



# ShareDiMobiHub

# Strategy for mobility and alternative forms of mobility in the Capital Region Capital Region of Denmark DELIVERABLE 2.14

28-08-2025

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# Summary sheet

Project Name	ShareDiMobiHub
Title of the document	Strategy for mobility and alternative forms of mobility in the Capital Region
Deliverable	D 2.14
Work Package	2
Programme	Interreg NSR
Coordinator	Province of Utrecht
Website	https://www.interregnorthsea.eu/sharedimobihub
Author	Søren Bom, Kia Madsen
Status	Public
Dissemination level	Public
Reviewed by	Jelten Baguet, Mpact
Submission date	
Starting date	September 2022
Number of months	36

# Project partners

Organisation	Abbreviation	Country
Province of Utrecht	ProvU	Netherlands
Capital Region of Denmark	CRD	Denmark
Vestfold county	VFK	Norway
Subpartner: Statens vegvesen	SVV	Norway
Subpartner: Tønsberg kommune	тк	Norway
Promotion of Operation Links with Integrated Services	POLIS	Belgium
City of Amsterdam	AMS	Netherlands
City of Leuven	LEU	Belgium
University of Antwerp	UAntw	Belgium
Transport Authority for the Amsterdam Region	VRA	Netherlands
Mpact	Mpact	Belgium
Way To Go	Auto	Belgium
City of Rotterdam	ROT	Netherlands
Hamburg University of Applied Sciences	HAW	Germany
University of Applied Sciences Utrecht	HU	Netherlands

# Document history

Version	Date	Organisation	Main area of changes	Comments
0.X				

## Table of Contents

Su	mmary sheet	2			
Pro	oject partners	3			
Do	ocument history	4			
Lis	t of figures	5			
1.	Introduction	6			
2.	Purpose and vision	7			
3.	Why a strategy for shared mobility and alternative forms of mobility?	9			
	3.1 A need for a unified approach	9			
	3.2 A need to think differently	9			
	3.3 Demand for knowledge and experience regarding shared mobility	9			
4.	Potentials of shared mobility	11			
	4.1 Changing transportation habits takes time	11			
5.	Sub-goals of the strategy	12			
6.	Shared mobility plays a role in the regional mobility system	13			
7.	A regionally coherent network of mobility hubs	15			
8.	Implementation of the strategy	17			
Th	e ShareDiMobiHub Consortium	18			
	st of figures				
_	gure 1: Mobility hub at DTU Science Park, Rudersdal Municipality as part of the GEMINI project gure 2 Shared bikes at Herlev Hospital and a S-train station as part of the shared mobility along the				
_	ht rail projectht rail project				
_	gure 3: Characteristics of the different geographical areas in the Capital Region				
Fig	gure 4: Mobility hub at Rungsted Kyst train station, Denmark	15			
Fig	Figure 5: Mobility hub at business area, Glostrup, Denmark				
Fig	gure 6: Mobility hub at Holte Midtpunkt, Holte, Denmark	15			
Fig	gure 7: An example of how the concept has been integrated into the urban space in Utrecht, the				
Ne	etherlands	16			

## 1. Introduction

This strategy is developed as a part of the Interreg North Sea project, ShareDiMobihub. The consortium consists of 13 partners and 2 sub partners, and includes cities, regions, research institutes and network organizations, all working together to make urban mobility more sustainable and accessible through shared mobility. The Capital Region of Denmark is a part of the project as a follower partner, meaning that the main goal for us in the project is to increase our knowledge base through learning from experiences and know-how of the more experienced partners in the project.

The Capital Region is Denmark's largest region and has a very diverse geography. The region comprises 29 municipalities, including the Copenhagen metropolitan area, the suburbs, and rural areas, and has over 1.9 million inhabitants.

The Capital Region of Denmark differs slightly from the other cities and region partners in the project, as we did not have any mobility hubs at the start of the project, and mobility hubs were a relatively new and untested concept. Therefore, our work is also largely about starting up and trying to work more systematically and strategically with shared mobility and mobility hubs.

With this acquired new knowledge of shared mobility as well as the planning and implementation of mobility hubs, we have developed this strategy for promoting shared mobility and mobility hubs in our region, the Capital Region of Denmark.

In addition to the extensive knowledge we have gained through the project, we also had an ongoing dialogue with transport companies and, in particular, municipalities in our region about the development of shared mobility and mobility hubs. This knowledge has also been used extensively in the preparation of the strategy.

## 2. Purpose and vision

In recent years, the spread of shared mobility solutions has gone from being a trend to an established transport option. Regions and cities therefore need to consider in order to support the potential benefits of making the overall transport offering more attractive and reducing dependence on private cars.

