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Mobility Hubs Guidance

Interreg North Sea Region SHARE-North
European Regional Development Fund
EUROPEAN UNION

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supporting shared transport

This CoMoUK guidance on Mobility Hubs has been created in conjunction with partners in the EU Interreg North Sea Region “SHARE-North” project for city and regional authorities, consultants and partners.

As well as an introduction to the concept and benefits of mobility hubs, the document provides advice on tailoring hubs to local scenarios illustrated with case studies.

The guide signposts the reader to everything needed to take a mobility hub from concept to reality with details on available resources on branding, technical drawings and monitoring of impacts.

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SHARE North

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Mobility hubs create space designed specifically to house public and shared mobility modes and improve the public realm for local residents and businesses as well as travellers. The concept is being applied to the streetscape in many European and North American cities.

There have never been so many pressing reasons why we need to rethink how we move and allocate street space to travel. From addressing air quality problems, decarbonisation of the transport sector, supporting the active travel agenda, decongesting and revitalising city centres. Improving public realm is a win-win even for businesses on these streets with evidence for improving footfall and spending.

Innovative tools are required to support this transition, to manage space for public transport and shared mobility modes which allow us to make better use of space dominated by inefficiently used private cars.

Public transport is the original shared mode, however the lines between public and shared transport are blurring. There are many new shared modes from bike share schemes to, back to base and one-way car share, shared taxi and buses which are collectively changing behaviour and user needs. There is a growing list of operators clambering to make more efficient use of the spaces being otherwise typically taken by a small number of individuals a day.

What is a mobility hub?

The definition below has been created building upon European best practice:

A mobility hub is a recognisable place with an offer of different and connected transport modes supplemented with enhanced facilities and information features to both attract and benefit the traveller.

A mobility hub is designed and is spatially organised in an optimal way so as to facilitate access to and transport between modes, including human-powered and shared modes, as well as provide extra transport-related and digital services.

Spread over an area, mobility hubs provide an unambiguous recognisable network of defined areas providing services to connect people through sustainable travel and improve the public realm.

Mobility hubs will generally, but not necessarily, be situated at significant points on major public transport corridors as they form a critical element in supporting the role of high-frequency public transport within cities and large towns.

Mobility hubs have three key characteristics:

- Co-location of public and shared mobility modes,
- The redesign of space to reduce private car space and improve the surrounding public realm,
- A pillar or sign which identifies the space as mobility hub which is part of a wider network and ideally provides digital travel information.

In the future the planning of mobility hubs will need to be incorporated into local, regional and national land use policies to ensure space can be allocated.

By looking at these alongside a spatial analysis of economic and social activity it is possible to optimise the planning of hub locations to the requirements of the area.

Credit: Jan De Graeve

Benefits of mobility hubs

- **Smarter sustainable transport planning**
  Mobility hubs reclaim the kerb for sustainable and equitable modes reducing the dominance of the private car and associated problems of congestion, carbon emissions, air quality and social exclusion. Creating a hierarchical network of such hubs, creates an attractive, integrated, viable alternative mobility lifestyle.

- **Convenience**
  Mobility hubs provide convenience for multi-modal trips, with the possibility of seamless switches and improved links between different layers of transport such as the core public transport network and shared services.

- **Choice of modes**
  Mobility hubs provide choice for different journeys and needs. They encourage people to think multi-modally and are a complement and enabler of full digital integration of services. (Mobility as Service). This then in turn allows people to reduce their car use and the associated impacts.

- **Plugging the gaps in the public transport network**
  In suburban areas they can perform a sustainable 'first or last mile' connection to the nearest bus or railway services, in a cost effective way. They can provide flexible 24 hour services as a sustainable, accessible, alternative to private car ownership.

- **Improves safety and more comfortable**
  Mobility hubs by design offer a safer and more comfortable dwell time which will lead to improved access for more vulnerable users.

