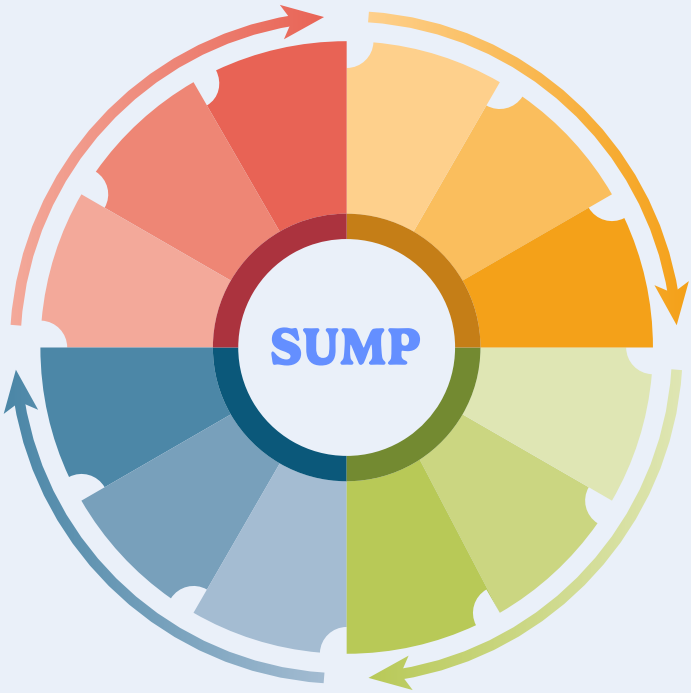
Inclusive Shared Mobility Planning Guide

Integrating diverse mobility needs into Sustainable Urban Mobility Planning



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About

This document provides a comprehensive guide for planning, implementing, and evaluating inclusive shared mobility, offering practical tools, checklists, and lessons from international good practices to ensure equitable, efficient, and sustainable urban transport for all.

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Guide to the reader

This guide has been developed under the framework of the Interreg North Sea SMALL project – Shared Multimodal Mobility for All. SMALL promotes the vision of (shared) mobility systems that are flexible, accessible, and responsive to the diverse needs of all users, including those who are often marginalised or face barriers to mobility.

The project brings together a consortium of 12 partners from six different countries in the North Sea Region. These include cities, regions, shared mobility providers, research institutes, and non-governmental organisations, all working collectively to make shared mobility more inclusive, demand-responsive, accessible, and sustainable[1].

Grounded in co-creation and participatory approaches, SMALL brings together 10 pilots in five European countries, testing inclusive shared mobility solutions that reflect real user needs. Its guiding principles are built upon openness and a respectful atmosphere, mutual learning, creativity and co-creation, user inclusion, and consideration of transferability and scalability to ensure that all interventions contribute to more equitable mobility systems.

Drawing from these pilots and beyond, this guide synthesises insights, experiences, and lessons learned, aiming to support replication, scaling, and knowledge transfer across cities and regions.

Purpose and Scope of this Guide

This planning Guide is one of SMALL's key outputs, developed to support cities and regions in integrating inclusive shared mobility into their Sustainable Urban Mobility Plans (SUMPs). It aligns with the European Commission's updated SUMP Guidelines, complementing them by focusing specifically on inclusivity within shared mobility services. While shared mobility has the potential to fill critical gaps in mobility networks, particularly in suburban, rural, or low-supply areas, its deployment in such contexts remains an emerging opportunity.

Embracing inclusivity within these systems offers a key chance to ensure that shared mobility becomes an effective and equitable option for all users, including people with reduced mobility. This guide therefore provides an overview of new possibilities for inclusive shared mobility systems and a structured approach for embedding them throughout the SUMP process.

Target Audience

The guide is intended for a wide range of stakeholders involved in mobility planning and delivery, including:

- Local and regional authorities responsible for urban and transport planning
- Public transport authorities (PTAs) and operators (PTOs)
- Shared mobility providers and technology developers
- Urban planners and mobility managers
- Civil society organisations and NGOs, especially those advocating for accessibility and inclusion
- Researchers and consultants supporting sustainable mobility transitions

Each section provides practical guidance, examples, and guiding questions to help practitioners and decision-makers apply inclusive principles within their specific context.

1 A full list of project partners is provided in Annex 1.

Executive summary

Cities today are rapidly embracing shared mobility services such as bike sharing, ride pooling, micro-transit, and demand-responsive transport (DRT) as key components of urban mobility ecosystems. Yet too often, these systems are designed around a young, fully mobile person, leaving behind those who face barriers to mobility, such as people with disabilities, older adults, caregivers, people with low income, or those with limited digital access. This guide places inclusivity at the centre of (shared) mobility planning, aiming to ensure that (shared) mobility becomes a tool for equity, accessibility, and social justice, not just efficiency or coverage.
This planning guide supports practitioners in integrating inclusive shared mobility into Sustainable Urban Mobility Plans (SUMPs). It aligns with the European Commission's SUMP Guidelines and other EU mobility and climate policies, while focusing specifically on how shared mobility can (and should) be made equitable and accessible for all. This guide complements general SUMP guidance by highlighting inclusive principles through each phase of planning, designing, implementing, and monitoring shared mobility systems.

The primary audiences are local and regional authorities, Public Transport Authorities (PTAs), urban mobility planners, Public Transport Operators (PTOs), shared mobility operators, NGOs, accessibility advocates, and mobility managers. The guide offers:

- **Practical recommendations** for embedding inclusive shared mobility in the SUMP planning process.
- **Guiding questions, tools and frameworks** to support inclusive decision-making and co-design of solutions.
- **Good practice examples and lessons** drawn from pilots, projects, and on-the-ground practices.
- **A comprehensive checklist** to support systematic implementation and evaluation.

Specifically, the guide helps practitioners:

- **Ensure mobility equity** by addressing barriers (physical, digital, economic, social).
- **Embed inclusion** into the vision, objectives, and targets of urban mobility plans.
- **Foster stakeholder engagement and co-creation**, especially with underrepresented and disadvantaged groups, such as People with Reduced Mobility (PRM).
- **Design inclusive shared mobility systems** that are accessible, flexible, affordable, and user-centric.
- **Integrate shared mobility** with public transport, walking and cycling, promoting seamless multimodal journeys.
- **Monitor and evaluate inclusive outcomes** using both qualitative and quantitative indicators.

By following the SUMP cycle, cities can ensure inclusive shared mobility is systematically planned, implemented, and assessed, thereby strengthening the overall mobility system and making it more resilient, just, and responsive to diverse needs.

Note that it is not necessary to be at the beginning of your SUMP journey to use this guide. You can simply start with the phase of the cycle in which your city finds itself.

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List of abbreviations

DRT	Demand Responsive Transport
EC	European Commission
EU	European Union
FUA	Functional Urban Area
GIS	Geographic Information System
ICT	Information and Communication Technology
ITS	Intelligent Transport System
KPI	Key Performance Indicators
LL	Living Lab
MaaS	Mobility as a Service
NGO	Non-Governmental Organisation
NMT	Non-Motorised Transport
PRM	People with Reduced Mobility
PTA	Public Transport Authority
PTO	Public Transport Operator
SDG	Sustainable Development Goals
SUMP	Sustainable Urban Mobility Plan
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOD	Transit-Oriented Development

Setting the scene: Towards Inclusive Shared Mobility Systems

The role of shared mobility in sustainable transport systems

Shared mobility refers to the use of mobility services that are accessible on demand, and shared among users, either through fleet-based systems or through peer-to-peer (P2P) arrangements where privately owned vehicles are made temporarily available to others. Shared mobility systems have become vital complements to public transport, with huge potential to cover system gaps, extend service reach in suburban and rural areas, and provide flexible, cost-efficient options where traditional public transport is less viable. These services have the potential to optimise vehicle use, reduce private car dependency and congestion, lower emissions, and promote more efficient and sustainable use of space. When designed with accessibility in mind, they can also provide essential transport options for people who face mobility barriers, helping to ensure equitable universal access to opportunities and supporting inclusive urban mobility.

Key shared mobility modes include:

- **Ride hailing:** Services that connect passengers with a driver for individual trips to their requested destination (similar to a taxi).
- **Ride sharing:** Services where drivers and passengers share a ride because they have a common or similar destination.
- **Vehicle sharing:** Peer-to-peer or fleet-based models which provide short-term vehicle rental with or without a driver. Vehicles can include (electric) cars, vans, small trucks, depending on the system and user needs.
- **Bike sharing and scooter sharing:** Public systems that allow users to rent (e)bikes, cargo bikes or (electric) scooters for short trips. Those systems can either be dockless or station based.
- **Demand responsive transport (DRT):** Flexible, on-demand public transport services that adapt routes and time-schedules based on user requests and foreseen demand.
- **Volunteer ride services:**
  Less common trips provided by volunteers (often for specific groups, e.g., people with reduced mobility or older adults), which may use digital booking or community coordination.

Each shared mode has its unique operational dynamics, but they all share the core objective of making mobility more accessible, cost-effective, and sustainable.

However, while shared mobility is often celebrated for its innovation and environmental benefits, inclusivity has rarely been an integral part of its design and operation. Many shared systems build their operations around a physically able, economically secure, and digitally connected user base. This creates barriers for people with reduced mobility, such as older adults, caregivers, individuals with limited digital literacy, and low-income groups. As a result, shared mobility risks reinforcing social inequities rather than bridging them, unless inclusivity becomes a deliberate and systemic goal.

Why Inclusive (shared) mobility planning must be central

Inclusive mobility is not a niche ambition; it is a cornerstone of a fair, people-centred mobility system. It ensures that everyone, regardless of age, ability, gender, or socio-economic background, can move freely, safely, and affordably. It encompasses three interrelated dimensions:

- **Accessibility:** Ensuring physical, digital, and cognitive access to all parts of the mobility chain.
- **Affordability:** Ensuring equitable access across income levels by reducing cost barriers
- **User-Centricity:** Designing services that accommodate diverse needs through flexible operations, accessible designs, and personalised support when needed.

Inclusive mobility is both a process and an outcome. It involves continually adapting systems to meet the evolving needs of diverse users, especially people with reduced mobility. Therefore, planning inclusive shared mobility is not only a social imperative but also a way to enhance overall system resilience and efficiency.

Box 1: People with Reduced Mobility (PRM)[2]: A definition

This guide adopts a broad understanding of "People with Reduced Mobility", recognising that mobility limitations are not only limited to physical disabilities, and can be permanent, temporary, or situational.

- **Permanent limitations** may include lifelong conditions that significantly impact how individuals interact with mobility systems, such as physical mobility impairments, sensory disabilities, or cognitive disabilities. In the EU, 26.8% of adults report some or severe long-standing limitations, including mobility, sensory, or cognitive impairments (Eurostat, 2023).
- **Temporary limitations** can result from short-term health conditions or life events such as injury, illness, pregnancy, recovery, or mental health challenges, which may influence travel behaviour or confidence in public spaces, such as anxiety or depression. 8.3% of young adults report temporary limitations, and 6.4% of Europeans experience mental health conditions such as depression[3].
- **Situational or contextual limitations** are not disabilities in the medical sense, but circumstances that restrict an individual's mobility at a specific moment, such as travelling with children, carrying heavy bags, pushing a stroller, or navigating unfamiliar environments. Many transport users experience these challenges and may require assistance or adaptations to complete their journeys comfortably and safely.

In practice, this means that we are all people with reduced mobility at some point in our lives. Therefore, planning for inclusivity benefits all of society, not just specific groups.

2 WHO (World Health Organisation) – International Classification of Functioning, Disability and Health (ICF) & European Commission 2023

3 Torre, J., Vilagut, G., Ronaldson, A., Serrano-Blanco, A., Martín, V., Peters, M., ... & Alonso, J. (2021). Prevalence and variability of current depressive disorder in 27 European countries: A population-based study. The Lancet Public Health, 6(10), 729-738. https://doi.org/10.1016/S2468-2667(21)00047-5

An inclusive shared mobility ecosystem benefits cities and regions by:

- **Reducing dependency** on specialised or segregated mobility solutions.
- **Expanding user bases** and increasing service uptake.
- **Strengthening social cohesion** and accessibility to education, work, healthcare, social activities, and volunteer opportunities.
- **Creating more adaptable and user-responsive systems** that serve diverse needs, as opposed to specialised or segregated transport which targets only specific groups and may reinforce separation rather than inclusion.

Yet, to achieve this, inclusivity must be embedded from the earliest stages of mobility planning, integrated into the policies, strategies, and design processes that shape shared mobility systems. This requires a shift from "designing for the average user (young, healthy, and able-bodied person around whom services are often tailored)" to "designing for the diversity of users", recognising that accessibility and equity strengthen the quality of mobility for everyone.

Linking Inclusive Shared Mobility with the SUMP Framework

This planning guide situates inclusive shared mobility within the Sustainable Urban Mobility Plan (SUMP) framework as a cornerstone of integrated urban mobility planning in Europe and globally. A SUMP framework provides a strategic, evidence-based process to plan and implement mobility systems that are sustainable, efficient, and people-centred.Within this context, inclusive shared mobility reinforces and extends SUMP principles by ensuring that equity and universal accessibility are not treated as add-ons but as core planning dimensions.

This guide complements the general SUMP guidelines and other topic guides by:

- **Translating inclusion** into the SUMP cycle phases from Preparation and Analysis to Implementation and Monitoring.
- **Providing tools, guiding questions, and case examples** to operationalise inclusion in shared mobility planning.
- **Demonstrating how inclusive and shared mobility principles** can be generalised across all modes, inspiring a systemic shift towards equitable urban mobility.

Integrating inclusive shared mobility into the four phases of the SUMP

To support practitioners and planners in systematically integrating inclusive and shared mobility, the guide is structured around the four phases of the SUMP cycle, providing guidance on how to integrate inclusive shared mobility into each phase.

Chapter 1 - Preparation and Analysis: Towards Building an Inclusive Baseline Scenario for (Shared) Mobility Systems guides cities in mapping the mobility needs of people with reduced mobility, and identifying barriers to access. It sets the foundation for all subsequent planning steps by ensuring that inclusive considerations are embedded from the outset.

Chapter 2 - Strategy Development: Defining an Inclusive Vision and Strategic Goals focuses on co-creating a shared vision with stakeholders. This chapter helps cities establish strategic objectives for inclusive (shared) mobility, identify key scenarios, and define performance indicators to measure progress in equity, accessibility, and integration.

Chapter 3 - Measure Planning: Co-Designing Inclusive Shared Mobility Solutions explores tangible interventions, from social and behavioural measures to technological and design-based shared mobility solutions as part of the integrated mobility system. It emphasises co-creation with users, particularly the most disadvantaged social groups such as the people with reduced mobility, to ensure measures are effective, user-centric, and adaptable.

Chapter 4 - Implementation and Monitoring: Tracking Progress and Adapting Solutions covers the operationalisation of measures and the development of robust monitoring frameworks. It highlights indicators, qualitative and quantitative feedback tools, and continuous learning mechanisms to ensure services remain inclusive, responsive, and sustainable over time.

Finally, the guide includes a practical tool: Key Takeaways: Checklist for Inclusive Shared Mobility Planning, which summarises the main learnings and provides a practical checklist of activities for each SUMP phase, enabling planners to systematically implement and evaluate inclusive shared mobility solutions. By embedding inclusive and shared mobility options into SUMPs, cities can make shared mobility not only a sustainable choice but also a socially just and resilient one, ensuring that the benefits of innovation are accessible to all.

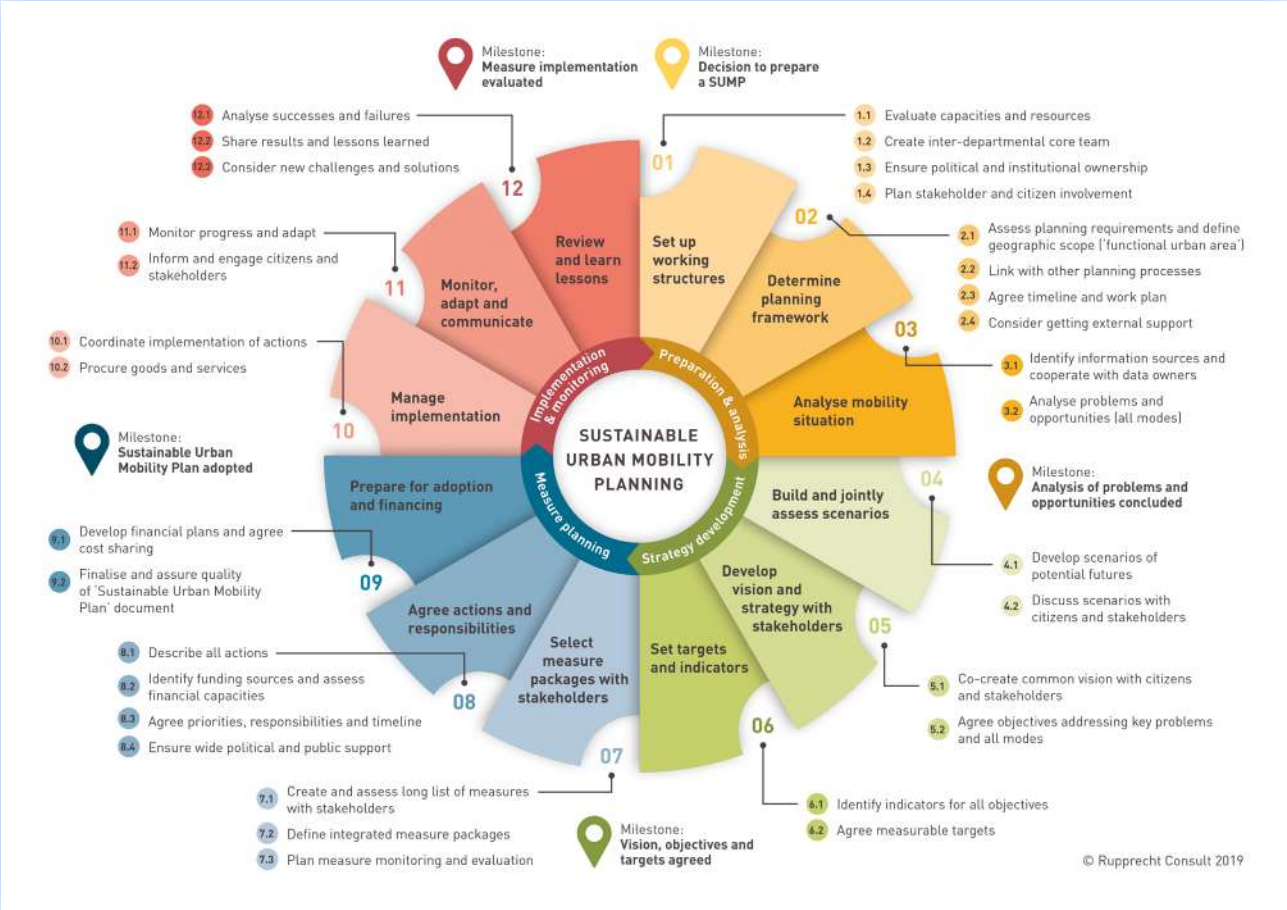


Figure 1: Sustainable Urban Mobility Plan Cycle. Rupprecht Consult, 2019.

