WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Community Paper

Guidelines for City Mobility

Steering towards collaboration

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Foreword



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By 2050, an additional 2.5 billion people will live in cities.[1] As cities grow, the demand for mobility increases. Where private car usage and free parking was once a priority, and delivery trucks double-parked in traffic, cities, mobility partners (defined as mobility companies, organizations and providers) and communities are taking a systems perspective to rethink the movement of people and goods. These stakeholders are looking for ways to reduce emissions and congestion, and at the same time to create an affordable, liveable and inclusive mobility system in commitment to the Shared Mobility Principles for Livable Cities[2] and Principles of Mobility Justice[3].

New mobility options are increasingly popular. The reception of these services indicates that users adapt to diverse options when travel time for both people and goods delivery is improved, services are safe, comfortable and convenient, or prices are competitive.

This creates an opportunity for cities to review their existing transport networks and take a systems level perspective. Rather than reacting to new mobility partners entering the landscape with restrictive policies, cities should pre-emptively modify existing structures to enable a practice of adaptable, creative and flexible regulation. At the same time, the private sector is starting to learn how to collaborate with cities and communities. Instead of ad hoc strategies and unconventional launch tactics, they are cognizant of the realities of the cities where they want to operate.

Cities and mobility partners that prioritize working together will improve mobility for all. This is the moment for cities, mobility partners and communities to think about a better way to collaborate. People and goods movement share the same mobility system. In order to systematically improve urban mobility, people and goods movement should be addressed as part of one mobility system. It should be designed, connected and optimized as a comprehensive system that facilitates safe and secure, clean and sustainable, and inclusive and efficient mobility.

Developed by the World Economic Forum's Global Future Council on Mobility, the *Guidelines for City Mobility* reflect shared goals for liveable and just transport networks and cities. Each guideline is intended to complement the operating authority of cities with the creativity and innovation of the private sector. It is our hope that cities and mobility partners around the world will deploy these guidelines in their work.

Introduction: What is at stake?

The pace of technology-driven innovation with new mobility options, including micromobility solutions and shared transport services, has been incredible. The widespread user adoption confirms that traditional public transport, such as fixed-schedule bus routes, and traditional private mobility services, such as taxi services, no longer satisfy user needs. At the same time, e-commerce has nearly tripled in the past five years resulting in an increasing surge of congestion caused by last-mile distribution, requiring new solutions altogether.[4] A fundamental review and revision of how people and goods get around in cities is under way.

- **Passenger mobility:** Traditional mobility options provided by government entities, public-private corporations or local communities are, in some geographies, increasingly complemented or substituted by new solutions provided by private mobility service providers, referred to as mobility partners throughout this document. They are transforming urban mobility options – seemingly overnight. These innovations include car-, bicycle- and scooter-sharing, ride-hailing and pooling platforms, trip-planning and route optimization apps, and they are winning over users from communities in cities around the world.
- **Freight mobility:** Urban logistics face similar challenges to passenger mobility. Urban logistics providers include parcel delivery, temperature-controlled general cargo and retail, as well as services in waste logistics, facility logistics and construction. Customers are increasingly looking for convenient and flexible, time-definitive fulfilment systems with a growing share of same-day or next-day deliveries. Consumer behaviour and market patterns are shifting as new technologies, including drones, robot delivery, microhubs, and parcel locker systems are deployed, populations age and companies strive for more sustainable and inclusive practices.

Part of the success of companies providing new mobility services is the ability to forge ahead and identify ways of meeting consumer demands. These early-entrant companies often benefit from regulators unsure of how to interpret and engage with them. This creates new challenges for cities to:

- Complement legacy public transport and freight systems
- Allocate public space to create more liveable cities
- Optimize the response to the needs of communities
- Revise city-planning processes
- Collaborate on a public-private framework

Complement legacy public transport and freight systems

When launching new services, mobility partners should seek to complement and increase ridership of existing public transport and expand the geographic and community reach of the system. Mobility partners should also seek to make better use of empty or partially empty trucks before adding new vehicles to delivery routes.

