

Introduction to the eHUBS project

Diederik Basta - Project Manager City of Amsterdam– Lead Partner September 2021





eHUBS are?

Clusters of shared *electric* mobility

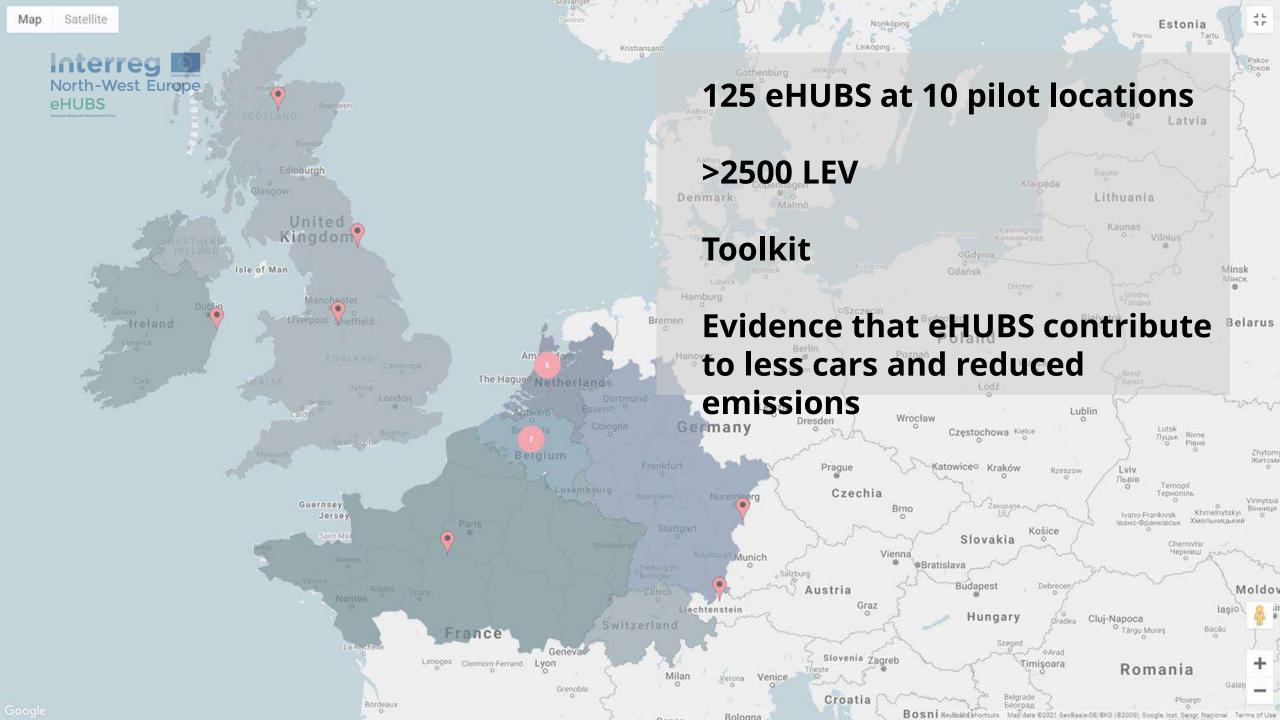
Tailored to local conditions and needs

Linked in a network

Available in different sizes

Integrated in MaaS ecosystems

DE BECKER-REMYPLEIN







15 February 2001

human genome

ww.nature.com

le

A

Scientific reports and published papers Policy recommendations

Such as:

- State of the art report
- Joint methodology on location selection

HH

 Behavioural interventions to stimulate user uptake

Many more

100 100

Nuclear fission Five-dimensional energy landscapes Seafloor spreading The view from under the Arctic ice

Career prospects Sequence creates new opportunities

More information

Website: https://www.nweurope.eu/projects/projectsearch/ehubs-smart-shared-green-mobility-hubs/

Linkedin: <u>https://www.linkedin.com/company/ehubs-nwe/</u> Twitter: <u>https://twitter.com/eHUBS_NWE</u>

Newsletter: sign up!

