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Recommendations for GREENMO public and private decision makers

A report with insights gained in the frame of GREENMO project

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Abbreviations

EV	Electric Vehicle
GIS	Geographic Information Systems
ICT	Information and Communication Technologies
KPI	Key Performance Indicator
MED	Mediterranean
NGO	Non-Governmental Organization
PT	Public Transport
PPP	Public-Private Partnerships
SUMP	Sustainable Urban Mobility Plan

Introduction

Across the Mediterranean region, policymakers and local authorities are increasingly understanding the importance of redesigning sustainable transport systems that reduce emissions, improve accessibility and enhance quality of life, aiming to create greener living areas. Yet many decision-makers face a **common challenge: the lack of clear, practical and context-specific guidelines** for how to plan and implement mobility hubs that meet citizens' needs while aligning with sustainability goals. Without such guidance, even well-intentioned initiatives risk remaining fragmented, underused, or disconnected from real urban mobility patterns.

Among the objective of the GREENMO projects was to address this gap by exploring how mobility hubs can be effectively designed, implemented and widely accepted across Mediterranean territories. Through **top-down and bottom-up input** from experts and citizens respectively, the project managed to identify what makes mobility hubs truly functional and attractive for users, not just as transport nodes, but as inclusive, safe, and community-oriented spaces that encourage the use of shared and sustainable mobility options.

Within this framework, the **GREENMO Recommendations** document was created to transform the project's findings into practical guidance for public and private decision-makers, planners, operators and general stakeholders. The recommendations presented herein are grounded on the extensive participatory process carried out within GREENMO, which included interviews with around 60 experts and engagement with over 1,500 citizens across six Mediterranean countries, namely Greece, Malta, Spain, Italy, Bosnia and Herzegovina, and Cyprus.

The analysis of input revealed four main dimensions that are fundamental to mobility hub implementation. These dimensions are the diversity and quality of **transport offerings**, the availability of **additional services** to support the commuter, the **attractive public space** integration and the **digital integration** of information and communication technologies (ICT). These pillars reflect the aspects most valued by citizens and stakeholders alike, such as safety, attractive and comfortable design, clear and accessible information, and the availability of diverse sustainable mobility and non-mobility services.

In order to translate these findings into actionable insights, the present document provides easy-to-apply **recommendations structured around goals** derived from the project's analytical results. Each recommendation aims to help decision-makers not only implement mobility hubs more effectively and more streamlined but also ensure their long-term success and public acceptance.

Aim

The purpose of this document is to offer public and private decision-makers **practical, easy-to-apply recommendations for the planning and implementation of mobility hubs** within their respective areas of interest. It serves as a hands-on guide for municipalities, transport authorities, and private stakeholders who wish to take meaningful steps toward sustainable mobility by developing or enhancing mobility hub systems.

Developed through the research and participatory activities of the GREENMO project, the document presents a set of recommendations centered on the **most critical factors shaping the success and acceptance of mobility hubs**. These recommendations focus on ensuring safety, both physical and digital, as a prerequisite for public trust; on creating attractive and comfortable designs that make hubs pleasant and inclusive spaces; on providing clear and easily accessible information through intuitive signage and digital tools; and on ensuring the availability of shared mobility services that enhance convenience and connectivity for users.

This document was created to **simplify and support the decision-making process**, offering a clear pathway for those who wish to act but may be uncertain where to begin. Too often, the complexity of mobility planning discourages local actors from taking the first step. This guide aims to bridge that gap by providing an accessible, ready-to-use reference that allows decision-makers to start being informed by real-world insights and practical experience.

Therefore, at its core, the GREENMO Recommendations document seeks to **empower decision-makers with confidence, knowledge and tools** to develop mobility hubs that are efficient, inclusive and trusted. This way, it aims to build confidence among decision-makers that implementing mobility hubs is both feasible and worthwhile, so that sustainable mobility becomes not only a policy objective, but a reality for Mediterranean communities. By offering structured guidance and evidence-based recommendations, it provides a sense of security and strategic clarity, ensuring that future initiatives are grounded in practical knowledge and community insight. The application of these recommendations will not only facilitate smoother implementation of mobility hub schemes but also accelerate public adoption and acceptance, supporting the creation of integrated, user-centered, and sustainable mobility systems across the Mediterranean and beyond.

Structure

This recommendations document is designed to be both accessible and practical, offering readers all the essential information needed to understand its scope, objectives and added value. It is structured into **four main chapters**, each serving a distinct purpose and collectively guiding readers from context and analysis to actionable recommendations.

The first chapter, ***"Challenges in Mobility Hub Implementation"***, introduces the key barriers and critical parameters influencing the development and operation of mobility hubs. It explores how factors such as infrastructure, information, motives, technology, safety, comfort, availability, social acceptance, and reliability shape the effectiveness and adoption of mobility hub initiatives. Through this analysis, readers gain a deeper understanding of the challenges that must be addressed to achieve successful implementation when deploying the recommended activities in their territories.

The second chapter, ***"Methodology for Developing the GREENMO Recommendations"***, explains the process and rationale behind the selection of the goals and recommendations presented in this deliverable. Drawing on the findings from the project's analytical work in the frame of its workplan, this chapter synthesizes insights derived from both bottom-up (citizen) and top-down (stakeholder and expert) perspectives. It highlights how these complementary viewpoints informed the identification of key priorities for mobility hub success and public acceptance.

The third chapter, ***"Goals and Recommendations"***, constitutes the core of this deliverable. It presents the main goals emerging from the analysis and connects each to the corresponding prerequisites identified as critical for effective mobility hub implementation. Each goal is further elaborated through specific recommendations, offering practical guidance and concrete actions that decision-makers can take to achieve the desired outcomes.

Finally, the fourth chapter, ***"Concluding Remarks"***, brings together the main insights and key messages of the deliverable. It provides a concise synthesis of the GREENMO Recommendations, highlighting pathways to facilitate mobility hub implementation and acceptance. The chapter concludes by reinforcing the purpose, benefits, and practical use of the GREENMO Recommendations, leaving readers with a clear understanding of how these insights can support the creation of safer, more connected, reliable and sustainable mobility systems.

Glossary

Public Transport: represents the backbone of most mobility hubs, including bus, light rail, or other mass transit options

Shared mobility services: refer to transportation services shared among users. They offer a range of flexible, on-demand services that complement existing public transit and taxis and include:

- **Shared Micromobility**: refers to a range of small, human and/or electric-powered transportation devices, such as bikes and scooters, that are managed as shared resources available to multiple users. Some special categories of shared mobility are further explained below to provide a short overview.
- **Carsharing** offers members access to vehicles by joining a service provider that provides and maintains a fleet of cars and/or light trucks. These vehicles may be located within neighbourhoods, at public transport stations, employment centers, universities, etc. The carsharing organization typically provides insurance, gasoline or electric vehicle charging, parking and maintenance. Members who join a carsharing organization typically pay a fee each time they use a shared vehicle.
- **Microtransit** is a privately or publicly operated, technology-enabled transit service that typically uses multi-passenger pooled shuttles or vans to provide on-demand or fixed-schedule services with either dynamic or fixed routing.
- **Carpooling /vanpooling** is defined as the formal or informal sharing of rides between drivers and passengers with similar origins and destinations. Services are typically provided on a not-for-profit basis.
- **Ridehailing** services are prearranged, on-demand transportation services, like Uber or Lyft, in which drivers and passengers connect via digital platforms. Digital applications are typically used for booking, electronic payment and ratings. Drivers are paid for services provided with tariffs typically set by the platform operator.

First/Last Mile Connectivity: refers to the challenge of getting travellers from their origin to a transit station or from a transit station to their final destination.

Amenities: Features like waiting areas, restrooms, or retail spaces enhancing the overall user experience at a mobility hub layout.

1 Challenges in mobility hub implementation

While the concept of **mobility hubs** has gained **popularity** in urban contexts in Northern Europe, largely due to their potential to promote sustainability, inclusivity and efficiency, their implementation and widespread **acceptance remain challenging** in MED living areas. Despite the numerous benefits associated with mobility hubs, the transition from concept to practice requires addressing a range of structural, behavioural and operational barriers that influence both their adoption and long-term use.

Most commuters have established travel routines and expectations, shaped by convenience, comfort and reliability. For mobility hubs to effectively encourage a shift towards more sustainable modes of transport, they must meet these expectations and address the **key challenges that hinder behavioural change**. The GREENMO partnership identified a series of critical parameters that influence the success, usability, and acceptance of mobility hubs.

The first major challenge is **infrastructure**. Effective connectivity between transport modes requires supportive infrastructure, for instance, cycleways, safe pedestrian access and integrated public transport stops. Without the right physical environment, shared mobility options such as bicycles or e-scooters remain underused. Mobility hubs need well-designed, accessible, and inclusive infrastructure that enables seamless modal transitions and encourages users to explore sustainable options.

A second critical challenge is **information**. Users must be able to navigate the hub easily, understand where to find services, and understand how to use them. In many cases, valuable amenities, such as parcel lockers, charging points, or shared vehicles, remain underutilized simply because they are not visible or well-communicated. The challenge extends beyond physical signage to include digital information systems that provide real-time updates, service availability, and journey planning tools. When information is fragmented or inconsistent, users lose confidence and revert to familiar travel habits.

Motivation also plays a key role. Many cities currently lack incentives or motives that encourage the public to adopt shared mobility services. Without tangible benefits, such as cost savings, convenience, or time efficiency, commuters are unlikely to change entrenched mobility patterns. Overcoming this challenge requires both policy-level support and public engagement strategies that make sustainable choices the most attractive ones.

Technology integration presents another barrier. Usually, shared mobility services depend on digital systems, smartphone applications, QR codes, or online payment methods, which may be unfamiliar or inaccessible to certain user groups. Older adults, individuals with limited digital literacy, or those without reliable internet access may feel excluded. Therefore, mobility hubs must be designed with inclusive technological solutions, ensuring that digital systems enhance accessibility rather than create barriers.

A non-negotiable prerequisite for mobility hub success is **safety**. Both actual and perceived safety are essential for user trust. People must feel secure while accessing the hub, waiting for transport, or using shared vehicles. This includes proper lighting, surveillance, clear visibility and well-maintained infrastructure, as well as measures to ensure digital security in connected services. Without a strong sense of safety, even the most advanced mobility hub will fail to attract consistent users.

Comfort is another influential factor. While public and shared transport are often viewed as less comfortable alternatives to private vehicles, hubs can help bridge this gap by offering shaded waiting areas, seating, weather protection and accessible amenities like toilets. A comfortable environment improves user satisfaction and supports habit formation toward regular hub use.

