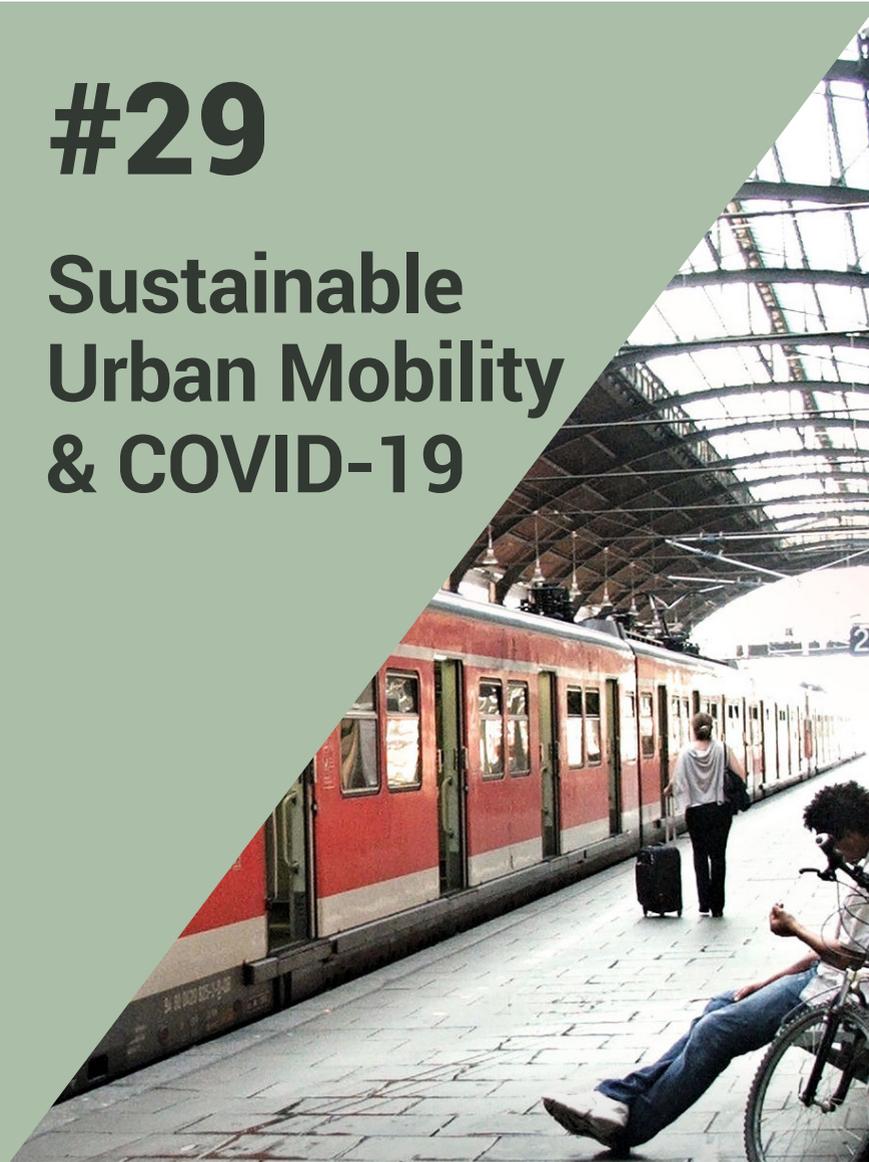


# #29

## Sustainable Urban Mobility & COVID-19



Peer Learning  
Wiesbaden (online), July 2021



Learning  
UCLG

## **Credits**

### **Coordination**

Association of German Cities (Deutscher Städtetag)

City of Wiesbaden

Connective Cities

Engagement Global and its Service Agency

Communities in One World

Latin American Federation of Cities, Municipalities  
and Municipal Associations (FLACMA)

Deutsche Gesellschaft für Internationale  
Zusammenarbeit (GIZ)

United Cities and Local Governments (UCLG)

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# Foreword

The Covid-19 pandemic is a global public health crisis that impacted most aspects of our lives. As one of the hardest impacted aspects, mobility was radically restricted by measures aiming at reducing the speed of the spread of the virus. This restriction impacted how the city is experienced, how production is organised and how our personal life is structured. Municipalities around the world were required to quickly adapt to unprecedented pressures concerning public transit and logistics without losing sight of sustainable development goals and the challenges to protect the climate.

Looking for a technical exchange of experiences, the city of Wiesbaden (Germany) hosted in July 2021 a Dialogue Event together with Connective Cities, UCLG and UN-HABITAT about Covid-19 and Urban Mobility with focus on the impacts of the pandemic and prospects for a more resilient and sustainable post-pandemic future.

Wiesbaden is the capital of the State of Hessen, and it is part of the Frankfurt Rhine-Main metropolitan region in Germany. Being located in this large metropolitan region and on the banks of the Rhine River, one of the central veins of the European continent, the city's connectivity is a central aspect of its functioning. The municipal administration sees the Covid-19 pandemic as game-changer as we are all facing challenges and adverse conditions in trade, in traffic flows and demands as well as logistic necessities. The protection of the quality of life of each of our citizens while facing the changes

of our urban surroundings is essential. This objective is intrinsically connected to many of the topics of the Dialogue Event as it can be seen here in this Peer Learning Note: from urban logistics to public transport and urban development.

Without strong, supportive, agile and collaborative solutions in the field of urban mobility, we will not be able to solve the logistical, economical and ecological challenges in the years to come. This shows the importance of our shared work and perspective.