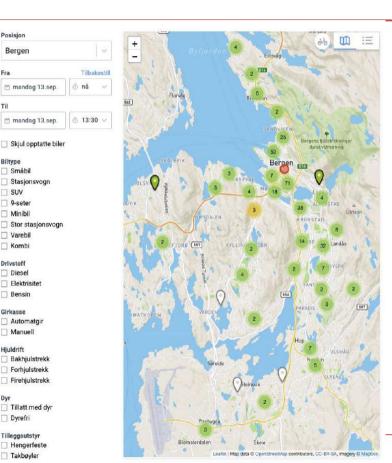
cargoroo



Bildeleringen MD Arne K. Riise

Cooperative Car sharing pool Established in Bergen in 1996

+ 3.300 members 360 available cars 90 locations mainly in Bergen More than 10.000 reservations pr month Owner of Bilparaplyen AS - System developer



Bildeleringen | Brukerundersøkelse 2021

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Posisjon Bergen

Biltype Småbil

SUV 9-seter Minihi

Varebil Kombi

Drivstoff Diese

Bensin Girkasse

Manuell

Hiuldrift

Dyrefri



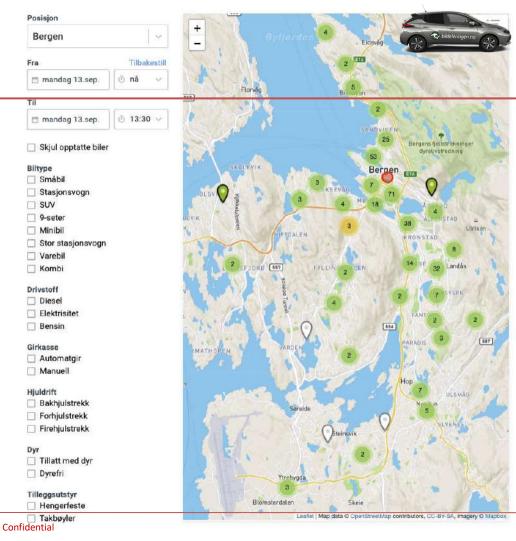
The significance of the eHUBS

In general the establishment of eHUBS have had a minor impact on the development of car sharing in the city of Bergen

Why?



The car sharing market have developed through more than 20 yearsin Bergen, without any beneficial advantages from the government or from Bergen *Municipality*

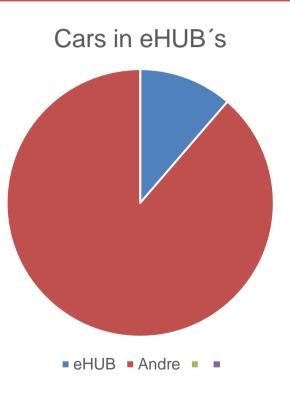


Fra

Dyr



Less than 50 of our 360 cars are located in eHUBS (14 %)



Only approxemately 50 % of the eHUBS are located in the "inner" city of Bergen

Eks: Møllendalsveien which is located outside of the city center

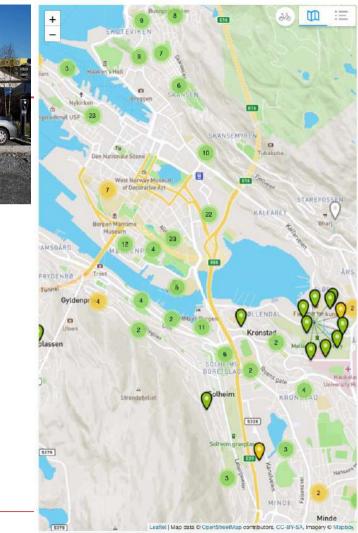
Bildeleringen is the only provider...



