



ADVANCING
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TRANSPORT



Moscow
Transport

► REPORT

LEADERS IN URBAN TRANSPORT 2021

JULY | 2021

INTRODUCTION

The “Leaders in Urban Transport Council” was designed as an event in cooperation of the Moscow Department of Transport and UITP to bring leading international experts to Moscow to debate strategy and innovation in urban mobility.

Like many other international events, it was impacted by the restrictions brought on with the coronavirus pandemic – but this did not stop us from holding the necessary discussions on public transport during and post-COVID.

From February until May 2021, UITP and the Moscow Department of Transport have welcomed hundreds of attendees from across the globe to our series of digital gatherings. Each of the five sessions had a unique topic of discussion, led by some of the most relevant speakers in the sector.

This Report wraps up the series of webinars and summarises what has been discussed. Lessons learnt from the pandemic, interesting case studies and perspectives from UITP members offers insight into how our sector has kept moving.



“ I think we have found a way, with this Leaders series, to share our ideas. I hope that similar digital gatherings will continue alongside physical meetings in the future.”

Sergey Andreikin, City of Moscow

THE BIGGER PICTURE

COVID-19 has disrupted our lives. The lockdowns have impacted our routines and official restrictions have limited how and where we move around. Public transport has played an important role in these critical times by continuously providing mobility for essential workers. But the sector has also been heavily affected with plummeting passenger numbers, growing financial pressure and a loss of trust of passengers. The first webinar looked into:

- How does the current pandemic affect important public transport stakeholders – our customers, the business community, manufacturers and service providers?
- How are leading public transport organisations experiencing the current pandemic?
- What are the challenges we need to address to be better prepared for such situations?
- What are the opportunities we could use to make public transport come out stronger and more attractive?

CHANGING CUSTOMER EXPECTATIONS

COVID-19 related restrictions, such as working from home, home schooling or closed shops and restaurants led to less regular travel patterns. A more dispersed mobility behaviour may not be aligned with the focus of mass mobility. Continued concerns for infection and an increased sensitivity for crowds may bring new expectations, which need to be met to keep passengers' trust. The second webinar discussed:

- Innovative products and services to provide attractive channels and offers meeting changed customer expectations.
- Mobility as a service – new concepts and partnerships to cater for more individualised mobility needs.
- Improving the integration of public transport with active mobility modes to maintain current trends for healthier lifestyles.

THE POTENTIAL OF INNOVATION

As a major disruption, the current pandemic has revealed the fragility of many business sectors, public transport included. Many traditional customer channels, business processes and working routines had to be reorganised and adapted to new requirements.

Many of the new solutions have been proven reliable options, helping to improve the efficiency and resilience of public transport operation. This should remind us to the continuous need to review and seek improvement to establish public transport as the preferred mode of choice in the future. The third webinar explored:

- How digitalisation can help to increase the attractiveness of public transport.
- How data-driven solutions can contribute to more efficient operational processes.
- How new and clean technology can help to improve the environmental footprint of public transport even further

RESILIENT URBAN MOBILITY SYSTEMS

Health and safety concerns during the pandemic have driven many passengers away from public transport. Whilst an increased share of walking and cycling is seen as a positive trend, the increasing use of individual cars gives reason for concern. To play its role as the backbone of urban mobility, public transport has to meet evolving expectations for safe, convenient and efficient travelling, but may also have to enlarge its business focus beyond the traditional service portfolio. The fourth webinar discussed:

- How to give a fresh momentum to a modal shift towards sustainable urban mobility.
- How to broaden the service portfolio to diversify potential revenue streams.
- How new partnerships can help to bridge existing gaps in mobility systems and create attractive new offers.

URBAN MOBILITY POLICY

COVID-19 and the related restrictions have had a major impact on urban mobility with many aspects of city life grinding to a halt. But people also discovered and enjoyed a city life with less traffic and more room to walk and cycle. Road surface was converted into bike and bus lanes, remote working triggered new routines, people re-discovered their immediate neighbourhood.

The pandemic and the immediate concern for health and safety of the entire population has made changes possible that were almost unfathomable until recently. Did the pandemic also bring a fresh approach and new awareness of the value of urban room, open space and air quality? The fifth webinar brought together high-level executives of major cities and transport authorities to discuss:

- How the disruption of city life brought about by COVID-19 could be used to redistribute urban space in favour of people.
- How cities take the lessons learned during the pandemic into account when developing their urban planning strategies.