In the name of all citizens of Wiesbaden, I would like to thank the colleagues from many parts of the world that contribute to this exchange with experiences here compiled, and we hope we could offer a bit of our heartfelt hospitality to the participants. Next time it will be a joy to receive you in person in the city of Wiesbaden.



© State Capital Wiesbaden\_Angelika Aschenbach

**Gert-Uwe Mende**  
Mayor of Wiesbaden

# Introduction

## Virtual Dialogue & Peer Learning



**+55**  
participants



**+15**  
countries

Between July 19-22, over 55 participants from over 15 countries, including representatives of municipal administrations and enterprises, civil society, business and academia, gathered to share experiences and discuss how local and regional governments can shape the future of urban mobility taking into account the impact of COVID-19 in urban logistics, bike traffic and public transportation.



*“Mobility has always been a priority for cities around the world. Confronted with this crisis, it is not enough to continue to provide local transport services. We have to do so in a healthy and safe manner. Building partnerships and creating new and innovative schemes of operations and finances together with citizenship, academia and the private sector.”*

**Sergio Arredondo**

Executive Director, FLACMA

Virtually hosted by the city of Wiesbaden (Germany), the Virtual Dialogue and Peer Learning event was convened in the framework of **Connective Cities**, a cooperation project between the Association of German Cities, Engagement Global and its Service Agency Communities in One World, and the GIZ, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). The event counted with the support of UN-Habitat and UCLG. Over three sessions, participants shared good practices, discussed concrete challenges building on each other's experiences, and together developed project ideas.



***“We have a window of opportunity to learn from this pandemic and to build back better by making our mobility systems more resilient and responsive to crises. We should aim to get out of this stronger and ready to address climate change, air pollution and road fatalities, because the world cannot accept any further delays!”***

### **Stefanie Holzwarth**

Sustainable Urban Mobility Expert, UN-Habitat

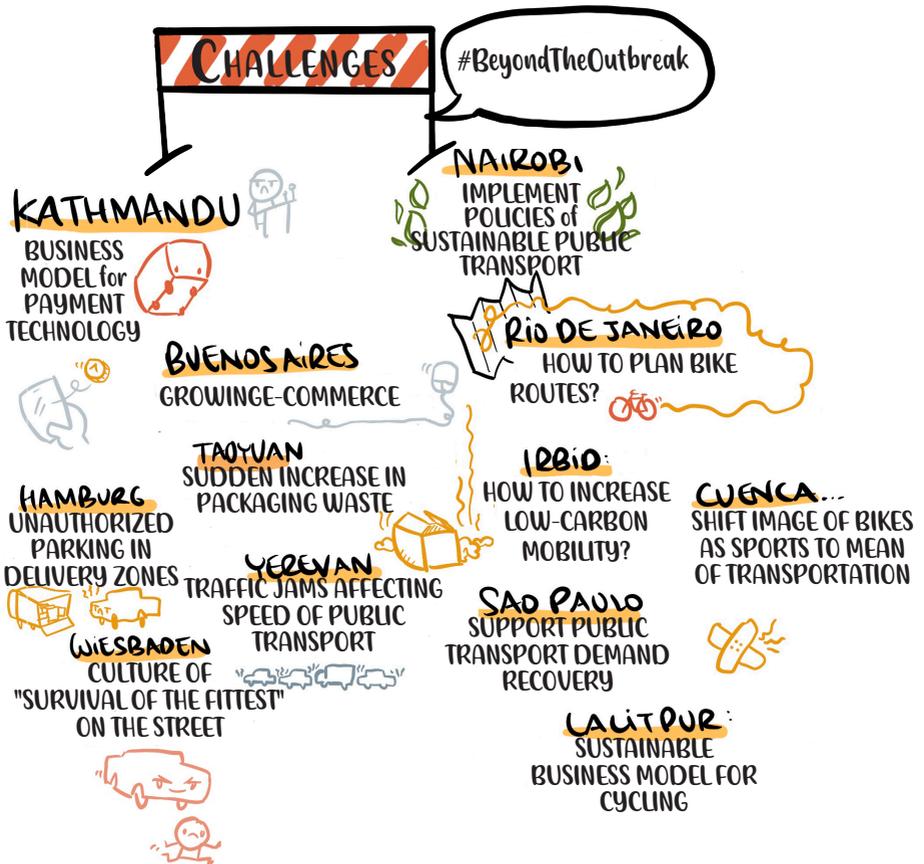
This peer-learning note aims to document the **key lessons** from the event, introducing some of the **good practices, challenges, opportunities and recommendations** for local and regional governments identified by participants throughout the event. It builds on the [#BeyondTheOutbreak Live Learning Experience on Mobility](#) hosted by UCLG, UN-Habitat, Metropolis, and UITP during the hardest months of the pandemic, the [Policy Brief on Mobility and Land-Use Planning](#) developed with UITP, and the ongoing experiences of UCLG's Community of Practice on Mobility, including the most recent #CitiesAreListening event entitled [“Increasing quality of life for people and for planet via sustainable urban mobility”](#) organized by UCLG and UITP in collaboration with UN-Habitat and Metropolis that took place within the framework of the United Nations Global Sustainable Transport Summit.

# 1. Sustainable Urban Mobility & COVID-19



## LOCAL GOVERNMENT LESSONS and PROSPECTS for a SUSTAINABLE POST-PANDEMIC FUTURE

The COVID-19 pandemic crisis has shown how adaptable our societies are to change, leading to fundamental changes in urban mobility worldwide. Although some impacts have been short-term, especially during the lockdowns and other restrictions implemented, local and regional governments have seized the opportunity to continue reshaping cities based on the principles of sustainable urban mobility planning which can contribute to a dynamic recovery, increased liveability, and the fight against climate change.