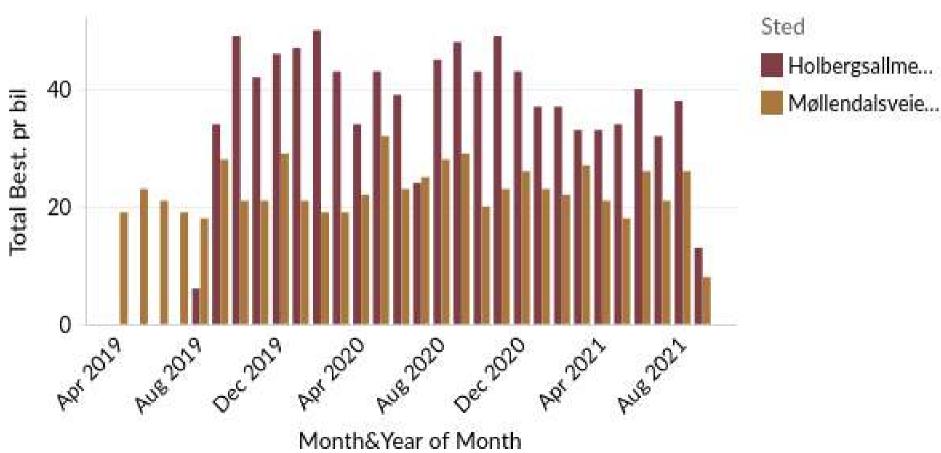
Approximately half of the eHUBS are located in the «inner city» of Bergen

Example: Møllendal Mobilpunkt is located outside of the city center

Bildeleringen is the only provider...



Confidential



Bestillinger pr sted



42 of the 46 cars located on an eHUB are electric vehicles

The eHUBS have contributed to more electric vehicles in Bergen







Customer survey

Bildeleringen SA

9.Juni 2021

Ziel Consulting AS Media City Bergen |Lars Hilles gate 30 | 5008 Bergen

> Steinar B. Christensen Epost: <u>steinar@ziel.no</u> Mobil: 95 70 55 14



Side

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1. Purpose and method of implementing the survey



Purpose

The purpose of implementing a user survey, was to gain specific feedbacks regarding our present performance and services. The feedback serves as a basis for future endeavors pertaining to development and improvement.

This is the first time Bildeleringen completes a survey among its members.

Method

The survey has been conducted digitally. Our management team in Bildeleringen has participated in designing the survey, choosing the most important questions and which respondents should receive the survey.

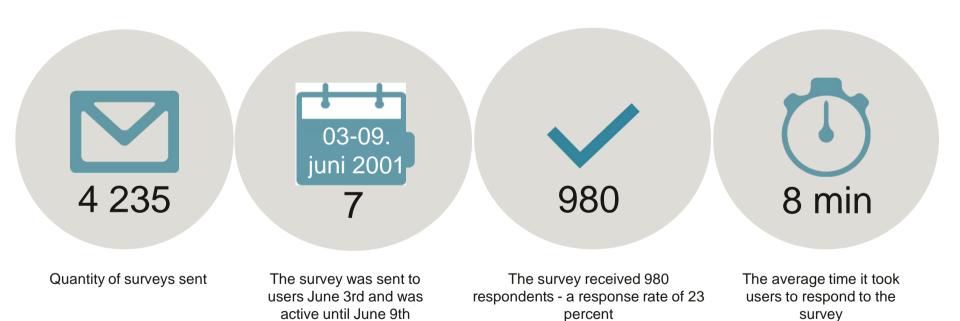
The target group of our survey has been members and users of the services provided by Bilderingen.

The survey was sent out by email from Bildeleringen, with one subsequent reminder.

The survey was conducted by Ziel Consulting AS under the supervision of Steinar B. Christensen.