The **availability** of services also represents a core challenge. Mobility hubs must provide not only diverse transport options but also complementary services that enhance convenience, such as cafés, snack bars, parcel points, restrooms, and information kiosks. These additional facilities transform hubs from mere transit points into vibrant community spaces, increasing both functionality and appeal.

Social acceptance remains one of the most complex challenges. Users may be hesitant to abandon private car use or sceptical about new mobility concepts. Resistance to change, coupled with limited understanding of the benefits, can delay adoption. Building trust through communication, participatory planning, and pilot projects is therefore essential to securing public buy-in and normalizing new mobility behaviours.

Finally, service **reliability** is a critical determinant of success. Commuters need assurance that transport options will be punctual, frequent, and dependable. Unreliable services quickly discourage use, especially among those with strict time constraints. Ensuring consistency and predictability in operations is key to establishing confidence in the system.

All these challenges, from infrastructure and information to technology, safety, comfort, and social acceptance, were carefully analysed within the GREENMO project. **Understanding these barriers provides the foundation for the goals and recommendations** presented in the following sections, which aim to equip policymakers, planners and operators with practical solutions and established steps to design mobility hubs that are functional, inclusive and widely embraced.

2 Methodology for developing the recommendations

This section presents the key areas identified as central to focus on when implementing mobility hub schemes. The GREENMO team engaged both **experts and community members** across all participating countries through interviews, workshops, and surveys, in order to capture both **top-down and bottom-up perspectives** on the shared vision of Mediterranean mobility hubs. The whole analysis of the gathered input is analyzed in detail in a report published as a GREENMO Deliverable in the official projects' website. In total, approximately 60 experts contributed through structured interviews, while more than 1,500 citizens participated in various co-creation and participatory activities such as workshops and questionnaire responses.

Figure 1 Number of participants in the GREENMO activities

The **combined input** from these groups was thoroughly analyzed, yielding **valuable insights into the parameters** shaping public perception and values for mobility hubs**.** The findings highlight the key factors that decision-makers should prioritize when designing and implementing hub schemes that effectively meet the needs of commuters.

Key points of the analysis from the top-down input

Policy-makers who participated in the interviews were asked to conduct **pairwise comparisons** among pre-defined parameters, indicating which one they considered a higher priority in each case. The results of this evaluation are briefly presented in the matrix below, where rank 1 represents the highest priority and rank 5 the lowest priority of the respondents.

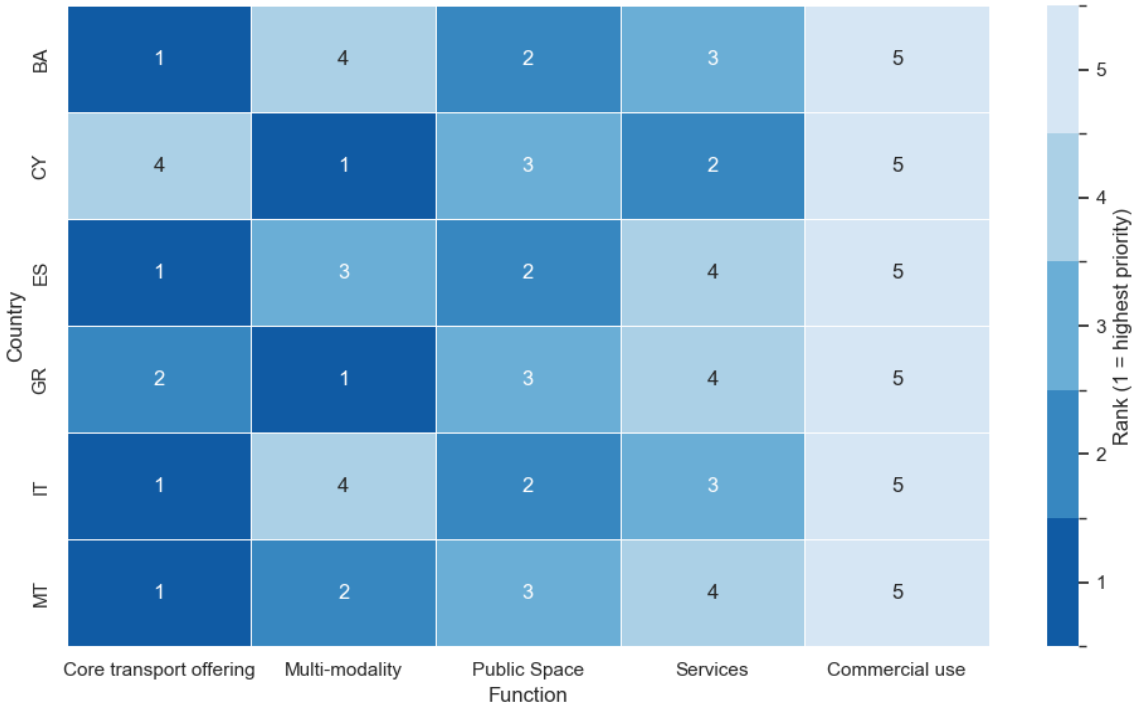


Figure 2 Prioritization of mobility hubs characteristics based on policy-makers input

Based on the matrix, the **core transport offering** emerges as the highest priority across all six countries, particularly in Spain, Malta, Italy and Bosnia and Herzegovina. **Multi-modality** is most valued in Greece and Cyprus, while it receives considerably less emphasis in Italy and Bosnia and Herzegovina. The overall **layout of surrounding public space** demonstrates a relatively strong presence, especially in Bosnia and Herzegovina and Greece. Services are moderately important in Cyprus, Bosnia and Herzegovina, and Italy, but less so in Greece and Malta. Finally, **commercial use** consistently ranks lowest in comparison to the other parameters, accounting for less than 10% across all countries, and reaching a minimum of 4.4% in Malta.

It is important to emphasize that a lower ranking does not indicate that a function was deemed unimportant by policy-makers. However, it reflects the **relative prioritization** of one function over another in the frame of each pairwise comparison. In fact, the average weightings for most functions cluster around 0.3, suggesting a broadly balanced distribution of preferences. This indicates that participants generally recognized the **value of all proposed functions**, without attributing disproportionate importance to any single one.

Key points of the analysis from the bottom-up input

The project researchalso investigated which features of mobility hubs **citizens** consider most important for their successful adoption. It was achieved through participatory workshops and a questionnaire survey. Key results from the analysis of responses collected are presented below:

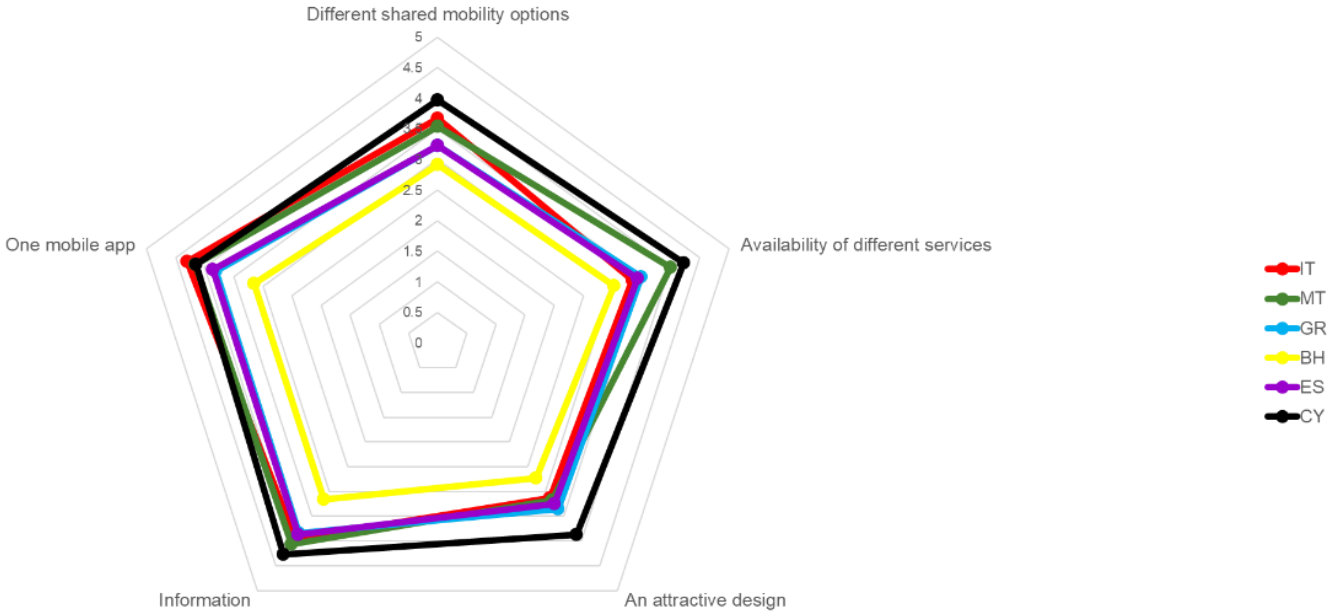


Figure 3 Importance of mobility hubs characteristics based on citizens input

Based on the radar chart:

- Respondents across all six countries consistently emphasized the importance of seamless integration and user-friendly design, underscoring the need for mobility hubs that are intuitive and **easy to navigate**.
- Access to a **diverse range of sustainable and shared mobility options** as well as of complementary services emerged as a key priority. This indicates that citizens envision hubs not merely as transport interchanges but as comprehensive platforms that facilitate and simplify multimodal travel.
- The availability of a unified mobile application for trip planning, booking and payment was also rated highly, reflecting a strong preference for **digital solutions** that streamline mobility, reduce complexity and build user trust.
- In contrast, aesthetic elements such as attractive design and visual appeal received lower—though still notable—ratings. This suggests that while design quality contributes positively to the overall user experience, **functionality and practical performance** remain the dominant concerns for most users.

These findings reaffirm that citizens envision **mobility hubs as spaces offering seamless integration, clear information and convenience**, echoing broader workshop discussions that identified reliability, accessibility and inclusivity as key factors shaping the overall attractiveness of hubs.

Continuing with the citizens survey, a **stated preference experiment** was also conducted in the six partner countries. The citizens were asked to evaluate scenarios based on four central elements of mobility hubs:

- the **availability** of transportation modes,
- the provision of **real-time information**,
- the presence of a dedicated **smartphone application**, and
- the **design** of the hub environment.

Each element was operationalized across **three levels of cost implication**, designed to test citizens' sensitivity to changes in affordability. Level 1 represented a baseline scenario where transportation costs remained unchanged, ensuring that the hub was perceived as cost-neutral. Level 2 reflected a moderate increase in transportation costs by 25%, signalling the added value of enhanced services and integration. Finally, Level 3 introduced a more substantial increase of 50%, challenging respondents to weigh the benefits of improved hub features against higher out-of-pocket expenses. This design enabled the project to quantify not only the importance citizens place on each individual hub element, but also their willingness to trade affordability for convenience, integration and quality of experience.