1. Building an Inclusive Baseline for (Shared) Mobility Systems

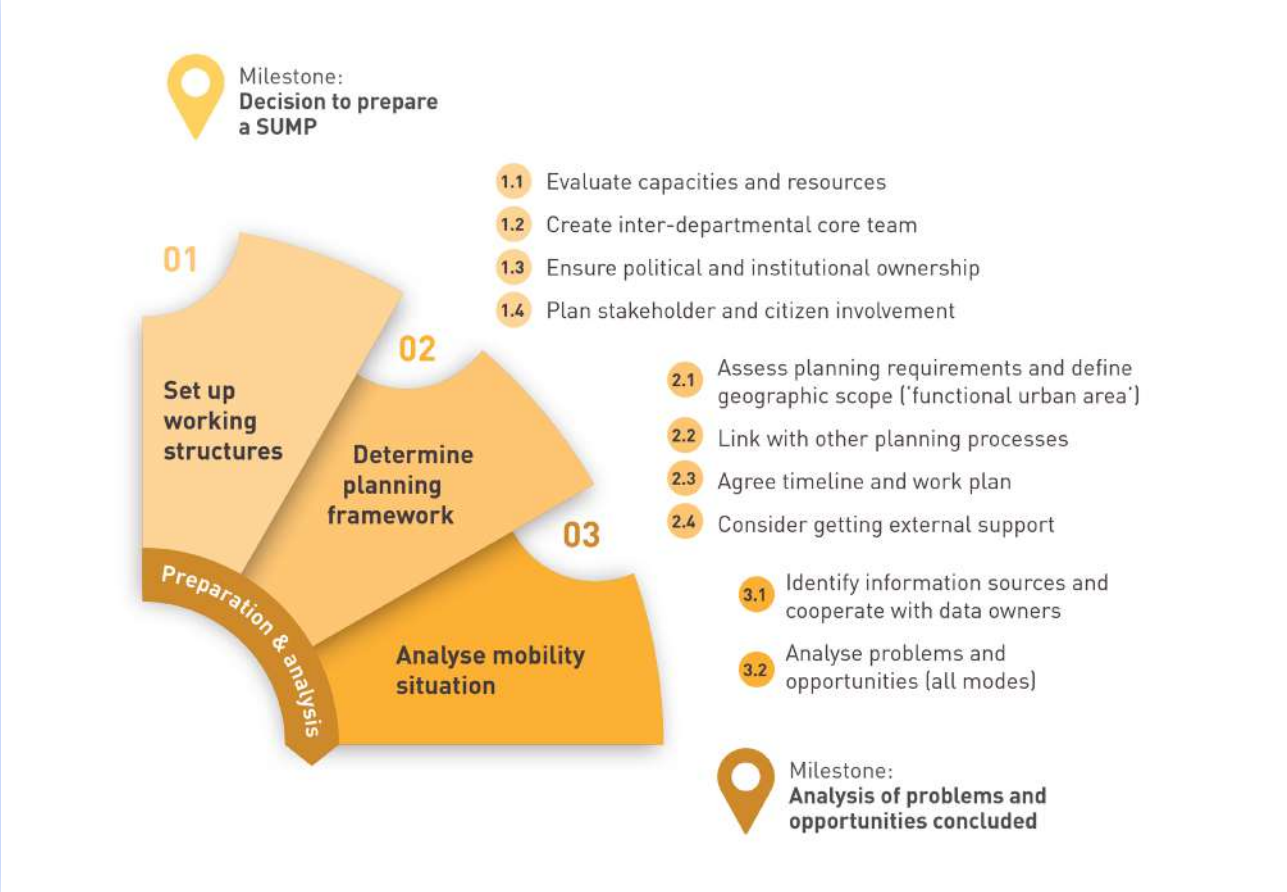


Figure 2: SUMP phase 1: Preparation & Analysis. Rupprecht Consult, 2019.

The Preparation and Analysis phase of the SUMP cycle lays the critical groundwork for the mobility planning process. It is during this phase that cities define the baseline conditions, identify key actors for engagement strategies, and align with broader policy frameworks, creating the foundation upon which all future strategies and measures will be built. Embedding inclusion, accessibility, and equity considerations in this phase ensures that people with reduced mobility (PRM) are represented in planning decisions that shape future services and infrastructure. This chapter highlights three key activities that are essential to embedding inclusion in the earliest steps of (shared) mobility planning:

1. **Bringing the right voices to the table** by ensuring early stakeholder identification and engagement. This involves users who face barriers to mobility, such as people with reduced mobility, as well as the actors who enable and operate shared mobility solutions, including service providers, public transport authorities, and digital platform developers. These groups are often overlooked or engaged at later stages. Integrating them from the beginning ensures that the planning process is shaped by diverse perspectives and practical insights, helping cities avoid one-size-fits-all solutions.

2. **Understanding the policy and governance environment** by examining how institutional frameworks and governance arrangements influence the integration of shared mobility in sustainable planning. Policies governing accessibility, data management, or service integration are often fragmented across departments and administrative levels. By reviewing existing strategies, legal instruments, and governance structures early in the process, cities can identify institutional enablers and barriers to inclusive shared mobility, as well as opportunities for coordination and reform.

3. **Identifying gaps and opportunities for inclusive shared mobility** by focusing on establishing a baseline understanding of mobility needs, behaviours, and access patterns. Analyses tend to prioritise transport supply and infrastructure performance, often overlooking social and spatial inequalities, affordability, and digital accessibility. By incorporating both quantitative and qualitative data sets, such as user experience, accessibility audits, and participatory mapping, cities can build a more complete picture of how mobility systems serve or exclude different population groups, and how shared mobility can complement public transport in addressing those gaps.

Together, these activities offer a comprehensive and inclusive approach to establishing the baseline conditions for inclusive shared mobility planning. They ensure that the SUMP process begins not only with an understanding of systems and data but also with the voices of those most affected by mobility inequities. By looking at the Preparation & Analysis phase through this inclusive lens, cities can set the stage for subsequent SUMP phases to be both evidence-based and socially just, making shared mobility a tool for empowerment rather than exclusion.

1.1. Bringing the Right Voices to the Table

A robust and inclusive planning process for shared mobility begins with meaningful participation. The first step towards planning an inclusive shared mobility system is to identify, engage, and empower the diverse actors who shape, influence and experience urban mobility. If mobility planning begins with a limited set of institutional stakeholders (typically municipal departments, transportation authorities, and operators), those who experience barriers to mobility or who represent new and emerging mobility services are neglected or often invited only at later stages, when the scope for change is limited. This narrow approach risks overlooking the realities of many users and the insights of innovators who could help address them.

Guiding questions:

- Who experiences mobility exclusion in our city?
- Who has lived experience but limited influence?
- Who speaks for and with people with reduced mobility?
- Who can act as a bridge between marginalised communities and planners?

An inclusive process must therefore begin early and recognise the diversity of voices across four key stakeholder groups: public institutions, private sector actors, civil society, and users. In addition, academia, research institutions, and consultancies can play a cross-sectoral advisory role, supporting evidence-based decision-making and facilitating dialogue among stakeholders. Specific stakeholders' roles are further outlined in the following table.

Stakeholder Group	General SUMP Activity	Focus on inclusive and shared mobility
Public Institutions	Transport authorities, urban planning offices, and regional governments provide policy direction and planning expertise.	Include institutions with mandates in social inclusion, disability rights, public health, and equity (e.g., social affairs departments, accessibility boards).
Private Sector	Engage shared mobility operators, technology providers, and business associations to explore service delivery and innovation.	Include operators with accessible fleets, assistive tech providers, paratransit services, and start-ups targeting underserved populations.
Civil Society	Map NGOs, community associations, and advocacy groups relevant to mobility issues.	Include organisations representing people with reduced mobility, such as disability advocacy, women's safety networks, seniors' councils, and volunteer driver schemes.
Users	Include residents, commuters, and public transport users in consultations and surveys.	Ensure active participation of people facing mobility exclusion, such as people with reduced mobility, older adults, low-income households, parents or caregivers of small children, women, and students.
Academia, Research & Consultancies	Provide analytical support, evidence-based evaluation, and policy advice.	Include universities, applied research centres, and consultancies working on inclusive design, mobility innovation, and behavioural research to help interpret data and translate user insights into actionable measures.

This early and structured engagement brings the right expertise and lived experience to the table, allowing cities to co-identify mobility challenges and access barriers in a way that is both evidence-based and socially grounded. Importantly, it also creates opportunities for shared learning between public authorities and private innovators, aligning regulatory goals with business models that prioritise accessibility and inclusion.

Recommended toolbox

- **Stakeholder mapping matrix:** Classify actors by their influence, interest, and relevance to inclusive (shared) mobility to ensure balanced representation.
- **User journey mapping:** Visualise how different user groups navigate the transport system to identify access gaps.

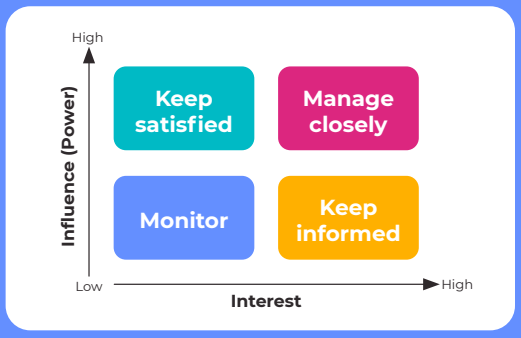


Figure 3: Stakeholders influence vs interest matrix. Source: PMAspirant.

However, the value of participation depends not only on who is invited but on how the engagement is conducted. Consultation methods such as surveys, public hearings, or online forums may exclude precisely those who face access barriers. Instead, engagement strategies should prioritise accessibility, trust, and empowerment.

This means offering multilingual materials, using simple language, providing sign language interpretation or alternative formats for participants with sensory or cognitive impairments, and ensuring physical accessibility of venues, including toilets and entrances. Engagement must also be designed to foster comfort and equality through smaller, creative group sessions, peer-facilitated dialogues, or on-site walk- and ride-alongs that help planners and operators experience and co-identify barriers first-hand.

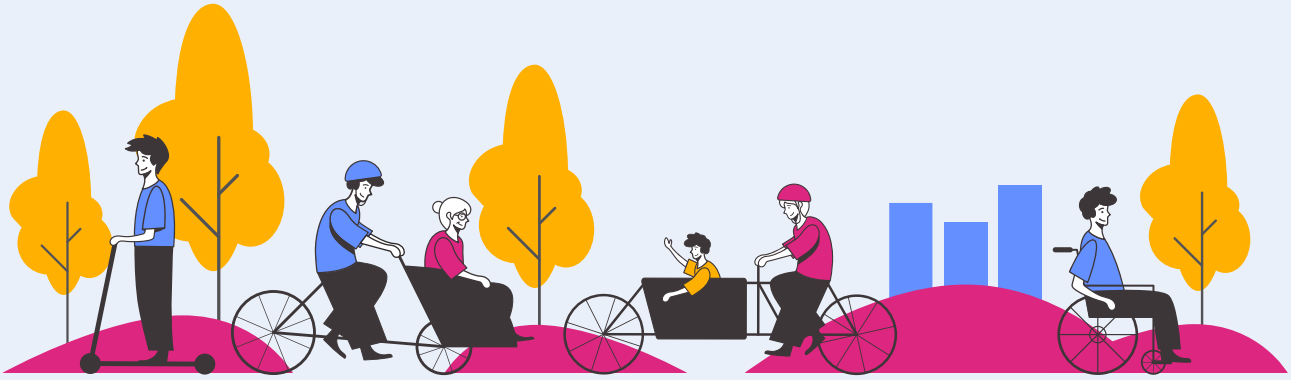
Guiding questions:

- How can we build trust with disadvantaged, marginalised & underrepresented groups?
- Are we engaging people beyond the “usual suspects"?
- How can we lower barriers to engagement?

Building trust also requires practical support and acknowledgement of contributions. Cities can provide logistical support such as transport or refreshments, compensate participants for their time, and schedule meetings at times that suit different groups. These gestures reinforce the message that all voices matter and that the planning process values lived experience as much as institutional expertise.

When applied consistently, inclusive engagement creates two outcomes. First, it ensures that planning decisions genuinely reflect a broad spectrum of needs and perspectives, reducing the risk of exclusionary designs or policies.
Second, it builds mutual trust and ownership among participants, making it more likely that inclusive shared mobility measures will be implemented, supported, and sustained in the long term.

Building on these principles of early, structured, and inclusive engagement, the following good practice examples illustrate how cities and regions have operationalised stakeholder participation and engagement in practice. They highlight methods for identifying, involving, and empowering diverse actors. Box 2 summarises the SMALL Inclusive Stakeholders Identification and Engagement approach, showcasing concrete applications in the Capital Region of Denmark, while box 3 showcases the diverse engagement methods used in Amsterdam to engage with mobility services users. Together, these examples demonstrate how structured user engagement plans, co-creation workshops, and continuous collaboration can translate inclusive planning principles into tangible mobility outcomes.



Box 2: Good Practice[4]

The Capital Region of Denmark's user engagement plan

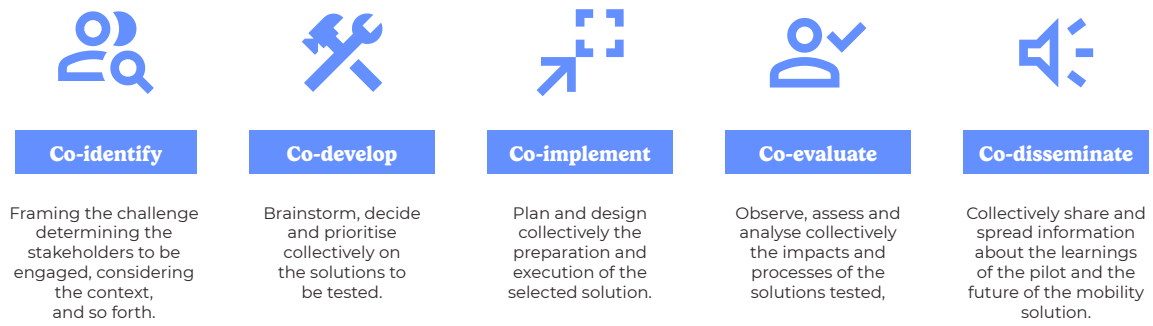


Figure 4: Five stages of co-creation, from SMALL user engagement plan template

A user engagement plan helps to facilitate a clear and meaningful co-creation approach by structuring questions related to "**Why, What, Who, When, and How**". Using this approach assists in strategy development by clarifying the decision-making power of stakeholders and providing objectives and timelines. Through the structured questions in their user engagement plan, the Capital Region of Denmark made clear that:

- The pilot aims to reduce reliance on private car use for hospital trips and to improve accessibility, focusing on the needs of elderly individuals and people with reduced mobility. **(Why)**
- The goal is to develop inclusive shared mobility solutions consisting of bicycles or tricycles attractive to elderly users. **(What)**
- The target groups are hospital patients, their families, employees, and especially elderly people. Key stakeholders include municipalities, hospitals, shared mobility providers, and public transport operators **(Who)**
- The pilot test phase runs from September 2024 to the end of 2025, with specific milestones for the identification of target group needs and for end-user workshops. **(When)**
- Engagement will occur through co-creation workshops and feedback sessions involving both users and stakeholders to refine the solutions. **(How)**

The Capital Region of Denmark determined that co-creation would be able to influence the specific types and features of the cycles, as well as how the booking and payment system would work, while it would not influence where the pilot would be focused (two hospitals), the type of shared mobility (cycles), or the pick-up and drop-off points. The plan also helped determine that the service would be co-developed & co-evaluated with users, co-implemented with specific stakeholders, and co-disseminated with ambassadors. Through the co-development process, the Capital Region of Denmark learned that the target user group strongly preferred specific tricycle designs. The user engagement plan helped organisers clarify the aspects on which stakeholders would have influence, so they could build their timeline for inclusive co-creation.

4 Resources on user engagement plans can be found on the SMALL website, including a template and additional information and HYPERLINK user engagement plans for selected SMALL pilots. Additionally, a SMALL webinar on this topic is available here.

Box 3: Good Practice

Diverse Inclusive engagement methods to better understand the experience of paratransit users in Amsterdam

The City of Amsterdam is working to future-proof its local paratransit system and to increase travel options for people with reduced mobility by making it easier for them to travel with public transport. As part of this effort, the city undertook an extensive analysis of the use of the paratransit system with a focus on understanding the reasons for use and how users' travel behaviours compare to travel behaviours of people with reduced mobility who do not use paratransit. The analysis included:

- **Written and telephone surveys and in-depth interviews** of paratransit users. These focused on mobility limitations, travel behaviour and assessment of the public transport and paratransit systems compared to survey results from non-paratransit users.
- **Trip analysis** through travelling alongside users and analysis of trip data.
- **Expert interviews** with local government staff, representatives from a disabled persons' rights association, and a public transport coach.
- **Completing the application process** for a paratransit pass as a 'mystery shopper'.
- **Analysing paratransit** pass application phone calls.
- **Creating personas** to help understand the needs of, and obstacles facing, paratransit users.
- **A workshop** with paratransit pass holders to brainstorm ideas to promote the use of public transport by paratransit users.