R bildeleringen ino

2. Background data and general information regarding our survey



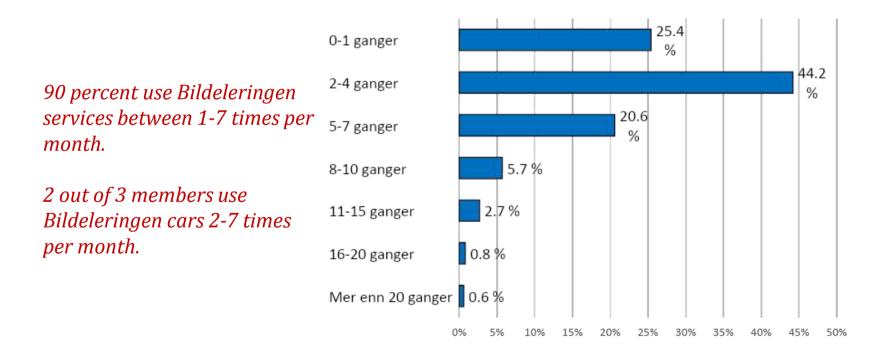
Bildeleringen | Customer Survey 2021

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2. General information regarding the survey

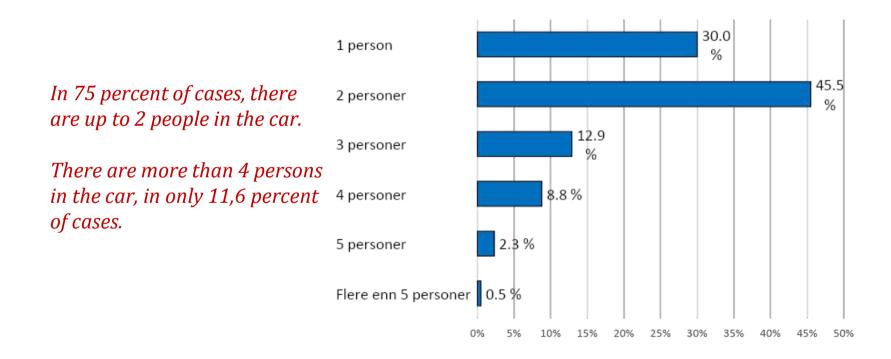
How many times per month do you normally use cars through Bildeleringen?





2. Background

How many people are usually in the car?





3. Importance

Which qualities stated underneath are most important to you when you are choosing a car? 6 being the most important, and 1 being least important. You can't give the same score on two points. You have to rank the qualities by importance.

All respondents were asked to assess the importance of six qualities predefined by Bildeleringen.

Compulsive ranking

The respondents had to prioritize and rank the six qualities according to importance. No points could receive the same score.

Randomizing

The qualities were randomized, meaning that the respondents were not presented with the qualities in the same order when answering. This increases the quality of their responses.

Maximum score

If everyone in the survey had ranked the same quality with the highest score, it would have received 6,0. We can clearly see that the two top qualities have been assessed as the most important to our members.

Cars can be booked on a short notice is the most important factor for the users







5. Product- and quality of the services

Randomisering

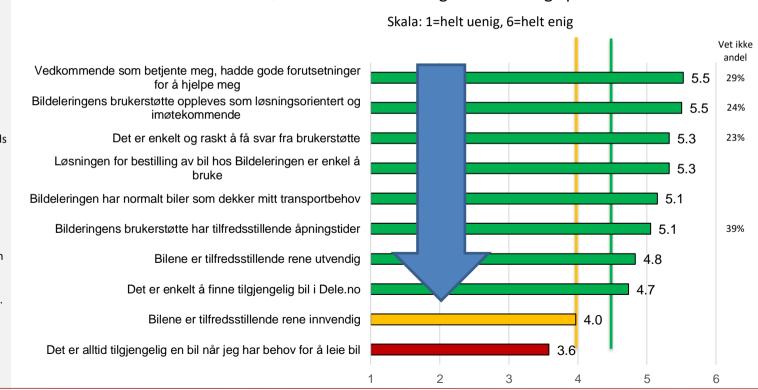
Punktene var randomisert, dvs at respondentene ikke fikk opp punktene i lik rekkefølge når de skulle gjøre en vurdering av tilfredsheten med de ulike tjenestene. Det øker kvaliteten på svarene.

Svært god score

Medlemmene er svært godt tilfreds betjening og brukerstøtte. Bestillingsløsningen for også høy score, tilsvarende at BDR har biler som normalt dekker brukernes behov.