The results of the stated preference experiment, which was used in the collection of data from the citizens and is included in the comparative analysis of the top-down and bottom-up input gathered during the GREENMO project and has compiled the relevant Deliverable of the project as well, highlight that **availability of transportation modes** and **real-time information** consistently emerged as the most valued elements across all partner countries. Italy, Greece and Malta showed particularly strong preferences for these features, underscoring the importance of integration and reliability in everyday mobility choices. The **smartphone app** also received relatively high scores, especially in Italy and Spain, reflecting citizens' demand for seamless digital tools to plan, book, and pay for journeys. By contrast, **design was generally rated lower in importance**, although Greece stood out with comparatively higher appreciation for hub aesthetics and layout. Bosnia and Herzegovina and Cyprus recorded the lowest overall scores across all four features, suggesting more cautious or sceptical attitudes toward paying additional costs for enhanced hub functions.

Regarding the **participatory workshops,** they were designed to capture citizens' experiences, perceptions, and expectations regarding mobility hubs and engaged participants as co-designers, enabling them to actively shape ideas that would inform project outputs. Participants explored both practical and intangible aspects of mobility hubs, from transport services and infrastructure to comfort, safety, accessibility, and community integration. Structured in multiple sessions, the workshops combined methods from design thinking, scenario-based exercises, and collaborative discussions.

Conducted across six Mediterranean countries, namely Greece, Malta, Spain, Italy, Bosnia and Herzegovina, and Cyprus, the workshops engaged over 80 citizens in total and generated a **unique qualitative dataset** capturing both functional needs and user perceptions.

Key results from the comparative analysis of data collected from the participants in the **workshops** are the following:

- The GREENMO participatory workshops revealed both **shared priorities and country-specific**

differences in citizens' expectations of mobility hubs. Across all contexts, participants emphasized the need for safety, inclusivity and integration as essential prerequisites, alongside a willingness to adopt new mobility practices if hubs deliver tangible improvements.

- **Urban hubs** were seen as key nodes for reducing congestion and enhancing multimodality, with citizens stressing seamless connections between transport modes, real-time digital platforms, and barrier-free, comfortable, and secure environments. Country-specific nuances included compact, multifunctional hubs in Malta and Cyprus, large and digitally integrated hubs in Spain and Italy, trust-building in Greece, and affordable, modest solutions in Bosnia and Herzegovina.
- **Suburban hubs** were identified as important connectors between peripheral areas and urban centers, with park-and-ride facilities, micromobility, and digital coordination highlighted as critical. Across all typologies, there was strong support for **non-mobility services**, reflecting the desire for hubs to function as **community-oriented spaces**, while concerns about affordability, digital exclusion, and governance shaped national priorities.
- In **rural areas**, hubs were viewed as crucial for reducing isolation and dependence on private cars, with on-demand and community-based transport solutions prioritized. Citizens consistently envisioned rural hubs as **multifunctional community anchors** that integrate basic services, though context determined the level of digital integration and scale.

Overall, the workshops underscored a **shared Mediterranean vision**: mobility hubs should be safe, inclusive, and integrated, combining transport, services, and community value, with **implementation tailored to local realities**.

Key points of the comparative analysis from policy-makers and citizens' input

The AHP analysis and stakeholder interviews consistently highlight **core transport offerings** as the most critical feature of mobility hubs, followed by **multi-modality**, reflecting the need for diverse, sustainable transport options and first- and last-mile connectivity. Persistent challenges in the Mediterranean, including **car dependence, congestion, inadequate public transport, and underdeveloped infrastructure**, reinforce the importance of hubs in addressing mobility gaps. Public engagement, while valuable, showed **limited public participation**, indicating ongoing challenges for inclusive planning. Additionally, **data accessibility and integration** were identified as significant barriers, with fragmented, scarce, and uncoordinated mobility data hindering evidence-based planning and effective hub implementation. Overall, the findings underscore that mobility hubs must prioritize **efficient transport services, multimodality, and data-driven planning**, while addressing structural and participatory challenges in the region.

Conclusions based on the analysis results

Taken together, the findings indicate that while **functional aspects such as mode availability and information provision are non-negotiable priorities, digital integration through a mobile app is increasingly seen as a necessary complement, whereas design plays a more secondary role in shaping hub attractiveness.**

The most significant finding of this analysis is the remarkable alignment in citizens' expectations for mobility hubs that are **safe, inclusive, and reliable**. Across Malta, Spain, Italy, Greece, Bosnia and Herzegovina, and Cyprus, participants consistently emphasized that mobility hubs should extend beyond their transport function to foster trust, comfort, and a sense of belonging. Rather than being perceived merely as transfer points, hubs were envisioned as **multifunctional community anchors**, integrating digital services, social amenities, and human-centered design into cohesive and inviting spaces. The recurring emphasis on both physical and digital safety highlights that the success and adoption of mobility hubs ultimately depend on citizens' trust in them as secure, accessible, and welcoming environments. This reflects a **broader public aspiration for mobility infrastructure** that not only connects places, but also connects people and communities through safety, inclusion, and shared experience.

Connection between the analysis results and the GREENMO Goals & Recommendations

Based on the conclusions of the analysis, the key parameters requiring attention became clear:

- Transport offerings
- Availability of options
- Public space integration
- Digital integration and signage
- Governance and coordination mechanisms

These five dimensions served as the core pillars guiding the formulation of the project's goals. Each pillar directly informed a specific area of focus: the transport offerings parameter inspired the goal of providing **diverse shared mobility services**; the availability of options led to the goal of ensuring the **availability of a wide variety of services**; public space integration shaped the goal of creating **attractive and safe hub designs**; digital integration and signage informed the goal of delivering **clear, accessible, and reliable information** to users; while the governance pillar underpinned the goal of establishing **supportive governance systems**.

Overall, the goals were structured and grounded in the analytical findings, which highlighted the key parameters influencing the success, usability, and public acceptance of mobility hubs. In particular, the inclusion of governance reflects the recognition that institutional arrangements, decision-making processes, and long-term management are critical enablers for the implementation and sustained operation of mobility hubs.

Subsequently, these goals were further developed into specific recommendations to provide greater clarity and focus. The recommendations were structured to either address horizontal, cross-cutting aspects of each goal—such as governance, stakeholder engagement, and funding mechanisms—or to target more specific elements, including measures tailored to particular modes of transport.

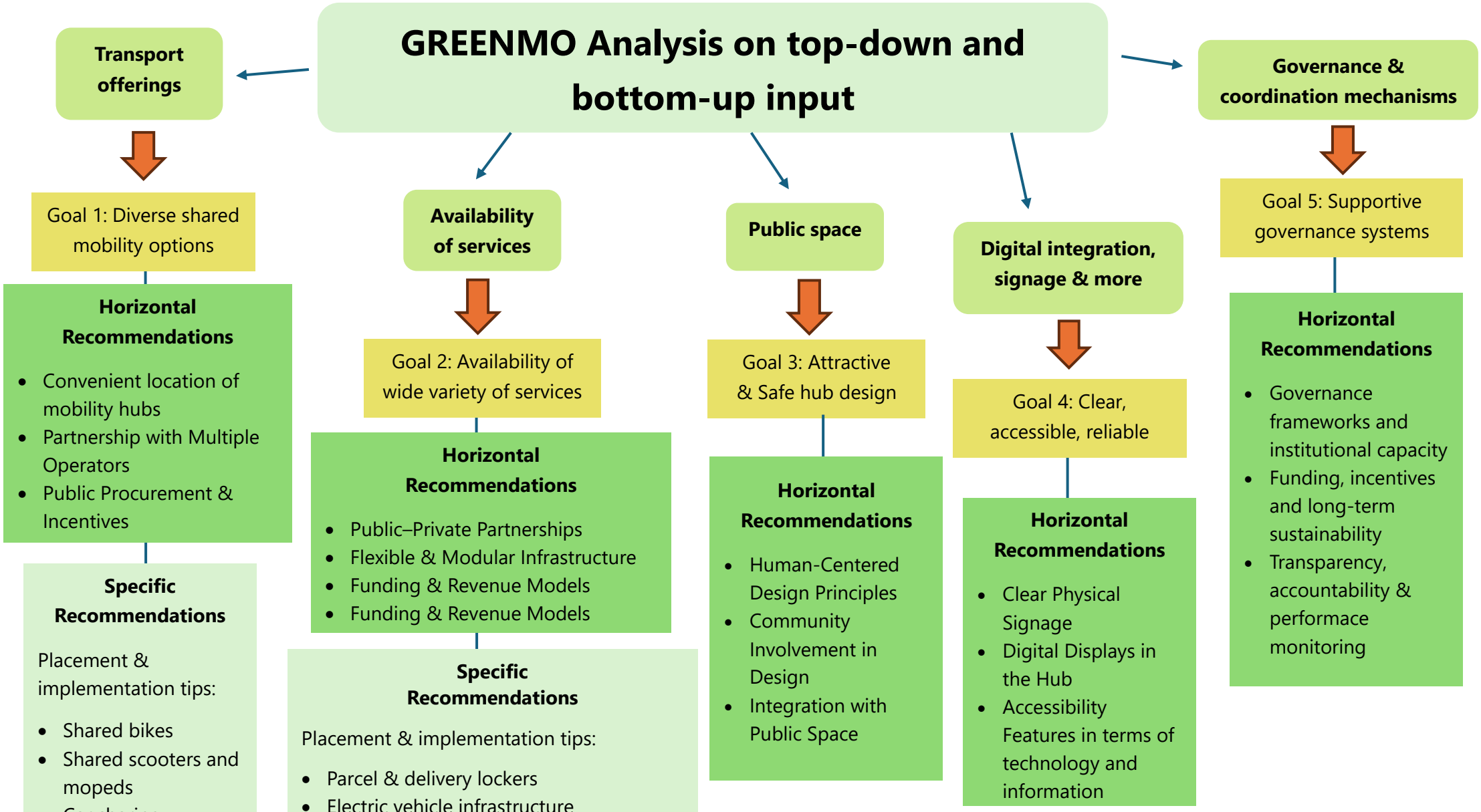


Figure 4 Overview of the path and content of GREENMO recommendations

3 Goals & Recommendations for their achievement

This chapter focuses on four overarching Goals. For each Goal, a detailed description is provided, along with the identified gap that motivated its formulation. Each Goal is further translated into a set of Recommendations, distinguishing between horizontal and goal-specific actions, as illustrated in the overview diagram above.