HOW DID THE GLOBAL PANDEMIC IMPACT PUBLIC TRANSPORT?

Worldwide, public transport organisations saw a dramatic reduction of passenger numbers caused by lockdowns and mobility restrictions but sometimes also worsened by official advice not to use public transport. In cities where restrictions have been lifted to some extent already, passenger numbers are growing and are reaching about 80 % again.

While it is positive to see that people are coming back, we also have to admit that public transport has lost some ground towards other modes of mobility. Efforts must be made to re-create momentum for sustainable mobility and avoid a car-led recovery.

Like with every crisis, this is a moment to review and reconsider; to correct and improve. What are the weaknesses that we need to address? Where are strengths of public transport that we can use to realise opportunities and tackle challenges that come from this crisis?

“ We have seen a lot of disruptions during the recent history, we have benefitted from this resilience, it helped to absorb the continuous changes in demands, restrictions, rules during the pandemic.”

Eva Kreienkamp, BVG Berlin

STRENGTHS

- **Agile organisations:** Faced with the pandemic and the related restrictions, most public transport organisations have proven very agile. They have been able to adapt quickly to remote working where possible and have defined new processes and procedures where necessary.

“The pandemic was uncharted territory; we have really been put to the test. We had to pivot a lot and change the way we work; it was great to see that LTA could be able to adjust to the circumstances and digital working so well.”

Jeremy Yap, LTA Singapore

- **Organisational culture:** Public transport operators experienced high levels of commitment and team spirit. Everybody, including operational staff as well support and administrative personnel, accepted the challenge and helped to adapt and improvise to the uncertain situation.

“TfL as an organisation pulled together to address an enormous challenge, cross-team collaboration was exemplary, and it was great to see people’s commitment.”

Michele Dix CBE, Transport for London

- **Creativity and innovation:** Health and safety concerns resulting from the outbreak of the coronavirus have challenged many processes that are essential for public transport - from purchasing and validating tickets to the opening of doors and managing passenger flows. The sudden need for improvisation brought out a lot of creativity in public transport organisations and resulted in a shorter turn around for innovation initiatives.

“As public transport organisations - we are normally very thorough, but very slow - now we know we can also be fast.”

Ho Wing Chan, MTR Hong Kong

WEAKNESSES

- **Concept of mass transport:** Successful public transport systems excel in efficiently moving high numbers of people, yet precisely that concept of crowds collided with health concerns and requirements for safe distancing and avoiding contact. On the other side, acceptable passenger occupancy levels are not aligned with traditional business models of public transport.
- **Rigid systems:** Being a very safety-minded sector, existing rules and regulations for public transport set a rather tight context and can make it difficult to change things. Also, the dimension of infrastructure investment and time periods needed to expand public transport systems are in conflict with the current rapid changes that we see.



CHALLENGES

- **Financial pressure:** On the short-term, the public transport sector is challenged by high fix costs (and some extra costs, e.g. due to cleaning) and less revenue due to travel restrictions. On the longer-term, with a rather slow recovery of passenger numbers expected the funding, financing and revenue generation models of public transport organisations may have to be reviewed to develop sustainable urban mobility systems.

“The pandemic has forced public transport operators to rethink their role. It is also an opportunity to do new things that were not possible before for political reasons, financial ones or others.”

Adi Lau, MTR Hong Kong

- **Changing customer expectations:** During the pandemic, people were forced to change their routines, including their mobility behaviour. While the daily commute was not needed or possible, they have discovered new routes and habits while trying to stay away from crowds. What changes will remain is still unclear, but more than one year of restrictions in many places might have left an impact and we will need to understand the shift in expectations in order to avoid a car-led recovery of life.

“New services and functions introduced during the pandemic are very popular now and provide us the foundation for further development.”

Roman Latypov, Moscow Metro



OPPORTUNITIES

- **Digitalisation:** Technology has clearly proven to be an asset during the crisis, it has allowed to keep the business going with mobility and contact restrictions for staff. A growing number of digital tools and channels has also helped and can continue to help making public transport more efficient and customer friendly.

“We have a strong cooperation with start-ups to support young people and innovation, and the pandemic made do things we never did before.”