One of the main responses of governments worldwide to the pandemic was to restrict the circulation of people. However, municipalities still had to guarantee the mobility of essential workers and goods. There was also a shift in behavior, with citizens changing their regular modes of transport for reasons of safety and hygiene. Modes of transport that allow for physical distancing, such as walking, cycling, and private cars were particularly favoured, leading to a decline in the use of public and shared transport. Lockdown restrictions further contributed to the rise in e-commerce and delivery services, posing particular challenges for last-kilometer freight distribution.

Mobility is one of the basic functions that keep the urban system running. As the main providers for public transport but also the coordinators of all other transport modes and regulators of the use of public streets and spaces, local and regional governments have a critical role to play. Having experienced reduced traffic and less pollution during lockdowns, the motivation to promote more sustainable urban mobility has grown for many local governments. Investing in measures such as active mobility infrastructure, safer and more accessible public transport, and low-emission transport options are in accordance with the imperative aim of economic recovery, as infrastructure investments may lead to job creation and private investment in diverse economic sectors.



Cities should see urban transport as a democratizing tool to achieve the right to the city. The current pandemic is an opportunity to rethink urban transport models and move towards inclusive, affordable,

accessible, integrated, and sustainable transport systems while unleashing the potential of emerging technologies to bring down congestion, air pollution, and the incidence of road traffic accidents. These systems should support the redistribution of opportunities among inhabitants, with particular attention to vulnerable groups such as women, children, persons with disabilities, and migrants, especially during the COVID-19 outbreak. Local governments should also consider the needs of those working in the informal sector, who will be highly impacted by the crisis and whose economic opportunities largely depend on public transport.



In order to maintain an adequate level of service with reduced revenue, however, local and regional governments need a clear mandate and the necessary financial resources. In order to find an effective and inclusive answer going out of the current emergency, partnership is needed between the different levels of governments, as well as with private transport providers, private sector, and communities.

From adapting ticket fare systems to new user behavior, to securing newly created bike networks and fostering sustainable practices for last-kilometer logistics, the cities participating in this peer-learning brought together an array of challenges, contexts, as well as solutions and expertise. This section will highlight some of the key discussions, good practices and recommendations presented by participants along three thematic lines:



We hope these discussions can inspire action and further peer learning and consultations among local and regional government officers facing similar situations.

## 2. Peer Learning & Case Studies

### Sustainable urban logistics

**FOSTERING  
INTEGRATED, EFFICIENT,  
LOW-EMISSION & LOCALLY  
ROOTED FLOWS**



Changes in consumer behavior, the growth of instant delivery and e-commerce, along with traditional goods movements, all amplified by the COVID-19 pandemic, have caused increasing pressure on cities. One reason is the lack of available and appropriate space for last kilometer logistics within cities, particularly as cities move to regain space for people within city centers. To reduce congestion, achieve sustainable mobility goals, and improve the efficiency of delivery, cities have had to bring together all relevant stakeholders and consider the freight flows from the beginning, both in mobility plans and in the management of public space.

One concept emerging from the increased demand in urban logistics is 'Shared-Use Mixed Zones' (SUM Zones). SUM zones can be defined as areas where parking management, urban vehicle access regulations, and freight management are integrated, and combined with flexible curb management concepts. In this way the same public street area can serve as temporary parking for logistic vehicles during morning delivery hours, as a drop-off/pick-up point during business hours, while remaining available for pedestrians at other times.

## Green City Master Plan puts focus on urban logistics

In response to its nitrogen dioxide levels exceeding legally permitted limits, the city of **Wiesbaden (Germany)** established a Green City Master Plan in 2018. One set of measures under this plan concerned urban logistics, aiming at reducing nitrogen oxides (NOx) emissions by 5.5 percent in the short to medium term.

One of the measures resulted in the establishment of intelligent delivery zones called “WiLoad”, with app-controlled access that ensure delivery trucks have a place to park, avoiding double-parking and traffic congestion in the historical district of the city. The delivery zones are first monitored by sensors, which collect data used to understand the specific time and volume demands, before establishing the app-controlled access. This data can be continuously used to facilitate decision-making and planning according to actual demand.

Another program established under this plan was EMILIE, a pilot project for emissions-free, low contact delivery logistics which was particularly useful during the corona crisis. The project features an app that connects local retailers with local, emission-free courier services, allowing them to improve their customer offerings by integrating an environmentally friendly delivery service. In parallel to this app, the city provided funding for cargo bikes purchases to individuals and businesses, which was rapidly exhausted due to strong demand.



Photo credit: Kiezkaufhaus

As in Wiesbaden, many cities and companies have also started to promote the use of emission-free last kilometer delivery through bicycles, walking, or electrically assisted vehicles. However, these operations often require the establishment of decentralized hubs

that facilitate the transfer and distribution of goods. Some cities like Wiesbaden or Taoyuan have worked with logistic companies to establish micro-hubs within urban districts, while others such as Paris have explored the partial adaptation of bus depots and other public transport centers to integrate urban logistic activities on a part-time basis.

## Low-carbon transportation and EcoLogistics hubs

The city of **Taoyuan (Taiwan)** is an important economic and trade hub in the Asia-Pacific region. As such it has led efforts to reduce the ecological impact of urban logistics, establishing together with ICLEI's EcoLogistics community the eight principles of EcoLogistics (see image).