In addition, each Recommendation is accompanied by key parameters, including timeframe, priority level and its connection to the overall strategy. The timeframe parameter is expressed using a three-level scale (Shorterm – Medium term – Longterm), where

- Short-term indicates actions that can be implemented in the near term.
- Medium-term refers to actions with a moderate implementation horizon.
- Long-term denotes actions with a longer implementation timeframe.

As for the priority parameter, this is expressed using a three-level scale (Low – Medium– High), where

- Low indicates lower urgency,
- Medium reflects moderate priority,
- High denotes actions of high strategic importance.

These levels are also visually represented through corresponding colour variations to facilitate readability and interpretation.:

3.1 Goal 1: Diverse sustainable mobility options

A fundamental prerequisite for the success of any type of mobility hub, either urban, suburban or rural, is the **diversity and availability of sustainable and shared mobility options**. A hub cannot truly function as a connector within the transport ecosystem unless it offers users multiple, flexible, and sustainable travel choices that meet a variety of needs and trip purposes. From shared bikes and e-scooters to car-sharing, carpooling and on-demand shuttle services, the coexistence of diverse modes within a single, coordinated space allows travellers to move seamlessly between transport options, reducing dependence on private vehicles and promoting greener travel habits. The recommendations under this Goal aim to guide decision-makers and planners in designing hubs that guarantee access to multiple sustainable and shared mobility services.

Figure 5 Different means of transport

Description

In practice, this goal suggests having a variety of transport modes available for people to choose from at a mobility hub. These modes include:

- **Public Transport:** buses, trams, metro, trains, demand-responsive shuttles.
- **Shared Micromobility**: bikes, e-bikes, cargo bikes, e-scooters.
- **Car-Based Sharing**: car-sharing services (station-based or free-floating), ride-hailing, carpooling.
- **On-Demand Services**: minibuses, autonomous shuttles, taxis.
- **Walking, Wheeling & Cycling Infrastructure**: safe pedestrian connections, bike parking, charging for e-bikes/scooters.

Gaps & Inspiration

From the input gathered through policy-makers interviews and citizen survey, it became evident that the **limited availability of shared mobility options** is a significant barrier to the effective use of mobility hubs. This gap not only reduces the attractiveness of hubs but also restricts their potential to provide a fully integrated and user-friendly transport experience. Consequently, the availability of diverse mobility options emerges as a key factor in assessing both user satisfaction and the overall functionality of a hub.

Goal 1: Diverse sustainable mobility options

Based on these findings, the **first Goal** is set to be **"Goal 1: Diverse sustainable mobility options"** aiming to enhance the range of mobility services offered within each hub. By integrating additional modes, the hub can better respond to the varying needs of different user groups and ensure accessibility for a wider population. For instance, in addition to conventional public transport connections, hubs could incorporate shared bicycles, e-scooters, car-sharing schemes or demand-responsive shuttles.

The underlying idea is to **reduce dependency on a single public transport line** by creating a multimodal ecosystem where users can seamlessly switch between different modes of travel. This mix of shared, sustainable and flexible transport options would allow commuters, occasional travelers, and visitors alike to select the option most suitable for their trip.

The overarching goal is to provide people with genuine **choice and flexibility**. For example,

- If someone arrives by train, they can pick up an e-bike for the last mile.
- A family might use a shared car instead of owning one.
- A commuter could switch between bus + scooter depending on the day.

A well-designed hub should empower users to **tailor their journey according to time, cost, sustainability preferences, or accessibility needs**. In turn, this diversity of options not only improves satisfaction but also supports broader policy objectives, such as reducing congestion, lowering emissions, and encouraging more sustainable mobility behaviors.

Benefits

- Increased convenience for users who can choose the mode that best fits their journey (bike, car, scooter, bus, train).
- Improved accessibility, serving diverse needs, including those with reduced mobility, families, and tourists.
- Reduces congestion, as shared and active transport options lower traffic in urban areas.
- Environmental benefits, meaning that it promotes low-emission and sustainable transport modes.
- Flexibility & resilience, users have alternatives if one mode is unavailable or delayed.
- Supports last-mile connectivity, complementing public transport by solving short-distance travel gaps.

Recommendations to achieve the 1st Goal

Horizontal recommendations

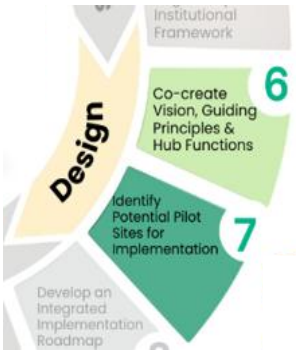
Goal 1: Diverse sustainable mobility options

1. Convenient location of mobility hubs

Timeframe: Longterm

Priority: High

Connected to Strategy: Design Stage – Activity 7



As cities and counties within the region identify candidate locations for deploying mobility hubs, effective placement is crucial. The approach to siting mobility hubs is guided by several key considerations to ensure that these hubs effectively meet the transportation needs of their communities and the region. Key considerations for mobility hub placement are outlined below:

1.1 Leverage existing transportation infrastructure and services

Enhance connectivity and convenience for users by building on existing assets, including metro stations, light rail, local and regional bus transit networks, pedestrian facilities and low-stress bikeways, on demand micro transit services, carpooling and vanpooling, car sharing services, shared micro mobility services and EV infrastructure.

1.2 Leverage existing destinations to locate mobility hubs

Locate mobility hubs strategically, near existing regional employment centers, major universities, regional shopping and entertainment centers and airports. Situating hubs close to these destinations maximizes usage and accessibility, supporting high-frequency travel and reducing reliance on personal vehicles.

1.3 Consider Green Zones

Focus on green zones as strategic areas for introducing mobility hubs, using them as catalysts to support planned infill development and expand access to sustainable transport options. Locating hubs within or near green zones encourages compact, walkable, and transit-oriented urban growth. These areas often serve as natural connectors between residential, commercial, and recreational spaces, making them ideal for integrating multimodal mobility solutions.

1.4 Seek opportunities to repurpose underutilized park and ride facilities

Identify specific locations where conversion of Park&Ride facilities to a mobility hub would provide greater community benefit. Some Park and Ride lots may be best suited for hybrid solutions that maintain some parking while adding mobility hub features.

2. Partnership with Multiple Operators

Timeframe: Longterm

Priority: High

Connected to Strategy: Plan Stage – Activity 10

2.1 Contract or license more than one type of shared mobility provider

This may include bike-share companies, e-scooter operators, car-sharing services, or even ride-hailing platforms. By incorporating multiple providers, the hub can cater to different user needs, such as short-distance trips, last-mile connections, or family travel.

2.2 Design contracts to promote synergy rather than competition.

For example, a bike-share operator could focus on short urban trips, while a car-sharing service could cater to longer journeys. Coordinated planning ensures that services complement each other, avoid unnecessary duplication and enhance the overall mobility experience.

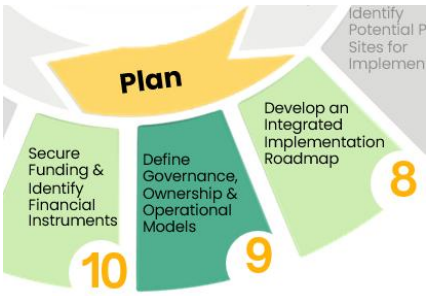
Agreements with multiple operators should allow for the introduction of new mobility modes over time, such as electric cargo bikes, microtransit, or autonomous shuttles. This ensures that the hub can adapt to evolving technologies and changing travel patterns.

3. Public Procurement & Incentives

Timeframe: Longterm

Priority: High

Connected to Strategy: Plan Stage – Activity 10



3.1 Direct procurement of fleets

Cities can choose to directly operate or oversee mobility services, such as municipal bike-share

programs, e-bike fleets, electric shuttles, or small electric vehicles for car-sharing. This approach allows public authorities to guarantee widespread service coverage, maintain affordability, and uphold high standards of safety, accessibility, and sustainability. Additionally, publicly managed fleets can be deployed strategically to reach underserved neighborhoods, support night-time mobility, or serve areas with limited commercial appeal. When procuring and managing publicly operated fleets, cities should clearly define the objectives of the service, set appropriate fleet sizes, and establish operational rules covering parking, drop-off areas, and route or zone restrictions. Contracts or management plans can also include performance indicators, maintenance standards, accessibility requirements, and environmental targets. Such measures ensure that the fleet operates efficiently, integrates smoothly with other transport modes, supports safety and urban planning priorities, and advances broader social, environmental, and mobility goals.

3.2 Incentives for Private Operators

Municipalities can offer financial or regulatory incentives to encourage private operators to introduce new vehicle types or expand their services. Examples include:

- Subsidies or grants for purchasing electric vehicles, cargo bikes, or adapted e-bikes.
- Reduced licensing or parking fees for operators that provide low-emission or accessible vehicles.
- Priority hub placement or marketing support for operators that complement the existing mobility mix.

Specific Recommendations based on transport mode

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1. Bike share

Bike share is a shared transportation service where bicycles are made available for shared use to individuals on a short-term basis for a certain price. Bicycles can be standard or electric assisted bikes and can be returned to dedicated stations, locked to allowed public infrastructure, or anywhere within a system's service boundary. Bike share can also be expanded to include adaptive and cargo bikes to support more ridership and trip types. Bikes are usually used for commute trips, errands, **first- and last-mile connections** etc.

Placement and Implementation tips

- Locate bike share stations within a transit facility (if space permits), in public space or on private property.
- Locate bicycle share stations within easy reach of the transit waiting area, but do construct

accessible pathways, bus doors, shelters, fire hydrants, or posted information.
- Locate stations in areas with good lighting.

Considerations

- Bike share stations in hubs should be located where existing or planned dedicated bike lanes, bus-bike lanes, or off-street trails are easily accessible. Therefore, less experienced riders will be encouraged to use low-stress routes between destinations.
- Station locations should be easy to reach and service. They should have adequate sun exposure, if using solar power, and be accessible to rebalancing and maintenance vehicles.

2. Shared Scooters and Mopeds

Shared scooters and other types of motorized lightweighted vehicles, such as mopeds and seated scooters give people access to small, rideable vehicles available for short-term rentals. Shared scooters are typically returned to designated areas or anywhere within a system's service boundary. Shared **micromobility** is used mainly for first- and last-mile connections, running errands and shorter trips (1-3 miles).

Placement and Implementation tips

- Situate scooter charging stations and dedicated micromobility parking stations near transit station entrances.
- Locate parking within a transit facility, if space permits, in a public area or on private property.
- Locate parking in areas with good lighting.

