UITP ADVANCING PUBLIC TRANSPORT

POLICY BRIEF

MOBILITY HUBS: STEERING THE SHIFT TOWARDS INTEGRATED SUSTAINABLE MOBILITY

APRIL | 2023

INTRODUCTION

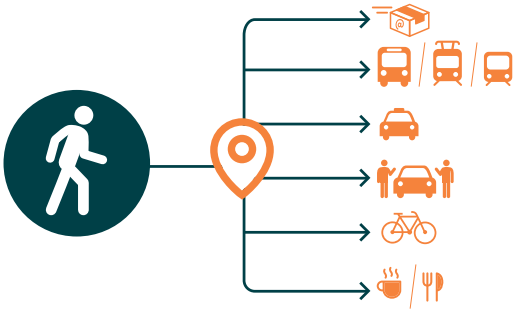
Mobility is changing before our eyes, with diversification of mobility services and growing numbers of vehicles being electric-powered. On the one hand, pavements and kerbs in city centres are becoming increasingly congested with a variety of vehicles and furniture, and on the other hand, low population density areas lack mobility options. Communities demand better quality of life, less-constrained mobility, more liveable neighbourhoods and more equitable access to opportunities and resources. An integrated multimodal mobility system, one that is more responsive to the needs of communities, is often seen as a way of addressing these challenges. But how can we orchestrate it effectively?

That is where the concept of mobility hubs can help. From central stations to neighbourhood hubs, a network of diverse mobility hubs offer physical integration for public transport, shared and active mobility, anchored in the reality of urban, suburban and more-rural areas. They support a people-centred, integrated and coordinated approach to foster more-sustainable mobility behaviours.

This paper will help you to understand the variety of hubs and the benefits of organising coherent networks of hubs. The focus on the newest types of mobility hubs will provide concrete examples along with recommendations, particularly for authorities and public transport operators, on how to play a driving role in the shift towards sustainable mobility.

WHAT IS A MOBILITY HUB?

A mobility hub provides a focal point in the transport network that seamlessly integrates different modes, especially mass public transport, shared and active mobility. It combines supportive multimodal infrastructure such as charging points and placemaking strategies[1]. A hub maximises access to mobility and other resources, while ensuring a transfer between modes for first- and last-mile connectivity.



It is important to keep in mind two distinct aspects of combined mobility and therefore two distinct use of mobility hubs:

- **Transfer:** When we look at one trip, 'from A to B', and we look at a door-to-door experience that combines mass public transport as a backbone and the other modes as 'first/last mile(s)', then mobility hubs function as points of interchange between modes in an intermodal trip.

- **Access:** When we look more globally at the lifestyle and mobility needs of people and households over weeks, months or years, we can look at how different services can fulfil their needs. This way, mobility hubs also become access points to different services, such as shared cars or cargo bikes, as resources for people to move away from private cars and travel more sustainably in a multimodal fashion.

There are a variety of definitions and criteria to define what constitutes a hub, but we observe that it often fulfils the following key characteristics:

- Its own branding and visibility
- Differing modes of transport, supportive infrastructure and other services
- Physical and digital integration that facilitate interchange and multimodality
- Placemaking strategies to create quality and safe places

EXAMPLES OF COMPONENTS IN HUBS

- **Different transport modes:**
  - Active modes: Parking for private bikes, connection to pedestrian and bike paths.
  - Mass transport: Bus shelters.
  - Shared mobility: Docks for shared bikes, parking for shared cars or e-scooters.
  - On-demand mobility: Identified stop, taxi stands.
- **Other components:**
  - Transport related: Charging infrastructure, delivery lockers and bike repair.
  - Non-transport related: Services with physical presence such as a library, fitness equipment or playground, solar panels or other street furniture.

1 Placemaking refers to the collaborative process of turning urban spaces into places. For more information: www.pps.org/article/what-is-placemaking

WHY A NETWORK OF HUBS?

It is important to build not just one hub, but a network of them, constructed in a logical, coherent and consistent way, widely covering the space and meeting the maximum number of requirements.

NETWORK AND DENSITY OF HUBS INCREASES USER SATISFACTION

In a survey carried out in Bremen on carsharing-based mobility hubs, it was found that one of the most important factors for user satisfaction was the short distance to the next station, just behind vehicle availability. Furthermore, for 24% of women (vs 16% of men) responding to the survey, the visibility of stations in public realm was also judged to be very important.

Frame & Mobilise, for the Smarthubs project, funded by Innoviris

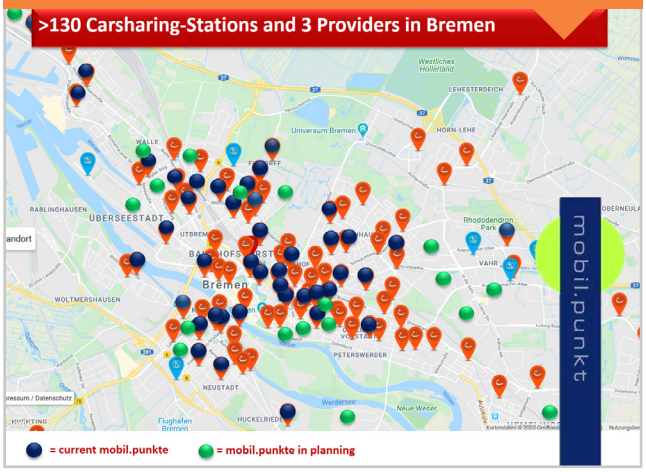
The greater the number of hubs there are, the greater the number of mobility options can be offered to visitors and local residents, and the greater the coverage of the region can be achieved. The density of hubs allows the different services to be competitive and accessible where the distance that people are willing to walk to catch an e-scooter or a bike are generally lower (around 150m) than the distance they would walk to catch a train (up to 500m).

