Orange was opened on July 2, with a limited trial service serving six stations between João Paulo I and Perdizes. Água Branca becomes the deepest metro station in South America at 47·8 m, overtaking Santa Cruz on Line 5 at 41·5 m.

Line 6 services are initially operating between 10.00 and 15.00 from Monday to Friday, with travel being free of charge. Extensions at each end will eventually take the line to 15·3 km, connecting Brasilândia in the north with São Joaquim in the city centre. The 15 stations will serve destinations including schools and seven higher education institutions, leading to the alternative name 'the

University Line'. The route is predicted to carry 633 000 passengers/day when complete, and a journey that currently takes up to 90 min by bus will be reduced to 23 min.

A concession to build, operate and maintain Line 6 was originally awarded to the Move São Paulo consortium in mid-2013, but was halted in 2016 when the concessionaire ran into financial difficulties. Under a 2019 agreement with the Acciona-led Linha Universidade consortium, Acciona is undertaking the civil works and Alstom is supplying the rolling stock.

Alstom has so far delivered 12 of the 22 six-car Metropolis trainsets that it is building for Line 6 at its Taubaté plant. The 80 km/h stainless steel trainsets are designed carry up to 2044 passengers. The CBTC will support GoA4 unattended driverless operation in the future.

'It is with great pride that we celebrate the early delivery of six stations on Line 6', said Francisco Pierrini, CEO of the Concessionária Linha Universidade consortium which has the concession to build and operate the line. 'The new line will benefit thousands of people who rely on public transport every day to work, study, seek healthcare and enjoy leisure activities. Line 6 will transform people's lives'.

Line M11 completed

TURKEY

The final section of Istanbul metro Line M11 has been formally inaugurated by President Recep Tayyip Erdoğan, with free travel being offered until the end of July.

The 17·5 km extension from Arnavutköy Hastane to Halkalı adds intermediate stations at Ibn Haldun University, Kayaşehir, Olimpiyatköy and Halkalı Stadium. It takes the line to a full length of 69 km, forming an inverted U shape curving around the north of the European side of the conurbation via the the new airport which opened in 2019.

Opened in four phases, M11 has been developed by the national Ministry of Transport & Infrastructure, rather than the Istanbul municipality. It was built by a consortium of Kolin Inşaat and Şenbay Madencilik under a contract valued at €999·8m, with signalling supplied by defence electronics group Aselsan.

Equipped for GoA4 unattended operation, Line M11 is run by national train operator TCDD Taşımacılık using a fleet of 44 four-car trainsets from CRRC which have a maximum speed of 120 km/h.

Shenzhen network expands

CHINA

A 19 km northern extension of Shenzhen Metro Line 13 from Shangwu to Lisonglang was opened on June 28, adding 11 stations serving the districts of Nanshan, Bao'an and Guangming.

The extension forms part of Phase II of the line, which also includes a short southern extension now under construction. Phase II is being operated under contract by Hong Kong's MTR Corp, which already runs the 22·9 km Phase I between Shenzhen Bay Checkpoint and Shangwu developed through a 30-year PPP concession by its MTR CREC Metro joint venture with China Railway Electrification Bureau and the Shenzhen municipal government.

MTR Corp said Phase I has been well received by cross-boundary passengers travelling between Hong Kong and Shenzhen.

CRRC Changchun has unveiled a 160 km/h suburban EMU for the Pingshan – Dapeng line east of Shenzhen. Expected to open in the last quarter of this year, the 39·4 km wholly underground line will be operated by Shenzhen Metro. The double-track line with six stations diverges from the Shenzhen – Huizhou high speed line south of Pingshan to serve the popular Dapeng coastal neighbourhood.

M5 tenders called

DENMARK

København metro authority Metroselskabet has called two tenders with a combined value of €1·35bn for the construction of the first phase of Line M5.

The standalone metro line is intended serve existing urban areas on the island of Amager, and new developments in the Østhavnen area; it will also increase metro capacity across the harbour where peak demand on lines M1 and M2 is already high.

Phase 1 will include a 6·5 km twin bore tunnel and 2 km of viaduct, plus short sections of embankment and a separate depot and control centre. There will be five underground stations at København H, Bryggebroen, DR Byen, Amagerbrogade Syd and Lergravsparken, plus an elevated station at Prags Boulevard.

The calls for tenders follow three years of market dialogue. Metroselskabet has revised its procurement model with the aim of increasing competition by making the project easier and more attractive to deliver, placing a particular focus on the division of risk between itself and the contractors.

Procurement of the Civil Works South design & build contract with an estimated value of €800m will use a negotiated procedure. A competitive dialogue is being used for the €550m Transportation Systems design and build contract, which will cover 14 driverless trainsets, signalling and telecommunications, platform screen doors, traction power supplies and other systems. These contracts are expected to be awarded by late 2027. The operations and maintenance contract is to be tendered separately.

A separate procurement is planned for the civil works for the elevated Phase 2 which would add three stations at Refshaleøen, Lynetteholm Syd and Lynetteholm Nord to serve new urban developments. The Transportation Systems would be supplied as an option on the Phase 1 contract. Phase 2 could open in 2045.