Klare forbedringspunkter

Det er nødvendig å se på tiltak som kan bedre de to punktene som handler om **innvendig renhold** og **tilgjengelighet** – når jeg har behov. Spesielt det siste punktet, som blir vurdert som det aller viktigste for medlemmene. Relativt lik score uavhengig av antall leie/mnd.



Vi ønsker å vite i hvilken grad du er enig i påstandene under.

Bildeleringen | Brukerundersøkelse 2021

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7. Customer Satisfaction Index - explenation

Vi har tatt utgangspunkt i samme modell for beregning av KTI som brukes på Norsk Kundebarometer (NKB).

Four questions are the basis of the Customer Satisfaction Index

- Over all, in what degree are you satisfied with Bildeleringen to day?
- In what degree are you experiensing that Bildeleringen meets your expectations to day?
- On what level does Bildeleringen perform compared to alternative supplyers?
- Imagine the ideal supplyer of our services. How would you rate Bildeleringens performence compered to this ideal?

A scale from 1 to 6, where 6 is the best score is used.

The average score is calculated to fit in a 100 point scale.





7. Customer Satisfaction Index



83. 8 77. 9 88 3 81 5 50 60 70 80 90 0 20 30 40

Members/users customers or congregation?

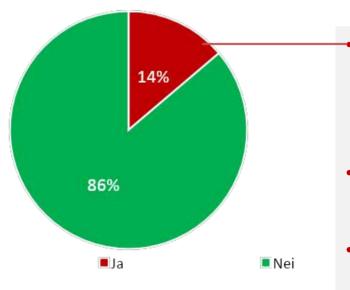
naturlig å sammenligne Bildeleringen med?





2. Do our members use other rental services?

Do you use other car sharing services or car rental companies, in addition to Bildeleringen?



- Most of the 131 respondents answered that they use companies like Avis, Hertz, Budget and Bergen Bilutleie.
- 21,4 percent listed Nabobil as a service they use.
- 4,5 percent of members stated they use iMove.

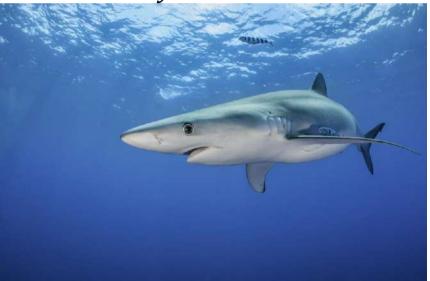




Bergen kommune is making room for commercial car sharing companies

Bildelringen is decreasing the number of cars in the city center

Bildeleringen members are using available cars from Hyre – Møller Mobility Group AS – a privately owned commercial company and importer of VW, Audi, Skoda and Seat





Business development

Bildeleringen have developed a taylor made front end software for booking

+ Backend with tasks as «replace» a car - in the system + Operational handling of car sharing –

We are developing our software to handle businesses whith opposite user patterns compaired to existing consumer groups. Increased co-use and lower cost



CAR RENTAL



Fascilitate sustainable mobility

Mobility software for cars, bicycles etc.

- easy startup for establishing
- new mobility solutions
- on new locations
- and in new mobility markets

Franchise concept?

Thank you for your attention!