Natacha Ferrier, RATP Paris

- **Travel behaviour changes:** Restrictions during the pandemic have changed our lives, remote working and online shopping have changed people's mobility behaviour. This was and is clearly reflected in lower travel peaks in cities across the world and we may see more leisure travel and less commuting in the near future. Things are still uncertain, but if we manage to actively shape the choices people make and keep the peaks low, it may help to make more efficient use of the capacity of public transport systems.

“New business models like school pick up services were developed, they might not have been rolled out without the pandemic, but this was very successful and will be continued.”

Hallie Liao, Shenzhen Bus Group

- **Growth in active modes:** With less traffic in the streets, people have rediscovered city space and the general desire to keep distance has brought a surge in walking and cycling in cities worldwide. Active modes of mobility complement public transport and may provide attractive first- and last-mile offers in an urban mobility system with public transport as a backbone.

“If there is one good outcome of the COVID-19 crisis, it is the growth of walking and cycling in the cities.”

David Belliard, City of Paris

MEASURES, PLANS AND STRATEGIES

At the time the webinars were organised, the COVID-19 crisis had been ongoing for about one year. Most cities were facing various degrees of restrictions. The health sector was confronted with the third and, in many places, the heaviest wave of the pandemic until then.

Yet progress became visible and vaccination programmes gained speed in many developed countries. The public transport sector had shifted focus from crisis management to business continuity. Many organisations tried to anticipate the road to recovery and started developing recovery strategies aiming to re-gain the trust of customers, to stabilise the business foundation and to establish public transport again as the backbone of sustainable urban mobility.

While it is still uncertain what the new normal precisely will look like, a number of major directions crystallised during the discussions.

“We saw trends accelerating that we already had on the radar, they are not different, but they happened faster, this gives confidence that we are on the right track.”

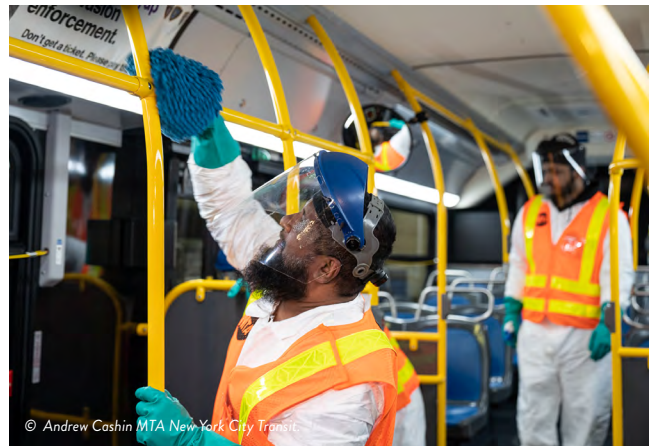
Endre Angelvik, Ruter Oslo

PASSENGER SUPPORT AND RETENTION

Keeping in touch is important, especially while being apart. Public transport organisations have put a lot of attention into staying close to customers and riding these difficult waves together. Continuous effort is necessary to avoid losing a loyal base of customers.

“COVID-19 showed that at Moscow Metro all can come together to address a common problem and solve questions that have been difficult to tackle before the pandemic.”

Zhanna Ermolina, Moscow Metro



Making ends meet

With the experience of the SARS epidemic in 2003, the pandemic response in Hong Kong was very quick. Contingency and business continuity plans had been in place. Essential supplies, such as masks, had been stocked and helped limiting the spread of the virus.

The first wave was well managed, but the duration of the current pandemic had been underestimated. A new, more risk-based response had to be applied as the previous measures could not be sustained for such a long period. In order to support clients and maintain them through these difficult times, MTR introduced a 20% fare discount on public transport in Hong Kong since July 2020 and also reduced rental fees for shops in shopping centres and stations.

Charity activities

Moscow Metro launched numerous of social activities during the pandemic to support vulnerable people of the community. They introduced the “From all the heart” initiative, allowing to include an extra ticket for a person in need with any ticket purchase. Planned charity activities, such as the bike marathon to raise money for the charity foundation, were converted into online events to continue providing support.

“Transport is not about moving from one point to another. We think in terms of brand value, social responsibility of Moscow transport as a single eco-system that meets the needs of passengers.”

Nikolai Asaul, Moscow Directorate of Transport

A new brand platform

RATP has introduced a new brand platform “A Demain”, meaning “See you tomorrow” in order to demonstrate customer centricity and its commitment to passengers. The new brand invites customers and RATP employees to come together every day with the promise of continuous improvement, as a means to counter hesitation and negative safety perception of public transport.