Thinking about a network of hubs implies giving them a unified visual identity and, increasingly, a digital connectivity across different hub operators (public, private, communities, local and regional). This can imply higher design standards, international data norms, and regularly requires dedicated staff to coordinate, streamline and increase efficiency of the complex delivery and management of a network of mobility hubs. A common challenge for networks of hubs is to find ways to integrate more bottom-up and private initiatives into a recognisable identity with unique branding over a territory. In Flanders in Belgium, for example, the common branding and criteria are obtained through a subsidised programme by the government (€100 million for 1,000 Hoppinpunten).

Below are three examples of networks of hubs at three different scales.

CITY OF BREMEN, GERMANY

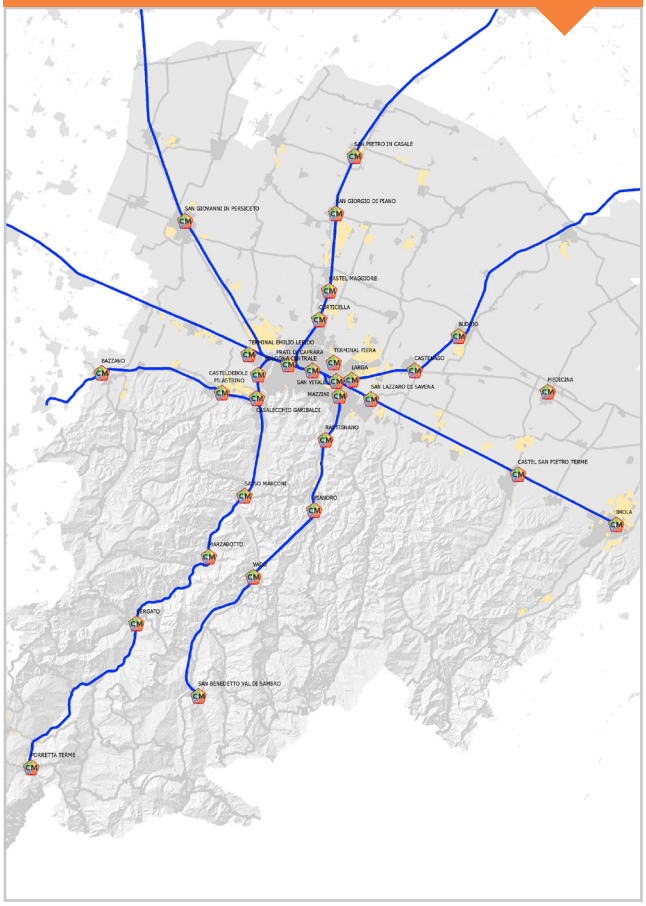
In the City of Bremen, 10 large mobility hubs with 4-12 carsharing vehicles, also known as 'mobil.punkte', were built at central locations near PT stops. Smaller mobil.pünktchen (currently 38 in number with 8-10 more planned per year) were built at decentralised locations usually with two to three carsharing vehicles as well as bicycle parking. In blue on the map are the existing mobility hubs and in orange and light blue are the overall carsharing stations. The green dots mark hubs currently in planning, which aim to close gaps in the network and reduce the maximum distance between carsharing stations to 300m.



METROPOLITAN AREA OF BOLOGNA, ITALY

There are 30 Mobility Hubs planned in Bologna's Sustainable Urban Mobility Plan (SUMP) throughout the Metropolitan area (nine in Bologna capital city), mainly at the stations of the metropolitan railways system.

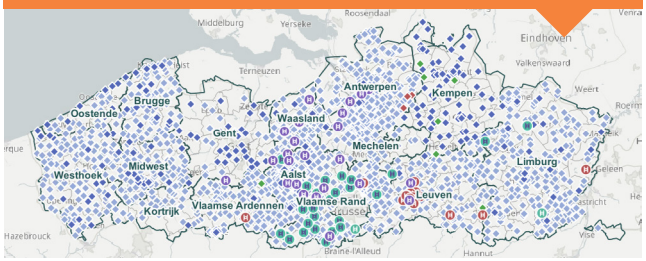
The standard design specifications were jointly produced as guidelines by Bologna Metropolitan City and the national railway network owner RFI.



"Mobility hubs enable the alignment of land-use planning, public space design and transport planning."

FLANDERS REGION, BELGIUM

In Flanders in Belgium, Mobipunt vzw, a partnership between Mpact, Autodelen.net and Infopunt Publieke Ruimte, has been guiding various pilot projects since 2019. The Flemish government decided to rebrand the mobility hubs as Hoppin-punten and to use this branding for the 1,000 upcoming mobility hubs, the mobility-as-a-service app, a call centre and the pricing policy of new on-demand transport services.