- **Improved accessibility**
  It is possible for mobility hubs to provide space for adapted and inclusive modes as part of overall transport solutions.

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All of these lead to a high concentration of demand, increased patronage and viability of services.

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- **Raises the profile**
  Mobility hubs raise the profile and visibility of the range of shared and sustainable travel modes, which provides a new status and appeal, with the associated benefits of reduction in car use.

- **Improved public realm**
  Mobility hubs allow space to be reorganised for the benefit of pedestrians, cyclists and business owners addressing parking problems and creating more pleasant urban realm. Converting space previously used only for private parking to green space, waiting areas and additional facilities makes for a better experience for the traveller, increasing patronage.

- **Support densification of developments**
  Mobility hubs provide an impetus for change in reducing parking provision, creating high density development and changing driving habits. In some cases developer contributions can be used to fund mobility hubs.

- **Management of emerging services:**
  In addition they help to solve the issue of managing "street clutter" from dockless / free floating micro-mobility services and provide a natural home for EV charging infrastructure.

CoMoUK is working with SHARE-North partners to create a monitoring framework for mobility hubs to allow the impacts of mobility hubs to be more clearly understood and quantified.

Components of mobility hubs

Mobility hubs can be seen as an interface between the transport network and spatial structure of an area. Mobility hubs include a range of different components, This diagram illustrates some of the most commonly used components:

A1: Mobility components: Public Transport

A2: Mobility components: Non - public transport

B: Mobility related components

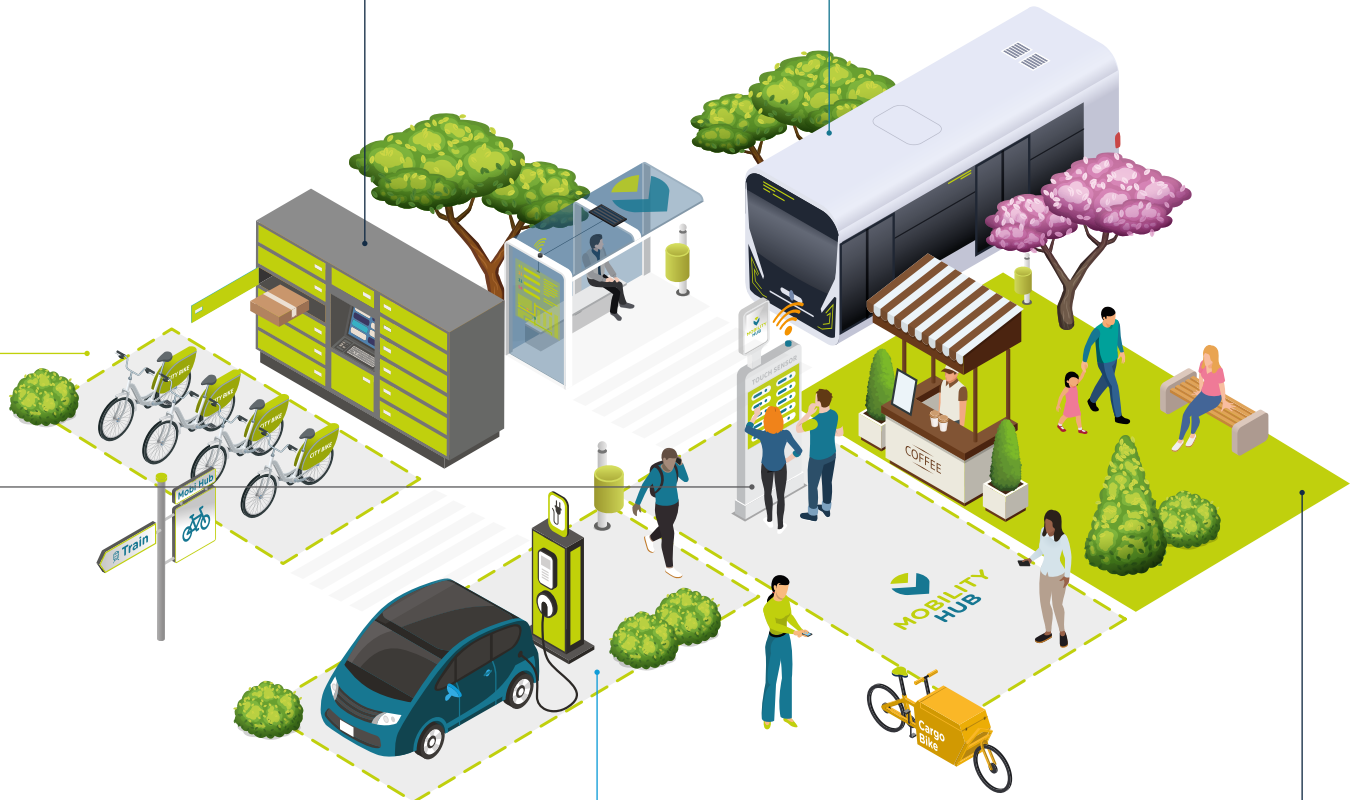
C: Non-mobility & Urban realm improvement