This process helped lead to the identification of eight pull factors that could encourage the target group to use public transport. These include providing personal public transport advice and improving physical accessibility and access to travel information, two factors which the iMaaS project in Amsterdam aims to positively impact.

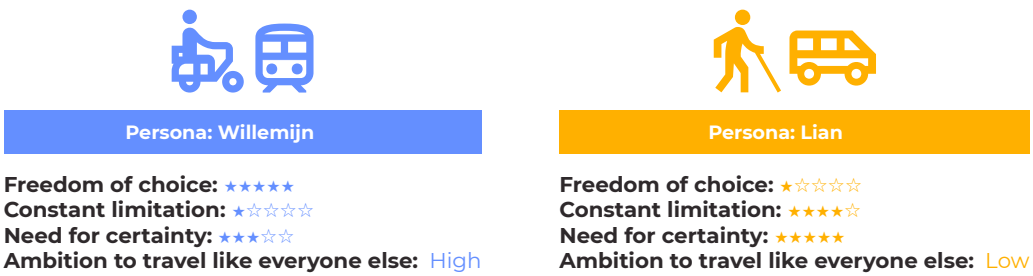


Figure 5: Two of the personas developed during the analysis, indicating their importance of freedom of choice, and constancy of their limitation, their need for certainty, and their level of desire to travel like others. © Gemeente Amsterdam

1.2. Understanding the Policy and Governance Environment

Effective planning for inclusive shared mobility requires a deep understanding of the policy and governance frameworks that shape how mobility systems are organised, financed, and regulated. These frameworks define not only who holds the decision-making power but also how inclusive and innovative solutions can be introduced, scaled, and sustained over time. This step involves identifying which frameworks currently guide decision-making, which actors hold the authority to regulate or support shared mobility, and where institutional, legal, or policy gaps may hinder inclusive solutions.

Guiding questions:

- Do current regulations require or incentivise accessible vehicles and infrastructure?
- Are there national mandates or performance targets related to accessibility or equity?
- Do current laws require periodic service equity evaluations?

In many cities, existing frameworks were designed for traditional modes such as typical public transport, sometimes cycling, or road traffic and therefore fail to recognise the hybrid and flexible nature of shared mobility solutions. At the same time, inclusion is often treated as a peripheral social concern rather than a central design principle in mobility policy. As a result, shared mobility initiatives frequently face fragmented governance, unclear responsibilities, and limited coordination between social inclusion objectives and transport planning strategies. Mapping and analysing the policy and governance context at this early stage enables cities to establish a coherent framework that integrates shared mobility as part of the transport ecosystem, while ensuring that inclusion is embedded from the outset. This process typically involves three complementary layers of assessment:

Institutional frameworks involve identifying mandates, responsibilities, and coordination mechanisms between authorities at different governance levels. This helps to reveal whether inclusive and shared mobility are explicitly recognised in institutional mandates or treated as separate, project-based initiatives. Understanding how responsibilities are distributed across transport, social affairs, and innovation departments highlights both opportunities for collaboration and existing gaps in coordination that can hinder the integration of inclusive shared mobility into broader urban policies.

Regulatory and policy frameworks focus on reviewing existing laws, plans, and standards that affect shared and inclusive mobility. Many regulatory systems were designed before the emergence of flexible and technology-enabled mobility services, leading to fragmented or outdated approaches. Analysing how accessibility, equity, and service quality are defined within local and national mobility regulations helps identify where reforms may be needed to ensure that shared mobility providers contribute to broader inclusion and sustainability objectives.

Strategic frameworks examine overarching policy goals, funding mechanisms, and cross-sectoral linkages between mobility, housing, and social services. This assessment helps determine how inclusion and shared mobility are prioritised within existing strategies such as SUMPs, innovation roadmaps, or digitalisation programmes. It also allows cities to identify potential funding and partnership opportunities that can enable inclusive service provision and long-term system integration.

Together, these three layers provide a structured understanding of the policy and governance landscape that shapes mobility and thus also inclusive shared mobility. The insights gained help cities identify where coordination mechanisms can be strengthened, where new regulatory instruments are required, and how strategic objectives can be aligned to foster equitable and accessible mobility systems. This understanding forms the foundation for coherent planning, bridging the gap between innovation and inclusion, and ensuring that shared mobility becomes a truly integrated part of sustainable urban transport.

1.3. Identifying Gaps and Opportunities for Inclusive Shared Mobility

A thorough analysis of the current mobility situation forms the backbone of inclusive and shared mobility planning. It allows cities to understand not only how people move but also who is left behind and why. For inclusive shared mobility, this diagnostic step extends beyond infrastructure and service provision to include social, economic, digital, and institutional dimensions of access. The goal is to develop an evidence-based baseline that identifies inequities, recognises existing good practices, and reveals opportunities for more inclusive and responsive mobility systems.

Guiding questions:

- Which social groups experience barriers to mobility?
- Which areas or neighbourhoods face persistent access gaps?
- Are vehicles, stations, and digital platforms accessible for all users?
- Do safety perceptions or cultural behaviour influence travel choices?

To create a comprehensive baseline, cities must combine quantitative data with qualitative data that reflect the lived experience of different population groups. Standard data sources such as travel surveys, ridership counts, and service coverage maps should be complemented by participatory and co-created methods that capture the perspectives of those often excluded from traditional analyses.

In addition, data disaggregation by gender, age, disability, income, and digital access helps reveal intersectional barriers and inequities that may otherwise remain hidden. By combining technical data with lived experience, cities can generate a richer picture of accessibility, affordability, and usability, laying the foundation for inclusive planning that responds to real needs rather than assumptions.

Recommended toolbox

- **Participatory data collection:** Use mental mapping, walk-alongs, targeted interviews and co-design workshops to capture lived experiences.
- **Equity mapping:** Combine demographic and service data to visualise exclusion patterns.

Once data are collected, the next step is to identify where access barriers and inequities exist and to determine their forms. Traditional analyses focus on service coverage, infrastructure quality, and travel demand, but inclusive shared mobility requires a broader lens.

Cities should map not only spatial and infrastructural gaps but also social, cultural, financial, and digital barriers that affect participation in (shared) mobility systems. For example, mobility services may be technically available in certain districts but remain inaccessible due to high costs, lack of digital literacy, or safety concerns. This helps cities prioritise investments, identify target groups for outreach, and co-design measures that promote equitable mobility access.

Identifying gaps lays the groundwork for opportunities in inclusive shared mobility planning. The diagnostic process provides cities with insights to build inclusive shared mobility systems that are both equitable and adaptive. Mapping unmet needs can reveal potential for new partnerships with shared mobility operators, civil society, and local communities. Identifying accessibility challenges can guide innovation in vehicle design, app interfaces, or fare structures. Uncovering systemic gaps can inform governance reforms that integrate social inclusion into mobility mandates.

To strengthen this diagnostic phase, cities can also integrate experiential and immersive methods that help planners and stakeholders better understand the lived realities of people with reduced mobility. While quantitative and qualitative data reveal structural and behavioural patterns, they often do not fully convey the physical, sensory, or emotional barriers that many users encounter in everyday mobility. Complementing traditional analyses with experiential tools can therefore provide a deeper, more empathetic understanding of accessibility gaps, supporting more informed and user-centred decision making. The following example illustrates how immersive simulation tools can be used to enrich the assessment of barriers and uncover needs that may not emerge through conventional data collection alone.

Box 4: SMALL Suitcase

Using immersive simulation tools to understand the realities of PRM

Immersive simulation tools are an effective method for helping planners, operators, and decision makers understand the physical and perceptual barriers faced by people with reduced mobility.

Such tools can replicate limited mobility, reduced visibility, or restricted range of motion, offering immediate insight into real-world challenges that are often overlooked in traditional planning.

As part of SMALL's partner meeting in Varberg, an interactive workshop was organised to allow participants to experience the daily challenges faced by people with reduced mobility.

Figure 6: SMALL Suitcase workshop at SMALL's partner meeting in Varberg.

Three simulation tools were tested:

- **Ageing suit:** A wearable suit that simulates the physical effects of ageing by adding weight and restricting movement, making everyday actions slower and more difficult.
- **Child-height mirror:** A visual tool that enables participants to see the environment from the perspective of a one-metre-tall child, revealing obstacles and visibility challenges.
- **Vision-impairment glasses:** Special lenses that reproduce different types of near- and long-distance vision impairments, demonstrating how signage, interfaces, and streetscapes appear to people with limited sight.

Participants highlighted that the hands-on experience provided insights that cannot be gained from reading or theoretical discussions alone. There was strong agreement that such immersive simulations should be adopted widely by cities and offered to professionals across sectors to build awareness, strengthen empathy, and support more inclusive mobility planning.

When approached holistically, this phase helps transform fragmented mobility landscapes into a coordinated, user-centred baseline where inclusion can become a driver of innovation and efficiency along the following SUMP phases.

By grounding the planning process in a clear understanding of who faces barriers, why these barriers persist, and how they interact, cities are better equipped to set realistic objectives, prioritise impactful measures, and design shared mobility solutions that truly respond to user needs.

The insights generated during this phase not only shape the strategic direction of the SUMP but also guide stakeholder engagement, resource allocation, and the identification of suitable pilot areas.

Integrating experiential and participatory approaches further strengthens the diagnostic foundation by fostering cohesion, strengthening cross-sector dialogue, and ensuring that the voices of people with reduced mobility are heard and embedded early in the planning cycle.

Together, these analytical and experiential components ensure that inclusion is not treated as an add-on but as a structural principle that informs decision making throughout the strategy development, measure planning, and implementation phases of the SUMP.

Ultimately, this phase sets the scene for the rest of the planning process featured in this planning guide: inclusion becomes both a lens for understanding mobility realities and a practical pathway for building shared mobility systems that are resilient, fair, and widely accessible.

2. Developing an inclusive (Shared) Mobility Strategy

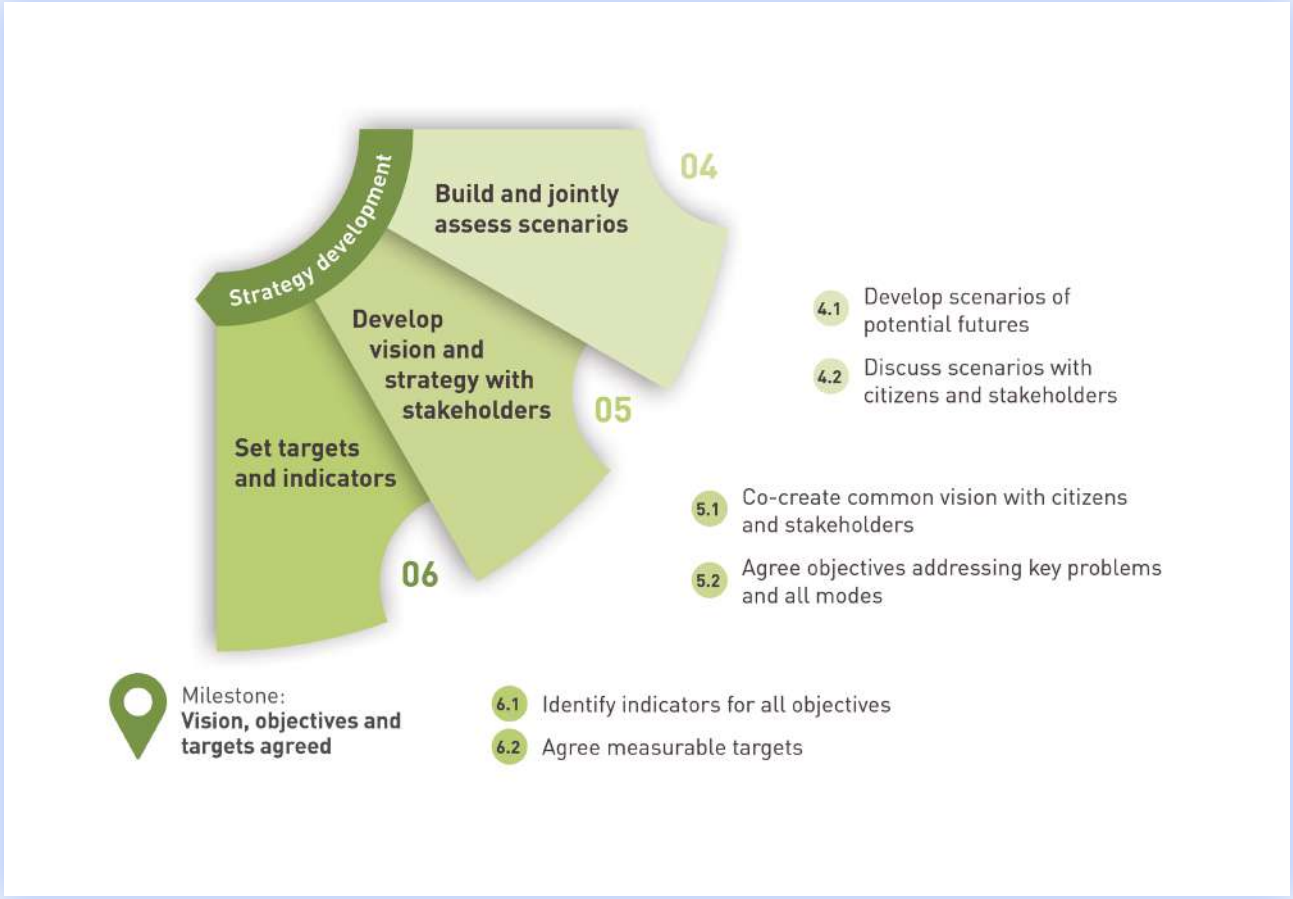


Figure 7: SUMP phase 2: Strategy Development. Rupprecht Consult, 2019.

The Strategy Development phase of the SUMP cycle sets the direction and priorities for urban mobility planning, building directly on the baseline, stakeholder insights, and policy reviews established during the Preparation & Analysis phase. In this phase, cities translate evidence into a coherent, forward-looking strategy that defines the vision, strategic objectives, and performance indicators guiding future interventions.

Embedding inclusive mobility ensures that equity, accessibility, and social inclusion are central to decision-making, prioritising the needs of people with reduced mobility and other underserved groups. Integrating shared mobility supports flexibility, resource efficiency, and complementary options to existing public transport, making the system more adaptable to diverse mobility needs. Together, the principles of inclusive and shared mobility create a strategy that not only addresses current mobility challenges but also strengthens fairness, efficiency, and resilience in urban mobility systems.

In practice, activities in this phase often focus on general scenario development, high-level strategic planning, and broad performance metrics without explicit attention to inclusion or demand-responsive mobility. This can result in strategies that overlook mobility barriers for people with reduced mobility, underserved populations, or the potential of flexible shared

services, leading to one-size-fits-all solutions that fail to address inequities or to optimise resource use. Key activities in a strategy development approach that is inclusive and addresses shared mobility include:

1. **Exploring and evaluating future scenarios:** This includes anticipating uncertainties and assessing alternative mobility scenarios or development options while explicitly considering accessibility, equity, and the role of shared mobility to improve inclusivity, flexibility and efficiency.

2. **Defining an inclusive and shared mobility vision and strategic objectives:** This includes establishing a future-oriented vision and clear objectives that centre on inclusion and demand-responsive services, ensuring mobility systems are equitable, efficient, and responsive to diverse user needs.

3. **Setting inclusive and shared mobility performance metrics:** This includes developing indicators that capture accessibility, affordability, service quality, and resource efficiency, allowing cities to track their progress and adapt strategies to achieve equitable outcomes.

By embedding inclusive and shared mobility principles at this stage, cities can ensure that strategies move beyond conventional planning approaches. This strengthens social equity, optimises resource use, and positions mobility systems to meet the diverse needs of all urban residents regardless of their physical ability, age, gender, or socio-economic background.

2.1. Exploring and evaluating future scenarios

Scenario development allows cities to explore multiple possible futures and test how different planning pathways may shape urban mobility. In the context of inclusive and shared mobility, scenarios provide a structured way to assess the impacts of alternative approaches on equity, accessibility, and resource efficiency. They help cities anticipate uncertainties such as demographic shifts, technological developments, or budget constraints while explicitly considering the needs of people with reduced mobility.

Traditional scenario development often focuses on high-level transport demand projections, infrastructure expansion, or technology adoption, frequently overlooking the social and spatial dimensions of inclusion.

Guiding questions:

- How do alternative scenarios affect access to jobs, healthcare, education, and essential services for PRM?
- Are social, spatial, and digital inequalities considered in scenario assumptions?
- How do scenarios address potential exclusion risks?
- Which scenarios offer the most equitable and feasible pathways for inclusive urban mobility?

Without an explicit inclusion lens, these scenarios risk favouring young, tech-savvy populations, neglecting the barriers faced by PRM, older adults, low-income households, or residents of underserved areas. Integrating Inclusive Mobility ensures that scenarios capture these realities, while Shared Mobility considerations explore flexible, resource-efficient solutions that complement public transport and expand access.

Inclusive scenario development begins with constructing contrasting pathways that reflect a range of possible futures. Examples may include a business-as-usual trajectory, technology-driven growth, community-led mobility expansion, or budget-constrained service scenarios. For each, cities should consider demographic trends, accessibility needs, digital inclusion, and social equity. By explicitly incorporating these factors, scenarios become a tool to anticipate and address potential exclusion risks while highlighting opportunities for shared mobility solutions that increase flexibility, reduce congestion, and optimise resource use.

Evaluating scenarios for inclusiveness involves assessing social, economic, and environmental impacts, helping cities identify pathways that improve access and equity while remaining feasible and resilient. Participatory evaluation tools, such as user personas, equity impact assessments, and co-creation workshops, can ensure that scenarios reflect lived experiences and practical realities. This approach allows planners to identify which groups may benefit or lose under each scenario, how emerging technologies can be harnessed without causing digital exclusion, and which shared mobility solutions can enhance both accessibility and resource efficiency.

Recommended toolbox

- **User Personas for Scenario Evaluation:** User personas provide detailed profiles of different mobility users, capturing their needs, preferences, and constraints. By applying personas to scenario assessment, cities can experience potential barriers, test service adaptations, and prioritise solutions that enhance equity and accessibility.

