Public Transportation in Sri Lanka

Rail and bus developments underway

Public transportation in Sri Lanka is majorly based on bus and rail services. These account for nearly 73 per cent of the total motorised transport and serve as important means of transport for the majority of the population.

Of this, bus transportation accounts for nearly 68 per cent, with the state-owned bus service accounting for a share of 23 per cent and private operators having a share of 45 per cent.

The remaining 5 per cent of public transport trips are undertaken on railways.

(continued on page 5)

Autonomous Shuttles in Canada

Enabling landscape and key pilots

Many autonomous vehicle (AV) pilot projects have been launched in Canada given the country’s expertise in artificial intelligence (AI) and related technologies, and the presence of a strong automotive sector. The projects have allowed governments, public transport operators and other private players to test the AVs in real-world scenarios, such as Canada’s extreme weather situations.

These stakeholders are aiming to prepare for widespread AV deployment by obtaining a better understanding of the technology, and developing the necessary strategies and policies.

(continued on page 2)

Shared Mobility in Africa

Replacing traditional modes of transportation

In recent years, shared mobility has played an increasingly important role in filling gaps in the existing public and private transportation systems, particularly in many low- and middle-income nations, where it can offer need-based short-term access to shared automobiles. Shared mobility encompasses the use of various transportation modes, including car and bike sharing, peer-to-peer ride-sharing, on-demand ride services and micro-transit.

These are generally developed in tandem with modern technology such as smartphones, GPS and electronic payments, among others.

These services are primarily offered by for-profit and private businesses and their rise presents an opportunity for positive regulatory action and collaborations, technological advancements and a shift away from traditional but insufficient transport systems.

Transport trends in Africa

Currently, about 40 per cent of the African population is concentrated in major cities, with this share expected to rise to 50 per cent by 2030 and to 60 per cent by 2050.

(continued on page 8)
Autonomous Shuttles in Canada (contd..)

Regulatory landscape enabling AVs

At the national level, the Motor Vehicle Safety Act (MVSA) governs the import of vehicles into Canada. To facilitate the introduction of AVs, the MVSA and associated regulations related to technical standards, licensing requirements, and standards on how an AV would interact with first responders and law enforcement were amended to permit the import of AVs, strictly for testing purposes.

Transport Canada’s “Guidelines for Testing Automated Driving Systems in Canada Version 2.0” summarise the majority of Canada’s pilot testing directives. The guidelines are referenced from materials published, such as Canada’s Safety Framework for Automated and Connected Vehicles, Safety Assessment for Automated Driving Systems in Canada, and Canadian Jurisdictional Guidelines for Safe Testing and Deployment of Highly Automated Vehicles. The Federal government has also legislated the PIPEDA (the Personal Information Protection and Electronic Documents Act) to regulate how private corporations collect, use and disclose personal data. The PIPEDA will address privacy concerns related to AVs in Canada.

**Provincial legislation** determines and regulates the safe operation of motor vehicles, including licensing, registration, insurance, maintenance standards, and traffic laws.

Table 1 provides details of the regulations introduced for AVs in each province.

Ontario, Québec and Manitoba currently have regulatory frameworks for the testing of AV technology. Saskatchewan amended its Traffic Safety Act to include automated driving systems. Similarly, Nova Scotia has received royal assent for a bill to amend its Traffic Safety Act to include the use of AVs on public roads and clarify the term distracted driving with regard to AVs.

The Nova Scotia legislation uses a broad definition of “autonomous mode” and “autonomous vehicles” to allow easy modification. It also defines how the use of AVs is governed through related regulations. Alberta and British Columbia have yet to introduce specific regulations for AVs, but permits for AV pilot testing can be obtained through a special process.

The provincial governments may opt out of PIPEDA by enacting a similar legislation.

Role of the government in the development of AVs

The federal and provincial governments have been actively involved in the development of AVs in Canada.

In December 2021, the Government of Canada through the Sustainable Development Technology Canada (SDTC) initiative invested CAD3.2 million in Montreal-based One Silicon Chip Photonics (OSCP) to promote cleantech innovations in the

<table>
<thead>
<tr>
<th>Province</th>
<th>AV Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontario</td>
<td>The “10-year Pilot Project - Automated Vehicles Regulation” provides guidance on AV use and defines what constitutes an “advanced driver assistance system” or a “dynamic driving task.”</td>
</tr>
<tr>
<td>Québec</td>
<td>The Québec Highway Safety Code (HSC) and has been amended to include AVs.</td>
</tr>
<tr>
<td>Manitoba</td>
<td>The Vehicle Technology Testing Act governs the development and use of AVs.</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>The Traffic Safety Act has been amended to include automated driving systems.</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>The province has received royal assent to amend its Traffic Safety Act to include the use of AVs on public roads and clarify the term distracted driving with regard to AVs.</td>
</tr>
<tr>
<td>Alberta</td>
<td>The province is yet to introduce specific regulations for AVs, but permits for AV pilot testing can be obtained.</td>
</tr>
<tr>
<td>British Columbia</td>
<td>The province is yet to introduce specific regulations for AVs, but permits for AV pilot testing can be obtained.</td>
</tr>
</tbody>
</table>
In addition, in December 2021, the government launched the Ontario Vehicle Innovation Network (OVIN) initiative in partnership with OCI to support Ontario-based companies and organisations active in the development of connected and autonomous vehicle technology. The government allocated CAD56.4 million to the OVIN initiative. SMEs were invited to apply for funding from OVIN for up to one-third of their project’s cost.

### Key autonomous shuttle pilots

Some notable autonomous shuttle pilots in recent years are presented in Table 2.

#### Whitby Autonomous Vehicle Electric (WAVE) shuttle pilot project

In September 2021, Durham Region Transit (DRT) commenced test operations of the WAVE shuttle on the 6km DRT Route 300, which is a circular route in the Port Whitby area (in south Whitby) that begins and ends at the Whitby GO Transit station.

The Government of Ontario supported the project and provided funds through AVIN, led by OCI. The project was also funded and supported by SmartCone Technologies, AutoGuardianby SmartCone, the Region of Durham, DRT, the Town of Whitby, Metrolinx, Nokia Canada, Ontario Tech, and Durham College.

After two months of trials without passengers, the service

### Table 2: Key autonomous shuttle pilots in Canada

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Manufacturer</th>
<th>Trial period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitby Autonomous Vehicle Electric (WAVE) shuttle</td>
<td>Whitby</td>
<td>Local Motors</td>
<td>September-December 2021</td>
</tr>
<tr>
<td>West Rouge Automated Shuttle Trial</td>
<td>Toronto</td>
<td>Local Motors</td>
<td>August-September 2021</td>
</tr>
<tr>
<td>Transdev shuttle pilot: Olympic Park</td>
<td>Montreal</td>
<td>EasyMile</td>
<td>June-December 2018</td>
</tr>
<tr>
<td>Transdev shuttle pilot: Olympic Park metro station-Maisonneuve Market</td>
<td>Montreal</td>
<td>EasyMile</td>
<td>June-August 2019</td>
</tr>
<tr>
<td>NAVYA autonomous shuttle pilot</td>
<td>Candiac</td>
<td>Navya SAS</td>
<td>August 2018-October 2019</td>
</tr>
<tr>
<td>ELA Calgary Zoo/Telus Spark pilot</td>
<td>Calgary</td>
<td>EasyMile</td>
<td>September 2018</td>
</tr>
<tr>
<td>ELA Old Strathcona pilot</td>
<td>Edmonton</td>
<td>EasyMile</td>
<td>October-November 2018</td>
</tr>
<tr>
<td>ELA Beaumont AB pilot</td>
<td>Beaumont</td>
<td>EasyMile</td>
<td>April-October 2019</td>
</tr>
<tr>
<td>ELA Olympic Village pilot</td>
<td>Vancouver</td>
<td>EasyMile</td>
<td>February 23- March 3,2019</td>
</tr>
<tr>
<td>ELA Surrey Civic Plaza pilot</td>
<td>Surrey</td>
<td>EasyMile</td>
<td>February 1-17, 2019</td>
</tr>
<tr>
<td>WATonoBus research program</td>
<td>Waterloo</td>
<td>EasyMile</td>
<td>July 2021-present</td>
</tr>
</tbody>
</table>


...
was opened to the public in November 2021 with an onboard attendant. The shuttle was restricted to operating at 20 km per hour with a maximum occupancy of four passengers per trip to comply with the safety regulations.

However, the project was suspended in December 2021, following an accident where the shuttle crashed and left the onboard attendant critically injured. The results of the police investigation revealed that the crash occurred while the shuttle was operating in manual mode.

**West Rouge Automated Shuttle Trial**

The City of Toronto partnered with Toronto Transit Commission and Metrolink for the West Rouge Automated Shuttle project. In October 2020, Local Motors signed an agreement with the City of Toronto to provide automated shuttle vehicle service on a 5km route in West Rouge for a 6-12-month trial period.

The Olli 2.0 shuttle is equipped with lidar and radar sensors, has a maximum speed of 20 km per hour when operating in autonomous mode, and the capacity to carry eight passengers. The shuttle service is also accessible to travellers with limited mobility.

From August to September 2021, the shuttle began digitally mapping the route. The shuttle operated on a circular route from the Rouge Hill GO station to Starspray Boulevard Rouge and National Urban Park before heading back to the GO station on weekdays. On weekends, the shuttle was limited to travelling between the GO station, Rouge National Urban Park and the West Rouge Community Centre.

Following the completion of the route mapping, the shuttle service was opened to the public in October 2021. The shuttle was tested during the snowy season to evaluate its performance during Canadian winters. The service was expected to be available till February 2022. However, in December 2021, Toronto suspended the pilot after the WAVE autonomous shuttle crashed in Whitby.

**Transdev autonomous shuttle trials in Montreal**

Transdev Canada conducted two autonomous shuttle pilots in the Olympic Park in Montréal. The first pilot was conducted at minimal traffic hours from June to December 2018. After its success, Transdev launched its second pilot with two shuttles operating in normal urban traffic in June 2019. The shuttles operated on a 1.4km route from the Olympic Park metro station to Maisonneuve Market, and covered the distance within approximately 6 minutes at an average speed of 15 km per hour. Intersections were equipped with intelligent traffic signals with which the shuttles could communicate when they crossed. The pilot ended in August 2019. France-based EasyMile designed and supplied the electric EZ10 driverless shuttles.

**NAVYA autonomous shuttle pilot in Candiac**

Keolis Canada and the City of Candiac partnered to launch the NAVYA autonomous shuttle pilot on a 2km route between the intersection of Marie-Victorin and Montcalm North boulevards in August 2018. The shuttle had the capacity to carry 15 passengers. It operated in normal traffic, passed through a railway crossing, and also navigated an intersection where it communicated with four traffic lights. For eight months, the service was available free of cost for public use. In winter, the shuttle was tested for four months without passengers to examine how it adapted to Quebec’s winter conditions.

**Electronic Autonomous Shuttle project (ELA)**

Pacific Western Transportation (PWT) has launched several autonomous shuttle pilots in Western Canada. In September 2018, the first pilot began on a 557metre route between the Calgary Zoo and TELUS Spark.

The shuttle took 39 trips per day on average over the course of one month. In 2018, PWT launched five pilots in the city of Edmonton at Blatchford, Old Strathcona, Chappelle Gardens, Grey Cup, and the University of Alberta. The Strathcona ELA pilot was temporarily halted due to hardware malfunction. There have also been ELA pilots in the Surrey Civic Plaza, the Olympic Village in Vancouver, Beaumont, and at the Reynolds Museum in Wetaskiwin.

**WATonoBus research program at the University of Waterloo**

In July 2021, the University of Waterloo launched the WATonoBus autonomous shuttle to transport staff and students on campus. The shuttle operates on a 2.7km route around the Waterloo main campus with five stops and an intersection with the campus light rail transit stop. The program is a multi-year initiative to demonstrate and integrate autonomous transportation in the campus. The shuttle is operated remotely over Roger’s 5G network. The shuttle is equipped with an on-board sensor system to provide vehicle intelligence and control; front, rear and side cameras to provide a 360-degree view; light detection and ranging (LIDAR) active remote sensing systems; and a WATonoBus smartphone app to help passengers navigate the campus using the shuttle.

**Autonomous development going forward**

Canada has been making significant progress in the development of AV technology and setting up of a legal framework for its operation; however, there are still hurdles that prevent full-scale deployment. Safety is a major concern since AI perception has a limited understanding of certain real-world scenarios, such as snowy weather, children in Halloween costumes, and Christmas lights. The regulatory framework in Canada, particularly in Alberta and British Columbia, needs to be developed further to provide clarity on questions related to AI ethics and vehicle insurance. The shuttle crash in Whitby also raises questions on who is responsible in the event of such accidents. Even though the accident occurred when the shuttle was being operated manually, the shuttle pilot in Toronto was suspended. The accident might lead to tightened regulations for AV testing and delay in future pilots.
Public Transportation in Sri Lanka (contd..)

Recently, several developments have been announced to increase the share of public transport and reduce traffic delays and congestion on roads. The bus fleet is being expanded and a new bus rapid transit (BRT) system has been proposed. Further, modernisation is underway on the existing rail network and new light rail transit (LRTs) systems are being planned.

Bus network

The Road Passenger Transport Authority, Western Province is responsible for regulating the intra-provincial private bus service in the country.

The Sri Lanka Transport Board (SLTB) and private bus companies operate bus routes in the Western Province. SLTB is the government agency that operates short distance (intra-provincial) and long distance (inter-provincial) bus services.

Most public bus services are owned by private service providers, who usually own one to two buses operating on a route. Private buses do not operate on unprofitable routes, while the SLTB operates on both profitable and unprofitable routes. Cash is used to pay the fare on buses.

Tickets are obtained from the bus conductor, who also assists the driver. Additionally, the Touch Travel Card is a near-field communication-enabled prepaid card that can be used to pay for transport fares and transport-related services. In the Western Province, the card works on Routes 138, 122 and 177.

Planned developments and procurements

New procurements and modernisation

Clean buses are being procured for deployment in the country. Further, plans to modernise the public bus transport system in the Western Province are underway.

The aim of the project is to replace the existing bus type with low-floor AC buses. The project also includes design and implementation of a control centre to monitor operational buses through GPS and establish a real-time information system relaying the status of the buses for the public. The estimated cost of the project is USD 27.6 million.

Electric and hybrid buses: In August 2018, the Cabinet approved a proposal to import 1,000 buses for the SLTB network. Hungary-based Csepel Holdings Limited secured the contract to supply 250 fully electric buses and 750 hybrid buses. Private operators will maintain the buses, while the drivers and the fuel will be supplied by SLTB. After 10 years, the buses will belong to SLTB. However, as of December 2018, the plan seemed stagnant.

Hybrid and hydrogen buses: In January 2019, Sri Lanka announced that it was in talks with China to import hybrid buses and hydrogen-powered buses. In January 2020, the Ministry of Passenger Services Management announced plans to import 2,000 new buses from China. SLTB will run these buses.

Other bus procurements: In January 2022, Sri Lanka announced plans to purchase 500 buses for SLTB from India for USD 15 million by utilising the line of credit extended to it. A total of 400 new buses with seating capacity in the range of 50–54 and 100 new buses with seating capacity in the range of 32–35 will be purchased utilising USD 15.03 million under the Indian loan grant/scheme.

Development of a bus rapid transit system

The Colombo Urban Transport Master Plan recommended three immediate actions for the development of a BRT network along the routes 1, 2A, 2B, 3 and 4, spanning a total length of 135.8 km. The Ministry of Transport, the Road Development Authority, and the Colombo Municipal Council will develop the system on public-private partnership (PPP) basis.

The three immediate actions include installing GPS devices to enable bus fleet tracking on a real-time basis, providing integrated circuit (IC) ticket systems which would further enable subsidies for private bus companies, since the exact number of discounted tickets can be counted, and conducting a feasibility study for a BRT system.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of routes</td>
<td>433</td>
</tr>
<tr>
<td>Permitted number of buses in the region</td>
<td>6,488</td>
</tr>
<tr>
<td>Daily operational number of buses</td>
<td>5,620</td>
</tr>
<tr>
<td>Mileage per day (approximately)</td>
<td>950,000 km</td>
</tr>
<tr>
<td>Number of trips per day (approximately)</td>
<td>48,000</td>
</tr>
<tr>
<td>Daily ridership</td>
<td>3,800,000</td>
</tr>
<tr>
<td>Number of bus stations</td>
<td>1,235</td>
</tr>
</tbody>
</table>

Source: Global Mass Transit Research
Table 2: Rail network in the Western Province

<table>
<thead>
<tr>
<th>Operational Line</th>
<th>Railway Operation</th>
<th>Distance (km)</th>
<th>Average travel time</th>
<th>Speed (km/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelani Valley Line</td>
<td>Colombo to Avissawella</td>
<td>60.81</td>
<td>2:15</td>
<td>27.03</td>
</tr>
<tr>
<td></td>
<td>Colombo to Padukka</td>
<td>36.24</td>
<td>1:35</td>
<td>22.89</td>
</tr>
<tr>
<td>Puttalam Line</td>
<td>Colombo to Chilaw</td>
<td>46.3</td>
<td>1:35</td>
<td>22.89</td>
</tr>
<tr>
<td></td>
<td>Colombo to Negombo</td>
<td>39.2</td>
<td>1:25</td>
<td>27.67</td>
</tr>
<tr>
<td>Coastal Line</td>
<td>Colombo to Ambalangoda</td>
<td>60.24</td>
<td>2:00</td>
<td>30.12</td>
</tr>
<tr>
<td></td>
<td>Colombo to Panadura</td>
<td>26.21</td>
<td>0:50</td>
<td>31.45</td>
</tr>
<tr>
<td></td>
<td>Express</td>
<td>60.24</td>
<td>1:20</td>
<td>45.18</td>
</tr>
<tr>
<td>Main Line</td>
<td>Colombo to Aluthgama</td>
<td>59.3</td>
<td>1:40</td>
<td>35.58</td>
</tr>
<tr>
<td></td>
<td>Colombo to Veyangoda</td>
<td>23.53</td>
<td>1:10</td>
<td>24.77</td>
</tr>
<tr>
<td></td>
<td>Express</td>
<td>59.3</td>
<td>1:10</td>
<td>24.77</td>
</tr>
<tr>
<td></td>
<td>Inter Provincial</td>
<td>59.3</td>
<td>0:57</td>
<td>62.42</td>
</tr>
</tbody>
</table>

Source: Sustainable Urban Transport Index

Rail network in Sri Lanka

The Western Region of Colombo encompasses four train lines operated by the Sri Lanka Railway authority.

A total of 531 km of rail network covers the Western Region, with 61 train stations allowing access to train services.

Planned expansions and procurements

Western Region Colombo LRT

In March 2021, the government approved the construction of four elevated rail tracks within Colombo City, after the earlier LRT project in the city was terminated on the grounds of high capital and operational costs, environmental damage, and disturbances caused to businesses and residential areas. However, one out of those four lines, which was the purple line, was also declared unfeasible upon further studies.

Western Region Transport Development Project of the Ministry of Megapolis and Western Development is the developer of the project.

The following three LRT lines are now planned to be developed under the project.

Contract for the construction is yet to be awarded.

Table 3: Proposed LRT lines in the western province

<table>
<thead>
<tr>
<th>Line</th>
<th>Project cost (USD million)</th>
<th>Source of funds</th>
<th>Expected opening</th>
<th>Length (km)</th>
<th>Route</th>
<th>Number of stations</th>
<th>Current stage of the project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raktha Line (Red)</td>
<td>1,768</td>
<td>The project will be developed on a PPP basis</td>
<td>2025</td>
<td>32.4</td>
<td>The line will span from Ragama Railway Station to Kirulapone</td>
<td>25</td>
<td>Under construction</td>
</tr>
<tr>
<td>Haritha Line (Green)</td>
<td>1,527</td>
<td>The project will be developed on a PPP basis</td>
<td>2025</td>
<td>28.6</td>
<td>The line will span from Kelaniya to Moratuwa</td>
<td>17</td>
<td>Under procurement</td>
</tr>
<tr>
<td>Neela Line (Blue)</td>
<td>955</td>
<td>The project will be developed on a PPP basis</td>
<td>2025</td>
<td>21.5</td>
<td>The line will span from Hunupitiya to Kottawa MMC</td>
<td>13</td>
<td>Under procurement</td>
</tr>
</tbody>
</table>

Source: Global Mass Transit
Colombo Light Rail Project

The line will span from Negombo to Colombo via Bandaranaike International Airport. The estimated cost of the project is USD 1,500 million.

As of September 2021, the project is currently under a feasibility study. South Korea-based KCI Metro Link Korea Company and GBK Consortium signed a memorandum of understanding to conduct the feasibility study for the development of an LRT system in Colombo.

The project will be supported by a USD 500 million loan from the Export-Import Bank of Korea to Sri Lanka. Around USD 1 billion will be raised from international investors.

Modernisation

One of the most significant modernisation projects currently underway in Sri Lanka is the Colombo Suburban Railway Project. The Ministry of Transport Services Management, along with Sri Lanka Railways, the National Planning Department and the External Resource Department will oversee the implementation of the project.

The project aims to modernise all prominent railway networks operating in the city, spanning a total distance of 210 km.

The network covers four major passenger corridors to Colombo City, namely, the Kelani Valley Line (Colombo to Avissawella), the Main Line (Colombo to Rambukkana), the Coastal Line (Colombo to Kaluthara South) and the Puttalam Line (Ragama to Negambo).

As a key contractor of the project, France-based Egis International provided consultancy services for additional studies. Meanwhile, in December 2017, a joint venture of Korea-based DOHWA Engineering Company Limited, Japan-based Oriental Consultants Global Company Limited and India-based Balaji Railroad Systems Private Limited was awarded a USD 9.26 million contract to carry out feasibility studies and to provide detailed design consultancy services for the project.

UN-Habitat conducted the social and economic survey from Maradana to Homagama.

The construction and rehabilitation works for the Puttalam, Kelani Valley and Main lines are planned to be completed by 2023, while that for the Coastal Line are planned to be completed by 2024.

Cost and funding

The cost of the modernisation project is expected to be USD 1,500 million and will be developed with the loan assistance of Asian Development Bank (ADB). ADB had earlier provided a loan of USD 1.7 million through its Technical Assistance Special Fund to support the modernisation of the 64 km Veyangoda-Colombo Fort-Panadura section of the project.

Further, LKR 1,630 million was allocated from foreign and local funds for this project for 2018. LKR 371 Million (82.4 per cent) was spent from the ADB fund by December 2018, while LKR 619.08 Million (81.5 per cent) was spent from the local fund.

Rolling stock

Around 97 electric multiple units will be deployed on the network by 2025.

Tracks

The project includes the construction of 105 km of additional tracks and the rehabilitation of 210 km of existing tracks of the Kelani Valley, Main, Coastal and Puttalam lines of Sri Lanka Railways.

The project also involves the development of railway stations and multimodal centres, replacement of signalling and ticketing systems, and construction of maintenance facilities.

Under the project, the Maradana-Padukka section of the Kelani Valley single-track line will be upgraded to double tracks, and the Padukka-Avissawella section will be rehabilitated.

Also, the double-line Panadura-Kaluthara South section on the 159 km Coastal Line will be rehabilitated and a third line from Colombo to Panadura will be constructed.

A double track on the Ragama-Negombo section of the 133 km-long Puttalam line will also be built. On the 291 km Main Line, the scope of work includes construction of a fourth line from Maradana to Ragama and the construction of a third track on the Ragama-Veyangoda section, as well as rehabilitation of the double track on the Ragama-Rambukkana section.

Conclusion

The public transport system in Sri Lanka is undergoing a massive modernisation and overhaul process, with the government focusing on enhancing the quality of life of its citizens. In the coming years, the government will not only focus on modernising the existing network, but also bringing in a more sustainable infrastructure that will substantially improve Sri Lanka’s rail and bus transit corridors.

With a number of Chinese-led transport projects delayed in 2015 in a bid to improve transparency and reduce costs, the government is increasingly targeting public-private partnerships and a broad array of international financing to carry out major planned infrastructure projects, including establishing mass rapid transit systems in its capital city.

With investment in the sector rising and reforms ongoing, the transport sector is slated to expand significantly in the coming years, extending knock-on economic benefits.

(1 LKR [Sri Lanka Rupee] = 0.004USD)◆
Shared Mobility in Africa (contd.)

With the rise in population and imminent problems of congestion, there is a commensurate increase in demand for non-personal vehicle-based transportation.

The urban population relies on a mix of motorised and non-motorised modes of transportation. In African cities, there are socioeconomic variations in how transportation is used. Walking accounts for more than 75 per cent of all daily journeys undertaken by Africa’s poor, compared to 45 per cent by better-off families.

At higher socioeconomic levels, the use of communal taxis and moto-taxis are very common, accounting for almost 75-80 per cent of all motorised journeys in Africa. Despite the low rate of car ownership (30-70 vehicles per 1,000 inhabitants) in the continent as compared to other regions, public transportation is expensive and lacks last-mile connectivity. In Lagos, an average household spends 28 per cent of its expenditure on public transportation.

Figure 1 demonstrates the percentage of household income spent on transportation using minibuses in major cities across the African continent.

The current state of Africa’s transport sector has a significant influence on the environment and health of the population in urban and semi-urban areas. The motorised transport sector is one of Africa’s fastest growing sources of greenhouse gas emissions as well as localised pollution. Air pollution has become so severe in at least 15 African cities, including Kampala, Kaduna and Bamenda, that the possible health risks of cycling outweigh its potential health advantages.

Traffic congestion has become a constant and debilitating problem in African cities as a result of rising rates of motorisation and car ownership. For instance, South Africans miss nearly 90 hours of work due to traffic congestions. Traffic delays also cause significant price fluctuation during peak hours in Lagos, with fares increasing from USD1 to USD3.

Current state of shared mobility

Pertaining to the rising cost of traditional transport systems in urban areas, ridesharing is quite widespread in Africa, especially informal ridesharing, such as commuter taxis and motorcycle taxis.

Ridesharing options available in cities across the continent ranges from smaller vehicles such as the three-seater auto-rickshaws, the Re4S Tuk Tuk Smack and Mellowcabs, to more conventional vehicles and buses such as the Kiira EV Smack and Kayoola Solar Bus in Uganda and the Mobius II in Kenya. In the past few years, these shared mobility vehicles have been increasingly electrified, with the aim of reducing operating costs and improving air quality.

Figure 1: Percentage of household budget needed for two trips per day by minibus in Africa

Source: Coruscate Solution

Traditional modes of ridesharing services such as commuter and motorcycle taxis used cash payment. However, with the increasing adoption of smartphones and internet services across the continent, popularity of modern ridesharing services is growing, allowing international players to enter the market.

As the smartphone adoption rate is expected to increase by up to 67 per cent by 2025, this presents further opportunities in the space of Internet of Things, big data, cloud computing, information processing and widespread data connectivity. Service providers will also be able to integrate urban trip planning and booking, real-time information and fare payment through a single-user interface.
The largest number of digital platforms for ridesharing services are concentrated in the countries of Morocco, South Africa, Egypt, Kenya and Nigeria, with all of them having more than six digital platforms. However, most of the country has one or less ridesharing platforms, showing that these countries largely depend on traditional ridesharing methods.

In Africa, car rentals as well as ride-hailing and taxis accounted for the largest share of revenue in the mobility services market between 2017-21 and this trend is projected to continue till 2025. In 2017, ride-hailing and taxis generated around USD3.76 billion in revenue, followed by car rentals generating around USD3.47 billion. By 2025, both these services are expected to account for the majority of revenue generated in the shared mobility market, with each projected to generate more than USD5 billion in revenue. The share of bike-sharing services is quite small and is not projected to grow significantly in the upcoming years. Car-sharing is only available in certain cities and its share is quite small and not expected to see any significant growth in the upcoming years. By 2025, both car and bike sharing are expected to account for only USD19.61 million in generated revenue.

Shared modes of transportation have the potential to minimise traffic congestion in the continent, reduce the requirement of parking spaces as well as increase vehicle occupancy rates. Short-distance travels have an average occupancy rate of 2.5 people per car, whereas long-distance trips have an average occupancy rate of 3.5 people per car. As a result, fewer cars are required to transport the same number of people.

Key market players

There are currently more than 50 ridesharing services across 21 countries in Africa. In metropolitan regions, ridesharing applications (apps) are becoming increasingly popular among the middle class. However, coverage is still restricted. Commuters in Uganda can only access Uber inside the capital city of Kampala and adjacent peri-urban areas. Most importantly, modern ridesharing options tend to be comparatively expensive for the majority of the low-income population in Africa. A study by the National Household Travel Survey in South Africa revealed that most of the users of ride-hailing services have an average household income of EUR560, representing approximately 365,000 households in Cape Town.

Sources: GSMA Intelligence

Figure 2: Smartphone adoption in Africa

Figure 3: Number of paratransit digital platforms in the African continent

Source: Boutweil & Quillerier
Figure 4: Revenue of shared mobility services in Africa from 2017-25

Table 1: Details of major shared mobility providers in Africa

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Year of inception</th>
<th>Funding (USD million)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little Cab</td>
<td>Kenya</td>
<td>2016</td>
<td>10</td>
<td>Little Cab allows customers to pay for their rides using Safaricom's mobile money service. It allows non-smartphone users to hail a cab through a USSD system. Little Cab does not own or operate its own fleet, but aggregates small operators and single vehicle owners.</td>
</tr>
<tr>
<td>Oga Taxi</td>
<td>Nigeria</td>
<td>2014</td>
<td>Unfunded</td>
<td>Oga Taxi is an app-based platform that connects taxi drivers with passengers. Users can request a ride and the app will find a driver available nearby to pick up. Passengers can pay with either card or cash.</td>
</tr>
<tr>
<td>Max Okada</td>
<td>Nigeria</td>
<td>2015</td>
<td>38</td>
<td>Max Okada provides on-demand motorcycle-taxi hailing platforms in West Africa. The company also plans to introduce electric bikes to its fleet.</td>
</tr>
<tr>
<td>LEFA</td>
<td>Namibia</td>
<td>2018</td>
<td>NA</td>
<td>LEFA is a cab requesting app that connects cab drivers and passengers. The service provides convenient cash and cashless payment options for passengers as well as provides the option to track rides in real time.</td>
</tr>
</tbody>
</table>

Source: Statistica
However, cheaper alternatives are emerging to cover the gaps, for example, Sendy and Mondo Ride offer motorcycle taxis in addition to car services, while Fone Taxi and ZayRide provide access to three-wheeler rides.

Some of the major players operating in the African ride-hailing market are Uber Technologies Incorporated, Didi Chuxing and Bolt.

Uber remains the top rideshare service throughout Africa since its entry in 2013, mainly due to its ability to provide low market rates.

However, in recent years, many African-based companies have also entered the shared mobility market, leveraging their knowledge about local conditions and customer expectations.

For example, Kenya-based Mondo Ride offers the option of hailing boda-bodas or tuk-tuks (three-wheeled motorbikes) in many of the cities to circumvent the issue of overcrowding and congestion.

Other companies, such as Uganda-based SafeBoda are deploying boda-bodas or motorcycle taxis, allowing citizens to narrow and congested roads more easily.

Competition in the previously homogeneous market has been growing due to the entry of many domestic companies. As the number of players increase, service quality is expected to improve as well as become cheaper.

Details of some of the key domestic players in the region are mentioned in Table 1.

### The future of ridesharing in Africa

While local ridesharing firms have the advantage of regional knowledge and familiarity over international players such as Uber, the ability of larger companies to undercut prices can threaten the survivability of African-based businesses.

These smaller enterprises have protested in numerous African cities, arguing that larger corporations are developing a monopoly in the market, reducing the benefit of healthy competition.

Due to the largely informal nature of the sector in Africa, most governments of the region are struggling to regulate the industry. Although Ghana was the first African country to issue legal documents confirming Uber's presence in its cities, other nations have struggled to keep up with the industry's rapid expansion.

Regardless of these issues, the widespread acceptance of shared mobility will benefit riders by offering convenience, cost savings and reducing motorised pollution in Africa and has the potential to largely replace inadequate traditional mobility. In the longer term, as these services begin to integrate innovation into their operation, decent data collection, analysis and data-based development of the transportation system can be achieved.

GoMetro in South Africa for instance, specialises in the design and implementation of intelligent transportation systems and smart mobility. Its GoMetro Pro app collects vehicle-related traffic data that municipal planners can utilise for mapping efficient transportation systems. GoMetro Flx, is a mobility platform that collects data on all conceivable routes and allows users to order a Flx shuttle to be transported to work rather than to drive themselves.

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Yookoo Rider</td>
<td>South Africa</td>
<td>2019</td>
<td>NA</td>
<td>Yookoo Rider has a user base of over 2 million in South Africa. The ride hailing service has a Pay Later feature besides cash and card payments.</td>
</tr>
<tr>
<td>MARAMOJA</td>
<td>Kenya</td>
<td>2013</td>
<td>Unfunded</td>
<td>MARAMOJA is a hailing app in Nairobi, Kenya. The service allows passengers to screen different prices during peak hours, thus making it easier for them to choose rides accordingly.</td>
</tr>
</tbody>
</table>

Source: Global Mass Transit Research
North America

North Okanagan Transit Future Action Plan approved, Canada

The City of Vernon, District of Coldstream and the Regional District of North Okanagan (RDNO) have approved the 2021 North Okanagan Transit Future Action Plan (TFAP) for the Vernon Regional Transit System. The TFAP outlines the transit priorities for the Vernon Regional Transit System over the next five to seven years. The plan also complements the Transit Future Plan developed in 2014.

MoT announces rail safety component under CPFP, Canada

The Ministry of Transportation (MoT) has announced a new rail safety component under the Community Participation Funding Program (CPFP) and issued a call for proposals for 2021–22, with up to CAD300,000 available in funding.

The objectives of the Community Participation Funding Program-Rail Safety Component are: supporting the participation of, and collaboration with, local and Indigenous communities and organisations in Transport Canada's engagement processes; and increasing awareness of, and improving information-sharing about risks and mitigations associated with railway safety.

The aim of the programme is to provide short-term grants with the goal of supporting the participation of eligible communities and organisations in the development and improvement of Canada's rail transportation system.

(1 CAD [Canadian Dollar] = USD0.79)

Metrolinx refines route for Yonge North Subway Extension, Canada

Metrolinx has announced plans to redefine the route for Yonge North Subway Extension. The new plans will result in deeper tunnels and a route that allows travel under far fewer residential properties in the Royal Orchard community than the previous route. The changes mean that the subway tunnels will follow a route that travels mostly under Bay Thorn Drive wherever possible once the tunnels turn east from Yonge Street to connect with the rail corridor. The previous route went under 40 homes and an additional 23 properties, whereas the new route goes under 20 homes and 15 additional properties.

The tunnels below the Royal Orchard neighbourhood will be at a minimum depth of 21 metres and at a maximum depth of 50 metres.

Orillia Transit launches Smart Pay Fare System, Canada

Orillia Transit has announced plans to launch the Smart Pay Fare System on January 2, 2022. Passengers will be able to pay for transit using a reloadable smart card called the “eConnect Pass”. The City of Orillia is currently working with the County of Simcoe to integrate the new fare system with the Simcoe County LINX transit service.

Passengers can procure the smart card from the agency’s website or by visiting the Orillia City Centre or the Orillia Public Library.