C: NON-MOBILITY & URBAN REALM IMPROVEMENT

- Package delivery lockers
- Mini fitness or play area
- Café and Co-working space
- Outdoor water fountain

A1: MOBILITY COMPONENTS - PUBLIC TRANSPORT MODES & OTHER PICK UP /DROP OFF:

- Bus
- Tram
- Rail
- Demand responsive mini-buses (all one points)
- Ride hailing, (shared) taxis



A2: MOBILITY COMPONENT: SHARED MOBILITY

- Car share: back to base, one way, electric.
- Bike share: back to base, one way, electric.
- Cargo bike share, cargo bike logistics store
- Other future micro-mobility options e.g. e-scooters, moped share
- Ride sharing

Branded pillar

Mobility hubs require a prominent sign or pillar with a common brand to make them visible to the public. The inclusion of a digital elements in a pillar can provide:

- Access to a local transport website for information on services
- A journey planning service for multi-modal trips
- A way finding option for local walking and cycling trips
- Registration and ticketing
- Customer services.

B: MOBILITY RELATED COMPONENTS

- EV car charging
- Bike parking, (Standard, covered, restricted access, EV charging)
- Bike repair, pumps
- Digital pillar, (transport info, ticketing, way finding, walk distances, local services
- Child car seats, bike seats & trailers
- Community concierge parcel last mile delivery

C: NON-MOBILITY & URBAN REALM IMPROVEMENT

- Improved public realm, safer crossings, step free access, road repairs, adjustments for disabilities.
- Waiting area space, covered, seating, planting, artwork, kiosks for coffee etc.
- Wi-Fi, phone charging

Locations and contexts

Mobility hubs can developed in a range of contexts from city centres to rural areas. They are a tool to enhance housing developments, business parks, hospital sites, transport interchanges or EV charging hubs.

There is no "one-size fits all" design for the mobility hub. Tailor-made solutions need to be created for each location using experience from other countries.

Mobility hubs need to be adapted to the setting both in terms of the type of components and their scale, for example a city centre rail hub may offer more space to public transport and bike share bikes whereas a hub in a market town centre or transport corridor interchange may focus on providing a smaller number of vehicles but greater choice of flexible travel options.

By overlaying the type of place such as workplaces, housing development and suburban setting with the local geographical factors and trip generators each area will be able to create a set of combinations which can be replicated across their area.

The following table highlights issues and possible combinations of components to consider in each area.