As part of its efforts to put these principles into practice, the city has held over 30 stakeholder meetings at different demo sites. Those sites plan to be converted into low-carbon transportation and logistics hubs together with private industry and relevant firms. The hubs will use green energy, as well as provide liquified natural gas for the low-emission fleet which will replace diesel cars. It will also aim to help with package reduction and circulation among companies operating from them.



**Promote multi-stakeholder decision making structures**



**Frameworks for climate-friendly business models**



**Optimize the efficiency of delivery operations**



**Shift to alternative delivery options**



**Commit to safer urban delivery vehicles for safer streets**



**Raise awareness and encourage behavior change**



**Integrate land use planning for freight delivery**



**Support consolidation schemes for urban deliveries**

As highlighted by Taoyuan's experience, engaging stakeholders is a critical factor for the success of sustainable urban logistics initiatives, as they combine many different industries and stakeholders. The increase of food deliveries, packaging waste, and gig-working conditions is also an issue raised by many of the participating cities which will require continued attention, innovation, and collaboration between local governments and the logistics sector in accordance with the particular local contexts and national legislation frameworks.



## Peer-to-peer Consultation: Addressing curb management in Buenos Aires

During the second day, participants engaged in a peer-to-peer learning consultation exercise to discuss eight concrete challenges brought up by participating cities. In small groups, participants presented these challenges and together with peers from other cities identified potential solutions for the specific local contexts.

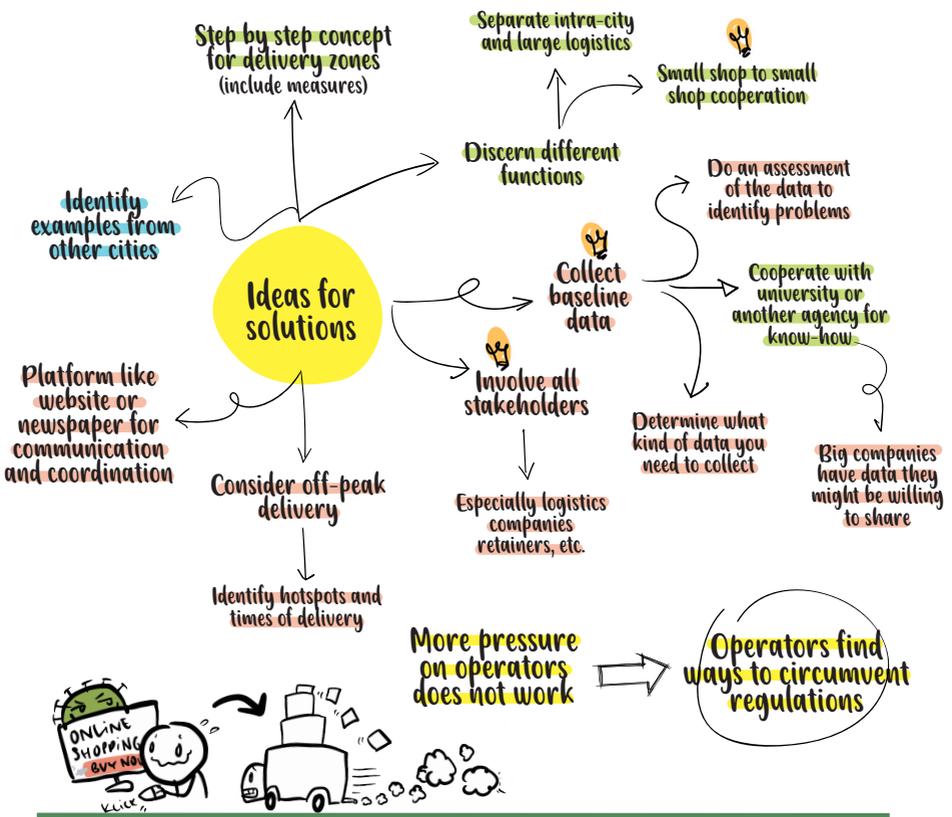
The city of Buenos Aires brought up a challenge many cities face: how to deal with curb management in the face of growing e-commerce and delivery activities. A growing number of delivery vehicles occupy parking spaces, bus stops, or driving lanes, obstructing traffic. At the same time, cars often park illegally in delivery zones, making it more difficult for delivery companies to do their job.

To develop suitable solutions to this challenge, participants suggested it would be helpful for the city of Buenos Aires to have more data available about the delivery traffic in the city. Universities or other institutions could be interesting partners for identifying and collecting the necessary data. In addition, separating intra-city and long-



distance freight transport might be a way to reduce pressure on urban traffic, while engaging stakeholders to promote off-peak delivery or develop micro-hubs with smaller neighborhood shops. One city officer emphasized that putting additional regulations and pressure on operators doesn't necessarily work and they should be engaged in the development of solutions to ensure compliance and cooperation which is also in their interest.

### Main challenge: How to manage Curb Management facing the growing e-commerce activity?



# Key LESSONS

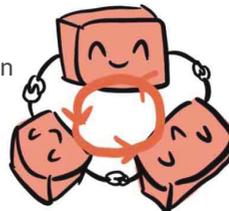
## Sustainable Urban Logistics

- To make last-kilometer logistics safer and more sustainable, municipalities can establish café-like social micro hubs for collecting deliveries, including drop-off places and permits to use the curb.
- Last-kilometer delivery can be done by bike, foot, or small electrically-assisted vehicles to reduce traffic and emissions.



- Shop owners can be involved to keep loading and delivery zones free from unauthorized parking, while combined sensor and camera systems can improve the technical surveillance of these zones.
- Municipal associations can be involved to increase pressure on the government to provide legal options for surveillance of loading and delivery areas.