Welcome eHUBS International Academy, Bergen

30/09/21





Hilke Evenepoel

Project coordinator eHUBS, City of Leuven, Belgium

The policy framework about eHUBS



General context





1. Current policy context

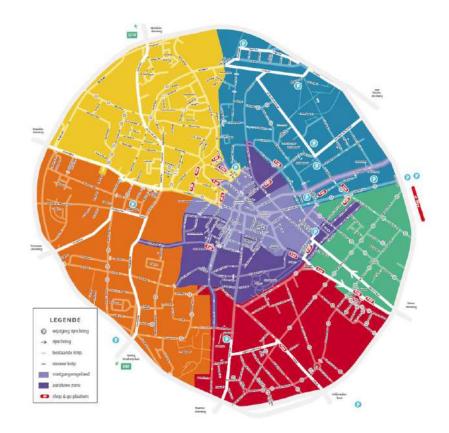






Circulation plan 2016









Het aantal busreizigers neemt toe





Spatial structure plan 2017





To increase liveability To upgrade experience value of the public domain

Ambitie 2030





Coalition agreement 2019-2025



BAANBREKEND LEUVEN

Tien ambities voor een zorgzame, groene en welvarende stad



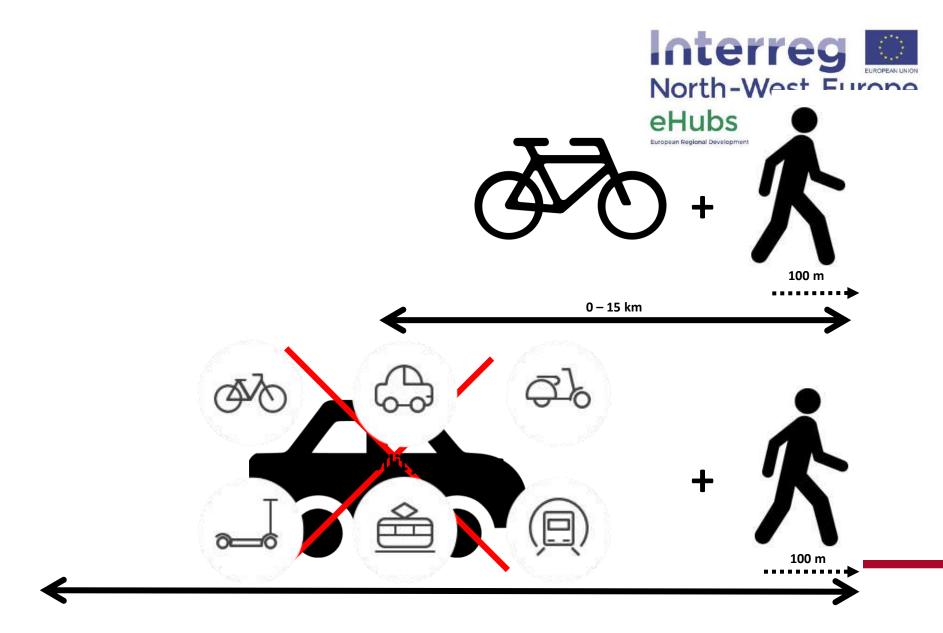
Stad Leuven – Bestuursnota 2019-2025





- Programme 3 (3.6): accessible and traffic-safe city
- → multimodal and shared mobility mobipoints
- Programme 6 (6.2): Sustainable, climate-proof and circular city







Roadmap Leuven 2025 - 2035 - 2050





- Leuven climate neutral by 2050
- Consortium Leuven 2030
- Inspiration
- Evidence based
- To do what's possible → to do what's necessary



Convenant of Mayors for climate and energy





- Signed end of 2019
- 40% emission reduction by 2030



Climate action plan 2020-2025





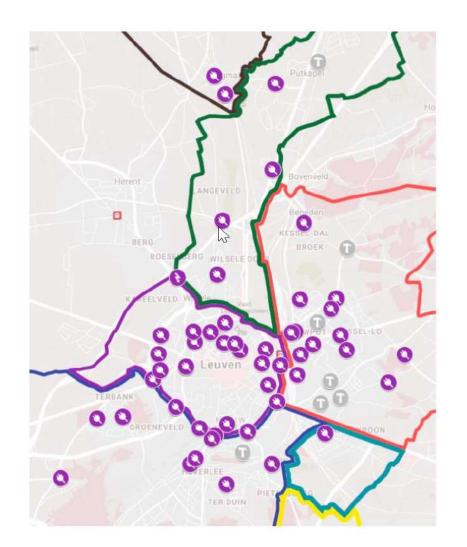


- Modal split by 2030: 35% bicycle + walking, 25% PT, 40% car
- 10% less car ownership by 2025, 50% by 2035 and 75% by 2050.
- 25% less salary cars by 2025
- More shared bikes → decreased bike parking pressure and increased use of PT
- 50 mobipoints by the end of 2021 (with (e)-cars, (e)-bikes and e-cargo bikes



