



# SHARED MOBILITY

# ROCKS

A Planner's Guide to the  
Shared Mobility Galaxy

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# SHARED MOBILITY



**A Planner's Guide to the  
Shared Mobility Galaxy**

## Imprint

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*Imagine no possessions  
I wonder if you can  
No need for greed or hunger  
A brotherhood of man.*

John Lennon

## 10 Golden Rules of Shared Mobility

1. Shared mobility is a means to decrease car dependency, to reduce greenhouse gas emissions and to increase the quality of life.  
> **Chapter 2**
2. Shared mobility fosters a shift away from car use and car ownership to multimodality. It enhances the use of zero emission transport modes like walking, cycling and public transport.  
> **Chapter 3**
3. Shared mobility allows for densification of urban areas, while liberating urban space from parked cars and strengthening value of urban green areas, thus increasing the resilience and biodiversity of cities.  
> **Chapter 4.2**
4. Some shared mobility modes develop slowly and have a strong positive impact on reducing car ownership and greenhouse gas emissions. Other modes develop rapidly, fostered by multinational corporations with investment power and have a more doubtful impact on reducing car ownership and greenhouse gas emissions. The latter modes have a strong appeal to people and get many people on board of shared mobility.  
> **Chapter 8**
5. The more modes of shared mobility that come to exist in an area, the bigger the synergy effects and the highest chance that it provides a more attractive transport alternative to people than the privately-owned car.  
> **Chapter 6.2**
6. Shared mobility works best in dense areas with governmental support and policies that support the various modes.  
> **Chapters 8 & 9**
7. In less dense areas, more guidance is needed to make shared mobility blossom. Multinational corporations are not interested in these areas. The main drivers are local cooperation and synergies with the local business sector.  
> **Chapters 8 & 9**
8. Without proper policy frameworks, shared mobility cannot rock. Local governments have to create the essential conditions, while tackling negative aspects in a proactive way.  
> **Chapter 9**
9. Physical integration with mobihubs is essential to make shared mobility visible. Digital integration with MaaS helps to make shared mobility connective and gives it a strong appeal.  
> **Chapter 6.3 & 6.4**
10. Car ownership is rooted deep in our society. It takes time and effort to raise awareness about new forms of transport. Shared mobility needs clever, consistent communication and marketing over a long period of time.  
> **Chapter 7**

# 3

# DEFINING SHARED MOBILITY

*Lucky me swimmin' in my ability  
Dancin' down on life with agility  
Come and drink it up from my fertility  
Blessed with a bucket of lucky mobility*

Red Hot Chili Peppers

## 3. Defining Shared Mobility

### GOLDEN RULE 2

Shared mobility fosters a shift away from car use and car ownership to multimodality. It enhances the use of zero emission transport modes like walking, cycling and public transport.

### 3.1 Introduction

Shared mobility is an umbrella for a myriad of transport options. This chapter defines this umbrella, explains how shared mobility affects its users in their daily mobility decisions and demonstrates how this results in a shift towards a more sustainable mobility mix. The chapter ends with an exploration of the sheer endless list of shared mobility applications.

### 3.2 Definition

Shared mobility is a strategy to make better use of vehicles and space. Shared mobility is also seen as a transport mode in itself. Shared mobility gives users the opportunity to have access to cars and bicycles and other vehicles at the moment when they want to use them. It is the alternative to ownership, converting private modes or trips to shared use for more sustainable outcomes. It is similar to renting, but the user experience and patterns of usage are different: short-term usage and seamless transactions.

Shared mobility includes carsharing, bike-sharing, shared micromobility, ridesharing and on-demand ride services. Traditional transport modes like public transport and taxi services are also ways to share the use of vehicles. In this guide, however, we have not included them in the in-depth exploration of shared mobility.

Shared mobility has a key focus on the under-use of vehicle and available seats in them. It is about the unused potential of assets when they are not in use. Cars are not in use 95% of the time [10]. During this idle time, they are consuming street space or require expensive indoor garages, in both cases space that could be used for other purposes. Car occupancy, mainly for commuting and business trips is rather low: on average, fewer than two persons per car and trip. Filling empty seats in cars already on the road is a cost-efficient strategy to reduce congestion.

### 3.3 How Shared Mobility Affects Our Behaviour

In order to understand how shared mobility works, one has to understand how ownership works first.