- Packaging should be reduced to a minimum and a return system (similar to the bottle deposit schemes already in operation in many countries) can increase recycling of packaging material. Companies can be rewarded for sustainable packaging management, with financial penalties for over-packaging.
- Campaigns to improve road safety, mutual respect, and sustainable urban transport help to make freight traffic safer and more sustainable.



# Local public transport

## The BACKBONE of INCLUSIVE URBAN MOBILITY & EQUAL OPPORTUNITIES FOR ALL



Local public transport operators around the world faced an unprecedented decline in passenger numbers and, consequently, severe revenue losses due to the restrictions imposed to control the pandemic. The pandemic has globally impacted people's mobility and will have long-term changes to traffic patterns, from commuting to city centres to moving more locally. In many developed countries/territories, it is estimated that between 40-70% of jobs can be performed from home. This will impact transport systems, which will need strong political support to advance sustainable mobility and not to lose market share against cars. In many cities, financing models had to be reconsidered and it will be necessary to regain passengers' trust and maintain the attractiveness of public transport services.



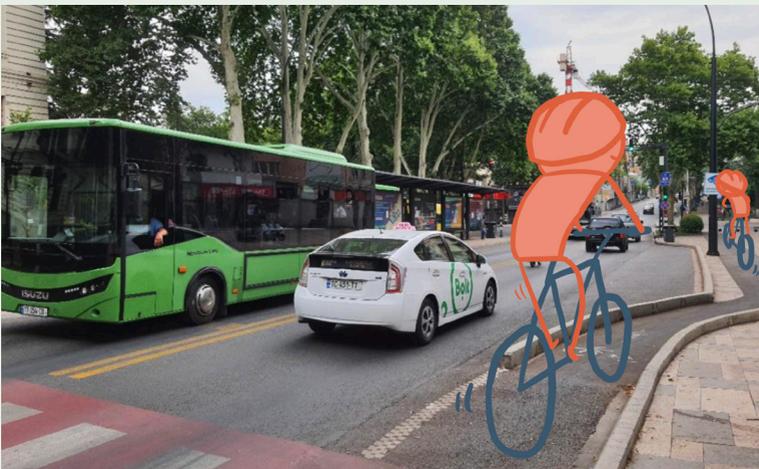
One practice to improve the efficiency and attractiveness of local buses which continues to gain traction in many cities around the world is the use of **bus lanes** (whether for exclusive or priority use) and/or bus rapid transit (BRT) systems. The low-cost interventions **make buses/public transportation visibly more efficient and attractive**, and they can be integrated into a city-wide sustainable mobility vision, fostering walkability, bike



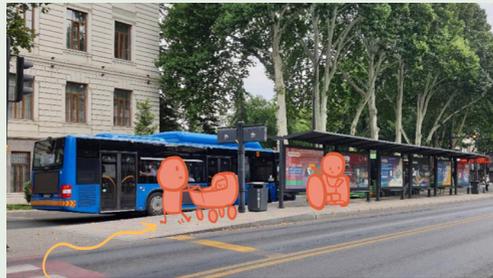
use, and safer spaces for pedestrians at the same time. As with tactical urbanism interventions seen during the COVID-19 response aimed at increasing bike lanes and pedestrian spaces, a good communication strategy and the engagement of key stakeholders is key to fostering understanding and acceptance of new models and interventions, and how they benefit the city and all of its residents.

## Bus lanes foster Mobility for All

In **Tbilisi (Georgia)**, the Ilia Chavchavadze Avenue was reconstructed between 2019-2020, reducing car lanes from two to one, incorporating new bus lanes and stops in the center of the road, and adding bike lanes and wider sidewalks. Efforts were made to make safer street crossings and the speed limit was reduced to 40km/h. These efforts made commuting easier particularly for vulnerable road users, such as the elderly, parents with children, and people with disabilities. The new design was developed during the preparations of the new Sustainable Urban Mobility Plan (SUMP) for Tbilisi, making it a testing field for this new system and highlighting the need for better communication strategies with road users and residents to foster acceptance and respect for new infrastructure.



Photos courtesy of the City of Tbilisi



Civil engagement and participation is a key part of the SUMP implementation strategy to make sure there is an understanding of the new roads and public spaces and how they will facilitate mobility for all. Offering a safe commute in post-pandemic times with more distance per passenger in public transport will continue to be a big priority for the city.

As mentioned before, the pandemic has brought with it a quick adoption of remote working, which together with the ongoing pandemic and related sanitary measures, have led to the adoption of hybrid working mechanisms with less frequent commutes to the office. At the same time that they ensure a safe commute to regain passengers' trust, and maintain regular levels of provision to bring people back, public transportation operators have had to **innovate in their communication and product strategies**, making sure that they respond to the changing needs and demands of commuters who still today are adjusting and rethinking their commuting routines.

Through market research, the Rhine Ruhr Transport Association (VRR) in Germany noticed that 25-30% of public transport users are using public transport less frequently than before COVID-19, while car drivers and cyclists are less likely to switch to other modes of transport. This has had a critical impact on the finances and fare systems of public transport operators that rely on a stable income from monthly or long-term passes which now have less demand. While trying new products and fare offers, public transportation operators are also increasingly adopting digital solutions and cashless payment options, which can provide valuable data on the new commuting styles and demands of users.