WHY A DIVERSE SET OF HUBS?

Multimodality can be coordinated through a diverse set of hubs. There are different types of mobility hubs, in differing shapes and sizes, quantity. They can also have different primary functions, whether they focus on smoothing the interfaces between two legs of the same trip or if they prioritise access to mobility options or resources.

For people familiar with multimodal central stations, other public transport interchanges or park & ride facilities, the **new types of mobility hubs** are typically smaller, focus on shared mobility, and are to be found also in residential areas (particularly in newly built-up-development sites) or in university campuses, where they can provide mostly proximity access to resources and services for mobility and beyond.

We have observed that the concept of mobility hubs is also being used to rethink facilities such as public transport interchanges, park & ride, car and bike parking areas. This will allow them to include a wider multimodal experience and transform them into a more attractive space for people. In Europe, the European Commission is considering requiring more than 400 urban areas (known as 'urban nodes') to develop **'multimodal passengers hubs'** in order to improve first- and last-mile connections and to enhance long-distance connectivity.

Different types of **mobility hubs** based on scale and quantity

WHAT IS THE ADDED VALUE OF MOBILITY HUBS?

The rise of shared, micro and on-demand mobility and MaaS applications, as well as the growth of electric vehicles and deliveries, have prompted the development of 'mobility hubs' at the forefront of mobility policies. These present an interesting solutions for:

- Increasing awareness of new transport services and multimodal, low-carbon lifestyles
- Enhancing the connectivity of traditional public transport and new transport services
- Improving public transport and active mobility by making it safer and more convenient
- Improving community facilities and liveability
- Ultimately, fostering sustainable and low-carbon mobility by providing:
- More-attractive and accessible alternatives to owning a car
- Services to communities that could potentially reduce the need to travel

This way, a mobility hub can be both a connectivity facility and a place where you can start, continue or finish your trip, or replace it altogether by the community service provided at the hub.

In general, the core value of mobility hubs is to provide a higher quality access point to a diverse range of transport facilities. This increases the inherent value of every single transport mode connected to the hub. Their strong marketing, branding and location choices particularly help public transport, shared and on-demand mobility become more visible, attractive and accessible. The more functions that are clustered, the greater the value: more people means more business and efficiency on operations, also for infrastructure providers[2].

MOBILITY HUBS ARE BENEFICIAL TO PUBLIC TRANSPORT

Public transport operators will find a direct interest in larger hubs where higher ridership as well as more efficient operations are expected.

Dispatching hubs through the network can also increase the efficiency of the commercial speed of public transport vehicles. As the network is remodelled and gains efficiency, the resources freed up can be reallocated to new services and/or used to increase the frequency of existing services.

Public transport operators will also have an indirect interest in other types of hubs, as **there is no need for mass public transport to be in all hubs to benefit from them.** Smaller hubs with no mass public transport can help connect with bigger hubs (by enlarging public transport catchment area) and can provide alternatives to private cars that in turn bring more people to public transport systems.

The expected increase in the adoption of sustainable transport services, as an alternative to single-use car, carries benefits across the following dimensions:

Environmental, mostly linked to the modal shift from single-use car to more sustainable modes with multiple benefits on carbon emission reduction, pollution and noise reduction, on public space recuperation. There will also be a reduction in resource use for production, maintenance and disposal of single-use cars.

Greater inclusion and accessibility, by taking into account user needs and addressing their:

- basic demand: mainly infrastructure- and information-related measures, in order to make the whole system accessible, particularly to those who are limited in their physical, mental, or cognitive capabilities.

- additional demand: mainly organisational and service-related measures, which can support those user groups who encounter problems with modern information and guidance systems, ticketing, and orientation; for example, information about the local surroundings and points of interest for tourists.

Additional socio-economic benefits, such as local development and support for local retailers.

2 A clear overview of benefits can be found here: www.como.org.uk/mobility-hubs/overview-and-benefits

LONG-TERM BENEFITS OF CAR-SHARING BASED MOBILITY HUBS IN BREMEN

According to the report 'Analysis of the impacts of car-sharing in Bremen, Germany', published in 2018 in the frame of the SHARE-North project, every car-sharing vehicle in Bremen replaces - or prevents the purchase of - 16 privately-owned vehicles. Thus the car-sharing opportunities studied account for approximately 5,000 fewer vehicles taking up space on Bremen's streets and parking spaces. As of January 2023, more than 7,500 cars have been removed from Bremen's streets due to car-sharing, freeing up nearly 40km of street space.

It was confirmed in the study that when a private household no longer owns a car, its members use environmentally-friendly modes of transport for three-quarters of the trips previously taken by private car. For the first time, it was found that the lifestyle associated with car-sharing makes an important contribution to strengthening local retailing because, compared with the general population, car-sharing users shop significantly more often in their neighbourhoods and significantly less often at shopping centres.