A tombola for annual ticket holders

Wiener Linien clearly saw the benefits of a relatively stable number of customers due to a very attractive price for annual public transport in Vienna. In order to acknowledge and maintain this loyalty, Wiener Linien launched a tombola, where annual pass holders could win prizes including visits to attractive city facilities, test rides, etc.

New business models and services

While lockdowns and mobility restrictions made normal business not possible, public transport played a crucial role in ensuring mobility for essential workers. Many public transport operators improvised and developed new services and solutions that may complement the traditional services in the future.

“We had to come up with ideas quickly, and they came from everywhere. Drivers came up with great ideas, all teams were bonding and supporting each other in that joint challenge.”

Joe Ma, Shenzhen Bus Group

New options for taxis

As an unsubsidised activity, taxi services within Shenzhen Bus Group were hit hard by the mobility restrictions. Seeing online shopping and consequently delivery traffic picking up at the same time, Shenzhen Bus has facilitated delivery services for its taxi fleet in order to provide the drivers with an additional revenue option. As the entire taxi fleet is equipped with cameras and tracking sensors, Shenzhen Bus could also introduce school pick-up services, allowing parents to book a ride for their children. Based on the success during the lockdown, this is now considered to become a permanent element of the service portfolio.

New shuttle lines

Already before the pandemic, Shenzhen Bus noticed the ongoing metro extension to attract passengers away

from the bus system. As a response, the affected bus routes are being converted into shuttle routes picking up passengers from major transport hubs and bring them to office areas or residential places without any booking required. This service update allows for more cost-effective operation and answers the growing demand for more flexible services.

Charging e-vehicles

Building the necessary infrastructure to charge e-buses, RATP, Shenzhen Bus and other operators made their charging stations available for re-charging private vehicles.

Technological solutions

Innovative technology solutions can help to create more efficient business processes within public transport organisations. During the pandemic customers have also developed an appetite for more digital tools and services. Building on this trend, digital channels and services can help to make public transport more customer friendly.

Safer traveling

Aiming to re-gain passengers' confidence, MTR Hong Kong has been exploring the use of technology for more efficient, fast and hygienic cleaning and disinfecting of public transport systems. The introduction of cleaning robots and the use of robots to vaporise disinfection fluids in stations and vehicles has helped to develop faster and more efficient cleaning routines.

There is a trial ongoing for permanent handrail cleaning at escalators and MTR has also introduced sensors replacing the buttons to call elevators in order to reduce the need to touch common surfaces. RATP is experimenting with holographic buttons to open vehicle doors.



Smart payment and ticketing

To provide safe and innovative options to buy and validate tickets, the Moscow Transport Department has intensified its effort to introduce smart payment. A variety of card- and phone-based ticketing options has been introduced and now every station lobby offers the possibility for contactless payment. The acceptance of contactless payment is encouraging, despite the decrease of passenger numbers due to the pandemic, the number of contactless ticket purchases and validations has continuously increased.

In order to facilitate smooth passenger flow and access, Moscow metro allows smart phone tapping without the need to unlock the phone first and tests face recognition as access control.

“Having focused on mobile solutions has helped to adapt fast and continuous focus on customer needs helps to be prepared.”

Nikita Skorik, Moscow Transport

Safe spaces

During the pandemic people have seen cities with less traffic. With changed daily routines, they also have discovered new places and active mobility modes. Many cities have created improvised infrastructure to facilitate safe walking and biking. If cities want to benefit from the growth of active mobility, we need to provide more room for other users than car drivers.

“People have changed their relationship with places. There is a clear expectation that space needs to be made for people and urban mobility will need to support this.”

Laura Shoaf, TfWM Birmingham



Reclaimed road space

LTA Singapore is actively promoting more than 60 projects to reclaim road space for other purposes, this includes abandoned car parking facilities along the road, converting car lanes into bus and bike lanes as well as speed reductions.

“Space efficiency is an important aspect, freeing up surface area when extending metro systems helps to give room to other usage.”

Anna-Maria Reich, Wiener Linien

Smoother traffic

In order to improve mobility management, the Moscow Department for Transport has implemented “Smart Intersection”, an adaptively coordinated traffic light management system. Traffic lights are equipped with sensors that allow to adjust the shift online, depending on the traffic situation giving absolute priority to public transport as 80% of citizens use public transport.

“The pandemic has forced us to re-think urban mobility management. No standard traffic light control system was prepared for the cars to disappear, now that we are re-calibrating the system anyway, we do it better.”

