

# MOBILITY POST-PANDEMIC: A STRATEGY FOR HEALTHIER CITIES

AUGUST | 2020

## INTRODUCTION

*The Covid-19 outbreak has had a major impact on our lives: the way we move, socialise and work. It has shown how vulnerable and unprepared our societies are to a pandemic crisis. It has also shown how strict decisions on individual mobility have significantly reduced air and noise pollution levels, leading to the terrible environmental impacts from motorised transport becoming ever more apparent to the public. This has triggered a change in citizens' mobility habits.*



➤ Temporary bike lane in Brussels, Belgium

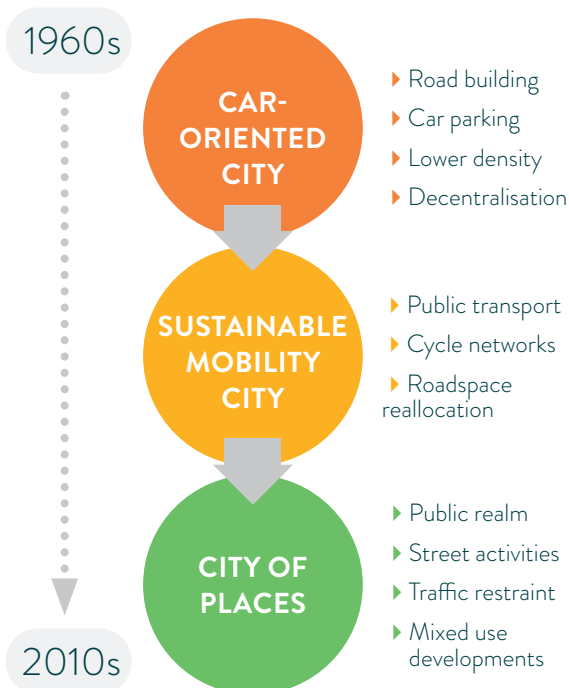
*This pandemic has evidenced the vital role of public transport systems for accessing work and essential services, and the flexibility of city streetscapes to provide the necessary additional space for walking and cycling. Despite its devastating impact, the crisis offers unique opportunities for cities to rethink and push for their mobility strategies to foster the use of sustainable transport modes and provide safe and sustainable mobility options to citizens. In times such as these, adapted urban space management and new mobility services offer the possibility to support public transport systems, while providing additional space for active mobility, and contributing to reducing car use in cities. Each crisis offers opportunities to change, this crisis has set the basis on which decision makers and citizens should build upon and reposition economic and social recovery in projects fighting climate change for healthy cities.*

*This Knowledge Brief will identify actions taken by cities to help maintain a good level of mobility access and to influence different demand and mobility behaviours, with the aim of better understanding the impact Covid-19 could have on cities' mobility strategies.*

## MOBILITY STRATEGIES: LET'S CONTINUE TO MOVE FORWARD

Public transport and mobility is not an end in itself but a means to an end for sustainable and liveable cities. They contribute to UN Sustainable Development Goals to build inclusive, safe and resilient cities. Today, as cities grow and vehicle traffic continues to increase with its related negative effects on air quality, noise, congestion and available space, cities are trying to build healthier and safer streets and regain space used for car traffic and parking. Authorities are acknowledging the significance of street life as the motor of society. It benefits the economy and places citizens at the heart of city planning.

From the car-oriented cities of the 60s, we are now moving to 'cities of places' with an additional focus on the public realm through street activities, car traffic calming measures and restrictions, enhanced public transport systems and walking and cycling facilities. Zones of mixed-use development also means many services and amenities can be reached in a shorter travel time. With the drastic measures to limit people's mobility during the Covid-19 pandemic, leading to a sudden drop in vehicles in cities, it has shown how car traffic has a real effect on cities' noise pollution and air quality. In fact, reductions of CO<sub>2</sub> emissions ranging from 8% up to 75% depending on the assessed urban areas have been observed in several European cities<sup>1</sup>. **It is essential that, as lockdown measures are now being lifted, cities should not encourage car use and forget or delay their sustainable mobility strategies, placing the needs of people at the forefront.**



Source: MORE, 2019

The pandemic crisis should serve as a ground to foster or explore sustainable mobility projects, invest in public transport systems and additional walking and cycling facilities. Such modes can use space efficiently in our cities. City authorities need to ensure they continue to move forward.