VPRA launches New River Valley Passenger Rail Station Feasibility Study, US

The Virginia Passenger Rail Authority (VPRA) has launched the New River Valley Passenger Rail Station Feasibility Study, which examines potential passenger rail station locations in and around the New River Valley. The feasibility study will examine and screen potential station locations to inform a Federal Railroad Administration National Environmental Policy Act Class of Action determination.

In May 2021, the Commonwealth reached an agreement with Norfolk Southern to extend passenger rail service along the former Virginian Line from Roanoke to the New River Valley.

In autumn 2021, VPRA began a feasibility study to examine five potential station locations in and around the New River Valley. The station locations are along the existing Norfolk Southern railroad corridors that are currently operated for freight trains only.

The New River Valley Passenger Rail Station Feasibility Study takes into account the previous work conducted for the New River Valley Passenger Rail Station locations in the region, while examining what station location opportunities are possible.

FTA approves Clayton Southlake BRT to enter CIG Program, US

The Federal Transit Administration (FTA) has approved the Metropolitan Atlanta Rapid Transit Authority's (MARTA's) Clayton Southlake Bus Rapid Transit (BRT) project to enter the project development phase of the FTA’s Capital Investment Grants (CIG) Program. The BRT project is part of the MARTA 2040 Project.

The estimated cost of the project is USD300 million. The project is expected to be completed by 2026.

The BRT project will provide high-capacity transit service connecting the College Park MARTA Station to several key destinations in Clayton County, including Airport Gateway, Shops of Riverdale, the Southern Regional Medical Center campus, the Mount Zion commercial corridor, and Southlake Mall.

The project includes development of dedicated transit lanes, more frequent service, BRT-focused stations, and transit-oriented development (TOD) opportunities. The project will also include construction of 13 new BRT-branded stations with off-board fare collection, the procurement of ten electric buses and associated electric vehicle (EV) charging infrastructure, and the installation of transit signal priority equipment at key intersections.

MST unveils Zero Emissions Bus Rollout Plan, US

Monterey-Salinas Transit (MST) has unveiled its first ever Zero Emissions Bus Rollout Plan aimed at reducing greenhouse gas emissions and improving air quality in...
the region by transitioning its public transit bus fleet to zero-emission buses.

The plan includes a financial investment of USD71 million to USD107 million, to be fully implemented over 19 years. The investment includes Zero Emissions Buses (ZEBs), equipment, and charging/fueling infrastructure. MST aims to secure grants and seek other funding opportunities to support the plan. The agency has already invested in five ZEBs, representing 6 per cent of its existing fleet of 86 heavy-duty diesel-powered buses.

In 2018, the California Air Resources Board (CARB) adopted the Innovative Clean Transit (ICT) regulation, which requires all bus fleets to be converted to zero-emissions fleets by 2040. As part of this mandate, small transit operators must submit a zero-emission bus rollout plan to CARB by July 2023.

### MDOT MTA launches transition plan to move to zero-emission bus fleet, US

The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) has launched a transition plan to move to a zero-emission bus (ZEB) fleet as older diesel-fueled and hybrid buses reach the end of their useful life.

The plan includes facility updates and is designed to meet the requirements of Maryland’s new Zero-Emission Bus Transition Act, which mandates that all new buses procured for the state’s transit fleet be emission-free beginning in 2023.

The agency has established several overall goals in undertaking the transition to a ZEB fleet, and has committed to converting 50 per cent of its bus fleet to zero-emission by 2030. The goals were set as per the targets identified in the Central Maryland Regional Transit Plan and were guided by the Greenhouse Gas Emissions Reduction Act Plan adopted by the Maryland Department of the Environment.

The agency’s first pilot ZEB programme is scheduled to be launched in 2023, when seven new battery-electric 40-foot and 60-foot articulated buses will be delivered at the agency’s Kirk Division. The procurement of the new buses for the pilot programme and the infrastructure for charging will be supplied through grant funding from the Low or No Emission Vehicle Program from the Federal Transit Administration and from the Volkswagen Settlement. The agency plans to convert the Kirk Division into a 100 per cent electric bus facility by the end of 2026.

The Northwest Division will begin work in early 2025, which will highlight the second phase of the ZEB programme, with electric buses arriving in 2026.

The Eastern Division is anticipated to begin its reconstruction in 2026. It is planned to become one of the few facilities in the US that are purpose-built zero-emission bus facilities, housing a zero-emission bus fleet starting in 2028. Beginning in 2030, the Bush Division is planned to undertake a series of similar infrastructure investments.

### MTS to develop trolley extension to San Diego International Airport, US

The Metropolitan Transit System (MTS) has announced that the trolley extension to the San Diego International Airport is feasible, and can be built in the next ten years at an estimated cost of USD1.5–USD2 billion.

The feasibility study for the project was conducted by Mott MacDonald, which presented multiple options for construction that were evaluated as part of the preliminary feasibility study submitted to the agency.

The agency has authorised its staff to pursue federal and state grants for the project, focusing on the underground options that will connect to the existing rail alignment near Hawthorn Street, and to continue community outreach efforts.

The Mott MacDonald study looked at three different options for construction—an elevated guideway off Laurel Street and two underground options at Hawthorne. MTS favoured the underground option along Hawthorn Street due to the absence of airspace restrictions, minimal impact on private property, and the lowest cost. Mott MacDonald examined two types of underground techniques—tunnel boring and cut and cover.

The MTS alignment also proposes a station at each airport terminal running parallel with Harbor Drive, including aligning with the Terminal 1 reconstruction. The proposed alignment would allow future expansion into Point Loma and beyond.

The San Diego International Airport has set aside more than USD500 million for transportation improvements, including transit to the airport.

### LA Metro board approves EIR for AVL Capacity and Service Improvements Program, US

The Los Angeles County Metropolitan Transportation Authority’s (LA Metro) has approved the final environmental impact report (EIR) for the Antelope Valley Line (AVL) Capacity and Service Improvements Program.

The project involves three proposed capital improvements along the rail corridor, aimed at increasing service frequency and improving reliability along the existing 123.27-km corridor between Lancaster and downtown Los Angeles.

The project aims to have a service frequency of 30 minutes on the commuter rail service from Los Angeles Union Station to the city of Santa Clarita, and a service frequency of 60 minutes to the end of the AVL corridor in Lancaster.

Current rail service patterns vary from 30 minutes during peak service hours to up to two hours during off-peak service hours.

The capital improvements being studied include the Balboa double-track extension in Los Angeles, the Canyon siding extension in Santa Clarita, and the Lancaster terminal improvements in Lancaster. The AVL project is part of Metrolink’s Southern California Optimized Rail Extension (SCORE) programme, a capital project to reduce greenhouse gases, improve access to affordable housing, and create economic opportunity.

Construction is expected to begin by 2028.
RIPTA announces suspension of paper tickets from 2022, US

The Rhode Island Public Transit Authority (RIPTA) has announced that public buses will no longer accept paper tickets, including monthly passes, day passes, seven-day passes, and 10-ride passes.

Starting January 15, 2022, passengers will be required to pay using the Wave contactless smart card or the Wave application (app), launched in 2020.

RTA adopts 2022 regional transit budget and five-year capital programme, US

The Regional Transportation Authority (RTA) has adopted the 2022 regional transit budget and the five-year capital program.

The RTA Board of Directors oversees the finances of the Chicago Transit Authority (CTA), Metra, and Pace.

The 2022 budget includes USD3.4 billion for operations, an increase of 4.6 per cent over the financial plan for 2022, which was adopted in the pre-COVID period. The approved 2022–2026 Capital Program of USD5.260 billion will fund investments in infrastructure, vehicles, and equipment. This program is 17.1 per cent less than the 2021–2025 Capital Program.

The 2022 capital program does not yet include funding from the recently passed federal Infrastructure Investment and Jobs Act.

Caltrain announces increase in cost of Electrification Project, US

Caltrain has announced that the cost of the Electrification Project has increased to USD2.44 billion. This will require an additional USD462 million over the initial cost estimate of more than USD129 million made by the Federal Transit Administration (FTA). The project is expected to be completed by 2024.

Caltrain Electrification project is a key component of the Caltrain Modernization (CalMod) Program and will electrify the corridor from San Francisco’s 4th and King Caltrain Station to the Tamien Caltrain Station. Electrification improvements include converting diesel-hauled trains to electric trains.

The cost increase is a result of negotiations and a settlement with Balfour Beatty (BBII), the contractor tasked with the construction of the project, and an overall detailed project budget update. The settlement resolves commercial issues and determines additional costs arising from the extension of the project to 2024 from 2022.

The detailed overall project budget update reflects delays related to the COVID-19 pandemic, provision of utilities, and real estate work among other factors.

Caltrain is working with its funding partners, as well as with its federal and state legislative delegations to fill the funding gap. To date, Caltrain has received an additional USD52.4 million from the federal government; it has access to USD150 million financing credit and to USD60 million in Measure RR capital reserves towards bridging the funding gap.

Currently, 95 per cent of the foundations have been installed, with only 59 remaining. The traction power facilities are approaching their completion dates, with all ten to be completed early in 2022. The entire overhead catenary system should be installed by summer 2022. The next phase of project construction will involve signal and system integration work. An electric locomotive will be testing the new catenary system in 2022. The first cars of the new electric fleet will arrive in spring 2022.

Metro issues RfP to procure 10 battery-electric buses, US

The Washington Metropolitan Area Transit Authority (Metro) has issued a request for proposals (RfP) to procure 10 40-foot standard-length battery-electric buses from multiple manufacturers to test different bus and charging technologies and to assess their performance. Metro will also separately buy chargers for the buses and install infrastructure to support the chargers.

The last date for the submission of RfPs is February 2, 2022. The buses will be operated out of Metro's Shepherd Parkway Bus Division, and will serve routes across the Maryland and Virginia districts. The agency plans to test the 10 buses with two 60-foot battery-electric buses purchased through a separate Federal Transit Administration's Low- or No-Emission Program Grant. The planned procurements support the agency’s goal to transition to a zero-emission bus fleet by 2045.

NJ Transit invites bids for Raritan River Rail Bridge Replacement Project, US

The New Jersey Transit Corporation (NJ Transit) has invited bids for the second Construction Contract GC.02 of the Raritan River Rail Bridge Replacement Project. The agency will accept electronic bids from firms that have previously submitted an approved special prequalification and have met the special qualifications requirements. The last date for the submission of bids is March 24, 2022.

The scope of work includes all necessary operations to perform the construction, mainly consisting of lift bridge and flanking spans, superstructure, communications, signal, and overhead catenary work. The contract will also cover all systems required for the movable span testing and operation, the erection of the four main span monopoles, miscellaneous civil and structural work, wetland mitigation work, and the demolition of the existing bridge to construct the bridge fender system and provide a fully functioning navigational channel beneath the newly constructed bridge.

Latin America

Mexico City Suburban Train airport extension to commence operations by 2023, Mexico

The Secretariat of Communications and Transport (SCT) has announced that the Mexico City Suburban Train extension to the Felipe Ángeles International Airport/ Santa Lucia Airport will commence operations by 2023.
The route will span from Lechería–Jaltocan–Santa Lucía Airport. The first station of the new route will be at Lechería. The new route will span 24 km and cover four additional stations: Cueymal, Los Agaves, Nextalpan, and Xaltocan. The route will terminate at the air terminal.

The five-car trains on the new airport line will have the capacity to carry 719 passengers.

**Electrification works to begin on Maya Train, Mexico**

Fondo Nacional de Fomento al Turismo (Fonatur) has announced plans to begin the electrification works on Mayan Train (Tren Maya) in January 2022 at an estimated cost of USD73.7 million. The project will include part of stretch 3 (Calkiní to Izamal), starting at Mérida and finishing at Cancún at the end of stretch 4 (Izamal to Cancún). The project is estimated to be completed by the end of 2024.

**Nuevo León to develop two new metro lines by 2022, Mexico**

The state government of Nuevo León has announced plans to develop two new metro lines by 2022. The construction on Monterrey’s metro Lines 4 and 5 will begin in June 2022. The works are expected to be concluded by 2027, at an investment of MXN19 billion. Metro Line 4 is expected to cover southern Monterrey, while Line 5 will connect the city’s centre and the west.

The state government floated a tender on December 15, 2021, inviting technical and economic bids from companies by January 2022.

The state government of Nuevo León is also focusing on other mobility projects within the city. The government has already coordinated with the federal government to float an MXN19.8 billion (USD846 million) tender to develop the García–Monterrey airport light rail line, which was confirmed as a public-private partnership (PPP) under the country’s 2021–24 infrastructure programme.

The state’s approved 2022 spending budget also includes the expansion of two bus rapid transit (BRT) systems within Monterrey.

**(1MXN [Mexican Peso] = USD0.04)**

**São Paulo Metro Line 4 construction completed; operations to commence in April 2022, Brazil**

Plans have been announced to commence operations on São Paulo Metro Line 4 as the construction works on the project have been concluded after 17 years. The line, which will be operated by the private sector, will span 12.8 km and cover 11 stations.

The project was implemented in two phases. The first phase comprised the construction of the Luz, República, Paulista, Faria Lima, Pinheiros, and Butantã stations. The estimated cost for phase 2 was BRL2.1 billion and included the construction of five stations. These were Fradique Coutinho, Higienópolis–Mackenzie, Oscar Freire, São Paulo–Morumbi, and Vila Sônia.

With the construction of Vila Sônia, the metro line is now complete. It will commence commercial operations by April 2022. The expected daily ridership is estimated to be 896,000.

**(1 BRL [Brazilian Real] = USD0.17)**

**Bids submitted for Panama MRT Line 1 extension**

Secretaría del Metro de Panamá (SMP)/Panama Metro has received bids from three companies for the extension of Panama Metro Line 1 to Villa Zaíta. The line will span 2.2 km.

The companies interested in the Panama metro tender are Group SAT comprising S.A., Alstom Panama, and Sofratesa de Panama, INC, and Thales Six GTS France SAS. The scope of the contract includes design engineering services, civil works, auxiliary line and station facilities, and interfaces with the integrated railway system for the project.

The Panama North Line Consortium comprising OHL and MOTA ENGIL is in charge of the construction of the extension of Line 1. SMP has also announced plans to build a bus interchange with a capacity to accommodate more than 8,000 passengers during peak hours.

**Fitram announces plans to launch tenders for mass transit projects, Dominican Republic**

The Dominican Republic’s mass transit development fund/ Fideicomiso para el Desarrollo del Sistema de Transporte Masivo de la República Dominicana (Fitram) has announced plans to award two contracts to conduct studies and engineering works for the Santo Domingo metropolitan train and for the engineering and construction of the Santiago city monorail.

Companies can submit their proposals by February 9, 2022. The contracts are due to be awarded by March 11, 2022.

The Santiago monorail will span 16 km from the southeast to the northwest and cover 14 stations. The trains will have a capacity to carry 20,000 passengers per direction per hour. They will connect with the 6.5-km Santiago cable-car line (under construction) and with six bus rapid transit (BRT) corridors.

In October 2021, the Central American Bank for Economic Integration (Cabei) announced that it had launched a demand and legal study tender for a separate rail project that would connect the capital Santo Domingo with Santiago.

**Asia Pacific**

**Tianjin to commence operations on two subway lines by end-2021, China**

The Tianjin Housing and Urban-Rural Development Committee has announced plans to commence operations on the southern section of Tianjin Metro Line 4 and the second phase of Metro Line 6 by the end of 2021.

The southern section of Metro Line 4 will span 19 km (underground) and cover 14 stations (Dongnanjiao, Beianqiao, Hepinglu,
Multiple metro lines commence operations in China

Nine metro lines have commenced passenger operations in Beijing. These are Line 19 Phase I, Line 17 southern section, Line 11 western section, the western extension of the Airport Line, Line 8, the remaining section of Line 14, the remaining section of Line S1, Changping Line Nanyan (Qinghe Station), and the middle section of Line 16 (Yuyuantan Dongmen Station).

Further, three metro lines have commenced passenger operations in Wuhan. These are Line 5, the second phase of Line 6, and Line 16 (Hannan), which together span 75.2 km. The total length of metro rail lines in operation in Wuhan has now reached 435 km.

Two metro lines have also commenced passenger operations in Shanghai from December 30, 2021. These are Line 14 and the northern part of Phase I of Metro Line 18.

Multiple metro lines commence passenger operations in China

Passenger operations commenced on Nanning Line 5 on December 16, 2021. The metro line deploys driverless operations of grade 4 and features a smart subway network. Nanning Metro Line 5 spans 20.2 km and covers 17 stations. It loops around the western side of the city centre, connecting Jinqiao Coach Station in the northeast to Guokai Dadao in the south. The line deploys a fleet of 24 six-car type-B trains that operate at a maximum speed of 80 km/hr. Each train has a capacity to carry 1,464 passengers (including 232 seated passengers).

China to launch vacuum tube trains maglev system; commences operations on multiple HSR lines

China has announced plans to introduce a high-speed maglev system capable of operating at a top speed of 600 km/hr and also to operate high-speed trains in a vacuum tube. The proposal was unveiled by the National Railway Administration (NRA) under a five-year plan for railway science and technology innovation.

Further, passenger trains will also be developed that will run at a speed of 400 km/hr. Other developments for improving the nation's railway architecture include BeiDou satellite navigation, 5G, artificial intelligence, and big data. These developments are expected to be completed during the 14th Five-Year Plan (2021–25) which is aimed at supporting the adoption of science and technology in China's railway systems.

Further, operations have commenced on the new high-speed rail (HSR) line in Shandong province in China. The line spans 199 km and will connect Qufu City and Caoxian County in Heze Province. Trains will operate at a speed of 350 km/hr. The new HSR line is part of the high-speed railway linking Rizhao City, Shandong Province, and Lankao County in Henan Province.

Earlier, operations commenced on two new high-speed railway lines in the central and north-eastern regions of China. The first route spans 245 km in Central China's Hunan Province, connecting Zhangjiajie and Huaihua. The end-to-end journey time has been reduced to one hour and ten minutes. The other new high-speed railway line spans from Mudanjiang to Jiamusi in north-eastern China's Heilongjiang Province, spanning 372 km and allowing trains to run at 250 km/hr.

Construction commences on northern section of Shijiazhuang Metro Line 1 Phase II, China

Construction has commenced on the northern section of Phase II of Shijiazhuang Metro Line 1 with Dongshangze being the first station on which works began. Phase II is being implemented in two parts, with the initial stretch from Xiaohedadao to Fuze coming into operation in June 2019. Two more stations, Dongshangze and Dongyang, spanning 3.1 km in total, will commence commercial operations from 2024. They are currently under construction.

Operations to commence on Shanghai and Beijing Metro lines by end-2021, China

Plans have been announced to commence operations on Shanghai Metro Line-14 by end-2021. The new line spans 38 km and covers 31 underground stations. Metro Line-14 provides an interchange facility with 13 other lines. Upon commencement, the Shanghai Metro network will span more than 800 km, making it the longest metro system in the world.

Further, plans have been announced to commence operations on Beijing subway Line 14 by end-2021. The construction of the Lize Business District station is complete.

This new urban subway route adds 47.3 km to the existing network. It will facilitate travel for residents living in the southwest, south, and east of Beijing.
stations, connecting Qinglonggang Station to Zongbaoqu.

Nanchang Metro Line 4 commenced operations for passengers on December 27, 2021. The line spans 39.6 km and covers 29 stations. It connects Baimashan to Yuweizhou Station.

**KMB to deploy e-payment system on entire fleet by end-2021, Hong Kong**

Kowloon Motor Bus (KMB) has expanded the number of bus routes supporting its e-payment system to 135 so that more passengers can pay the bus fare via the e-payment fare system. It is expected that the entire bus fleet, with more than 4,000 buses, will be equipped with an e-payment system by the end of 2021. The KMB e-payment system accepts multiple payment methods, including contactless payment, Mastercard, UnionPay, VISA, JCB, mobile payment, Apple Pay, Google Pay, Samsung Pay, QR code payment, AlipayHK EasyGo, Alipay Transit QR code, and UnionPay Transit QR code.

**Changwon S-BRT deploys priority signal technology, South Korea**

Plans have been announced to deploy priority signal technology on the Changwon City S-BRT Advanced Arterial Express Bus System, which will commence construction from 2022.

The BRT project will be implemented in two phases. The first phase will comprise a section of Won-daero, connecting Dogye Square to Gaeumjeong Intersection.

This section was selected to conduct pilot studies in January 2020 and will span 9.3 km. The second phase will span 8.7 km and connect Dogye Plaza to Yukho Plaza.

Construction on the second phase of the section will begin in the second half of 2024 and will conclude in 2025.

Mobile ticketing will be deployed on the line. It will require commuters to install an application (app) on their smartphones. The short-distance wireless communication device (beacon) will recognise the application on the passenger’s phone and automatically pay the fare.

**Busan Jungang–Daero Seomyeon–Chungmu BRT network to commence operations in December 2021, South Korea**

The City of Busan has announced plans to commence operations on the Busan Jungang–Daero Seomyeon–Chungmu bus rapid transit (BRT) network from December 20, 2021.

The corridor spans 7.9 km and focuses on improving the public transportation system in the city.

The BRT network will now span 24.9 km, comprising the currently operational Dongnae–Haeundae (10.4 km) and Dongnae–Seomyeon–Gwangmugyo (6.6 km) stretches.

**Road-rail midi buses to commence operations in Shikoku, Japan**

Passenger operations have commenced on road-rail midi buses in southeastern Shikoku from December 25, 2021. The single-track line spans 10 km, with a 1,067 mm gauge line connecting Awa-Kaigan in Tokushima prefecture with Kannoura.

The three-coaster diesel midi buses are supplied by Toyota and have a capacity to carry 21 seated passengers.

Paved adapter tracks have been built at Awa-Kaigan and Kannoura where the driver motor vehicles (DMVs) can transfer between road and rail.

Flanged guide wheels are lowered at the front and back to prevent derailments, but the rubber-tyred rear road wheels continue to provide traction in the rail mode.

Testing on the line commenced in December 2020, but the opening was delayed after a safety inspection determined that modifications were needed to strengthen the vehicle suspensions.

**Operations to commence on 50 Alexander Dennis Enviro500 double-deck buses in Singapore**

The Singapore Land Transport Authority (LTA) has announced plans to commence operations of 50 new Alexander Dennis Enviro500 double-deck buses.

The buses deploy aluminium composite body technology and have a host of new safety and energy-saving features. The double-decker buses are equipped with three passenger doors and two glazed staircases, with the one at the rear of the vehicle leading directly to the exit door. Fully step-free aisles on both decks ensure passengers can move around the vehicle with ease.

**New train sets unveiled for Manila MRT-7; line to commence partial operations by Q4 2022, Philippines**

New train sets were unveiled for Manila metro rail transit (MRT) Line 7 at Tandang Sora station on December 15, 2021. A total of 108 rail cars or 36 train sets have been acquired from South Korea.

The line will span 24.7 km, connect North Avenue in Quezon City to San Jose Del Monte in Bulacan, and cover 14 stations.

Additionally, the civil works of the project are already 62 per cent complete and the line will commence partial operations by Q4, 2022.

San Miguel Corporation (SMC) is the concession holder for the project and is fully funding the construction of the MRT network, which connects the existing MRT-3 and Light Rail Transit Line 1 (LRT-1) via a common station at North Avenue. The estimated cost of the project is PHP77 billion.

The expected daily ridership will be approximately 300,000 in the first year of operations, with the number going up to 850,000 by the end of the 12th year. The end-to-end journey time will be 35 minutes.

(1 PHP [Philippines Peso] = USD0.01)
News

NDC approves construction of Kaohsiung Yellow Line, Taiwan

The National Development Council (NDC) has approved the construction of Kaohsiung mass rapid transit (MRT) Yellow Line. The line will span 22.91 km (1.08 km elevated and 21.83 km underground), traversing through Asia New Bay Area, Chenching Lake, and the districts of Niaosong, Fongshan, Chienchen, and Lingya. It will cover 23 stations. It is expected to commence operations by the end of 2028.

The estimated cost of the project is USD5.18 billion and is awaiting approval from the government. The line is to be operated by an autopilot system and will boost the system capacity by 18 to 25 per cent.

VinBus launches contactless bank card for fare payments, Vietnam

VinBus, the public transport provider in Hanoi, has launched contactless bank card payments to pay fares on its buses. Under a plan drawn by the Government of Vietnam and the State Bank of Vietnam (SBV), bank cards are planned to replace magnetic cards. Passengers can use cards issued by seven commercial banks, namely TPBank, BIDV, Agribank, SHB, Viet Capital Bank, VietBank, and SeABank to buy Vinbus tickets. More cards will be issued by other banks in future.

After Hanoi, the service is expected to be provided in other cities, including Da Nang and HCM City, where electric buses will be available.

CMRCL cancels Phase-2 civil construction and rolling stock tenders, India

The Chennai Metro Rail Corporation Limited (CMRCL) has cancelled six major tenders of the 118.9-km Chennai Metro Phase 2 project after failing to negotiate final contract values and scopes. The lowest bid received for each of the JICA-funded packages was higher than CMRCL’s estimate, and it will re-invite bids again in the coming weeks.

The cancelled packages are Package UG-01 (Madhavaram to Perumbur), for which Tata Projects was the lowest bidder; Package UG-02 (Ayanavaram to Kellys), which was awarded to DRA Infracon; Package UG-03 (KMC to Royajpetta); Package UG-04 (Radhakrishnan to Adyar Junction); and Package UG-05 (Adyar Depot to Taramani Link Road Ramp), for which L&T was the L1 bidder.

Additionally, CMRCL has also cancelled two rolling stock tenders for the supply of 204 coaches for Phase 2 of the Chennai Metro rail project. Of these 204 coaches, 78 were going to be procured for the 26.09-km Line 4 (Poonamallee–Light House) and 126 were going to be leased for the 45.8-km Line 3 (Madhavaram–SIPCOT 2) and the 47-km Line 5 (Madhavaram–Sholinganallur).

A third tender for procuring 210 coaches for Lines 3 and 5 will invite technical bids on December 23, 2021.

Passenger operations to commence on Kanpur Metro in December 2021, India

Uttar Pradesh Metro Rail Corporation (UPMRC) has announced plans to commence commercial operations on Kanpur Metro from December 28, 2021.

The Commissioner of Metro Rail Safety (CMRS) will undertake a three-day safety inspection of the priority corridor of the project on December 20–22, 2021 before the commencement of commercial operations. The CMRS will inspect the viaducts, tracks, and all station facilities like the public announcement system, signage, safety and security arrangements, drinking water facilities, station access, and connectivity to the control room. On the third day, the team will carry out a speed trial test by operating the train at 80 km/hr.

Eleven companies have submitted bids for the civil contract of Kanpur Metro Phase 1’s second elevated package connecting Transport Nagar Ramp to Naubasta Station.

This 5.427-km section on the eastern end of the 23.785-km Line 1 (IIT Kanpur – Naubasta) consists of five elevated stations at Baradevi, Kidwai Nagar, Vasant Vihar, Baudh Nagar, and Naubasta.

Uttar Pradesh Metro Rail Corporation (UPMRC) had invited tenders for the construction of this section in August 2021 with an estimate of INR5.26 billion and a completion deadline of 30 months. The contract will be funded by the European Investment Bank (EIB) through a EUR650 million loan approved in July 2020.

Trial operations commence on Nagpur Metro’s Aqua Line’s Reach 4, India

Trial operations using CRRC trains have commenced on Nagpur Metro’s Aqua Line’s Reach 4 that spans 8.15 km and connects Sitabuldi to Vaishno Devi Chowk.

Initially, testing will commence on the 6.5-km section that connects Sitabuldi Interchange and Prajapati Nagar Station on Central Avenue in eastern Nagpur. The 1.6-km section between Vaishno Devi and Prajapati Nagar includes a double-decker viaduct where testing will begin at a later stage.

The concession for Reach 4’s construction was awarded to ITD Cementation India in March 2017 along with the civil construction contract for nine stations—Cotton Market, Nagpur Railway Station, Dosar Vaisya Square, Agrasen Square, Chitaroli Square, Telephone Exchange, Ambedkar Square, Vaishno Devi Square, and Prajapati Nagar.

Bids submitted for Kanpur Metro’s second elevated package, India

Passenger operations to commence on Kanpur Metro in December 2021, India

The 8.728-km priority section is part of the 23.79-km corridor 1 connecting IIT Kanpur to Naubasta. This priority section will connect IIT Kanpur to Motijheel, with nine elevated stations at IIT Kanpur, Kalyanpur Railway Station, SPM Hospital, CSJM Kanpur University, Gurudev Chauraha, Geeta Nagar, Rawatpur Railway Station, Lala Lajpat Rai Hospital, and Moti Jheel.

Passenger operations to commence on Kanpur Metro in December 2021, India

Trial operations commence on Nagpur Metro’s Aqua Line’s Reach 4, India

Bids submitted for Kanpur Metro’s second elevated package, India

Passenger operations to commence on Kanpur Metro in December 2021, India

Trial operations commence on Nagpur Metro’s Aqua Line’s Reach 4, India
The 11 companies that are interested in the construction tender are Afcons Infrastructure Limited, Dilip Buildcon Limited, GR Infraprojects, JMC Projects India, KEC International – YFC Projects JV, Larsen & Toubro Limited, Montecarlo Ltd. – Ranjit Buildcon JV, NCC Limited, Rail Vikas Nirgam Limited, Sadbhav Engineering Limited, and Tata Projects.

The scope of the contract includes the construction of five elevated stations at Baradavei, Kidwai Nagar, VasanTVihar, Baudh Nagar, and Naubasta, their intermittent viaducts, architectural finishing, and E&M works.

**BMTC to launch 230 new buses in Bangalore, India**

The Bangalore Metropolitan Transport Corporation (BMTC) has announced plans to launch 230 new buses in Bangalore by the end of 2021. Of the 230 new buses, 200 will be BSVI diesel and 30 will be electric.

The electric buses will be operated as metro feeder buses and will operate on mainly three routes – Kengeri to Yeshwanthpur, Kengeri to Electronics City, and Yeshwanthpur to Kengeri.

**NHSRCL issues EIA study tender for Chennai–Mysore bullet train corridor, India**

The National High Speed Rail Corporation Limited (NHSRCL) has issued a tender for conducting the environmental impact assessment (EIA) study for the proposed 435-km-long Chennai–Mysore high-speed rail (HSR) corridor.

The scope of the contract includes carrying out the environmental impact assessment (EIA) field work and preparing the EIA report and the environment management plan for the HSR corridor.

The Chennai–Mysore HSR corridor will connect Chennai to Mysore through nine stations.

The proposed stations are Chennai, Poonamallee, Arokkonam, Chittoor, Bangarapet, Bengaluru, Channapatna, Mandya, and Mysore.

**CMRCL issues four underground civil tenders for Chennai Metro Phase 2, India**

The Chennai Metro Rail Corporation Limited (CMRCL) has issued four underground civil tenders for Chennai Metro Phase 2.

The scope of work for the first contract package includes the construction of five underground stations at Thapalpetti, Moolakadai, Sembiyam, Perambur Market, and Perambur Metro. It also includes the construction of the crossover at Sembiyam and other works excluding the diaphragm wall of two underground stations at Madhavaram Milk Colony and Murari Hospital for corridor 3 of phase 2 of the project. The last date for the submission of bids is February 22, 2022.

The scope of work for the second contract package includes the construction of underground stations at Kolathur Junction, Srinivasa Nagar, Villivakkam Suburban Station (Villivakkam), Villivakkam Bus Terminus, and Nathamuni (Villivakkam MTH Road), and twin bored tunnels from the Kolathur Junction retrieval shaft to the Nathamuni launching shaft. It also involves the construction of entry and exits, ventilation shafts, plumbing works, ramps with U-section, and architectural finishes and signages for corridor 5 of phase 2 of the project. The last date for the submission of bids is February 23, 2022.

The scope of work for the third contract package includes the construction of five underground stations at KMC (Kilpauk), Sterling Road, Nungambakkam, Gemini (Anna Flyover), Thousand Lights and Thousand Lights Cross Over Box and other works excluding the diaphragm wall of two underground stations at Royapettah Government Hospital (Royapettah) and Chetpet Metro for corridor 3 of phase 2 of the project. The last date for the submission of bids is March 14, 2022.

The scope of work for the fourth contract package includes the construction of four underground stations at Dr. Radhakrishnan Salai, Thirumayilai, Mandaveli, and Adyar Junction, two cross passage shafts, one emergency escape shaft, and other works excluding the diaphragm wall of one underground station at Greenways Road for corridor 3 of phase 2 of the project. The last date for the submission of bids is March 16, 2022.

**Sangam city to deploy 25 smart e-buses, India**

The Prayagraj City Transport Services Limited (PCTSL) has announced plans to operate 25 e-buses, which will be deployed in two phases. The buses will be operated along five key routes, that is, Railway Station to Lalgopalganj, New Stantipuram to Raymond Crossing, Trivenipuram to Purumufiti, Bairhana to Shankargarh, and Civil Lines bus depot to Pratappur.

Currently, 15 buses have commenced operations in the first phase. The remaining 10 buses will begin operations by February 2022. The fully air-conditioned buses will be equipped with a PA system for announcements, an indicator for low battery, a music system, a mic for the driver, a GPS system, and CCTV cameras.

**Maha Metro commences DPR planning for Pune Metro extension, India**

The Maharashtra Metro Rail Corporation (Maha Metro), a joint venture between the central and Maharashtra governments established to implement the Pune Metro project, has commenced works on a detailed project report (DPR) for the Pune Metro extension.

Maha Metro has also started conducting surveys and planning activities for Phase 2. It is preparing a detailed project report (DPR) to extend the existing 33.1-km Phase 1 of the metrorail project.

The Phase 2 corridors will collectively span 82.5 km. They will connect Vanaz to Chandni Chowk (1.5 km), Ramwadi to Wagholi (12 km), Hadapsar to Kharadi (5 km), Swargate to Hadapsar (7 km), Khadakwasla to Swargate (13 km), and SNDT to Warje (8 km).

The company is conducting surveys in Pune and Pimpri Chinchwad to estimate ridership, through UMTC and Data Corp Traffic.
Bids submitted for construction of Subhash Nagar depot for Bhopal Metro, India

The Madhya Pradesh Metro Rail Corporation (MPMRC) has received bids from 13 companies for the construction of Bhopal Metro’s Subhash Nagar depot.

The companies that are interested in the construction tender are Altis Holding Corporation, Amara Raja Infra Private Limited, Bansal Construction Works Private Limited, Bridge and Roof Company India Limited, Cube Construction Engineering, Engineering Projects (India) Limited, IRCON International, KEC, Montecarlo, Shalimar Corp, SMS Limited, Suroj Buildcon, and URC Construction.

The scope of the contract includes construction of the rolling stock depot-cum-workshop at Subhash Nagar and allied works of the project. The depot is planned to be built to IGBC platinum rating standards. It will include standard train stabling, washing/cleaning, maintenance, repairs and overhaul facilities. It will initially house 27 train-sets of three coaches each as part of a larger 156-coach rolling stock contract and will serve as a common depot for two of the city’s metro lines – the under-construction 14.99-km Purple Line (Karond Circle–AIIIMS) and the 12.88-km Red Line (Bhadbhada Square–Ratnagiri Tiraha) which is in the planning stage.

Kolkata Metro to launch QR-code tickets, India

Kolkata Metro has announced plans to launch quick response (QR)-code tickets on the East–West line by mid-December 2021. Trials are already being conducted on the line. Commuters can download an application to purchase the tickets and will be allowed to use them within 45 minutes. The facility will be launched on the Kavi Subhas–Dakshineswar stretch in 2022.