Considerations

- Micromobility sharing should be encouraged at hubs with dense networks of dedicated bike lanes and/or off-street trails. Protected bike infrastructure in mobility hub areas can help reduce sidewalk riding.
- Given their range and ability to attract a broader demographic, mopeds are viable across a broader cross section of mobility hub types than scooters and should be prioritized.
- Parking of scooters should be considered as poorly parking can cause problems for pedestrians on sidewalks, or for wheelchair users and people with visual impairments.

3. Car share

Car share services provide access to shared automobiles and light trucks for short-term rental. Both two-way/station-based and peer-to-peer car share models and free-floating/one way **car share models** are available in the market. Car sharing is used for trips involving carrying items, medium or long-distance trips and group/family trips.

Placement and Implementation tips

- Group car share vehicles together in 'pods' of at least two vehicles.
- Keep in mind the minimum size parking space per shared car vehicle.
- Add signage to every car share parking space.
- Locate shared cars in highly visible locations along with wayfinding signage to direct the public to and from the mobility hub.

Considerations

- Car share operators should be advised as they can provide valuable input on demands regarding the potentially useful location of the car share system.
- With the appropriate public subsidy levels, peer-to-peer and community-controlled car share models might be viable in low-income locations where there are limited public transit options and high concentrations of multifamily housing, social services and community resources.

3.2 Goal 2: Availability of wide variety services (waiting room, café, restaurant, restrooms, etc.)

Based on the analysis of citizen and policy-makers input, the **availability of facilities and non-mobility services** emerged as a crucial parameter for the success of mobility hubs. Consequently, the 2nd Goal focuses on ensuring that hubs offer a broad range of both transport and non-transport services, addressing users' practical needs while enhancing their overall experience. These recommendations are designed to guide decision-makers in creating **multifunctional hubs that combine mobility with convenience**, paving the way towards achieving this goal effectively and sustainably.

Figure 6 Non-mobility services in a mobility hub

Description

The phrase "Variety services" refers to facilities such as:

- **Essential amenities**: waiting rooms, restrooms, smart benches, drinking fountains and information points.
- **Comfort and convenience services**: cafés, restaurants, kiosks, coworking spaces, or shops.
- **Flexible services**: pop-up retail, food trucks, repair stands, or seasonal markets that can adapt to changing demand.

Gaps & Inspiration

The availability of multiple services within a mobility hub has been identified as a particularly attractive feature for users. **Convenience and time saving** are central factors and people increasingly value opportunities to combine travel with everyday activities. A hub that allows commuters to complete several errands in one place becomes more than just a transfer point; it becomes a destination that adds tangible value to their daily routines.

For instance, a commuter returning home by metro could pick up a parcel from a locker before heading home, while another traveller on their way to work might buy a coffee or a quick snack at the station.

Parents could benefit from safe drop-off points or small play areas for children, while cyclists might appreciate repair stations and secure bike parking. By integrating such facilities, mobility hubs reduce the friction of everyday life, creating a sense of efficiency and comfort that increases user satisfaction and loyalty.

Taking these insights into account, the **second "Goal 2: Availability of wide variety services"** emphasizes the importance of designing hubs that go beyond transport connections to include a variety of supporting services and amenities. These may include retail outlets, parcel delivery and collection points, cafés, waiting areas, information desks, restrooms, or even co-working spaces. Safety and accessibility should also be prioritized, ensuring that all users, including elderly people, children, or those with limited mobility, Availability of wide variety services (waiting room, café, restaurant, restrooms, etc.)A mobility hub should be more than just a place to transfer between modes, it should function as a **welcoming, comfortable and convenient space** where people can safely wait, rest, or meet basic needs. By creating hubs that are comfortable, practical, and engaging, cities can foster greater use of sustainable transport options, enhance community satisfaction, and ultimately contribute to the broader goals of livability and urban resilience.

Benefits

- Longer and more pleasant use of the hub, making it a **safe** and attractive place rather than just a transfer point.
- Supports community life and the **local economy** by involving local businesses and creating spaces that reflect the identity of the surrounding area.
- Ensure **equity** by providing baseline services publicly accessible regardless of time of day or ability to pay.

Recommendations to achieve the 2nd Goal

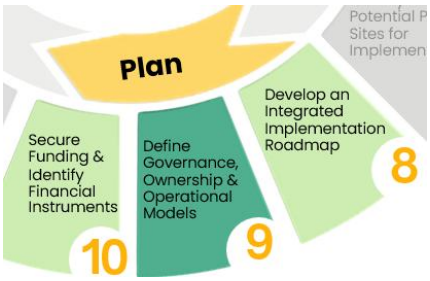
Horizontal Recommendations

1. Public–Private Partnerships

Timeframe: Longterm

Priority: High

Connected to Strategy: Plan Stage – Activity 10



Municipalities can enhance both the vibrancy and financial sustainability of mobility hubs by renting commercial spaces to private operators, including cafés, restaurants, or kiosks, reducing dependence on public funds. To further reinforce the hub's community identity, preference can be given to local businesses and entrepreneurs instead of predominantly large retail chains.

2. Flexible & Modular Infrastructure

Mobility hubs should be designed with flexible spaces that can accommodate a range of non-mobility additional services depending on demand and seasonality, such as pop-up cafés, food trucks, farmers' markets, or temporary retail stalls. This modular approach ensures that hubs remain dynamic and adaptable to user preferences, while also allowing operators to test new services before committing to permanent infrastructure. In doing so, it becomes easier to identify which amenities are most valued by the community and to scale them accordingly.

3. Funding & Revenue Models

Essential facilities like waiting areas, restrooms and information points should be supported through public funding to guarantee equal access for all users, regardless of financial return. Meanwhile, income from renting commercial spaces, such as cafés, coworking offices, or retail outlets, can be directed back into the hub's management and upkeep, helping to secure its long-term viability.

4. Comfort & Convenience

Certain facilities should be treated as essential public goods in every mobility hub, including restrooms, seating areas, and information desks, which need to be publicly provided and incorporated into the hub's design. Relying exclusively on private operators to offer these services can lead to unequal access, particularly for vulnerable users or during off-peak hours. By ensuring a baseline of guaranteed amenities, mobility hubs can remain inclusive, welcoming, and fully functional for all travellers.

Specific elements based on non-mobility additional services

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1. Parcel and Delivery Lockers

Delivery services are seeing a significant surge in demand. Couriers deliver orders and packages using their personal or shared cars, vans, bicycles, mopeds, and other freight-enabled modes. Packages are efficiently and safely delivered at any time of the day. Locating delivery lockers at mobility hubs offers convenience to users by providing a **secure place to receive or drop their deliveries** when away from home, with the additional convenience of not having to make an extra trip for pick-up.

Placement and Implementation tips

- Locate lockers near high-volume transit stations, dense employment centers, and commercial areas for more efficient use.
- Keep delivery lockers area well-lit at night and accessible 24 hours a day.

Considerations

- Consider working with delivery companies to identify which mobility hubs are prime delivery locker locations.
- Consider partnerships with delivery companies and community groups to help with maintenance of services.

2. Electric Vehicle Infrastructure

EV charging stations provide mobility hub users the opportunity to park or access an electric car share vehicle, charge their EV while accessing transit or other transportation options at a hub. This infrastructure provides **charging access** to residents without at-home capacity and potential to establish electric car share services.

Placement and Implementation tips

- Coordinate with the local utility in selecting a site and charging level and understanding the costs as EV charging stations have certain electrical infrastructure requirements, such as grid capacity.
- Incorporate wayfinding signage to and from the mobility hub.
- Limit curbside application and focus on areas with limited off-street parking and in mixed-use commercial areas.
- Install infrastructure based on neighbourhood needs.
- Enable "plug-and-play" electrification for mobility and infrastructure providers through make-ready requirements at new development or as part of corridor redesign.

Considerations

- The charging station should be equipped with smart features.
- It is recommended that EV stations be grouped into pods.
- Adequate charging station information should be provided including maintenance requirements, station status, cost to charge, and signage and provisions of emergency contact information.
- Access to fast chargers in a mobility hub will enable quick charging and therefore better rotation.

- Incentives encouraging users to vacate charging spaces once their cars are fully charged, such as lower fees for timely departure or higher rates for overstaying.

3. Secure Bike Parking

Bike parking can take the form of **unsheltered bike racks, bike cages, or closed bike lockers** depending on the use case of each mobility hub. Outdoor unsheltered bike racks are an appropriate solution for short-term bike parking, in order to serve those who leave their bicycles for relatively short periods of time, typically for shopping or errands, eating or recreation. They should be ubiquitous, visible, and offer a moderate level of security. Secure parking areas such as bike lockers and cages offer longer-term storage that better protect bikes and their accessories from weather and theft.

Placement and Implementation tips

- Locate short-term bike parking within a transit facility, if space permits, in public space or on private property. While it is preferable to place bike parking off-street, bike racks can be in the street area adjacent to the curb in locations with limited sidewalk space to make use of on-street areas that are unsuitable for auto parking.
- Keep short-term bike parking conveniently located near the transit stop waiting area while ensuring it does not obstruct accessible pathways, bus doors, shelters, fire hydrants, or posted information.
- Locate bike lockers and cages inside transit stations or in the pedestrian zone.
- All forms of bike parking must be well lit at night and accessible 24 hours a day.

Considerations

- Bike parking should be prioritized in hubs where existing or planned dedicated bike lanes, bus-bike lanes, or off-street trails are easily accessible.
- Areas with high incidence of bicycle theft may justify specific security features such as specialty racks, tamper-proof mounting techniques, or active surveillance.
- Consider seasonal on-street bike corrals in high-demand hub areas.

4. Vendors

Programming mobility hubs with cart-based vendors, food trucks, and other types of retail activity can transform waiting areas into welcoming active spaces. Vending at a hub can be a **year-round or seasonal activity**, depending on available shelter.

Considerations

- Consider selecting vendors in coordination with the neighbouring community and prioritize local businesses whenever possible.
- Consider installing parklets and seating areas alongside food vendors to enhance user comfort and encourage longer stays.
- Keep in mind that carts and trucks might require access to electricity and other utilities.

3.3 Goal 3: Attractive and safe hub design

Since comfortable design was identified as a key parameter influencing the use of mobility hubs, alongside the non-negotiable condition of safety, the creation of attractive and safe hub design was established as the 3rd Goal. This section presents a set of targeted recommendations aimed at helping planners and decision-makers **design mobility hubs that are both visually appealing and secure**, ensuring users feel comfortable, confident, and protected throughout their journey.