Since 2003, strategically planning and building mobility hubs (or mobil.punkte) and in particular decentralised smaller neighbourhood mobil.pünktchen hosting shared cars as well as bicycle and pedestrian facilities have been pivotal to the successful policy of the Municipality of Bremen. By so doing, they bring car-sharing closer to people and expand them progressively in suitable neighbourhoods. This approach is endorsed by the definition of car-sharing as a 'permissible special use' of public street space in the (German Federal) Car-sharing Law (Gesetz zur Bevorrechtigung des Carsharing) as well as Bremen's own Car-sharing Law.

The report concludes that establishing the mobility hubs, new and existing regulations, communication measures (also targeted at recruiting people in periods of transition like relocation, transition to retirement, family formation, pending replacement of vehicles), as well as the opportunities available through the providers have brought about long-term positive effects for transport, the environment and local retailing. This impact is achieved mainly via a reduction of traffic, parked cars and a shift to more environmentally friendly modes of transport.

Neighbourhood mobility hub next to a tramway station in Bremen.

HAMBURG UNIVERSITY CONFIRMS SIZEABLE BENEFITS OF BRINGING MOBILITY OPTIONS CLOSER TO THE PEOPLE

According to an evaluation of the hvv switch stations in neighbourhoods carried out by the Technical University of Hamburg in 2019-2020, frequent users of hvv switch stations use active modes of transport (walking, cycling) and public transport more frequently. The hvv switch stations in neighbourhoods have the greatest impact on the choice of mobility options of people living within a 200m radius. In particular, the availability of car-sharing close by enables people to live without owning a car. The hvv switch stations attract a more-varied user group than carsharing offers, notably women and families with children seem to appreciate the enhanced reliability of finding a shared car or parking space.

THE BENEFITS OF INTEGRATING HUBS INTO THEIR CONTEXT

It is essential for authorities and public transport operators willing to lead the development of networks of hubs that they carefully consider their viability, but they should not expect mobility hubs to be commercially viable from day one. Instead, they should consider their socioeconomic benefits and increase their sustainability by integrating them into their context, ecosystem, policies and operations.

The complexity of mobility hubs must be borne in mind when trying to quantify the benefits of introducing hubs within an ecosystem, as it may prove challenging to isolate the effects of the hub. **Continuous evaluation and a flexible design, suitable for adaptation, is recommended to adjust weak components, make hubs flourish and be resilient to rapid changes in the market, society and in policy orientations.**

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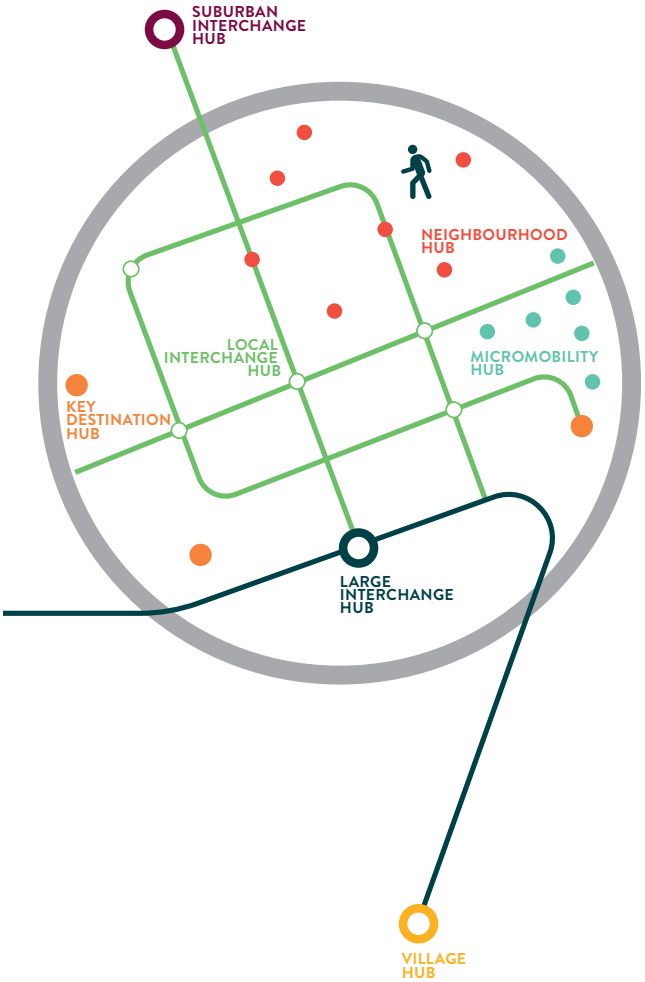


Various mobility hubs across a territory

GEOGRAPHICAL AND TRANSPORT CONTEXT

In geographical terms, hubs can be found in various parts of the city, in the suburbs and rural areas, allowing the distribution of resources and smooth connectivity.

There are different hub types for different areas:

URBAN MOBILITY HUBS OBJECTIVES

- Increase multimodal trips, walking, cycling and public transport
- Reduce the private use of cars
- Improve the public realm

SUBURBAN MOBILITY HUBS OBJECTIVES

- Reduce need for the second car
- First/Last mile connectivity
- Improve the public realm

RURAL MOBILITY HUBS OBJECTIVES

- Connect to interurban public transport
- Improve accessibility and attractiveness
- Increase/create first/last miles connectivity
- Bring services to people

NATIONAL AND INTERNATIONAL MOBILITY HUBS OBJECTIVES

- Offer seamless transfer for long-distance door-to-door mobility offers

Depending on the location and function, the mobility hub should focus on meeting different requirements, mobility offers and operational models. Hubs tend to address different objectives, as shown in the graphic on the previous page, where we can visualise four main territories, each with its own objectives for mobility: urban, suburban, rural as well as national and international hubs.