Dmitri Gorshkov, Moscow Traffic Control

Reallocating urban space

The pandemic has changed the way of thinking about urban mobility. Public transport passenger numbers have been significantly reduced, there is a risk that car traffic will lead the recovery. On the other side, walking and especially biking have seen an unprecedented growth. The city of Paris has installed a lot of temporary cycling lanes and people have happily accepted and use it.

The City of Paris is committed to reducing car traffic and maintaining the trend towards active mobility. The city plans installing a limited traffic zone with a speed limit of 30km/h, aiming to calm traffic and make room for other activities and thereby facilitating public transport. Public space will be re-arranged to give more room for non-motorised modes.



CLEAN ENERGY AND CLIMATE CHANGE

Public transport is the backbone of sustainable urban mobility systems as it is essential to combat climate change. But while being considered part of a green solution, it can still become cleaner. New fuels and new vehicles, smarter mobility management and better integration of modes will help to reduce the ecological footprint of urban mobility and help to make cities more liveable.

“Mobility has a major impact on air quality. With efficient public transport as the backbone, supported by technology, active modes and cleaner vehicles we will be able to make cities more attractive and healthier.”

Lola Ortiz Sanchez, City of Madrid

Green public transport

The City of London plans to enlarge the existing ultra-low emission to cover one third of London's area. Recovery plans of Transport for London are based on public transport and specifically green public transport, with the ambition to convert the entire bus fleet into electric vehicles.

Shenzhen Bus already operates purely electric public transport including buses and taxis. The ongoing enlargement of charging infrastructure should also facilitate the conversion of more urban service fleets and encourage private persons to buy more electric vehicles.

RATP invests in the transformation of its bus depots in order to provide the necessary facilities for the operation of an electric and gas-powered bus fleet. In line with the urban gardening programme in Paris, France, depot roofs will also be converted into public gardens where possible.

MTR Hong Kong has started tests with solar panels on top of light rail vehicles, aiming to contribute the production of green energy.

A sustainable environment strategy

The City of Madrid aims to reduce its greenhouse gas emissions by 65% in 2030. It has developed “Madrid 360”, the new sustainable environment strategy including more than 200 measures focused on air quality and climate change.

The city relies on public transport as the backbone of the future mobility system. To improve attractiveness and allow for safe distancing, the service frequencies have been increased. For more efficiency of the bus system the City of Madrid has installed more than 45 km of bus lanes - first as a temporary solution, but now being consolidated as permanent installations.

Public transport focused improvements are complemented by measures, such as:

- The promotion of cleaner fuels for all urban vehicles, including freight vehicles.
- Extending the network of bike lanes and launch of bici-mad, a new bicycle share system.
- Development of more attractive pedestrian zones and connections.

In helping people to make the optimal mobility choice, the city has developed Madrid Mobility 360, an integrated mobility app that allows travel planning based on the entire choice of mobility modes.

Air quality

MTR Hong Kong has set up a programme to improve air quality monitoring inside stations, vehicles and buildings. Monitoring results will be used to improve ventilation and optimise air conditioning throughout the public transport system.

One of the priorities for the development of ITS in the city of Moscow is the monitoring and control of noise and pollution levels in the road network. For this, sensors have been placed allowing to compile heat and sound maps will provide key input for future intersection management.

CONVENIENCE

The key to getting passengers back into public transport is to make it easy to use, accessible and seamless. This includes optimising the use of the existing capacity, the extension of networks where necessary and complementation with first and last mile services where possible.



Optimising system use

LTA Singapore sees growing passenger numbers since the lifting of restrictions has started. Off-peak travel is growing faster than peak travel. Maintaining this trend could help to make better use of the available public transport capacity. LTA tries to encourage off-peak travel with active monitoring of travel demand, continuous adaptation of supply and fare discounts for off-peak travel.

In order to facilitate safe distancing and optimise the occupancy, public transport authorities and the Moscow Transport Department actively uses fare discounts to encourage off-peak travel. A pilot project in the two busiest metro lines in Moscow, stimulating off-peak travel with a fare discount has already resulted in a 4% shift of peak occupancy towards adjacent periods.

Extending the network

Where possible, cities and public transport organisations have used the mobility restrictions to continue and accelerate construction measures. Moscow Metro has built stations faster than planned. MTR will also open a new metro line towards the end of the year. These new network elements will help to improve the overall service offer and to make public transport the most attractive and convenient mobility option in the city.