Figure 7 Safe and secure mobility hub design

Description

The phrase "Attractive and safe design" refers to:

- **Human-centered features**: comfortable seating, protection from weather (sun, rain), natural light, greenery, and clear wayfinding that make the hub welcoming and easy to navigate.
- **Integration with surroundings**: smooth connections to pedestrian paths, cycling networks, and public spaces, ensuring that the hub blends into the urban environment instead of standing apart from it.
- **Safety and accessibility:** barrier-free access, good lighting, transparent sightlines, and intuitive layouts that enhance comfort and security for all users, including those with reduced mobility.
- **Aesthetic and cultural value:** high-quality architecture, use of sustainable materials, and incorporation of local art or design elements that give the hub a unique identity.
- **Flexibility for the future**: modular and scalable design that can adapt to evolving mobility services, technologies, or community needs.

Gaps & Inspiration

The design of mobility hubs plays a critical role in shaping how people perceive and use them. A hub should not only serve commuters' functional needs but also provide an environment that is aesthetically pleasing, comfortable, and **aligned with the principles of urban quality of life**. A positive user experience directly influences whether commuters continue to use the hub regularly, and whether they view sustainable mobility as a convenient and attractive alternative to private car use.

Safety, is an equally important factor. In several cases, poorly maintained or inadequately designed hubs have unintentionally attracted crime or antisocial behavior. Because mobility hubs often contain a range of services and amenities, certain areas may be underused at specific times, especially late at night, creating opportunities for vandalism, littering, or other unwanted activities. Such conditions can quickly lead to an environment that feels dirty, unsafe, and unwelcoming, discouraging commuters from using the hub and **undermining its purpose**.

The **third "Goal 3: Attractive and safe hub design"** addresses these concerns by stressing that mobility hubs should be designed with both functionality and user experience in mind. They must be safe, accessible and visually appealing spaces that foster trust and comfort for all types of users. A well-designed hub not only improves the immediate travel experience but also contributes to the broader attractiveness of sustainable mobility. It strengthens the identity of the neighbourhood in which it is located, fosters a sense of pride and community ownership and, in parallel, it demonstrates that sustainable transport infrastructure is a valued public asset.

Benefits

- Encourage more people to choose shared and sustainable transport by making hubs pleasant and convenient to use.
- Create places that people enjoy spending time in, not just moving through, reinforcing the hub's role as part of the community.
- Build long-term resilience and adaptability by using a design that can evolve with changing demand, climate goals, and new mobility solutions.

Recommendations to achieve the 3rd Goal

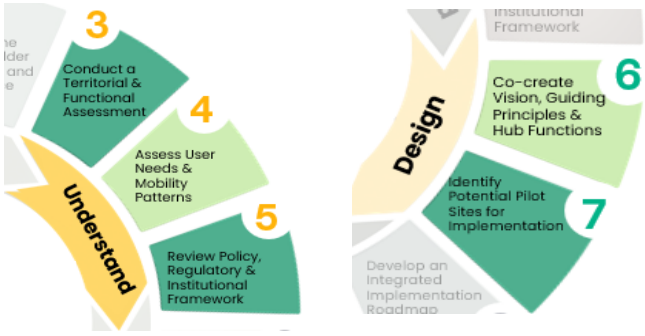
Horizontal Recommendations

1. Human-Centered Design Principles

Timeframe: Short term

Priority: Medium

Connected to Strategy: Understand Stage – Activity 4 & Design Stage – Activity 6



1.1 Prioritize comfort for users

- Create spaces with ample natural light, indoor and outdoor greenery, and comfortable seating where users can relax while waiting.
- Design choices that support comfort and encourage people to spend more time in the hub and make sustainable mobility options more appealing.

1.2 Ensure accessibility in terms of space

- Design the hubs to serve all users equally, including people with disabilities, the elderly, children, teenagers and families. This requires step-free access throughout the hub, wide circulation paths, and lifts or ramps where needed.
- Add tactile paving and contrasting floor materials to support visually impaired users.
- Include amenities such as family-friendly spaces (baby-changing facilities, stroller access) and designated areas for people with reduced mobility.

1.3 Consider Neo-Bauhaus principles

- Apply the Bauhaus design principles using simplified, functional forms that prioritize clarity, efficiency and intuitive navigation.
- Organize spatial layouts around clean lines, modular structures and well-defined zones, allowing users to move easily between transit, waiting areas, and commercial or leisure spaces.

1.4 Reduce stress and improve safety

- Add features like transparent sightlines, adequate lighting and open spaces which reduce anxiety and improve safety. Thoughtful design can minimize overcrowding, guide natural circulation flows, and they can create a calmer, more user-friendly environment.
- Separate zones for vehicles and pedestrians reduce safety risks and enhance comfort for all users.

BONUS INFO

Seating and Place Amenities

Seating, visual elements and common architectural features contribute to whether people will choose to stay in the mobility hub place beyond their transfer. Seating should support a more comfortable **waiting experience**, but also opportunities to **rest, eat, socialize,** or even watch live concerts and cultural programming. Architectural elements, help people understand that they are at a hub, but they can be used as a leaning feature, a seat, lunch table, and more.

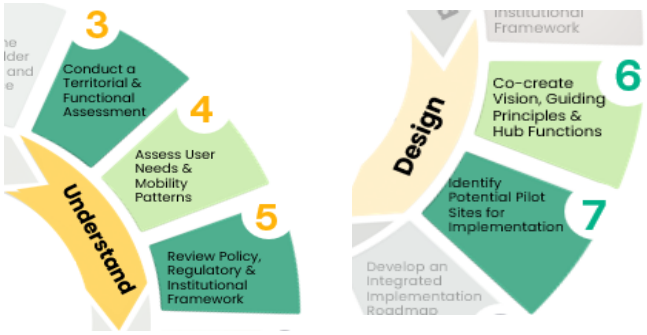
Figure 8 Seating area and green spaces at hub design

2. Community Involvement in Design

Timeframe: Short term

Priority: Medium

Connected to Strategy: Understand Stage – Activity 4 & Design Stage – Activity 6



2.1 Organize participatory workshops and consultations

- Involve the local community early in the design process ensures that the hub reflects the identity, culture, and real needs of the people who will use it most.
- Gather input on priorities such as seating, safety, green spaces, or the types of services most valued from workshops, surveys, and focus groups.
- Identify potential challenges in accessibility or functionality before construction begins through collaboration.

2.2 Co-create with residents, artists and local businesses

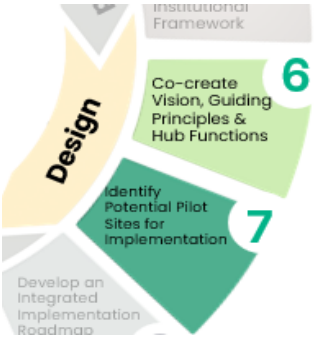
- Encourage local artists to contribute murals, public art, or cultural references that give the hub a distinct identity.
- Partner with nearby businesses to integrate services that meet both traveler and community needs (e.g., local cafés or repair shops instead of generic franchises).
- This co-creation strengthens a sense of ownership among residents and positions the hub as a shared community asset, rather than just an infrastructure project.

3. Integration with Public Space

Timeframe: Short term

Priority: Medium

Connected to Strategy: Design Stage – Activity 7



3.1 Blend with the urban fabric

- Design plazas, green areas, and pedestrian-friendly pathways that connect the hub with nearby streets, neighborhoods, and commercial zones.
- A mobility hub should not feel like an isolated transport facility but should integrate seamlessly with its surroundings.

3.2 Create outdoor gathering spaces

- Locate hubs near public areas such as benches, shaded seating, small parks, or landscaped zones that encourage people to use the hub as a social and community space rather than just a transfer point.
- These outdoor amenities also improve comfort for those waiting and help the hub contribute positively to urban life.

3.3 Architectural & Aesthetic Quality

- Use eco-friendly and long-lasting materials reduces maintenance costs and environmental impact, while sourcing materials locally supports the regional economy.
- Incorporate murals, art installations, or cultural motives that reflect the community's identity to give character to space, reduce the sense of anonymity and create a more enjoyable environment.

3.4 Safety & Security Features

- Ensure that all areas of the hub are well-lit and have transparent sightlines to improve both real and perceived safety.
- Add visible staff presence, whether security personnel or service staff, to further reassure users and deteriorate antisocial behavior.
- Design to prevent unsafe areas, avoid creating secluded corners, narrow passages, or underused spaces where people may feel unsafe.
- Promote open, active, and naturally supervised environments that encourage constant movement and visibility, reducing opportunities for loitering or crime.

BONUS INFO

Hub Lighting

Hub lighting is essential to brand the space, but also ensure that users feel **comfortable**, and can see the various hub amenities available to them. Hub lighting should be pedestrian-scaled, illuminating specific hub features as well as bikeways, walkways, and crossings. Hub lighting can also be used as a wayfinding tool and a way to brighten high priority mobility options at the hub. **LED lighting** will also improve energy efficiency.

BONUS INFO

Heated Spaces and Sun Protection

Hub connections should be comfortable and dignified year-round. The region's colder months should not deter people from accessing mobility hub transportation options. Likewise, people using hubs should be protected from the sun's heat and UV rays during the region's warmer months. Heated shelters, awnings, functional and architectural shade structures, and other physical features can signal to traveller that hubs are open for connections **year-round** and that their travel experience is valued.

3.4 Goal 4: Clear, accessible, reliable information (digital display, signage)

Another key parameter influencing the acceptance and effective use of mobility hubs, as revealed through the analysis, is the **availability and quality of information**. This encompasses both clear physical wayfinding within the hub and digital integration that complements and enhances the user experience. Easy navigation, real-time updates and unified digital tools were all identified as essential elements that help users feel informed, confident, and in control of their journey. Accordingly, the 4th Goal focuses on ensuring the provision of clear, accessible and reliable information to all users. This section outlines a series of practical recommendations designed to help decision-makers and planners deliver information systems that are intuitive, inclusive, and seamlessly connected across both physical and digital platforms.