Green Line BRT commences operations in Karachi, Pakistan

The Green Line bus rapid transit service (BRTS) has commenced operations in Karachi with the network getting a green light from the government. It is the first ever modern mass transit system in the city. The corridor spans 21 km and covers 22 stations from Surjani Town to Numaish, near downtown Karachi. The project entails a federal investment of PKR35.5 billion.

The fleet will comprise 80 modern air-conditioned buses, with a capacity to accommodate 250 passengers. The expected daily ridership is 135,000 passengers. The BRT stations will be equipped with escalators, ticket rooms, special-accessibility facilities for differently abled persons, and standby generators in case of electricity failure.

Commercial operations will commence from December 25, 2021 while passenger services will begin from January 10, 2021. The BRT network has been developed under the supervision of Sindh Infrastructure Development Company Limited (SIDCL).

Government of Bangladesh launches pilot operations on Dhaka Nagar Paribahan buses, Bangladesh

The Ministry of Road Transport and Bridges has commenced pilot operation on Dhaka Nagar Paribahan buses on December 26, 2021. Initially, Dhaka Nagar Paribahan will operate 50 buses on a 21-km route from Ghatarchar to Kanchpur. The route covers Bosila, Mohammadpur, Elephant Road, Shahbagh, Paltan, and Motijheel.

Of the 50 buses that are ready to run, 30 double-decker buses belong to the Bangladesh Road Transport Corporation (BRTC) and 20 buses belong to Trans Silva. The buses will deploy an e-ticketing system. There will be 40 passenger sheds and 16 bus bays on the route.

Track works completed on Echuca Line in northern Victoria, Australia

Transport for New South Wales (NSW) has announced plans to pilot a mobility-as-a-service (MaaS) application (app) in Sydney.

The app will enable passengers to plan, book, and pay for journeys across both private and public transport services as well as opt to purchase a prepaid multimodal mobility plan.

The testing is a part of the NSW government’s Future Transport Technology Roadmap 2021–2024, which also involves a year-long project to test the digital version of Transport for NSW’s Opal transit card, which will end on December 12, 2021.
The new trial is expected to give 10,000 users access to a TfNSW app that can be used to plan, book, and pay for both public and private modes of transport. It will also be equipped with an integrated journey planner and offer a selection of multimodal subscription-style bundles. Further details of the trials are expected to be announced by early 2022.

**Go Bus operations contracts extended till 2025; ticketing system to be launched in 2022, New Zealand**

The Gisborne District Council has decided to extend two public transport contracts with Go Bus until June 30, 2025. Go Bus currently holds two contracts from the district council, that is, for running bus routes around Gisborne city and for taking students to and from school. The contract extension also covers the next National Land Transport Programme review in 2024.

Further, the district council has announced plans to launch a new ticketing system in May 2022. The Regional Integrated Ticketing System (RITS) will be deployed across the country as a requirement of Waka Kotahi funding.

**Europe**

**EC commences public consultation for multimodal digital mobility services**

The European Commission (EC) has commenced a public consultation for a proposal to deploy digital mobility services that will help travellers plan their journeys and purchase tickets by combining different operators or transport modes across the European Union (EU).

The EC has proposed multimodal digital mobility services to help travellers compare different travel options, choices, and prices, and potentially facilitate the purchase of mobility services, such as mobility-as-a-service (MaaS) applications, route-planners, and ticket vendors. The main objective of the proposal is to resolve the problem of limited options and the lack of information faced by travellers while travelling cross-border.

The EC has invited citizens and stakeholders to identify their initial or potential policy issues. The issues include the limited availability and accessibility of data; lack of adequate cooperation between transport operators and providers of multimodal digital mobility services; non-cooperation among mass transit operators; limited availability of digital tickets; inadequate payment system interoperability; and lack of cooperation because of different licensing and distribution agreements. The public consultation will be open till February 23, 2022.

The EC has included the initiative in its Sustainable and Smart Mobility Strategy to address market challenges in developing digital mobility services. The strategy's action plan states that the EU will need to remodel its legal framework to provide the necessary support for the provision of multimodal travel information; booking and ticketing services; and smart and interoperable payment services and tickets. The project aims to integrate public transport and rail services in a multimodal mix to incentivise customers to use sustainable modes of transport and help the EU achieve its European Green Deal objectives.

**GBR invites stakeholders for development of WISP, UK**

The Great British Railways (GBR) Transition Team has invited stakeholders from the rail sector to provide insights on the development of a 30-year Whole Industry Strategic Plan (WISP), which will help the government set long-term objectives for the railway sector. GBR will undertake the responsibility of achieving the outcomes stated in the WISP, regularly providing progress updates to ministers, and adapting the plan according to changes in the economy, society, and technology.

The stakeholders will provide their views on how the rail sector can help the government achieve its five strategic objectives, which are meeting customer needs, delivering financial sustainability, contributing to long-term economic growth, increasing connectivity, and delivering environmental sustainability. Submissions will have to be supported with verifiable data and qualitative evidence. GBR has stated that submissions that identify opportunities for prioritisation, efficiency, and cost reduction will be preferred. The last date for the submission of bids is February 4, 2022.

**NTA to introduce Leap Card on Mallow–Cork railway line, Ireland**

The National Transport Authority (NTA) of Ireland has announced plans to introduce the Leap Card on the Mallow–Cork railway line by mid-2022. The introduction of the fare structure will reduce the fare for journeys between Mallow and Cork. The Leap Card is currently deployed on the Cork–Cobh and the Cork-Midleton railway lines, and on Cork city bus services.

**Eurostar commences trial operations for its biometric ticketing technology, UK**

Eurostar has commenced trial operations for its contactless fast-track SmartCheck service for customers travelling from London’s St. Pancras International station to continental Europe who hold business premier and carte blanche tickets. Eurostar has a separate lane dedicated to its SmartCheck service. The fast-track SmartCheck service will permit travellers to verify their identity through a biometric face scan linked to their e-ticket by scanning their passport with an iPhone. Eurostar aims to use the biometric technology to eliminate queues and improve customer satisfaction for frequent travellers. The trials will be limited to invited passengers on the check-in and exit control processes operated by Eurostar at the St. Pancras station.

**Liverpool City announces plans to introduce green bus routes, UK**

The Liverpool City Region has announced plans to expand connectivity in the city by utilising the EUR710 million allocated by the UK government. The funds will be
used to improve train infrastructure by introducing additional stations, procuring a new Merseyrail fleet, and establishing ‘green routes’ in the city.

The scope of work for the green routes will involve constructing priority lanes, upgrading traffic signals, remodelling junctions, and constructing upgraded, accessible passenger facilities. The green routes will increase the efficiency of the public transport system. They will provide fast and reliable transportation for areas in Liverpool that are not covered by the Merseyrail network. The city aims to achieve a ‘trackless tram’-style system for buses on these routes. Hydrogen buses will be deployed on the green routes. The buses are expected to be operational on the green routes by end-2022. The first green route will be route 10A, which runs from St Helens to the Liverpool city centre, passing through areas such as Knotty Ash and Stoneycroft.

(1 EUR [Euro] = USD1.13)

TfW to pilot ‘pay as you go’ ticketing on trains and buses, UK

Transport for Wales (TfW) has announced plans to pilot ‘pay as you go’ ticketing on trains and buses, where passengers will be able to purchase tickets by tapping in and out with bank cards when using different services or operators. The service will facilitate a daily or weekly fare cap which will enable flexible day journeys.

The first three pilot schemes will cover trains and buses separately. The schemes will be on selected routes in south-east Wales, with later plans to roll out the service to north-east Wales, the Swansea Bay region, and the Cardiff city region. The first pilot will begin in autumn 2022; it will cover rail services between Pontyclun, Cardiff, and Newport. The second pilot will cover bus services provided jointly by Cardiff Bus and Newport Transport between Cardiff and Newport. TfW has yet to select the bus route for the planned third pilot. The results of the initial pilot schemes will be examined prior to the final pilot scheme, which is scheduled to begin in autumn 2024 and which will cover bus and rail routes between Cardiff and Newport.

The installation of software and hardware, such as readers at stations and on buses, will be required prior to the commencement of the pilot schemes. The budget for setting up the pilot schemes is EUR10.46 million. An additional EUR7.66 million has been allocated for the operational costs of the pilots.

Birmingham deploys hydrogen buses on National Express West Midlands Route 51, UK

The Birmingham City Council has deployed 20 zero-emission hydrogen buses on the National Express West Midlands Route 51 to Walsall through Perry Barr. The hydrogen buses can operate for 300 km on a single tank and can be refuelled in seven to ten minutes. The double-decker buses only emit water vapour, which will reduce the emission of 631 kg of NOx and 1,560 tonnes of carbon dioxide annually. Drivers will need special training to operate the buses efficiently. The buses were supplied by Wrightbus.

The green-hydrogen bus fleet was procured as part of the Birmingham City Council’s Clean Air Hydrogen Bus Pilot. The scheme aims to help the city achieve its target of net-zero carbon emission by 2030. The project is funded by the Office for Low Emission Vehicles (OLEV); the Greater Birmingham & Solihull Local Enterprise Partnership (GBSLEP); the Birmingham City Council; and through JIVE (Joint Initiative for hydrogen Vehicles across Europe) project funding from the European Union’s Fuel Cells and Hydrogen Joint Undertaking (FCH JU). The FCH JU is supported by Hydrogen Europe, Hydrogen Europe Research, and the European Union’s Horizon 2020 research and innovation programme.

ML completes preliminary study for Lisbon Metro Red Line extension, Portugal

Metropolitano de Lisboa (ML) has completed the preliminary study phase for the 4-km Lisbon Metro Red Line extension between São Sebastião and Alcântara. The extension will include three underground stations at Amoreiras, Campo de Ourique, and Infante Santo; and a surface station in Alcântara. The scope of work will also cover the construction of 380 metres of viaducts. The annual ridership on the extension is expected to be 11 million passengers. The project is included in the Recovery and Resilience Plan (PRR) 2021–2026 and will receive EUR304 million in funding. ML submitted the licensing process documents to the Portuguese Environment Agency (APA) on December 27, 2021.

(1 EUR [Euro] = USD1.13)

Department of Mobility to purchase electric buses for MetroGuagua BRT, Spain

The Department of Mobility has announced plans to purchase 17 fully electric buses for its bus rapid transit (BRT) system, MetroGuagua, in Las Palmas de Gran Canaria in Spain.

The buses are required to be clean, efficient, and environmentally friendly. The buses will be operational on the BRT system between 2023 and 2024.

Further, the city will reorganise its yellow bus lines and transport network in 2022 before the BRT system becomes operational. There are several ongoing MetroGuagua projects, which include the construction of the Hoya de la Plata station, the lanes on Calle Alicante, and the section connecting Luis Doreste Silva with Pío XII.

The project is awaiting authorisation from Costas to expand the maritime avenue between the cemetery and Guiniguada to enable the construction of a fourth lane and to create space for the MetroGuagua roads. The Canarian government will launch a tender for the expansion works by end-2022 following the grant of approval.

Further, the Guaguas Municipales has launched a tender for a EUR6.71 million five-year contract to install and maintain the canopys at MetroGuagua stops. The scope of the contract includes the design, manufacturing, and maintenance of the canopies at 35 stops. The canopies will require a Wi-Fi zone, real-time information panels that are accessible to the blind, and a waiting area, including special waiting areas for people with disabilities.

(1 EUR [Euro] = USD1.13)
Metro de Madrid purchases rolling stock fleets from Ferromovil, Spain

Metro has purchased two rolling stock fleets from Ferromovil, ending the leasing agreement between the parties that was due to expire in December 2023. The leasing agreement covered 684 cars of Series 3000 and 9000 worth EUR367 million. The Series 3000 trains are deployed on Metro Lines 2, 3, 4, and 5.

The Series 9000 trains are operated on Metro Lines 7, 7b, 9, 10, and 12. The payment for the fleets will be made in two installments. Metro has stated that the purchase of the train sets from Ferromovil will generate savings worth EUR134 million.

Metro de Madrid has currently leased 60 per cent of its rolling stock of 1,369 cars. The purchase of these train sets before the expiry of the leasing agreements is estimated to cost EUR800 million.

(1 EUR [Euro] = USD1.13)

France announces plans to expand overnight train services

The Government of France has announced plans to expand night train services from France to cities across Europe in 2022. The aim is to connect Paris with European capitals such as Madrid, Rome, Copenhagen, and Stockholm with overnight train services. Overnight services are also being considered from Strasbourg and Luxembourg to Barcelona through Metz, Nancy, Montpellier, and Perpignan.

Further, France is expected to introduce 10 domestic overnight services by 2030. The government will support the expansion of overnight services by investing a minimum of EUR800 million to procure 300 new coaches and 30 locomotives and to construct two workshops between 2025 and 2030.

SNCF Voyageurs secured a contract from the Transport Ministry to operate the night train service. The government’s France Relance economic stimulation package had allocated EUR100 million for the relaunch of overnight trains in 2021. SNCF launched two daily overnight services from Paris to Lourdes and Briançon in December 2021. SNCF plans to launch an overnight service from Paris to Berlin in 2023 and from Zürich through Lyon to Barcelona in 2024.

(1 EUR [Euro] = USD1.13)

München City Council to begin construction of Metro Line U5 extension, Germany

The München City Council has announced plans to commence construction of the western extension of the München Metro Line U5 in January 2022. The 3.8-km extension will have three stations and span from the existing terminus at Laimer Platz to Pasing, which will have an interchange with the city's S-Bahn and regional rail networks. The city council had invited bids to provide civil works on the initial Lot 1 between Laimer Platz and Willibaldstraße in February 2020, which will enable immediate commencement of construction on the section. The council has announced that bidding for the Lot 2 works between Willibaldstraße, Am Knie, and Pasing will begin soon. The total estimated cost of the project is EUR988 million and will be financed by the Federal Government. Further, planning has commenced for an additional extension from Pasing to Freiham, an upcoming residential district. The application for the proposed route has been submitted. The detailed design and planning approval stage is expected to begin between 2022 and 2023. The extension is expected to be operational between 2035 and 2040.

(1 EUR [Euro] = USD1.13)

STB invites bids for introduction of contactless payment system, Romania

Societatea de Transport București (STB) has invited bids for the introduction of a contactless bank card payment system on dual validators that will be installed on 1,000 public transport vehicles, including Mercedes EUJRO3 and EURO 4 buses, trams, and trolleybuses. The contactless payment system will enable passengers to make payments using a smartphone or smart watch without the requirement for a transport card or a valid travel document. The feature is currently being offered on Mercedes Hybrid and Otokar buses. The estimated value of the five-year contract is RON6.8 million. The last date for the submission of bids is January 18, 2022.

(1 RON [Romanian New Leu] = USD0.22)
MOTC approves route for Rail Baltica line between Kaunas and Vilnius, Lithuania

The Ministry of Transport and Communications (MOTC) has approved the route of a new Rail Baltica railway line from Kaunas to Vilnius. The trains on the line will operate at speeds of up to 249 km/hr. The journey time between Vilnius and Kaunas will be reduced to 38 minutes. The UAB Sweco Lietuva and DB Engineering & Consulting GmbH joint venture (JV) had developed four alternate routes for the Rail Baltica railway line between Vilnius and Kaunas. The northern S5 alternative route was selected; it will connect the cities of Lentvaris, Vievis, and Kašiadiorys. The next stage of the project will cover the selection of specific areas for the line and consultation with landowners along the route. The detailed plan for the line will be published in 2022.

Government of Andorra to develop LRT system

The Government of Andorra has announced plans to develop a light rail transit (LRT) line from Sant Julià de Lòria to Escaldes-Engordany, with three connecting cable car links to the airport, La Massana, and Encamp. The development of the tramway aims to reduce public reliance on private transport and to achieve sustainable development goals. An inter-ministerial commission has been established to study the plan in depth. The estimated cost of the project is EUR270 million. It is expected to be funded from private sources.

(1 EUR [Euro] = USD1.13)

Sarajevo Canton invites bids for supervision of tram extension, Bosnia and Herzegovina

Sarajevo Canton has invited bids for a contract to provide supervisory services for the extension of the Sarajevo tram network to the western suburbs of Ilidza and Hrasnica. The project will cover the construction of 13-km-long tracks and 20 tram stations. The estimated value of the contract is EUR20 million. The project will be funded by a loan from the European Bank for Reconstruction and Development (EBRD). The tender for the construction works will be launched in January 2022.

(1 EUR [Euro] = USD1.13)

Rostov-na-Donu City Council to modernise and expand its tram network, Russia

The Rostov-na-Donu City Council has announced plans to modernise and expand the Rostov-na-Donu tram network as part of its transport strategy for 2035. The project will expand the existing tram network from 27 km to 58 km. Further, two main corridors will be developed which will run from east–west to connect the Veresaev and Leventsovsky districts, and from north–south to link high-rise developments with the left bank of the River Don. The expansion and modernisation strategy was prepared by the Simetra consultancy.

The city council has signed a cooperation agreement with the Sinara–GTR joint venture (JV), consisting of STM Holding and regional concession companies, for the project to be implemented through a public–private partnership (PPP). The estimated total cost of the project is RUB51.2 billion. The project will be co-financed by a capital grant from an investment bank loan, a soft loan provided by state development corporation VEB.RF and the National Welfare Fund, and local sources.

(1 RUB [Russian Rouble] = USD0.01)

Middle East & Africa

GCC Supreme Council approves establishment of GCC Railways Authority

The Gulf Cooperation Council (GCC) Supreme Council has approved the establishment of the GCC Railways Authority. All the Gulf states are currently working on setting up the GCC Rail network, which is expected to connect all the six countries by 2025.

The GCC is a regional, intergovernmental political and economic union that consists of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

Qatar Rail to commence service on Lusail Tram

Qatar Railways Company (Qatar Rail) has announced plans to commence service of the first phase of the Lusail Tram services from January 1, 2022.

The first phase will include service across six underground stations on the Orange Line, which are Marina, Marina Promenade, Yacht Club, Esplanade, Energy City South, and Legtaifiya. Legtaifiya station will connect Lusail Tram to the Doha Metro network. Once fully operational, the tram network will span 28 km across four lines, covering 25 stations.

Governments of Iran and Iraq sign agreement to implement Basra–Shalamcheh railway line

Iran’s Minister of Road and Urban Development has signed an agreement with Iraq for the implementation of the Basra–Shalamcheh railway line. Islamic Republic of Iran Railways and Iraqi Republic Railways will establish a joint venture within two months to complete the project.

The project will span 30 km and will connect Basra in southern Iraq to Shalamcheh in western Iran.

FCTTS acquires DMUs to support operation on Abuja LRT, Nigeria

The Federal Capital Territory Transport Secretariat (FCTTTS) has acquired four diesel multiple units (DMUs), rescue cranes, and rail grinding machines to support the operation of the Abuja Light Rail Transit (LRT).

The agency expects the delivery of the remaining eight sets of DMUs from China in the coming months.

The agency plans to resume work on Lot 1A which will span 5.76 km (Gbazango to Kubwa) to complete Lots 1 and 3 of the Abuja LRT project.
Regional Transportation Authority

**Planned investments under capital programme and budget**

The Regional Transportation Authority (RTA) is the unit of the local government created to oversee finances, secure funding and conduct transit planning for the Chicago Transit Authority (CTA), Metra, and Pace in north-eastern Illinois. RTA manages the annual operating budgets and five-year capital programmes of the three agencies.

The CTA operates the country’s second largest public transportation system and covers the City of Chicago and 35 surrounding suburbs. The agency operates the Chicago “L” rapid transit system and CTA bus service. Metra is a commuter rail system in the Chicago metropolitan area serving the city of Chicago and its surrounding areas. Pace is the suburban bus and regional para-transit division of the RTA in the Chicago metropolitan area.

In October 2020, RTA outlined a three-step Covid recovery strategy. The first two steps focused on near-term decisions to pass a budget and sustain critical transit during the first waves of the Covid-19 pandemic. The third step of the recovery strategy involves the development of a long-term vision with an update of the regional transit strategic plan that will have the outlook for 2023 and beyond.

In December 2021, RTA published its budget for 2022 and its capital programme for the next five years, highlighting the capital programmes under the regional transit strategic plan.

Figure 1 shows the timeline adopted by RTA to develop the Regional Transit Strategic Plan.

### Impact of Covid-19: Federal funding

In March and April 2020, RTA system ridership declined by about 80 per cent due to the Covid-19 pandemic. The RTA system ridership declined by 59 per cent in 2020 compared to 2019.

In the last two years, the RTA has allocated USD3.37 billion in federal relief to the CTA, Metra, and Pace to cover for lost public funding and operating revenues resulting from the

<table>
<thead>
<tr>
<th>Table 1: Federal funding under CARES Act, CRRSSAA, and ARP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CTA</strong></td>
</tr>
<tr>
<td><strong>USD Million</strong></td>
</tr>
<tr>
<td>CARES Act</td>
</tr>
<tr>
<td>CRRSA</td>
</tr>
<tr>
<td>ARP Act</td>
</tr>
<tr>
<td>Total Combined Relief Allocations (USD Million)</td>
</tr>
<tr>
<td>Share of All Three Federal Relief Packages (%)</td>
</tr>
</tbody>
</table>

*Source: RTA*

**Figure 1: Regional transit strategic plan timeline**

*Source: RTA*
Covid-19 pandemic. These funds include USD1.4 billion from the Coronavirus Aid, Relief and Economic Security Act (CARES Act), USD486 million from the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA), and USD1.5 billion from the American Rescue Plan (ARP). Table 1 provides information on federal relief funds allocated to CTA, Metra and Pace.

2022 Regional Operating Budget

Revenue

The total revenue for 2022 is estimated at USD3.412 billion, which is the total of operating revenue, relief funding and public funding. Figure 2 shows the estimated revenue for 2022.

Operating revenue

Operating revenue consists of system-generated revenue from passenger fare as well as ancillary revenue from sources such as lease of space, advertising and investment income. It also includes the reduced fare reimbursement (RFR), which partially compensates the agencies for free and reduced fare programmes.

The 2022 budgets of the three agencies assume USD1.096 billion of operating revenue, an increase of USD29 million, or 2.7 per cent, over the 2021 estimate.

The 2022 operating revenue includes USD540.9 million of the existing CARES Act and CRRSAA funding.

Figure 3: 2022 Expenses - USD3.405 billion

JSIF: Joint Self Insurance Fund

Source: RTA
Public funding

The overall public funding in 2022 is projected at USD2.067 billion, an increase of USD7.5 million or 0.4 per cent of the 2021 estimate. The majority of state funding received by the RTA is based on a 30 per cent match of the RTA sales tax and Real Estate Transfer Tax (RETT) receipts.

The match funding comes from the state’s Public Transportation Fund (PTF), which is expected to provide USD442.9 million for 2022 operations.

Expenditure

The 2022 budget includes USD3.405 billion in operating expenses for the north-eastern Illinois transit system. The operating expenses comprise about 92 per cent of the RTA Regional Budget and are largely driven by planned service levels.

CTA’s adopted budget continues to incorporate full pre-pandemic service levels, while the adopted Metra and Pace budgets continue to restore many of the significant service reductions implemented by both agencies as ridership declined in the immediate aftermath of the Covid-19 outbreak.

Figure 3 shows the planned expenditure for 2022.

Primary RTA public funding sources

Public funding as a source of revenue for RTA is projected to contribute USD2.067 billion in the fiscal year 2022. The main sources of public funding for RTA is RTA Sales Tax Part I, RTA Sales Tax Part II, Real Estate Transfer Tax (RETT), Public Transportation Fund (PTF) Part I, Public Transportation Fund (PTF) Part II, State Financial Assistance and State Reduced Fare Reimbursement. Box 1 provides details on these various sources.

Regional Capital Program

Capital programming is a core function of the RTA. Section 2.01b of the RTA Act (70 ILCS 3615/) requires the RTA Board to annually adopt a Five-Year Regional Capital Program that is guided by a strategic plan (Invest in Transit) and is fiscally constrained by the annual budget and two-year financial plan. Figure 4 shows the detailed process of how the agency develops its capital programme.

2022 Regional Capital Program

The 2022 Regional Capital Program includes USD1.394 billion in funding. After deducting USD332.0 million of CTA debt service payments, on previously issued bonds, an estimated amount

Box 1: Primary RTA Public Funding Sources

RTA Sales Tax Part I: The original RTA sales tax, levied at 1 per cent in Cook County and 0.25 per cent in the collar counties of DuPage, Kane, Lake, McHenry and Will. Around 85 per cent of Sales Tax I receipts are distributed to the Service Boards according to a statutory formula. The remaining 15 per cent of Sales Tax I is initially retained by the RTA to fund regional and agency expenses before being allocated at the direction of the RTA Board.

RTA Sales Tax Part II: Authorized by the 2008 funding reform, this is an additional sales tax of 0.25 per cent in all six counties of the RTA region. Sales Tax II is distributed to the Service Boards according to a statutory formula after deducting funds for ADA Paratransit, Pace Suburban Community Mobility (SCMF), and RTA Innovation, Coordination, and Enhancement (ICE). After these deductions, CTA receives 48 per cent, Metra 39 per cent and Pace 13 per cent.

Real Estate Transfer Tax (RETT): The 2008 funding reform also increased the City of Chicago RETT by USD1.50 per USD500 of property transferred and dedicated this additional tax revenue to directly fund CTA operating expenses.

Public Transportation Fund (PTF) Part I: PTF Part I is state-provided funding comprised of a 25 per cent match of Sales Tax I receipts. PTF I is 100 per cent retained by the RTA and combined with 15 per cent of Sales Tax I to form the basis for funding to be allocated at the direction of the RTA Board.

Public Transportation Fund (PTF) Part II: PTF Part II, authorized by the 2008 funding reform, is state-provided funding equal to a 5 per cent match of Sales Tax I receipts and a 30 per cent match of Sales Tax II receipts and RETT receipts. After allocating 5/6th of the PTF on RETT receipts to CTA, the remaining PTF II is distributed to the Service Boards by the same statutory formula used to allocate Sales Tax II.

State Financial Assistance: State-provided assistance to reimburse the RTA’s debt service on Strategic Capital Improvement Program (SCIP) bonds. It consists of two components: Additional State Assistance (ASA) and Additional Financial Assistance (AFA).

State Reduced Fare Reimbursement: State-provided reimbursement to the Service Boards, via the RTA, to partially offset the cost of providing reduced fare and free ride programs mandated by law, including those for seniors and disabled persons.

Source: RTA
Figure 4: Regional processes that move projects from planning to completion

The RTA, CTA, Metra, and Pace work on an annual cycle to develop, program, and deliver capital projects to maintain and improve the Chicago region’s transit system. All projects go through rigorous vetting, approval, and public review to ensure the best use of limited public funds.

1. In spring, each Service Board’s staff propose projects for their capital program based on needs.
2. Next, staff organize lists into immediate and long-term priorities based on agreed-upon criteria and funding.
3. Service Board leadership review lists to ensure the projects align with their Board and regional priorities.
4. In early fall, each Service Board reviews the capital program as part of the budget and releases it for public comment. The Service Boards hold 21 public hearings across the region and incorporate comments before board approval.
5. In late fall, Service Board approved capital program are submitted to the RTA.
6. In November and December, RTA staff review Service Board programs for alignment with regional goals and fiscal constraints.
7. Service Board programs are combined into the Regional Capital Program, which is available for public comment at eight hearings and presented to each County Board.
8. In December, RTA Board adopts the Regional Capital Program.
9. After approval, the Service Boards begin implementing the projects in the Regional Capital Program. The RTA conducts ongoing program monitoring and administration, including quarterly amendments to the Regional Capital Program as needed.

Source: RTA
Table 2: 2022 Regional Capital Program Funding (in USD thousands)

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>CTA</th>
<th>Metra</th>
<th>Pace</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Funds</td>
<td>430,223</td>
<td>181,650</td>
<td>42,741</td>
<td>654,614</td>
</tr>
<tr>
<td>PAYGO Funds</td>
<td>141,875</td>
<td>73,775</td>
<td>11,350</td>
<td>227,000</td>
</tr>
<tr>
<td>RTA Innovation, Coordination, &amp; Enhancement (ICE)</td>
<td>-</td>
<td>5,530</td>
<td>1,843</td>
<td>7,373</td>
</tr>
<tr>
<td>Service Board and Other Local Funds</td>
<td>105</td>
<td>-</td>
<td>1,000</td>
<td>1,428</td>
</tr>
<tr>
<td>CTA Bond Proceeds</td>
<td>504,090</td>
<td>-</td>
<td>-</td>
<td>504,090</td>
</tr>
<tr>
<td><strong>Total Capital Funding</strong></td>
<td><strong>1,076,293</strong></td>
<td><strong>260,953</strong></td>
<td><strong>56,934</strong></td>
<td><strong>1,394,182</strong></td>
</tr>
</tbody>
</table>

Source: RTA

Figure 5: 2022 Capital Funding - USD1.394 billion

- Federal Funds: 47.0%
- CTA Bond Proceeds: 36.2%
- PAYGO Funds: 16.3%
- RTA Innovation, Coordination, & Enhancement (ICE): 0.5%
- Service Board and Other Local Funds: 0.1%

Source: RTA

of USD1.062 billion is available for the year. Table 2 shows the funding sources for CTA, Metra and Pace for 2022.

Figure 5 shows the funding sources for CTA, Metra and Pace for 2022.

2022-2026 Regional Capital Program

The 2022-2026 Regional Capital Program includes USD5.260 billion in funding. After accounting for CTA debt-service payments, the region has USD4.164 billion for capital projects in the five-year program. Table 3 shows the funding sources for CTA, Metra and Pace over the period of 2022-2026.

Figure 6 shows the funding sources for CTA, Metra and Pace over the period 2022-2026.

CTA Capital Program 2022-2026

CTA’s five-year capital program has USD3.474 billion available for capital expenditure during 2022-2026, with a 10-year requirement for more than USD23 billion.

CTA’s capital projects are largely focused on repairing the system, and replacing and rehabilitating both buses and rail cars. CTA has identified 43 priority projects such as Red Purple Modernization, bus and rail car overhauls and the Blue Line Forest Park Branch Modernization, which focus on maintaining the current system. Table 4 provides information on some of these priority projects.

Metra Capital Program 2022-2026

Metra has USD1.50 billion funding available in its 2022-2026 capital program with an estimate of USD11.80 billion needed for priority projects over the coming 10 years. Metra capital projects mainly focus on replacing and rehabilitating both rail cars and locomotives. Metra plans to spend approximately USD612.9 million over the next five years on fleet modernization including the purchase of zero-emissions locomotives. Other major projects are focused on improving stations, bridges and right of way for trains. Metra has identified 10 priority projects.
### Table 3: 2022-2026 Regional Capital Program funding (in USD millions)

<table>
<thead>
<tr>
<th></th>
<th>CTA</th>
<th>Metra</th>
<th>Pace</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Funds</td>
<td>2,040.14</td>
<td>980.22</td>
<td>214.59</td>
<td>3,234.95</td>
</tr>
<tr>
<td>PAYGO Funds</td>
<td>696.66</td>
<td>370.23</td>
<td>68.10</td>
<td>1,135.00</td>
</tr>
<tr>
<td>RTA Innovation, Coordina-</td>
<td>17,024</td>
<td>5,674</td>
<td>22,908</td>
<td></td>
</tr>
<tr>
<td>-ation, &amp; Enhancement (ICE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Board and Other Local Funds</td>
<td>0.53</td>
<td>-</td>
<td>1.00</td>
<td>1.85</td>
</tr>
<tr>
<td>RTA Bond Proceeds</td>
<td>-</td>
<td>130</td>
<td>-</td>
<td>130</td>
</tr>
<tr>
<td>CTA Bond Proceeds</td>
<td>736.59</td>
<td>-</td>
<td>-</td>
<td>736.59</td>
</tr>
<tr>
<td>Total Capital Funding</td>
<td>3,473.92</td>
<td>1,497.49</td>
<td>289.36</td>
<td>5,260.09</td>
</tr>
</tbody>
</table>

Source: RTA

### Figure 6: 2022-2026 Capital Funding: USD5.260 billion

- **Federal Funds**: 61.5%
- **PAYGO Funds**: 21.6%
- **CTA Bond Proceeds**: 14%
- **RTA Bond Proceeds**: 2.5%
- **RTA Innovation, Coordination, & Enhancement (ICE)**: 0.4%
- **Service Board and Other Local Funds**: 0.03%

Source: RTA
Table 4: CTA priority projects (USD million)

<table>
<thead>
<tr>
<th>Priority projects</th>
<th>Estimated 10-year need for priority project</th>
<th>Total 5-year funding programmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Purple Modernization</td>
<td>6,301</td>
<td>344.84</td>
</tr>
<tr>
<td>Red Line Extension</td>
<td>2,497</td>
<td>357.77</td>
</tr>
<tr>
<td>Railcar Purchase</td>
<td>1,087.27</td>
<td>349.65</td>
</tr>
<tr>
<td>Green Line Improvements</td>
<td>683.04</td>
<td>0</td>
</tr>
<tr>
<td>Replacement Bus Purchase 1000 Series - Future Order 430 Electric</td>
<td>459.35</td>
<td>0</td>
</tr>
<tr>
<td>System-wide Track Renewal</td>
<td>422.57</td>
<td>204.49</td>
</tr>
<tr>
<td>Red Line Improvements</td>
<td>396.40</td>
<td>0</td>
</tr>
<tr>
<td>Perform Bus Maintenance Activities</td>
<td>360</td>
<td>180</td>
</tr>
<tr>
<td>Replacement Bus Purchase (1000 Series) Current Order 600 Clean Diesel</td>
<td>324.31</td>
<td>286.54</td>
</tr>
<tr>
<td>Rail Car Maintenance Activities</td>
<td>300</td>
<td>90.10</td>
</tr>
<tr>
<td>Replacement Buses (4000 Series) - New Electric Buses</td>
<td>291.20</td>
<td>0</td>
</tr>
<tr>
<td>Rail Yard Improvements</td>
<td>263.27</td>
<td>7.90</td>
</tr>
</tbody>
</table>

Source: RTA

Table 5: Metra priority projects (USD million)

<table>
<thead>
<tr>
<th>Priority project</th>
<th>Estimated 10-year need of priority project</th>
<th>Total 5-year funding programmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Replacement and Repair</td>
<td>2,041.12</td>
<td>72.04</td>
</tr>
<tr>
<td>Track Improvements</td>
<td>1,969.56</td>
<td>133.75</td>
</tr>
<tr>
<td>75th Street Corridor</td>
<td>1,746</td>
<td>0</td>
</tr>
<tr>
<td>Fleet Modernization Plan</td>
<td>1,690.41</td>
<td>610.90</td>
</tr>
<tr>
<td>Signal and Electrical Improvements</td>
<td>1,187.83</td>
<td>216.80</td>
</tr>
<tr>
<td>A-2 Interlocking Replacement</td>
<td>1,100</td>
<td>2.60</td>
</tr>
<tr>
<td>Rail Station Improvements</td>
<td>762.07</td>
<td>216.21</td>
</tr>
<tr>
<td>Yards, Facilities, and Equipment Improvements</td>
<td>626.61</td>
<td>149.09</td>
</tr>
<tr>
<td>Chicago Union Station Improvements</td>
<td>525</td>
<td>0</td>
</tr>
<tr>
<td>PTC - Systemwide</td>
<td>-</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: RTA

Table 5 provides information on these priority projects.