#### Cars

Ownership results in usage. This statement is the most fitting when applied to the privately owned car. If a person owns a car which is parked in front of his/her residence, it will be used very readily and easily. It is accessible 24 hours a day and the cost of using it, in particular the cost of each individual trip, is virtually invisible (sunk costs). For new car owners, the car quickly becomes the default transport option.

With carsharing, things are quite different. Carsharers pay per trip and receive a regular invoice listing the real cost of each trip. They are fully aware of the operating costs for driving a car. They discover that in comparison to other transport modes, the cost of driving a car is quite expensive, while saving money with low usage and not having the fixed costs of ownership (such as depreciation costs, taxes, insurances and unforeseen repair costs).

Moreover, carsharing requires more active steps: the car has to be booked and picked up. Carsharing, therefore, fundamentally transforms driving from a fixed-cost activity into a variable-cost option [11]. As a result, carsharers use a car as little as possible, leading to an increase in walking and cycling and the use of public transport, ridesharing and taxi services [12].

### Bikes

For bikesharing, the same rule about ownership applies in reverse: if one does not own a bike, one does not cycle. And if one doesn't cycle, why purchase a bike? Many cities that want to increase cycling are struggling with this dilemma. With bikesharing, it's possible to discover the benefits of cycling without having to invest in a bike of one's own. If convinced that cycling is a nice way to travel, the step to purchase a bike and to cycle even more is only a small one. Bikesharing serves as a 'gateway drug' to cycling for people who may never have tried it before. Bikesharing also broadens the palette of sustainable transport options. For example, if a city has

a bikesharing system, it's more attractive to travel to or in this city using public transport because bikesharing can help to solve 'last mile' transport issues. For example, OV-fiets, the bikeshare scheme run by the Dutch national railway company, is used mainly for the last portion of the trip to reach the final destination [13]. Bikesharing supports the integration of cycling into transportation systems and promotes the daily use of cycling [11].

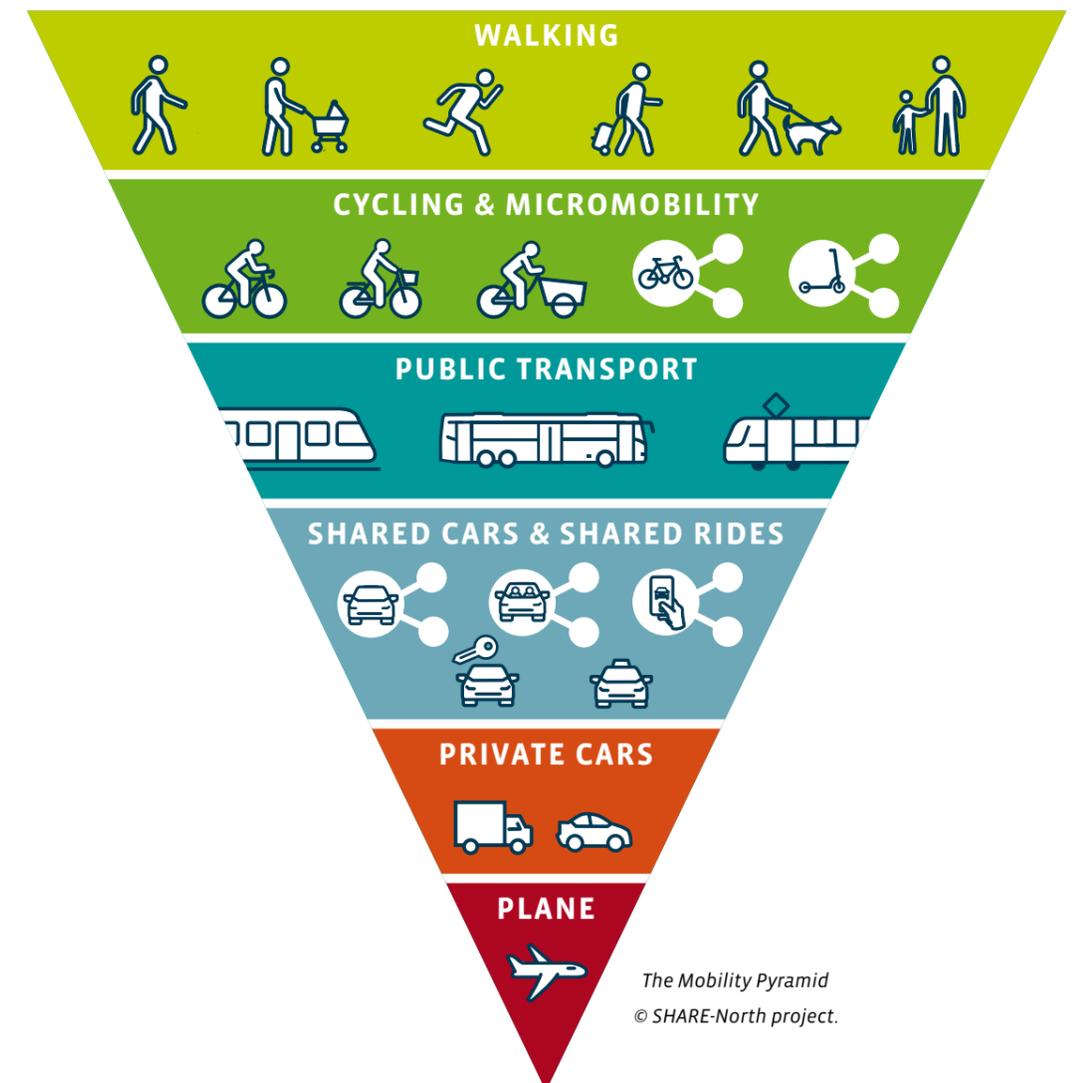
### 3.4 Shifting towards a Sustainable Transport Mix