### Flexible ticket models for the new hybrid worker

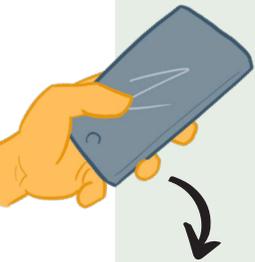
In response to a sudden increase in subscription breaks or cancellations in 2020 (up to 15% of previous users), VRR has introduced a new FlexTicket model as a way to adapt to its corporate clients' needs. Instead of the weekday pass common before, it introduced a pass that offers 12 discounted 24-hours passes per month in exchange for the payment of a base amount which can be subsidized by the employers. Allowing for monthly termination, a similar pass will be offered to individual clients in 2022 combining a base monthly amount with unlimited discounted single tickets. The FlexTicket model reduces the base cost for commuters and employers while providing a discounted fare which might incentivize more regular use as the sanitary conditions improve.



In addition to rethinking their fares and financing mechanisms, local and regional governments are also making efforts to **integrate the different mobility options available**, giving residents a clear idea of all the alternative mobility options they have for owning a private car. From public transportation to bike and carsharing, and

even on-demand cars/taxis, integrating these systems can also help cities gain a more in-depth understanding of mobility patterns, preferences, and behaviors, which can then facilitate the planning of mobility systems within and between cities, making public and active mobility ever more attractive.

## Combined mobility apps - an integral alternative to the private car



**BUS & TRAM**



**BIKESHARING**



**CARSHARING**



**TAXI**

The city of **Leipzig** (Germany) has invested in smart technologies in recent years to support its initiatives for more sustainable systems both in the public and private sector. This has extended to the mobility sector, through the creation of user-friendly apps to provide real-time information on trains and buses.

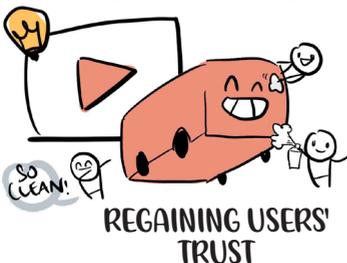
The most recent product developed, LeipzigMOVE, combines all mobility offers within the city in one single app. This includes bus and trains, as well as bike and car-sharing systems, and even the city's own on-demand pool taxi which reaches underserved areas of the city connecting residents to nearby train and tram stations.

The app was very well received, with over 66,000 active users one year after its launch. The combination of bike-sharing and bus/trams in one single app (and subsequent offer of a limited number of hours of bike-sharing for public transportation pass holders without additional charge) saw a huge increase in demand for its bike-sharing system. The city is looking at mobility on its own as a public service, going beyond the regular public transportation systems, and aiming to provide a better alternative to private cars by focusing on residents' diverse needs.

From giving public transportation priority in the use of public roads, adapting products to the new commuting reality, to integrating mobility options, local and regional governments and municipal mobility actors have shown great flexibility, innovation and commitment to continue providing a key public service and securing the right to move of its population, while also reducing the environmental impact of their transportation systems.

A more immediate challenge however, is how to restore trust in the sanitary safety of public transportation systems. This was the challenge raised by the city of São Paulo, which brought together concrete proposals, learnings and experiences from some of the participating cities, as the delegation from São Paulo aimed to develop a concrete action plan to bring back public transport users.

## Action Planning - Cocreating strategies to bring back public transport demand in São Paulo



The last day of the peer-learning event, participants developed four specific project ideas in working groups building on the city challenges discussed the previous day. Although the ideas address specific local realities, they bring up diverse knowledge and expertise and can easily be adapted by other municipalities in other countries, as in the case of São Paulo (Brazil) describe below.

The Covid-19 pandemic led to a 75% decrease in public transport use in the city of São Paulo, which has yet to bounce back. While routes from the city's outskirts to the centre continue to have high demand, as most people living there do not own a car and have no alternative to public transport, many bus or metro routes within the city are hardly used. Passenger surveys reveal that around 30 percent of all passengers do not plan to return to using public transport.



As such, the city developed together with peers a proposal to improve communication with citizens and to spread the message that high-standard hygiene measures are in place and that using public transport is safe. As the metro and tram system in São Paulo is run by the state and not by the municipality, the project envisions the municipality and the state working together to develop joint awareness-raising campaigns. Showing

cleaning procedures to users has proven effective in other cities and could be replicated here. As the municipality lacks funds for extensive awareness-raising campaigns, the idea is to produce low-cost videos about the hygiene measures in place, to be shown in buses and on social media, without forgetting more traditional communication channels such as newspapers or posters in bus stops. Partnering with the Marketing and Communication departments of universities could be an option to reduce costs while ensuring high professional standards.

The proposed strategy also included plans to reach out to employers, schools, and childcare facilities and promote the use of public transport in these settings, where appropriate, as part of existing campaigns about pedestrian safety. Finally, the city administration needs data about the use of public transport and about people's concerns and expectations. Here, universities could also be suitable partners to collect data, while open-door communication with users via offices or temporary stands in metro/bus stations could also be envisioned to get first-hand feedback and build back trust.



# Key LESSONS

## Local Public Transportation



- Bus lanes are a simple solution to increase speed/reliability of public transportation, and thus its attractiveness.
- In order to win back customers despite the pandemic, local transport operators can run publicity campaigns focusing on hygiene measures and safety.
- An electronic ticketing system and the introduction of a multi-modal app can improve bus and train operations, providing information on new commuting patterns.
- Road interventions can also contribute to better sidewalks, separated waste collections, or supporting other mobility options such as cycling or e-scooter sharing.
- Aside from investments in public transportation and mobility offers (pull factor), zero-emissions campaigns, high parking fees, and car-free zones can increase people's willingness to leave the car at home or even give it up and switch to public transport or walking and cycling (push factor).