Conclusion

RTA plans to spend around USD3.405 billion in 2022 to provide reliable and efficient transit service in the north-eastern Illinois area. CTA has identified capital projects that focus on modernizing the current system and plans to invest over USD3.474 billion in the next five years. Metra plans to invest over USD1.497 billion in the next five years on fleet modernization. 
**TMB Strategic Plan 2025**

**Increasing modal share by 2025**

In December 2021, Transports Metropolitans de Barcelona (TMB) Group's two main companies, Ferrocarril Metropolità de Barcelona, SA (Metro) and Transports de Barcelona, SA (Bus), approved the TMB Strategic Plan for 2025, which aims to convert 65 per cent of motorised travel in Barcelona to public transport by 2025. The plan will be implemented under the TMB2025 framework. Several participatory groups were involved in its development, which included TMB’s boards of directors, metropolitan-area mayors, transport-associated authorities, the Advisory Board, the Metro and Bus Company Committees, TMB technical and management teams, etc.

The plan aims to strengthen the commitment to public transport and sustainable mobility through the setting of specific and significant goals, such as reducing CO₂ emissions by 17,000 tonnes by 2025. This will be achieved through various measures, such as:

- A 6 per cent reduction in energy consumption in the metro
- Application of technologies enabling a recovery of the energy generated by trains
- Use of electricity from the metro network to power the charging of buses (at a lower cost)
- Deployment of 508 clean-energy buses, of which 233 will be electric powered and 46 will be fuelled by hydrogen gas
- Promotion and commissioning of a hydrogen station open to public use
- Construction of a 550-vehicle green depot in Zona Franca
- Digitalisation of management and operations
- Promotion of energy efficiency
- Use of renewable energies

**Metro and bus network improvements**

To achieve the modal share goals listed under the TMB2025, the agency aims to increase metro and bus network use to 2.3 million journeys a day on weekdays, up by 10 per cent over the 2019 figures. The plan includes specific improvements to both the metro and bus networks.

**Metro**

For the metro, some of the most notable initiatives are:

- Operationalisation of the Line 9 central section: Works on the Line 9 central section are expected to resume in 2022 and last until 2029. As of November 2021, the government had reserved at least EUR25 million to resume the works of the central section of the metro.
- Deployment of 96 new trains for network extensions
- Development of two new stations in Badalona (L1), two in Esplugues (L3) and three in Barcelona (L4)
- Transformations of the metro stations so that 100 per cent are accessible by 2024

**Buses**

For buses, the plan provides for improved network efficiency, achieving a 10 per cent increase in commercial speed on the main lines and hubs that cater to 85 per cent of customers by rolling out improvements such as traffic-light priority, more bus lanes, and improved tracks.

- **Launch of on-demand bus service:** In May 2021, an on-demand bus service was launched in the Torre Baró district to offer a more personalised service (where each passenger can feed in their pick-up and drop-off locations), a service that is faster and more efficient (the bus does not operate if there is no demand), and requires less waiting time at stops. In 2022, it will be expanded to five more areas.

- **First semi-direct line of the city:** The new line, with four stops, connects Francesc Macià and Les Glòries squares with the centre more quickly. The end-to-end journey time is 10 minutes and the service frequency is 8 minutes. In addition to providing a faster service, the new semi-direct bus line is integrated with other means of public transport, such as the metro and the tram. It started operating in September 2021. It is active on weekdays, from 7.00 a.m. to 10.00 p.m.

- **More connectivity north of Nou Barris:** The restructuring of the bus service in the neighbourhoods of Torre Baró, Vallbona, and Ciutat Meridiana includes the creation of three new lines, the 180, 182 and 183, and changes to the existing Line 62. In addition, the bus service will be expanded to include on-demand service in Torre Baró.

- **Boosting the sustainability of the service:** The roadmap for green energy adoption envisages the acquisition of 210 battery-powered electric vehicles, 46 hydrogen vehicles, and 154 gas hybrid vehicles in the period 2021–2024. In addition, three high-demand bus lines, the H16, H12 and V15, will be fully electrified in the short term.

- **More information and accessibility:** The functions of the TMB application have recently been expanded, smart tags have been deployed at all stops to make it easier for visually impaired people to travel, and the direct payment system for single tickets through credit card is under internal testing.

- **Increase in bus lanes:** Around 3,000 square metres of pavement on bus lanes will be renewed. This is in addition to several actions taken in the last two years in more than 20 streets to create, expand, or improve bus lanes.

- **Last-mile autonomous bus project:** A pilot last-mile bus project is also planned with an autonomous vehicle in the Zona Franca industrial estate, and a bus on-demand service is planned for 20 local lines that will serve 50 neighbourhoods.

**Personalised and digitalised mobility**

TMB’s new Strategic Plan provides for more personalised mobility with the complete implementation of T-mobilitat, which will help...
in improving fare payment with the most current systems and optimising information channels.

In June 2021, T-Mobility First Contact was launched. In Phase I, the agency focused on contactless validation with the new plastic card. By end-June 2020, passengers could validate their tickets via mobile devices, which were initially available for Android devices with NFC. In October 2020, T-Mobility expanded its tests and made the web channel and mobile application available to the public. In the same month, it was announced that almost 4,000 passengers were making trips daily using T-mobilitat.

### New mobility service

The agency also envisages the launching of new mobility services, such as metropolitan bicycles, as part of its commitment to sustainability and innovation. In August 2021, AMB approved the establishment of the new metropolitan public bicycle service, which is expected to be launched at the end of 2022. The design of the service has been promoted and coordinated with the metropolitan councils. TMB will manage it through a private operator. Based on the experience of e-Bicibox and Bicing, it will initially have 2,000 bicycles and 200 stations in 15 municipalities in the metropolis, which are L’Hospitalet de Llobregat, Badalona, Cornellà de Llobregat, Santa Coloma de Gramenet, El Prat de Llobregat, Esplugues de Llobregat, Sant Feliu de Llobregat, Sant Adriá de Besòs, Sant Joan Despí, Sant Just Desvern, Molins de Rei, Sant Boi de Llobregat, Viladecans, Gavà, and Castelldefels.

### Conclusion

The agency aims to undertake several development projects to expand the existing metro and bus lines, deploy a cleaner fleet, and launch autonomous and on-demand buses. Ease of fare payment, which is integrated, is also aimed at enhancing passenger experience. The planned new sustainable mobility service aims to complement the metropolitan public transport system and continue to improve intercity connectivity.

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**Global Mass Transit Report**

**Information and analysis on the global mass transit industry**

The mission of Global Mass Transit is simple and modest - to provide decision makers with up-to-date and comprehensive information and analysis on the global mass transit industry. We cover metro, bus, light rail, regional rail, and inter-modal passenger transport.

Global Mass Transit keeps you informed on all the key developments, trends, and issues in the sector. It tracks major projects, contracts, and investments. It profiles leading mass transit authorities/operators and discusses their strategies. It reports on regulatory initiatives and examines their implementation. It provides the latest available data and statistics. It also features the views and perspectives of experts and top industry players.

Our service package consists of three elements Global Mass Transit Report (a monthly newsletter), Global Mass Transit Weekly (a weekly update) and www.globalmasstransit.net (an information-enriched website).

Global Mass Transit Report, the monthly newsletter, comprises 10 distinct sections:

- **News**: Latest news from across the world, with subsections on North America, Latin America, Asia Pacific, Europe and Middle East & Africa
- **Features**: Analytical, insightful and topical write-ups on major trends and developments
- **Tenders & Contracts**: Key information on open tenders and contracts from across the world
- **Transport Authority/Operator Focus**: Profile of a transport authority/service operator, covering its history, current status, and future plans
- **Policy Review**: An examination of recent policy and regulatory initiatives
- **Finance**: Developments in transport finance, PPP, debt, equity, M&A deals
- **Project Update**: Current status of key projects
- **Spotlight**: A detailed look at a specific topic or area of interest
- **Company News**: News on equipment and service providers
- **Data & Statistics**: Tables and charts with relevant and latest information

Global Mass Transit Weekly, published every Tuesday, provides you with a summary of key events and developments that took place in the mass transit sector during the previous week from across the world.

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Progress Report

Slow and steady expansion of rail network in Mexico

In Latin America, over USD48 billion is expected to be invested in rail networks by 2030. Of the total planned investment, over 33 per cent is planned to be invested in Mexico.

The regional and urban rail network in Mexico is expected to be expanded by over 2,000 km, with more than 95 new stations, at an investment of over USD16.45 billion as part of 13 projects. Of these, three projects are under construction that are scheduled to be completed by 2024. The majority of the upcoming projects are at the planning stage and offer significant opportunities to consultants, developers, contractors, rolling stock and system suppliers, etc. Table 1 provides a snapshot of the key upcoming rail projects.

<table>
<thead>
<tr>
<th>Project</th>
<th>Transport mode</th>
<th>Length (km)</th>
<th>No. of stations</th>
<th>Current stage</th>
<th>Capital cost (USD million)</th>
<th>Expected opening</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional rail projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico–Toluca Interurban Train</td>
<td>Commuter rail</td>
<td>57.87</td>
<td>6</td>
<td>Under construction</td>
<td>4,700</td>
<td>2024</td>
</tr>
<tr>
<td>Mayan Train</td>
<td>Intercity</td>
<td>1,525</td>
<td>21</td>
<td>Under construction</td>
<td>6,700</td>
<td>Beyond 2023</td>
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<tr>
<td>Mexico City–Querétaro High-Speed Railway (HSR)</td>
<td>HSR</td>
<td>210</td>
<td>To be announced</td>
<td>Under planning</td>
<td>2,656</td>
<td>2024 [Tentative]</td>
</tr>
<tr>
<td>Guanajuato–Querétaro Interurban Train</td>
<td>Commuter Rail</td>
<td>174</td>
<td>To be announced</td>
<td>Under planning</td>
<td>980.776</td>
<td>To be announced</td>
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<tr>
<td><strong>Urban rail projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guadalajara LRT Line 4</td>
<td>LRT</td>
<td>20.8</td>
<td>18</td>
<td>Under planning</td>
<td>490.388</td>
<td>2024</td>
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<tr>
<td>Naucalpan–Buenavista Light Rail</td>
<td>LRT</td>
<td>14.6</td>
<td>To be announced</td>
<td>Under planning</td>
<td>To be announced</td>
<td>To be announced</td>
</tr>
<tr>
<td>Xalapa Light Rail</td>
<td>LRT</td>
<td>17.32</td>
<td>14</td>
<td>Under planning</td>
<td>147.32</td>
<td>2024-2025</td>
</tr>
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<td>Mexico City Metro Line 12 extension</td>
<td>Metro</td>
<td>4</td>
<td>2</td>
<td>Under construction</td>
<td>541.276</td>
<td>2023</td>
</tr>
<tr>
<td>Mexico City Metro Line 4 extension</td>
<td>Metro</td>
<td>24.5</td>
<td>20</td>
<td>Under planning</td>
<td>To be announced</td>
<td>2030</td>
</tr>
<tr>
<td>Mexico City Metro Line 9 extension</td>
<td>Metro</td>
<td>1.4</td>
<td>1</td>
<td>Under planning</td>
<td>To be announced</td>
<td>2030</td>
</tr>
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<td>Mexico City Metro Line 8 extension</td>
<td>Metro</td>
<td>10.21</td>
<td>7</td>
<td>Under planning</td>
<td>To be announced</td>
<td>2030</td>
</tr>
<tr>
<td>Mexico City Metro Line A extension</td>
<td>Metro</td>
<td>13.2</td>
<td>6</td>
<td>Under planning</td>
<td>232.78</td>
<td>2030</td>
</tr>
<tr>
<td>Mexico City Metro Line B extension</td>
<td>Metro</td>
<td>To be announced</td>
<td>2</td>
<td>Under planning</td>
<td>To be announced</td>
<td>2030</td>
</tr>
</tbody>
</table>

Source: Global Mass Transit Research
Regional rail projects

Over 1,967 km of rail network at an estimated investment of USD15 billion is planned to be developed as part of a commuter rail/ intercity/ HSR system in Mexico.

**Mexico–Toluca Interurban Train**

The rail link will span 58 km and connect Mexico City with Toluca. The project is included in the National Plan for Infrastructure (2013–2018).

The civil works on the project are already 75 per cent completed as of October 27, 2021.

A total of four of the planned seven stations and terminals have been completed, two are under construction, and work on one will start in 2024.

The line is divided into three stretches.

- **Section 1:** The first stretch will span 36.3 km between Toluca’s Zinacatepec and La Marquesa areas.
- **Section 2:** The second stretch will span 4.7 km (underground tunnel).
- **Section 3:** The third stretch will span 16.8 km through Cuajimalpa, Santa Fe and Álvaro Obregón districts. The works on the third stretch are still pending.

The end-to-end journey time will be 39 minutes. The line will have an estimated daily ridership of 230,000 passengers. Construction is underway.

CAF will supply 30 five-car trains. The trains will have a maximum speed of 160 km per hour.

CAF will also provide technical, management and supervision services for construction, including power and electrification systems, electromechanical systems, the signalling system, the communications system and a control station.

**Mayan Train**

The rail line will span 1,460 km, connect five states (Tabasco, Chiapas, Campeche, Yucatan, and Quintana Roo) in south-eastern Mexico, and cover 16 stations.

The project is planned to be executed in two phases, which are split into seven sections.

**Phase I:**

- **Section 1:** It will span 227 km from Palenque to Escárcega and cover four stations and two stops.
- **Section 2:** It will span 235 km and connect Campeche with Escárcega, Calkín and Yucatan.

**Phase II:**

- **Section 3:** It will span 172 km from Calkiní to Izamal.
- **Section 4:** It will span around 186 km from Izamal to Cancún.

**Key contracts awarded:**

- In February 2021, a consortium of Acciona Infrastructure Mexico and Grupo México secured a construction contract for Section 5 (South) of the Mayan Train project. The value of the contract is EUR713 million.

  The scope of work includes the construction of the railway and road infrastructure works, the construction of the double-track line, electrification work, the provision of drainage, and the construction of dirt roads and wildlife crossings.

- In December 2020, a consortium of Renfe, Grupo Mitma, Ineco, Inecomex (a subsidiary of Ineco), and DB Engineering & Consulting was appointed the shadow operator.

  The contract has been valued at EUR13.5 million. The duration of the contract is three years.

  The scope of work includes the provision of support services during the construction period, defining of the requirements of the operation and maintenance (O&M) work, and provision of supervision services for the manufacture, delivery and trials of the rolling stock and allied systems until the commercial service testing period.

- In October 2020, TYPSA secured a contract to provide technical support for the entire project and basic engineering supervision of the seven sections. The company will also provide project and construction management for Sections 1 to 5, including the technical, legal and economic structuring, the support in the tender processes, as well as project and construction management and supervision of the five sections which cover a total length of 1,043 km.

- In May 2020, the following contracts were awarded:

  - A consortium of Mexico-based Carso Infraestructuras y Construcción (CICSA) and Spain-based FCC Construcción secured a contract to design, construct, and maintain Section 2.
The estimated value of the contract is over EUR700 million. The consortium will execute the works within 28 months and will provide maintenance services for five years.

- A consortium of Construcciones Urales, Gami Ingeniería e Instalaciones and Azvi will construct and maintain Section 3 of the Mayan Train project.

- In April 2020, a consortium led by Mota-Engil México SAPI will construct Section 1.

The consortium will execute the works within 28 months and will provide maintenance services for five years.

The members of the consortium are the China Communications Construction Company (CCCC) and Mexico-based Grupo Cosh and Gavil Ingeniería.

In June 2020, construction work commenced in Campeche.

**Rolling stock and signalling system:** In May 2021, a consortium of Bombardier Transportation México, Alstom Transport México, Gami Ingeniería e Instalaciones, Construcciones Urales, and Construcciones Urales Procesos Industriales secured a contract to supply rolling stock for the Mayan Train project.

The total value of the contract is around EUR1.3 billion (MXN31 billion+). The share of Alstom-Bombardier is nearly EUR1 billion.

The consortium will supply 42 trains and allied systems, provide after-sales services as well as design and construct maintenance workshops and allied infrastructure.

The trains will undergo tests in 2023.

In addition, the consortium will be responsible for the design, manufacture and commissioning of the full signalling system including the design, supply and installation of the ETCS onboard technology and over 1,500 km of trackside equipment including ETCS, interlocking, traffic management and telecommunications systems, leveraging the complete Alstom portfolio.

The initial 42 trains are procured for Sections 1–5, and there will be an option in favour of FONATUR to purchase 27 trains for Sections 6 and 7.

**Mexico City–Querétaro High-Speed Railway**

The project is the first planned HSR line in Mexico. It will span 210 km. The daily ridership is estimated to be 23,0000 passengers.

The trains that can operate at a speed of 300 km/hr are planned to be deployed on the line.

In 2014, the contract for the construction of this line was awarded to a consortium led by the China Railway Construction Corporation.

This contract was later cancelled due to irregularities in the bidding process. In October 2020, the project was announced as part of the plan to invest over MXN297 million in 39 communications, transport, energy, water, and environmental projects.

The project will be executed at an estimated investment of MXN2,656 million and will be financed by the Government of Mexico and the private sector.

**Guanajuato–Querétaro interurban train**

The Guanajuato–Querétaro Metropolitan and Intermunicipal State Train will span 174 km and connect the cities of León, Silao, Irapuato, Salamanca, Celaya, and Querétaro.

The system is expected to have an estimated daily ridership of 220,000 passengers. The project is estimated to cost MXN20 billion.

In March 2021, a consortium of Transconsult, Senermex Ingeniería y Sistemas and Deloitte Asesoría Financiera secured a MXN42.3 million contract to carry out pre-investment studies.

The contract, which is for a period of 300 days, involves carrying out the master plan as well as the cost-benefit studies.

**Urban rail projects**

Currently, around four systems in Mexico are planned to be developed/expanded. These lines will cover more than 106 km of urban rail lines as part of a light rail or a metro rail system.

More than USD1.41 billion is estimated to be invested in these projects by 2030. The majority of the investment (>55%) is planned for Mexico City.

**Guadalajara LRT Line 4**

The project involves the development of a 20.8-km-long line, covering 19 stations, by 2024, at an estimated investment of USD500 million.

The State of Jalisco is the project developer. Sistema de Tren Eléctrico Urbano (SITEUR) operates the existing system and is expected to operate the line.

The project is estimated to cost MXN10 billion. The project will be financed by private initiatives (MXN5 billion), FONADIN (MXN3 billion) and the state government (MXN2 billion).

Construction work is expected to begin by the first half of 2022.

**Naucalpan–Buenavista Light Rail**

The feasibility study to develop an LRT line connecting Libero Río Hondo with Buenavista was conducted between August 2020 and June 2021. The study was financed by Banco Nacional de Obras y Servicios Públicos (Banobras), a development bank. The LRT line will span 14.7 km.

In November 2021, the Government of Mexico announced financial support for five rail projects, including the Naucalpan-Buenavista light rail project.
**Xalapa Light Rail**

The line will span 17.32 km from Banderilla to the Velodrome and cover 14 stations. The line will be built on the existing tracks that cross the city.

A technical advisory committee, established under a collaboration agreement between Mexico’s Rail Transport Regulatory Agency (ARTF) and the state government of Veracruz, will plan, implement, construct and operate the system.

The trains will be operated at a frequency of every 10 minutes in peak hours.

The end-to-end travel time will be 40 minutes. A fleet of 10 trains with a capacity to carry 250-300 passengers is planned to be deployed.

As of February 2021, the project was delayed due to the Covid-19 pandemic.

However, in March 2021, the governor announced plans to complete the project by the end of 2024.

**Mexico City Metro**

Sistema de Transporte Colectivo (STC) has announced network expansion of Mexico Metro by more than 53 km and 38 stations by 2030. The network expansion plans are as follows:

**Line 12 extension**: The line will be extended by 4 km and 2 stations from its current western terminus at Mixcoac to an interchange with Line 1 at Observatorio. A consortium of Promotor y Desarrolladora Mexicana (PDM), its subsidiary Desarrollo de Terracerias, and Spain-based Proacon will construct the extension.

A consortium of Mexico-based Grupo Promotor Aries (GPA) and Desarrollo, Tecnologia y Planeacion (DTP Consultores) will supervise Phase I of line 12 extension. Electrical and mechanical works will be carried out by Alstom.

**Line 4 extension**: The line will be extended by 24.5 km and 20 stations, from Martin Carrera to Ecatepec municipality. The plan was proposed in 2014 and is at the planning stage.

The project aims to develop 19 new intermediate stations (elevated stations) and a new terminal in Tepexpan (at grade station). It also includes the implementation of new workshops located next to the Tepexpan terminal station.

**Line 9 extension**: The line will be extended by 1.4 km and one station, from Tacubaya to Observatory. It is currently at the planning stage. The federal government of Mexico awarded MNX190 million for the project in May 2017.

**Line 8 extension**: The line will be extended by 10.2 km and seven stations to northbound to La Raza, where it would connect with line A. The project was announced in STC’s 2018-30 Master Plan.

**Line A extension**: It will span 13.2 km from La Paz to the municipality of Chalco and cover six stations. In March 2016, Mexico’s Ministry of Finance allocated MNX200 million to conduct financial and technical studies for the extension. The project was announced in STC’s 2018-30 Master Plan.

**Line B extension**: The line will be extended by two stations, from westbound towards Colegio Militar, where line B would connect with line 2. The project was announced in STC’s 2018-30 Master Plan.

**Impact of Covid-19 on rail projects timeline**: Poor planning of the projects has led to under-investment in the public transport systems, thereby hindering the timelines of rail projects.

Various projects are announced regularly, but a majority of these planned projects are wholly or partly funded by the government, making their funding dependent on the level of resources generated by the government internally.

For example, contracts were awarded for Mexico City–Querétaro HSR in 2014, but later the project was suspended due to corruption issues as well as financial cutbacks.

The Covid-19 pandemic has impacted the opening dates of many projects in Mexico as well as the financial health of governments at various levels.

For the year 2020, the decline in ridership has resulted in estimated losses of MNX19.5 billion in the capital cities of the country.

Several projects, especially the ones at the planning stage, are expected to be delayed as their construction works are pushed back further than was originally planned due to factors such as lack of funding and high-risk working environments.

For example, several projects including the Xalapa Light Rail in Veracruz was delayed due to the pandemic.

The government now plans to seek public-private investment for the completion of the light rail projects.

**The way forward**

The national governments have realised the critical importance of rail systems and reliable infrastructure for the development of the economy.

While the majority of the projects have picked up pace in terms of allocation of funds and launch of construction work, a slight delay in the completion of schedules is expected owing to the ongoing pandemic.

(1 MXN [Mexican Peso] = 0.049USD) ✦
United Kingdom: National rail length and ridership

Rail Delivery Group, an unincorporated association, oversees the operations of the National Railway in the United Kingdom (UK). The association’s membership consists of train operating companies that run passenger services for British Rail.

There has been a consistent increase in the total and electrified length of the National Rail over the past 10 years. The total electrified length of the National Rail increased by 14.89 per cent from 2010-11 to 2020-21.

Table 1 provides information regarding the total length and the electrified length of the National Rail.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Route</th>
<th>Electrified Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>15,777</td>
<td>5,262</td>
</tr>
<tr>
<td>2011-12</td>
<td>15,742</td>
<td>5,261</td>
</tr>
<tr>
<td>2010-13</td>
<td>15,753</td>
<td>5,265</td>
</tr>
<tr>
<td>2013-14</td>
<td>15,753</td>
<td>5,268</td>
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<tr>
<td>2014-15</td>
<td>15,760</td>
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<tr>
<td>2015-16</td>
<td>15,799</td>
<td>5,331</td>
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<tr>
<td>2016-17</td>
<td>15,811</td>
<td>5,374</td>
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<tr>
<td>2017-18</td>
<td>15,878</td>
<td>5,766</td>
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<tr>
<td>2018-19</td>
<td>15,847</td>
<td>6,010</td>
</tr>
<tr>
<td>2019-20</td>
<td>15,904</td>
<td>6,049</td>
</tr>
<tr>
<td>2020-21</td>
<td>15,935</td>
<td>6,045</td>
</tr>
</tbody>
</table>

Source: Government of the UK

There had been a steady increase in ridership between 2010-11 and 2020-21. However, in 2020-21, the ridership declined by 77.6 per cent as compared to the previous year due to the Covid-19 pandemic.
Table 2 provides information about National Rail ridership during 2010-11 and 2020-21.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>1,343</td>
</tr>
<tr>
<td>2011-12</td>
<td>1,449</td>
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<td>2010-13</td>
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<td>1,744</td>
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<tr>
<td>2019-20</td>
<td>1,731</td>
</tr>
<tr>
<td>2020-21</td>
<td>387</td>
</tr>
</tbody>
</table>

Source: Government of the UK

The following figure provides information about National Rail ridership during 2010 and 2021.

Figure: Annual ridership on National Rail from 2010-11 to 2020-21 (million passengers)

Source: Government of UK
United Kingdom: London Tramlink and London Underground Ridership

Tramlink is a light rail tram system serving Croydon and surrounding areas in South London. Tram Operations Limited, a subsidiary of FirstGroup, has been operating the system since 2017. The network comprises three lines, which collectively span 28 km and covers 39 stops.

The tram system had seen a steady increase in ridership during 2010-11 and 2013-14. However, ridership declined slightly in 2014-15, before registering a decline by 12 per cent in 2015-16. It again increased by 9 per cent in 2016-17. The ridership steadily declined during 2017-18 and 2019-20, after which it sharply declined by 57 per cent in 2020-21 during the Covid-19 pandemic.

Table 1 provides information about the annual ridership on the London Tramlink from 2010-2021.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>27.9</td>
</tr>
<tr>
<td>2011-12</td>
<td>28.6</td>
</tr>
<tr>
<td>2012-13</td>
<td>30.1</td>
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<td>2013-14</td>
<td>31.2</td>
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<td>2014-15</td>
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<td>2015-16</td>
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<td>2016-17</td>
<td>29.5</td>
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<td>2017-18</td>
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<td>2018-19</td>
<td>28.7</td>
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<tr>
<td>2019-20</td>
<td>27.2</td>
</tr>
<tr>
<td>2020-21</td>
<td>11.6</td>
</tr>
</tbody>
</table>

Source: Government of UK

Figure 1 provides information about the annual ridership on the London Tramlink from 2010-21.
The London Underground is a rapid transit system operated by London Underground Limited in Greater London and parts of the adjacent counties of Buckinghamshire, Essex and Hertfordshire. The system has 11 lines, which collectively span 402 km and it covers 272 stations.

The annual ridership on the London Underground had been steadily increasing from 2010-11 to 2017-18. It started to decline from 2018-19 and witnessed a 77.8 per cent fall in 2020-21 due to the Covid-19 pandemic.

Table 2 provides details about the annual ridership on the London Underground from 2010-11 to 2020-21.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>1,107.0</td>
</tr>
<tr>
<td>2011-12</td>
<td>1,171.0</td>
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<tr>
<td>2010-13</td>
<td>1,229.0</td>
</tr>
<tr>
<td>2013-14</td>
<td>1,265.0</td>
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<td>2014-15</td>
<td>1,305.4</td>
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<td>2015-16</td>
<td>1,349.3</td>
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<tr>
<td>2016-17</td>
<td>1,377.9</td>
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<tr>
<td>2017-18</td>
<td>1,394.6</td>
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<tr>
<td>2018-19</td>
<td>1,384.0</td>
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<tr>
<td>2019-20</td>
<td>1,337.0</td>
</tr>
<tr>
<td>2020-21</td>
<td>296.1</td>
</tr>
</tbody>
</table>

Source: Government of UK

Figure 2 presents details on the annual ridership on the London Underground from 2010 to 2021.

Figure 2: Annual ridership on London Underground from 2010-11 to 2020-21 (million passengers)

Source: Government of UK
United Kingdom: London local bus ridership

Transport for London (TfL) manages most bus services in London. It manages a bus fleet of around 9,300 vehicles operating across 675 routes. Most bus services in London are run by private operators, who secure contracts from TfL.

Bus ridership was fairly stable between 2010-11 and 2019-20. There was a steep decline of 59 per cent in 2020-21 compared to the previous year due to Covid-19 pandemic.

The following table provides information about bus ridership in London between 2010-11 and 2020-21.

<table>
<thead>
<tr>
<th>Year</th>
<th>Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>2,269</td>
</tr>
<tr>
<td>2011-12</td>
<td>2,324</td>
</tr>
<tr>
<td>2010-13</td>
<td>2,315</td>
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<tr>
<td>2013-14</td>
<td>2,384</td>
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<td>2014-15</td>
<td>2,364</td>
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<td>2015-16</td>
<td>2,293</td>
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<td>2,240</td>
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<td>2018-19</td>
<td>2,198</td>
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<tr>
<td>2019-20</td>
<td>2,091</td>
</tr>
<tr>
<td>2020-21</td>
<td>856</td>
</tr>
</tbody>
</table>

Source: Government of UK

Information about bus ridership in London during 2010-11 and 2020-21 is provided in the accompanying figure.
North America

USDOT’s Build America Bureau provides loan for 183N Mobility Project, US

The U.S. Department of Transportation (USDOT) has announced that its Build America Bureau has provided a USD250.29 million 35-year, low-interest loan to the Central Texas Regional Mobility Authority (CTRMA) for the 183N Mobility Project in the Austin metropolitan area.

The 183N Mobility Project involves construction of two express lanes in each direction along US 183 extending from SH 45N/RM 620 to State Loop 1 (MoPac), a distance of approximately 14.48 km, and the addition of a fourth general-purpose lane in areas where there is not one currently.

The express lanes will allow Capital Metro to increase bus service during peak periods. The project also includes building auxiliary lanes, shared-use paths, sidewalks, and bicycle/pedestrian facilities.

Capital Metro has procured almost 200 new electric buses which will be deployed on the corridor.

FTA announces USD395.6 million grant to King County Metro; approves METRO Purple Line BRT to enter project development phase of CIG, US

The U.S. Department of Transportation’s (USDOT’s) Federal Transit Administration (FTA) has announced a USD395.6 million grant to the King County Metro Transit Department (King County Metro) in Seattle, Washington, through its American Rescue Plan (ARP) funds.

The funding is a part of more than USD30 billion in funding announced for public transportation in the American Rescue Plan (ARP) Act which was signed into law by President Biden on March 11, 2021.

The funding comes from the USD26.6 billion allocated according to statutory formulas to urban and rural areas and to tribal governments, and for the enhanced mobility of seniors and individuals with disabilities.

Further, FTA has approved the METRO Purple Line bus rapid transit (BRT) project to enter the project development phase of the Capital Investment Grants (CIG) Program under New Starts projects.

The BRT line will span 24.14 km (15 miles). It will serve St. Paul, Maplewood, Vadnais Heights, Gem Lake, White Bear Township, and White Bear Lake, and cover 21 stations. The line is expected to be operational by 2026.

The Metropolitan Council anticipates the grant of federal approval for the project, thereby moving the project to the engineering phase in 2023, where the FTA will review the project’s scope, schedule, and budget.

The current estimated cost of the project is USD475 million, with Ramsey County covering the local share and with FTA providing a grant through the CIG Program.

The line’s operating costs will be shared by the Metropolitan Council and Ramsey County.

USDOT approves loan for Vine Bus Maintenance Facility Project

The U.S. Department of Transportation’s (USDOT’s) Build America Bureau has approved a USD19.92 million Transportation Infrastructure Finance and Innovation Act (TIFIA) loan under its Rural Projects Initiative (RPI) to the Napa Valley Transportation Authority (NVTA) for the Vine Bus Maintenance Facility Project.

NVTA will construct a 31,504 square foot transit maintenance facility with a 40-year useful life to replace its currently leased transit yard in the city of Napa, California.

This will provide the authority a facility that meets its growing needs, including charging infrastructure for NVTA’s new electric bus fleet.

PSTA board approves USD80 million for procurement of electric buses, US

The Pinellas Suncoast Transit Authority’s (PSTA’s) Board of Directors has approved USD80 million for procurement of 60 electric buses over the next five years.

The first of the 60 buses is expected to be deployed by 2024. The agency aims to deploy a zero-emissions fleet by 2050.

PSTA currently operates six all-electric green buses.

MTA and Amtrak sign agreement to fund two projects, US

The Metropolitan Transportation Authority (MTA) and Amtrak have signed an agreement to fund the Penn Station Access project and the East River tunnels project. Under the agreement, Amtrak has committed USD500 million towards upgrading the rail lines north of Manhattan to allow MTA-operated Metro-North trains from the northern suburbs to go to Penn Station on Manhattan’s west side.
Further, the MTA has committed USD432 million towards rehabilitating Amtrak-owned tunnels under the East River that connect the rail lines from Manhattan to Queens and Long Island.

**Virginia DRPT awards grant to study impacts of Zero-Fare, US**

The Virginia Department of Rail and Public Transportation (DRPT) has awarded a USD8 million grant to Greater Richmond Transit Company (GRTC) to study the impacts of Zero-Fare. The study will be conducted between July 1, 2022 and June 30, 2025.

The City of Richmond and Virginia Commonwealth University will match the grant funding. Under the state grant, the agency will study the benefits and impact of Zero-Fare, the effects of sustainability, and the feasibility of alternative fare collection methods.

Initially, the agency suspended fare collection in March 2020 to limit contact between passengers and drivers during the COVID-19 pandemic.

With the availability of federal COVID relief funding, the agency extended the suspension of fare collection through to June 30, 2022.

**MassDOT awards grant under Community Transit Grant Program, US**

The Massachusetts Department of Transportation (MassDOT) has awarded USD8.9 million for municipalities, the Councils on Aging, non-profit organisations, and other entities to use under the Community Transit Grant Program.

Applications for the programme were made during 2021 for Fiscal Year 2022 (FY2022).

The grant includes funding to 27 organisations for 115 vans and minibuses and to 18 entities for 23 operating and mobility management projects.

The Community Transit Grant Program is the Commonwealth's annual competitive grant programme to distribute both Federal Transit Administration (FTA) Section 5310, Enhanced Mobility of Seniors & Individuals with Disabilities funds and State Mobility Assistance Program (MAP) funds.

The FTA Section 5310 grant programme provides funding to assist with the purchase of capital equipment, implementation of mobility management, and coverage of operational costs to meet the mobility needs of older adults and individuals with disabilities of any age.

State Mobility Assistance Program funds are used to assist in the provision of transportation services to seniors and persons with disabilities exclusively through the purchase of eligible vehicles.

**Latin America**

**AFD to finance Santo Domingo Metro expansion, Dominican Republic**

Agence Française de Développement (AFD) / French Development Agency has signed an agreement worth EUR86 million (USD97 million) to finance the expansion of the Santo Domingo Metro.

Expansion works will include doubling the length of the trains, which will help the line to transport 66,000 additional passengers, thus reducing waiting times at peak hours.

The agreement is part of a global strategic framework that was formalised in the 2021–2023 Cooperation Roadmap between AFD and the Dominican Republic, which outlines the prospects for technical and financial cooperation to accompany the country’s ecological, climatic, social, and economic developments.

The global strategic framework will further allow French companies that have developed mass transportation systems to enter into technical and financial cooperation agreements with entities in the Dominican Republic.

**Nicaragua government to procure loan from Export-Import Bank of Russia to purchase buses**

The National Assembly (Parliament) of Nicaragua has approved a USD18.9 million loan from the Export-Import Bank of Russia for the purchase of buses for public transport in Managua.

The purchase of the new fleet of buses is intended to benefit 350,000 commuters who travel daily in Managua’s public transport units.

The loan has been approved under the Credit Facility Agreement, with a term of seven years and a grace period of two years.