## FROM DECISION TO IMPLEMENTATION

The pandemic crisis is putting a lot of pressure on public transport systems. The crisis has impacted the systems, firstly because of lockdown measures and imposed mobility limitations, impacting fare revenues. And secondly, because to ensure physical distancing, public transport networks had to enforce capacity limits. In addition, confusing messages from some authorities (fear of virus transmission) discourages users to travel using the services.

To better manage the crisis, reduce the pressure on public transport systems and limit the pandemic effects, cities are implementing measures to provide additional space for walking and cycling. What was once perceived as a revolutionary ways of thinking a few decades ago, has now been prioritised in many mobility strategies.

We have seen a number of cities quickly adapting streets infrastructure for more active forms of mobility, and using the crisis as an opportunity to provide safer mobility solutions for citizens, ensure a link to economic and social activities and prepare for the recovery phase. The lockdown effect and the reduced car trips due to teleworking and schools and universities closure, opened a 'window' to test and implement mobility projects. Nevertheless, this situation has made people and cities adapt and try in real conditions different ways of moving around and even rethink mobility planning using tactical urbanism to push for a change in mobility behaviours. This change was possible thanks to several factors:

- Citizens will walk and cycle more due to lock down measures.
- A very strong political will to reduce trips, ensure social distancing while preserving sustainable mobility strategies.
- City authorities and stakeholders reacting quickly and implementing the changes.

Additionally, authorities in charge of managing and designing roads and streets are considering that they should play a role in providing priority to public transport, walking and cycling as safe travel options. Indeed, their policy goal consists in promoting walking, cycling and high occupancy vehicle lines as a complement to mass transit, and as services that will contribute to sustainable mobility practices.

<sup>1</sup> CMCC Foundation. Euro Mediterranean Center on Climate Change, 2020. *Clear reduction in urban CO<sub>2</sub> emissions as result of COVID-19 lockdown.*



Not only are these options sustainable but, provided enough space is available, these travel options are in line with health recommendations. The cooperation of the various actors (government, local authorities, and private partners) towards a common goal has been a key factor to implement these temporary measures that hopefully may lead to permanent action.

Although not widely communicated, some cities have taken a step backwards to protect people from the pandemic, lifting parking fees for instance or encouraging individual car use. From a political point of view, decisions in terms of mobility changes are very hard to take as there is a need to balance between the health and the mobility challenge. Nevertheless, without jeopardising people's mobility, quick solutions can be put in place to provide additional mobility facilities and ensure safety. As restrictions ease, cities have to ensure that measures taken bring in additional value for the recovery phase and support local businesses and economies as they in return benefit from the healthy streets measures.

## AGILE STREET INFRASTRUCTURES

Unlike buildings, streets are easy to retrofit and temporary measures can be implemented quickly without huge investments since the public realm is not subsequently modified and no works are being undertaken. These light measures require quick studies to define them and do not need any specific or long-term tendering processes before street works can begin. Administrative authorisations can be quickly obtained and delivered to implement these measures, when they are necessary. They are compatible with agile public consultation schemes and their implementation does not require many resources: new lines or separated corridors are marked on streets, temporary or modular bus stops are provided, and road signs are quickly put in place. In general, measures can be implemented easily using already existing urban material

such as cones, spray paint, traffic tape, signs and gates. For many cities, this window offered by the pandemic is an excellent opportunity to invent and experiment, and then evaluate and adapt in close cooperation with all the stakeholders (residents, partners, businesses and users).

Here is a list of various measures taken by several cities. Different neighbourhoods mean different streets, different needs and different strategies and these measures will have to be adapted to the type of environment: residential, business, commercial, mixed used etc. Here is a list of possible measures:

- 1 **Open dedicated bus lanes and improve bus interface with streets in high ridership corridors or areas where need for transport is high.** This can be done by converting parking space into reserved lanes or by taking regular traffic lanes and using paint or stripping signage.



► Dedicated bus lanes in Barcelona, Spain

- 2 **Slow streets or healthy streets: Limit through traffic and manage speed reduction for a shared space.** In highly populated areas, mixed used residential and commercial area encourage shared spaces for all modes. Limiting through traffic and imposing speed limits enables a shared and safe multimodal street, accessible to services nearby. Some streets may be closed to traffic and reserved for local access. Quick building material such as cones, spray paint or official signs can be used to announce the shared space. Access to micromobility parking zones should be provided.



► Mixed-use street with clear visuals on road in Dunedin, New Zealand



**3 Remove parking lanes to create walking and cycling paths in high density areas and mixed used zones (business, residential and commercial).** Use cones to widen pavements and bike lanes using the space initially taken for car parking.