Context & considerations	A1 - Mobility components: Public transport	A2 -Mobility components: Non public transport	B - Mobility related components	C -Non-mobility & Urban realm improvement
Large interchanges / City hubs (Larger multi-purpose or a network of smaller mobility hubs). High passenger numbers for starting / ending journeys / transferring between modes. Potential to convert private car and taxi trips to sustainable modes by raising the profile and improving links. Space may be limited meaning there may be a need to focus on priority sustainable, efficient modes and links to last mile modes	• National & regional rail • Tram • Local bus • Taxi	• Car club bay - electric & conventional • Bike share -electric & conventional	• Large scale cycle parking • Digital pillar, (transport info, ticketing, way finding, walk distances, local services). • EV charging bays	• Covered waiting area • Improved public realm, safer crossing, road or pavement repairs • Parklet or community art • Kiosk for refreshments
Transport corridor, smaller interchanges / Linking hubs. Focus on services which link residents in surrounding areas to core network services. An opportunity to offer greater choice to people for first and last trips	• Regional rail or tram • Local bus • DRT feeder service • Taxi	• Back to base car club bay with choice of van / estate car • Bike share - electric & conventional • E-cargo bike share / trailers	• Secure cycle parking for connecting travellers • Digital pillar, (transport info, ticketing, way finding, walk distances, local services). • Freight logistics hub • EV charging bays	• Covered waiting area • Safer crossing & street repairs • Package delivery lockers • Wi-Fi /phone charging • Play equipment • Kiosk for refreshments
Business park / new housing development hubs High density of users. A need to offer commuting links and back to base solutions.	• Regional rail or tram • Local bus • DRT feeder service	• Back to base car club bay with choice of van / estate car • One-way, shuttle or back to base bike share • E-cargo bike share / trailers	• Secure cycle parking • Digital pillar, (transport info, ticketing, way finding, walk distances, local services).	• Covered waiting area • Improved public realm • Art / planting / play equipment • Package delivery lockers

Locations and contexts

Context & considerations	A1 - Mobility components: Public transport	A2 -Mobility components: Non public transport	B - Mobility related components	C -Non-mobility & Urban realm improvement
Suburbs / Mini hubs Lower density of people with higher private car ownership, mobility hubs can be designed to address local issues e.g. car club spaces to take away issues of over-crowded streets, bike share or secure cycle parking for flats without space for bike storage or DRT to supplement restricted bus services.	• Local bus • DRT feeder service	• Back to base car club bay with smaller vehicles	• Secure cycle parking • Bike repair stand / pump • EV charging bays	• Traffic calming & street repairs • Parklet • Community exercise equipment
Small market town, village hubs The extra space in these types of areas can be used to provide a wider range of services as long as there is critical mass to ensure there is viability. Assess local needs such as the limited public transport with pools of shared e-bikes or 2+ ride share stops.	• Regional rail or tram • Local bus • DRT feeder service • Taxi	• Back to base car club bay with choice of van / estate car • Back to base bike share • E-cargo bike share / trailers	• Bike repair stand / pump • EV charging bays	• Covered waiting area • Package delivery lockers
Tourism hubs Focus on services with easy registration for visitors which can then provide a seasonal boost to the viability of service for rural residents. Ideally well integrated with journey planning and wider ticketing services (e.g. combined travel with destination entry). While tourism areas are often in rural areas, they can also be areas of high demand where having a tangible, focal point for sustainable modes especially for visitors unfamiliar with the area. Could also apply to tourist destinations in more urban areas.	• Regional rail or tram • Local bus • DRT feeder service	• Back to base car club bay with choice of van / estate car • One-way, shuttle or back to base bike share • E-cargo bike share / trailers	• Secure cycle parking • Digital pillar, (transport info, ticketing, way finding, walk distances, local services).	• Covered waiting area • Improved public realm • Art / planting / play equipment • Package delivery lockers

Optimal scales of mobility hub development

For optimal impacts mobility hubs should be planned as network integrated with public transport and a key part of planning strategy. In many areas the development of mobility hubs may be may an incremental upgrade of sites as opportunities arise such as:

- Additional or refurbishment of a new housing or commercial development
- Upgrade of a bus or tram route stops
- Utility service work
- Introduction of electric vehicle infrastructure

City centres would ideally become a network of larger and smaller mobility hubs carving out additional space for the increased range of sustainable mobility services. New strategic housing and mixed use developments should be designed with mobility hubs providing local level access connecting with a larger central hub with onward connectivity to nearby bus, rail and town centres.