**Asia Pacific**

**Government to approve Klang Valley MRT-3 financial plans by early 2022; tender to be launched in April 2022, Malaysia**

The Government of Malaysia has announced plans to approve the financial projections for the Klang Valley Mass Rapid Transit Line 3 (MRT-3) project by early 2022.

The tender for the project is expected to be issued in April 2022.

The expected cost of the MRT-3 project is MYR30.5 million, the same as for the MRT-2 project, since the underground stretch of the former is almost equal in length to that of the latter.
The project will follow a hybrid financing plan. Around 70–90 per cent of the total cost will be financed through an issuance of government-linked bonds by a special purpose vehicle (SPV), DanaInfra Nasional Bhd, while the remaining 10–30 per cent will be funded on a private funding initiative (PFI) basis.

Government of Vietnam seeks foreign investors for metro projects in HCMC

The Government of Vietnam has announced plans to execute multiple metro projects in Ho Chi Minh City (HCMC) through USD8 billion in foreign investments. The metro projects have already been approved, and the government is seeking foreign investments for 2021–25.

The government is seeking USD4.57 billion for the 36.2-km Metro Line 4 spanning districts 1, 3, 4, 7, 12, Gò Vấp, Phú Nhuận, and Nhà Bè; USD1.82 billion for Line 3; and USD1.48 billion for the second phase of Line 2. The city plans to build eight metro routes.

PFC to finance 350 electric buses in Uttar Pradesh, India

The Power Finance Corporation (PFC) has announced plans to finance the deployment of 350 electric buses in Uttar Pradesh at an investment of INR2.75 billion.

The project is a part of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME-II) scheme, with an allocation of INR35 billion for the promotion and adoption of electric buses.

The agreement was signed with Green Cell Mobility, an e-mobility platform that is supported by the governments of India and the United Kingdom to boost the adoption of electric vehicles in India.

The buses will be deployed in key cities of Uttar Pradesh, including Agra, Meerut, Aligarh, Bareilly, Ghaziabad, and Mathura.

Multilateral funding approved for multiple metro projects in India

The Government of India and Kreditanstalt für Wiederaufbau (KfW)/ German Development Bank have signed a EUR442.26 million loan to finance the Surat Metro rail project.

The total estimated cost of the project is EUR1.5 billion, of which KfW will provide EUR442.26 million. The project is being co-financed by the Agence Française de Développement (AFD)/French Development Agency.

The metro project will span 40.35 km and will utilise solar energy at depots. Further, the European Investment Board (EIB) has approved a EUR450 million loan for the construction of Agra Metro Phase I.

Phase I of the project will span 29.65 km, cover 28 stations, and comprise two lines.

Line 1 will connect Sikandra to Taj East Gate through 14 stations and span 14.25 km.

Line 2 will connect Agra Cantt to Kalindi Vihar through 15 stations and span 15.4 km. The lines will include a combination of underground and elevated sections.

Europe

EIB launches Green Rail Investment Platform

The European Investment Bank (EIB) has announced plans to launch the Green Rail Investment Platform to facilitate public and private investments in rail projects.

The platform will include the lending, blending, and advisory services of the EIB, and the European Union (EU) financial instruments listed under InvestEU. It will be accessible to all rail operators, infrastructure managers, transport authorities, and other stakeholders.

The EIB’s investment in lower-carbon transport has grown by approximately 10 per cent, from EUR6.7 billion in 2019 to EUR7.2 billion in 2020. The EIB has increased its funding for rolling stock modernisation and procurement from 30 per cent in 2017 to 60 per cent in 2020.

Future investments undertaken by the EIB will focus on projects with climate action targets, such as electric rail rolling stock, hydrogen trains, rail infrastructure, and intermodal terminals.

Stratio announces Series A funding for fleet maintenance platform, Spain

Spain-based Stratio has announced USD12 million Series A funding to facilitate its global expansion, increase its R&D activities, and speed up overall time-to-market by the end of 2022. The investments will be led by Forestay Capital, Deep Tech, Waypoint Capital, and Crane Venture Partners. The company uses large-scale processing, an autonomous artificial intelligence (AI) system, and individual vehicle data collectors to provide real-time
insights to fleet managers and operators to help them understand potential breakdowns and to move away from a reactive maintenance approach. Further, the predictive maintenance technology companies will ensure zero downtime while operating, which will enable operators to reduce their vehicle emissions.

**Keolis sells EuroBahn to Team Treuhand GmbH, Germany**

Keolis has sold its EuroBahn rail operation business to Team Treuhand GmbH, a subsidiary of the Noerr legal group. Team Treuhand will operate the business under a new subsidiary, SG EuroBahn UG. The four EuroBahn networks will be operated under the brand of Eurobahn GmbH & Co KG. The company will retain the management team and 900 employees.

EuroBahn, under Keolis, has been operating regional railway services in Nordrhein-Westfalen, under contract to Zweckverband Nahverkehr Westfalen-Lippe, Verkehrsverbund Rhein-Ruhr, and the Dutch province of Overijssel.

The four contracts permit EuroBahn to operate on 15 routes, covering 1,000 km, and carrying approximately 40 million passengers per year. The contract to operate railway services for the Maas-Rhein-Lippe-Netz and the Ostwestfalen-Lippe-Netz is valid till 2025. The EuroBahn contract with Hellweg-Netz is valid until 2030 and the contract with Teutoburger Wald-Netz is valid until 2032.

The Keolis Group reported that the operations in Germany recorded losses in 2020. It announced plans to transfer ownership of EuroBahn in October 2021.

**Also in finance**

**EIB to support acquisition of rolling stock by Trenitalia, Italy**

The European Investment Bank (EIB) has announced plans to subscribe for green bonds worth EUR550 million issued by Ferrovie dello Stato Italiane S.p.A. (FS) to support the acquisition of modern high-speed trains by Trenitalia, a subsidiary of FS and the national train operator in Italy. An initial subscription of EUR350 million has been approved which will be transferred to Trenitalia through an intercompany loan.

The EIB will fund 50 per cent of the costs for the purchase of 34 high-speed trains. The acquisition of rolling stock will support high-speed transport on the Trans-European Transport Network (TEN-T) in Italy and Spain in accordance with the 4th Railway Package of the European Union (EU).

The fleet upgrade will improve Trenitalia’s competitive position. Trenitalia will lease 20 trains to the Intermodalidad de Levante (ILSA) consortium for deployment on the Madrid–Seville–Malaga, Madrid–Barcelona, and Madrid–Valencia–Alicante high-speed (HSR) routes. The remaining trains will be deployed on the Turin–Trieste and Milan–Naples–Salerno–Reggio Calabria tracks by Trenitalia.

(1 EUR [Euro] = USD1.13)

**PKP announces investments under National Railway Programme, Poland**

Polish Railway Lines (PKP) has announced planned investments of over PLN14 billion in 2022 as part of the National Railway Programme.

PKP has planned to adapt rail infrastructure according to the requirements of the TEN-T Core Network, where lines will be electrified and the European Rail Traffic Management System (ERTMS) ERTMS/ European Train Control System (ETCS) will be installed on lines on the TEN-T Core Network. Capacity in urban areas will be expanded by constructing four-track lines with separate tracks for suburban, long-distance, and freight trains. The main urban and agglomeration centres will receive investments for modernised railway lines aimed at shortening the journey time between cities by increasing the train speed.

The Centralny Port Komunikacyjny (CPK)/ Solidarity Transport Hub (STH) will also receive investments. Further, the government will implement the Kolej Plus Programme to modernise and construct railway stops between 2021 and 2025 to complement the other railway projects. PKP will collaborate with local governments to improve safety by building collision-free intersections.

The tenders for the modernisation and construction of rail infrastructure will be announced under the 2021–2027 financial perspective. The study and design documentation of projects for the 2021–2027 financial perspective has been ongoing for several years. The documentation for tenders worth PLN11–12 billion has been completed. The award of tenders will be announced in 2022.

The National Railway Programme is designed to provide accessible stations and stops; ensure shorter journey times; and improve freight transport. It is worth PLN77 billion. Currently, it is 93 per cent completed.

PKP has used European Union (EU) funds to modernise 370 stops by equipping them with lifts, ramps, and special signage to increase access to railways for travellers in cities, such as Szczecin, Lublin, Rzeszów, Gdańsk Główny, and in smaller towns. Further, 50 stops were constructed in new locations and rail services were restarted on unused routes to increase accessibility to railways.

PKP has constructed 500 new collision-free intersections, reconstructed viaducts, and modernised 2,000 railroad crossings. The total value of the completed and under construction project is PLN71.2 billion. Projects worth PLN20.4 million have been completed. The ongoing projects are worth PLN50.4 million and will be completed within two to three years. Investments worth PLN2.5 billion are also in the tendering stage.
The EU and PKP have signed 77 contracts for projects worth PLN35.64 billion under three 2014–2020 programmes. These are the Infrastructure and Environment OP (OPI & E), Eastern Poland OP, and the Connecting Europe Facility.

PKP plans to complete all the contracts that are co-financed using EU funds from the 2014–2020 perspective under the Infrastructure and Environment OP by the end of 2022.

(1 PLN [Polish Zloty] = USD0.24)

**EBRD grants loan for modernisation of Timisoara tram system, Romania**

The European Bank for Reconstruction and Development (EBRD) has granted a EUR20.3 million loan to modernise the Timisoara tram system for the 2020–2023 period. The city will use the funds to renew the tram fleet, rehabilitate the T5 tram line, and finance two consultancies to support the city’s public transport reforms.

The Infrastructure Development Programme in Timisoara is estimated to have a total value of EUR87.2 million. The programme will be co-financed by government funds and technical corporation funds.

The EBRD loan will cover the costs of Timisoara’s priority infrastructure programme and of the city’s plans to introduce green mobility.

The European Union (EU) has granted EUR53.6 million to develop the Timisoara tram infrastructure under the Regional Operational Programme 2014–2020.

(1 EUR [Euro] = USD1.13)

**EIB grants funding for modernisation and rehabilitation of Southern rail corridor, Moldova**

The European Investment Bank (EIB) has granted an additional EUR24 million to Moldovan Railways/Calea Ferata din Moldova (CFM) for the rehabilitation and modernisation of the 233-km-long Bender – Causeni – Basarabeasca – Etulia – Giurgiulesti south railway corridor. The south railway corridor will require EUR62 million for the modernisation of the infrastructure and EUR13.7 million for the upgradation of the signalling and power systems. The project had received EUR50 million from EIB in 2016. The project is part of a national investment plan to modernise and rehabilitate three main lines, which will require investments worth EUR205 million. The European Bank for Reconstruction and Development (ERBD) granted a EUR23.5 million loan to upgrade key infrastructure in 2021; and granted EUR110 million for the acquisition of railway infrastructure and rolling stock in 2014. Further, the European Union’s (EU’s) Neighbourhood Investment Facility (NIF) has allocated EUR5 million. CFM has procured 12 TE33A diesel locomotives using the EU funds.

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**Ridango acquires IT solutions provider LIT Transit**

Estonia-based Ridango has acquired Slovakia-based LIT Transit, an IT solutions provider for public transportation that specialises in transit management systems and estimated time of arrival (ETA) prediction engines. Ridango will use LIT Transit’s expertise to simplify complex processes in public transport and to improve the quality of real-time and ticketing solutions.

Ridango offers ticketing, transit management, and payment solutions in Estonia, Sweden, Finland, Lithuania, Norway, Ukraine, and Greenland. The acquisition will expand Ridango’s global market to countries and cities like Singapore, Hong Kong, India, Saudi Arabia, Australia, Qatar, New Zealand, and Oman.

**AIIB sanctions financial aid for Ispartakule–Cerkezkoy railway project, Turkey**

The Asian Infrastructure Investment Bank (AIIB) has announced financial aid worth EUR300 million for the Ispartakule–Cerkezkoy railway project in Turkey. The funds will be provided under AIIB’s climate mitigation financing and transport sector strategy. The project covers the construction of a double-track electrified railway route between Ispartakule and Cerkezkoy. The railway connection will provide access to an inter-operable national rail transport corridor with links with the Trans-European Transport Network (TEN-T) as per European Union (EU) standards. The project will also minimise greenhouse gas emissions.

The project will also be co-financed by a loan of EUR150 million from the European Bank for Reconstruction and Development (EBRD).

(1 EUR [Euro] = USD1.13)

**Middle East and Africa**

**Government of Ghana allocates funds for MMTL**

The Government of Ghana has announced plans to refurbish the Metro Mass Transit Limited (MMTL) fleet, with the procurement of new buses in its 2022 Budget Statement and Economic Policy.

The government has approved an estimated budgetary allocation of GHS921.84 million for the Ministry of Transport and its sub-vented agencies to execute their programmes and projects for the 2022 fiscal year.

Of the total amount approved, GHS694.35 million will be used by the Transport Ministry to finance the purchase of assets. MMTL plans to procure around 300 buses by the first quarter of 2022. MMTL currently has a fleet of 200 buses.

(1 GHS [Ghanaian New Cedi] = USD0.16008)

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North America

IndyGo Purple Line Bus Rapid Transit (BRT) Project, US

Developer: The Indianapolis Public Transportation Corporation (IndyGo) is the developer.

Project description: Development of a bus rapid transit (BRT) system in Indianapolis and the City of Lawrence.

Background: The line will span 24.46 km between downtown Indianapolis and northeast and downtown Lawrence, replacing most of the existing Route 39 local bus service.

The project includes the development of 15.9 km of new and exclusive bus lanes and construction of 18 new stations. Operations will be carried along an 8.52-km section of the existing Red Line BRT alignment, covering 13 existing stations. Transit priority signals will be installed at 30 intersections along the route. The construction is expected to commence in early 2022. Revenue service is scheduled to begin in July 2024, with an annual operating cost of USD9.5 million. In December 2021, IndyGo board awarded two contracts worth a combined USD113.8 million to deliver the project. The board awarded a USD95.6-million contract to Crider & Crider to perform the civil works package. The scope of work includes carrying out civil works, such as development of roads, drainage system, and sidewalks. The board has also awarded a second contract worth USD18.2 million to F.A. Wilhelm Construction Company for the communications package, which also includes construction of stations.

Cost and Funding: The project is being developed at a cost of USD162 million, of which USD81 million is being provided under the FTA's Capital Investment Grants (CIG) Program. In June 2021, IndyGo secured a USD12 million grant from the FTA's American Rescue Plan Act (ARP) of 2021 for this project.

Rolling stock: A fleet of 15 60-foot electric buses will be deployed on the line.

Recent developments:

- In December 2021, IndyGo board awarded two contracts worth a combined USD113.8 million to deliver the project.

Toronto Subway, Ontario, Canada

Key players: Metrolinx is executing public transport expansion projects in Ontario. Toronto Transit Commission (TTC) is the operator.

Project description: Expansion of the subway in Toronto, Canada.

Background: The current network comprises four lines, spanning 76.5 km and covering 80 stations.

- Yonge-University-Spadina Line (Line 1): The line spans 38.4 km and covers 38 stations. It connects Yonge Street and Finch Avenue East to Allen Road and Sheppard Avenue West through the Union Station downtown.
- Bloor-Danforth Line (Line 2): Spans 26.2 km and covers 31 stations. It connects Dundas Street West and Kipling Avenue to Eglinton Avenue East and Kennedy Road through Bloor Street and Yonge Street in downtown.
- Scarborough Line (Line 3): The line spans 6.4 km and covers six stations. It deploys an intermediate capacity transit system or light metro technology. It connects the area of Eglinton Avenue East and Kennedy Road, north and east to the Scarborough Town Centre, and continues east to the area of McCowan Road and Progress Avenue.
- Sheppard Line (Line 4): The line spans 5.5 km and covers five stations. It connects Yonge Street and Sheppard Avenue to Sheppard Avenue East and Don Mills Road.

Rolling stock and technology: As of December 2019, 480 six-car train sets supplied by Bombardier Transportation (branded Toronto Rockets) have been deployed on the Yonge-University-Spadina and Sheppard lines.

Bombardier has also supplied 368 T1 rail cars for the Bloor-Danforth Line. A fleet of 28 ICTS Mark I vehicles manufactured by UTDC has been deployed on the Scarborough Line. These vehicles have been in service for over 25 years.

Track and power: Tracks are standard gauge (1,495 mm for subway). Power is sourced from the third rail (600 V DC).

Ridership: In 2019, the annual ridership on the subway network was 231.7 million passengers, while that on the Scarborough Line was 4.2 million passengers.

Fare system: Passengers can pay fare using stored-value cards (PRESTO). The fare system is integrated with other modes of public transport in the city.

Capital plans: The following extensions and improvement plans are underway:

- Ontario Line: It will span 15.5 km and cover 15 stations. The estimated investment on the line is CAD10.90 billion. It is scheduled to be completed by 2030. The project is planned to be executed on a public–private partnership (PPP) mode. The northern terminus will be located near Science Centre and will provide a connection to the Eglinton Crosstown LRT line. The southern terminus will be located at or near Exhibition Place and Ontario Place along Toronto’s waterfront. The project also includes the development of six interchanges with other modes of transit, passenger pick-up and drop-off areas, and a maintenance and storage facility.

In March 2020, IO and Metrolinx selected HDR-let to provide technical advisory services for the Ontario Line. HDR and
its primary partners – Mott MacDonald, Stantec, Systra, and Comtech – will provide planning, design, engineering, design, and construction oversight services. In June 2020, Metrolinx and IO started the procurement process for the line under three separate PPP contracts. The first contract is for operations and maintenance (O&M), railway systems, and rolling stock, structured as a 30-year design-build-finance-operate-maintain (DBFOM) contract. It includes the track work, power supplies, communications, and train control systems, passenger information and ticketing, together with the maintenance of the depot and operations control centre. The other two contracts are for the design and construction of civil works for the northern and southern sections. The concessionaire will excavate the tunnels and build the stations. In February 2021, Metrolinx released the Final Early Works Report for the Exhibition Station. In December 2021, Metrolinx selected Bechtel as the delivery partner for the Ontario Line in Toronto. Bechtel, along with its sub-vendors Bantrel Co. and Comtech Group Inc, will provide the necessary resources, experience, and knowledge for the construction of the line.

- Scarborough Subway Extension: It will span 7.8 km and cover three stations. It will be developed at an estimated investment of CAD5.5 billion by 2029. The daily ridership on the line is estimated at 105,000 passengers. In future, the line will be extended from Sheppard Station and will connect to Line 4.
- Yonge Subway Extension: It will span 7.4 km and cover six stations. An updated business case is being drafted and is expected to be released in 2021. Passenger services are expected to commence in 2029.

In November 2020, the automatic train control (ATC) signalling system was deployed on the Yonge subway from Queen Station to Rosedale Station. ATC is now in operation from Vaughan Metro Centre Station to Rosedale Station. The estimated investment on the project is CAD661 million. The ATC system will be fully deployed on the line by 2022. In December 2021, Metrolinx announced plans to redefine the route for Yonge North Subway Extension. The new plans will result in deeper tunnels and a route that allows travel under far fewer residential properties in the Royal Orchard community than the earlier route. The changes mean that the subway tunnels will follow a route that travels mostly under Bay Thorn Drive wherever possible; the tunnels turn east from Yonge Street to connect with the rail corridor. The previous route went under 40 homes and an additional 23 properties, whereas the new route goes under 20 homes and 15 additional properties. The tunnels below the Royal Orchard neighbourhood will be at a minimum depth of 21 metres and at a maximum depth of 50 metres.

- Stations improvement: The stations undergoing various improvement programmes (like the construction of a second platform, installation of a second exit, renovation, etc.) are Chester, Christie, College, Greenwood, Keele, Lansdowne, Rosedale, King, Runnymede, Sherbourne, Summerhill, Wilson, and Yorkdale stations.
- Rolling stock: TTC is entering the earliest stages of design for the next generation of TTC Subway Trains. These trains will replace the trains that are currently being used on Line 2 and will help meet the demand resulting from growth in ridership on Line 1. New trains are targeted to be introduced into service starting in 2026, with full rollout scheduled through 2030.

- Signalling system upgrade: Under the capital programme 2012–21, an automatic train control (ATC) signalling system will replace the conventional signalling system that is deployed on the Bloor-Danforth Line at an investment of CAD528 million. The works are expected to be completed by 2030.

In May 2021, Canada’s federal government announced plans to cover up to 40 per cent (CAD10.4 billion) of the CAD26.8 billion capital costs associated with Ontario’s four subway projects. The projects are the Ontario Line, the three-stop Scarborough Subway Extension, the Yonge North Subway Extension, and the Eglinton Crosstown West Extension. The CAD10.4 billion funding will be combined with CAD17 billion that Ontario had previously committed towards the four subway projects.

Recent developments:

- In December 2021, the following developments were recorded:
  - Metrolinx selected Bechtel as the delivery partner for the Ontario Line in Toronto.
  - In the same month, Metrolinx announced plans to redefine the route for Yonge North Subway Extension.

(1 CAD [Canadian Dollar] = USD0.79)

Latin America

Monterrey Light Rail Project, Mexico

Developer: Sistema de Transporte Colectivo (STC) and the Transportation and Communications Ministry (SCT) are the project developers.

Project description: Expansion of light rail network in Monterrey, a city in the state of Nuevo León, by 2020.

Background: Metrorrey LRT comprises three lines, of which Lines 1 and 2 together span 32.17 km and cover 31 stations. Both lines intersect at the Cuauhtémoc station.

- Line 1 spans 18.5 km from the Talleres station to the Exposition station, covering 19 stations.
- Line 2 spans 13.67 km (6.6 km elevated) from the city centre to the north, covering 13 stations (six elevated).
- Line 3 spans 7.5 km (0.6 km underground, 0.3 km at-grade, 6.65 km elevated) from Macro Plaza to the Metropolitan Hospital, covering nine stations with an average daily ridership of 116,000 passengers. The Barrio Antiguo-Metropolitan Hospital section
Project Update

is elevated while the section from Barrio Antiguo to Zaragoza is underground and comprises eight stations. Construction of Line 3 commenced in October 2013 and has been completed at an estimated investment of MXN9.446 billion. The consortium of Alstom Mexicana, Constructora Garza Ponce and Constructora Moyeda constructed Line 3 under a USD40.70-million turnkey contract secured in November 2013.

Rolling stock and technology: The current fleet for Lines 1 and 2 comprises 40 light rail vehicles (LRVs) supplied by a consortium of Canada-based Bombardier and Mexico-based Concarill, Spain-based Construcciones y Auxiliar de Ferrocarriles (CAF) and Bombardier.

Regiotren, S.A. de C.V., a consortium of Construcciones y Auxiliar de Ferrocarriles, S.A. (CAF), CAF México, S.A. de C.V., and CAF Investment Projects, S.A. supplied a fleet of 22 electric trains under an MXN3.30-billion contract secured in July 2014. In addition, the consortium will maintain the fleet for a period of 20 years. In December 2019, China-based CRRC Zhuzhou Locomotive Company Limited secured an MXN1.39-billion contract from the state government of Nuevo León to supply 26 new metro wagons for Line 3. In November 2020, the four first remanufactured railcars of Monterrey Metro Line 3 were delivered. In October 2019, Metrorrey awarded a EUR40-million contract to a consortium of Germany-based Talbot Services GmbH, Prose AG, and Schaltbau Refurbishment GmbH for the refurbishment of 24 40-year old trains. Each railcar is equipped with an AEG USC 6456 engine and has a maximum operating speed of 80 km/hr.

Frequency: The service frequency is 3.5 minutes during peak hours.

Fare system: Passengers can pay fares using single-use cards, Multiviaje tickets and contactless rechargeable smart cards Mia.

Ridership: In 2018, the system had a ridership of 180.81 million passengers, registering a growth of 1.82 per cent.

Power and Technology: Germany-based Siemens has supplied the signalling, electrification and telecommunication systems for all the three operational lines.

Capital plans: The master plan involves the development of six lines, of which three lines are in operation and three are under planning and feasibility studies are underway. Lines 1 and 2 are being rehabilitated.

Upgrade of Lines 1 and 2: In August 2018, the state government of Nuevo León signed an agreement with Verkehrs Gesellschaft Frankfurt (VGF) to supply 24 refurbished used railcars for Lines 1 and 2. The railcars will have a useful life of 20 years. In addition, the state government announced plans to invest MXN400 million for infrastructure maintenance.

Lines 4 and 5: The state government of Nuevo León announced plans to develop two new metro lines by 2022. The construction on Monterrey’s metro Lines 4 and 5 will begin in June 2022. The works are expected to be concluded by 2027, at an investment of MXN19 billion. Metro Line 4 is expected to cover southern Monterrey, while Line 5 will connect the city’s centre and the west. The state government floated a tender on December 15, 2021, inviting technical and economic bids from companies by January 2022.

García-Monterrey International Airport Suburban Rail Line: In July 2020, Fideicomiso de Proyectos Estratégicos (FIDEPROES) invited bids to conduct a cost-benefit analysis for the pre-investment analysis to develop a suburban rail line in the metropolitan area of Monterrey.

The contract to conduct the technical studies for the project was awarded to SENER Engineering. The work will be structured in two packages: field works (includes geological and geotechnical studies and topographic survey) and preliminary projects (includes railway engineering for passenger and freight transport). The rail line will use 62 km of existing tracks and will combine passenger and freight operations. The line will cover 27 stations. It will connect Apostaca, San Nicolás de los Garza, Monterrey, San Pedro Garza García, Santa Catarina, and García. It will have an estimated daily ridership of 164,000 passengers. It will be developed at an investment of over MXN22 million. Construction was estimated to commence by 2021. However, nothing has started yet.

Funding: The project cost of MXN9.60 billion is being funded by the federal government, National Infrastructure Fund (Fonadin) and the private sector. In May 2019, the Board of Directors of the North American Development Bank (NADB) approved a USD122.62-million credit line for Regiotren to procure 22 electric trains for the line. NADB will procure the rolling stock and lease it to Regiotren, which will further lease it to the city government of Metrorrey for a period of 225 months. The ownership of the rolling stock will be transferred to the government of Metrorrey after the completion of 225 months.

Recent developments:

- In December 2021, the state government of Nuevo León announced plans to commence construction on two new lines, metro line 4 and 5 by June 2022. The government also floated a tender inviting technical and economic bids from companies by January 2022.

**Panama City Metrorail Project, Republic of Panama**

Developer/operator: Metro de Panamá (formerly known as Secretaría del Metro de Panamá [SMP]) is the developer and operator.

Project description: Expansion of the metro system in Panama City.

Background: The operational network comprises two lines, which collectively span 36.8 km and cover 30 stations.

Line 1 spans 15.8 km from Albrook near the airport to San Isidro, covering 14 stations (eight underground and six elevated). Passenger services commenced in 2014.
Line 2 spans 21 km from San Miguelito to La Dona, covering 16 stations (all elevated). Passenger services commenced in April 2019.

A consortium of Spain-based FCC Construcciones and Brazil-based Odebrecht Transport (Consortio Línea 2) has constructed and financed Line 2 Phase 1 under a USD1.86-billion contract secured in May 2015. The scope of work includes design engineering, civil construction, and secondary works, including supply of rolling stock and initial commissioning.

Rolling stock and technology: Alstom supplied 20 three-car trains and will supply another 70 cars to increase the length of the existing 20 trains from three cars to five cars; the remaining 30 cars will be configured as six five-car trains. In addition, the company has supplied 21 trains for Line 2.

Tracks are standard gauge (1,435 mm). Power is sourced from the third rail (750 V DC). Alstom Panama SA has provided the power supply and the Urbalis communication-based train control system (CBTC) signalling system. The company has also provided preventive maintenance for the rolling stock, power supply, and signalling systems.

Capital projects: The master plan for Panama City Metro proposes the development of extensions of Lines 1 and 2, the construction of five metro lines, and the construction of a monorail line.

Line 1 extension: The extension will span 2.2 km. A consortium of Spain-based OHL and Portugal-based MOTA Engil is constructing Line 1 under a EUR177-million contract. In addition, the TCP Rail Incorporation-SGT Villa Zaíta consortium had secured the supply of the railway and telecommunications systems for USD13.9 million dollars and USD6.1 million dollars respectively. Construction commenced in January 2021 and is expected to be completed within 33 months. The total investment budget of Panama Metro for 2021 was USD147 million, of which USD16.9 million has been allocated for the expansion of Line 1.

In August 2021, the TCP Rail Incorporation-SGT Villa Zaíta consortium secured the contract to supply the railway and telecommunications systems for USD13.9 million dollars and USD6.1 million dollars respectively. In December 2021, Secretaría del Metro de Panamá (SMP)/Panama Metro received bids from three companies for the extension of Panama Metro Line 1 to Villa Zaíta. The companies interested in the Panama metro tender are Group SAT comprising S.A., Alstom Panama, and Sofratesa de Panama, INC, and Thales Six GTS France SAS. The scope of the contract includes design engineering services, civil works, auxiliary line and station facilities, and interfaces with the integrated railway system for the project.

Line 2 (Airport Line): The extension will span over 2 km from Nuevo Tocumen to the Tocumen International Airport, covering two stations. Passenger services are expected to commence by March 2022. In November 2021, the civil works and electromechanical systems of Metro Line 2 were 85 per cent complete while the integral railway system (SIF) was 38 per cent complete.

In February 2020, the Grupo de Empresas (GdE) Consortium secured a contract to design, supply, install, and test the integrated rail systems (including rolling stock). GdE is a consortium of Alstom Transport SA, Alstom Panamá SA, Compagnie Internationale de Maintenance (CIM), SOFRATESA, Thales SIX GTS France SAS, TCP Rail, and TSO.

Line 3 Phase 1: The monorail line will span 25 km (fully elevated) and cover 14 stations. Phase 1 of Line 3 will connect Albrook to the Ciudad del Futuro sector. In February 2020, the HPH Consortium, a consortium of South Korea-based Hyundai Engineering & Construction (51 per cent stake), Posco Engineering Construction (29 per cent stake), and Hyundai Engineering Company (20 per cent stake), secured a USD2.81-billion contract to design, construct, and finance Line 3. Construction commenced in February 2021 and is expected to be completed within 54 months. The construction is also being financed by the Japan International Co-operation Agency (JICA).

Line 3 Phase 2: Phase 2 will span 7.3 km and will extend up to La Chorrera. The timeline for the project is yet to be announced.

In August 2021, a consortium of Tecnica y Proyectos S.A. (TYPSA) and Louis Berger LAC, secured a contract to provide design services for a tunnel of Line 3 of the network. The estimated value of the contract is USD9 million. This tunnel will span 5.3 km and will be 64 metres below sea level. Metro de Panama had received bids from three more consortia. In November 2020, a consortium of Japan-based Hitachi, Hitachi Rail STS, and Mitsubishi secured a USD833-million contract to supply rolling stock for Line 3. Under the contract, Hitachi and Hitachi Rail STS will supply 28 six-car trains. They will also supply signalling and communications systems, control systems and electrification systems, along with platform screen doors, a central control centre, and maintenance equipment. Mitsubishi will manage the administration of the project.

Line 5: Line 5 will cover the areas of Bella Vista, Obarrio, the Multiplaza shopping centre, San Francisco, Omar park, Lefevre Park, Santa Elena, Chánis and Centenario Avenue up to Costa del Este. Further, it will head north towards the Santa María business centre, the area of the Rommel Fernández stadium sports complex and end at the El Crisol station on Line 2. In addition, it will have a connection with Line 1 at the Santo Tomás station.

In July 2021, the Central American Bank for Economic Integration (CABEI) invited expressions of interest (EoIs) for consulting firms to provide support services to develop the Panama Metro Line 5 Rail Network.

In April 2021, the Central American Bank for Economic Integration (CABEI) executed a USD630,000 non-reimbursable, technical co-operation grant for executing a feasibility study of Line 5 of the network. The grant has been approved by the Government of South Korea within the Korea-CABEI Single Donor Trust Fund (KTF) framework.

Other lines: Five additional lines (Lines 4, 6, 7, and 8) are also planned to be developed. These lines will collectively cover over 40 stations (including interchange stations). The timeline for these projects is yet to be announced.
Recent developments:

- In December 2021, the following developments were recorded:
  
  - A consortium of Alstom, Sofratesa, and Thales Six GTS secured a contract worth USD31.3 million for the supply and installation of the signalling and remote control system, while Celmec secured an energy systems contract worth USD5.9 million.
  
  - Secretaría del Metro de Panamá (SMP)/ Panama Metro received bids from three companies for the extension of Panama Metro Line 1 to Villa Zaíta.
  
- In November 2021, the civil works and electromechanical systems of Metro Line 2 were 85 per cent complete while the integral railway system (SIF) was 38 per cent complete.

- In October 2021, construction commenced on Panama Metro Line 3 Phase 2.

- In August 2021, the TCP Rail Incorporation-SGT Villa Zaíta consortium secured the contract for the supply of the railway and telecommunications systems for USD13.9 million dollars for Line 1 extension and USD6.1 million dollars respectively while Consorcio Túnel de Las América, a consortium of Tecnica y Proyectos S.A. (TYPSA) and Louis Berger LAC, secured a contract to provide design services for a tunnel of Line 3 of the network.

- In July 2021, Central American Bank for Economic Integration (CABEI) invited expressions of interest (EoIs) for consulting firms to provide support services to develop the Panama Metro Line 5 Rail Network.

(1 EUR [Euro] = 1.17 USD)

**Asia Pacific**

**Chennai-Bengaluru-Mysuru Bullet Train Corridor, India**

**Developer/Operator:** The National High-Speed Rail Corporation Limited (NHSRCL), a special purpose vehicle (SPV) incorporated as a subsidiary of Rail Vikas Nigam, Limited is the developer.

**Project Description:** Development of a bullet train corridor from Chennai to Mysuru.

**Background:** The Chennai-Bengaluru-Mysuru high speed rail (HSR) corridor will span 435 km and will connect Chennai and Mysuru through Bengaluru. The line will cover nine stations, which are likely to be at Chennai, Poonamallee, Arakkonam, Chittoo, Bangarapet, Bengaluru, Channapatna, Mandya, and Mysuru. Passenger services are expected to commence by 2051.

Further, a multi-model transit hub linking the railways, metro, and buses is expected to be planned on the outskirts.

**Key contractors:**

- Preparation of GADs (General Alignment Drawings): Translink Consultants
- Final Alignment Design including Aerial LiDAR Survey: Aarvee Associates Architects Engineers Consultants Pvt. Ltd.-GSL Associates Private Limited

**Rolling Stock:** Trains will operate at a maximum speed of 350 km/hr.

**Power and Technology:** Power will be sourced from 25 KV AC overhead catenary overhead electrification (OHE).

**Recent Developments:**

- In December 2021, NHSRCL issued a tender for conducting the environmental impact assessment (EIA) study for the proposed HSR corridor. Further, the contract to prepare detailed project reports (DPR) for all the HSR lines was also awarded to Translink Consultants. Work on completing a thorough alignment mapping is currently underway.

**Klang Valley Mass Rapid Transit (MRT) Project, Malaysia**

**Developer/Operator:** Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) is the developer. Prasarana Malaysia Bhd’s subsidiary Rapid Rail Sdn Bhd will operate the mass rapid transit (MRT) system for 10 years with an option for extension by five years. Rapid Rail will retain the fare revenues.

**Project description:** Expansion of the MRT system in Klang Valley.

**Background:** Klang Valley Mass Rapid Transit (KVMRT) currently comprises a single MRT line (MRT 1). MRT 1-Sungai Buloh-Kajang Line (SBK Line): It spans 51 km (9.5 km underground) from Sungai Buloh to Kajang, covering 31 stations (seven underground). Work began in July 2011 and was completed in July 2017. The line was developed in two phases and required an investment of MYR23 billion.