We can see that there is untapped potential in linking shared mobility to our existing public transport services. Learnings from our recent shared mobility pilot projects in the Capital Region show that people use shared mobility in combination with public transport, either directly as part of their overall journey or during their daily or weekly commute to work, leisure activities, or education. In <u>user surveys</u>, we observe that shared mobility can increase the use of public transport and reduce the use of private cars, for example by replacing car journeys and postponing or completely abandoning the purchase of a car.

**Purpose of the strategy:** To improve mobility and strengthen public transport by supporting the development of shared mobility and alternative forms of mobility in the Capital Region, with a view to increasing active transport and attracting more passengers to public transport.

**Vision:** To create a well-functioning, coherent, and sustainable mobility structure in which shared mobility, alternative forms of mobility and mobility hubs complement public transport and enable individual travelers, both in urban and rural areas, to travel more sustainably and contribute to reducing congestion, CO2 emissions, and noise.

Shared mobility is typically widespread in larger cities, where high population density makes it easier for providers to achieve economic sustainability. In Denmark, these providers are private companies, whereas outside the major urban centres, the picture is somewhat different, as the population density is lower, and it is therefore more difficult for private providers to make ends meet financially.

From a regional perspective, it is relevant to explore shared mobility and alternative forms of mobility in these areas for several reasons:

#### Improved access to mobility - even outside major cities

In rural areas and smaller towns, access to public transport can be challenging, as there are often fewer bus and train connections and a lack of or poor connections between public transport services. Shared mobility can offer flexible solutions and thus reduce some of the transport barriers that can arise where public transport services are less frequent.

## Reducing car dependency and congestion

Shared mobility can be an economic and environmental advantage, as the solutions can reduce the need for private car ownership while offering flexibility. By promoting the use of shared transport in combination with existing public transport, the number of cars on the roads can be reduced, which reduces CO2 emissions and noise pollution, even in smaller communities.

## Increased social inclusion and health

Shared mobility can make it easier for older people, young people, and people on lower incomes to get around, especially if they are unable to or do not want to own a car. It can strengthen social inclusion in areas with limited transport options. In addition, shared mobility can support health through active forms of transport such as shared bicycles.

### Better access to jobs and education

Introducing shared mobility schemes can increase access to business areas, workplaces, and educational institutions that are not located near stations or that may be difficult to serve locally by public transport. We are already seeing more collaborations between private companies, educational institutions, and shared mobility providers, and we are experiencing increasing demand from these groups.

#### Testing new models for alternative forms of mobility

Rural areas and smaller towns can be good test areas for new technologies and models in shared mobility and alternative forms of mobility, such as local bus concepts, which can later be scaled up to more areas. Examples include electric car sharing, local bike sharing, carpooling, and taxis with local drivers, or perhaps even self-driving minibuses, where development is in high gear.

## 3. Why a strategy for shared mobility and alternative forms of mobility?

## 3.1 A need for a unified approach

Experience from abroad and the Capital region's own projects show that coordination across municipalities and transport companies is crucial to achieving greater impact and ensuring a more unified offer for citizens, while also creating a more sustainable business foundation for providers—especially outside the largest cities. An overall strategy and implementation can help ensure that shared mobility is not only concentrated in densely populated urban areas, but also extended to suburbs, more rural railway stations, and village communities or larger business parks—and that services are operated in a consistent and reliable manner.

This strategy sets the direction for the development of shared mobility and alternative forms of mobility and will thus form the basis for further cooperation between relevant actors in the capital region. The strategy aims to make it easier for municipalities, regions, transport companies, and providers of alternative forms of mobility to create a common framework and a unified approach to linking shared mobility, alternative forms of mobility, and existing transport services.

## 3.2 A need to think differently

Shared mobility and alternative forms of mobility are initiatives that can supplement traditional public transport and are included as relevant elements in the Ministry of Transport's Expert Committee's recommendations on future mobility. This calls for a rethink, whereby the strategic main network and other scheduled public transport services must be supported to a much greater extent by a range of new flexible and needs-based transport solutions.

## 3.3 Demand for knowledge and experience regarding shared mobility

There is considerable interest in shared mobility among municipalities, as it can support their climate goals in the transport sector, and there are good examples of local trials and tests. However, municipalities are calling for more experience, knowledge and greater coherence so that shared mobility solutions can function uniformly at a regional level, as most of the municipality's citizens, leisure travellers, students, and workers travel across municipal boundaries.