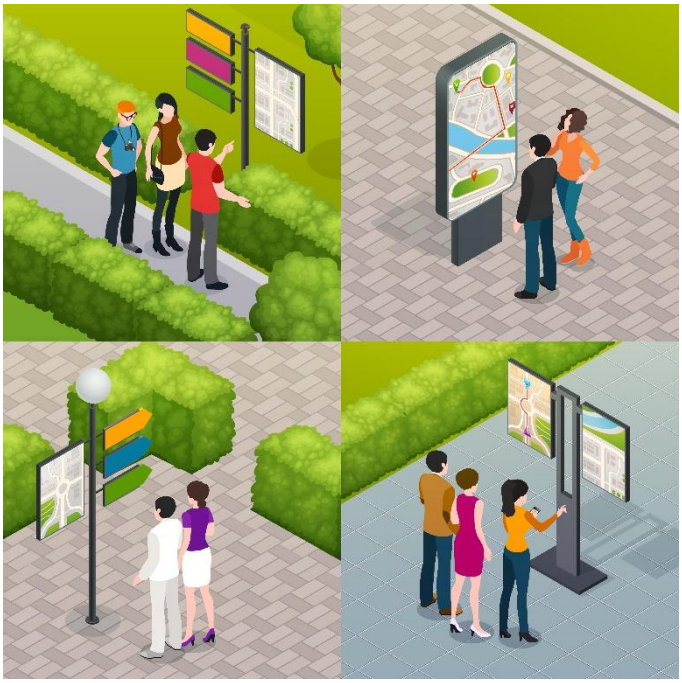


Figure 9 Wayfinding in a mobility hub

Description

In practice the phrase "Information (digital display, signage)" refers to:

- **Wayfinding and navigation:** Clear and intuitive signage, including maps, icons and directional markers which guide users through the hub, helping them quickly find bike docks, scooter parking, bus stops, or car-sharing areas. Effective wayfinding reduces confusion, especially in large or multi-level urban hubs.
- **Real-time digital information**: Digital displays and interactive kiosks can provide live updates on vehicle availability (e.g., bikes, scooters, cars), departure times for public transport, estimated travel

durations, and even disruptions or delays. This empowers users to make quick, informed decisions about which mode best suits their journey.

- **Multimodal integration**: Information systems should integrate multiple transport modes into one cohesive platform, showing connections between buses, trains, shared bikes, scooters, or taxis. This makes the hub a true multimodal node rather than a collection of separate services.
- **Accessibility of information**: Signage and digital tools should be designed for universal accessibility, using clear symbols, multilingual text, high-contrast visuals, audio announcements, and tactile features where possible, to serve people with disabilities, tourists, and diverse user groups.
- **Digital and mobile integration**: Beyond physical signage, hubs can link to mobile apps or QR codes that provide personalized trip planning, ticketing, or real-time updates directly on a user's smartphone, expanding the accessibility of information beyond the physical site.
- **Community and local context**: Digital displays can also include local information, such as maps of nearby services, cultural events, or walking routes, helping the hub serve as both a transport gateway and a community connector.

Gaps & Inspiration

Another crucial parameter that has often been overlooked in existing mobility systems is the provision of **timely and accurate information** for users. Policymakers and citizen interviews confirmed that one of the main frustrations among commuters is the lack of clarity and accessibility of essential information such as schedules, delays, and service updates. Since the operation of mobility modes is influenced by numerous dynamic factors, such as traffic, weather conditions, technical disruptions, or demand fluctuations, information provision can change rapidly throughout the day.

In such a context, commuters expect to be informed **in real time**. They want to know, with minimal effort, the duration of their trip, the frequency of services, expected arrival times, and alternative routes if disruptions occur. If accessing this information requires too much time or effort, frustration arises, discouraging continued use of shared and sustainable mobility options. Conversely, when information is delivered quickly, clearly, and reliably, users feel more satisfied, confident, and in control of their journey.

The **fourth "Goal 4: Clear, accessible, reliable information"**, therefore, emphasizes the critical importance of embedding user-friendly information systems within mobility hubs. Information systems are not merely technical add-ons but a core element of the user experience. They directly influence efficiency, accessibility and trust in the entire mobility ecosystem. A hub equipped with clear and reliable information empowers users to navigate confidently, reduces the cognitive burden of trip planning, and makes sustainable mobility a practical and attractive alternative.

In short, providing accurate, accessible and real-time information is essential for ensuring that mobility hubs are not only functional transfer points but also user-centered and trustworthy environments that encourage long-term adoption of sustainable transport.

Benefits

- Improved user experience by making the hub intuitive and stress-free to navigate.
- Greater use of shared and sustainable transport by giving people confidence in availability and reliability.
- Equity of access to information for all user groups, including vulnerable populations.

Recommendations to achieve the 4th Goal

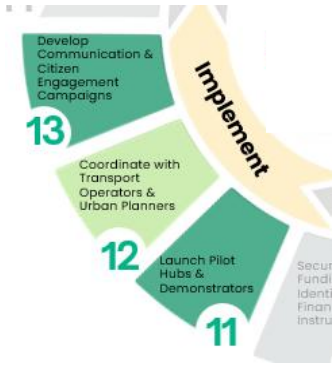
Horizontal Recommendations

1. Clear Physical Signage

Timeframe: Short term

Priority: High

Connected to Strategy: Implement Stage - Activity 11



- Use consistent symbols and colours across all available transport modes (bus, train, bike-share, car-share, scooter) so users can quickly identify and navigate each option. Standardization reduces confusion, particularly for first-time users or visitors. For example, in Antwerp, mobility hubs across the city are designed with a uniform visual identity, ensuring that all hubs are immediately recognizable to users. This consistency in colours, signage, logos, and overall design helps create a sense of cohesion and reliability across the network. Importantly, the visual identity of the hubs is integrated with the broader branding of the city and the public transport authority (PTO/PTA), reinforcing the perception that mobility hubs are part of a unified, city-wide mobility system rather than isolated projects.
- Install clear, easy-to-read maps that show both the hub layout and connections to the surrounding neighbourhood. These maps should highlight entrances, exits, pathways, and the location of additional services like restrooms, cafés and seating areas, helping users plan their movement efficiently.

Provide translations in multiple languages, especially in areas with international users (airports, tourist zones, or major transit hubs) to ensure accessibility for non-native speakers.

BONUS INFO

Wayfinding Principles

Wayfinding at mobility hubs should be natural to the visitor and frequent customer alike and provide a seamless experience for every trip, regardless of how someone arrives or departs the hub area, and regardless of a passenger's age, ability, knowledge of, or comfort with transportation systems. Wayfinding at mobility hubs, like at all transit stations, should provide **orientation**, **navigation**, and **information at the right moments** to all passengers and potential customers. While each individual mobility hub will have its own opportunities and challenges depending on its type, services available, and surrounding land uses, the wayfinding system available should be:

- **Complete** – Users get the information they need, organized in a hierarchical order easy to process, understand, and remember.
- **Eye-catching** – Useful and well-located, signs should not be distracting, overbearing, or block paths of movement. Signs should be mounted within natural sight lines where people expect them.
- **Clear** – Signs should be easy to understand, with simplified language and typography and iconography that is comfortable, legible, and readable.
- **Compassionate** – The design should be for a broad audience, allowing people of all backgrounds, English-speaking ability, and reading levels to navigate using the signage.

Mobility hub wayfinding signage should coordinate with the local jurisdiction's existing wayfinding system. This means adding mobility hub directional information to existing or planned local pedestrian, vehicular, and/or bicycle wayfinding signs within a reasonable radius of the hub. The radius could be up to ½ mile from the mobility hub area for pedestrians; one to two miles for cyclists; and up to three miles for vehicles.

2. Digital displays at the mobility hub

- Install screens showing up-to-date departure and arrival times for all available modes, including buses, trains, and shared vehicles. Accurate, live information helps users make timely decisions and reduces anxiety about wait times.
- Install displays that indicate the number of available bikes, scooters, or cars, as well as the status of charging stations for electric vehicles. This allows users to plan trips without unnecessary searching.
- Include notifications about delays, service disruptions, or alternative routes, helping users adapt quickly to changing circumstances.

BONUS INFO

Real-time data

Real-time information, delivered through an app, digital signage, or interactive kiosk provides accurate information on the actual availability of nearby mobility options, allowing hub users to choose the options that work best for them, reduce their wait times and improve their travel experience. **Travel alerts** and **real-time notifications** of service disruption are also essential features to keep people informed and shift travellers to alternative mobility options.

3. **Accessibility features in terms of technology/information**
   - Provide spoken updates and alerts for visually impaired users or those with cognitive disabilities.
   - Ensure that printed and digital signs are readable for people with low vision, with clear fonts and contrasting colors to improve visibility and comprehension.
   - Install tactile maps or braille signage in waiting areas to assist visually impaired users in navigating the hub independently.

3.5 Goal 5: Supportive governance systems

While physical design, service integration, and user experience often receive the most attention, these elements can only function effectively when reinforced by a solid institutional and regulatory foundation. The lack of clear governance and transparent frameworks will result in fragmented responsibilities, slow decision-making, uneven implementation, and a user experience that feels confusing or unreliable. A **supportive governance system** establishes coherence and direction. It clarifies who leads the project, which departments contribute to it, and how collaboration takes place across transport, spatial planning, public works, digital services and financial authorities. By providing consistency and predictability, it creates an enabling environment for private operators, investors, and service providers, while giving users confidence that the hub offers a reliable and well-managed mobility experience.

Figure 10 Significance of governance

Description

In practice, the phrase "Governance" refers to:

- **Institutional coordination and roles**: Clear definition of roles, responsibilities, and decision-making competences among public authorities, transport operators, shared mobility providers, and other stakeholders involved in the planning, implementation, and operation of the mobility hub. Effective coordination avoids overlaps, gaps, and conflicts between actors.
- **Management and operational structures:** Establishment of appropriate management models for

mobility hubs, such as a single managing entity, public–private partnerships, or coordinated agreements between multiple operators. These structures ensure the day-to-day operation, maintenance, and long-term sustainability of the hub.

- **Policy and regulatory alignment:** Alignment of mobility hub development with local, regional, and national mobility policies, land-use plans, and regulatory frameworks. Governance mechanisms should support compliance with regulations related to public space use, data sharing, safety standards, and service quality.
- **Stakeholder engagement and participation:** Processes that enable the active involvement of key stakeholders, including municipalities, operators, local businesses, and users, throughout the hub lifecycle. Participatory governance helps ensure that hubs respond to local needs and gain public acceptance.
- **Financial and contractual arrangements:** Definition of funding schemes, cost-sharing mechanisms, and contractual arrangements that support both initial investments and long-term operation. This includes agreements on revenues, responsibilities for infrastructure, and performance-based contracts.
- **Monitoring, evaluation, and adaptability:** Governance frameworks should include mechanisms for monitoring performance, evaluating impacts, and adapting services over time. This allows mobility hubs to evolve in response to changing mobility patterns, technological developments, and user expectations.

Gaps & Inspiration

Another crucial parameter that strongly influences the success of mobility hubs, yet is often insufficiently addressed in practice, is supportive governance. Policymakers, operators, and local stakeholders frequently highlight that fragmented responsibilities, unclear decision-making processes, and weak coordination between actors can significantly hinder the planning, implementation, and long-term operation of mobility hubs. Without a clear governance framework, even well-designed hubs risk underperforming or failing to reach their intended impact.