2.2. Defining an Inclusive (Shared) Mobility Strategy

A clear strategic framework is a cornerstone of the SUMP process. It articulates the city's long-term aspirations for urban mobility by defining where it wants to go (vision), why (mission), and how it intends to achieve its goals (strategic objectives and principles). Strategic frameworks often focus on emissions reduction, modal shifts, infrastructure expansion, or technology adoption without an inclusive mobility lens. Such frameworks risk overlooking the barriers faced by marginalised users, failing to reflect the lived experiences of communities with limited access, and underutilising opportunities for shared mobility solutions that could enhance flexibility and resource efficiency. By embedding inclusive and shared mobility principles, cities strengthen the legitimacy of their strategies, foster cross-sector collaboration, and create a clear foundation for equitable implementation.

Guiding questions:

- Does the vision explicitly prioritise accessibility, equity, and inclusion for PRM?
- Were PRM and marginalised communities actively involved in shaping the vision and mission?
- Do the mission and objectives empower People with Reduced Mobility?

The development of the strategic framework begins with co-creating a vision and mission. A well-crafted vision sets the long-term direction for mobility planning, reflecting the city's values and commitments, while the mission translates this vision into actionable intent. Inclusive and participatory processes are essential at this stage, ensuring that all mobility stakeholders, including users, operators, planners and authorities, are genuinely represented in defining future directions and aspirations.

Cities can engage the diverse actors through visioning workshops, scenario discussions, and participatory mapping to co-define the mobility strategy. For instance, a city vision might state: "A city of opportunities; where everyone can access opportunities through safe, sustainable, inclusive mobility options that connect all the city's neighbourhoods equitably." A corresponding mission could focus on "Delivering flexible, inclusive, and resource-efficient transport systems that prioritise accessibility and efficient mobility use over private ownership."

Using scenario planning or priority ranking exercises helps align stakeholder perspectives on equity, accessibility, and system adaptability, ensuring that shared mobility is strategically positioned as a complement to traditional public transport rather than a competing service.

Recommended toolbox

- **Visioning workshops** help explore future mobility options under different mobility pathways.
- **Participatory mapping** visualises spatial inequalities and identifies accessibility gaps where shared mobility can bridge.
- **Priority ranking and multi-criteria analysis** enable stakeholders to evaluate competing objectives, ensuring that final strategies balance social fairness with resource optimisation.

Once the vision and mission are defined, the next step is to establish strategic objectives and guiding principles. These objectives operationalise the vision by translating broad ambitions into measurable targets that clarify intent, allocate resources, and enable progress monitoring. Within an inclusive (shared) mobility framework, objectives should directly address accessibility, affordability, inclusive design, and empowerment of marginalised users, as well as emphasise the system's efficiency, demand-responsiveness, and resource optimisation. For example, strategic objectives could include:

- Increasing the share of barrier-free vehicles and digital booking interfaces in shared fleets.
- Ensuring affordability through integrated fare structures that include shared mobility within public transport passes.
- Expanding the coverage of accessible shared mobility services in peripheral or underserved areas.
- Encouraging data-sharing partnerships between public and private actors to monitor inclusion and service equity.

Cross-sector collaboration remains central to overcoming systemic barriers faced by people with reduced mobility and underserved populations. Objectives should therefore encourage coordination between transport authorities, urban planning departments, social services, and private mobility providers, promoting shared responsibility for inclusive service delivery.

By embedding inclusive and shared mobility principles throughout the strategic framework, cities can ensure that planning moves beyond conventional transport optimisation, creating a foundation for equitable, flexible, and efficient urban mobility systems that meet the needs of all residents.

2.3. Establishing Inclusive (Shared) Mobility Performance Metrics

Performance indicators provide the foundation for evidence-based mobility planning. They translate strategic objectives into measurable outcomes and help cities ensure that progress towards inclusivity, flexibility, and resource efficiency is both visible and accountable.

Within the context of inclusive and shared mobility, indicators should assess not only how efficiently the mobility system operates, but also how equitably and adaptively it serves diverse users.

Traditional indicator frameworks often focus on efficiency, modal shift, or emissions, with limited attention to equity or user diversity. As a result, social and spatial disparities in access, affordability, and participation remain unaddressed.

An inclusive and shared mobility indicator framework must therefore be multi-dimensional, capturing both system performance and user experience across population groups, territories, and governance processes.

Developing and validating indicators should follow an iterative and participatory approach. Cities can combine quantitative data (e.g. accessibility scores, modal coverage) with qualitative insights (e.g. user experience narratives, participatory mapping).

Guiding questions:

- Do KPIs capture the lived experiences of marginalised users?
- Are users part of the KPI validation process?
- Is there a mechanism to revise indicators based on evolving inclusion needs?

Recommended toolbox

Cities can adapt and combine existing reference systems to embed inclusivity and shared mobility in their monitoring frameworks:

- **SUMI (Sustainable Urban Mobility Indicators)** provides a base structure that can be expanded with social equity and shared mobility metrics.
- **Co-monitoring platforms and dashboards** facilitate real-time collaboration between municipalities, operators, and user communities.
- **Benchmarking and peer learning networks** offer opportunities for cities to develop and contextualise data indicator sets, and share practices on inclusive participation, governance, and monitoring.

A balanced framework can be structured around **five complementary dimensions:**

1. **Accessibility and spatial equity:** Evaluates whether all residents (including those in peripheral or underserved areas) can access shared and public transport within acceptable time or distance thresholds. Examples: number of barrier-free stops and vehicles; proportion of residents within 300 m of a shared mobility access point; accessibility score for door-to-door trip-chain options combining active, shared and public mobility options.

2. **Affordability and economic inclusion:** Assesses whether mobility costs are proportionate to income and whether pricing structures enable equitable access to shared and flexible services. Examples: share of monthly income spent on mobility; existence of integrated fare capping or social tariffs; percentage of shared services included in public mobility passes.

3. **User experience and digital inclusion:** Captures the quality, comfort, and accessibility of services, including the inclusivity of digital platforms that mediate access. Examples: satisfaction rate among PRM and elderly users; availability of non-smartphone booking channels; user feedback on safety, reliability, and dignity of service.

4. **Environmental and operational efficiency:** Links inclusivity to sustainability by ensuring that shared mobility contributes to emission reduction and efficient resource use across all districts. Examples: reduction in vehicle-kilometres per capita; fleet utilisation rates in low-demand areas; emissions avoided through shared trips replacing private car use.

5. **Governance and participation:** Assesses the inclusiveness, transparency, and responsiveness of decision-making and planning processes. This dimension ensures that diverse voices, especially from marginalised and underrepresented groups, are embedded throughout the policy cycle. Examples: number and diversity of stakeholder groups engaged in monitoring; formal mechanisms for PRM or community representation in mobility governance; frequency and quality of feedback loops between operators, users, and authorities.

Embedding these dimensions in the SUMP framework ensures that inclusivity and shared mobility are not treated as add-ons but as measurable, cross-cutting priorities that define how success is understood.

To illustrate how inclusive performance metrics can be systematically developed and applied in practice, the following example presents SMALL's impact evaluation approach and its use in the NOMADES pilot in Saint-Quentin.

Figure 8: School children using shared bikes as part of the NOMADES pilot in Saint-Quentin. © Saint-Quentin.

Box 5: Good Practice

SMALL's impact evaluation plan and its use in the NOMADES pilot in Saint-Quentin

In Saint-Quentin, France, the NOMADES pilot deployed fleets of bicycles in primary schools to offer teachers an alternative to buses for taking their pupils on school outings. All SMALL pilots developed an impact evaluation plan – a plan which assists with both selecting indicators and formulating strategic goals. An impact evaluation is a before and after comparison focused on the investment of time and resources into a project and the results achieved, with goal setting and performance metrics being part of the impact evaluation process.

For the SMALL pilots, the impact evaluation methodology focused on four components: 1) an impact statement, 2) a metrics overview, 3) goal formulation and 4) KPIs and measurement methodology.

The impact statement helps identify users, the scale, the reason for the measure, the timeframe, how the measure will be implemented, what the mobility solution entails, and who can use the information gained. The NOMADES pilot impact statement identified that school classes **[USERS]** in Saint-Quentin **[SCALE]** have limited or unsustainable transportation options during school hours **[WHY]**. Therefore, from October 2023 until July 2026 **[TIMEFRAME]**, this pilot deploys fleets of bicycles in city schools **[HOW]** to provide a new mobility option to classes **[WHAT]**. The use case and data will be available for other local authorities **[TAKERS]**.

Based on this impact statement NOMADES identified seven key metrics for each of the pre-, during, and post-pilot phases. Directly linked to the impact statement and metrics, the NOMADES pilot concretely identified both leading and lagging KPIs for seven specific goals. Leading KPIs measure incremental progress towards predefined goals, offering real-time feedback on trajectories. Lagging KPIs are based on past performance, take time to change, and track long-term progress. For example, an economic goal of the NOMADES pilot is to reduce bussing costs. A leading KPI for this is the number of days NOMADES bikes are used, and a lagging KPI is the reduction in bus trips relative to prior years.

The measurement methodology section of the plan helps to concretely identify how you want to measure progress towards predefined goals and what must be done to get this information. With the NOMADES project, this led to the planned use of surveys (e.g. to assess progress towards behaviour-related goals), and usage analytics (e.g. related to bus use to assess progress towards sustainability goals.)

Taken together, this chapter has highlighted how cities can build an inclusive mobility strategy by assessing future scenarios, defining a clear vision and objectives, and establishing performance metrics that make progress measurable. Together, these steps provide a solid strategic foundation for integrating inclusion into the SUMP process. They clarify the direction of change, prioritise user needs, and ensure that ambition is matched with accountability.

With this strategic framework in place, the following chapters turn to the next phases of the SUMP cycle, focusing on how cities can translate these objectives into concrete measures, co-design solutions with users and stakeholders, and prepare for effective implementation.

3. Co-Designing Inclusive Measures and Actions

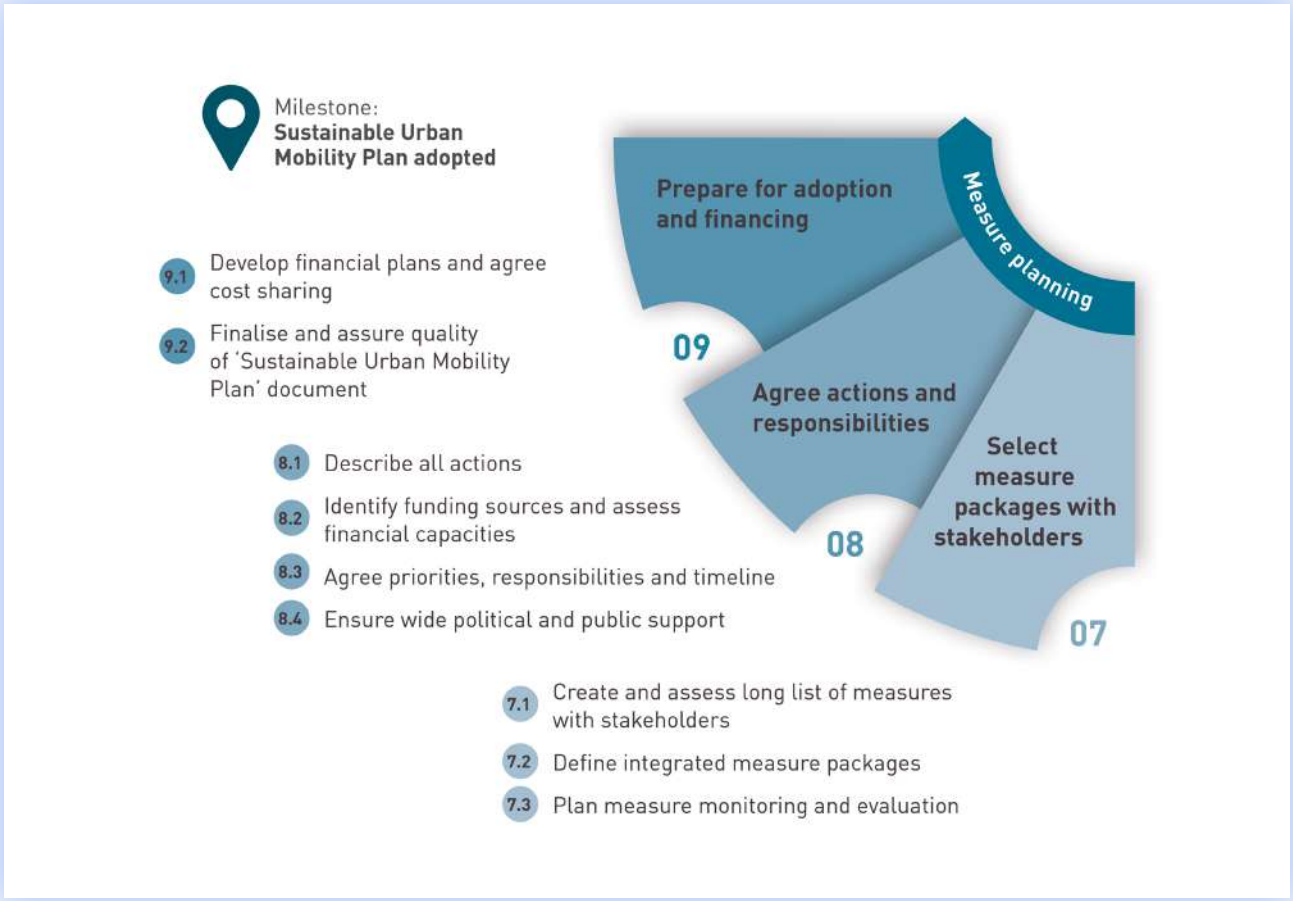


Figure 9: SUMP phase 3: Measure Planning. Rupprecht Consult, 2019.

Phase 3 of the SUMP cycle marks the transition from defining strategic objectives to designing concrete actions. At this stage, cities translate their vision and goals into tangible mobility measures and interventions. For inclusive and shared mobility, this phase is particularly important, as it determines whether the ambitions for accessibility, equity, flexibility, and resource efficiency will be realised in practice.

Inclusive mobility ensures that everyone – regardless of age, gender, income, or ability – can access opportunities safely and affordably. Shared mobility, meanwhile, enhances efficiency and adaptability by providing flexible, demand-responsive solutions that complement public transport and reduce dependency on private vehicles. Integrating both concepts in measure planning enables cities to create sustainable, equitable, and resilient mobility ecosystems.

Developing inclusive measures requires cities to move beyond traditional planning approaches that are expert-driven and infrastructure-focused, towards co-design and participatory innovation. Co-design involves (potential) users, service providers, planners, experts, and policymakers in identifying needs, co-creating solutions, and testing interventions.
This participatory process not only ensures that measures address real barriers but also fosters trust, ownership, and long-term commitment among stakeholders.

To guide this inclusive shared mobility process, four broad categories of measures can be distinguished:

Design and infrastructure measures: These ensure physical accessibility, safety, and comfort through inclusive design of spaces, vehicles, and interfaces.

Digital and technological measures: These improve digital accessibility, interoperability, and data inclusion in apps and platforms that support shared and on-demand mobility.

Social innovation measures: These address behavioural, cultural, and social barriers through peer-support schemes, capacity-building, and community-based initiatives.

Governance and organisational measures: These embed inclusion and shared mobility into institutional structures, funding, regulations, and accountability mechanisms.

These four categories provide a framework to systematically translate strategic goals into actionable interventions.

While each category focuses on specific aspects of inclusive mobility, they are interdependent: for example, digital platforms are only effective if complemented by accessible infrastructure; social measures are most impactful when governance mechanisms enable participation and accountability.

The process of planning these measures should be iterative and evidence-based, involving five key steps:

1. Assess barriers and needs: Co-identify infrastructural, digital, social, and institutional barriers through audits, surveys, and participatory mapping.

2. Co-define inclusive standards and priorities: Agree on measurable targets for inclusion and accessibility, building on the city's strategic framework.

3. Co-design and prototype solutions: Test ideas through workshops, living labs, and small-scale pilots with diverse user groups.

4. Integrate and prioritise measures: Align selected measures with funding schemes, responsibilities, and monitoring frameworks.

5. Monitor and adapt: Establish feedback loops to evaluate impacts on inclusion and to refine interventions.

The following sections present guidance for each of the four measure pillars. They outline the rationale for action, highlight examples of good practice, and discuss key considerations for implementation. By exploring design, digital, social, and governance measures separately, while keeping their interconnections in mind, practitioners can build coherent and inclusive measure packages that advance the city's overall mobility objectives.

3.1 Inclusive Design and Infrastructure Measures

Design and infrastructure form the foundation for mobility systems. Physical spaces, vehicles, and interfaces directly shape who can access, use, and benefit from mobility services. Poorly designed infrastructure can exclude people with reduced mobility, older adults, caregivers, and other disadvantaged groups, whereas inclusive design ensures accessibility, safety, comfort, and dignity for all users. Key areas of focus include:

- **Infrastructure:** sidewalks, bike lanes, curbs, stops, shelters, mobility hubs, and micro-hubs designed for universal access.
- **Vehicles:** adapted bikes, e-bikes, tricycles, cargo bikes, scooters, cars, vans, and buses that accommodate diverse mobility needs.
- **Interfaces:** wayfinding, signage, booking, and payment systems designed to be intuitive, readable, and inclusive.

Core principles for inclusive design inclusive and shared mobility measures should rely on a set of guiding principles that ensure infrastructure, vehicles, and interfaces meet the needs of all users. These principles provide the conceptual foundation for practical interventions:

1. **Barrier-free access:** Ensure continuous, step-free pathways, ramps, crossings, and boarding points that accommodate wheelchairs, mobility aids, strollers, and cargo bikes.
2. **Safety and comfort:** Provide well-lit, sheltered waiting areas, seating, tactile guidance, and clear visual or auditory signals at stops and stations.
3. **Universal usability:** Vehicles, docking stations, and interfaces should be intuitive, flexible, and adjustable to a range of user needs and physical abilities.
4. **Seamless intermodality:** Infrastructure should promote door-to-door intermodality by connecting public transport, shared vehicles, and active mobility options, enabling easy transfers without barriers.
5. **Participatory validation:** Co-design solutions with target users to ensure design choices reflect lived experience rather than assumptions.