In **rural areas**, mobility hubs can be a key feature of redesigned hierarchical networks of transport, as explored in the Knowledge Brief on The rural mobility challenge for public transport: How combined mobility can help with the example of the mobility hubs of the Dutch provinces of Drenthe-Groeningen. Rural mobility hubs can have the following main functions:

- To reduce length of the 'last miles'.
- To ensure safe and easy transfers between interurban classic public transport and other shared and on-demand modes at local level, for example. DRT, taxi, carpooling, bikes to cover the last miles and increase accessibility.
- To bring goods, services and social links closer to inhabitants, thus reducing the need to travel.
- To enhance public space with many potential activities, such as healthcare, education or other public services and tourism.
- To introduce useful technology, such as electric chargers.

Frame & Mobilise, for the Smarthubs project, funded by Innoviris

The success of a hub is not only dependent on the right location, the right scale or the right type of hub. **As the multimodal hubs are in competition with the use of the private car, their sustainability is linked to the local context and ecosystem.** Multimodal hubs alone may not reverse car-use dominance but they can accompany and accelerate the transition to multimodal, low-carbon mobility. This includes allowing access of private cars to multimodal systems through, for example, park & ride hubs on the outskirts of cities.

Experts recognise that a mobility hub can enhance mobility services but if there is, for example, abundant parking for private cars around, it will not happen spontaneously. Similarly, if the services and components at the hub are not attractive and of suitable standard. The quality, safety and security of public space, built environment and facilities around the hub may also impact the hub uptake.

SOCIOECONOMICAL AND CULTURAL CONTEXT

Mobility hubs are a unique opportunity to create community and a learning environment for using sustainable mobility: Active, shared and public transport. Hubs are also a tool to drive the distribution of mobility resources as well as other resources, and enable the use of transport services by vulnerable citizens (such as older people, people with impairments and digitally excluded citizens). Thus, hubs foster more equitable access to opportunities and inclusive sustainable mobility, as in the case of Twin Cities, USA, as described and developed by the Shared-Use Mobility Center (SUMC).

That is why – in order to maximise benefits of mobility hubs - it is critical to invest in stakeholders engagement and participation. For example, co-creation processes are relevant to designing user-centric and barrier-free mobility hubs with citizens, while tactical urbanism might be useful to deploy short-term, low-cost, scalable interventions to drive long-term change. Moreover, partnerships with a variety of stakeholders, such as real estate developers, local businesses or energy providers, should be given consideration in order to increase sustainability of the hubs.

Community involvement is also crucial to ensure that mobility hubs are context-sensitive and the components provided respond to the needs of residents and travellers. Here, non-users should be included in the process, so they can gain insights into the services to be found at the hub and contribute to the design of more-attractive and usable facilities, encouraging the broader adoption of the services. Furthermore, the sense of collective ownership may increase, and the resulting hub could become an attractive place, making it more viable in the long run by helping meeting costs and gaining revenue streams.

DIGITAL CONTEXT

Mobility hubs are increasingly being thought of as a physical representation of MaaS, sometimes in parallel and coordinated deployments. By doing this, mobility hubs offer one more opportunity to innovate and support multimodality with additional synergies that could be created through digital services and MaaS apps (for example, by rewarding people for using a shared bike with a discount at the hub's coffee place).

A strong link between the physical (mobility hubs) and the digital infrastructure (MaaS / digital platform) is thus desirable to ensure strong usage of the hubs. The location of hubs should be integrated into existing digital apps, as should the availability of vehicles and services at hubs. Mobility hubs need to be maintained and monitored and monitoring of all types of usage data could be potentially useful to adapt hubs.

STRONG LEADERSHIP AND COORDINATION BY AUTHORITIES AND PUBLIC TRANSPORT OPERATORS

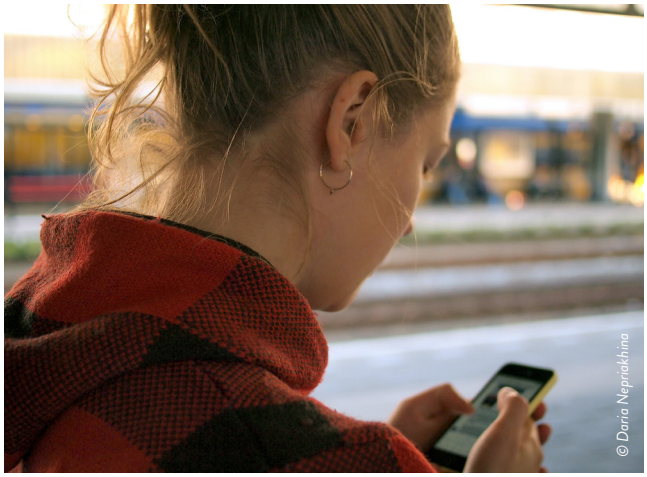
Building a network of mobility hubs requires:

- Strong leadership
- A clear division of responsibilities
- The capacity to coordinate a dynamic context that can be challenging with pre-existing elements and coordination of existing stakeholders (for example, to impose a unified branding or a coherent wayfinding),
- The capacity to develop something that is flexible enough to be adapted and ultimately long-term.