Shared mobility users travel with cars less frequently than average car owners. Instead, they walk more, cycle more and use public transport more frequently. This stimulates a large-scale shift away from car-dependent lifestyles. Carsharing is the missing link that can make car-free living as convenient as car ownership. This results in less space consumption of cars that move around or are parked in the streets, and therefore, adds to more liveable places.

Traditional transport planning emphasises car traffic as the main mode of transport, while walking, cycling and public transport are seen as 'travel alternatives'. Integrated, sustainable transport planning turns it around. Walking and cycling may be seen as the main transport modes. In most European cities, most trips are shorter than 5 kilome-

tres and active transport modes are very suitable for this distance. Electric bikes even have a larger range, making cycling a sustainable transport option for longer trips, together with public transportation. Since our current society is strongly car dependent, however, a car may be necessary for some journeys if the other modes don't work.

## MOBILITY PYRAMID



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One of the biggest powers of shared mobility that it fosters the shift from car dependency towards sustainable transport. Therefore, shared mobility can be regarded as an equal pillar to the other sustainable transport modes of walking, cycling and public transport.

It makes sense to put shared mobility on the political agenda which seeks to increase the sustainability of communities. Without any governmental support, however, a sound development of shared mobility is rather unlikely. Therefore, municipalities and regions need to take action and integrate shared mobility into their policies, such as in Sustainable Urban Mobility Plans. A Shared Mobility Action Plan is also a proven strategy to reduce congestion and increase the use of shared sustainable modes. Chapter 9 explores how to develop policies for shared mobility.

### 3.5 The World of Shared Mobility

The shift from ownership to use is a gradual one and impacts the way we are dealing with vehicles and trips. Everything that can be owned can also be shared in many ways. This implies that there is a rather endless list of shared mobility modes. The best way to understand these modes is to put them in a spectrum from ownership to use. A distinction can be made between cars, bikes, public transport, micromobility and rides. Last but not least, there are a lot of vehicle types that may be shared too, from planes to prams and from campers to mobility scooters.

Many models can be distinguished, for example, roundtrip carsharing and bikesharing versus free-floating services and vehicles owned by a provider versus Peer-to-Peer platforms that connect owners with users.