Integration of mobility services

Responding to the growing demand for individual service, Wiener Linien actively repositions itself from a classic public transport operator towards the enabler of mobile freedom. Besides improving and upgrading public transport services, this also includes a greater focus on integration, setting up mobility points with a variety of modal choices and close cooperation and partnership with new service providers experienced in MaaS and car- or bike-sharing.

Grand Paris Express, considered the largest transport project in Europe, is set up to improve the connections between Paris and its surrounding communities with an automated metro system. It aims to develop attractive housing and business locations in the region of Paris and relieve the city itself from some development pressure.

CONCLUSION AND OUTLOOK

The pandemic has been a disruption for UITP. Personal and direct contact is essential for any community and for more than one year we could not meet each other in person.

Yet, at the same time we see how valuable and resilient our community is. The physical separation brought us closer together. Faced with the same challenges we quickly learnt together and members all over the world were generous to share their experiences. But it needs ongoing support and investment to make sure sustainable urban mobility options are what keeps our cities moving.

“I want to thank UITP for their work during the pandemic, as they kept on working and preparing content and publications for the sector. We needed this information and we have continued to realise how important it is to use the experience and knowledge of our sector colleagues. On behalf of the Moscow Government, we thank them for their work during these difficult times.”

Maksim Liksutov, Deputy Mayor of Moscow for Transport

The pandemic has disrupted our sector and there are challenges to be addressed, but it has also created opportunities and these webinars have shown how public transport organisations can use them to strive.

“As UITP, our role during the pandemic was first to support and reassure our members, so they knew that throughout all of this they belonged to a community, to a global family. We had to invent new ways to support our members in a world where we could not physically gather at our events. This crisis has strengthened the relevance and reach of our association, and we have created new ways to serve the sector.”

Mohamed Mezghani, UITP Secretary General

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Our series covered the entire spectrum of public transport, and we would like to thank all involved, the Department of Transport in Moscow, our speakers, and the audience, for making it a success.

Sergey Andreikin, First Deputy Head Department of Transport and Road Infrastructure Development of Moscow, Russia

Endre Angelvik, Vice President Mobility Solutions, Ruter, Oslo, Norway

Nikolay Asaul, CEO Moscow Directorate of Transport, Russia

David Belliard, Deputy Major in charge of public space transformation, transport, mobility and street regulation, Paris, France

Ho Wing Chan, Head of Operations Innovation Hub, MTR, Hong Kong

Michele DIX CBE, Managing Director Crossrail 2, London, United Kingdom

Zhanna Ermolina, Head of payment services at Moscow Metro, Russia

Natacha Ferrier, Group Corporate International Relations, RATP, France

Dmitry Gorshkov, Deputy Head of Moscow Traffic Control, Russia

Eva KREIENKAMP, Chief Executive Officer Berliner Verkehrsbetriebe, Germany

Roman LATYPOV, Deputy CEO Strategy and Client Service, Moscow Metro, Russia

Adi LAU, Managing Director - Operations and Mainland Business, MTR Hong Kong

Maksim LIKSUTOV, Deputy Major of Transport, Head of Department for Transport and Road Infrastructure Development, Moscow, Russia

Hallie LIAO, Head of International Development, Shenzhen Bus Group, China

Joseph MA, Deputy General Manager, Shenzhen Bus Group, China

Mohamed MEZGHANI, Secretary General UITP, Brussels, Belgium

Lola ORTIZ SANCHEZ, General Director of Planning and Mobility Infrastructure, Madrid, Spain

Anna MARIA REICH, Kellnhofer, Head of Corporate Communication, Wiener Linien, Austria

Nikita Skorik, Head of Mobile App Development Team, Moscow Transport, Russia

Laura Shoaf, Managing Director of Transport West Midlands, Birmingham, United Kingdom

Jeremy YAP, Deputy Chief Executive Public Transport, Policy and Planning, LTA Singapore



This is an official Report of UITP, the International Association of Public Transport. UITP has more than 1,600 member companies in 99 countries throughout the world and represents the interests of key players in this sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and the industry. UITP addresses the economic, technical, organisation and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.



Rue Sainte-Marie 6, B-1080 Brussels, Belgium | Tel +32 (0)2 673 61 00 | Fax +32 (0)2 660 10 72 | info@uitp.org | www.uitp.org

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