# Bicycle traffic & cycling infrastructure



**REIMAGINING CITIES  
and PUBLIC STREETS to PRIORITIZE  
ACCESSIBLE, AFFORDABLE  
& EMISSION-FREE MODES  
of TRANSPORTATION**

**#THISMACHINEFIGHTSCLIMATECHANGE**

In the decade before the pandemic, many regions around the world saw increasing investments and policies in walking and cycling infrastructures, traffic calming measures, and focus on public realm improvements as cities focused on developing mix-modal and inclusive public transportation systems and tried to move away from carbon-intensive modes of mobility such as the private car which occupy a large percentage of public streets while mobilizing only a small portion of cities' populations.

The pandemic further underlined the need for more bike-friendly cities. It also proved to be an opportunity to rethink urban space and the role of cycling in urban mobility. Many cities adopted a quick tactical urbanism approach to set up bike lanes to facilitate the sudden increase in bike riders with no access to private car who were trying to avoid usually crowded public transport systems.

## Accelerating bike infrastructure implementation in response to spike of bike trips



For over 10 years, the city of **Buenos Aires (Argentina)** had been investing in its cycling infrastructure, achieving a tenfold increase in bike usage in the city between 2009 and 2019. Before the pandemic hit, the city had 245 kilometers of bike-lanes, and 4% of trips in the city were done by bike. And the city was aiming to triple the number of trips from 400,000 in 2019 to 1 million in 2023.

The pandemic however fast-tracked this goal, with the number of bike trips in 2020 surpassing 1 million before the end of the year. Aware that their network of bike lanes covered mostly minor roads, and 6 out of 10 cyclists in the city were circulating through some of the city's

main avenues (outside of the bike lanes network), the city decided to add bike lanes in some of these avenues through simple tactical interventions. This not only resulted in safer lanes for existing users but also attracted a growing number of cyclists, with up to 50% of cyclists circulating in intervened avenues derived from the addition of bicycle lanes. Particularly visible was the increase in female cyclists which increased 4 times in avenues with exclusive bike lanes.



+1  
million  
BIKE TRIPS



The city is now looking at how to avoid a massive return to the private car and sees cycling as key to guaranteeing balanced, healthy, inclusive, and sustainable mobility. The interventions done in the avenues would have encountered much stronger resistance without the pandemic, but now that they have been embraced, the city needs to



Photos courtesy of the City of Buenos Aires

look for financing options to make those lanes more permanent and secure, while also expanding bicycle parking options and addressing citizens' safety concerns which continue to hinder many potential bike users.

As mobility in the cities has started to recover, cities are now considering how to maintain attractive and safe cycling infrastructure which continues to gain adopters of bicycles not only from public transportation users (as it happened during the pandemic), but particularly from private car users. In this sense, many cities participating in the Peer-Learning exchange highlighted the need to invest further in secure parking spaces, bike-sharing systems, or end-of-trip facilities (showers, changing rooms, lockers, etc.) for bicycle users. This has led to the installation of supervised “bicycle nurseries” in sports arenas in Buenos Aires, where bicycle robberies continue to be one of the main concerns for cyclists, an increase of bicycle parking spaces next to BRT stations in Bogotá, or the creation of portable parking facilities (Bikehubs) to respond to the sudden increase of parking demand during the summer season or cultural/sports events in Lindau (described next page).



## BIKEHUBS - Innovative flexible parking facilities

The city of **Lindau (Germany)** has seen an increase in bike use not only from its residents but also as a destination for bike tourism as it lies along Lake Constance, home to one of Europe's most popular cycle paths. Together with the creation of "bicycle boulevards" - restricted access roads with low-speed limits to prioritize bicycles -, the city has created new parking facilities following increased usage during the pandemic

As part of these efforts, the city also developed BIKEHUBS, a portable parking facility in a modular container, which can be moved as necessary providing extra bicycle parking facilities for events, or during summer periods of high demand.

Photos courtesy of the City of Lindau



Other cities have worked with public and private institutions to provide incentives for bike riders such as secure parking, showers, and other facilities, or use gamification to foster bike use. Aside from the safe riding environment which bike lanes and routes can facilitate, access to secure parking spaces, repair shops, changing or shower facilities, etc. remain some of the most cited concerns of bicycle commuters. Working together with the private sector, engaging other public/private facilities, as well as fostering small

enterprises can help cities address these needs. Engaging cycling associations, as well as schools and employers, has also proven to be a great way of changing local mobility cultures and the acceptance of bike riders. From bicycle caravans to provide a safe environment for children's school commute to the provision by companies of incentives for bike commuters, to the use of gamification to incentivize bike trips (see box below), working in partnership can lead to innovative ways to further advance sustainable modes of transport within and around cities.

## Building a cycling culture through gamification

An innovative and collaborative approach to foster bicycle commuting has been adopted by a consortium of organizations including the UNDP, Cycle City Network Nepal, a mobile service provider, a media company, and the cities of **Lalitpur** and **Tulsipur (Nepal)**.

Following investments by Lalitpur Metropolitan City to develop existing roads as cycle-friendly roads and install cycle stands, the project launched a mobile app through which participants could earn points whenever commuting by bicycle. Working together with schools and other public institutions, the app provided cash incentives which could then be invested by the schools and institutions to develop cycle-friendly infrastructure for their commuters, or even provide new bikes for new users.

The consortium has also worked with companies to develop bicycle plans guidelines for companies to support their bike commuters, developed bicycle learning ideas for schools, and provided cycle-friendly policy guidelines for other cities in Nepal based on the experiences of Lalitpur and Tulsipur.