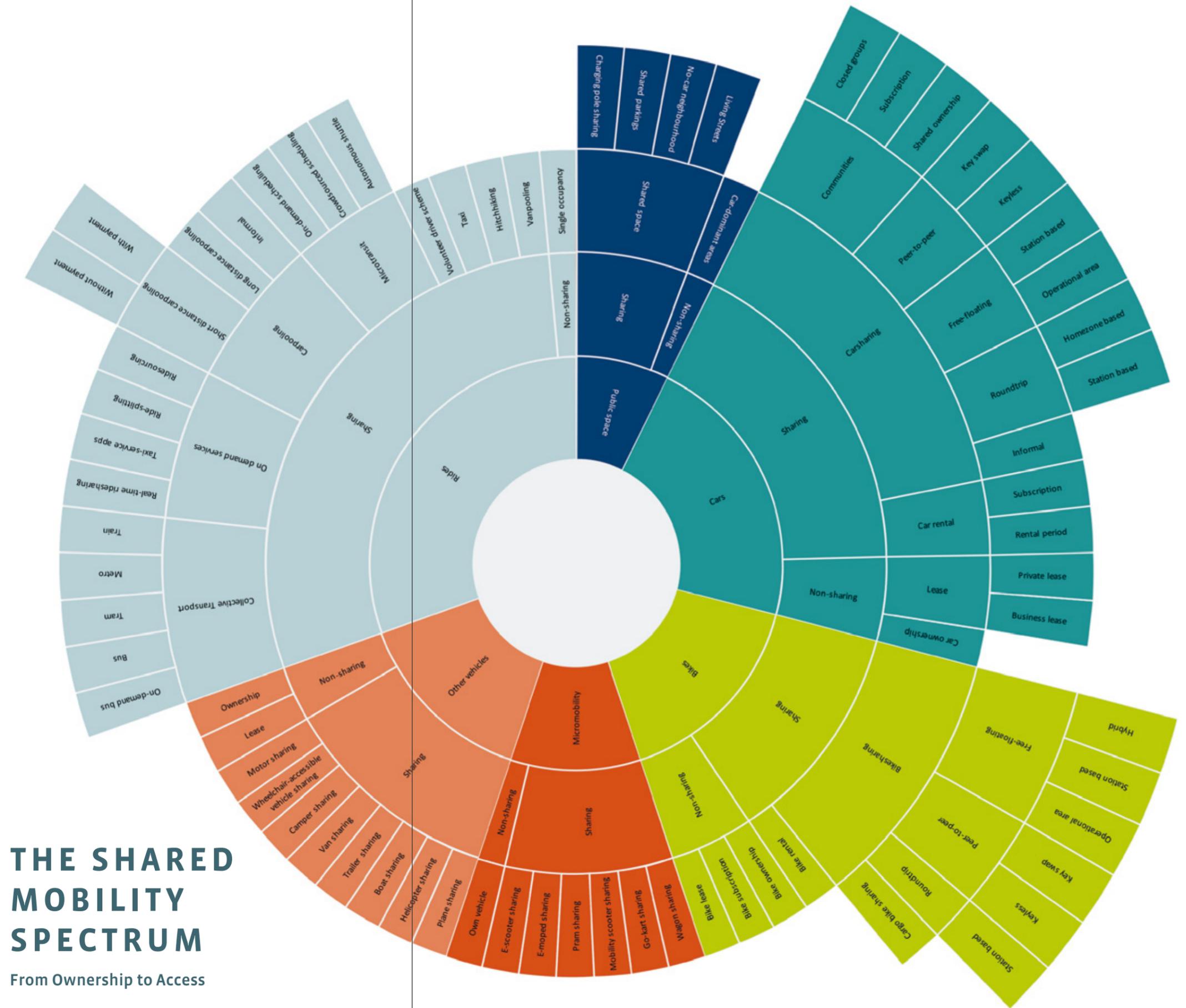
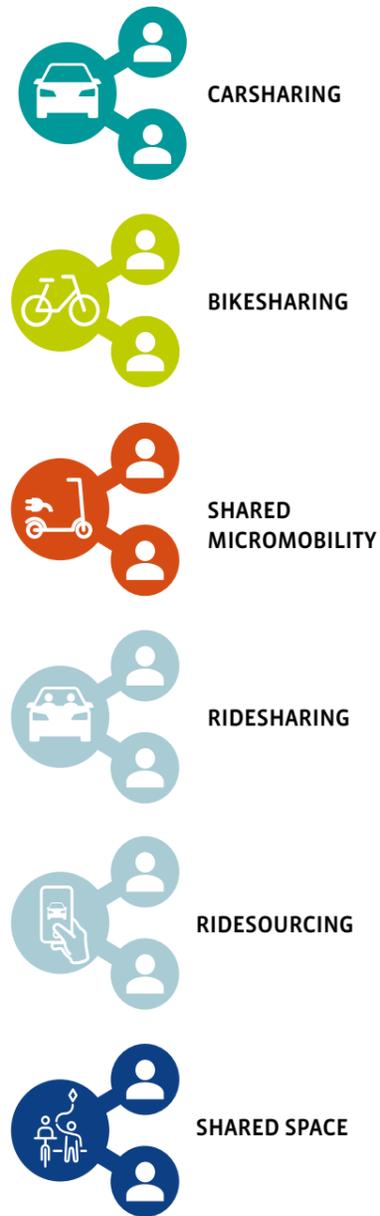


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In many cases, boundaries between these modes are blurring: traditional car and bike rental services are introducing technology to make vehicles accessible 24 hours a day. Shared mobility modes are also being mixed in order to create dedicated services for specific target groups: for example, riding together (ridesharing) in a taxi or an on-demand ride service.