► *Enlarged bicycle lane in Vancouver, Canada*

**4 Enlarge pavements for pedestrians.** Provide enough space to maintain 1.5m physical distance and space for queuing in high density residential, business and commercial areas with large streets. Pavements should be enlarged from 1.5m to 2.5m. The additional space can be taken from lanes dedicated to cars. This can be done easily using cones, poles or construction site material. Vertical barriers are necessary to ensure safe physical separation from road traffic.



► *Extended pavement in Montreal, Canada*

**5 Enlarge cycling lanes and provide additional dedicated lanes in residential, commercial and business areas, in peripheral areas, on local streets, boulevards, main streets and major urban streets.**

Cyclists need 2.5m width to ride safely and cross each other. To allow the physical distancing, a width of three metres is needed. Enlarging cycling lanes can be done by narrowing car lanes or by removing space dedicated to parking cars, using cones, poles and construction site material. Vertical separation or highly visible paint

is necessary to ensure safety and that drivers are aware of the separation. Additionally, the material used for the cycling lane should be safe and not add risks of accident.



► *Temporary bike lanes in Berlin, Germany*

**6 Enlarge pedestrian areas on existing pedestrian areas neighbouring streets using vertical barriers.** Close neighbouring streets using movable barriers, official signs. Access to micromobility parking zones should be provided.

**7 Enable bikes to move on bus lanes on main streets, major urban corridors connecting residential areas to business and commercial areas.** It is important to improve the interface between bus stop and cycling lane to enable safe pick-up and drop-off of bus passengers without interfering with bike traffic. Use visual signs for shared space. Temporary movable bus stops may be created.



► *Shared bus and bike lanes in Barcelona, Spain*

**8 Analyse potential for car-pooling and on-demand services on bus lanes.** This can prioritise shared vehicles or high occupancy vehicles over individual private transport when needed. But make sure it does not slow down bus traffic.



## INVOLVING NEW MOBILITY PLAYERS

Micromobility services have been severely impacted by the lockdown crisis. While some have disappeared from our streets, others have managed to increase their ridership when measures have been lifted. The use of data for understanding mobility patterns is essential to adapt infrastructure and proposed services to the actual demand. In times such as these, the use of mobility data becomes even more essential to adapt and implement quick measures. The pandemic has changed mobility habits, with demand for mobility spreading over the day and a report on active modes in urban centres. To ensure that no report is put on private cars, authorities and micromobility services must continue and push for dialogue and collaboration in the context of city strategic goals and grab the opportunity for quick planning strategies to make sure they are integrated in the new planning phase.

## CURRENT CITIES INITIATIVES: QUICK FACTS

As a response to the Covid-19 crisis, cities have taken numerous initiatives. In North America for instance, New York announced that it would temporarily open 150km of roads to pedestrians and cyclists, Seattle is planning to permanently close 32km of roads and in Europe there are lots of ambitious projects. Here are a few examples:

### EXPANDING WALKING AND CYCLING SPACE IN MILAN, ITALY

The city has announced that 35km of streets will be transformed over the summer, with a rapid, experimental citywide expansion of cycling and walking space. There will be low-cost temporary cycle lanes, new and widened pavements, 30km/hour speed limits, and pedestrian and cyclist priority on streets in specific neighbourhoods.



### INCREASING WALKING AND CYCLING INFRASTRUCTURES IN TORONTO, CANADA

Toronto's Ministry of Transportation is working on installing 25km of new bikeways. Additionally, it is planning to install 40 kilometres of on-street cycling infrastructure to be completed by summer 2020. The city is proposing to spend almost \$4 million to "create more public space and patios, make a more beautiful street, and pilot active transportation infrastructure in strategic areas."



### PUSHING MOBILITY PROJECTS FORWARD IN BARCELONA, SPAIN

The city is planning to transform 30,000m<sup>2</sup> of urban areas into spaces for pedestrians (the equivalent of 12km of streets), and 21km of cycling paths to link urban and interurban connections. The local government is also working on improving bus traffic with additional segregated bus lanes and improvements on other existing ones. To make these changes, the city is actively campaigning to encourage walking and cycling, and to position itself as the mobility of the future. In addition, parking fees will increase from €2.50/hour to €3.50/hour depending on the vehicle's level of emissions.

## PLACING HEALTHY STREETS FIRST IN LONDON, UK

London has converted some streets to walking and cycling. It is increasing its congestion charging scheme and providing 5,000m<sup>2</sup> of extra space on pavements. The speed limit is to be reduced along temporary cycle lanes, and park lanes. Low traffic corridors have been created in residential areas so more people can walk and cycle.