Allocate public space to create more liveable cities

In addition to changing how consumers and goods move around urban environments, the influx of these new services impact the use of public space, urban infrastructure and city resources. As the share of on-demand pooled rides increase, the need for parking spaces may go down significantly, freeing up room for community uses. Through this collaboration, cities should establish or revise protocols for managing the impact on passenger and goods mobility, infrastructure and other city resources to proactively engage with new mobility services.

Optimize the response to the needs of communities

Users and providers will modify their travel around cities as transport networks expand to previously underserved communities. As new technologies are introduced and, simultaneously, city governments work in anticipation of disruption, the needs of communities should be prioritized. Community leaders should be brought into the planning process as advocates. Cities should routinely review and improve public transport and freight delivery offerings through direct consultation with all communities, particularly marginalized communities, who have been historically excluded from planning, and respond to their needs.

Revise city planning processes

Complementary and collaborative planning, in pursuit of mobility justice, will ensure better deployment of community-oriented solutions from the private sector and the steady review of existing transport infrastructure by cities. Furthermore, transport policies should be updated in a manner that prioritizes sustainable mobility that moves users from single-occupancy private vehicles to shared transport alternatives and facilitates co-loading and load-pooling of goods for full freight vehicles. New mobility services should provide inclusive, sustainable and shared options.

Collaborate on a public-private framework

Cities should design partnerships and collaborations in advance with mechanisms that include setting aside public funds to ensure that new services are deployed where public transport systems are limited or otherwise inaccessible to communities. As new mobility services are growing and getting more users, it is the role of city governments to maintain a level playing field and ensure that these services will properly meet the needs of communities, to maintain public space and to improve liveability. Cities should work together with mobility partners and the communities they serve to revise appropriate regulations and financing options to deploy new mobility services.

How should these guidelines be used?

The purpose of the *Guidelines for City Mobility* is to establish a framework for cooperation between cities and mobility partners. These guidelines suggest practices for collaborating across the private and public sectors and offer an approach, developed by the World Economic Forum's Global Future Council on Mobility, for accomplishing and implementing the *Shared Mobility Principles for Livable Cities* and *Principles of Mobility Justice*.

As a manual for stronger collaboration, the *Guidelines for City Mobility* preliminarily define the points that anchor the relationship between both parties to ensure that the *Shared Mobility Principles for Livable Cities* and *Principles of Mobility Justice* are upheld, the goals of cities and mobility partners are accomplished in a mutually supportive way and the basic mobility needs of users are prioritized above all.

This document provides eight practical guidelines – from data-sharing to multimodal integration – that help establish, develop and strengthen partnerships between cities and mobility partners. These guidelines are intended to serve as a blueprint for collaborations, including existing, new and future partnerships. While this document could be adopted in full, it is feasible that cities and mobility partners will align to select guidelines depending on the context. The document intentionally presents guidelines as points for consideration and topics to discuss as both parties collaborate to provide mobility services to users.

The document covers a breadth of topics necessary for cities and mobility partners to align. Each topic, first presented in the document as a standalone guideline, frames its scope and then each guideline is further elaborated, with additional points detailing key elements. The guidelines are conversation starters or points for meeting agendas as cities and mobility partners define (or redefine) relationships creating a menu of options. These options can be adopted and modified as necessary. What is important for one city or mobility partner may not resonate with others. As guidelines, this allows for adaptation according to the nuances of each geography's need, city's specification and mobility partner's business.

We invite cities and mobility partners to affirm commitment to the *Guidelines for City Mobility* and use this document to facilitate partnerships and serve as the basis of agreements, such as a memorandum of understanding. We invite cities and mobility partners to confirm the guidelines that resonate for their context, adapt them as necessary and apply them consistently with all stakeholders.