# Key LESSONS

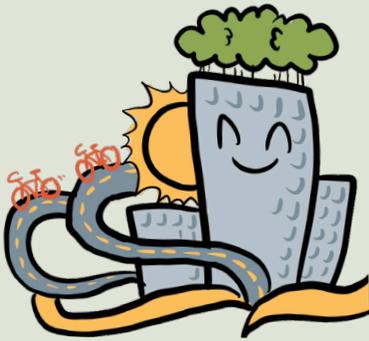
## Bicycle Traffic & Infrastructure

- Assess where riders are already riding. In order to get a good picture of bike traffic, municipalities can cooperate with universities to collect data or use cyclists' GPS data.
- Bicycle parking is critical to facilitate mobility and promote bicycle use. It can be improved on-demand or through the use of supervised parking lots depending on context.
- New infrastructures must be properly explained and communicated to ensure understanding from both cyclists, pedestrians, residents, and other stakeholders.
- The introduction of a bike-sharing system can encourage more people to use bikes.
- Apart from building infrastructures such as bike lanes and parking facilities, municipalities have to address and involve their citizens to identify their needs, promote cycling as a sustainable, safe, and fast mode of transport and reduce potential opposition to bike traffic due to the loss of parking space.
- Addressing gender and age gaps in ridership, needs, and perceptions of safety is critical to increasing bicycle use.
- In order to increase mutual appreciation and respect between different road users, bike-only days on weekends can help to promote cycling and raise awareness of cyclists' road safety.



# 3. Conclusion

## Towards Sustainable & Inclusive Mobility Models



**As it has been made clear by the experiences shared during this peer learning and by the key lessons learned, mobility and public transport have acted as the backbone of local public services ensuring their continued provision during the COVID-19 pandemic.**

Although the COVID-19 pandemic has not ended yet, the lockdowns and sudden changes in urban mobility opened up new possibilities, as well as new challenges, for cities' efforts to foster more sustainable, resilient, and inclusive modes of mobility within and between cities. As providers of public services and as caretakers of their communities, municipalities have had to continue providing their citizens with mobility services, with a particular focus on vulnerable groups, in order to guarantee the continued functioning of interconnected city systems, local economies, and critical livelihoods.

To create healthy, inclusive, economically competitive, zero-carbon urban areas beyond the outbreak, cities need to have an integrated approach to urban mobility. This means, establishing political support and commitment, fostering multi-stakeholder partnerships and cooperation. It also means strengthening sustainable city visions that sharpen citizens' resolve to create livable cities based on walking, cycling, and public transport. This also means strengthening and maintaining the provision of basic services and coordination between municipalities and across government levels, so that these policies are effective in moving cities away from individual car dependence.

## Key recommendations

### 1. Public transport should be the backbone of urban mobility

Public transport should be the backbone of urban mobility across cities efforts towards more sustainable modes as part of an integrated public transport system (administrative, modal, fare,...) that facilitates the right to move by combining mobility services, providing door-to-door seamless journeys, equalizing access to services and opportunities in the city, and reducing the need for the private car.

### 2. Develop a shared social agreement and vision

Ensure there is a widely shared social agreement and vision about what constitutes sustainable urban mobility and its overall benefits. This is crucial as justification when priorities have to be set between incompatible wishes (e.g. space for cars versus space for people). Reinforce the relationship between access to mobility and access to opportunity and the importance that mobility plays in the lives of all, especially the most vulnerable.

### 3. Foster cooperation between stakeholders with effective communication

Fostering cooperation between public and private bodies and engaging stakeholders through effective communication and consultation channels from the beginning of the processes is critical to bringing everyone on board. This will contribute towards reinforcing local democracy as well as the efficiency of the service as it will reflect the needs of people.

#### **4. Advance citywide mobility programmes to support inclusive access**

Cities should continue to advance mobility programmes to support inclusive and sustainable access and citywide development to contribute to social inclusion and climate action. This includes: Investing in mass public transport, cycling, and walking; Coordinating public transport and street management by integrating walking, cycling, and public realm improvement; Investing in traffic calming measures and building multimodal nodes; Reinforcing parking policies, such as residential parking controls and charging for and limiting the supply of destination parking.

#### **5. Remember that urban mobility goes beyond infrastructure**

Sustainable urban mobility goes beyond infrastructure and should address cultural conceptions of mobility and citizens' needs. From the acceptance of bikes as a transportation mode beyond sports to the availability of parking and changing facilities, and respect and prioritization among different road users, sustainable urban mobility needs to go beyond the construction of bike lanes or the definition of loading curbs.

#### **6. Explore the potential of data and technology**

Make use of data and technology to gather, analyze mobility data, and understand travel patterns, needs, and trends. Both in terms of public transport as well as urban logistics, there is a need to continue analyzing the long-term impacts and changes in travel patterns and demand in order to define adequate measures and develop mobility plans. Universities can be a key partner to gather and analyze this data, and develop innovative and integral solutions.

## **7. Define adequate financing mechanisms for local governments**

Ensure both the legal possibility and the access to financial markets by local governments, and adapt financing mechanisms to changing realities. Define and establish several funding mechanisms to cover the costs of operating and maintaining these public transportation systems over time.

## **8. Advocate for sustainable urban mobility and the role of LRGs**

Continue to advocate for sustainable mobility within international policy processes led by the United Nations and other multilateral organizations to ensure that mobility is mainstreamed across all agendas and that local and regional governments are included at the decision-making table for improved policymaking.

## Partners

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## Supported by

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