Autodelen.net, the Belgian shared mobility organisation has taken a regional approach to mobility hub planning in Flanders and provides a useful example of calculating scale. The principle was that every residential centre or activity cluster needs at least one local mobility hub. For cores with a regular tram line, the stops are used as the best location, for other centres, a potential node is located which fits with local mobility needs. Their strategy assumes one mobility hub per 1,000 inhabitants outside the main towns and one mobility hub per 2,000 inhabitants in the urban core area.

Case studies

There is already a great deal of experience with setting up mobility hubs in urban area and some is emerging in more rural and tourist areas. Below are some examples of tailor-made solutions that have been created through the experience from the pilot projects of SHARE-North.

CASE STUDY 1: Urban transport hub - Leuven, Belgium

Leuven station is a public transportation hub with a large number of high-frequency railway lines, city and regional bus lines and is already an interregional mobility hub for the city centre.

The already extensive mobility offer is strengthened with the addition of sharing cars, sharing bicycles, taxis, parking spaces for bicycles and car, drop off zones. The additional services in and around the mobility hub have been expanded and improved and the surrounding space is well integrated in its environment with high quality accessibility and traveller comfort.

CASE STUDY 2: Small town, transport corridor, business park. - Saint Bernard, Belgium

Saint Bernard is a small town in the Lubbeek municipality, on the road from Leuven to Diest with an improved bus service. The mobility hub offers a wide range of mobility services: the HOV line, bus feeders, shared cars, bicycle and car parking, there is a bicycle highway nearby.

The redesign of the transit provided the opportunity for the creation of a qualitative public space. The redevelopment of an industrial site in the core also gave the opportunity for improvements and the additional of services.

CASE STUDY 3: Larger transport interchange - Vienna, Austria

This example from Austria illustrates how the impetus can come from different stakeholders. It is developed by Wiener Linien the company running most of the public transit network in the city of Vienna. It demonstrates digital as well as physical integration through the Wiener MaaS platform.

The WienMobil station Simmeringer Platz, right next to the U3 terminus Simmering, offers all this. Whether you borrow a car-sharing vehicle, safely lock your own bike in bicycle boxes, rent an e-bike or charge your e-vehicle - the WienMobil Station leaves nothing to be desired. “In this way, we are linking public transport even better with rental offers for further mobility.

Our passengers in Simmering can quickly and conveniently switch between bus, tram and subway as well as the sharing offers. This is how we offer them the best mobility offer for all requirements, “says Wiener Linien Managing Director Alexandra Reinagl.

The WienMobil Station offers you these features:

- E- bike sharing and a cargo bike from Simbike
- Bike boxes from Safetydock to park your own bikes
- Car sharing of city car
- E-charging station of Wien Energie
- As well as a bicycle pump, seating and an information terminal with touch screen.

CASE STUDY 4: Transport corridors and suburbs - Bremen, Germany

The Municipality of Bremen has created a network of mobility hubs or “mobil.punkt” in the public realm, starting in the city centre and along transport corridors as early as 2003 and expanding into residential and more suburban neighbourhoods over the past few years.

The network currently consists of more than 40 “mobil. punkte” – 10 of which are larger, centralised hubs while the remainder are smaller in scale and serve as microhubs in neighbourhoods were daily trips start. This network will be continuously expanded by 8-10 new hubs each year to ensure equality of coverage throughout the city. Locations link the extensive tram system and local buses to shared mobility services and cycling infrastructure – while space for car club services always builds the core of the mobility hub.

The City has the clear aim to reduce space taken up by private cars and redesign public space to improve conditions for pedestrians and cyclists through reserved spaces for mobility hubs, a strategy that is anchored in Bremen’s Car-Sharing Action Plan, Sustainable Urban Mobility Plan and recently, the City-State’s own Carsharing Law.