It is important to keep in mind that a successful governance model in a multi-stakeholder setting creates a dedicated wayfinding function above (and separate from) all of the individual transport operators/actors. The information system prioritise the mode, not the operator/brand at the wayfinding level. This is now even more important than ever, given the likely rate of change of individual operators (and their brands!). Thus, authorities and public transport operators are typically expected to lead the development of mobility hub networks.

The concept of mobility hubs provides an integrated planning approach to link transport and land use, infrastructure management and service provision while steering the ecosystem towards more sustainable mobility.

Mobility hubs also provide an opportunity to reinvent a location's identity. They have the potential to create attractive, purposeful, accessible locations that can incorporate and unite previously disconnected and independent modes.



There is a need to ensure similarities among same types of hubs. For example, in neighbourhood hubs there will often be shared cars and bike parking, but also diversity, among components and operational models, to address local needs and specificities. To identify individual hub characteristics and the required (or desired) facilities, it is important to consider location, hub type, context, existing services, needs of people living in the area or target groups (for example, tourists).

Each component may have its own governance and business models aspects. Sometimes there will be pre-existing agreements that engage different parties and a whole supply chain, such as street furniture or a bus shelter. However, it appears that **the more integrated the planning and management of the components, the more efficient the management and the more coherent the experience will be for the user.**

STRATEGIC LEAD BY THE PUBLIC TRANSPORT OPERATOR IN VIENNA TO OFFER A POWERFUL, COMPLEMENTARY SERVICE

Vienna public transport operator Wiener Linien started planning mobility Hubs in 2018, under the brand name 'WienMobil Station' (its multimodal brand) within a research project, with a plan to reach a net of hubs of more than 100 hubs (approved by the city in 2021) to offer a powerful, complementary service to the well-established public transport services. By the beginning of 2023 50 hubs had been built, mostly in public spaces, and each one can offer slightly different services according to the location and needs of

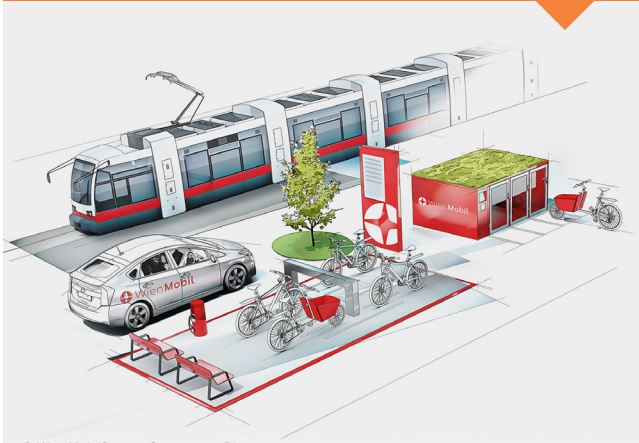
population and customers within the specific area. The bike-sharing and carsharing services provided by Wienen Linien can also be found in the hubs as well as mobility services of partners (such as shared e-scooters, taxi, e-charging for cars).

The implementation phase includes:

- conceptualising and day-to-day adjustment of a citywide network of mobility hubs
- consulting with, and official approval by, several public authorities
- cooperating and coordinating all partners of mobility services, including public tendering
- constructing low-key infrastructure with an external builder company
- hiring in-house staff
- funding by the city of Vienna

The network of hubs includes large network interchanges, local interchanges, neighbourhood hubs, micromobility hubs, suburban interchanges and key destinations hubs. The network is twinned with the multimodal app of Wienen Linien, also called WienMobil.

Mobility Hubs and shared mobility are part of the smart city concept of the city of Vienna, the local SUMP (Fachkonzept Mobilität) and part of the strategic development of Wiener Linien, from a Public Transport provider to a "mobility provider". The integration of tendered bike-sharing and carsharing services into the portfolio and branding of Wiener Linien symbolises this shift towards holistic mobility service offers for all people in Vienna.



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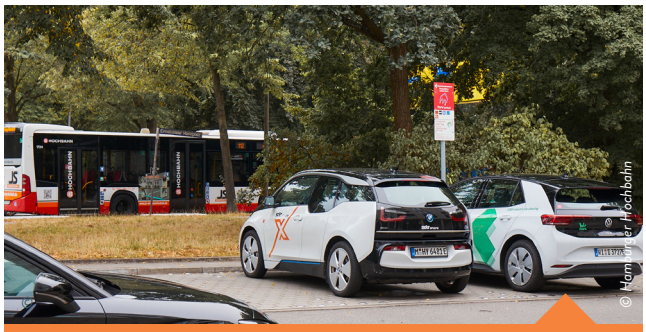

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A STRONG BRAND LINKED TO THE HAMBURG AUTHORITY BUT LED BY THE OPERATOR, UNDER MANDATE OF THE CITY

Hamburger Hochbahn AG, the Hamburg public transport operator, started to build mobility hubs in 2013 as a means of interlinking public transport with other shared mobility services, initially close to large intersections in the public transport network. Since 2017, they have also been placed in densely populated neighbourhoods (mandate to plan, develop and operate by the City of Hamburg). Under the brand of 'hvv switch' (formerly known as 'switchh') 96 hvv switch stations were developed with dedicated parking space for the hvv switch partners, such as the providers of shared mobility services like car-sharing, ride-pooling and bike-sharing.