## EXTENDING PEDESTRIAN AREAS IN BUENOS AIRES, ARGENTINA

Since the outbreak of Covid-19, the city has pedestrianised approximately 100 streets to help avoid crowding and encourage commercial interactions within the same neighbourhood. Pavements with substantial pedestrian traffic now also have physical distancing markers, and the city's public bike-share and electric scooter scheme has been reactivated with new protocols.

## DEVELOPING BIKE NETWORKS IN LISBON, PORTUGAL

Lisbon has started to work on its cycle network with 105 km in May, 135 km in July and reaching 200 by 2021. The government has secured 7,750 extra bike parking places, and €3 million "mobility fund" to subsidize bicycle purchases. Citizens can apply for €100 vouchers to buy standard bicycles, €350 for e-bikes, and up to €500 to help pay for cargo bikes.

## INCREASING THE BIKE NETWORK IN PARIS, FRANCE

Since mid-May, Paris has rolled out pop-up bike lanes. The city is planning to have an additional 50km of lanes ready by June 2020 with a final goal of 650km by end of the project. The geographical coverage of the project is the centre and outskirts to serve main business areas.



## POP-UP BIKE LANES IN BOGOTA, COLOMBIA

Bogota was one of the first cities to implement pop-up bike lanes with 76km of temporary bike lanes on the main streets in place of car lanes, adding to the 550km of permanent cycling lanes. It has also designed specific bus routes for health personnel and deployed 400 free e-bikes to help health workers get to their jobs.





## COVID-19 AND IMPACT SCENARIOS

The coronavirus has had major impacts on public transport systems with a drop in ridership from 40 to 90% in a very short space of time (February to March 2020). With lockdown measures being lifted in certain parts of the world, the ridership level is beginning to increase. However, this is not yet returning to the pre-pandemic levels.

On the other side, citizens' mobility behaviours are changing with safety becoming a priority when travelling, with less demand for mobility due to working from home policies and flexible hours. There is increased level of walking and cycling and raised awareness that public space has a huge potential to build pleasant streets for people. But what will be the impact of this crisis in the long-term? Will cities go back to the pre-pandemic situation in the short-term (2-3 years), will they take one step backward with significant drops in public transport ridership levels and services and a return to the private individual car use, or will they seize the crisis and push for more sustainable and integrated mobility systems? The below scenarios try to look at what the future could be and potential impact on cities.

### BUSINESS AS USUAL: TOWARDS INTEGRATED MOBILITY AND PEOPLE CENTRIC CITIES

No change in services, modal split and public companies financial situation back to January 2020 levels. Cities continue to work on more integrated public transport and mobility systems with a goal towards people centric and healthy cities. This back to "normal" situation is due to pandemic control, restoration of trust in public transport systems as a safe mode, government financial support measures to public transport companies, investments in planned projects and actions to continuing moving towards the SDG.

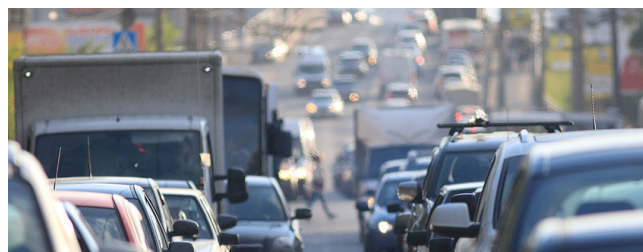
Although easy to recognise, as this is a reality we have known so far, this might not be a likely scenario as the financial situation for many cities and public transport companies is highly impacted and the services will have to be reduced for quite some time. Moreover, the demand for mobility will most likely be affected by unemployment rates and a growing number of people working from home or with flexible hours.

### ONE STEP BACK: INDIVIDUAL PRIVATE MOTORISED TRANSPORT

Because of strong health measures, authorities encourage the use of individual transport including car use. The short term costs of maintaining high level of public transport services with few customers does not encourage

governments to financially support them which, on top of the loss in ridership, leads to the reduction of many services. Additionally, trust in public transport remains low, individual car use increases but still limited with teleworking measures and school closures. With off-peak hour transport, private car mobility might become even more present throughout the whole day. On top of this, the increase of delivery transport generates additional chaos and deployment can't be controlled due to the lack of data or their unpredictability.

With the reopening of the economy and activities, individual car use is increasing and it is to fear that existing measures taken by some cities to restrict car use (slow zones, pedestrian areas, congestion charges and parking fees) are lifted to encourage spending. Investments in public transport systems and projects to implement the SDG goals are delayed or cancelled.