- Phase I spans 30 km from Sungai Buloh to Semantan, covering 19 stations (seven elevated). It began commercial operations in December 2016.
- Phase II spans 21 km from Semantan to Kajang, covering 12 stations. It began commercial operations in July 2017.

**Ridership:** The average daily ridership is around 400,000 passengers on MRT 1 and is estimated at 529,000 passengers on MRT 2.
Siemens has supplied 58 four-car driverless trains, of which 24 trains have been deployed in Phase I.

**Capital plans and extensions**

MRT 2, Sungai Buloh-Serdang-Putrajaya Line (SSPLine): The line will span 52.3km (13.5 km underground) and cover 27 station stations (11 underground). Construction began in Q2-2016 and revenue service is expected to commence in 2022. The line is being developed in two phases at an estimated investment of MYR30.5 billion. Phase I comprises the Sungai Buloh-Kampung Batu section and is expected to commence operations in March 2022. Phase II comprises the Kampung Batu-Putrajaya Sentral section and is expected to commence operations in January 2023.

MRT-3 (Circle Line): The feasibility study for the line, expected to span 50 km of which 40 per cent will be underground, is underway. Service is expected to commence in 2025. The expected cost of the MRT-3 project is MYR30.5 million, the same as for the MRT-2 project, since the underground stretch of the two projects is almost equal in length. MRT-3 will link the MRT-1 and MRT-2 lines. The line is expected to cover 30 stations, of which 10 will be interchange stations. The project will follow a hybrid financing plan. Around 70-90 per cent of the total cost will be financed through the issue of government-linked bonds by a special purpose vehicle (SPV), DanaInfra Nasional Bhd, while the remaining 10-30 per cent will be funded on a private funding initiative (PFI) basis. The MRT system is planned to be integrated with the light rail transit (LRT), monorail, KTM Komuter (commuter rail) and intra-city buses.

Civil Procurements: MMC and Gamuda were the project delivery partners for the Sungai Buloh-Kajang Line (MRT-1) and the turnkey contractor for the Sungai Buloh-Serdang-Putrajaya Line (SSP or MRT-2).

Consortiums are also being formed to bid for MRT-3. YTL Corp is expected to partner with Siemens and a bumiputera company, while Sunway Construction Group (SunCon) and IJM Corp are expected to form a JV together. MMC Corp Bhd and Gamuda Bhd are also expected to come together for the project.

**Recent developments:**

- In December 2021, the Government of Malaysia announced plans to approve the financial projections for the Klang Valley Mass Rapid Transit Line 3 (MRT-3) project by early 2022. The tender for the project is expected to be issued in April 2022.

- As of July 2021, the Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) had received over 40 requests for information (RFIs) for the Line 3 (MRT-3) project of the Klang Valley Mass Rapid Transit (MRT) network.

(1 MYR [Malaysian Ringgit] = 0.23 USD)
Project Update

Ridership: The network is expected to carry 4,500 passengers during peak hours.

Rolling stock: Guaguas Municipales announced plans to procure 17 fully electric buses. The buses will be clean, efficient and environmentally friendly and will commence operations between 2023 and 2024.

Recent developments:

- The following developments were recorded in December 2021:
  - Guaguas Municipales announced that the project was awaiting authorisation from Costas to expand the maritime avenue between the cemetery and Guiniguada to enable the construction of a fourth lane. A tender for the expansion works will be launched by end-2022.
  - Guaguas Municipales invited bids for a EUR6.71-million five-year contract to install and maintain the canopies at MetroGuagua stops.
  - In August 2021, Guaguas Municipales launched a tender for a EUR21.5-million contract to construct an underground section in Santa Catalina.

(1 EUR [Euro] = USD1.13)

Lisbon Metrorail Project, Portugal

Key player: Metropolitano de Lisboa (ML) is the system developer and operator.

Project description: Expansion of the existing metro rail system and deployment of 42 rail cars and automatic train control (ATC) system.

Background: The system comprises four lines that together span 44.3 km and cover 56 stations. These are:

- Linha Azul (Blue), which spans 13.8 km from Santa Apolónia to Reboleira, covering 18 stations.
- Linha Amarela (Yellow), which spans 11 km from Rato to Odivelas, covering 13 stations.
- Linha Verde (Green), which spans 9 km from Cais do Sodré to Telheiras, covering 13 stations.
- Linha Vermelha (Red), which spans 10.5 km from São Sebastião to Aeroporto, covering 12 stations.
  - There are six transfer stations.

Ridership: The annual ridership is 90.6 million (2020).

Rolling stock and signalling system: A consortium of Stadler, Valencia and Siemens Mobility Unipessoal has secured a contract to supply 14 three-car trains and the communication-based train control (CBTC) signalling system. The contract also includes a provision for preventive and corrective maintenance of all equipment for a period of three years, with an option for an extension for an additional two years. The contract value is around EUR114.5 million. In May 2021, Portugal’s Court of Auditors granted approval for the contract. Stadler will be responsible for supplying the rolling stock, while Siemens will provide the CBTC system. A fleet of 70 trains will be installed with the automatic and continuous control system. The Blue, Yellow, and Green lines will be equipped with automatic train protection (ATP), automatic train operation (ATO), and automatic train supervision (ATS). The contract period is around 77 months. The first train is expected to be delivered by 2023 for testing.

Track and power supply: Tracks are standard gauge (1,435 mm). Power is sourced from the third rail (750V DC).

Fare system: Contactless smartcards and bankcards are used as fare media. The fare system is integrated across all modes of public transportation in the city.

Extensions/Capital projects: ML is undertaking the following projects for the expansion of the system:

- Circular Line: It will comprise a 2-km long tunnel connecting the Cais do Sodré terminus station of the Green Line with the Rato terminus station of the Yellow Line. The project involves the construction of two stations – Estrela and Santos. The project will be constructed in two sections: section 1, from Rato station to Santos station; and section 2, from Santos to Cais de Sodré. The extension will create a new circular line through the city centre, with six-car trains travelling at a frequency of 3 minutes and 40 seconds during peak hours.

- Red Line extension: It will span 4 km from São Sebastião to Alcântara, with three underground stations at Amoreiras, Campo de Ourique, and Infante Santo, and a surface station in Alcântara. The scope of work will also cover the construction of 380 metres of viaducts. ML completed the preliminary feasibility study and submitted the licensing process documents to the Portuguese Environment Agency (APA) in December 2021.

  - In October 2021, Recuperar Portugal, the body overseeing the country’s COVID-19 Recovery and Resilience Plan 2026 (PRR), signed an agreement with Lisbon Metro to grant EUR304 million for extension. The funding for the project is conditional on its being completed by December 31, 2025. The annual ridership on the extension is expected to be 11 million passengers.
and Infante Santo, and a surface station in Alcântara. ML submitted the licensing process documents to the Portuguese Environment Agency (APA) on December 27, 2021.

- In October 2021, Recuperar Portugal allocated EUR304 million for the Red Line extension.

- In May 2021, Portugal’s Court of Auditors granted approval for the EUR114.5 million contract for 14 trains and communication-based train control (CBTC) signalling system secured by a consortium of Stadler and Siemens Mobility.

(1 EUR [Euro] = USD1.13)

Middle East & Africa

Cairo Ring Road Bus Rapid Transit (BRT) Project, Egypt

Developer: The Ministry of Transport (MOT) will develop the project.

Project description: Construction of a bus rapid transit (BRT) system in Cairo, Egypt.

Background: The BRT will span 106 km and cover 57 stations across Greater Cairo’s Ring Road. The project will cover the construction of car parks and the development of BRT special lines that will be connected with Metro Line 3 at Adly Mansour Station in Cairo and at Road Al Farag Axis Station in Giza. Construction commenced in January 2022 and is expected to be completed by June 30, 2022. In May 2021, the Transdev-led consortium, comprising Orascom Construction PLC, Mwasalat Misr, and MCV, signed a memorandum of understanding (MoU) with the MOT to conduct technical and economic feasibility studies for the development of the BRT system.

Funding: The government will grant EGP20 million for the infrastructure development.

Ridership: The hourly ridership is estimated at 4,000 passengers.

Fare system: The tickets will be prepaid to facilitate quick entry and exit of passengers.

Rolling stock: A fleet of 760 railcars is planned to be deployed.

Ridership: The estimated annual ridership is 450 million passengers.

Cost: The cost of the project is estimated at USD45.1 billion.

In April 2021, NTA Metropolitan Mass Transit System Limited invited bids to appoint a network manager for the project. In April 2021, Israel’s National Infrastructures Committee announced that it intended to send the plans for Line M3 to the Government of Israel for approval. In January 2021, NTA-Metropolitan Mass Transit System Limited invited requests for information (RFIs) to appoint a consultant to provide information about management or execution of metro projects around the world and relevant experience in execution of complex infrastructure projects.

In August 2021, Metropolitan Mass Transit System Limited (NTA) invited pre-qualification bids for the design and management of the project.

In December 2021, NTA awarded a contract to the METAV consortium comprising Egis and local partner Gadish Group to manage the Tel Aviv Metro. The scope of work includes coordination and management of all construction works and procurement for the first 18 months.

Recent developments:

- In January 2022, the MOT announced that construction had begun for the first 10 stations.

Tel Aviv Metro Rail System, Israel

Developer: NTA Metropolitan Mass Transit System Limited is the project developer.

Project description: Development of a new metro rail system in Tel Aviv.

Background: The network will comprise three metro lines, which will together span 149 km (mostly underground) and cover 108 stations (all underground, may include interchange stations) and seven transport hubs.

- Line M1 will span 85 km and cover 62 stations. The line will run north to south, from Kfar Saba and Ra’anana, through Tel Aviv, to Rishon LeZion, Lod, Ramla and Rehovot.

- Line M2 will span 25 km and cover 22 stations. The line will run east to west, from the southern part of Petach Tikva, via Ramat Gan, Bnei Brak and Givatayim, to the eastern side of Tel Aviv.

- Line M3 will span 39 km and cover 25 stations. The line will run a half-ring connecting the other two sections to a metro network, running from Bat-Yam, Holon, Azor, Ben Gurion Airport, Or-Yehuda, KiryatOno, Petach-Tikva, north of Tel-Aviv and Herzliya.

Rolling stock: A fleet of 760 railcars is planned to be deployed.

Ridership: The estimated annual ridership is 450 million passengers.

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North America

Metrolinx selects Bechtel as delivery partner for Ontario Line, Canada

Metrolinx has selected Bechtel as the delivery partner for Ontario Line in Toronto. Bechtel, along with its sub-vendors Bantrel Co. and Comtech Group Inc, will provide the necessary resources, experience, and knowledge for the construction of the line. The project is estimated to cost CAD10.9 billion. It is scheduled to be completed by 2030.

The line will span 15.6 km and cover 15 stations through the city of Toronto.

The northern terminus will be located near the Science Centre and will provide a connection to the Eglinton Crosstown Light Rail Transit line.

The southern terminus will be located at or near Exhibition Place and Ontario Place along Toronto’s waterfront. The project also includes development of six interchanges with other modes of transit, passenger pick-up and drop-off areas, and a maintenance and storage facility.

(1 CAD [Canadian Dollar] = USD0.79)

Nova Bus to supply 24 electric buses to four transit authorities in Quebec, Canada

Nova Bus has received an order of 24 LFSe+ electric buses from four transit authorities in Quebec. The tender was coordinated by the Association du transport urbain du Québec (ATUQ) and the Réseau de transport de Longueuil (RTL).

The first pilot bus unit will be delivered in 2022, followed by the others in 2023 and 2024. A total of 10 buses, including five options, will be delivered for the Réseau de transport de Longueuil (RTL), two buses for the Société de transport de l’Outaouais (STO), two buses for the Société de transport de Trois-Rivières, and 10 buses for the Société de transport de Sherbrooke (STS). The procurement is part of a CAD30 million federal and provincial government financial assistance package for the electrification of public transportation.

(1 CAD [Canadian Dollar] = USD0.77)

Miami-Dade County DTPW awards contract to refurbish Metromover, US

The Miami-Dade County Department of Transportation and Public Works (DTPW) has awarded a contract to L.K. Comstock National Transit to supply components and electrical contracting services as part of a four-year plan to refurbish the Metromover automated people mover (APM) system in Miami-Dade County.

Under the contract, L.K. Comstock will work with the prime contractor, Alstom. L.K. Comstock will refurbish 25 guideway switch machines; replace/install new blue light stations and access control at the platform gates; replace train signals; and install new automatic train control (ATC) equipment installed at 21 ATC rooms and new cabling for ATC and fibre optic communications.

Metromover is an elevated, electrically powered, fully automated people-mover system with 7.08 km of dual-lane guideway, which operates in the downtown Miami, Omni, and Brickell areas. The system includes three loops, 21 stations, and 29 APM vehicles.

IndyGo board awards two contracts to deliver Purple Line BRT project, US

The Indianapolis Public Transportation Corporation (IndyGo) board has awarded two contracts worth a combined USD113.8 million to deliver the Purple Line bus rapid transit (BRT) project.

The board has awarded a USD95.6 million contract to Crider & Crider to perform the civil works package. The scope of work includes civil works, such as development of roads, drainage system, and sidewalks.

The board has also awarded a second contract worth USD18.2 million to F.A. Wilhelm Construction Co. for the communications package, which also includes construction of stations.

The construction of the USD188 million Purple Line BRT project is expected to commence in early 2022.

The line will span 24.46 km between Indianapolis and Lawrence, covering 31 stops.

MTA approves contract for Penn Station Access Project, US

The Metropolitan Transportation Authority has approved a USD1.8 billion design–build contract for the Penn Station Access Project, which will provide direct Metro-North Railroad service from the Bronx, Westchester, and Connecticut to Penn Station and Manhattan’s west side. The contract will be awarded to Halmar International, LLC/RailWorks, Joint Venture (JV).

The USD2.87 billion project is expected to be completed in 2027.

Latin America

Alstom secures rolling stock contract for Santiago Metro Line 7, Chile

Alstom has secured a contract worth USD395 million to supply trains for Santiago Metro Line 7. Scope of contract involves...
the supply of trains and installation of the automatic driving system, which is valued at USD315.7 million, while the 20 year maintenance contract is valued at USD79.3 million.

The new trains will be manufactured in São Paulo, Brazil and imported to Chile and will have a capacity to carry 1,250 passengers each.

A total of 37 trains will be manufactured, each consisting of five cars and will be 102 meters long and 2.85 meters wide. Further, the trains will be equipped with CCTV cameras, information screens, emergency evacuation doors, smoke detection system, twenty intercoms, five air conditioning units and twenty route maps. The fleet is expected to be delivered by 2025-2026.

**Multiple contracts awarded for Panama Metro Line 1**

Secretaría del Metro de Panamá (SMP)/ Panamá Metro has awarded two separate contracts for the extension of Panama Metro Line 1 to Villa Zaíta.

The consortium of Alstom, Sofratesa, and Thales Six GTS has secured a contract worth USD31.3 million for the supply and installation of the signaling and remote-control system, while Celmec has secured an energy systems contract worth USD5.9 million.

In addition to these contracts, the TCP Rail Incorporated–SGT Villa Zaíta consortium had already secured the supply of the railway and telecommunications systems for USD13.9 million dollars and USD6.1 million dollars, respectively.

These works will complement the civil works of the viaduct being built by the companies OHL and Mota Engil, at a cost of USD177 million.

The total investment budget of Panama Metro for 2021 was USD147 million out of which USD16.9 million has been allocated for the expansion of Line 1.

**Asia Pacific**

**East Japan Railway and Seibu Holdings consortium to develop MaaS solution, Japan**

A consortium of East Japan Railway and Seibu Holdings has announced plans to develop a regional and tourism-based mobility-as-a-service (MaaS) solution called ‘Kaiyu Karuizawa’ to be deployed in Karuizawa-machi, Nagano.

It is a web service that will enable on-demand transportation and the use and settlement of various electronic tickets with a smartphone.

The service period is expected to extend from January 15, 2022 to March 31, 2022. The consortium will collaborate with local governments and with transportation and tourism companies to deploy the service.

**Singapore’s LTA awards construction contract worth USD571.51 million to construct CRL Phase I tunnels**

Singapore’s Land Transport Authority (LTA) has awarded a civil contract worth USD571.51 million to a joint venture (JV) of Shanghai Tunnel Engineering Private Limited and LT Sambo for the construction of CRL Phase I tunnels.

The scope of the work includes the design and construction of tunnels between Aviation Park Station and Changi East Depot as part of the Cross Island Line Phase I. The tunnels will span 6 km and will be built under Aviation Park Road at around 20 metres below ground level.

Work on the project is expected to commence by the end of 2021. Passenger services are expected to begin by 2030.

The Cross Island Line is Singapore’s eighth MRT line. Phase 1 will span 29 km and cover 12 stations. Line 1 will connect Aviation Park to Brighton Hill.

**Malaysia Airports awards KLIA Aerotrain contract to Pestech**

Malaysia Airports Holdings Bhd (MAHB) has awarded a USD177.57 million contract to Pestech International Bhd for the construction and delivery of a new automated people mover (APM) at Kuala Lumpur International Airport (KLIA).

The scope of the contract includes the design, supply, deployment, testing, and commissioning of the aerotrain project.

Pestech, in collaboration with Bombardier Transportation, will commence work on the project from March 2022. Under the project, APM vehicles will be replaced, along with communication, signalling systems, and APM equipment. The firm will also be responsible for the supply of power, maintenance facilities and equipment, and more.

Additionally, the new aerotains will be enhanced in terms of security, comfort, appearance, energy consumption, diagnostics, etc.

**DMRC awards contracts for Patna Metro Rail Project, India**

The Delhi Metro Rail Corporation (DMRC) has awarded Larsen & Toubro (L&T) and the YFC–MCL joint venture (JV) two major civil construction contracts for Patna Metro’s Phase-1 project. L&T has secured a contract for the Rajendra Nagar–Patna Junction Railway Station section on Line-2.
The 8-km section will cover six underground stations. The scope of the contract involves the design and construction of twin tunnels through shield tunnel boring machines (TBMs), an underground ramp at Rajendra Nagar, and six underground metro stations (Rajendra Nagar, Moin Ul Haq Stadium, University, PMCH, Gandhi Maidan, and Akashvani) with entry/exits and connecting subway.

The contract also entails undertaking architectural finishing, installing water supply, and constructing drainage works on the New ISBT-to-Patna Station section of the line.

The YFC–MCL JV will construct Line-1’s Danapur-Patliputra ramp section and the 4-km Mithapur Ramp–Khemni Chak section that will cover seven elevated stations.

The scope of the contract involves part design and construction of elevated viaducts, elevated ramps at Mithapur and Patliputra, and seven elevated stations, that is, at Danapur, Saguna More, RPS More, Patliputra, Mithapur, Ramkrishna Nagar, and Jaganpura Station, of Line-1 of Phase-I of the project.

Line-1 of Patna Metro will span 16.86 km and will connect Danapur Cantonment to Khemni Chak through 14 metro stations at Danapur Cantonment, Saguna More, RPS More, Patliputra, Rukanpura, Raja Bazar, Patna Zoo, Vikas Bhawan, Vidyut Bhawan, Patna Railway Junction, Mithapur, Ramkrishna Nagar, Jaganpura, and Khemni Chak.

Line-2 of Patna Metro will span 14.05 km and will connect Patna Railway Junction to New ISBT through 12 stations at Patna Railway Junction, Akashvani, Gandhi Maidan, PMCH, Patna University, Moin Ul Haq Stadium, Rajendra Nagar, Malahi Pakri, Khemni Chak, Bhoothnath, Zero Mile, and New ISBT.

GR Infraprojects secures contract worth INR5.93 billion for Noida Metro Extension, India

Noida Metro Rail Corporation (NMRC) Limited has awarded a construction contract worth INR5.93 billion to GR Infraprojects. The contract involves the construction of a 9.6-km extension of Noida Metro’s Aqua Line from Noida Sector-51 to Greater Noida Sector-2.

The scope of the contract involves the part design and construction of elevated viaducts and of five elevated stations at Noida Sector-122, Noida Sector-123, Greater Noida Sector-4, Ecotech-12 (Tech Zone), and Greater Noida Sector-2.

(1 INR [Indian Rupee] = USD0.013)

Tata Motors delivers 60 electric buses to AJL; Jammu to introduce e-buses soon, India

Ahmedabad Jamnagar Limited (AJL) has received 60 hi-tech electric buses from Tata Motors. The buses in the delivered fleet comprise Tata Ultra Urban 9/9 AC buses with a capacity of 24 seated passengers. The buses feature zero-emissions technology. They have been supplied under the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II) initiative through a gross cost contract (GCC) with AJL.

The buses are equipped with a fully electric drivetrain and can deliver 328 hp of maximum power and 3,000 Nm of maximum torque.

They also feature a regenerative braking system, new-generation telematics, and a high-security intelligent transport system, which are all designed to offer smooth and efficient operations.

Tata’s Ultra Urban electric buses will run on Ahmedabad’s bus rapid transit system (BRTS) corridor.

The company will also set up the required charging infrastructure and support systems to ensure the smooth functioning of these buses.

Further, the Jammu transport sector authorities have announced plans to introduce 150–200 e-buses under the second phase of the FAME II initiative for the promotion of electric vehicles.

The addition of the 150–200 e-buses will facilitate safer, greener, and more reliable transportation for the public.

A fleet of two buses from Olectra Greentech will be deployed on a trial basis, one each in Jammu and Srinagar. Based on the results of the trial operations, the government will decide the future course of action regarding inter-city and intra-city transport operations.

Ardanuy Padeco JV secures consultancy contract for Bangalore Metro, India

Bangalore Metro Rail Corporation Limited (BMRCL) has awarded a consultancy contract for the design of two metro stations to a joint venture (JV) of Ardanuy Ingeniería and Padeco.

The scope of work includes consultation for the design of the Doddajala airport subway station and the undertaking of remodelling works for the Baiyappanahalli station. Both stations are part of Phase 2 of the project, involving an estimated investment of INR394 million. The expected duration of the work is 36 months.

(1 INR [Indian Rupee] = USD0.013)

L&T secures Mumbai–Ahmedabad HSR construction contract, India

The National High Speed Rail Corporation Limited (NHSRCL) has awarded the contract for the construction of an 8.19-km viaduct of the 508.17-km Mumbai–Ahmedabad high speed rail (HSR) project. Package 5 connects the main line within Vadodara city and is the second shortest of the five packages that will be implemented
within Gujarat. It will become Gujarat’s fifth and final section to head into the construction stage by mid-2022.

The scope of the contract includes design and construction of civil and buildings works, including the testing and commissioning on a design build (DB) lump sum price basis for the double-line HSR stretch, constructing Vadodara station, viaducts and bridges, crossing bridges, and allied works of the project. The works are expected to be completed within four years from the date of issuance of the letter of acceptance (LoA).

BEML and RITES to collaborate for metro projects, India

Bharat Earth Movers Limited (BEML) and Rail India Technical and Economic Service (RITES) have signed a memorandum of understanding (MoU) to collaborate and jointly bid for tenders of metro systems and export of rolling stock.

As part of the MoU, RITES will provide expertise in design, engineering, marketing, and any other support that may be required for tapping domestic and overseas opportunities, while BEML will be responsible for the manufacturing of customised metro coaches and rolling stock.

The collaboration will enable BEML and RITES to jointly bid for projects and to provide the entire spectrum of services, ranging from design and manufacture to operations and maintenance, for existing and upcoming metro systems, as well as export of rolling stock and related services.

Cashfree Payments launches QR code-based payment facility on Mumbai Metro Line-1, India

Cashfree Payments has launched a QR code-based payment facility, in collaboration with Mumbai Metro One Private Limited (MMOPL), to allow commuters to purchase tickets or recharge their cards contact-free on Mumbai Metro Line 1.

The facility will be available on all 12 stations. Passengers can use a UPI platform of their liking such as WhatsApp, GPay, BKIM, or PhonePe, to scan Cashfree Payments’ QR code and process the payment.

The newly deployed payment system will minimise human touchpoints by reducing check-ins and transit time at ticket counters, thereby making the metro journey more seamless and efficient. Mumbai Metro Line 1 spans 11.4 km and connects Versova to Ghatkopar, reducing the end-to-end journey time from 90 minutes to 21 minutes.

Contracts awarded for metro projects in Delhi and Bangalore, India

Bangalore Metro Rail Corporation Limited (BMRCL) has awarded Rail India Technical and Economic Service (RITES) Limited a consultancy contract worth INR200.58 million for Bangalore Metro’s 56-km Line 5 (Blue Line).

The scope of the contract includes providing limited project management consultancy (Designated Engineer) services for the civil construction works of the metro corridor from Central Silk Board Junction to Kempegowda International Airport. The line is a part of Phase 2A (ORR Line) and Phase 2B (Airport Line). It will connect Silkboard – KR Puram – Bengaluru International Airport through 30 stations.

Further, Delhi Metro Rail Corporation (DMRC) Limited has awarded an underground civil contract worth INR17.79 billion to Afcons Infrastructure Limited.

The contract involves the construction of a 6.51-km section with twin tunnels. The Delhi Metro Silver Line will span 23.63 km and connect Tughlakabad to Delhi Aerocity, covering 15 stations (four elevated and 11 underground).

The scope of work includes design and construction of twin tunnels by shield tunnel boring machine (TBM), cut and cover tunnel box, construction of an underground ramp and four underground stations (Chhattarpur, Chhattarpur Mandir, IGNOU, and Neb Sarai) with entries/ exits and connecting subways. The works of the new corridor are expected to be completed by 2025.

(1 INR [Indian Rupee] = USD0.013)

URC Construction secures contract for Chennai Metro depot, India

The Chennai Metro Rail Corporation Limited (CMRCL) has awarded the civil construction contract for the Madhavaram depot to URC Construction. The depot will house a majority of the trains that will run under the Phase II project. It will be constructed on 27.8 hectares of land and will be bigger than the facility at Koyambedu.

The Madhavaram depot will be equipped with facilities essential for stabilising lines and inspection lines. It will also have a workshop for overhauling and for carrying out major repairs of trains and wheel profiling.

Translink secures GAD contract for 2,365 km of HSR lines, India

The National High Speed Rail Corporation Limited (NHSRCL) has awarded the general arrangement drawings (GAD) contract to Translink for developing detailed project reports (DPRs) for new high-speed rail (HSR) lines in India, which will together span 2,365 km.

The contract relates to four proposed high-speed rail lines for which various surveying works are currently underway. These are the Delhi–Amritsar HSR corridor (approximately 459 km), the Mumbai–Hyderabad HSR corridor (approximately 711 km), the
Chennai–Mysore HSR corridor (approximately 435 km), and the Varanasi–Howrah HSR corridor (approximately 760 km).

The scope of the contract includes the preparation of general arrangement drawings (GADs) of crossing bridges over rivers/canals/railways and roads, and GADs of proposed stations and maintenance depots for the detailed project report (DPRs) of various HSR corridors.

Tata–Siemens JV secures corridor contract for Pune Metro, India

A joint venture (JV) of TRIL Urban Transport Private Limited (a Tata Group Company) and Siemens Project Ventures GmbH (a subsidiary of Siemens Financial Services) has secured a contract to implement the corridor from Hinjewadi to Shivajinagar for Pune Metro on a public-private partnership basis. The corridor will span 23.3 km and cover 23 stations. The joint venture has formed a special purpose company called Pune IT City Metro Rail Limited for implementing the project.

A consortium of Siemens AG, Siemens Mobility GmbH, Siemens Limited, and Alstom Transport India Limited has secured the contract for the electrical and mechanical system works of the project awarded by Pune IT City Metro Rail Limited. Siemens Limited is a part of the consortium that will provide project management services, turnkey electrification services, signalling system, communications system, and depot works (equipment). The estimated cost of the contract is INR9 billion.

It will be the first metro project in India under the New Metro Rail Policy.

Bids submitted for Mumbai–Ahmedabad HSR track work, India

The National High Speed Rail Corporation Limited (NHSRCL) has received four bids to design, manufacture, and install tracks of the 508.17-km Mumbai–Ahmedabad High Speed Rail (MAHSR Bullet Train) project. Package T-3 spans 116.17 km, connecting Vadodara to Sabarmati Depot.

The companies interested in the HSR tender are IRCON International, Larsen & Toubro (L&T), NCC, and Tata Projects Limited (TPL). The scope of the contract includes design, supply, and construction of tracks and related works, including testing and commissioning on a design-build lump sum price basis of the line between Vadodara and Sabarmati Depot.

Ghella–CPB JV secures AUD1.8 billion contract for Sydney Metro, Australia

The government of New South Wales (NSW) has awarded a tunneling works and boxes contract for Sydney Metro's Western Sydney Airport station to a joint venture (JV) of Ghella and CIMIC Group's CPB Contractors. The estimated value of the contract is USD1.8 billion. It will be funded by the Australian and NSW governments.

The contract is also estimated to generate a revenue of USD450 million for Ghella. The scope of the contract includes the design and construction of approximately 9.8 km of twin tunnels; excavations for the stations at St Marys, Orchard Hills, Airport Terminal Station, Aerotropolis Station; and excavations for service facilities at Bringelly and Claremont Meadows.

Preparatory works for the tunnel will get underway by early 2023, while major works will commence in the upcoming months after the establishment of the site.

The new metro line will run from St Marys through the Western Sydney International (Nancy-Bird Walton) Airport to the Western Sydney Aerotropolis.

(1AUD [Australian Dollar] = 0.72USD)

ADL and Kiwi Bus Builders deliver first fleet of electric buses to Howick and Eastern, New Zealand

Alexander Dennis Limited (ADL) and Kiwi Bus Builders have completed the delivery of the first fleet of extra-large electric buses for Howick & Eastern by Transdev, part of Transdev Australasia. A pair of BYD ADL Enviro200EV XLB buses will be deployed on Auckland Transport services and will have a capacity to carry 75 passengers each.

They are the first electric buses to have been assembled in New Zealand as part of the renewed partnership between ADL and Kiwi Bus Builders. New Zealand is preparing to fully transition its bus fleet to zero-emission vehicles by 2035 as part of a wider set of measures intended to help meet the country's 2050 carbon-neutral target.

Europe

Hitachi–Alstom JV to design, build, and maintain train fleet for HS2 Phase 1, UK

The Hitachi–Alstom joint venture (JV) has secured a GBP1.9 billion contract to design, build, and maintain 54 eight-car trains for the HS2 Phase 1 between London, the West Midlands, and Crewe.

The trains will have a lightweight and aerodynamic design, as well as energy efficiency traction technology. The regenerative braking system will also enable the trains to be energy efficient by returning electricity back to the national grid. The trains will be 15 per cent lighter than the Italian ETR1000 trains built by the JV.

The 200-metre-long trains will be able to operate at speeds of up to 360 km/hr. They will have the capacity to carry 500 passengers. Further, two units can be coupled to carry 1,100 passengers.
The trains will be equipped with high-capacity wireless internet and a digital seat reservation system. Travel information will be delivered through multiple channels. The trains will be future-proofed to adapt to technological advances. The first train is scheduled to be completed in 2027. The trains are expected to be operational between 2029 and 2033 after the testing and commissioning process has been completed.

The 12-year maintenance contract will include an option to extend the period to cover the estimated 35-year life of the rolling stock. The fleet will be maintained at the depot that is currently under construction at Washwood Heath in Birmingham.

(1 GBP [Great British Pound] = USD1.32)

**Cordel Group to deliver SaaS platform to Network Rail, UK**

Cordel Group has secured a EUR3.2 million contract from Network Rail to replace the National Gauging Database (NGD) in the UK with a new Railway Gauging Data Solution (RGDS). It will deliver a Software-as-a-Service (SaaS) platform to store and process the gauge and clearance information for 32,186.88 km of track; 30,000 bridges; tunnels; viaducts; signals; level crossings; and over 2,500 railway stations. The contract term will be six and a half years, with an option to extend the contract to eight and a half years. Cordel Group will deliver the platform in January 2022.

(1 EUR [Euro] = USD1.13)

**RATP Dev London and Tower Transit form JV to operate buses in London, UK**

RATP Dev London and Tower Transit have formed a joint venture (JV) which will operate under the name RATP Dev Transit London. The JV will help the two firms lower their costs, obtain more investments, adapt to market conditions, invest in new technology, achieve sustainability targets, and improve their competitive position in London. The JV will operate 1,250 buses that will be deployed on 112 bus routes. The bus fleet will consist of 300 fully electric buses.

**Alstom to supply electric trains for DART network, Ireland**

Alstom has signed a ten-year framework agreement with Irish Rail/Iarnród Éireann to supply 750 X’trapolis rail cars and battery trains for the DART network, with an initial firm order for 19 five-car trains worth EUR 270 million. The scope of the agreement also includes the delivery of support services such as providing technical support and spares; and deploying Alstom’s HealthHub and TrainScanner technologies for predictive maintenance for a period of 15 years.

The initial order will include six five-car electric multiple units (EMUs) and 13 five-car battery-electric multiple units (BEMUs).

The 82-metre-long trains will be able to operate 80 km outside the electrified network under battery power and will be able to recover braking energy while the train is in motion. The batteries will be recharged at chosen terminus locations which will enable the network to be emission-free prior to the complete electrification of the DART network.

The trains will have the capacity to carry 550 passengers. The trains will be equipped with cycle and family areas; charging facilities for mobile phones, e-bikes, and e-scooters; CCTV systems throughout the train; and walk-through gangways, low-level floors, and an automatic retractable step to maximise accessibility.

The battery-electric carriages will be deployed on the Drogheda-to-Dublin Northern Commuter services. The electric rail cars will enter operation on the existing Malahide/Howth-to-Bray/Greystones DART service.

The Irish government had allocated EUR318 million for the initial order. The initial order costs will also include design costs which will not be incurred for subsequent orders for additional trains under the framework agreement. Future orders are expected to cost 50 per cent of the original order.

(1 EUR [Euro] = USD1.13)

**UTE consortium to supply telecommunications and energy systems for Madrid–Seville HSR, Spain**

The Temporary Union of Companies (UTE) consortium, comprising Sistemas y Montajes Industriales and Sistem Security Check, has secured a EUR68.37 million four-year contract to provide the telecommunications and energy systems on the Madrid–Seville high-speed (HSR) line from Administrador de Infraestructuras Ferroviarias (ADIF).

The contract will cover the renovation of the facilities; increasing the line capacity; improving the reliability of rail facilities; and the rationalisation and optimisation of rail operations according to the needs of the operators. Fibre optic cables will be installed along the entire route.

The platform between Madrid and Seville will be equipped with 750 volt alternating current (AC) power cable on both sides to double the current supply. Further, the consortium will improve the power supply for the signalling and communications equipment. It will replace the power panels, transformers, uninterruptible power supplies, and batteries on the route.

The European Rail Traffic Management System (ERTMS) Level 2 will be deployed on the Madrid–Seville route in two phases, in coordination with the installation of the GSM-R communication system, the fibre optic cable, and the 750 volt power lines. The European Union will support the project through the NextGenerationEU (NGEU) package.
CaetanoBus delivers hydrogen buses to TMB, Spain

CaetanoBus has delivered eight hydrogen fuel cell buses to Transports Metropolitans de Barcelona (TMB). The 12-metre-long buses are equipped with Toyota’s 60kW fuel cell, five 37.5 kg capacity Type 4 hydrogen tanks, a Siemens traction motor with a maximum output of 180 kW, and a Siemens ELFA 2 voltage inverter.

The buses have LTO lithium-ion technology batteries with a capacity of 44 kWh to store the energy generated by the fuel cell and the regenerative braking system. The buses will undergo passenger-free testing before they are deployed by TMB in Barcelona in 2022.