In recent research, it was proven that, in Bremen, each station-based car share / club car removes 16 vehicles from the roads. The hubs have become an impetus for reclaiming public street space and positive community engagement while reducing the dominance of the car.

CASE STUDY 5: City centre, suburbs and new developments - Bergen, Norway

The City of Bergen is leading on the development of mobility hubs which link the car share / club and bike share services to the local public transport network, bike parking facilities and other relevant transport services.

The first of the hubs was launched in 2018 with a network being rolled out across the city gradually with city authority funding. They are positioned around the city centre and in nearby residential areas.

All of the hubs / mobilpunkt include electric charge points for the shared vehicles and some include digital pillars offering travel information. The photographs are taken at a new student housing development.

In the old urban area of Møhlenpris, which is currently being developed as a car-free neighbourhood, the three new mobility hubs have led to a significant decrease (30% in two years) in private car ownership.

Better access to car sharing and bicycles means that street space can be reclaimed from parked cars and tuned into places for people to stay and play.

Implementation

Allocating resources

The Municipality of Bremen in Germany estimate that their programme of developing mobility hubs across the city is currently taking 20% of one officer's time to manage the planning process. The whole process can take around a year, sometimes 2 years, refer to the timeline below. The availability of staff for engaging external partners may become a restricting limiting factor to implementation. It is expected that with experience timescales can be streamlined and multiple hubs can be implemented in parallel.

Once the elements of the programme are identified, these can be broken down and a budget developed. The cost of implementation will vary considerably with the context, scale and opportunity to piggy-back on other development programmes.

An existing funding programme for development of EV infrastructure, a bike share scheme or S106 contributions from a new housing scheme may provide a proportion of resources required or hubs may need to be developed gradually as local resources allow.

The ideal scenario would be for a cross departmental approach to planning and funding to emerge.

Site selection

The change of purpose of public space requires consultation with many groups including, local residents, transport providers, police, fire brigade, utility providers, local community groups, disability groups, environmental services and so on. Organising group site visits with the range of representatives is an efficient way to gain collective agreement. Photographs should be used to remind stakeholders what was agreed. Development of the mobility hub is an opportunity to solve local issues such as road safety, pavement parking or lack of cycle storage. The use of a community website to map sites and highlight local issues supports a collaborative development approach.

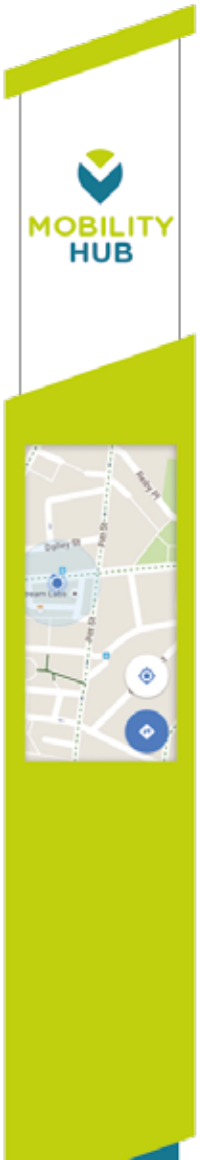
Factors to examine with site selection include:

- Visibility of the area to passers by to raise the profile and address safety and vandalism concerns.
- Sufficient density of residents, businesses or through flow of passengers to ensure sufficient users.
- Existing modes to link to and gaps to fill.
- Safety issues, lighting, obstacles.
- Access for those with disabilities.
- Sufficient space, pragmatic assessment of what can be included, it may be necessary to scale down designs to fit an area.
- Make sure the plans support the local land use plan.
- Consider adding environmental building practices such as solar panels, living roof for shelters, sustainable building materials, and rainwater filtration paving with new public realm changes.

Signage and branding

Mobility hubs need a clear identifier on the street in terms of a pillar or sign to ensure they are visible for users and a sense of place is created. Many cities have included a static or digital information in the pillar.