Guiding questions:

- Which infrastructure elements consistently create barriers for PRM?
- Do vehicles and interfaces accommodate a broad spectrum of physical and cognitive abilities?
- Are wayfinding and information systems accessible to users with sensory or literacy challenges?
- How are users involved in testing and refining design solutions?
- How do proposed measures align with broader multimodal integration and mobility objectives?

Practical Design Considerations

Building on these core design principles, cities and service providers can put in place practical measures to create inclusive infrastructure. **Accessibility audits** should be conducted to identify obstacles on sidewalks, at transit stops, in vehicles, and at points of interface. Service planning and mobility fleets should incorporate **adaptable vehicle formats**, such as low-floor buses, cargo tricycles, or e-bikes, to accommodate diverse users. Tactile, visual, and auditory wayfinding systems can be integrated across the mobility network to guide users effectively. **Inclusive design standards** should be embedded in procurement, contracts, and urban planning regulations to ensure long-term compliance and continuity.

Finally, **pilot-testing infrastructure** solutions with real users, using iterative feedback loops, helps refine designs and address unforeseen barriers in practice.

The brief examples in Table 6 illustrate how cities around the world have applied design measures in practice, demonstrating innovative solutions that enhance accessibility, usability, and comfort for all users.

Recommended toolbox

- **Accessibility audit:** Systematically assess physical and digital mobility infrastructure to identify barriers and improvement opportunities (e.g. walkability audits, spatial analysis, mobility hubs assessments).
- **Participatory mapping:** Visually map mobility barriers and user experiences to highlight gaps and inform design, including interviews or focus groups with target users.
- **Universal design checklists:** Refer to frameworks for inclusive design standards covering vehicles, infrastructure, and interfaces (e.g. ISO accessibility standards, UNCRPD guidelines).
- **Digital twins and simulation tools:** Model mobility systems to test interfaces and service flows before deployment
- **Pilot testing / living labs:** Implement small-scale interventions to test useability, gather feedback, and refine measures before scaling.

Box 6: Good Practice

International practices of design and infrastructure

Inclusive vehicles
The car-sharing provider Cambio piloted a shared car with a wheelchair ramp in Belgium, allowing people in wheelchairs to use car sharing. In Vienna, the public bike share system includes bicycles equipped with child seats, and in Bremen the system includes 60 cargo bikes suitable for transporting children.

Inclusive infrastructures:
All underground platforms in the city of Munich are barrier-free, allowing people to use rapid transit throughout the city without requiring assistance or restricting them to particular stations. In Los Angeles, bus shelters designed as a package of parts allow for customisable waiting areas which incorporate seating and leaning rails, weather protection, and audio and/or visual passenger information systems.

Inclusive interfaces:
The Lyft Silver service features live telephone support, providing real-time assistance through direct access to human operators. In Prague, all public transport stops are equipped with an electronic device that audibly announces the line number and direction of approaching public transport vehicles. The city is also rolling out digital information boards that will include an audio read-out. These boards will provide information on the accessibility of incoming public transit vehicles, for example, if they are accessible low-floor vehicles and/or air-conditioned.

Box 7: Good Practice

Co-creating to find shared mobility solutions for the elderly in Varberg

The SMALL DRIVA pilot explored how to design a shared micro mobility service for elderly and disabled residents in Varberg, Sweden. Throughout the pilot organisers have used co-creation, including to inform what type of tricycles will be tested during the pilot.

During a co-creation workshop held early in the pilot, senior citizen focus group participants made it clear to organisers that they much preferred the look and the idea of cargo tricycles with two wheels in the front over traditional adult tricycles with two wheels in the back which, to their eyes, look like they are designed for people with disabilities – and clearly they didn't see themselves in that category.

Figure 10: Testing of tricycles during European Mobility Week in Varberg.

Workshop participants felt that a modern cargo bike would allow them to better blend in with younger riders and also to undertake the types of trips they would hope to do, including picking up their grandchildren.

Based on this feedback pilot organisers arranged for suppliers to provide various models of cargo bikes to test at an event planned during European Mobility Week. When focus group participants tested the supplied cargo bikes, many realised that these were much more difficult to ride than they had anticipated, and that it required significant strength to comfortably manoeuvre them. The organisers began the search for a lighter cargo tricycles in the focus group's preferred style and will do longer term testing of this model as well as of a regular adult tricycle with a smaller number of test riders.

To find suitable mobility solutions for their target groups, organisers had to go beyond merely asking the target group what they wanted, and provide multiple opportunities for testing proposed solutions.

Design and infrastructure provide the physical foundation, but their benefits are amplified when combined with digital solutions that facilitate usability, social measures that support user engagement and confidence, and governance measures that ensure implementation and sustainability. Effective co-design ensures that infrastructure does not remain a barrier but becomes a driver of inclusion in shared mobility systems.

3.2. Digital and Technological Innovation Measures

Digital and technological solutions are key enablers of inclusive and shared mobility.

While physical infrastructure provides access, digital tools such as apps, booking platforms, real-time information systems, and assistive technologies facilitate useability, navigation, and autonomy for people with diverse mobility needs. Inclusive digital measures reduce informational and operational barriers for people with reduced mobility, older adults, low-literacy users, and other underprivileged groups.

These measures complement infrastructure, social, and governance actions, ensuring that shared mobility is accessible not only in physical terms but also through information, services, and technology.

Guiding questions:

- Do digital interfaces meet the accessibility needs of all users?
- Are users with varying digital skills included in the design and testing phases?
- How are digital solutions integrated with mobility infrastructure and measures?
- Are there mechanisms to provide real-time assistance and user support?
- How are continuous improvement and user feedback embedded in the digital service lifecycle?

Inclusive digital solutions enhance:

- **Access:** Ensuring people can easily find, book, and pay for mobility services.
- **Usability:** Interfaces that accommodate different abilities and literacy levels.
- **Safety and autonomy:** Providing guidance, alerts, and real-time support.
- **Integration:** Connecting digital services to physical mobility infrastructure and other transport modes.

Core Principles for Inclusive Digital Measures
Inclusive digital and technological measures should rely on guiding principles that ensure platforms, apps, and interfaces are accessible, usable, and adaptable for all users.
These principles provide the conceptual foundation for practical interventions.

1. Accessible interfaces: Ensure apps, websites, and onboard systems support screen readers, voice commands, high-contrast modes, and multilingual options in line with WCAG (Web Content Accessibility Guidelines) standards.

2. Simplicity and intuitiveness: Design workflows and navigation that can be used by individuals with low digital literacy or with cognitive challenges.

3. Real-time assistance: Include options for live support via phone, chat, or on-demand help to increase confidence and safety.

4. Interoperability and integration: Ensure that digital tools connect seamlessly with other mobility services, payment systems, and information platforms.

5. Participatory validation: Co-design and test tools with users to ensure they reflect lived experiences and diverse needs.

Practical Considerations

Practical considerations help translate inclusive digital principles into concrete actions.

Digital accessibility audits can identify usability barriers in apps, websites, and vehicle systems.

Solutions should be pilot-tested with diverse users, including individuals with reduced mobility, and users with low digital literacy, to ensure they meet real needs.

Adaptive features, such as customisable displays, voice navigation, or simplified menus, should be incorporated into all digital interfaces.

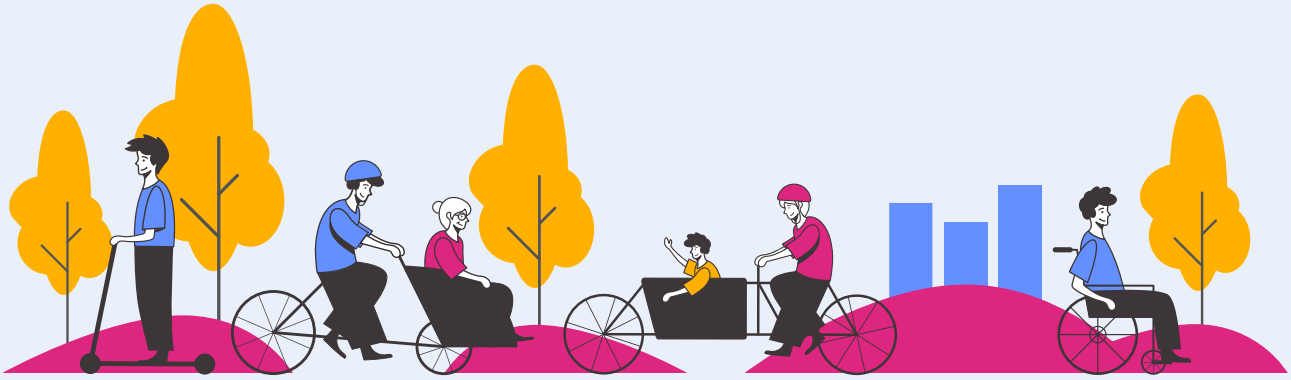
Digital tools must also align with inclusive standards (eg. WCAG Standards) and regulatory requirements.

Finally, integrating feedback loops, including user reporting mechanisms and real-time support, allows for continuous improvement and responsiveness to evolving user needs.

Box 6 presents examples of inclusive digital and technological measures, illustrating how cities and operators have successfully put these solutions in place.

Recommended toolbox

- **User testing and usability labs:** Structured sessions to observe real users navigating digital tools to identify useability issues and iterate solutions for different abilities.
- **Participatory design workshops:** Engage users in co-creating a digital solution and incorporate lived experience into app and service design.
- **Accessibility audit tools:** Automated or manual audits of digital platforms to detect barriers to accessibility and compliance with standards.
- **Persona development and scenario testing:** Create representative user profiles and simulate journeys to understand diverse needs and to design adaptive solutions.
- **Feedback and reporting systems:** In-app feedback, surveys, or community reporting platforms to capture ongoing issues and real-time barriers for continuous improvement.



Box 8: Good Practice

International practices in digital and technological innovation

Accessible Route Planning

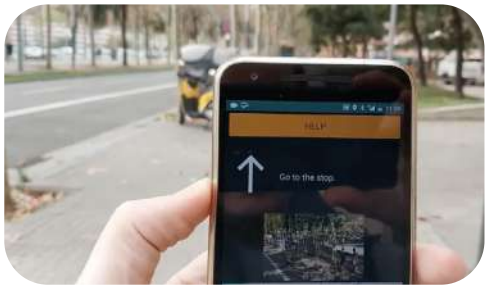
In Brest, the Bibus pilot combines a new information layer available in its journey planning app allowing for reporting of obstacles by a community of users. Elsewhere in France the MyEasyAccess app provides information on accessible routes and destinations, with a community of users providing accessibility information for destinations.

Inclusive Mobility as a Service

The iMaaS app under development in Amsterdam will offer people with reduced mobility inclusive Mobility as a Service through additional travel and accessibility information, a helpdesk function, and, at a later stage, an emergency button to call for assistance. Further details about this app is available in box 9.

Inclusive interfaces

In Vienna, the WienMobil app makes real-time public transport information more inclusive, translating operational and disruption information into sign language via the app. Increased accessibility for deaf people is also planned through the integration of animated videos into the app. As part of addressing inclusivity gaps and improving the travel experience for older adults, Uber has made a simplified app interface available. The interface features larger text, fewer home screen buttons, and easier access to saved destinations.



Digital accompaniment

App&Town Compagnon (App&Town Companion) is an innovative intelligent guidance system that enables autonomous navigation and intermodal public transport use for people with mild to moderate cognitive and physical disabilities.

Box 9: Good Practice

Co-creating with stakeholders to network and develop digital solutions for volunteer transport services in Amsterdam

Inclusive Mobility as a Service (iMaas) is an application and help desk that people with reduced mobility in Amsterdam can use to plan, and at a later stage book and pay for, their trips.

The objective is to bring together tailor-made information covering paratransit, public transport and voluntary transport. Organisers from the City of Amsterdam held a co-creation workshop focused on networking among mobility service providers, the development of voluntary transport services and the inclusion of these services in iMaaS.

Figure 11: District Administrator explaining how the city values volunteer transport services / Amsterdam. © Gemeente Amsterdam

The workshop facilitated the exploration of common needs, possible synergies, and opportunities for collaboration amongst participants, leading to the identification of potential solutions for the needs identified. Facilitated by the City of Amsterdam and Kenniscentrum Vrijwilligersvervoer (Knowledge Centre for Volunteer Transport), the event brought together 40 people from 20 organisations. This included (potential) volunteer transport service providers, municipal employees, and representatives from the paratransit provider and the public transport operator.

Each of the approximately 15 volunteer transport service providers operating in Amsterdam has its own services and coverage area, but many have common needs. These were identified through open discussions and the sharing of experiences. Solutions were discussed during plenary sessions and workshops on specific topics.

Common difficulties included setting up appropriate legal entities and obtaining suitable insurance. A knowledge gap lay in the operational elements of transporting people - including vehicle parking, storage and charging, trip planning and contingency plans in the event of vehicle breakdowns.

It was agreed that a knowledge sharing forum could help meet the need for greater knowledge of legal practicalities, and that the paratransit provider could assist with reviewing quotes for insurance. Regarding operational elements, the paratransit provider offered to share infrastructure and services where appropriate, and to provide either transport for users whose trip is interrupted due to a vehicle breakdown, or a replacement vehicle for the service provider. This co-creation workshop facilitated the identification of both common needs and solutions by providing an opportunity to explore synergies and collaboration among transport providers.

Digital and technological measures are most effective when combined with complementary design, social, and governance strategies. Physical infrastructure enables mobility by offering the necessary spaces and facilities, social measures build user confidence and engagement, and governance measures ensure policy support and durability.

Digital solutions amplify these efforts by making services accessible, easy to navigate, and adaptable to diverse user needs.

3.3. Inclusive Social Innovation Measures

Social innovations enhance inclusivity in shared mobility by fostering community-driven and user-centred solutions that support people with reduced mobility and other underprivileged groups. They also complement the design, digital and governance solutions. These measures focus on building trust, empathy, and solidarity within mobility systems, while addressing the needs of people with reduced mobility. By fostering new forms of collaboration and engagement, social innovation can make mobility both more accessible and more socially sustainable. Examples of social innovation in mobility include:

- **Intergenerational travel buddy programmes** that pair young volunteers with older adults to provide guidance, support, and companionship during journeys, fostering confidence and social interaction.
- **Mobility mentoring** for first-time users of digital platforms, apps, or shared vehicles, offering hands-on guidance and troubleshooting to build user competence and comfort.
- **Cultural mediation** to support first-time users including tourists, migrants or or people with reduced mobility in understanding routes, ticketing, and service use, helping them navigate public and shared transport systems safely and confidently.
- **Participatory community-based solutions** where residents identify and implement small-scale interventions, such as improved lighting, ramps, seating, or safer pedestrian crossings, based on local priorities and needs.

Guiding questions:

- What social mobility challenges faced by PRM could be addressed through peer support or community engagement?
- What existing networks (e.g., schools, senior centres, NGOs) can help implement or promote socially oriented mobility initiatives?
- Which community resources (volunteers, spaces, funding) can support social innovation?
- What forms of travel assistance (e.g., companionship, navigation help) are most needed and feasible within the community?
- What barriers (cultural, social, organisational) need to be addressed in the measure?

Core Principles

Inclusive social measures should rely on guiding principles that ensure interventions empower users, build trust, and foster equity. Such principles provide a conceptual foundation for designing practical initiatives that address the diverse needs of people with reduced mobility.

1. Empowerment and participation: Involve users, communities, and local organisations in the co-creation and decision making of mobility initiatives and measures.

2. Equity and accessibility: Ensure that social programmes reduce barriers to participation and reach underserved or marginalised groups.

3. Trust and confidence: Build supportive systems, including volunteer assistance, peer mentoring, or travel companions to increase user confidence.

4. Mutual benefit: Encourage initiatives that provide benefits both to users and community stakeholders, fostering solidarity and social cohesion.

5. Scalability and sustainability: Design interventions that can be replicated, adapted, or scaled up beyond pilot projects.

Practical considerations

Practical considerations translate these principles into actionable steps for planning, implementing, and scaling social innovation measures. They guide practitioners in mapping needs and resources, co-designing interventions, testing pilots, and embedding successful initiatives into long-term mobility strategies.

Map social needs, resources, and opportunities, identifying existing networks, community actors, and volunteers.

Co-design and Co-creation initiatives with local stakeholders and target users, such as travel buddy programmes, mentorship, or participatory mobility projects (e.g., pairing older adults with volunteer cyclists to test and improve bike-sharing systems, or involving PRM users in designing accessible bus stops and digital booking apps).

Pilot and test initiatives in real-world contexts, collecting feedback to refine interventions. Integrate successful pilots into long-term planning and governance structures to ensure continuity.

Monitor social outcomes alongside mobility outcomes, including trust, satisfaction, and inclusivity indicators (e.g., percentage of trips accessible to PRM, frequency of use by tourists, or low-income groups, or user-reported ease of access for seniors and people with disabilities).

Box 10 and 11 provide examples of how cities and operators have successfully put in place inclusive social measures.

Recommended toolbox

- **Community mapping:** Identify local actors, networks, and resources to support social innovation measures.
- **Co-creation workshops:** Facilitate participatory sessions with users and stakeholders to design socially inclusive initiatives.
- **Focus groups / interviews:** Gather qualitative insights on social barriers, preferences, and unmet needs.
- **Pilot programmes / living labs:** Test social interventions in controlled environments to assess feasibility, useability, and impact.
- **Monitoring and feedback systems:** Collect data on social outcomes, including participation rates, satisfaction, and inclusivity metrics.

Box 10: Good Practice

International practices in social innovation

Figure 12: De Fietstaxi - Ghent

Volunteer-based transport
Volunteer drivers provide the people power for De Fietstaxi (the Bicycle Taxi) in Ghent. This SMALL pilot aims to encourage social integration by having newcomers to Belgium act as vehicle drivers for the bicycle taxi service. Mpact's Mobitwin arranges for volunteers to provide transport, with their own vehicles, to people with reduced mobility. De Witte Raaf in Eindhoven is a volunteer-run door-to-door ride provision service for the elderly, and for people with disabilities, and their accompanying caregivers.

Travel training
In the London borough of Hounslow, the Travel Buddy Service provides independent travel training and support to adults with learning or physical disabilities, taught by adults with similar conditions. In Essen, Germany the public transit operator offers people over the age of fifty a free course on using public transit, which includes advice on how to safely board, disembark, and travel on public transit. These examples increase inclusivity by increasing the confidence of people with reduced mobility in using public transport through guidance and coaching.