Some shared mobility modes have large societal benefits. For other modes, these benefits are more controversial. All modes, however, contribute to a shift from ownership to access. This influences people's mobility behaviour. Owning cars results in reflexive car usage. People who do not own a car make more conscious decisions when selecting a transport mode for each specific journey. With a shift from car ownership to car use (though carsharing, for example), the decision to use a car for a specific journey becomes rational rather than automatic. There is evidence from all over the world that carsharers start to cycle more and make more use of collective transport more than the average car owner. Sharing systems even reinforce other modes of sharing. A bikesharing system makes people aware of shared mobility and makes them less car dependent. This can benefit the market introduction of carsharing [14]. With the co-existence of different types of carsharing in a city, the same spill-over effects are visible.

A set of shared mobility icons has been developed in the SHARE-North project. These icons help to increase the recognition of shared mobility and its main forms. They may be used in signage, at mobihubs, on websites and in information packages. The icons are free for sharing and have been made available in Noun Project, a free icon gallery ([www.thenounproject.com](http://www.thenounproject.com)). The icons are on their way to becoming the European standard for shared mobility.



## Living Streets

### LOCATION

Ghent, Belgium (260,000 inhabitants)



### IMPLEMENTING BODIES

Initially Lab van Troje of Ghent  
City of Ghent

### SUPPORTING ORGANISATION(S) & INVOLVED STAKEHOLDER(S)

Network of citizens, entrepreneurs and supporting companies

### DESCRIPTION

In a Living Street, neighbours test a different way of ‘organising’ their street, by temporarily removing all of the cars. The starting point is a conversation between neighbours about the future of their street, under the guidance of Trojan Lab and the City of Ghent. They talk about visions and concerns with the residents and then plot them on a map. Next, they try to find solutions for every challenge. If solutions have been found for every challenge, the ‘building’ of the Living Street can begin. The street decor is tested for two or three months. At the end, it is removed again.

A Living Street creates new meeting places on the street and gives a stronger sense of belonging within the neighbourhood. A lot can be learned about how citizens see the future of their street and their city and about how sustainable mobility can be part of the Living Streets.

### CRITICAL SUCCESS FACTORS

1. A designated person is needed to lead the process. The importance of this role varies from street to street.
2. It's necessary to create a good cooperation between citizens, the city and organisations. The process is neither top-down nor bottom-up.
3. The city and organisers must make time to listen to the residents and not judge them for their fears and or crazy/creative ideas.
4. The challenge is to involve all residents, also those who can't identify themselves with the development.
5. Without a solution for car parking during the trial period, there can't be a Living Street.



### IMPACT

A Living Street strengthens the contact between neighbours. In 2012, the initiative started with two streets in Ghent. Within 5 years, 51 experiments took place in 30 streets in the city centre and in 19th and 20th century districts. The process results in a rethinking of what streets should be. Residents are asking for permanent street design and new neighbourhoods are inspired by the concept.

#### TYPE OF LOCATION

Urban



#### TARGET GROUP

Residents  
Families with children



#### LOCATION SCALE

Medium



#### INVESTMENT SCALE

Medium



#### IS THE ACTION PART OF A SUMP OR SHARED MOBILITY ACTION PLAN?

No



#### COST-BENEFIT-RATIO

High



#### MORE INFORMATION

[www.livingstreet.org](http://www.livingstreet.org) Youtube: <https://youtu.be/6gEuleM54YM>

***‘Formerly, I felt like coming home when crossing my doorstep. Since the Living Streets project, I experience this feeling already when I enter the street’.***