The use of a strong brand on the signage across a network will help to raise the profile of the mobility hubs, provide a uniform identity and promote a shift to a multi-modal lifestyles. There are several examples of this from other countries. CoMoUK is exploring options for creating a UK wide brand developed from the Belgian Mobi-Punt.



CoMoUK Support and Resources

See www.como.org.uk/mobilityhubs

1. Advice

CoMoUK is able to provide bespoke guidance on developing mobility hubs for specific contexts. This will involve providing expertise and advice on the design, planning, consultation, implementation and monitoring phases, informed by experience of the SHARE-North partners.

There is also the opportunity to link into a network facilitated by CoMoUK of local authorities and partners developing on mobility hubs in the UK.

2. Technical drawings and design standards

CoMoUK will be developing technical guidance with design standards and plans from example and actual hubs.

3. Communications materials

Targeted communication materials have been developed and tested with audiences such as residents, entrepreneurs and potential users. CoMoUK and SHARE-North can share behavioural campaigns, advertisements, animations and various templates developed for shared mobility.

4. Monitoring

CoMoUK and SHARE-North are developing a standard for measuring the impact covering areas such as increases in patronage, demographics of users, reported benefits in terms of convenience and safety.

Please contact
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us for details.

Lessons Learnt

Project partners in the SHARE-North project have shared their experience of developing mobility hubs. Their key points are:

- Tailor the mobility hub to the local area and needs.
- Maximise the support and input of community groups.
- Work closely with service providers to choose sites and ensure alignment of planning e.g.: linking EV charging to order or vehicles.
- Be open to the development of hubs to sometimes come from organic bottom up initiatives to complement top down planning.
- Be patient and be realistic about limitations – working with multiple partners on a complex multi- service pioneering development may not happen fast or easily.
- Plan for the upkeep of the hubs and ensure there is a budget and partner responsible for maintenance of the hub.

Develop a branding and communications plan for the introduction and long-term expansion of hubs with differentiated communications at different stages and for different audiences.

- **Politicians:** provide a mix of evidence on the impacts of mobility hubs alongside site visits to illustrate first- hand experience of problems and solutions e.g. pushing a buggy down a street with parking pavement or a visit to experience the convenience of having the choice of multiple modes at a tram stop.
- **Media:** involve press on site visits to understand the problems first-hand and capture local stakeholder views.
- **Business owners:** Share evidence for sustainable travel promoting local shopping habits and boosting the local economy
- **The public:** promote the personal convenience and lifestyle benefits, fun, new technology.

Timeline

Total time / overlaps	Months	Activity	Notes
Months 0-2	2	Phase 1 consultation	Consultation to gain local support and identify location, carry out site visits and agree the key elements and design
Month 2-4	2	Design phase	Specification converted to technical design documents
Month 3-6	3	Phase 2 stakeholder engagement	Public promotion campaign and agreements in place with all stakeholders
Months 7-8	2	Tender service providers	This phase will depend on whether there are existing service provider contracts or new tenders are required. A batch of hubs may be done at once. This phase can only begin once specifics are known, e.g. EV charging, hub size, type of signage.
Month 9	1	Tender for construction	
Months 10-12 or 10-15	2-5	Building and public information	Time depends on availability of construction team, local services and local conditions.
On-going		Monitoring, report, feed into planning of next batch	

Contact details

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Links and further reading

Mobility hubs in Belgium
https://www.mobipunt.be/

Mobility Hubs in Netherlands
https://www.reisviahub.nl/

Mobility Hubs in Austria
https://www.tim-oesterreich.at/graz#

https://share-north.eu/topics/mobility-hubs/

https://sharedusemobilitycenter.org/build-your-own-mobility-hub-7-lessons-for-cities-from-bremen-germany/

Quality Streets by John Austin Mobihub ltd.
https://www.transportxtra.com/shop/books/?id=493

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