Travel accompaniment
The public transport providers in Tours and Nantes (France) partner with Mon Copilote, a private company, to offer people with reduced mobility a free accompanying "co-pilot" on public transit trips. In Berlin, the VBB Bus&Train Guide Service is aimed at people with reduced mobility who feel uncertain about using public transit. Available throughout the city, it provides a guide from front door to destination. This accompaniment helps people with reduced mobility feel safer and more supported while using public transport.

Box 11: Good Practice

Stakeholder and user engagement for social innovation measures co-creation in Flanders

Mpact, a Ghent-based NGO that focuses on mobility and the sharing economy, leads a SMALL pilot taking place in three cities in Belgium, experimenting with peer-to-peer sharing of adapted vehicles and communication strategies to recruit more volunteer drivers. Through stakeholder engagement, Mpact was able to better shape and refine measures in its pilot and build public support.

Figure 13: Mobitwin volunteers participate in a co-identification workshop.

Representatives from the local administration and owners of adapted vehicles were brought together to discuss the financial, regulatory, and organisational challenges of sharing privately-owned adapted vehicles and the use of adapted vehicles, and to identify potential users of such shared vehicles. This process confirmed that peer-to-peer sharing could be very useful in reducing the financial burden of purchasing an adapted vehicle and helped Mpact to identify how an existing vehicle sharing platform used in the pilot should be adapted for adapted vehicles and their users.

Concretely, this meant providing a suitable level of in-app information on vehicle-specific user mobility requirements. In addition, it highlighted the importance of both reducing barriers throughout the customer journey and making 'last mile' trips easy, accessible, and comfortable for people with reduced mobility.
To improve recruitment of new volunteer drivers, they held co-creation workshops with current volunteers and with other organisations which currently use volunteers with a different profile. A key lesson learned was that stories from current volunteers could inspire potential new volunteers to take the leap. Together, they identified the right moments, channels, and content to effectively reach and convince these individuals.

Organisers gained valuable insights through these engagement processes and were able to develop a strong foundation for pilot activities. The opportunity to contribute led to a sense of ownership among stakeholders and users, helping to build greater public support.

Social innovation measures are most effective when integrated with design, digital, and governance measures. While design and digital solutions remove physical and technological barriers, social measures ensure users are aware, confident, and empowered to benefit from mobility services. Together, these pillars create inclusive, holistic, and sustainable shared mobility systems.

3.4. Governance and Policy Measures for Inclusive (Shared) Mobility

Governance and policy measures form the institutional backbone of mobility systems. They define how decisions are made, who participates, and how responsibilities and resources are distributed.

Effective governance frameworks enable cities to coordinate actors across sectors, levels, and modes, ensuring that inclusion and shared mobility approaches are systematically embedded in planning, funding, regulation, and monitoring processes.

Examples of governance-focused inclusive measures in shared mobility:

Guiding questions:

- What mechanisms ensure accountability for achieving inclusion and accessibility goals?
- How are PRM included in decision-making structures?
- Are shared mobility operators required to meet equity and accessibility standards?
- How is coordination ensured between transport, social, and digital policy domains?

- **Accessibility-based procurement criteria:** Requiring shared mobility providers to meet minimum accessibility standards in public tenders, including vehicle accessibility and real-time data sharing.
- **Formal representation of user groups:** Social organisations representing PRM are given formal roles in governance bodies, ensuring that PRM perspectives are explicitly considered and that accountability and voice are maintained within decision-making processes.
- **Inclusive mobility steering committees:** Institutionalising inclusive transport advisory boards that include PRM representatives, providing a structured platform for participation and input into decision-making processes.
- **Integrated regulatory frameworks:** Adoption of a cross-sector regulatory framework that aligns urban mobility planning with social inclusion policies, integrating mobility services for elderly and disabled persons in one platform.
- **Inclusion-linked public subsidies:** Subsidies for shared mobility operators are conditional on meeting performance indicators tied to inclusive access for diverse user groups and underserved areas.

By fostering collaboration between transport authorities, social service agencies, community representatives, and private operators, governance measures ensure that inclusive and shared mobility objectives translate into actionable, enforceable, and sustainable outcomes.

Core Principles for Inclusive and Shared Mobility Governance

Inclusive governance should rely on principles that promote transparency, accountability, and participation. These principles guide institutions in creating frameworks that empower all stakeholders, particularly underrepresented user groups, and ensure that inclusion and resource efficiency are not afterthoughts but central goals of mobility governance.

1. Collaborative decision making: Establish participatory structures (e.g., advisory boards, mobility roundtables) that include PRM, user groups, and private operators in mobility decisions.

2. Transparency and accountability: Ensure open data policies, regular progress reporting, and public monitoring of inclusivity and accessibility targets.

3. Integrated policy alignment: Coordinate transport, urban planning, social inclusion, and digitalisation policies to create coherent frameworks supporting shared and inclusive mobility.

4. Equitable resource distribution: Design funding mechanisms and incentives that prioritise underserved areas and user groups while supporting flexible, shared solutions.

5. Adaptive regulation: Develop dynamic regulations that balance innovation (e.g., DRT, e-scooters) with safety, accessibility, and equity.

Practical considerations:

Practical governance considerations translate these principles into institutional processes, partnerships, and instruments that ensure inclusive and shared mobility strategies are effectively implemented, monitored, and sustained. Multi-level governance structures can be established to ensure coordination between local, regional, and national authorities.

Equity-based evaluation criteria should be introduced for public procurement, funding calls, and operator licensing to prioritise inclusive outcomes. Developing shared data platforms enables integrated planning, monitoring, and regulation of shared mobility services.

Regular consultation mechanisms with user groups, particularly those representing people with reduced mobility and other disadvantaged populations, help ensure decisions reflect lived experiences. Inclusivity metrics should be embedded in performance frameworks, requiring operators to report on accessibility and equity outcomes, such as the percentage of trips accessible to people with reduced mobility or user satisfaction scores disaggregated by diverse user groups.

Finally, interdepartmental cooperation across transport, social affairs, IT, and environment departments can be facilitated through joint strategies or working groups.

The following section presents international examples of inclusive governance and policy measures, illustrating how cities and operators have successfully implemented these solutions.

Recommended toolbox

- **Stakeholder mapping matrix:** Identifies key actors, their influence, and interests to support balanced and inclusive participation in governance processes.
- **Mobility governance audit:** Assesses the inclusivity, transparency, and adaptability of existing governance structures and identifies gaps for improvement.
- **Institutional coordination framework:** Provides a structured approach for aligning roles, responsibilities, and data-sharing agreements among public and private actors.
- **Public-private collaboration charter:** Formalises cooperation between cities and mobility providers to ensure shared mobility services operate equitably and transparently.

Box 12: Good Practice

International examples of inclusive governance and policy measures

Participatory governance measures
In Komotini, Greece, accessibility is a core priority that is integrated across policy areas. People with reduced mobility participate as equal partners on advisory boards and steering committees; this has helped ensure accessibility of the city's public transport system. In Torino, Italy, transport policies for disabled people are informed by an advisory board consisting of over fifteen associations and stakeholders.

Planning Frameworks for inclusivity
The Transport Poverty Action Plan (2021-2025) in Ghent was informed by input from advisory councils for seniors and people with disabilities, leading to clarification of, and engagement with, an action plan to make mobility in Ghent accessible to everyone. In Lisbon, a leading principle of "equality and autonomy in access and use of space" in the guidelines for mobility hubs aims to ensure inclusivity in mobility hub design.

Funding and incentives
Multiple SMALL pilot organisers have highlighted the importance of inclusive mobility measure financing through health insurance funding and social service budgets, with a recognition that inclusive mobility is not only about transportation but also about health and social inclusion.

Governance and policy measures ensure that inclusive and shared mobility ambitions are translated into structured, accountable action. They provide the institutional and regulatory scaffolding that enables the design, digital, and social pillars to thrive. Without strong governance, inclusive and shared mobility risks remaining isolated projects rather than systemic transformations. The following section brings together these four pillars, highlighting how their integration ensures coherent, equitable, and sustainable urban mobility systems.

3.5. From Measures to Action: Packaging, Prioritisation, and Implementation Pathways

Developing inclusive and shared mobility systems requires more than designing standalone interventions; it demands integration, prioritisation, and sustained institutional commitment. The four pillars outlined in this chapter: 1) design and infrastructure, 2) digital and technological innovation, 3) social innovation, and 4) governance and policy, are most effective when pursued as an interconnected framework that translates inclusion from principle into practice[5].

5 See SMALL's Observatory for a collection of international good-practice interventions and measures that support inclusive shared mobility: https://sharedmobilityforall.eu/observatory/

Building Synergies and Integration of Measures for Greater Impact

Design, digital, social, and governance measures should not be pursued in isolation. Their greatest impact is achieved when they are combined into coherent, mutually reinforcing packages. For example, a digital booking platform only becomes inclusive when paired with universal design standards in vehicles and stops, with social mentoring for first-time users, and with governance mechanisms that ensure affordability and service equity. Integrating measures across the four pillars prevents duplication, fosters efficiency, and ensures that inclusion becomes a systemic feature of urban mobility rather than a peripheral goal.

Strategic Prioritisation and Phasing

Not all measures can be implemented simultaneously, and some require groundwork to succeed. Municipalities should apply structured prioritisation tools such as multi-criteria analysis (MCA) or inclusion-weighted scoring systems, which consider social impact alongside cost and feasibility. Quick wins, such as improving signage, piloting shared e-bikes for PRM and caregivers, or launching inclusive awareness campaigns, can build trust and momentum. Larger-scale interventions, such as procurement reforms or major infrastructure upgrades, should be sequenced over the medium to long term. Phasing should remain transparent, with clear milestones and opportunities for review and stakeholder feedback.

Financial Alignment with Inclusion Goals

Even the most well-designed measures cannot succeed without adequate and stable financial support. Inclusive shared mobility should be integrated into mainstream municipal budgets, not treated as an optional add-on. This includes securing subsidies for (shared) mobility services in underserved areas, reserving funds for barrier-free infrastructure, and fostering partnerships with private operators, social enterprises, and community organisations. Resource alignment also extends to human capital, ensuring that staff training, institutional mandates, and performance systems embed inclusion and shared mobility as enduring priorities.

Towards an Actionable Pathway for Implementation

Taken together, these elements form a coherent pathway for turning inclusive mobility principles into real-world transformation. The emphasis should remain on coherence, equity, and sustainability, ensuring that every action taken contributes to strengthening cities' capacity to deliver mobility for all.

When effectively combined, the four pillars supported by integrated funding, phasing, and institutional alignment enable cities to move from fragmented planning toward resilient, adaptive, and equitable mobility systems. Inclusive and shared mobility, when approached holistically, becomes not just a mobility goal but a driver of social inclusion, resource efficiency, and urban wellbeing.

The following chapter builds on this integrated framework, outlining the implementation and monitoring phase of the SUMP cycle where strategies and measures are operationalised, tested through pilot actions, and evaluated to ensure that inclusivity and shared mobility remain embedded in practice.

4. Implementation and monitoring for inclusive mobility

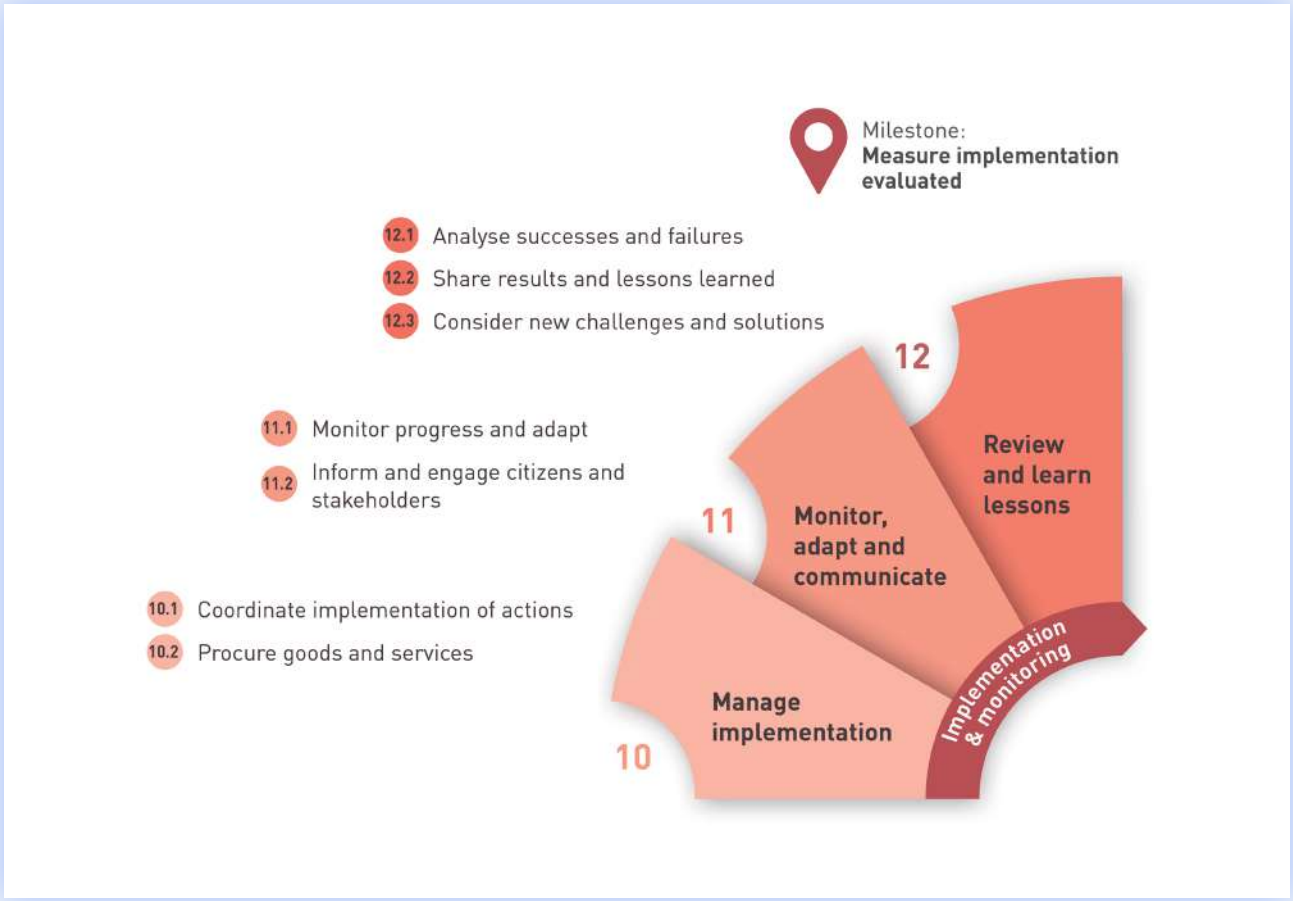


Figure 14: SUMP phase 4: Implementation & Monitoring. Rupprecht Consult, 2019.

Phase four represents the final – but ongoing – stage of the SUMP cycle. It focuses on implementing, operating, and continuously monitoring, evaluating, and refining measures to ensure equitable access, usability, and tangible benefits for all user groups, while adapting and improving them based on observed impacts and user feedback. Implementation and evaluation are not static endpoints; they are dynamic, iterative processes that must remain adaptable and responsive to real-world conditions, emerging challenges, and diverse user experiences.

In the context of inclusive and shared mobility, this phase is particularly critical. It is the point where planning commitments are tested in practice, and where inclusivity objectives must be translated into visible, measurable change on the ground. The effectiveness of inclusive mobility strategies ultimately depends not only on how well projects are designed, but also on how they are implemented, who participates in their delivery, and how their impacts are monitored and refined.

By linking action, reflection, and adaptation, this phase closes the loop of the SUMP cycle. It enables cities to transform strategies into practice, assess performance against inclusion goals, and capture lessons that inform future mobility planning and governance.

Key objectives of this phase include:

- Delivering inclusive shared mobility measures effectively and coherently across design, digital, social, and governance domains.
- Establishing participatory and transparent monitoring systems that reflect user experience, particularly of people with reduced mobility and marginalised groups.
- Evaluating social and accessibility impacts to identify gaps, successes, and lessons for future planning.
- Ensuring that inclusive shared mobility solutions are sustained, scaled, and improved over time through continuous learning and adaptation.

4.1. Implementing Inclusive Shared Mobility Measures

Implementation marks the point where strategic plans are transformed into real-world action. In the context of inclusive and shared mobility, this phase determines whether the ambitions of accessibility and equity are effectively realised.

Success depends not only on technical precision but also on ensuring continuous coordination across institutions, engaging with diverse stakeholders, and responding to user needs throughout the entire process from baseline co-assessment, measures co-design to implementation and evaluation.

While many of these activities are detailed in previous chapters, their ongoing emphasis is critical to translating inclusion goals into practice. Implementation is therefore both a managerial and a social process that shapes how measures are experienced by different user groups and how inclusion goals are translated into practice.

Guiding questions:

- Are all actors (public, private, and community-based) clear about their roles and responsibilities?
- Are accessibility and inclusion standards included in procurement, contracts, and staff training?
- What mechanisms exist to ensure flexibility and adaptive responses during implementation?

Delivering inclusive shared mobility measures requires coherent alignment across design, digital, social, and governance domains. Infrastructure upgrades, for instance, must go hand in hand with digital accessibility tools, inclusive operational practices, and transparent governance mechanisms. A shared e-bike scheme is only inclusive if it is supported by accessible docking points, user-friendly booking platforms, and staff trained in assisting people with reduced mobility. Such integration ensures that inclusivity is embedded into every layer of mobility provision.

Partnerships between public authorities, private operators, and civil society play a decisive role in this phase. Inclusive implementation requires transparent collaboration, accountability, and clear roles for monitoring service delivery.

Recommended toolbox

- **Implementation roadmaps:** Structured plans that define timelines, roles, responsibilities, and milestones for inclusive shared mobility actions, ensuring coordination across stakeholders.
- **Inclusive procurement guidelines:** Criteria and checklists that ensure service providers and suppliers comply with accessibility, equity, and user engagement requirements.
- **Participatory pilot testing:** Short-term, small-scale trials that involve users in assessing and refining solutions before large-scale deployment.