Hochbahn is responsible for planning, implementing and operating the hubs. It has a dedicated staff of three to four people for implementation and for the contractual partnerships with shared mobility providers as well as other stakeholders such as electricity providers, and public bodies.

The hvv switch brand is a sub brand of the main Hamburger Verkehrsverbund brand (HVV - the PTA), which is the umbrella organisation for all public transport in the Greater Hamburg region. Currently, hvv switch stations are only found in the city of Hamburg, but expansion to the metropolitan region is possible. The brand includes the name, logo, typography, icons, animations and movies for a website, Instagram and YouTube. The brand and product communication follow the strategy of a 360° campaign model.

Since June 2021, the hvv switch app allows users to book, use and pay for shared mobility options and provides information on the availability of parking/shared cars at hvv switch stations.

PLANNING AND DEPLOYING A HIGHLY DENSE HUBS NETWORK WITH BKK CENTRE FOR TRANSPORT IN BUDAPEST

BKK Centre for Budapest Transport started to work on micromobility hubs in 2014, with its MOL Bubi public bike sharing scheme. Thanks particularly to the EU-funded 'Cities-4-People project', which ended in 2020, and an extensive participative planning, BKK developed new ways of place-making and reallocation of public space that include traffic calming measures and improvement of public transport accessibility.

In 2021, three types of mobility hubs were integrated into BKK's Active- and Micromobility Strategy:

- 'Micromobility hubs', located on a 100-150m radius in/all over the the city centre, for private and public vehicles.

- Neighbourhood hubs known as 'mobility points', which also includes shared cars and are located at a distance of 250-300m one from the other in the city centre and in the denser outer areas.

- Local interchange hubs known as 'mobility stations', located near mass-transport stations and with extended capacity for services such as a bicycle repair station, electric chargers and parcel delivery pickup services.

By 2022, BKK - in collaboration with District Municipalities – had deployed more than 600 micromobility hubs. Ultimately, 1000 are foreseen by 2024, mainly built out of car parking spaces and integrated with public transport. For this, the micromobility hubs ('Mobi-points') have a unified design, branding identity and logo, integration for the public journey planner (BudapestGO), offer a high level of availability/density (availability is the guarantee for reliable/plannable journeys for customers) and easy access/egress. BKK acts as the coordinator in mobility management on behalf of Budapest Municipality and in close collaboration with stakeholders. Further Mobility points and Mobility stations are being prepared as pilot projects till 2024.

INSPIRING APPROACHES FROM THE PARKING AND HOUSING SECTORS

Mobility hubs represent also an opportunity to bring further allies to the promotion of sustainable mobility, be they parking, housing or energy organisations. Their efforts must be included within wider mobility plans.

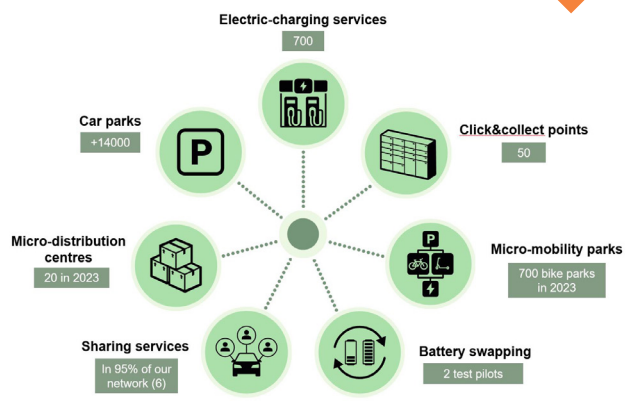
THE PIONEERING PARKING TRASFORMATION IN BARCELONA

The example of BSM, the municipal agency of Barcelona, shows how parking operators can convert their assets into mobility hubs to accompany the transformation of cities and mobility. By focusing on electric charging provision, logistic hubs for last-mile delivery and multimodality, BSM contributes to freeing up public space, reducing CO_2, noise and air pollution, pushing the transition to electric mobility while improving citizens experience.

With 42 off-street parking structures, BSM is converting the network of hubs into multiservice platforms. Services offered are: an extensive network of public charging points (700 and growing), 50 'click&collect' points, micromobility parks (700 in 2023), two battery-swapping

pilots, sharing services (in 95% of the network), micro-distribution centres (20 in 2023) and car parks (more than 14,000).

Key success factors include the hubs' capabilities and urban density, which enable BSM to provide useful services and its communication strategy for leveraging proximity of users living 300-600m around the hubs, as well as local shops. A key challenge is to adapt the parking space and make it a pleasant, useful and safe place for people.