Madrid Municipality awards construction contract for Madrid Metro Line 3 extension, Spain

The Azvi-Cotodisa Obras and Servicio-Obras Subterráneas joint venture (JV) has secured a EUR91.9 million contract from the Madrid Municipality to provide construction services for the 3.2-km-long Madrid Metro Line 3 extension from Villaverde Alto to El Casar in Getafe.

The contract period will be 22 months. The station in El Casar will be an interchange for Metro Line 12 and Cercanías Line C-3 (Renfe suburban rail).

(1 EUR [Euro] = USD1.13)

Thales to replace electronic interlockings and track circuits on Madrid–Seville HSR, Spain

Thales has secured two contracts to modernise the Madrid–Seville High-Speed (HSR) line.

The first contract will cover the replacement of the electronic interlockings on the route with a combination of the management of the current train protection system (LZB) and the new European Rail Traffic Management System (ERTMS) Level-2 solution. Additionally, the contract will include the upgrade of the copper networks for the systems that spot fallen objects on the lines. The estimated total value of the contract is EUR80 million, which will be financed by European Union (EU) reserves.

The second contract will cover the replacement of the existing track circuits with Thales’ TTC track circuit on the HSR line. The new track circuits will enable the deployment of 16 units on each frame.

Trial operations on the track circuit have been conducted on UIC track gauges (standard: 1,435mm), Iberian (1,668 mm), and metric, and with high-speed overhead voltage (25 KVcc), conventional (3 KVcc), and metric (1.5 KVcc). The track circuits will eliminate the requirement of space in the technical rooms. The available space will be used for the placement of the new ERTMS interlockings and equipment. The estimated value of the contract is EUR18 million.

(1 EUR [Euro] = USD1.13)

Alstom to supply trains to Transdev and SNCB

Alstom has secured a EUR250 million contract from Transdev to supply 16 eight-car Omneo Premium trains for deployment on the Marseille–Toulon–Nice Line.

The Omneo Premium trains will be equipped with 12 bicycle spaces per train, video surveillance, a passenger counting system, Wi-Fi, passenger information displays, USB charging, air conditioning, and wide seats. They will include multi-purpose areas for bicycles, scooters, and luggage. The 110-metre-long double-decker trains will have the capacity to carry 352 seated passengers, which can be further extended for short journeys with the inclusion of 66 folding seats. The scope of the contract includes a 10-year maintenance contract for the 16 trains, which includes maintenance engineering, the supply of spare parts, and the overhaul of the main components (including bogies, engines, and pantographs). Alstom is scheduled to complete the delivery of the trains by end-2024. Transdev will deploy the trains on the Marseille–Toulon–Nice Line in 2025.

Further, Alstom has secured a EUR268 million contract for the supply of 98 M7 train cars from Société Nationale des Chemins de Fer Belges (SNCB) in accordance with the framework agreement for 1,362 M7 train cars signed in 2015. The double-decker M7 trains will operate at speeds of up to 200 km/hr. They will be deployed on Belgium’s electrified rail network and on cross-border lines into the Netherlands and Luxembourg.

(1 EUR [Euro] = USD1.13)

Stadler to supply trams to ViP, Germany

Stadler has secured a contract to supply 10 Tramlink trams to ViP Verkehrsbetrieb Potsdam GmbH (ViP), the transport operator in Potsdam. The scope of the contract includes delivery of spare parts and provision of maintenance services for 10 years. The contract includes an option to order an additional 15 trams and to provide an additional six years of maintenance.

The 42-metre-long low-floor trams will have the capacity to carry 246 passengers (including 74 seated). They will be equipped with step-free access, parent-child seats, two wheelchair spaces, and four multifunctional areas with space for pushchairs.

The Potsdam City Council has signed a financing agreement for EUR60.8 million with ViP for procurement, with an option to fund the procurement of an additional three trams.

(1 EUR [Euro] = USD1.13)
**Mercedes-Benz to supply hybrid buses to BSAG, Germany**

Mercedes-Benz has secured an order for 15 Mercedes-Benz eCitaro and 24 Citaro G hybrid buses from Bremer Straßenbahn AG (BSAG). The eCitaro buses will be equipped with a battery capacity of 441 kWh and will have charging sockets on both sides. The 24 Citaro G hybrid buses will be fuel-efficient and low-emission articulated vehicles. The additional 15 eCitaro buses are scheduled to be delivered in 2022.

**Siemens Mobility to install CBTC system on Frankfurt metro and tram network; and Oslo T-Bane Metro**

Siemens Mobility has secured a contract from Stadtwerke Verkehrsgesellschaft Frankfurt am Main mbH (VGF) to install a new digital train control (DTC) system for its metro and tram network in Frankfurt.

The communication based train control (CBTC) system will provide real-time information about the digitally and wirelessly linked metros and trams. The control system will help trains operate at shorter intervals, which will allow more trains to operate on a route. Further, the system will reduce maintenance costs, increase efficiency, and ensure punctuality and reliability. VGF will be able to achieve up to 20 per cent energy savings and provide travellers comfort through gentler acceleration and braking. Wear and tear on trains and rails will also be reduced.

Siemens Mobility will convert all nine lines of Frankfurt’s metro system to a CBTC system by 2031. The system will first be replaced on Metro Lines U4 and U5, including the U5 extension to the Europaviertel. Additionally, VGF has announced plans to use the new control system to increase the capacity by up to 25 per cent on Lines U1, U2, U3, and U8 without expanding or constructing new lines.

Further, Siemens Mobility has secured a EUR240 million contract to install a CBTC on the 94-km five-line Oslo T-Bane metro network from Sporveien, the transport operator in Oslo. The scope of the contract will also include maintenance services for 25 years.

The control system will increase operational efficiency, reduce delays, provide updated passenger information, and optimise maintenance.

**Solaris to supply hydrogen buses to Villach, Austria**

Solaris has secured an order from ÖBB Postbus to supply five Urbino 12 hydrogen buses for deployment in Villach. The buses will be emission-free and will be able to travel 350 km on a single tank. The order is scheduled to be delivered by the end of November 2022. The order was exercised as part of the framework agreement signed by Solaris and ÖBB Postbus in early 2021 for the purchase of 40 hydrogen buses by December 2023.

The procurement is part of the H2 Carinthia project which aims to promote the development of hydrogen technology in the Carinthian Alps.

**Siemens Mobility to supply multisystem locomotives to Akiem**

Siemens Mobility has signed a framework agreement to supply 30 Vectron multisystem cross-border locomotives to Akiem, a rolling stock-leasing company.

The locomotives will be able to operate at speeds of up to 200 km/hr. They have a maximum power output of 6.4 MW. They will be equipped with the national train control system and the European Train Control System (ETCS). The trains will be deployed on the rail corridors in Scandinavia, Italy, and in Central and South-Eastern Europe.

Siemens Mobility has secured the order as part of a framework purchase agreement with Akiem for locomotives, ancillary equipment, and services that was signed in August 2021.

**Thales to supply generic axle counter system for ProRail, Netherlands**

Thales has secured a EUR100 million contract to supply the generic axle counter system for
European Rail Traffic Management System (ERTMS)-equipped railway lines to ProRail, the railway network infrastructure manager in the Netherlands.

ProRail has announced plans to replace the current Automatische TreinBeïnvloeding (ATB) train protection system with the digital signalling system ERTMS. ERTMS will require the installation of a new axle counter system for a modern form of train detection.

The axle counter system will count the number of wheel axles of trains entering and leaving a section to help operators determine if trains are present in a section. Thales will deliver the axle-counting system for 600 km of track until 2032. Thales will also provide 25 years of maintenance services following the completion of the delivery.

ProRail will deploy ERTMS on the Kijfhoek–Roosendaal–Belgian border section, the Hoofddorp–Duivendrecht section, the Roosendaal–Hertogenbosch section, the Lelystad–Weesp–Duivendrecht section, the Amsterdam–Weesp–Hilversum section, the Meteren–Eindhoven section, and the Eindhoven–Venlo–German border section after the successful completion of trial operations on the Hanzelijn route and the Lelystad railway yard. ERTMS has been installed on the Amsterdam–Utrecht, Hanzelijn, and Betuweroute sections. The installation of ERTMS is scheduled to be fully completed in 2030.

(1 EUR [Euro] = USD1.13)

**TSA to design and manufacture energy-optimised traction motors for CAF, Sweden**

Traktionssysteme Austria (TSA) has secured a contract to design and manufacture traction motors for 28 regional trains for Construcciones y Auxiliar de Ferrocarriles (CAF). The traction motors will have an energy-optimised design to facilitate operation of trains in extreme weather conditions.

CAF will use the traction motors to fulfil its EUR250 million contract to manufacture and supply 20 four-car electric multiple units (EMUs) and eight biodiesel–electric bimodal units (BMUs) to AB Transitio in Sweden. The contract signed between CAF and AB Transitio includes the option for additional orders for 19 EMUs and seven BMUs. The trains will be deployed in Jönköping County, Kalmar County, Kronoberg and in Blekinge in Sweden. The trains will initially begin operations on the Krösatågen rail in southern Sweden and on the Kustpilen rail routes. CAF is scheduled to complete the first delivery to AB Transitio by end-2022.

(1 EUR [Euro] = USD1.13)

**BYD delivers electric buses to Bergkvarabuss, Sweden**

China-based Build Your Dream (BYD) has completed its initial delivery of 45 BYD electric buses to Bergkvarabuss as per its contract secured in May 2021 to supply 79 buses.

The 40-foot-long buses will be equipped with BYD’s iron-phosphate battery technology, which will provide a long driving range. They will have a battery thermal management system to provide an enhanced battery life and to optimise safety. The buses will be equipped with a 6-in-1 controller, which will integrate the bus’s primary electronic components.

The BYD buses will be deployed in Ängelholm, Malmö, Trelleborg, Ystad, Simrishamn, and Sjöbo in the Skane region.

**Kempower to supply electric bus fleet charging solutions to Gothenburg, Sweden**

Kempower has secured an order from Keolis to supply electric bus fleet charging solutions to Gothenburg. The order will cover the delivery of 70 fast chargers, including Kempower S-Series and C-Series fast charging systems.

The procurement will help Västrafik, the public transport service provider in Sweden, to achieve its goal of electrifying all the traffic in Gothenburg by 2030. The city will deploy 60 electric buses by end-2022. Wennstrom Sweden will also commission bus depots with the Kempower charging solutions in 2022. The bus depots will be operated by Keolis Sweden.

**Solaris to supply hydrogen buses to Ústí nad Labem, Czech Republic**

Solaris has signed a framework agreement with the Ústí nad Labem municipality to supply 20 hydrogen-powered Urbino 12 buses. The Urbino 12 buses will have two electric motors, each with an output of 125 kW; 70 kW fuel cell modules; a small battery; and five hydrogen tanks with a total capacity of 1,560 litres. The buses will be equipped with a passenger-counting system, a system for the visually impaired, USB charging sockets, and air-conditioning with a CO₂ heat pump.

The framework agreement will be valid for eight years. Solaris will have to deliver the buses within 420 days after the order has been initiated.

**Skoda to supply EMUs to CD, Czech Republic**

Škoda Transportation has secured a CZK5 billion contract from Czech Railways/Ceske dráhy (CD) to supply 31 three-car RegioPanter electric multiple units (EMUs). The EMUs will be equipped with the European Train Control System (ETCS); air-conditioning; barrier-free boarding; spaces for prams and bicycles; Wi-Fi; USB ports; and charging sockets for mobile devices and electric wheelchairs. The order is scheduled for delivery in 2024. The trains will be deployed on lines in Prague, and in the Central Bohemia, Ústí nad Labem, and Hradec Králové regions.
PKP awards reconstruction and electrification contract for Elk–Korsze rail route, Poland

December 9, 2021 The consortium of Aldesa Construcciones, Coalvi, and China Civil Engineering Construction Corporation has secured a PLN650 million contract for the reconstruction and electrification of the 100-km Elk–Korsze rail route from PKP Polish Railways.

The scope of work for the 49-km-long section includes track modernisation, electrification, replacement of the railway traffic control devices, construction of two collision-free intersections in Gżycko and Wydminy, reconstruction of 59 engineering structures (bridges, viaducts, and culverts), and reconstruction of 23 rail crossings. The platforms in stations will be raised and equipped with benches, shelters, passenger information systems, and lit objects to meet the needs of disabled people.

The Elk–Korsze project will be implemented under Poland’s 2021–2027 Financial Perspective. The trains will operate at speeds between 80 km/hr and 160 km/hr. The journey time from Olsztyn to Elk will be approximately two hours. The travel time between Białystok, Olsztyn, and the Tri-City will also be shortened. The Elk station will be modernised and used as a connection of the Rail Baltica network.

The Operational Programme Infrastructure and Environment (OPI&E) and the European Union are expected to co-finance the project, which is valued at PLN499 million. Work is expected to commence in 2021 and is scheduled to be completed in 2024.

(1 PLN [Polish Zloty] = USD0.24)

Pesa Bydgoszcz to supply trams to MPK Wrocław, Poland

Pesa Bydgoszcz has secured a PLN204 million contract from Miejskie Przedsiębiorstwo Komunikacyjne (MPK) Wrocław to supply 24 low-floor three-section trams. The contract includes an option for additional orders for 16 trams, which will increase the contract value to PLN337.5 million. The 29-metre-long trams will be manufactured based on Pesa Bydgoszcz’s Twist design. The first vehicle is scheduled to be delivered within 24 months. The order will be completed within 37 months.

(1 PLN [Polish Zloty] = USD0.24)

Solaris Bus & Coach and Skoda Electric consortium to supply trolleybuses to BKK, Hungary

A consortium of Solaris Bus & Coach and Skoda Electric has secured an order from Budapesti Közlekedési Központ Zrt. (BKK) to supply 48 battery-electric trolleybuses. The trolleybuses will belong to the Solaris Trollino series and will be fitted with batteries and electrical equipment supplied by Skoda Electric.

The order will cover delivery of 12 Trollino 12-metre vehicles and 36 Trollino 18-metre vehicles. The 12-metre-long trolleybus will be fitted with a 160 kW motor. The 18-metre articulated trolleybus will be fitted with a 250 kW motor.

The batteries will enable the vehicles to travel a minimum of 4 km without overhead lines. The low-floor trolleybuses will be equipped with air conditioning, a video surveillance system, a reversing camera, LED lighting, and a fire protection system. The trolleybuses are scheduled to be delivered by autumn 2022.

Skoda Transportation to supply trams to DPB, Slovakia

Škoda Transportation has secured two contracts to supply 30 unidirectional and 10 bidirectional trams to Dopravný podnik Bratislava (DPB), the public transport provider in Bratislava. The unidirectional vehicles will have the capacity to carry 207 passengers (including 69 seated). The bidirectional vehicles will have the capacity to carry 204 passengers (including 52 seated). The contracts are estimated at EUR71.7 million and EUR26.5 million respectively. The procurement will be funded partly by DPB with additional contributions from the city government and the European Union.

(1 EUR [Euro] = USD1.13)

Stadler to supply EMUs to ZSSK, Slovakia

Stadler has secured a EUR76.95 million contract to manufacture and deliver four Kiss electric multiple units (EMUs) to Zeleznicna Spolocnost Slovensko (ZSSK), a Slovakia-based passenger railway company.

The 155-metre-long double-decker electric trains will be able to operate at speeds of up to 160 km/hr on batteries powered by an overhead contact line. They will include cameras on the inside and outside of the vehicle and on the roof to observe the pantograph, which will ensure safe rail operation. The trains will have the capacity to carry 30 seated passengers in the first class and 552 seated passengers in the second class. They will be equipped with a heating, ventilation, and air conditioning (HVAC) system for the passenger compartments and driver’s cabs; an energy consumption measuring system; and a precise passenger counting system. Passengers will benefit from a modern passenger information system (PIS); WLAN; a step-free entrance area; toilets for passengers with reduced mobility; and multifunctional compartments offering space for wheelchair users, bicycles, prams, and luggage. Further, drivers will have an ergonomically designed cabin.

The trains will be deployed in the Banská Bystrica, Nitra, Trnava, Trenčín, Bratislava, and Žilina regions. Stadler is scheduled to deliver the EMUs by end-2023.

(1 EUR [Euro] = USD1.13)
NS MHD Petržalka consortium to construct bridges for Bratislava tram line, Slovakia

The NS MHD Petržalka consortium, comprising Aldesa, Cedis, and Hant BA, has secured a EUR74.6 million work package from the Bratislava municipality for the construction of a new tram line. The contract covers the construction of four bridges in Rusovská Cesta, Kutlíkova, Panónska Ceste, and over the Chorvátske canal. The Panónska Ceste trunk road will be rebuilt to improve connectivity and facilitate interchange between the tram route and feeder bus services. The 3.9-km-long tram line will operate from the Route 3 station at Bosáková to Janíkov Dvor, with five stops. The journey time to Šafárikovo Námestie will be 12 minutes. Trams will run every two or three minutes during peak hours. The daily ridership is estimated to be 30,000 passengers per day. The project will be partially financed using European Union (EU) funds.

(1 EUR [Euro] = USD1.13)

Alstom to provide maintenance services for Bucharest Metro, Romania

Alstom has secured a EUR500 million contract from Metrorex to provide maintenance services for the Bucharest Metro fleet. The contract will cover preventive and corrective maintenance services and the overhaul of a fleet of 82 trains. The contract period is 15 years and will be valid till 2036.

(1 EUR [Euro] = USD1.13)

VR Fleetcare to maintain trains operating agreement between Helsinki and St. Petersburg

Finland-based VR FleetCare has signed a 20-year agreement with Russian Railways (RZD) and Karelian Trains to provide maintenance and lifecycle services for Allegro trains operating between Helsinki (Finland) and St. Petersburg (Russia). The agreement covers the maintenance of four seven-car electric trains manufactured by Alstom until the end of their service life at the Helsinki depot in Finland. The maintenance services will include scheduled maintenance and repairs carried out in accordance with the material management and maintenance programme. The contract period will begin in 2022 and will end in 2042.

Metrowagonmash to supply metro cars for Tbilisi Metro, Georgia

Russia-based Metrowagonmash has secured a contract to supply 44 metro cars that will be deployed on the Tbilisi Metro network. The company will deliver eight metro cars by 2022. The remaining 36 vehicles are scheduled to be delivered in 2024.

The fleet procurement is part of the Tbilisi Metro modernisation project. The project will also cover the renovation of the Guramishvili, Station Square, Sarajishvili, Marjanishvili, Freedom Square, 300 Aragveli, Rustaveli, Isani, Tsereteli, and Nadzaladze metro stations. The European Bank for Reconstruction and Development (EBRD) has allocated EUR65 million to finance the project.

(1 EUR [Euro] = USD1.13)

Mosproekt-3 secures contract to expand Nizhny Novgorod Metro’s Avtozavodskaya Line 3, Russia

Russia-based Mosproekt-3 has secured a RUB35.5 billion contract to extend the Nizhny Novgorod Metro’s Avtozavodskaya Line 3 from Gorkovskaya station to Sennaya. The scope of the contract covers design, documentation, and construction services, which include requirements to minimise the impact of construction on surface transport operations. The construction is scheduled to be completed by end-2025. The project will be funded by a government infrastructure loan, of which an initial RUB8.3 billion has been granted.

(1 RUB [Russian Rouble] = USD0.01)

Middle East and Africa

Aramco signs agreement with Gaussin to explore hydrogen-powered vehicle, Saudi Arabia

Aramco has signed an agreement with Gaussin to explore a hydrogen-powered vehicle business. Under the agreement, Aramco and Gaussin aim to establish a modern manufacturing facility for on-road and off-road hydrogen-powered vehicles in the Kingdom of Saudi Arabia. As a first step, Gaussin and Aramco will study the feasibility of setting up a manufacturing facility and a hydrogen distribution business to serve the Middle East region.

The two companies have also agreed that Aramco’s Advanced Innovation Center (LAB7) will be closely involved in Gaussin’s development of hydrogen-powered vehicles and in the development of a remote controlled/autonomous hydrogen racing truck. LAB7 aims to integrate Aramco’s composite materials into Gaussin’s existing range of products to reduce the weight, energy consumption, and cost of these vehicles.

Treepz partners with CMS T&M to provide digital ticketing solutions, Nigeria

Treepz has partnered with CMS Taxi and Motor Nigeria Limited (CMS T&M) in Lagos to provide commuters with convenient and affordable means to access the buses operated by CMS T&M.

Under the partnership, Treepz will provide digital payment options and predictable travel times to passengers using the CMS T&M buses operating in the Central Business District of Lagos, including Marina, Lagos Island, Victoria Island, and the Ikoyi and Lekki areas of Lagos State.♦
North America

Provide on-demand public transit and microtransit services in Placer County, US

Country: United States
Organisation: County of Placer
Description: Request for proposals (RfPs) are issued to appoint qualified mobility service and technology providers to develop and launch a turnkey Software-as-a-Service (SaaS) solution for deploying flexible on-demand public transit services using the agency’s vehicles and drivers. The microtransit service will launch first as a one-year pilot program in one or more zones within the area encompassing the City of Roseville, City of Rocklin, City of Lincoln, Town of Loomis, City of Auburn and unincorporated Placer County communities of Granite Bay and North Auburn. Separate contracts will be awarded per individual agency for an initial term of approximately 3 years, with an option to renew the contract for two additional one-year periods. Further details are available at https://placer.bidsandtenders.net/Module/Tenders/en/Tender/Detail/ea0ac1dd-20d3-416f-be38-5688be71b301
Closing date: January 20, 2022
Contact: Attn.: County of Placer, 11270 B Avenue Auburn, California, USA
Phone: +1 916 408 6000
Website: http://www.placer.ca.gov/

Services to draft active transportation master plan for Rochester, US

Country: United States
Organisation: Genesee Transportation Council (GTC)
Description: Requests for proposals (RfPs) are issued to provide services to draft the active transportation master plan.
Closing date: January 20, 2022
Contact: Attn.: Chris Tortora, 50 West Main Street, Rochester, New York, US
Phone: +1 585 232 6240
Email: ctortora@gtcmpo.org
Website: https://www.gtcmpo.org/

Feasibility study for public transport services in Strathcona, Canada

Country: Canada
Organisation: Strathcona Regional District
Description: Requests for proposals (RfPs) are issued to conduct feasibility study for public transportation services to connect west coast communities with Campbell River. Further details are available at https://srd.ca/bids/rfp-14-21-public-transportation-feasibility-study/
Closing date: January 24, 2022
Contact: Attn.: Tom Yates, 990 Cedar Street, Campbell River, British Columbia, Canada
Phone: +1 250 830 6704
Website: https://srd.ca/

Deployment of farebox media cards for Knoxville area transit, US

Country: United States
Organisation: City of Knoxville
Description: Bids are invited to deploy farebox media cards for Knoxville area Transit. Further details are available at https://bidfortune.com/workspace/bids/itb-farebox-media-cards-for-507155697444196735/
Closing date: January 26, 2022
Contact: Attn.: Karisa Scott, 400 Main St SW, Knoxville Tennessee, US
Phone: +1 865 215 2063
Email: kscott@knoxvilletn.gov
Website: http://www.knoxvilletn.gov/

Supplementary transit services in Tolleson, US

Country: United States
Organisation: City of Tolleson
Description: Request for proposals (RfPs) are issued to provide supplementary transit services to provide technology to replace the current service with a more modern and cost-effective approach. Further details are available at https://www.tolleson.az.gov/DocumentCenter/View/6249/RFP-FO-21-01-Supplementary-Transit-Services?bidId=
Closing date: January 26, 2022
Contact: 9555 West Van Buren Street, Tolleson, Arizona, USA
Phone: +1 623 936 7111
Email: bidquestions@tollesonaz.az.gov
Website: https://www.tolleson.az.gov/

On-call transportation planning services in Bellingham, US

Country: United States
Organisation: Whatcom Transportation Authority
Description: Requests for proposals (RfPs) are invited to provide on-call transportation planning services. Further details are available at https://wta.cobblestone.software/gateway/SolicitationPublicDetails.aspx?rid=UN97eo8FQ%2bpNkmjdpWZKw%3d%3d
Closing date: January 27, 2022
Contact: Attn.: Magan Waltari, 4011 Bakerview Spur Rd., Bellingham, Washington State, USA
Phone: +1 360 788 9332
Email: procurement@ridewta.com
Website: http://www.ridewta.com/

Strategic planning services to update transit plan of Orlando, US

Country: United States
Organisation: Central Florida Regional Transportation Authority
Description: Request for proposals (RfPs) are issued to provide strategic planning services to update transit development plan. Further details are available at https://www.demandstar.com/app/limited/bids/394032/details
Closing date: January 28, 2022
Contact: Attn.: Daniel Santana, 455 North Garland Avenue, 2nd Floor, Orlando, Florida, US  
Phone: +1 407 841 5969  
Email: dsantana@golynx.com  
Website: https://www.golynx.com/

Study of transportation system in Hunterdon County, US
Country: United States  
Organisation: County of Hunterdon  
Description: Bids are invited to conduct study on transportation system of Hunterdon County. Further details are available at https://www.co.hunterdon.nj.us/depts/purchase/purchases.htm#quotes  
Closing date: February 3, 2022  
Contact: Attn.: Raymond E. Rule, 71 Main Street, PO Box 2900, Flemington, New Jersey, USA  
Phone: +1 908 788 1102  
Email: rrule@co.hunterdon.nj.us  
Website: https://www.co.hunterdon.nj.us/

Services for community shuttle Ada in Davie, US
Country: United States  
Organisation: Town of Davie, Florida  
Description: Bids are invited to provide professional services for community shuttle Ada project. Further details are available at https://www.davie-fl.gov/DocumentCenter/View/17144/RFQ-RM-22-19-Professional-Services-for-Community-Shuttle-ADA-Project?bidId=804  
Closing date: February 8, 2022  
Contact: Attn.: Brian O’Connor, 6591 Orange Drive, Davie, Florida, US  
Phone: +1 954 797 1016  
Email: boconnor@davie-fl.gov  
Website: https://www.davie-fl.gov/

Latin America

Develop urban transport system in Ovalle, Chile
Country: Chile  
Organisation: Programa de Vialidad y Transporte Urbano – SECTRA  
Description: Bids are invited to provide a strategic and management plan for the development of an urban transport system (STU) for the city of Ovalle. The scope of work also includes conducting a strategic infrastructure plan which will help to improve the operation of the transport system and an operational improvement plan of the urban public transport system (stp), specifically of the higher public transport that operates in Ovalle.  
Closing date: January 21, 2022  
Contact: Teatinos N950, Floor 16, Región Metropolitana de Santiago, Chile  
Email: sfigueroap@mtt.gob.cl  
Website: https://www.mtt.gob.cl/

Asia

Supply of 75 electric buses in Guwahati, India
Country: India  
Organisation: Guwahati Smart City Ltd.  
Description: Bids are invited to supply 75 AC electric buses. Each bus should be 9 meter long.  
Closing date: January 19, 2022  
Contact: 4th Floor, Aditya Tower, Opp. Down Town Hospital, Down Town, Dispur, Guwahati, India  
Website: https://gscl.assam.gov.in/

Supply of 125 electric buses in Guwahati, India
Country: India  
Organisation: Guwahati Smart City Limited  
Description: Bids are invited to supply 125 AC electric buses. Each bus should be 9 meter long.  
Closing date: January 19, 2022  
Contact: 4th Floor, Aditya Tower, Opp. Down Town Hospital, Down Town, Dispur, Guwahati, India  
Website: https://gscl.assam.gov.in/

Supply of 75 AC electric buses in Guwahati, India
Country: India  
Organisation: Guwahati Smart City Limited  
Description: Bids are invited to supply 75 AC electric buses. Each bus should be 9 meter long.  
Closing date: January 19, 2022  
Contact: 4th Floor, Aditya Tower, Opp. Down Town Hospital, Down Town, Dispur, Guwahati, India  
Website: https://gscl.assam.gov.in/

Supply of 15 electric vehicle buses in Shimla, India
Country: India  
Organisation: Himachal Road Transport Corporation  
Description: Bids are invited to supply 15 electric vehicle buses with chargers. The project also includes providing a comprehensive annual maintenance contract.  
Closing date: January 19, 2021  
Contact: Head Office, Old Bus Stand, Shimla, India  
Website: http://hrtchp.com/hrtc_info/index.html

Installation of AFC system for Delhi Metro station, India
Country: India  
Organisation: Delhi Metro Rail Corporation Limited (DMRC)  
Description: Bids are invited to install, test, commission automatic fare collection (AFC) system of Delhi Metro station. The estimated value of the project is INR200 billion. Further details are available at http://www.delhimitrorail.com/otherdocuments/922/NIT1044-30122021.pdf
Supply of 168 metro cars for Zhengzhou Rail Transit Line 1 Phase I, China

Country: China
Organisation: Guoxin Tendering Group Company Limited
Description: Bids are invited to supply 168 metro cars for Zhengzhou Rail Transit Line 1 Phase I.
Closing date: January 21, 2022
Contact: Attn.: Baiyang Guozhen, 11th Floor, Guoxing Tower No. 22 Shoutianlzu, Haidian District, Beijing, China
Phone: +86 10 88354433
Website: http://www.delhimetrorail.com/

Services to develop TOD development project for Metro Manila, Philippines

Country: Philippines
Organisation: Japan International Cooperation Agency (JICA)
Description: Bids are invited to provide services to prepare Philippines public transport oriented development (TOD) capacity project for Metro Manila Subway and North-South Commuter Railway.
Closing date: January 21, 2022
Contact: Yuchengco Tower, 40th Floor, 6819 Ayala Ave, Makati, 1200 Metro Manila, Philippines
Phone: +63 2 8889 7119
Website: https://www.jica.go.jp/english/

Development of integrated bus terminal and commercial complex at different places in Karnataka, India

Country: India
Organisation: Mangaluru Smart City Limited
Description: Expression of Interest (EOIs) are invited to develop integrated bus terminal and commercial complex at Pumpwell, Mangaluru, Karnataka through public-private partnership (PPP) basis. on Design, Build, Finance, Operate and Transfer (DBFOT) Basis.
Closing date: January 27, 2022
Contact: 2nd Floor, City Corporation, MG Rd, Lalbagh, Mangaluru, Karnataka, India
Website: https://www.mangalurusmartcity.net/

Services to develop a bus terminal cum commercial complex at Ghaziabad, India

Country: India
Organisation: Uttar Pradesh State Road Transport Corporation (UPSRTC)
Description: Bids are invited to provide services to develop a bus terminal cum commercial complex at Ghaziabad.
Closing date: January 28, 2022
Contact: Parivahan Bhawan, 6- M.G. Marg, Varanasi, Uttar Pradesh, India
Phone: +91 9415049606
Website: http://www.upsrtc.com/

Selection of operator for bus transport system in Gwalior, India

Country: India
Organisation: Directorate Urban Administration and Development
Description: Bids are invited to select a bus operator to provide operation and maintenance services for bus transport system in Gwalior smart city on cluster basis.
Closing date: February 2, 2022
Contact: Main Rd 1, Opp Chirtraali, No 6 Locality, Shivaji Nagar, Bhopal, Madhya Pradesh, India
Website: http://www.mpurban.gov.in/

Bus operator to supply and provide O&M of bus transport system in Gwalior, India

Country: India
Organisation: Gwalior Smart City Development Corporation Limited (GSCDCL)
Description: Bids are invited to select a bus operator to supply, operate, and maintain the bus transport system in Gwalior smart city on cluster basis.
Closing date: February 2, 2022
Contact: Nagar Nigam Office, City Centre, Gwalior, Madhya Pradesh, India
Phone: +91 751 2438386
Email: gwaliorsmartcity@gmail.com
Website: http://gwaliorsmartcity.org/

Services to support urban transport policy integration project phase 3 in Jakarta, Indonesia

Country: Indonesia
Organisation: Japan International Cooperation Agency (JICA)
Description: Bids are invited to provide technical assistance services to provide support for the urban transport policy integration project phase 3 of Jakarta in Indonesia.
Closing date: January 21, 2022
Contact: F14 Sentral Senayan II, Jl. Asia Afrika Gelora Bung Karno, No. 8, Gelora, Tanah Abang, 10270 Jakarta Pusat, Indonesia
Phone: +62 21 57952112
Website: https://www.jica.go.jp/english/
Supply of 199 AFCS along with 50 control sets in Nagoya, Japan

**Country:** Japan  
**Organisation:** Nagoya City  
**Description:** Bids are invited to deploy 199 automated fare collection system (AFCS) and 50 sets of control unit.  
**Closing date:** February 2, 2022  
**Contact:** 1-1, Sannomaru 3-chome, Naka-ku, Nagoya, Japan  
**Phone:** +81 52 972 3845  
**Website:** https://www.city.nagoya.jp/en/

**Supply of rolling stock for 78 cars in Chennai Metro Phase II Corridor, India**

**Country:** India  
**Organisation:** Chennai Metro Rail Limited (CMRL)  
**Description:** Bids are invited to design, manufacture, supply, install, test and commission standard gauge metro rolling stock (electrical multiple units) for 78 cars. The scope of work also includes provision of personnel training. Further details are available at https://chennaimetrorail.org/wp-content/uploads/2018/10/NIT-ARE03A-to-be-published.pdf  
**Closing date:** February 16, 2022  
**Contact:** 2nd Floor, Administrative Building, CMRL Depot, Poonamallee High Road, Koyambedu, Chennai, India  
**Website:** https://chennaimetrorail.org/

**Consultancy services for Bhopal Metro rail projects, India**

**Country:** India  
**Organisation:** Madhya Pradesh Metro Rail Corporation Limited (MPMRL)  
**Description:** Bids are invited to provide consultancy services for environmental and social monitoring for Bhopal metro rail project. The duration of the contract is 48 months and the estimated value is INR14.6 billion. The procurement is being funded by The European Investment Bank (EIB). Further details are available at https://bimworx.net/tender/24302767/profile/  
**Closing date:** February 24, 2022  
**Contact:** Attn.: Akhilesh Agrawal, 2nd Floor, Smart City Development Corporation Limited Office Building, Kalibadi Road, BHEL, Sector A, Berkheda, Bhopal, Madhya Pradesh, India  
**Phone:** +91 7552475605  
**Email:** metrorail@mpurban.gov.in  
**Website:** http://www.mpmetrorail.com/

**Supply equipment for bus operation management system in Tokyo Metropolitan, Japan**

**Country:** Japan  
**Organisation:** Tokyo Metropolitan Government  
**Description:** Bids are invited to supply equipment for bus operation management systems for the automobile department.  
**Closing date:** February 28, 2022  
**Contact:** Building No. 2 Main Building 26th Floor Tokyo Metropolitan Bureau of Transportation Asset Management Department Contract Division, Tokyo, Japan  
**Phone:** +81 3 5320 6063  
**Website:** https://www.metro.tokyo.lg.jp/

**Construction services of four underground stations of Chennai Metro Corridor 3, India**

**Country:** India  
**Organisation:** Chennai Metro Rail Limited (CMRL)  
**Description:** Bids are invited to provide services to construct four underground stations of Chennai Metro Corridor 3. The procurement is a part of Chennai Metro Phase II project. Further details are available at https://www.constructionweekonline.in/projects-tenders/cmr invites-bids-for-corridor-3-of-cmr-phase-ii  
**Closing date:** March 15, 2022  
**Contact:** Room No.507, 5th Floor, Administrative Building, CMRL Depot, Poonamallee High Road, Koyambedu, Chennai, India  
**Website:** https://chennaimetrorail.org/