Resident of Ghent

## Annex 1: Types of Shared Mobility

### Carsharing

» Chapter 4.3 -> General information Chapter 5.2 -> impacts of carsharing

### Roundtrip Carsharing

Station-based and homezone-based Variations

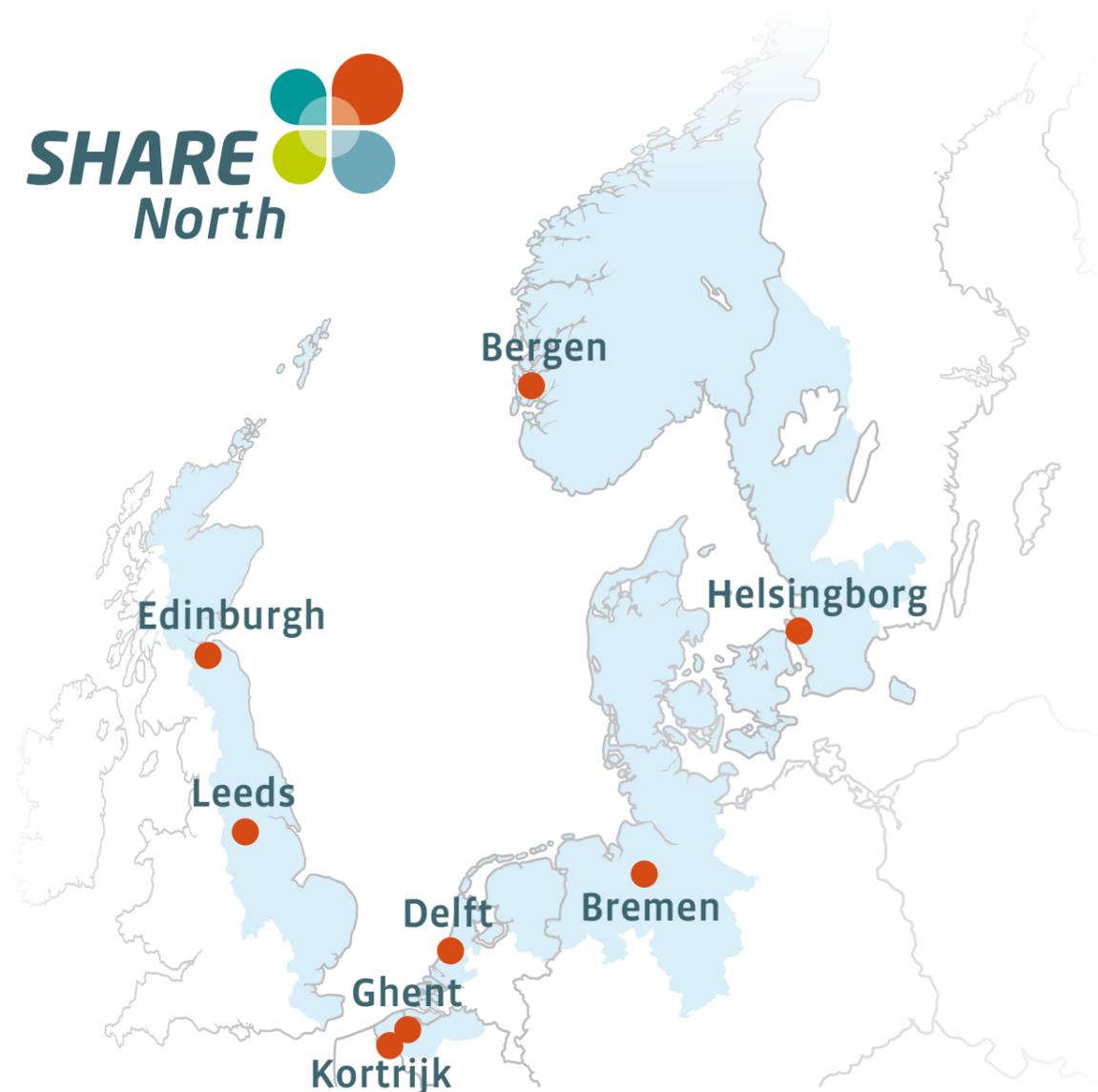
<p><b>Characteristics</b></p> 	<p><b>Station-based variant</b></p> <ul style="list-style-type: none"> <li>- Carsharing provider owns a fleet of vehicles</li> <li>- Fixed carsharing stations</li> <li>- Vehicles must be returned to the same station</li> <li>- Cars must be booked in advance (can be done minutes, hours, days or weeks in advance)</li> <li>- Pay per hour of usage [22]</li> <li>- Tariff based on time travelled and distance travelled</li> <li>- 23 to 45 users per car</li> <li>- Relatively cheap</li> </ul> <p><b>Homezone-based variant</b></p> <ul style="list-style-type: none"> <li>- No fixed carsharing stations but fixed pick-up zones</li> <li>- Vehicles must be returned to the same zone</li> <li>- Tariff based may be based on time travelled only</li> </ul>
<p><b>Examples of Providers</b></p> 	<ul style="list-style-type: none"> <li>- GreenWheels (NL/DE)</li> <li>- Cambio (BE/DE)</li> <li>- SunFleet (SE)</li> <li>- Zipcar (UK, USA)</li> <li>- Co-Wheels (Scotland)</li> <li>- Enterprise Car Club (UK)</li> <li>- MyWheels (NL), also homezone-based</li> <li>- Partago (BE) homezone-based</li> </ul>
<p><b>Where</b></p> 	<p>Medium-sized cities to large metropolitan areas but mostly in dense neighbourhoods</p>
<p><b>Usage</b></p> 	<ul style="list-style-type: none"> <li>- Incidental car trips</li> <li>- Mostly planned trips longer than 5 kilometres</li> <li>- Destinations often out of town</li> <li>- Average trip length: 6 hours</li> <li>- 57% of users use it less than once a month</li> <li>- 4% uses it more than three times a month</li> </ul>