Community engagement during implementation – through user panels, participatory testing, or community-based pilots – ensures that user feedback is heard and barriers are detected and addressed early. This approach strengthens the sense of ownership among all participants and ensures that services evolve in line with people's real needs rather than being based on assumptions.

Implementation is also an opportunity to build institutional capacity and long-term sustainability of inclusive (shared) mobility measures and services.Embedding accessibility standards into procurement, contracts, and performance requirements ensures continuity beyond project cycles.

Likewise, staff training and awareness campaigns aimed at planners, employees and operators can cultivate a culture of inclusion across agencies and operators. The process must remain adaptive, with flexibility to modify designs, operations, and governance mechanisms based on evidence gathered during deployment.

Box 13: Good Practice

Informing and engaging the target user group in Brest

Figure 15: The Velo&Co service in Brest.

The SMALL Vélo&Co pilot in Brest is a free on-demand transport service by tricycle intended for people over 60 years of age or who have a disability. Organisers have used an array of methods to communicate about the pilot. Stories about Vélo&Co have been featured in a local magazine and in the local press. During local mobility-related events, including May by Bike and European Mobility Week in September, the mobility department hosts an information stand and brings one of the tricycles to display.

Most effectively, every Thursday morning the tricycle and a representative from BaPaV, a local cycling organisation (that provides drivers for the service), are present at the weekly market in the district of Bellevue.

Market visitors have the chance to ask questions about the service, give feedback, book future rides and see first-hand how the tricycle looks. Many potential users are uncertain if the tricycle service would be suitable for their mobility levels. Having the tricycle at the market removes this barrier as potential users have the chance to experience the service first-hand, without the hurdle of having to make a reservation or travel somewhere where they were not already going. Furthermore, on-demand rides are offered from the market, and many market goers use the tricycle service to return home with their purchases. The presence at the market allows organisers to effectively communicate with users at a location they already are. The pilot coordinators believe the presence at the market is a key reason why demand for rides with Vélo&Co have seen a nearly 600% increase year over year.

4.2. Monitoring Inclusive Shared Mobility Measures

Monitoring forms the crucial bridge between implementation and evaluation. This step is not merely a technical exercise but a governance and learning process that captures how inclusive measures function in real-world conditions and how they are experienced by diverse users. In the context of inclusive and shared mobility, ongoing monitoring provides an understanding of the extent to which interventions are genuinely improving accessibility and equity. It also helps identify barriers that may persist or emerge over time. In this sense, monitoring ensures accountability and transparency, making inclusive shared mobility measures effective throughout their operation.

An inclusive monitoring process should combine both quantitative operational data, such as reliability, efficiency, and level of use, with qualitative insights derived through interviews, focus groups, participatory workshops, or surveys on user experience, perceptions, and satisfaction. It should also go beyond traditional performance indicators to examine how shared mobility solutions affect people's sense of autonomy, comfort, safety and trust in the system. This requires a user-centred approach that focuses on how people actually experience mobility, rather than solely on technical or operational metrics.

In practice, effective monitoring depends on several principles. It should be participatory, involving users and representatives from marginalised or underrepresented groups directly in the observation and review process. It should also be transparent, with results and progress communicated openly to maintain trust and stimulate dialogue between operators, authorities, and communities.

Finally, it must be iteratively designed as a learning loop that allows for real-time adjustments and improvements to ongoing operations. Cities are encouraged to establish inclusive monitoring committees or working groups involving people with reduced mobility, social service organisations, and civil society actors.

Regular collection of user feedback through accessible surveys (designed in plain language and available in multiple formats such as online, paper-based, or assisted interviews to ensure participation of all users), community workshops, or digital reporting channels helps maintain accountability and ensures that the monitoring process remains sensitive to lived experiences. Observational audits (on-site assessments where planners or trained observers evaluate how people actually experience and navigate mobility environments) and participatory evaluations can further support the identification of physical, digital, or social barriers that hinder inclusivity.

Guiding questions:

- Are monitoring indicators adequately capturing both operational efficiency and inclusivity outcomes?
- How are user experiences and perceptions being integrated into monitoring frameworks?
- Who is involved in the monitoring process, and are PRM meaningfully represented?
- How are monitoring findings communicated, and how do they inform adaptive decision-making?

Recommended toolbox

- **Mixed method monitoring frameworks** that integrate quantitative KPIs with qualitative assessment tools, such as user satisfaction surveys, focus group discussions, ethnographic observation, and participatory mapping.
- **Digital interactive dashboards** can support transparent data sharing, while inclusivity audits and accessibility scorecards can be used to systematically assess the performance of shared mobility services against inclusivity goals.

Box 14: Good Practice

Tool: Co-evaluation - Observing, assessing, and analysing collectively

Figure 16: Fietstaxi - Ghent @ Martin Corlazzoli

The Fietstaxi is a SMALL pilot led by the NGO the Fietsambassade, which provides a tricycle taxi service for people with reduced mobility in Ghent. Co-evaluation was used to evaluate the use of the service and to identify its strengths and weaknesses.

80 users of the Fietstaxi service were surveyed by a master's student completing an internship with the Fietsambassade. Using this co-evaluation process the Fietsambassade increased its understanding of why people use the service, how users learned about it, the purpose of their trips, satisfaction with the service, and how the service impacted their lives. Co-evaluation allowed the Fietsambassade to go beyond readily available trip data (number of trips, average length, etc.) and find out more about the emotional and social impact the pilot has on users. 93% of users agreed with the statement that the service has become indispensable for them, and nearly two-thirds agreed that it increases their social contact. This information has helped demonstrate the value of the service to the local government and other stakeholders.

In a separate co-evaluation process, a feedback workshop was conducted with 17 volunteers from the service. The workshop centred on the questions 'What is good (about the service)?' and 'What can be improved (with the service)?'. How rides are planned, the amount of time allocated for rides, and the personal approach of the service were identified as good.

Volunteers suggested that an extra bicycle taxi be kept in reserve, that the reservation system be further automated, and that the storage and deployment of the bicycle taxis be changed. This co-evaluation activity informed the decision to change operational aspects of the service (where bicycle taxis are stored) and also led to a volunteer involved in the co-evaluation process connecting the Fietsambassade with another organisation they could partner with on bicycle taxi storage[5].

6 More details regarding this example and other co-evaluation workshops can be found on the SMALL website: https://sharedmobilityforall.eu/co-creation-workshops/

4.3. Evaluating inclusive shared mobility practices

Evaluation completes the initial SUMP cycle of inclusive shared mobility planning by moving beyond simple performance tracking to assessing the social outcomes of implemented measures. It examines the extent to which actions have improved accessibility, reduced inequalities, and enhanced user satisfaction across diverse groups. Evaluation is not only about measuring degrees of success but also about understanding what worked, what did not, and why.

In the context of inclusive and shared mobility, evaluation is particularly important because it determines whether the measures designed to promote equity have genuinely delivered on their promises and whether any new barriers have emerged during implementation.

Inclusive evaluation (that actively involves diverse users, to capture lived experiences and accessibility impacts) should be outcome-oriented, focusing on the lived experience and real-world effects of mobility solutions rather than merely reporting on numerical indicators. It should be collaborative and reflective, engaging users with reduced mobility in interpreting findings and co-developing lessons. Evaluation must also remain transparent, and lessons should be shared with all stakeholders to foster accountability and collective learning. Importantly, it is a participatory, continuous learning process that strengthens the institutional capacity of cities to plan, implement, and sustain inclusive mobility systems more effectively over time.

Guiding questions:

- How have implemented measures improved accessibility, affordability, and comfort for diverse user groups?
- What social or behaviour changes have resulted from the measures?
- Which barriers or challenges persist or have newly emerged?
- Who has participated in the evaluation process, and how have their perspectives shaped the findings?
- How will the lessons learned inform the next iteration of planning and policy development?

An effective evaluation process should combine quantitative data such as accessibility coverage, travel times, or use rates with qualitative insights from user stories, focus groups, or interviews. It is important to examine both intended and unintended impacts, as inclusive measures may create new dynamics, such as changes in travel patterns or increased demand in certain areas that were not anticipated, which need to be understood and addressed.

Recommended toolbox

- **Mixed-method impact assessments** combining quantitative and qualitative indicators (e.g. Accessibility mapping, Equity and inclusion scorecards for evaluating performance)
- **Co-reflection workshops** and participatory evaluation sessions with PRM and community representatives. (e.g. Storytelling and user diaries to capture lived experiences.
- **Digital dashboards** or visualisation platforms to communicate results transparently.

Co-evaluation workshops involving representatives of PRM, community groups, and mobility providers can provide valuable spaces for collective reflection and feedback on findings.

The results of the evaluation should then be translated into concrete recommendations for replicating successful practices, revising policies, and refining planning approaches.

Disseminating lessons learned through open reports, public meetings, and cross-city knowledge exchange platforms can help spread inclusivity principles more broadly across the mobility planning community.

4.4. Adapting and Sustaining Inclusive Shared Mobility Measures

The final step of the SUMP cycle focuses on adapting and sustaining inclusive shared mobility measures based on lessons learned during implementation, monitoring, and evaluation. This step ensures that the knowledge gained becomes the foundation for ongoing improvement and informs future SUMP revisions.
Key activities include:

- **Learning from experience:** Analyse successes, challenges, and unintended outcomes to guide refinements across all measures.
- **Iterative adjustment:** Update infrastructure, services, digital tools, and operational practices in response to user feedback and emerging needs.
- **Scaling and institutionalisation:** Expand effective measures and embed them into policies, procurement, and operational procedures to ensure long-term sustainability.
- **Capacity building and knowledge sharing:** Strengthen staff and operator skills and maintain mechanisms for participatory reflection and co-learning.
- **Resource and policy alignment:** Secure financial, technical, and organisational resources to sustain inclusive mobility measures over time.

By anchoring future planning in the evidence and lessons gathered, this step ensures that inclusivity becomes a lasting, adaptive, and systemic feature of urban mobility, guiding the next SUMP cycle toward more equitable, accessible, resilient, and user-centred mobility systems.

Concluding Remarks: Advancing Inclusive and Shared Mobility Planning

Key takeaways

This document outlines a comprehensive framework for planning, designing, implementing, and evaluating inclusive and shared mobility within the Sustainable Urban Mobility Planning (SUMP) cycle. Across all phases, the focus is on ensuring that mobility systems are accessible, equitable, flexible, and responsive to the diverse needs of people with reduced mobility (PRM) and other marginalised groups.

Key takeaways from this document include:

1. Participatory design is essential: Engagement of users, communities, operators, and policymakers is central to translating strategic goals into tangible measures. Co-design processes validate (or refute) assumptions, identify barriers, and build trust, ownership, and commitment among stakeholders.

2. Inclusion should be embedded at all levels: Achieving inclusive mobility requires more than isolated measures; it demands integration across design, digital, social, and governance dimensions. Each pillar reinforces the others, creating a mutually supportive system that ensures accessibility and equity throughout the mobility system.

3. Integrating measures increases impact: Design and infrastructure upgrades, digital platforms, social innovation initiatives, and governance reforms achieve their greatest effect when implemented together as coherent packages rather than in isolation. Strategic prioritisation and phased implementation enable cities to deliver quick wins while building momentum for long-term systemic changes.

4. Learning should be iterative and adaptable: Inclusive mobility is not static. Effective implementation, monitoring, and evaluation create feedback loops that allow cities to adapt services and policies to emerging needs, operational challenges, and user experiences. Continuous learning strengthens institutional capacity and embeds inclusivity as a sustained priority rather than a temporary project.

5. Evaluation should be evidence-based and outcome-oriented: Monitoring and evaluation must go beyond counting outputs to assess actual social outcomes, such as improved accessibility, reduced inequities, and increased user satisfaction. Participatory evaluation ensures that lessons learned are meaningful, actionable, and aligned with the lived experiences of diverse user groups.

6. Alignment of priorities ensures continuity: Stable funding, interdepartmental cooperation, and clear governance structures are essential to translating inclusive mobility ambitions into lasting urban transformation. Resource allocation must reflect inclusion priorities across both public and private sectors.

In essence, the framework presented in this document enables cities to move from fragmented interventions towards coherent, resilient, and equitable mobility systems where inclusion is embedded at every stage.

The activity checklist below summarises some practical steps for making (shared) mobility inclusive in each SUMP phase, providing actionable guidance for planners, operators, and policymakers.

Activity Checklist for Inclusive Shared Mobility Planning

The following checklist translates the guidance provided throughout this document into practical, actionable steps. It is designed to support cities, planners, operators, and other stakeholders in systematically implementing inclusive and shared mobility measures across the SUMP cycle. The checklist is structured according to the four main SUMP phases: Analysis & Visioning, Strategy Development, Co-Designing Measures & Actions, and Implementation & Monitoring/ Evaluation. Each phase includes a structured list of activities, ranging from overarching objectives to specific practical tasks. This structure supports users in identifying responsibilities, planning sequencing, and tracking progress, ensuring that inclusion and equity remain central throughout the mobility planning process.

The checklist can be used as a living tool: activities and tasks should be adapted to local contexts, expanded with city-specific interventions, and regularly updated based on monitoring and evaluation outcomes.

Phase 1: Building an Inclusive Baseline for (Shared) Mobility Systems

Objective: Establish a comprehensive understanding of the current mobility system, including barriers, gaps, and opportunities for inclusion, ensuring the voices of diverse users—particularly People with Reduced Mobility (PRM)—are central to planning.

Measure Pillar	Sub-Activities / Tasks	Recommended Toolbox
1. Bringing the right voices to the table	• Identify key stakeholders across public institutions, private sector, civil society, users, academia/research. • Engage users facing mobility barriers early through consultations, workshops, and surveys. • Ensure accessibility, trust, and empowerment in engagement strategies.	• Stakeholder mapping matrix • User journey mapping • C-creation workshops • Peer-facilitated dialogue • Walk- and ride-alongs
2. Understanding the policy and governance environment	• Map institutional mandates, responsibilities, and coordination mechanisms. • Review existing laws, plans, and standards affecting shared mobility and accessibility. • Analyse strategic frameworks, funding mechanisms, and cross-sectoral linkages.	• Policy and governance mapping matrix • Legal and regulatory review templates • Strategy alignment frameworks
3. Identifying gaps and opportunities for inclusive shared mobility	• Collect quantitative data (travel surveys, service coverage, ridership). • Gather qualitative insights (interviews, participatory mapping, persona development). • Disaggregate data by gender, age, disability, income, digital access. • Analyse barriers in social, spatial, financial, and digital dimensions.	• Accessibility audits • Participatory mapping • Persona development • Mystery shopper analysis • gap and opportunity matrix

Phase 2: Developing an Inclusive (Shared) Mobility Strategy

Objective: Translate baseline insights and stakeholder input into a coherent, future-oriented strategy that embeds inclusion, accessibility, and shared mobility, defining a clear vision, strategic objectives, and performance metrics.

Measure Pillar	Sub-Activities / Tasks	Recommended Toolbox
1. **Exploring and evaluating future scenarios**	• Construct contrasting future scenarios considering demographic, technological, financial, and policy uncertainties. • Assess impacts on equity, accessibility, and shared mobility adoption. • Evaluate potential risks and opportunities for underserved groups.	• Scenario planning templates • Equity impact assessments • Participatory workshops • User personas
2. **Defining an inclusive (shared) mobility strategy**	• Co-create a vision and mission reflecting inclusion and shared mobility principles. • Establish strategic objectives and guiding principles that operationalise the vision. • Align cross-sector collaboration between authorities, service providers, and communities	• Visioning workshops • Participatory mapping • Priority ranking exercises • Scenario alignment exercises
3. **Establishing inclusive (shared) mobility performances metrics**	• Identify measurable indicators for accessibility, affordability, user experience, efficiency, and governance. • Develop both leading and lagging indicators linked to strategic objectives. • Validate indicators using participatory and data-driven approaches.	• Impact evaluation plans • Indicator dashboards • Surveys, usage analytics, participatory monitoring

Phase 3: Co-Designing Inclusive Measures and Actions

Objective: Translate strategic objectives into tangible, user-centred interventions that embed inclusion, equity, and shared mobility, ensuring that design, digital, social, and governance measures work in an integrated and sustainable manner.

Measure Pillar	Key Actions	Recommended Toolbox
1. Design and infrastructure	• Conduct accessibility audits of streets, stops, hubs, and vehicles. • Pilot adaptable vehicles (e.g., low-floor buses, cargo trikes, e-bikes). • Integrate inclusive wayfinding and signage.	• Scenario planning templates • Equity impact assessments • Participatory workshops • User personas
2. Digital and technological innovation	• Audit digital interfaces for useability and accessibility • Pilot apps and platforms with adaptive features (voice, large text, simplified menus). • Integrate real-time support and multimodal journey planning.	• Digital accessibility audits • User testing panels • Inclusive app design standards • Feedback loops
3. Social innovation	• Map community needs and existing support networks. • Co-design buddy programmes, mentorship, or volunteer support schemes. • Pilot community-based mobility initiatives.	• Participatory mapping • Co-creation workshops • Pilot programmes • Social impact monitoring
4. Governance and policy	• Establish inclusive advisory boards and committees. • Integrate accessibility criteria in procurement and funding. • Align transport, social, and digital policies	• Multi-level governance structures • Equity-based procurement criteria • Policy alignment tools • Data and performance dashboards
5. Integration and prioritisation	• Combine measures into coherent, mutually reinforcing packages. • Sequence interventions for short-, medium-, and long-term impact. • Align with funding and institutional capacity.	• Multi-criteria analysis (MCA) • Inclusion-weighted scoring • Implementation roadmaps • Stakeholder alignment sessions

Phase 4: Implementation and Monitoring for Inclusive Mobility

Objective: Transform strategic plans and co-designed measures into real-world action, while continuously monitoring, evaluating, and adapting interventions to ensure equitable, accessible, resilient, and user-centred mobility systems.