About the authoring of this paper and the Global Future Council on Mobility

Each guideline, and its summary, is the final product of detailed debate, careful consideration and compromise among members of the World Economic Forum's Global Future Council on Mobility representing the public and private sectors as well as civil society. The Global Future Council on Mobility seeks to identify the points of innovation or cultural transformation on the brink of impacting the movement of people and goods.

The Global Future Council on Mobility is part of the World Economic Forum's network of Global Future Councils, which forms an interdisciplinary knowledge network dedicated to promoting innovative thinking to shape a sustainable, safe and inclusive future for all. The network convenes more than 700 of the most influential and knowledgeable thought leaders from academia, government, business and civil society, grouped in expertise-based, thematic councils. It is an invitation-only community and members are nominated for a one-year period.

Terms

Cities: Cities and metropolitan areas, no matter the size

Mobility: The movement of people and goods

Mobility partners: Companies or organizations, including traditional mobility providers, which provide services including and not limited to car-, bicycle- and scooter-sharing, ride-hailing, freight shipping (i.e. delivery and pick-up of goods), infrastructure connectivity, enabling technologies, etc.

Users: People, from citizens to residents to tourists, inhabiting a city and using the services of mobility partners and cities

Workers: People who earn income from work facilitated or to which they were connected by mobility partners, including digital work/services platforms, whether as a main source of income or in addition to other work (including independent workers and the self-employed)[5 i]

Marginalized communities: Historically disenfranchised communities whose access to mobility services, and therefore social and economic opportunity, is often limited due to structural inequities in transport planning

[i] This definition is in alignment with the World Economic Forum's Charter of Principles for Good Platform Work and has been expanded for the mobility context. The use of "worker" is generic and is not intended to have any employment connotation; it does not imply the employment law definition of a worker in certain countries.

Eight Guidelines for City Mobility

The eight guidelines to structure collaborations between cities and mobility partners and serve as the building blocks of partnership agreements are first introduced as high-level topics. In the subsequent section, each guideline is expanded in detail.

1 **Data sharing:** Mobility partners and cities should share and leverage data, which is appropriately aggregated and anonymized, to optimize commercial operations and efficiently conduct mobility planning and management; data should be transparently shared to a wider audience, unless clear reasons exist not to, in a mutually agreeable manner; cities and partners should establish collaborative policies guiding the responsible collection, storage and sharing of trip data.

2 **Public space usage and infrastructure impact:** Mobility partners and cities should strive to minimize use of public space allocated to the overall mobility system by integrating long-term city planning, enabling smart digital solutions and involving community stakeholders.

3 **Safety:** Mobility partners and cities, with other community stakeholders, should collaborate to ensure the physical safety, information security and perceived well-being of all people.

4 **Inclusion and equity:** Mobility partners and cities, in consultation with community leaders, residents and users, should provide services to communities of people within and outside a city to enable safe and sustainable services for all, with particular emphasis on incorporating marginalized communities, to enable equitable economic growth and inclusion.

5 **Fair work:** Mobility partners, cities and workers or their representative organizations should work together to ensure adequate working conditions, including training, compensation and hours, to provide safe, sustainable and inclusive services.

6 **Shared mobility and pooling:** Mobility partners and cities should strive for ways to increase efficient shared mobility and pooling for passengers and co-loading of goods across all modes, including active transport, to decrease the number and volume of single occupancy-private vehicles and less-than-full freight vehicles.

7 **Clean transition:** Mobility partners and cities should work towards zero-emissions public and private fleets in alignment with the Paris Agreement and the United Nations 2030 Agenda for Sustainable Development and the latest scientific thinking.

8 **Multi-modal integration:** Mobility partners and cities should make maximum effort to generate mobility-as-a-service solutions, when applicable, that integrate multiple modes, whether publicly or privately provided, to expand mobility coverage and reduce the demand for single-occupancy private vehicle usage and less-than-full freight vehicles.

Taken on their own, the guidelines provide starting points for establishing respectful and beneficial collaboration between cities and mobility partners. In the next section, each guideline is described in detail to move beyond initial talking points and thoroughly discuss each topic.