In Denmark, it is primarily DSB and their shared mobility program, as well as private companies offering car sharing, carpooling, or bike sharing, that are driving development. However, in recent years, the Capital Region, together with municipalities, has carried out pilot projects to link shared mobility to existing public transport via local mobility hubs.

In Rudersdal, located in the peri-urban area of the region, we have tested shared mobility consisting of shared bicycles and shared cars, both free-floating and station-based, through the <u>GEMINI project</u>.



Figure 1: Mobility hub at DTU Science Park, Rudersdal Municipality as part of the GEMINI project

And in another project called <u>'Shared mobility along the light rail'</u>, shared electric bikes is being tested through a corridor of nine municipalities along the light rail in the suburban area of Copenhagen including two of our hospitals in the region.



Figure 2 Shared bikes at Herlev Hospital and a S-train station as part of the shared mobility along the light rail project.

## 4. Potentials of shared mobility

Shared mobility has the potential to transform mobility, benefit the environment, alleviate congestion, and change how citizens travel in their daily lives and leisure time, both in and outside cities. However, it requires the right conditions and good planning to ensure that shared mobility can contribute to the green transition of the transport sector.

Projects in the Capital Region show a strong link and thus potential between shared mobility and public transport. User surveys show that approximately 30% of all trips, whether by shared bicycle or shared car, are related to public transport. At the same time, we know that many users, especially shared bicycle users, believe that shared mobility contributes to increasing their use of public transport.

Shared mobility solutions therefore have the potential to be so-called 'first and last mile' solutions for public transport, thereby supplementing public transport and adding increased flexibility to the overall transport options for individuals or families. Shared mobility can also be a supplement to public transport if there is a need or desire to use a car or bicycle during daily or weekly transport without having to own the car or bicycle.

## 4.1 Changing transportation habits takes time

Shared mobility and alternative forms of mobility should not be a replacement for public transportation, but rather a supplement to it. However, it will be inevitable that some shared mobility trips will replace trips by public transport, private bicycle, or walking.

Changing transportation habits takes time, so it is not enough to look at what individual trips replace in isolation, but rather to look at how shared mobility affects transportation patterns overall and over time. For example, it may be relevant to investigate how shared mobility affects perceptions of cars, including car use and ownership now and in the future, the use of public transport, or the opportunities that shared mobility offers individuals.

Shared mobility and the use of alternative forms of mobility, such as carpooling, are not measured or collected in current transport surveys, but as the expected development progresses, it will be necessary to monitor their use more closely than is currently the case. More knowledge is needed about the use of shared mobility and alternative forms of mobility and their effects, as well as mobility hubs in the Danish context. In particular, it will be important to study the effects outside the major cities and the impact on transport patterns over time so that they can be adapted to the needs of citizens, workers, leisure travellers, pupils, and students.

In the Capital Region, there are several conditions that mean that shared mobility and alternative forms of mobility have the potential to play a role in the mobility system of the future:

#### Short commuting distances and proximity to public transport

According to Statistics Denmark, citizens in the Capital Region commute an average of 15.7 km, which is the shortest commuting distance compared to other Danish regions. The Capital Region has a well-developed public transport network, and many people live and work relatively close to a station or stop, while bus and train frequencies vary depending on the time of day and location.

## Car ownership and use

More than half of the citizens in the Capital Region do not have access to their own car while many travel alone in their cars. Figures from the Danish Road Directorate show that, on average, only 1.08 people travel in each passenger car on their commute.

## Shared mobility is already established

In some parts of the Capital Region, shared mobility solutions are already established. At the same time, the proximity to the big city makes it easier for private shared mobility operators to run a sustainable business even in less densely populated areas. We are also seeing interest from shared mobility operators in exploring new opportunities outside the major cities.

## 5. Sub-goals of the strategy

Achieving the overall goals of the strategy requires close cooperation between public and private stakeholders at a level that extends beyond municipal boundaries. It is therefore particularly important to build on and expand existing cooperation across regions and municipalities to also include transport companies and state actors in order to ensure the coherent development of shared mobility.

#### Sub-goals:

- To establish a new and effective collaboration between the region, municipalities, transport
  companies, and private actors in the Capital Region around a holistic program and concept for
  shared mobility and alternative forms of mobility.
- To develop a design and graphic identity for mobility hubs for use in both public and private areas.
- To develop and disseminate more innovative solutions to support citizens who want to use shared mobility and alternative forms of mobility as a supplement to traditional public

transport.

• To explore opportunities for external funding for the collection of new knowledge, development, and implementation of mobility solutions at a regional level—e.g., through EU funding and collaboration with other European cities and regions.