	<ul style="list-style-type: none"> <li>- 80% of the users is (very) satisfied with the availability of vehicles</li> <li>- 70% of users is (very) satisfied with the accessibility/distance to the booked vehicles</li> <li>- 62% of the users is satisfied with the price [23]</li> </ul>
<p><b>Impacts</b></p> 	<ul style="list-style-type: none"> <li>- Replace 5-16 privately owned vehicles</li> <li>- High impact per vehicle, but relatively few vehicles available</li> <li>- For 63% of users, carsharing is a full replacement of the own car [21]</li> </ul>
<p><b>Advantages</b></p> 	<ul style="list-style-type: none"> <li>- Use behaviour simulates private car use</li> <li>- Supplementary to public transport, walking and cycling</li> <li>- Helps cities reduce number of privately-owned cars</li> <li>- Reduces greenhouse gas emissions through supporting sustainable travel behaviour</li> <li>- Contributes to regaining public street space for other purposes</li> <li>- 24-hour availability</li> <li>- Cost savings for users who drive less than 10,000 km a year compared to owning a car</li> <li>- Users know where to find the vehicles (only station-based)</li> <li>- Low barrier to entry in a neighbourhood (homezone-based)</li> </ul>
<p><b>Disadvantages</b></p> 	<p>Cars have to be returned to the place or area of origin. Potential users may find this unattractive</p>
<p><b>Requirements</b></p> 	<p><b>Station-based variant</b></p> <ul style="list-style-type: none"> <li>- Fixed parking places in public or private areas</li> <li>- Municipalities have to allow for on-street parking space</li> <li>- Signage makes clear that these parking places are for carsharing</li> <li>- Illegally parked vehicles should be fined and towed away</li> <li>- Operators should be informed about road works, events and other street closures</li> </ul> <p><b>Homezone-based variant:</b></p> <ul style="list-style-type: none"> <li>- Citywide parking permission required</li> <li>- No dedicated parking places needed</li> </ul>

## About the SHARE-North project

This Guide was developed as part of the Interreg North Sea Region Project ‘SHARE-North’ – Shared Mobility Solutions for a Liveable and Low Carbon North Sea Region (January 2016 - July 2022). The project includes activities for developing, implementing, promoting and assessing carsharing, bikesharing, ridesharing and other shared mobility modes in urban and rural areas and employment clusters. The main objectives of the project are: improving resource efficiency and accessibility for and in cities, rural areas and conglomerations;

increased efficiency in the use of transport infrastructure; reduction of space consumption for transport; improving quality of life; and low carbon transport. The partnership consists of public authorities, NGOs, a small enterprise and a research institution from the North Sea Region. The partnership stands for transnational cooperation dedicated to implementing concrete actions around shared mobility as well as creating political support for the incorporation of shared mobility into integrated transport strategies.



Der Senator für Umwelt, Bau und Verkehr  Freie Hansestadt Bremen



## Shout Out

This rockin' Guide to Shared Mobility was a collaborative effort of the SHARE-North shared mobility rock stars. They brought their expertise from the field and practical experiences into the development of this guide. A special thanks goes to the following persons:

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