Guidelines in detail

Below, summary points further describe and elaborate the intention of each guideline. The details provide additional information for conversations between cites and mobility partners, clarity for interpreting each guideline and a basis for developing a mutual understanding of each guideline for implementation.

❶ Data sharing

Mobility partners and cities should share and leverage data, which is appropriately aggregated and anonymized, to optimize commercial operations and efficiently conduct mobility planning and management; data should be transparently shared to a wider audience, unless clear reasons exist not to, in a mutually agreeable manner; cities and partners should establish collaborative policies guiding the responsible collection, storage and sharing of trip data.

- Mobility partners should share a set of mutually agreed upon trip data with cities in an adequate level of aggregation and anonymity for the purpose of planning networks and services, ensuring the safe and efficient management of transport services and the assessment of infrastructure readiness.
  - Cities and mobility partners should identify and aggregate data that is suitable for public disclosure and beneficial to community stakeholders (mobility partners, educational institutions, city planners, et al).
  - Mobility partners should share data that provides insights into basic trip and/or shipment details including time and pick-up and arrival locations that have been aggregated to protect privacy. Cities shall ensure their data practices conform with applicable privacy and data protection laws.
- Data shared by mobility partners can allow cities to better manage, monitor and evaluate their transport networks, ensuring adequate deployment of public transport and anticipating infrastructure repairs and future needs.
  - Shared data should help cities identify areas of inadequacy in their public transport systems. Data, along with the creation of reasonable benchmarks for equitable service, will determine the performance in supporting the needs of a diverse population of users.
  - Shared data should help cities identify future infrastructure needs for inner- and outer-city freight facilities (such as distribution centres/hubs, pick-up and drop-off points, etc.).
- Cities should provide clear guidance on acceptable data formats. Mobility partners should deliver data in a mutually agreed upon format, method and regularity.
- Cities should recognize the opportunity to enhance passenger and goods transportation through public-private partnerships with mobility partners via fair, transparent policies for collaboration.
- Cities should seek feedback from the private sector on what attracts mobility partners to locate their services in specific geographies. Successful operation in one city often indicates a mobility partner's corresponding opportunity to scale offerings within a geographical region or in other cities.
- Cities should remain open to services from multiple mobility partners seeking partnership with their municipality.

❷ Public space usage and infrastructure impact

Mobility partners and cities should strive to minimize use of public space allocated to the overall mobility system by integrating long-term city planning, enabling smart digital solutions and involving community stakeholders.

- Cities, in consultation with mobility partners and users, should shift away from car- and truck-centric urban development and rebalance the distribution of public space among all transport modes. Cities and mobility partners, in direct consultation with users and community stakeholders, should consider the needs of users, in particular residents of the areas where public space might be repurposed to enable passenger mobility services and freight services, such as curbside pick-up or drop-off points.
- Cities should introduce pricing mechanisms for the use of public space for all modes (e.g. on- and off-street parking management, curb access, city tolls) to achieve goals such as reducing congestion or second-lane parking of freight delivery vehicles and promoting equity, and should reinvest revenue to increase sustainable transport options.
- Cities and mobility partners should collaborate to repurpose public parking space for the use of sustainable transport modes and new mobility services (sidewalk/pavement expansion, greenspace, cycling infrastructure, dedicated micro-mobility and bicycle parking, mobility hubs, urban freight, etc.).

– Cities and mobility partners should educate users on how best to use transport modes across public spaces – particularly in regard to speed limits and parking restrictions – and incentivize compliant user behaviour.

❸ Safety

Mobility partners and cities, with other community stakeholders, should collaborate to ensure the physical safety, information security and perceived well-being of all people.

– New mobility services should incorporate the basic safety principles of pre-existing modes.

– Mobility partners and cities should understand the ramifications and modifications to user behaviour of technological innovations.

– Technological innovations should enhance the operating safety and efficiency of services, including improving awareness of and ability to abide by speed limits, and not create undue distraction to users.