Shah Alam Line opens

MALAYSIA

Inaugurated by Prime Minister Anwar Ibrahim on June 28, the 37·8 km Shah Alam Line linking Bandar Utama to Shah Alam and Johan Setia is intended to provide a high-capacity east–west route serving areas of the Klang Valley to the west of Kuala Lumpur.

Under construction since 2016 as LRT3, the automated light metro is now designated Line 11 of the Rapid KL network. It is operated by the Rapid Rail subsidiary of government-owned Prasarana Malaysia.

Most of the route is elevated, with a 2 km underground section. Interchanges are provided to the MRT Kajang Line at Bandar Utama, to the LRT Kelana Jaya Line at Glenmarie, and to KTM Komuter services at Jambatan Kota.

The CBTC supports GoA4 unattended driverless operation at up to 70 km/h, offering an end-to-end journey time of 70 min. Trains are initially operating every 8 min in the peaks and every 10 to 15 min off peak. CRRC Zhuzhou was awarded a contract in 2017 to supply 42 six-car trainsets, but the order was subsequently cut to 22 three-car sets as a cost-saving measure. However, the government confirmed at the opening that seven more sets would be ordered to increase capacity as ridership grows.

Running only in the state of Selangor, LRT3 is the country's first rapid transit line entirely outside the Federal Territory of Kuala Lumpur.

Sanying Line trial operations

TAIWAN

Limited passenger-carrying trial operation of the automated Sanying Line in the rapidly growing southwestern suburbs of New Taipei City began on June 30.

The 14·3 km fully elevated Light Blue line links the southern terminus of Taipei metro's Blue Line at Dingpu with Yingge to the southeast of Taoyuan, serving 12 stations.

Built at a total cost of NT$50·2bn, the light metro line has been constructed by the ARH consortium of Ansaldo STS (now Hitachi Rail), RSEA Engineering Corp and Hitachi under a 2016 turnkey contract. Hitachi Rail has supplied 29 two-car trains able to run at up to 80 km/h.

Trial operation is expected to continue until August 31, enabling operator New Taipei Metro Corp to carry out 'a stress test' of the new line. After the full opening, services are expected to operate from 06.00 to midnight each day. The line will cut journey times between the Sanying area and central Taipei by about 20 min.

Going round in circles

SINGAPORE

The continuous loop of Singapore's Circle Line was completed with the opening of the final stage of the 30-year metro project on July 12.

The 4·3 km Stage 6 has closed the gap between Harbour Front and Marina Bay, adding underground stations at Keppel, Cantonment and Prince Edward Road which have been named following a public vote.

The line operated by SMRT is now 39 km long, comprising the 35·5 km ring and a short branch to Dhoby Ghaut. It has 33 stations, of which 12 are interchanges. There are connections with all other metro lines, enabling passengers to avoid the busy city centre interchanges at City Hall and Raffles Place.

The first stage of the Circle Line opened in 2009. Land Transport Authority said the construction of Stage 6 had been particularly challenging, working in a dense urban environment adjacent to the port, tunnelling beneath the operational Keppel Viaduct and requiring the removal of previously undocumented coastal structures.

The opening of Stage 6 has been supported by the delivery of 23 Class C851E Alstom Metropolis trainsets, which were built in Spain. These began entering service in April, supplementing the existing C830 and C830C classes and taking the fleet to 87 trains. Kim Chuan Depot has been expanded to increase its capacity from 70 to 133 trains and 550 buses.

Briefing

The first phase of Belo Horizonte metro Line 2 was opened on July 3, when services began operating on the 1·6 km from Amazonas to an interchange with Line 1 at Nova Suíça. Stations at Nova Gameleira, Nova Cintra and Vista Alegre are now expected to open in 2027, with Ferrugem and Barreiro following in 2028 to take the line to its full 10·5 km.

Italy's Ministry of Finance and the Ministry of Infrastructure & Transport have agreed to provide the final €589m to fund the €1·9bn extension of Milano metro Line M5 to Monza. The 12·6 km extension with 11 stations would take the automated metro line north from Bignami to Polo Istituzionale in Monza.

Ile-de-France Mobilités has started introducing bank card validation across the Paris metro and RER networks as an alternative to the Navigo Easy pass. Prioritising tourist-heavy routes, the phased deployment began at Orly airport metro station, and full rollout is anticipated by 2030. Acceptance of paper tickets will cease later this year.

Passenger-carrying trial operations started on an initial 4 km section of the light rail network in the Brazilian city of Salvador on June 29. The 16·6 km line from Calçada to Ilha de São João in the north of the city was reported to be 75% complete by mid-July. Two further routes are envisaged to create a 36·4 km network, for which CAF is supplying 40 seven-section Urbos 3 trams.

Afcons Infrastructure has erected the first viaduct segment at Piplani Chouraha for the 12·9 km elevated section of the Bhopal Metro's future Blue Line from Bhadbhada to Ratnagiri.

New York City Transit has begun using Kawasaki R211A trains on the D/6th Avenue Express service, replacing R68 cars which have been used since the 1980s. This is the sixth Subway route to be operated with the new stock.