**Construction services of five underground stations of Chennai Metro Corridor 3, India**

**Country:** India  
**Organisation:** Chennai Metro Rail Limited (CMRL)  
**Description:** Bids are invited to provide services to construct five underground stations of Corridor 3 of Chennai Metro. The procurement is a part of Chennai Metro Phase II project and is also being financed by the Japan International Cooperation Agency (JICA). Further details are available at https://chennaimetrorail.org/construction-of-five-underground-stations-at-thapalpettimoolakadai-sembiyam-perambur-market-and-perambur-metro-and-crossover-at-sembiyam-and-works-other-than-diaphragm-wall-of-two-underground-stat/  
**Closing date:** February 21, 2022  
**Contact:** Room No.507, 5th Floor, Administrative Building, CMRL Depot, Poonamallee High Road, Koyambedu, Chennai, India  
**Website:** https://chennaimetrorail.org/

**Europe**

**Supply of eight electric buses and charging stations in Pécs, Hungary**

**Country:** Hungary  
**Organisation:** Tüke Busz Közösségi Közlekedési Zártkörűen Mukődő Rézsvénytársaság
Description: Bids are invited to supply eight low-floor electric buses and eight charging stations. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:642007-2021:TEXT:EN:HTML&src=0
Closing date: January 18, 2022
Contact: Attn.: Sas Viviána 35, Nyugatiipariútút 8., Pécs, Hungary
Phone: +36 30 600 7537
Email: sas.viviana@tukebusz.hu
Website: http://tukebusz.hu/

Supply of three electric buses in Wejherowo, Poland

Country: Poland
Organisation: Miejski Zakład Komunikacji Wejherowo Sp. z o.o.
Description: Bids are invited to supply three city electric buses. Each bus should be 12 meters long Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:676407-2021:TEXT:EN:HTML&src=0
Closing date: January 18, 2022
Contact: Attn.: Marcin Balakowski, Tartaczna 2 2, Wejherowo, Poland
Phone: +48 58 572 2930
Email: zp@mzkwejherowo.pl
Website: www.mzkwejherowo.pl

Supply of seven electric buses in Piotrków Trybunalski, Poland

Country: Poland
Organisation: Miasto Piotrków Trybunalski
Description: Bids are invited to supply seven maxi electric buses. The scope of work also includes the option to supply additional equipment, warranty and post-warranty service. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:639957-2021:TEXT:EN:HTML&src=0
Closing date: January 18, 2022
Contact: Attn.: Anna Januszczak-Deredas, UL. Kasztanowa 31 Piotrków Trybunalski, Poland
Phone: +48 44 733 9257
Email: zp@zdium-piotrkow.pl
Website: http://www.zdium-piotrkow.pl

Supply of six diesel buses in Piotrków Trybunalski, Poland

Country: Poland
Organisation: Miasto Piotrków Trybunalski
Description: Bids are invited to supply six maxi buses fuelled with diesel. The scope of work also includes the option to supply additional equipment, warranty and post-warranty service. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:643862-2021:TEXT:EN:HTML&src=0
Closing date: January 20, 2022
Contact: Attn.: Anna Januszczyk-Deredas, UL. Kasztanowa 31 Piotrków Trybunalski, Poland
Phone: +48 44 733 9257
Email: zp@zdium-piotrkow.pl
Website: http://www.zdium-piotrkow.pl

Services to develop a railway infrastructure in Budapest, Hungary

Country: Hungary
Organisation: NIF Nemzeti Infrastruktúra Fejlesztő Részvénytársaság / NIF National Infrastructure Development Private Limited Company (NIF Zrt.)
Closing date: January 20, 2022
Contact: Attn: Farkas Bálint, Váci út 45., Budapest, Hungary
Phone: +36 1 436 8572
Email: kozbeszerzes@nif.hu
Website: http://www.nif.hu/

Supply of electric buses in Palma de Mallorca, Spain

Country: Spain
Organisation: Consejo de Administración de la Empresa Municipal de Transportes Urbanos de Palma de Mallorca, S.A.
Description: Bids are invited to supply Class I electric buses. Each bus should be of length 12 metres. The project is also being financed with the European Union. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:647963-2021:TEXT:EN:HTML&src=0
Closing date: January 21, 2022
Contact: C / Jos Anselmo Clav, Palma de Mallorca, Illes Balears, Spain
Phone: +34 971 21 4444
Email: emt@palma.es
Website: http://www.emtpalma.cat/en/home

Study to draft sustainable mobility plan for Blaj, Romania

Country: Romania
Organisation: Municipalitul Blaj
Description: Bids are invited to conduct feasibility study to draft the sustainable mobility plan for Blaj Municipality.
Supply passenger information systems at bus stops in Bonn, Germany

Country: Germany
Organisation: Stadtwerke Bonn Verkehrs GmbH (SWBV)
Closing date: January 21, 2022
Contact: Theaterstrasse 24, Bonn, Germany
Phone: +49 228 711 0
Email: tobias.weiser@stadtwerke-bonn.de
Website: https://www.stadtwerke-bonn.de/

Development of a SUMP for Warsaw West area, Poland

Country: Poland
Organisation: Gmina Łomianki
Description: Bids are invited to develop a Sustainable Urban Mobility Plan (SUMP) for the functional area of Warsaw West. The scope of work includes strategic environmental impact assessment and SUMP promotion.
Closing date: January 21, 2022
Contact: Warszawska 115, Łomianki, Poland
Email: um@poczta.lomianki.pl
Website: https://www.lomianki.pl/

Supply of four intercity buses in Funchal, Portugal

Country: Portugal
Organisation: Horários do Funchal Transportes Públicos S.A.
Closing date: January 22, 2022
Contact: Travessa da Fundoa de Baixo n 5, Funchal, Portugal
Email: ccpap@horariosdofunchal.pt
Website: www.horariosdofunchal.pt

Supply of six intercity buses in Funchal, Portugal

Country: Portugal
Organisation: Horários do Funchal Transportes Públicos S.A.
Closing date: January 22, 2022
Contact: Travessa da Fundoa de Baixo n 5, Funchal, Portugal
Email: ccpap@horariosdofunchal.pt
Website: www.horariosdofunchal.pt

Supply of two CNG buses in Wernigerode, Germany

Country: Germany
Organisation: Fahrzeugbeschaffung Harzer Verkehrsbetriebe
Description: Bids are invited to supply two low-floor buses fuelled with compressed natural gases (CNG). Each bus should be 12 meter long. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:664727-2021:TEXT:EN:HTML&src=0
Closing date: January 24, 2022
Contact: Attn.: Beate Angerstein, Dornbergsweeg 7, Wernigerode, Germany
Email: beate.angerstein@hvb-harz.de
Website: http://www.hvb-harz.de/

Preliminary studies for the development of transport infrastructure in Corse, France

Country: France
Organisation: Collectivité de Corse
Description: Bids are invited to conduct preliminary studies and consultancy services to develop transport infrastructure between Vescovato and Cervione.
Closing date: January 24, 2022
Contact: Gran Palazzu - 22, corsu Grandval - 20000 Aiacciu, Rond Point Maréchal Leclerc - Bastia, Corsica, France
Email: correspondre@aws-france.com
Website: https://www.isula.corsica/

PMS for tram and bus turning loop in Schöne-Weid, Germany

Country: Germany
Organisation: Berliner Verkehrsbetriebe (BVG)
Description: Bids are invited to provide project management services (PMS) to construct around the tram and bus turning loop in Schöne-Weide
Closing date: January 24, 2022
Contact: Holzmarktstraße 15-17, Berlin, Germany
Email: Einkauf.SE3@bvg.de
Website: https://vergabekooperation.berlin/

Planning services to construct an electric bus depot in Cologne, Germany

Country: Germany
Organisation: Kölner Verkehrs-Betriebe AG
Description: Bids are invited to draft a plan to construct an electric bus depot. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:664563-2021:TEXT:EN:HTML&src=0
Closing date: January 24, 2022
Contact: Attn: Janine Tessen, Scheidtweilerstraße 38, Cologne, Germany
Phone: +49 221/5473644
Email: Thomas.Nolden@kvb.koeln
Website: https://www.kvb.koeln/
Reconstruction of tram infrastructure in Chorzow, Poland

Country: Poland
Organisation: Tramwaje Śląskie S.A.
Closing date: January 24, 2022
Contact: Attn: Joanna Urych, Ul. Inwalidzka, Chorzów, Poland
Email: j.urych@tram-silesia.pl
Website: http://www.tram-silesia.pl/

Reconstruction of tram track in Riga, Latvia

Country: Latvia
Organisation: Rīgas Satiksme
Description: Bids are invited to reconstruct tram tracks in Riga.
Closing date: January 25, 2022
Contact: Attn.: Alena Kamisarova, Kleistuila 28, Riga, Latvia
Phone: +371 67104791
Email: alena.kamisarova@rigassatiksme.lv
Website: https://www.rigassatiksme.lv/

Supply of 20 ecological buses in Pitesti, Romania

Country: Romania
Organisation: Primaria Municipiul Pitesti
Description: Bids are invited to supply 20 ecological buses. The estimated value of the contract is RON32.85 million (excluding VAT). The project is also being financed by the European Union.
Closing date: January 25, 2022
Contact: Attn.: Daniel Constantinescu, Str. Victoriei nr. 24,Pitesti, JudetulArges, Romania
Phone: +40 248213994
Email: primaria@primariapitesti.ro
Website: http://www.primariapitesti.ro

Repairing services for tram infrastructure in Budapest, Hungary

Country: Hungary
Organisation: Budapesti Közlekedési Zártkörűen Mukődő Részvénytársaság (BKD Zrt.)
Description: Bids are invited to provide services to repair tram infrastructure. The scope of work also includes to provide maintenance and associated services related to tram and other rolling stock equipment.
Closing date: January 26, 2022
Contact: Attn.: Szkely Katalin, AkáciaUtca15., Budapest, Hungary
Phone: +36 14616578
Email: kozbeszerzes@bkv.hu
Website: http://www.bkv.hu/

Supply of eight buses in Zielona Góra, Poland

Country: Poland
Organisation: Miasto Zielona Góra
Description: Bids are invited to supply eight low-floor electric buses. Each bus should be the length of 12 meter. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:660115-2021:TEXT:EN:HTML&src=0
Closing date: January 26, 2022
Contact: Attn.: Maria Patrzyłas, Chemiczna 8, Zielona Góra, Poland
Phone: +48 684520450
Email: m.jelinska@mzk.zgora.pl
Website: www.mzk.zgora.pl

Supply of four electric buses and two charging station in Ketrzyn, Poland

Country: Poland
Organisation: Gmina Miejska Ketrzyn
Description: Bids are invited to supply four electric buses with two charging station. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:666061-2021:TEXT:EN:HTML&src=0
Closing date: January 26, 2022
Contact: Attn.: Karol Lizurej, ul. Wojska Polskiego 11 Ketrzyn, Poland
Phone: +48 897520535
Email: k.lizurej@miastoketrzyn.pl
Website: https://bip.miastoketrzyn.pl/

Supply of 10 articulated buses in Lampertheim, Germany

Country: Germany
Organisation: V-Bus Gmbh
Closing date: January 26, 2022
Contact: DE715 Bergstrae, Lampertheim 5, Germany
Phone: +49 211 60035202
Email: maria.najdenova@orthkluth.com
Website: www.rnv-online.de

Supply of rolling stocks for Thessaloniki metro, Greece

Country: Greece
Organisation: Attiko Metro A.E.
Description: Bids are invited to supply rolling stock for the Thessaloniki metro. The scope work includes to design, construct, supply and commission 15 trains, of which six for the needs of the basic project of the Thessaloniki metro and nine for the needs of its extension to Kalamaria. The project is financed by the European Union.
Closing date: January 26, 2022
Contact: Leof. Mesogeion 191, Athens, Greece
Phone: +30 2106792473
Email: ksaiti@ametro.gr
Website: http://www.ametro.gr
Supply of eight electric buses in Zielona Góra, Poland

Country: Poland  
Organisation: Miasto Zielona Góra  
Description: Bids are invited to supply eight low-floor electric buses. Each bus should be the length of 12 meter. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:660115-2021:TEXT:EN:HTML&src=0  
Closing date: January 26, 2022  
Contact: Attn.: Maria Patrzylas, Chemiczna 8, Zielona Góra, Poland  
Phone: +48 684520450  
Email: m.jelinska@mzk.zgora.pl  
Website: www.mzk.zgora.pl

Procurement of trams in Kharkiv, Luxembourg

Country: Luxembourg  
Organisation: European Investment Bank  
Description: Bids are invited to carry out in two phases, first providing technical assistance services to procure trams and second, upgrading and modernising tram services, track, systems, and depot infrastructure in the Kharkiv city. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:628907-2021:TEXT:EN:HTML&src=0  
Closing date: January 28, 2021  
Contact: 100, boulevard Konrad Adenauer, Luxembourg  
Email: eib-cpcm-procurement@eib.org  
Website: https://www.eib.org/

Services for the construction of tram track in Poznan, Poland

Country: Poland  
Organisation: Poznańskie Inwestycje Miejskie sp. z o.o.  
Description: Bids are invited to provide supervision services to prepare and implement the construction work on tram route. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:670595-2021:TEXT:EN:HTML&src=0  
Closing date: January 28, 2021  
Contact: pl. Wiosny Ludów 2, Poznan, Poland  
Phone: +48 618842016  
Email: zamowienia.publiczne@pim.poznan.pl  
Website: www.pim.poznan.pl

Supply of 20 hybrid buses along with ticketing system in Łódz, Poland

Country: Poland  
Organisation: Województwo Łódzkie  
Description: Bids are invited to supply 20 low-floor hybrid buses along with ticketing system. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:669439-2021:TEXT:EN:HTML&src=0  
Closing date: January 28, 2022  
Contact: al. Piłsudskiego 8, Łódz, Poland  
Phone: +48 422361700  
Email: przetargi@lka.lodzkie.pl  
Website: www.lka.lodzkie.pl

Supply of 20 hybrid buses along with ticketing system in Łódz, Poland

Country: Poland  
Organisation: Województwo Łódzkie  
Description: Bids are invited to supply 20 low-floor hybrid buses along with ticketing system. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:669439-2021:TEXT:EN:HTML&src=0  
Closing date: January 28, 2022  
Contact: al. Piłsudskiego 8, Łódz, Poland  
Phone: +48 422361700  
Email: przetargi@lka.lodzkie.pl  
Website: www.lka.lodzkie.pl

Supply of four articulated buses in Zielona Góra, Poland

Country: Poland  
Organisation: Miasto Zielona Góra  
Description: Bids are invited to supply four low-floor articulated buses. Each bus should be between 17.5 meters and 18.75 meters. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:669494-2021:TEXT:EN:HTML&src=0  
Closing date: January 28, 2022  
Contact: Attn.: Maria Patrzylas, Chemiczna 8, Zielona Góra, Poland  
Phone: +48 684520450  
Email: m.jelinska@mzk.zgora.pl  
Website: www.mzk.zgora.pl

Technical assistance services for Malaga Metro, Spain

Country: Spain  
Organisation: Agencia de Obra Pública de la Junta de Andalucía  
Description: Bids are invited to provide technical assistance services to coordinate the works for Malaga Metro. The estimated value of the contract is EUR1.116 million. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:3130-2022:TEXT:EN:HTML&src=0  
Closing date: January 31, 2022  
Contact: Plaza de la Constitución, 1, Fuenlabrada, Madrid, Spain  
Phone: +34 916497035  
Email: contratacion@ayto-fuenlabrada.es  
Website: http://www.ayto-fuenlabrada.es

Supply of four electric buses in Fuenlabrada, Spain

Country: Spain  
Organisation: Ayuntamiento de Fuenlabrada  
Closing date: January 31, 2022  
Contact: Plaza de la Constitución, 1, Fuenlabrada, Madrid, Spain  
Phone: +34 916497035  
Email: contratacion@ayto-fuenlabrada.es  
Website: http://www.ayto-fuenlabrada.es

Consulting services to extend tram tracks in Sarajevo, Bosnia and Herzegovina

Country: Bosnia and Herzegovina  
Organisation: Ministarstvo saobraćaja Kantona Sarajevo/ Ministry of Transport of Sarajevo Canton  
Description: Expression of Interest (EOIs) are invited to provide consulting services to execute work to extend tram tracks between Ilidza and Hrasnica in Sarajevo. The procurement is also being financed by the European Bank for Reconstruction and Development (EBRD).  
Closing date: January 31, 2022  
Contact: Attn.: Emir Hota, Reisa Dzemaludina Causevica 1, Sarajevo, Bosnia and Herzegovina  
Phone: +387 33 562 058  
Email: emir.hota@ms.ks.gov.ba  
Website: https://ms.ks.gov.ba/
Supply of up to 114 buses in Budapest, Hungary

Country: Hungary
Organisation: VOLÁNBUSZ Közlekedési Zártkörűen Muködő Részvénytársaság
Description: Bids are invited in two lots to supply up to 114 low-floor three-axle articulated buses. Lot 1 includes the supply of 47 buses; and lot 2 includes the supply of 67 buses. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:4013-2022:TEXT:EN:HTML&src=0
Closing date: January 31, 2022
Contact: Attn.: Szoke Dóra, Ülloiút 131, Budapest, Hungary
Phone: +36 14655630
Email: dora.szoke@volanbusz.hu
Website: http://www.volanbusz.hu/

Modernisation of tram vehicles in Prague, Czech Republic

Country: Czech Republic
Organisation: Dopravní podnik hl. m. Prahy, akciová společnost
Description: Bids are invited in two parts to modernise and assemble tram vehicles. Part 1 includes modernisation of T3CS type tram vehicles; and part 2 includes to dismantle and prepare the end sections of the KT8D5 tram vehicles. Further details are available https://ted.europa.eu/udl?uri=TED:NOTICE:665104-2021:TEXT:EN:HTML&src=0
Closing date: January 31, 2022
Contact: Attn.: Mria Kopeck, Sokolovská 42/217, Praha 9, Czech Republic
Phone: +420 255000111
Email: maria.kopecka@havelpartners.cz
Website: http://www.dpp.cz/

Supply of up to 360 buses in Budapest, Hungary

Country: Hungary
Organisation: VOLÁNBUSZ Közlekedési Zártkörűen Muködő Részvénytársaság
Description: Bids are invited in three lots to supply up to 360 low-floor two-axle solo buses. Lot 1 includes the supply of 40 buses; lot 2 includes the supply of 120 buses; and Lot 3 includes the supply of 200 buses.
Closing date: January 31, 2022
Contact: Attn.: Szoke Dóra, Ülloiút 131, Budapest, Hungary
Phone: +36 14655630
Email: dora.szoke@volanbusz.hu
Website: http://www.volanbusz.hu/

Modernization of transport infrastructure in Tulcea, Romania

Country: Romania
Organisation: Judetul Tulcea
Description: Bids are invited to provide design and technical assistance services to modernise transport infrastructure on the route of Sarighiol de Deal – Rahman. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:667246-2021:TEXT:EN:HTML&src=0
Closing date: January 31, 2022
Contact: Attn.: Purcaroiu Georgeta, Pacii, nr. 20 Tulcea, Romania
Phone: +40 240502235
Email: mona.munteanu@cjtulcea.ro
Website: https://www.cjtulcea.ro/

Supply of six methane buses in Mantova, Italy

Country: Italy
Organisation: APAM Esercizio S.p.A.
Description: Bids are invited to supply six class I buses fuelled with methane and equipped with Euro VI emission standard engines. The estimated value of the contract will be EUR150,000. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:647989-2021:TEXT:EN:HTML&src=0
Closing date: January 31, 2022
Contact: Via dei Toscani 3/C, Mantova, Italy
Phone: +39 3762301
Email: ufficio.acquisti@apam.it
Website: http://www.apam.it/

Services for PUMS in Palermo, Italy

Country: Italy
Organisation: Città Metropolitana di Palermo
Description: Bids are invited to prepare service to draft the Urban Sustainable Mobility Plan (PUMS) for the Metropolitan City of Palermo.
Closing date: January 31, 2022
Contact: Attn.: D.ssa Roberta Di Natale, via Maqueda, 100, Palermo, Italy
Email: infrastructures@cert.cittametropolitan.pa.it
Website: http://www.cittametropreste.pa.it

Preliminary studies for the development of railway connection in Gothenburg, Sweden

Country: Sweden
Organisation: Göteborgs stads Trafikkontoret
Description: Bids are invited to conduct preliminary studies to develop the railway connection. The scope of work includes to take future decisions in process management of the feasibility study and its constituent parts.
Closing date: January 31, 2022
Contact: Attn.: Pauline Hansson, Box 2403, Gothenburg, Sweden
Email: pauline.hansson@trafikkontoret.goteborg.se
Website: http://www.goteborg.se/trafikkontoret

Supply of 59 buses in Budapest, Hungary

Country: Hungary
Organisation: VOLÁNBUSZ Közlekedési Zártkörűen Muködő Részvénytársaság
Closing date: January 31, 2022
Contact: Attn.: Szoke Dóra, Ülloiút 131, Budapest, Hungary
Phone: +36 14655630
Email: dora.szoke@volanbusz.hu
Website: http://www.volanbusz.hu/

Supply of up to 20 diesel buses in Ústí nad Labem Region, Czech Republic

Country: Czech Republic
Organisation: Dopravní společnost Ústeckého kraje, průmyslová organizace
Description: Bids are invited to supply up to 20 low-floor buses fuelled by diesel. Each bus should be of length between 12.8 meter to 13.4 meter.
Closing date: January 31, 2022
Contact: Attn: Bc. Hana Toflová, Velká Hradební 3118/48, Ústí nad Labem, Czech Republic
Phone: +48 43 825 02 00
Email: tofova.h@ds-uk.cz
Website: https://www.ds-uk.cz/

Services for mobility management equipment in Lyon, France

Country: France
Organisation: Métropole de Lyon
Description: Bids are invited to supply equipment to implement, maintain and renew the mobility management equipment of the Métropole de Lyon. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:656678-2021:TEXT:EN:HTML&src=0
Closing date: February 1, 2022
Contact: 20 Rue Due Lac, Lyon, France
Phone: +33 426993078
Email: voirie-marches@grandlyon.com
Website: http://marchespublics.grandlyon.com/

Supply of three electric buses and two charging stations in Gżycko, Poland

Country: Poland
Organisation: Gmina Gżycko
Closing date: February 1, 2022
Contact: Attn.: Dorota Tkaczyk, Mickiewicza 33, Gżycko, Poland
Phone: +48 874299960
Email: dorota.tkaczyk@ugg.pl
Website: https://bip.ugg.pl/

Supply of 40 low-floor buses in Ourense, Spain

Country: Spain
Organisation: Ayuntamiento de Ourense
Description: Bids are invited in three lots to supply 40 low-floor buses for Ourense City Council. Lot 1 and 2 includes supply of 30 minibuses fuelled with diesel and equipped with Euro VI emission standard engines; and lot 3 includes supply 10 electric buses along with chargers. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:2475-2022:TEXT:EN:HTML&src=0
Closing date: February 1, 2022
Contact: Plaza Mayor, 1, Ourense, Spain
Phone: +34 988269333
Email: contratacion@ourense.es
Website: http://www.ourense.gal

Supply of 100 electric buses with charging infrastructure in Bucharest, Romania

Country: Romania
Organisation: Bucharest City Hall
Description: Bids are invited to supply 100 electric buses along with charging infrastructure. The estimated value of the contract is RON219.57 million (excluding VAT). Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:644003-2021:TEXT:EN:HTML&src=0
Closing date: February 2, 2022
Contact: Str. Regina Elisabeta no. 47, Bucharest, Romania
Phone: +40 213055530
Email: directiaproceduri@pmb.ro
Website: http://www.pmb.ro/

R&D for transport infrastructure in Vienna, Austria

Country: Austria
Organisation: Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
Description: Requests for Proposal (RFPs) are issued to conduct research and development (R&D) for mobility to develop future transport infrastructure.
Closing date: February 2, 2022
Contact: Radetzkystraße 2, 1030 Vienna, Austria
Phone: +43 800 21 53 59
Email: servicebuero@bmk.gv.at
Website: https://www.bmk.gv.at/

Development of Bologna tramway Blue Line, Italy

Country: Italy
Organisation: Comune di Bologna
Description: Bids are invited to provide technical and economic feasibility design to develop the Bologna tramway network south-west section of the Blue Line. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:656824-2021:TEXT:EN:HTML&src=0
Closing date: February 2 2022
Phone: +39 51 05121934
PMS to initiate infrastructure and mobility projects in Auvergne-Rhône-Alpes, France

Country: France  
Organisation: Région Auvergne-Rhône-Alpes  
Description: Bids are invited to provide project management services (PMS) to manage, plan and operate infrastructure and mobility projects of Auvergne-Rhône-Alpes Region. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:662008-2021:TEXT:EN:HTML&src=0

Closing date: February 3, 2022  
Contact: 1 esplanade François Mitterrand Lyon, France  
Email: Mobilites.achats@auvergnerhonealpes.fr  
Website: https://www.auvergnerhonealpes.fr/

Supply of four electric buses in Bocsa, Romania

Country: Romania  
Organisation: Orașul Bocșa  
Description: Bids are invited to supply four electric buses. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:629992-2021:TEXT:EN:HTML&src=0

Closing date: February 3, 2022  
Contact: Strada: 1 Decembrie 1918, Nr. 22 Bocșa, Romania  
Phone: +40 2566225504  
Email: primariabocsa@yahoo.com  
Website: https://orasulbocsa.ro/

Design and construction of tram infrastructure in Warsaw, Poland

Country: Poland  
Organisation: Tramwaje Warszawskie sp. z o.o.  

Closing date: February 3, 2022  
Contact: ul. Siedmiogrodzka 20, Warsaw, Poland  
Phone: +48 225326140  
Email: zampub@tw.waw.pl  
Website: http://www.tw.waw.pl/

Design services to expand trolleybus network in Galati, Romania

Country: Romania  
Organisation: Primaria Municipiul Galați  
Description: Bids are invited to provide design services to expand the trolleybus network. The estimated value of the contract is RON380 million (excluding VAT). Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:1050-2022:TEXT:EN:HTML&src=0

Closing date: February 4, 2022  
Contact: Attn.: Crina-Mirela Niculae, Street Domnească nr. 54, Galați, Romania  
Phone: +40 236307720  
Email: licitatii@primariagalati.ro  
Website: http://www.primariagalati.ro/

Prepare EIA for Kaunas-Lithuania-Latvia border railway system of Rail Baltica at Vilnius, Lithuania

Country: Lithuania  
Organisation: AB Lietuvos geležinkeliai/ Lithuanian Railways  
Description: Bids are invited to prepare and provide environmental impact assessment services for the development of the engineering infrastructure for the communications systems of the Kaunas-Lithuanian-Latvian border railway system of the Rail Baltica, railway infrastructure. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:674773-2021:TEXT:EN:HTML&src=0

Closing date: February 4, 2022  
Contact: Attn.: Skaiste Guigaite, Geleinkelio G. 16, Vilnius, Lithuania  
Phone: +370 62306166  
Email: skaiste.guigaite@ltg.lt  
Website: http://www.litrail.lt/
Supply of three electric buses with charging station in Zakopane, Poland

Country: Poland  
Organisation: Gmina Miasto Zakopane  
Description: Bids are invited to supply three electric buses with a charging system for the city of Zakopane.  
Closing date: February 4, 2022  
Contact: Attn.: Ewa Stasik, ul. Kosciuszki 13, Zakopane, Poland  
Phone: +48 182020448  
Email: przetargi@zakopane.eu  
Website: www.zakopane.pl

Supply of 14 methane buses in Mantova, Italy

Country: Italy  
Organisation: APAM Esercizio S.p.A.  
Description: Bids are invited in three lots to supply 14 class II buses fuelled with methane and equipped with Euro VI emission standard engines. Lots 1 and 2 include the supply of 10 buses; and lot 3 includes the supply of four buses.  
Closing date: February 7, 2022  
Contact: Via dei Toscani 3/C, Mantova, Italy  
Phone: +39 3762301  
Email: ufficio.acquisti@apam.it  
Website: http://www.apam.it/

Design a section of railway line No. 408 and 409 in Warsaw, Poland

Country: Poland  
Organisation: PKP Polskie Linie Kolejowe S.A.  
Description: Bids are invited to provide design services to develop a railway section between Szczecin Główny and Szczecin Gumięce of the railway line No. 408 and 409.  
Closing date: February 9, 2022  
Contact: Attn.: Ilona Mazurkiewicz, ul. Targowa 74, Warsaw, Poland  
Email: ilona.mazurkiewicz@plk-sa.pl  
Website: http://www.plk-sa.pl/

Supply of up to 42 urban buses in Biella, Italy

Country: Italy  
Organisation: Azienda Trasporti Automobilistici Pubblicidelle Province di Biella e Vercelli (ATAP SPA)  
Description: Bids are invited in multiple lots to supply and maintain up to 42 urban buses. Lot 1,2,3,4,5 and 6 includes supply of buses fuelled with compressed natural gases (CNG); and Lot 7 includes supply of electric buses.  
Closing date: November 11, 2022  
Contact: Attn.: Marco Ardizio, Corso Guido Alberto Rivetti, 8 / B, Biella, Italy  
Phone: + 39 158488459  
Email: atapspa@cert.atapspa.it  
Website: www.atapspa.it

Supply of 16 hybrid locomotives in Warsaw, Poland

Country: Poland  
Organisation: PKP Intercity  
Description: Bids are invited to supply 16 hybrid locomotives along with maintenance services.  
Closing date: February 15, 2022  
Contact: Jerozolimskie 142A, Warsaw, Poland  
Email: barbara.krolak@intercity.pl  
Website: https://www.intercity.pl/en/

Construction of site for buses and vehicles in Luxembourg

Country: Luxembourg  
Organisation: Administration de l’Architecte de la Ville de Luxembourg  
Description: Bids are invited to construct a new site for buses and vehicles in Luxembourg city. The scope of work also includes to provide maintenance and repair management services for around 800 vehicles, including heavy goods vehicles (trucks and buses), vans, cars, and other special vehicles in VDL vehicle fleet. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:627494-2021:TEXT:EN:HTML&src=0  
Closing date: February 25, 2022  
Contact: 3 rue du Laboratoire, Luxembourg  
Email: sneuman@vdl.lu  
Website: https://www.vdl.lu

Construction supervision for Rail Baltica main line in Latvia

Country: Latvia  
Organisation: SIA Eiropas Dzelzceļa līnijas (EDZL)  
Description: Bids are invited to provide construction supervision and engineering consulting services for the development of Rail Baltica main line in Latvia. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:650601-2021:TEXT:EN:HTML&src=0  
Closing date: February 28, 2021  
Contact: Gogola iela 3Latgales priekšpils “ta, Riga, Latvia  
Website: http://edzl.lv/

Implementation of tram network Phase I in Barcelona, Spain

Country: Spain  
Organisation: Consorci de l’Autoritat del Transport Metropolità (ATM)  
Description: Bids are invited to implement on first phase of the unified tram network in Barcelona. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:672037-2021:TEXT:EN:HTML&src=0  
Closing date: February 29, 2022  
Contact: Attn.: Silvia Gasch, Balmes, 49 6. planta Barcelona, Spain  
Phone: +34 933034170  
Email: sgasch.bimsa@bcn.cat  
Website: http://www.bimsa.cat
Supply of 10 electric buses in Málaga, Spain
Country: Spain
Organisation: Gerencia de la Empresa Malagueña de Transportes S.A.M.
Description: Bids are invited to supply 10 electric buses. Each bus should be 12 meter long. The estimated value of the contract is EUR21.6 million (excluding VAT). Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:671683-2021:TEXT:EN:HTML&src=0
Closing date: March 1, 2022
Contact: Camino de San Rafael, 97, Málaga, Spain
Phone: +34 951015521
Email: asesoria@emtsam.es
Website: http://www.emtmalaga.es

Extension of tram tracks in Sarajevo, Bosnia and Herzegovina
Country: Bosnia and Herzegovina
Organisation: Ministarstvo saobraćaja Kantona Sarajevo/ Ministry of Transport of Sarajevo Canton
Description: Bids are invited to extend tram tracks in Sarajevo. The procurement is also being financed by the European Bank for Reconstruction and Development (EBRD).
Closing date: March 9, 2022
Contact: Attn.: Emir Hota, Reisa Dzemaludina Causevica 1, Sarajevo, Bosnia and Herzegovina
Phone: +387 33 562 058
Email: emir.hota@ms.ks.gov.ba
Website: https://ms.ks.gov.ba/

Supply of electric buses in Grüneningen, Switzerland
Country: Switzerland
Organisation: Verkehrsbetriebe Zürichsee und Oberland AG (VZO)
Description: Bids are invited to supply electric buses.
Closing date: March 21, 2022
Contact: Attn.: Heinz Blatti, Binzikerstrasse 2, Grüneningen, Switzerland
Phone: +41 44 936 53 31
Email: heinz.blatti@vzo.ch
Website: https://www.vzo.ch/

Supply and design of trains in Milan, Italy
Country: Italy
Organisation: Azienda Trasporti Milanesi S.p.A.
Description: Bids are invited to design, delivery and commission of trains with the extended warranty of five-year. Further details are available at https://ted.europa.eu/udl?uri=TED:NOTICE:658085-2021:TEXT:EN:HTML&src=0
Closing date: March 22, 2022
Contact: Foro Buonaparte 61, Milan, Italy
Phone: +39 2480311
Email: responsabileacquisti@atm.it
Website: https://www.atm.it/it/Pagine/default.aspx

Renovation of tram tracks in Szczecin, Poland
Country: Poland
Organisation: Tramwaje Szczecińskie Sp. z o.o.
Description: Bids are invited to renovate tram tracks in Szczecin.
Closing date: March 28, 2022
Contact: Ul. Klonowica 5, Szczecin, Poland
Phone: +48 91 311 41 142
Email: przetargi@ts.szczecin.pl
Website: http://www.ts.szczecin.pl/

Middle East & Africa

Review of Kenya public bus management improvement project
Country: Kenya
Organisation: Japan International Cooperation Agency (JICA)
Description: Bids are invited to review public bus policy, sustainable public bus in Nairobi metropolitan area under Kenya public bus management improvement project.
Closing date: January 21, 2022
Contact: BRITAM Tower, 22nd & 23rd, Hospital Road, Nairobi, Kenya
Phone: +254 20 2775000
Website: https://www.jica.go.jp/english/

Supply and deliver of four shelters in Kiti, Cyprus
Country: Cyprus
Organisation: Kiti Community Council
Description: Bids are invited to supply and deliver four bus shelters for Community Council of Kiti.
Closing date: January 21, 2022
Contact: Panagias Angeloktistis 12, Kiti, Cyprus
Phone: +357 24422233
Email: kskitiou@cytanet.com.cy
Website: https://www.cyta.com.cy/

Supply of railway tracks and structure for Tanzania railway
Country: Tanzania
Organisation: Tanzania Railways Corporation (TRC)
Description: Expressions of interest (EoIs) are invited provide consultancy services for detailed engineering design & preparation to procure railway track and Structures (Bridge & Culverts) as well as provide rehabilitation works for the section of 840.172 km long form Dar Es Salaam to Tabora in Tanzania. The project is financed by the World Bank.
Closing date: January 24, 2022
Contact: PO Box 76959, Barabara ya Sokoine, Dar es Salaam, Tanzania
Phone: +255 754940411
Email: singo.mlemba@trc.co.tz
Website: https://www.trc.co.tz/
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