– Mobility partners and cities, with other community stakeholders, should collaborate on educational programmes, including campaigns that address user behaviour and safety concerns; awareness campaigns should identify users as equally responsible for behaviour that promotes safe urban spaces.

– Mobility partners should ensure that vehicles are equipped with technology that also supports the safety and well-being of non-users, either other road users or pedestrians.

– Cities should ensure that infrastructure supports the safety and well-being of users, other road users and pedestrians through its design, implementation and maintenance.

– In alignment with local regulations, all vehicles should be equipped with items that ensure basic levels of safety, such as working brakes, seatbelts (when applicable), helmets (when possible); mobility partners should regularly maintain their vehicles to ensure safe use conditions.

– In alignment with local regulations, all vehicles should have adequate insurance coverage to compensate for bodily injury to users and non-users.

– Cities and mobility partners should consult with other community stakeholders to understand local challenges on safety.

❹ Inclusion and equity

Mobility partners and cities, in consultation with residents and users, should provide services to communities of people within and outside a city to enable safe and sustainable services for all, with particular emphasis on incorporating marginalized communities, to enable equitable economic growth and inclusion.

– Mobility should be a service for all people, not just the elite few. Mobility partners and cities, in consultation with users and community stakeholders, should provide access to communities of people within and outside a city ensuring that communities can:

  – Access services: Mobility partners, in consultation with cities, should prioritize services that supplement and improve access to public transit and delivery and pick-up infrastructure in underserviced areas and for underserved users, enabling equitable access to transport and freight services and empowering communities.

  – Afford services: Mobility partners and cities should collaborate to provide adequate, appropriately priced services; as necessary, services should be transparently subsidized and allow for differentiated and understandable user fares for specific communities.

  – Physically use services: Mobility partners and cities should accommodate users with disabilities by assessing with the local community what is needed and developing a plan to meet those needs.

– Cities and mobility partners, in direct consultation with users and community stakeholders, should assess “mobility deserts” and gaps in mobility services throughout the city or region continually and adapt service offerings as needed. Information learned should be shared among parties.

– Cities should incorporate services from mobility partners into existing transport networks to ensure sustainable access, affordability and physical use of networks to communities of people within or outside a city.

– Cities and mobility partners should explore innovative financing, risk-reward sharing and technological solutions to better serve the economically disadvantaged or underbanked.

5 Fair work

Mobility partners, cities and workers or their representative organizations should work together to ensure adequate working conditions, including training, compensation and hours, to provide safe, sustainable and inclusive services.

- Cities and mobility partners should provide equitable, fair work opportunities for all individuals working to facilitate efficient and safe transport of passengers and goods in alignment with the Charter of Principles for Good Platform Work.
- Cities and mobility partners should use smart planning and make sure there is a good balance between work hours and training.
- Mobility partners should collaborate with the appropriate regulators as required – whether city-level, state, national or other – in order to ensure that workers are correctly classified according to local employment law
- Cities and mobility partners should work closely with third-party vendors to ensure fair labour practices for transport workers.
- Cities and mobility partners should collaborate with workers and local representative organizations to facilitate reskilling and training that ensures transport workers are able to carry out their tasks safely and sustainably.

6 Shared mobility and pooling

Mobility partners and cities should strive for ways to increase efficient shared mobility and pooling for passengers and co-loading of goods across all modes, including active transport, to decrease the number and volume of single occupancy-private vehicles and less-than-full freight vehicles.