## 6. Shared mobility plays a role in the regional mobility system

Shared mobility is one of many initiatives that can help reduce congestion on the roads and bring about a green transition in the transport sector.

Shared mobility plays different roles depending on geography and the urban and transport context. It is therefore important to take location-specific conditions into account when assessing how to best realize the potential of shared mobility.

This strategy focuses on urban areas and their surrounding areas, e.g., in the Finger Plan area, where the S-train network, metro, light rail, state railways, and the regional bus network connect mobility across the board. The strategy will also cover the rest of the Capital Region and support areas with local urban centres, provincial towns, and villages, where regional trains, local railways, and regional bus networks in particular make up the overall public transport network.



#### Central municipalities

Bicycle and pedestrian traffic on the

Growth in car ownership puts pressure on the road network and increases congestion.

Significant growth in the number of passengers on S-trains and the metro threatens capacity.



#### City fingers

Very high proportion of car use on trips between city fingers

The proportion of bicycle use for internal trips is low.

High proportion of trips with public transport between city fingers and central municipalities, requires good transport hubs.



#### Ring city

Growth in road traffic leads to more noise-polluted homes

Congestion on the road network limits accessibility

Bicycle traffic accounts for a small proportion of internal journeys

Low market share for public transport on internal journeys



#### Other metropolitan areas

The share of cycling and public transport is low from here to other geographical areas

Cycling is losing market share to cars

For trips to destinations not close to stations, public transport cannot compete with cars

Figure 3: Characteristics of the different geographical areas in the Capital Region.

## 7. A regionally coherent network of mobility hubs

According to the Danish Road Traffic Regulations, a hub is a place where different modes of transport converge, and these places can be a bus stop, a bus terminal, or a station. In this strategy, we will work on the development of hubs and expand the concept to include mobility hubs, which are also locations that provide access to shared mobility and alternative modes of transport – even if the bus or train does not stop nearby.



Figure 4: Mobility hub at Rungsted Kyst train station, Denmark

In the Capital Region's opinion, a hub should A mobility hub should be seen as a collection and drop-off point for shared vehicles, carpooling, and other shared transport services on various scales—with or without a nearby bus stop or station.

In addition to being located at stations and major stops, mobility hubs can, for example, be located in a private parking area in a larger business area or at local town centres, ports, or other local meeting places.







Figure 5: Mobility hub at business area, Glostrup, Denmark

A coordinated and recognizable uniform network of mobility hubs ensures that hubs are strategically located and support a coherent travel experience, where switching between bicycle, public transport, shared mobility, and alternative forms of mobility is easy and intuitive. User-friendliness and recognizability play a particularly important role, and we can see from other countries and our regional projects that the development of a recognizable design across hubs makes a positive difference to the use of shared mobility, especially for micro-mobility solutions.

When mobility hubs are developed as part of a larger network, investments can be better prioritized and overlapping or local design solutions can be avoided. Furthermore, a common framework on a regional or a national level makes it easier to scale up the network and adapt it to local needs while maintaining recognizability.

Finally, a uniform and well-coordinated network creates greater incentives for private actors to invest in and operate mobility solutions, which can be a challenge in some geographical areas.

In the Netherlands, a national concept and identity for shared mobility have been developed, which municipalities and regions across the country are implementing to make shared mobility hubs more visible. This means that the hubs look the same with recognizable elements, regardless of where you are, but with information tailored to the local situation. Below you can see how the concept has been integrated into the urban space in Utrecht, the Netherlands.

With inspiration from the Netherlands, we will in our strategic work, create a framework for developing a common design and graphic identity for mobility hubs that can be integrated into existing urban infrastructure and local design guidelines.



Figure 7: An example of how the concept has been integrated into the urban space in Utrecht, the Netherlands.

## 8. Implementation of the strategy

The initiatives in this strategy are relevant in terms of realizing the potential of linking shared mobility and alternative forms of mobility as a supplement to public transport. However, for this to succeed, overall coordination and development are needed at a level that extends beyond the individual municipalities and the legal scope of action of the transport companies.

The overall course of action in the strategy is therefore to collect internal resources to run a secretariat responsible for a dedicated program for shared mobility and alternative forms of mobility within the Capital Region of Denmark. The Shared Mobility Program will start in the second half of 2025 and continue until the formation of the new East Denmark Region, at which point the program should be revised with a view to integration and development in the new geography.

## The ShareDiMobiHub Consortium

The consortium of ShareDiMobiHub consists of 13 partners and 2 sub partners with multidisciplinary and complementary competencies. This includes European cities and regions, universities, network partners and transport operators.



For further information please visit https://www.interregnorthsea.eu/sharedimobihub

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