Mobility hubs operate within a complex ecosystem involving multiple public authorities, transport operators, shared mobility providers, and private stakeholders, each with different objectives, regulatory obligations, and operational constraints. In such a dynamic environment, effective governance is essential to ensure alignment between policies, services, and investments. Stakeholders require clarity regarding roles, responsibilities, and procedures, as well as mechanisms to resolve conflicts, adapt to changing conditions, and coordinate actions efficiently.

In this context, decision-makers and operators expect governance structures that are transparent, flexible, and supportive rather than restrictive. Clear governance arrangements enable timely decisions, facilitate cooperation across sectors, and support the integration of new mobility services as demand, technologies, or policy priorities evolve. Conversely, complex or rigid administrative processes can delay

implementation, increase costs, and discourage innovation and private-sector participation.

The fifth **"Goal: Supportive governance systems"** therefore emphasizes the importance of establishing governance models that actively enable mobility hub development and operation. Governance is not merely an administrative requirement but a foundational element that underpins service integration, quality assurance, financial sustainability, and long-term scalability. Well-designed governance frameworks create the conditions for effective collaboration, consistent service delivery, and continuous improvement.

In short, supportive governance is essential for ensuring that mobility hubs function as coherent, resilient, and adaptable systems. By providing clear coordination mechanisms, aligned policies, and transparent management structures, governance frameworks help transform mobility hubs from isolated interventions into sustainable, widely accepted components of the urban mobility system.

Goal 5: Supportive governance systems

Benefits

- **More efficient and reliable hub** operation through clear roles, responsibilities, and coordinated decision-making among involved stakeholders.
- **Faster implementation and adaptation of services** by reducing administrative complexity and enabling flexible responses to changing mobility needs.
- **Increased trust and long-term commitment** from public and private actors by providing transparent, stable, and supportive governance frameworks.

Recommendations to achieve the 5th Goal

Horizontal Recommendations

1. Governance frameworks and institutional capacity

Timeframe: Short term

Priority: High

Connected to Strategy: Understand Stage - Activity 5

& Plan stage – Activity 9

Steps to establish clear **multi-level governance** frameworks:

- Define and formalize roles, responsibilities, and decision-making competences across national, regional, and local authorities involved in mobility hub planning, implementation, and operation.

- Ensure effective vertical coordination between policy levels so that national strategies and regulations actively support regional and local initiatives.
- Align mobility hub development with Sustainable Urban Mobility Plans (SUMPs), land-use planning instruments, and other relevant sectoral policies to reduce fragmentation and ensure policy coherence.

Steps to strengthen **institutional capacity** and knowledge sharing:

- Develop national or regional platforms providing guidance, methodological tools, templates, and good practice examples on mobility hub governance.
- Facilitate peer-to-peer exchange, learning networks, and mentoring between cities and regions with different levels of experience.
- Support capacity-building activities, such as targeted training and technical assistance, to strengthen governance and management skills within local authorities.

2. Funding, incentives and long-term sustainability

Timeframe: Medium term

Priority: High

Connected to Strategy: Plan Stage - Activity 10

Steps to link **funding and incentives** to integrated planning and governance

- Make access to public funding for mobility hubs conditional on the existence of integrated mobility planning frameworks, such as an approved or developing SUMP.
- Require clearly defined governance and management structures, including stakeholder coordination mechanisms, as part of funding eligibility and project evaluation criteria.
- Use financial incentives to encourage coordination between transport, public space, digital services, and land-use planning authorities.

Steps to ensure **long-term financial** and operational **sustainability**

- Develop governance models that address the full lifecycle of mobility hubs, from planning and construction to operation, maintenance, and future upgrades.

- Define stable and diversified funding mechanisms that combine public funding, operator contributions, and, where appropriate, private investment.
- Clearly allocate long-term responsibilities for maintenance, service quality, and system updates to prevent infrastructure and service degradation over time.

3. Transparency, accountability and performance monitoring

Timeframe: Medium term

Priority: Medium

Connected to Strategy: Monitor Stage - Activity 14

- Define clear performance indicators related to mobility hub operation, service integration, accessibility, and user satisfaction.
- Establish regular reporting cycles and review processes to track progress, identify challenges early, and support evidence-based decision-making.
- Ensure transparency in governance arrangements and performance reporting to build trust among public authorities, operators, users, and local communities.

The GREENMO project has produced the report "Governance structure of mobility hubs" with more detailed analysis on the matter of Governance Structures for Mobility Hubs.

4 Concluding Remarks

The primary aim of **GREENMO Recommendations** document was to provide public and private decision-makers with practical, easy-to-apply guidance for the planning and implementation of mobility hubs. Through the combined efforts of the GREENMO project, this aim has been successfully achieved, as the document presents a clear framework, informed by evidence and participatory research, that supports policymakers in taking confident and informed steps toward sustainable mobility.

The development of this deliverable was grounded in a **comprehensive analysis** of both bottom-up and top-down input. Participatory workshops and questionnaires surveys captured the lived experiences, expectations and priorities of citizens, while interviews and engagement with experts and decision-makers provided a strategic perspective on institutional, infrastructural and technological realities. Comparing these perspectives revealed common priorities across different Mediterranean contexts, while also highlighting context-specific challenges. Key insights included the **importance of safety and inclusivity**, the role of **digital integration** for trust and usability, and the demand for multifunctional hubs that **go beyond transport to serve as community spaces**.

Building on these insights, the document structured its goal development around four critical dimensions: first, ensuring **diverse sustainable mobility options** to support multimodal travel and first- and last-mile connectivity; second, guaranteeing the **availability of a wide variety of non-mobility services**, from waiting areas and cafés to restrooms and information points, in order to make hubs attractive and convenient for all users; third, achieving **attractive and safe hub design**, combining comfort, accessibility, and security to encourage consistent use; and fourth, providing clear, accessible and reliable **information** through signage, digital displays and integrated apps to facilitate navigation and trip planning.

The resulting recommendations are organized to address both **horizontal principles** that can be applied to achieve the certain goal, as well as **specific operational measures** related to specific transport and non-transport services. Together, these recommendations provide a holistic and actionable framework for the successful design, implementation, and operation of mobility hubs in diverse contexts.

Summing up, this document offers public and private stakeholders both **strategic clarity** and **practical confidence**. Its application is expected to facilitate smoother implementation, encourage public adoption and contribute to the development of integrated, user-centered and green mobility hub systems across the Mediterranean region and beyond.

Annex

To facilitate the reader, the cross-reference of the main conclusion of the GREENMO Strategy document is presented in the Annex of the GREENMO Recommendations document. Kind reminder that these two documents are complementary and supportive to each other, together comprising a useful toolkit for policymakers. More information can be found in the Deliverable section of the project's website.

In short, the GREENMO Strategy envisions mobility hubs in MED areas as community-driven, multi-modal, and sustainable spaces that integrate **smart solutions with local identity**, turning mobility into a catalyst for social cohesion, environmental responsibility and resilient growth. The insights and outcomes generated through the activities of the GREENMO project have been consolidated to form the foundation of the strategic document, which represents both a roadmap and a reference for advancing green and inclusive mobility hubs across the region.

The GREENMO Strategy Cycle demonstrates the process with six interlinked stages, **Engage, Understand, Design, Plan, Implement and Monitor**, each with a set of concrete activities and subsequent steps. The methodology used to create this cycle draws on previous work conducted throughout the project, including research activities, analysis of top-down and bottom-up input from questionnaires and interviews, participatory workshops, and the insights documented in the deliverables *"The Concept of Mobility Hubs"* and *"Governance Structures of Mobility Hubs"*. From securing political commitment and building stakeholder coalitions, to analyzing territorial circumstances and citizens' needs, to co-creating visions and selecting pilot sites, the methodology ensures that all types of mobility hubs are designed for real communities and their diverse contexts. Planning stages provide the operational backbone through governance, ownership and financing models, while implementation pilots act as living labs for experimentation and further engagement. Finally, monitoring introduces performance evaluation, adaptive management, and knowledge transfer, ensuring hubs remain future-ready and replicable across the Mediterranean.

In Stage 1 – Engage, the strategy establishes the institutional and community foundation upon which all subsequent actions depend. The focus is on securing political commitment, obtaining signed local mandates and building strong stakeholder networks which will be maintained overtime. Political endorsement anchors mobility hubs within wider strategies on urban development, climate resilience and social inclusion, while diverse coalitions ensure legitimacy, ownership and reduced resistance during implementation. Without this foundation, no strategy can move forward effectively.

In Stage 2 – Understand, the process provides the evidence base by defining the problems and opportunities before designing solutions. This includes conducting territorial and functional assessments, mapping user needs and mobility patterns through targeted surveys, and reviewing the

existing policy, regulatory and institutional frameworks for gaps and/or synergetic interventions. Evidence-based analysis ensures that the scheme of mobility hubs respond to real needs rather than assumptions and it helps identify enablers and barriers that can make or break implementation.

In Stage 3 – Design, the strategy moves from "what we have" to "what we want to achieve." Long-term visions and guiding principles are co-created with communities and stakeholders through participatory activities, ensuring inclusivity, legitimacy, shared ownership and public acceptance. Functions and services are defined based on demand, inclusiveness and feasibility, while pilot sites are strategically selected to maximize impact and visibility. This stage embodies the participatory approach of GREENMO, ensuring that hubs are not imposed but co-produced.

In Stage 4 – Plan, vision is transformed into concrete action by developing governance, ownership and financing models, and by preparing an integrated roadmap. Governance models clarify roles and responsibilities, financial instruments secure long-term sustainability, and roadmaps align actions with timelines. This stage provides the operational backbone of the strategy, ensuring accountability, resource allocation and institutional acceptance.

In Stage 5 – Implement, mobility hubs are brought to life through pilots, integration efforts and engagement campaigns. Piloting hubs enables testing, learning and adaptation before scaling up. Coordination with transport operators and urban planners ensures seamless integration into the wider mobility and urban system. Communication and citizen engagement campaigns build awareness, trust, and behavioural change, making hubs widely accepted and used.

In Stage 6 – Monitor, the strategy embeds a culture of continuous improvement. Performance monitoring frameworks with clear KPIs ensure accountability and transparency in the long run. Adaptive management allows flexibility for the hubs to evolve with changing needs, technologies and expectations. Knowledge-sharing activities document lessons learned and promote replication across MED cities. This way, mobility hubs are not static infrastructure but dynamic systems that continuously generate value.

The following Figure illustrates the GREENMO Strategy Cycle, which is **structured around six stages** that together comprise sixteen key activities. The diagram conveys the sequential yet cyclical process, from political commitment to long-term monitoring which allows policymakers and stakeholders to design, implement and scale inclusive and sustainable mobility hubs across MED cities.

Figure 11 The GREENMO Strategy Cycle for green and inclusive mobility hubs

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