Measure Pillar	Sub-activities/ Tasks	Recommended Toolbox
1. Implement inclusive shared mobility measures	• Deploy design, digital, social, and governance interventions. • Coordinate across institutions and stakeholders. • Engage communities in implementation and testing. • Embed accessibility standards in procurement, contracts, and operations.	• Project management plans • Stakeholder coordination platforms • Participatory implementation panels • Staff training and capacity building
2. Monitor inclusive shared mobility Measures	• Collect operational data (usage, reliability, efficiency). • Gather qualitative user feedback on accessibility, autonomy, comfort, safety, and trust. • Conduct audits of infrastructure, digital platforms, and services. • Establish inclusive monitoring committees or working groups.	• User surveys and interviews • Participatory observational audits • Digital reporting channels • Community workshops • KPI dashboards
3. Evaluate inclusive shared mobility in practice	• Analyse social and accessibility outcomes beyond operational performance. • Compare results with inclusion targets and strategic objectives. • Conduct co-evaluation workshops with PRM, community groups, and service providers. • Identify lessons learned, best practices, and areas for improvement.	• Outcome-oriented evaluation frameworks • Quantitative and qualitative analysis • Co-evaluation workshops • Open reports and knowledge sharing platforms
4. Adapt and sustain measures	• Adjust interventions based on monitoring and evaluation results. • Scale successful initiatives. • Update policies, operational procedures, and funding allocations. • Embed continuous learning into institutional processes.	• Iterative action plans • Policy and procurement revision • Institutional Capacity-Building • Continuous Learning Mechanisms

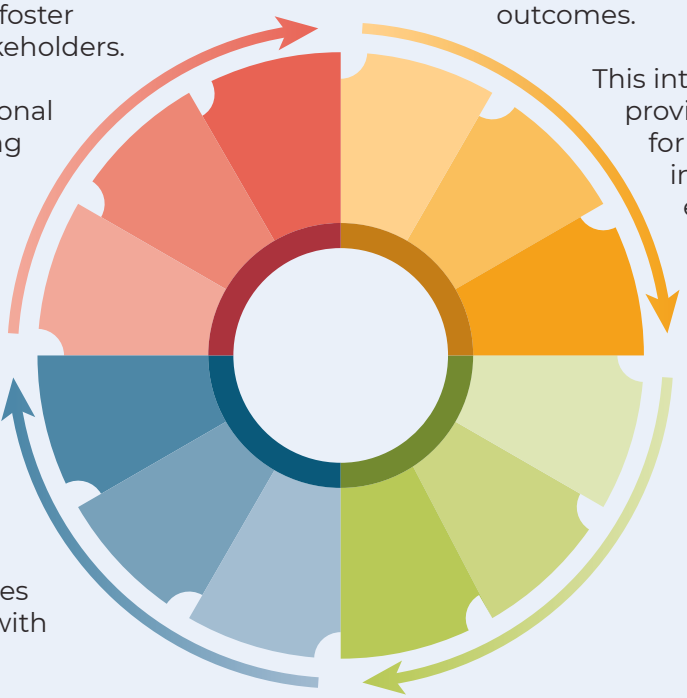
Concluding Remarks

Inclusive and shared mobility are essential pillars for building equitable, efficient, and sustainable mobility ecosystems. This panning guide has presented a comprehensive approach to promoting inclusive shared mobility, guiding cities through the full SUMP cycle from diagnosis and strategy development to co-design, implementation, monitoring, and evaluation. It has offered guiding questions, practical checklists, and highlighted methods and tools to support participatory planning, ensuring that measures respond to real user needs and foster ownership among stakeholders.

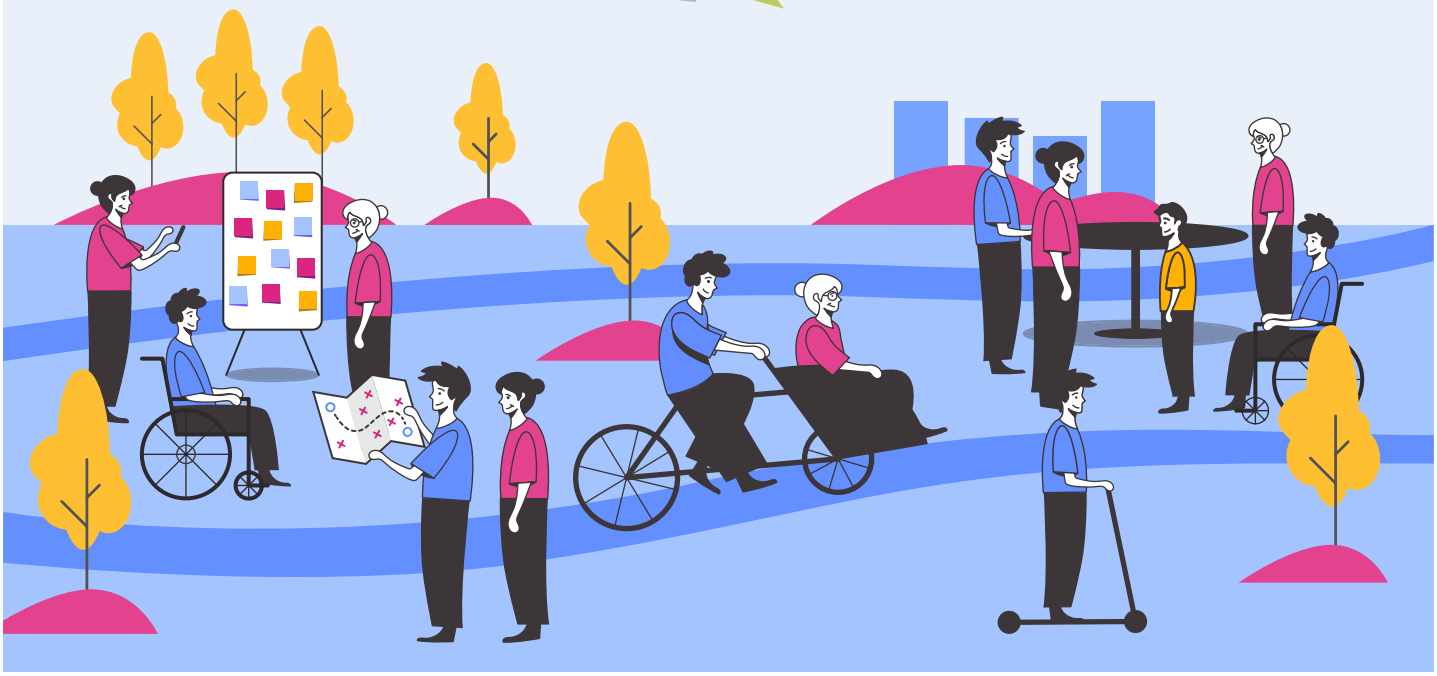
Lessons from international best practices, including insights from the SMALL project and other pilots, demonstrate the value of co-creation of measures. Inclusive mobility ensures that no one is left behind and that all residents, regardless of ability, age, gender, income, or social background, can access opportunities safely, affordably, and with dignity.

Shared mobility complements this by enhancing flexibility, efficiency, and the sustainability of public transport, offering demand-responsive and resource-efficient solutions that adapt to diverse urban contexts.

Ultimately, inclusive shared mobility is not a one-off intervention but an ongoing, adaptive process. By embedding learning loops, participatory evaluation, and continuous refinement, cities can transform policy ambitions into tangible, lived outcomes.



This integrated framework provides a foundation for resilient, socially inclusive, and environmentally responsible mobility systems, ensuring that every SUMP revision builds on prior knowledge and lessons, and strengthens cities' capacity to deliver mobility for all.



Glossary

The following glossary includes key terms and definitions that are central to understanding the document's content. This glossary table will help the readers better understand the key terms used throughout the document and ensure clarity when discussing the inclusive shared mobility planning process.

Term	Definition
Accessibility	Refers to the ease of access to opportunities or activities (Hansen, 1959).
Accessibility standards	A set of guidelines and regulations that ensure mobility services and infrastructure are designed and operated to be accessible to all users, including those with physical or cognitive impairments. This includes vehicle design, infrastructure, and digital platforms.
Barriers to mobility	In this guide, we do not refer only to physical mobility barriers, but also to social, economic, and technological obstacles that limit access to mobility options for people with reduced mobility.
Co-creation	A collaborative process in which users, stakeholders, and planners work together to design, develop, and refine mobility solutions. Co-creation ensures that services are inclusive, user-centred, and grounded in real-life needs and experiences.
Co-design	A participatory approach where users and stakeholders are actively involved in the design process, ensuring that solutions meet the actual needs and preferences of diverse groups, particularly those with reduced mobility.
Cross-sector collaboration	The process of aligning and coordinating efforts across different sectors, such as transport, social services, and urban planning, to create comprehensive, inclusive mobility solutions that meet the needs of all residents.
Digital inclusion	The practice of ensuring that all individuals, regardless of their digital literacy, access to technology, or physical disabilities, can fully participate in the digital aspects of mobility, such as booking and planning through apps or websites.
Disaggregated data	Data broken down by specific user characteristics such as age, gender, disability status, income level, etc., used to understand the diverse needs and barriers faced by different population segments in mobility planning.
Equity	The principle of ensuring fair and just access to mobility opportunities by recognising that different user groups have different needs, barriers, and starting points. Equity focuses on directing resources, policies, and design measures in ways that reduce structural disadvantages, particularly for people with reduced mobility and other underserved populations.
Feedback loop	Mechanisms that allow users, particularly underserved groups, to continuously provide input on mobility services, enabling cities to adapt and improve transportation systems based on user experiences and evolving needs.
Key performance indicator (KPI)	Metrics used to track the progress and success of specific mobility goals, focusing on accessibility, affordability, and service quality. In the context of ISM, KPIs include disaggregated data to reflect the experiences of underserved groups, particularly PRM.
Living lab	Test environments or real-world settings where mobility solutions are piloted and refined with direct user participation. Living labs allow for the continuous adaptation and feedback of services and innovations before broader implementation.
Mobility as a Service (MaaS)	A concept where various forms of transport are combined into a single accessible and customer-friendly digital service that allows users to plan, book, and pay for all types of mobility options, such as public transport, bike-sharing, and taxis, through one platform.
Participatory planning	An approach where stakeholders, particularly marginalised groups, are actively involved in the planning process, ensuring that solutions are designed based on real needs and lived experiences.
Peer-to-Peer (P2P) Systems	Peer-to-peer systems refer to shared mobility models in which privately owned vehicles or other transport assets (such as cars, bikes, or scooters) are made available for temporary use by others. Unlike fleet-based shared mobility, P2P systems rely on individual owners who share their vehicles directly with users.

People with reduced mobility (PRM)	Individuals who face barriers to mobility due to permanent, temporary, or situational conditions, such as disabilities, ageing, injuries, or carrying heavy loads.
Ride hailing	Services that connect passengers with a driver for individual trips to their requested destination (similar to a taxi).
Ride sharing	Services where drivers and passengers share a ride because they have a common or similar destination.
Shared mobility	Transportation systems that provide on-demand services and are not privately owned. Key modes include ride-hailing, bike-sharing, car-sharing, and demand-responsive transport (DRT), aiming to maximise vehicle usage and reduce congestion.
Stakeholder mapping	A process of identifying and analysing key actors (public institutions, private operators, NGOs, and community groups) involved in or affected by shared mobility planning. This ensures that all relevant voices, especially those of underserved groups, are considered in the decision-making process.
Sustainable Urban Mobility Plan (SUMP)	A long-term strategic plan developed by cities to meet the mobility needs of people and businesses while improving quality of life and ensuring sustainability, accessibility, and equity. The SUMP process is structured around four phases: preparation, strategy development, measure planning, and implementation and evaluation.
Universal design	A design approach that aims to create products and environments that are accessible and usable by all people, regardless of age, ability, or circumstance. This includes designing accessible vehicles, infrastructure, and digital tools.
Universal service model	Mobility service models designed to cater to a wide range of needs and abilities, ensuring that services are adaptable to different user requirements, including accessibility features and flexible scheduling.

Annex

SMALL Project Partners

- Mpact vzw (BE)
- POLIS (BE)
- Rupprecht Consult – Forschung und Beratung GmbH (DE)
- Ghent University (BE)
- Athena Institute, Vrije University Amsterdam (NL)
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- Vervoerregio Amsterdam (NL)
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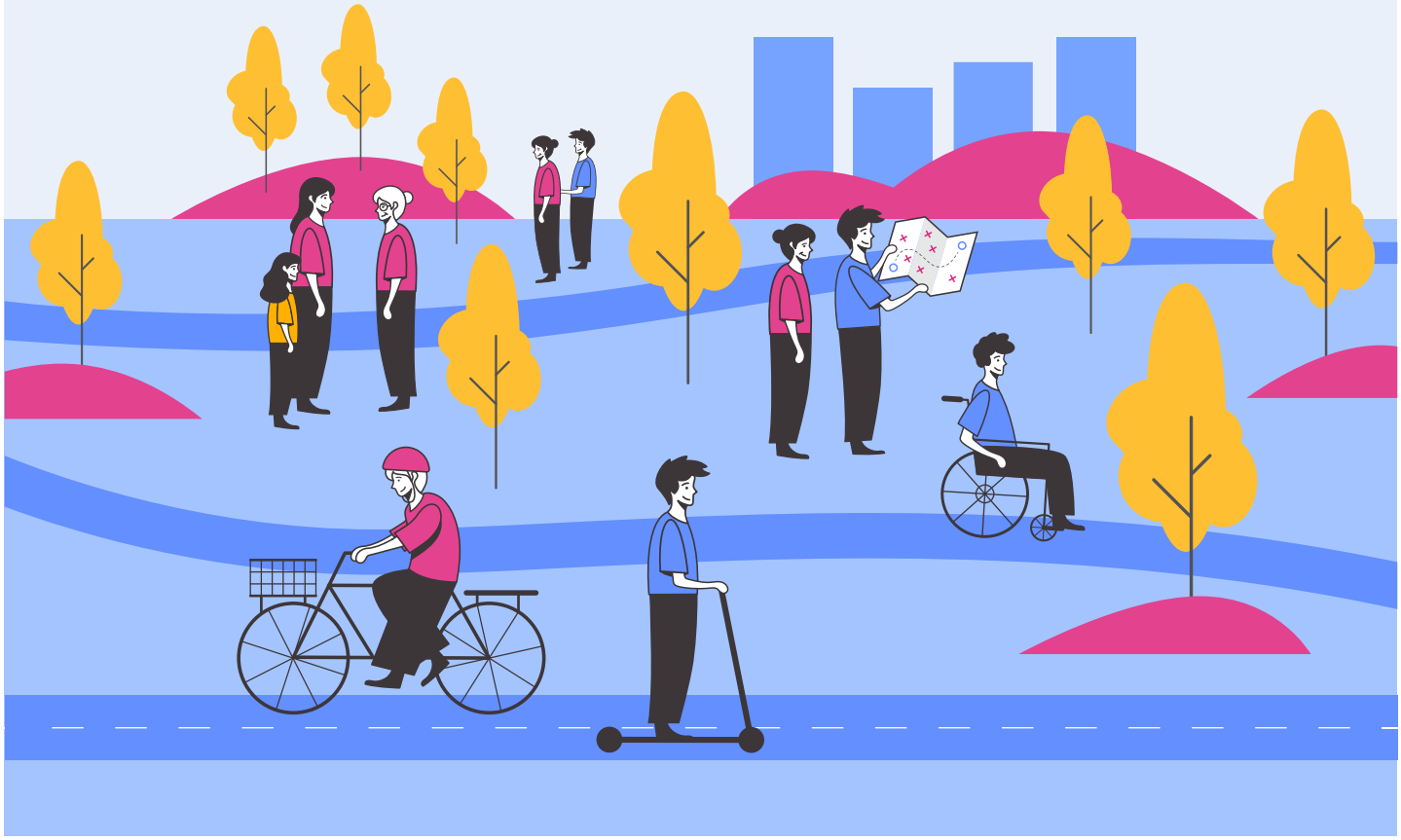
- Brest Métropole (FR)
- Ville de Saint-Quentin (FR)
- Municipality of Varberg (SE)
- City of Amsterdam (NL)
- Bax (SP)

References

- Institute for Transportation and Development Policy (ITDP). Cities for All through Universal Accessibility, 2024. Available at: https://itdp.org/publication/cities-for-all-through-universal-accessibility/
- Oxley, P. Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure, Department for Transport, 2021. Available at: https://assets.publishing.service.gov.uk/media/61d32bb7d3bf7f1f72b5ffd2/inclusive-mobility-a-guide-to-best-practice-on-access-to-pedestrian-and-transport-infrastructure.pdf
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Inclusive Mobility for Indian Cities. Gaps in Implementing Disability-Inclusive Transport Infrastructure, 2023. Available at: https://www.giz.de/en/downloads/giz2023-en-inclusive-mobility-for-indian-cities.pdf
- Institute for Transportation and Development Policy (ITDP) & Transformative Urban Mobility Initiative (TUMI). From Challenges to Solutions: Building Inclusive Transpoprt for People with Disabilities, 2025. Available at: https://itdp.org/wp-content/uploads/2024/11/Inclusive-Transport-White-Paper-ITDP-TUMI-2025.pdf
- Institute for Transportation and Development Policy (ITDP). Access for All: Accessible Transport and Urban Mobility for Persons with Disabilities, 2022. Available at: https://itdp.org/wp-content/uploads/2022/02/Full-Report-jun21.pdf
- Transformative Urban Mobility Initiative (TUMI). Disability-Inclusive Public Transport, 2023. Available at: https://energiewende-global.com/wp-content/uploads/2023/05/Disability_inclusive_public_transport.pdf
- International Association of Public Transport (UITP). Pathways to a Multimodal Lifestyle: Policy Brief, 2023. Available at: https://www.uitp.org/wp-content/uploads/sites/7/2025/08/20231001_Pathways-Multimodal-Lifestyle_Policy-Brief.pdf
- POLIS Network. Catch me if you can! How European Cities are regulating Shared Micromobility, 2023. Available at: https://www.polisnetwork.eu/wp-content/uploads/2023/11/SHARED-MICROMOBILITY-REPORT.pdf
- Shared Multimodal Mobility for All (SMALL). SMALL Insight 1, 2023. Available at: https://sharedmobilityforall.eu/wp-content/uploads/2023/09/SMALL-Insights-Paper-1.pdf
- Shared Multimodal Mobility for All (SMALL). SMALL Insight 2 – Inclusive Shared Mobility, 2024. Available at: https://sharedmobilityforall.eu/wp-content/uploads/2024/11/SMALL-Insight-2-Nov24.pdf



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