INNOVATIVE MOBILITY MANAGEMENT IN REAL ESTATE DEVELOPMENTS IN BREMEN

The example of Bremen shows how the concept of mobility management and mobility hubs can be applied to housing, with similar impacts to neighbourhood car-sharing based mobility hubs. Households use cars significantly less frequently and correspondingly use bicycles and/or public transport significantly more often.

To achieve this, the Municipality of Bremen modified the local Parking Regulation for Housing Developments (Mobilitäts-Bau-Ortsgesetz) to a framework that enables estate developers to reduce costs and space consumption through requiring them to offer less parking while simultaneously requiring them to create sustainable mobility management concepts. These concepts can include measures such as the provision of car-sharing memberships, public transit passes, the integration of car-sharing stations on the site itself, as well as shared cargo bikes, micromobility and much more. This framework for mobility management in new developments was voluntary from 2013-2022. As of October 2022, innovative mobility management measures are mandatory for all new housing and commercial developments spaces.

A study of the mobility concepts implemented on a voluntary basis has already shown positive impacts on sustainable travel behaviour – beneficiaries (or 'users') of the mobility management measures used public transport and bikes more, and used a car significantly less than their direct neighbours (or 'control group'). This impact could be amplified with more extensive communication to potential residents before, during and after moving in, as this is a crucial moment for mobility behaviour change. As of October 2022, developers are also required to devise a communication concept to accompany their mobility concept.

MEANS OF TRANSPORT / MODAL SPLIT	USERS	CONTROL GROUP	BREMEN TOTAL
Motorised individual transport as a driver/ passenger	29%	**40%**	36%
Public transport	**17%**	10%	15%
Bicycle / e-bike / cargo bike	**30%**	23%	25%
Walking	24%	27%	25%

Data from the 2021 report "Effectiveness of Mobility Management Measured Implemented within Bremen's Parking Code"

RECOMMENDATIONS

The following recommendations concern networks of hubs with a special focus on the new types of hubs.

- **If you wish to promote a sustainable multimodal lifestyle, you will need mobility hubs as infrastructure** to support a shift away from private car usage and a focus on local development. It helps to create places for people, to bring services and assets closer to the users and to enhance accessibility while fostering mobility that benefits both the planet and people. More specifically, mobility hubs promote multimodal mobility services that complement public transport, the multimodal reallocation of public space and the establishment of activities that encourage walking, cycling, public transport and shared mobility services. Mobility hubs can act as a catalyst for local development and future commercial activities and have the potential to minimise the need to travel by bringing services closer to people.

- With each new mobility hub, the value for the user will increase exponentially, which is why **mobility hubs need to be implemented in a scalable network.** To encourage multimodal infrastructure in a systematic way, it is key to integrate mobility hubs in strategic planning documents as well as in sectoral plans (SUMPs, urban development plans, housing plans with parking requirements). A long-term planning approach that goes beyond administrative borders strongly supports the success of mobility hub usage, especially in metropolitan regions. To facilitate the integration of different mobility hubs, including those that are privately led, consider the potential of MaaS to enable visibility of the hubs and availability of services at the hubs.

- For mobility hubs to flourish, **stakeholders' involvement as well as clear leadership on branding, design and communication are vital.** Mobility hubs are based on a thorough understanding of users' and residents' needs as well as those of providers. It also requires a recognition that a hub is in continuous development and that every location is different. Implementing a strong and memorable branding for mobility hubs, supports better awareness, acceptance and recognition. To make the best of mobility hubs, you must actively stimulate and encourage a multimodal ecosystem made up of different mobility service providers as well as supportive stakeholders. This includes small businesses such as bike repair shops, start-ups or associations.

"If you wish to promote a sustainable multimodal lifestyle, you will need mobility hubs as infrastructure to support a shift away from car usage."

- For mobility hubs to develop, **you will need to establish a regulatory framework, clear responsibilities and multilateral commitment to a stable offer,** while streamlining coordination process within your organisation as well as with authorities and partners. **Mobility hubs must be stable enough to balance the volatility of the sharing mobility market and flexible enough to adapt to emerging needs** in terms of scope, kind of mobility and additional services. A regulatory framework is needed for the functional reallocation of public realm/existing space for transport functions as well as for the use of mobility hubs by private service providers and - in some cases - public service providers.
- **It is important to work on the viability of mobility hubs,** as they cannot be considered viable from day one. **Their implementation and operation can be reinforced** by considering the context, the involvement of civic society, the value delivered to service operators and the opportunities for cross selling between different services. A key consideration is to focus public sector funding on the right components, and not on commercially viable operations in order to deliver the widest range of benefits.

“For mobility hubs to develop, you will need to establish a regulatory framework, clear responsibilities and multilateral commitments to a stable offer.”

Frame & Mobilise, for the Smarthubs project, funded by Innoviris

CONCLUSION

With mobility hubs, authorities and public transport operators have a new tool for delivering a multimodal mobility offer. Hubs' urban acupuncture approach, or hyper-local interventions, to public space can move its design away from car-centric to one centred on people. By focusing on making active, shared and public travel modes the simplest choice for people, mobility hubs can deliver wider benefits and unite different stakeholders in the transition to sustainable mobility.

This is an official Policy Brief of UITP, the International Association of Public Transport. UITP represents the interests of key players in this sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and the industry. UITP addresses the economic, technical, organisation and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.

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