- Mobility partners and cities should collaborate to educate users on the benefits of shared, pooled and co-loaded modalities and encourage mindset shifts on how users view single-occupancy trips and less-than-full freight vehicles.
- Cities and mobility partners should pilot ways to actualize changes in user behaviour through a combination of social and behaviour-change communication strategies, economic incentives, participatory engagement and service-design improvements. Cities and mobility partners should collaborate in the design and evaluation of these pilots.
- Cities and mobility partners should strive to continuously increase vehicle occupancy in commercially sustainable ways by transparently incentivizing shared and pooled rides through travel-time savings, preferential access to specific locations, fare differentials, etc. Cities and mobility partners should collaborate on concepts – from operations and fares to infrastructure and evaluation – for integrating shared and pooled services in public transport and freight transport, including non-motorized forms of transport as appropriate.
- Cities and mobility partners should work together to minimize the impact of mobility services, including issues related to speed, curb usage and public space concerns, on non-users and the larger community.
- Cities and mobility partners, in direct consultation with users and community stakeholders, should collaborate to provide and amplify shared mobility and pooled services across “mobility deserts” or areas without user density.

7 Clean transition

Mobility partners and cities should work towards zero-emissions public and private fleets in alignment with the Paris Agreement and the United Nations 2030 Agenda for Sustainable Development and the latest scientific thinking.

- Cities should strive for zero-emission vehicles in private, public and shared mobility fleets and should develop a pathway for phasing out fossil fuel combustion engine vehicles.
- Cities should incentivize higher efficiency, low- and zero-emission mobility – including shared and high-occupancy mobility – and disincentivize less efficient, higher-emission mobility, such as single-occupant privately used fossil-fuelled vehicles (e.g. through emissions-based road pricing and operating restrictions or bans).
  - Useful metrics for measuring the transition to zero-emission mobility include carbon intensity per passenger-kilometres-travelled (emissions per passenger distance) and passenger density.
- Mobility partners should strive for zero-emission fleets, including passenger and freight vehicles, and work towards more efficient freight routing or tour planning with consolidation centres.
- Cities and mobility partners should work together to understand reasonable timelines and pathways to achieve long-term zero tailpipe emission mobility while being mindful of reasonable constraints including pathways necessary to meet climate agreements, public and private sector resources, and user economics and affordability.
- Cities and mobility partners should collaborate on a masterplan for the necessary charging infrastructure for new mobility services (e.g. charging infrastructure at public transport stations and freight hubs, repurposing gas or petrol stations as charging hubs).
- Cities and mobility partners should advocate for deep

decarbonization and significant uptake of renewable energy by companies and relevant government entities serving the power sector.

8 Multi-modal integration

Mobility partners and cities should make maximum effort to generate mobility-as-a-service solutions, when applicable, that integrate multiple modes, whether publicly or privately provided, to expand mobility coverage and reduce the demand for single-occupancy private vehicle usage and less-than-full freight vehicles.

- Cities should offer a standard way to integrate mobility partners into existing public transport including the integration of ticketing, payment and scheduling.
- Mobility partners should seek to integrate other mobility partner services through an interoperable system.
- Cities and mobility partners should encourage multi-modal trips by integrating infrastructure and offering services in close physical proximity (e.g. bike-docking stations near train stations).
- Cities and mobility partners should collaborate to establish on-demand, fixed route and multi-modal last-mile services that expand the reach of public transport and freight transport.

Path forward

The *Guidelines for City Mobility* create a framework for joint action among cities and mobility partners. As a starting point of collaboration, the guidelines could serve as a basis for early conversations and, potentially, a memorandum of understanding between city authorities and mobility partners, particularly those providing new services in cities.

The *Guidelines for City Mobility* invite cities and mobility partners to:

1. Create opportunities to share information and insights for future mobility activities and projects

2. Work together to educate users on the impact of their mobility choices and encourage behavioural changes

3. Cooperate through dedicated contact people who will ensure that the basic mobility needs of all users are prioritized

4. Prioritize collaboration and communication with users and local community stakeholders

Each of the eight guidelines may give way to a detailed agreement with mutual specific responsibilities and deliverables. In collaborations, cities and mobility partners should recognize the intent of each guideline and act together to strengthen the needs of users. The Global Future Council on Mobility will work with other World Economic Forum groups, like the Global New Mobility Coalition, and organizations like C40 Cities, to make the guidelines tangible and accessible for cities, mobility partners and communities.

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