### ONE STEP FORWARD: AGILE PEOPLE CENTRIC CITIES AND INFRASTRUCTURES

Covid-19 offers cities and citizens opportunities to move towards more integrated and sustainable mobility systems, implementing planned measures and tested solutions. The health crisis pushes cities to provide additional space for walking and cycling and on-street public transport services (such as priority bus lanes). Working from home and flexible hours becomes the norm, so public transport companies spread demand for transport over the day, improving their offers and quality. Government support to local economies and businesses pushes for additional proximity services which encourages the development of slow zones, walking and cycling facilities, micromobility and an improved integration between the different modes for a complete mobility offer.

The crisis raises awareness on the importance of investing in sustainable and environmentally-friendly services, and providing efficient transport for essential services to push for sustainable and resilient cities. Governments are forced to respond to this pressure and take actions for healthy and inclusive cities. Public-private partnerships increase the exchange of data which enables cities and mobility companies to understand new travel patterns and move towards a more efficient use of public space, with public transport as the backbone<sup>2</sup>.

<sup>2</sup> UITP's campaign, "[Back to better mobility](https://www.bettermobility.uitp.org)" advocates for all cities to take the step forward and prioritise public transport. Find out how the public transport sector can get involved: [bettermobility.uitp.org](https://www.bettermobility.uitp.org)

## CONCLUSION

Covid-19 has hit our cities dramatically but it has shown how adaptable our human societies are to change and how easily we can adapt the way we work, socialise, and move. At the peak of the pandemic, many cities have worked on adapting transport offers to maintain the link to essential services and provide enough space for people to move safely. This has led to initiatives during the lockdown period to experiment new mobility measures as governments were forced to take action to adapt transport offer and build healthy streets, showing public transport networks but also streets are not static elements but can be easily adapted to provide sustainable mobility. As lockdown measures have started to be lifted up in some part of

the World and with the potential societal changes it will bring in terms of transportation needs, it is urgent that governments and cities move faster towards sustainable mobility and take actions to fight against air pollution and climate change. These actions are necessary to avoid the surge of car use and recreating the mistakes of car dominated cities choked by traffic congestion, accidents, pollution and with space issues. The slow streets or healthy streets movements but also pop-up mobility initiatives that gained importance during the pandemic are easy tools for cities to experiment, monitor and adapt sustainable multimodal systems and build healthier, resilient and more inclusive cities.





## RECOMMENDATIONS

### CITY LEVEL:

#### Adapt your mobility strategy and foster projects

- Invest in public transport infrastructures and services as key pillars of economic, social and environmental recovery. The public sector must step in to guarantee a certain level of stability through dedicated mobility funds, acting as a driver. Alternative funding schemes, such as congestion charging or road pricing, should be considered.
- Encourage the use of public transport and communicate about its safe use.
- Encourage walking and cycling.
- Continue to advocate for sustainable transport-oriented developments, based on a careful integration of land-use and transport planning.
- Integrate all modes to offer a complete mobility solution, with public transport as the backbone.
- Be agile, don't see street infrastructures as static elements, prioritise flexibility and multi-modality.
- Share the public space between the different users and balance or reprioritise the use of the street according to the mobility strategy chosen and mode efficiency.
- Work on a traffic plan to decrease motorised traffic.
- Provide incentives to citizens to encourage the use of sustainable mobility modes.
- Adapt bus offers to demand using agile route planning and scheduling (modular bus stops).

- Turn temporary actions (pop-up bike lanes, widened sidewalk, bus lanes) into permanent measures when results are positive.
- Coordinate the interactions between delivery transport and people's mobility.
- Use data to understand travel patterns.
- Involve users in the process to understand their needs.
- Work closely with governments, schools, businesses etc to spread demand for travel. Use the press and media to communicate about the changes.

### STREET LEVEL:

#### Use tactical urbanism to test, evaluate and adapt mobility projects

- Extend pedestrian areas.
- Use space dedicated to car parking to create walking and cycling zones.
- Build up pop up bike lanes in and around city centre and on main traffic corridors.
- Widen pavements in high density areas (with temporary signalling material) to 2.5m wide.
- Reduce or modify on-street parking to enable access to additional on-road space.
- Create slow streets or healthy streets in high density areas reducing vehicle's speed or restricting through traffic to improve space capacity.
- Install clear visuals to help understanding the new mobility rules applied, make them visible, readable and coherent to ensure safety of all users.



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**AUGUST | 2020**