Policy plan zero emission mobility, 2021





- Today: 156 charging points (Flemish tender + own permits)
- From 2022: demand/data driven → need for 6.000 charging points by 2025



2. Policy challenges



European Regional Development Fund





Free floating

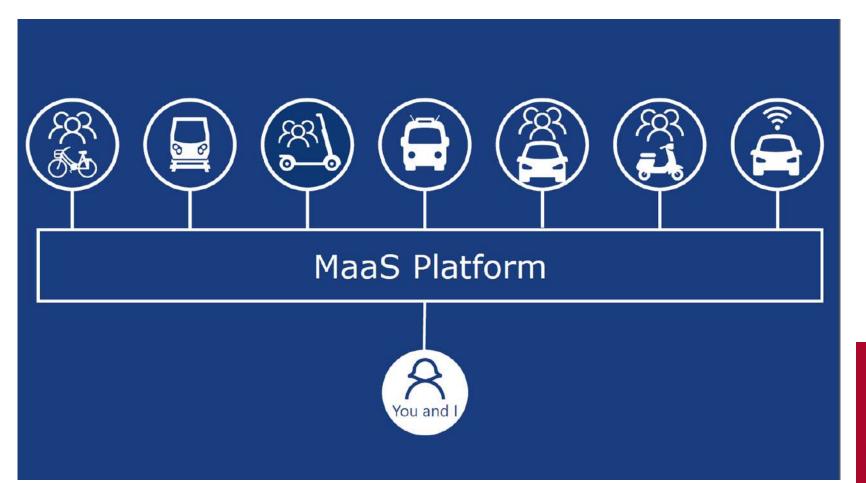








User friendly, smart and mobility for all





User data

North-West Europe eHubs

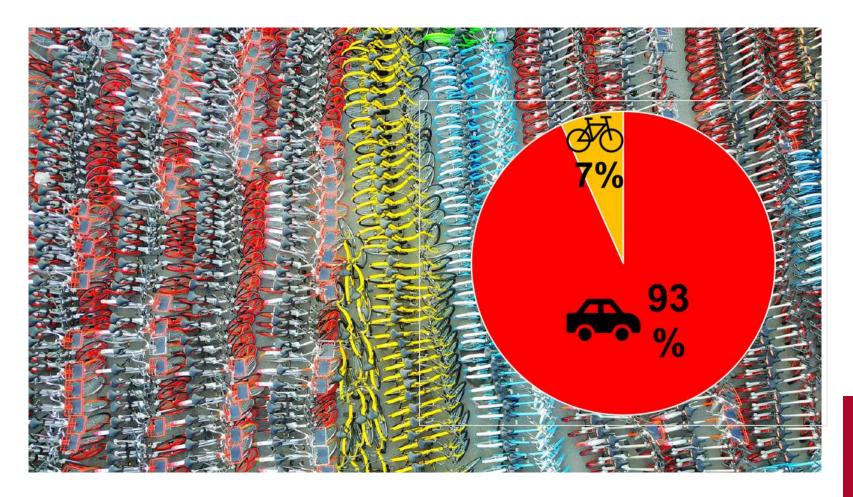
European Regional Development Fund





Space and regulation for (shared) bicycle parking







Interreg Intere

European Regional Development Fund

Thank you!





BuurtHubs Amsterdam

Diederik Basta <u>–</u> project manager BuurtHubs 30 September 2021





"When involving and empowering citizens in designing their eHUBS from the start. They will be more inclined in changing their mobility behaviour"

So, what is a 'BuurtHub'?



Gemeente Amsterdam

Buur















De proefrijdag op 11 september 2021 is van 12:00 tot 15:00 uur op het Witte de Withplein.

Deel-auto, (bak)fiets, en/of scooter voor de buurt? Breng uw stem uit op www.amsterdam.nl/buurthubs

North-West Europe HUBS SODA ADVIES

Gemeente Amsterdam Buurt Hub 50 <u>di</u>



Deze plek is Gereserveerd voor Buurthub voertuigen





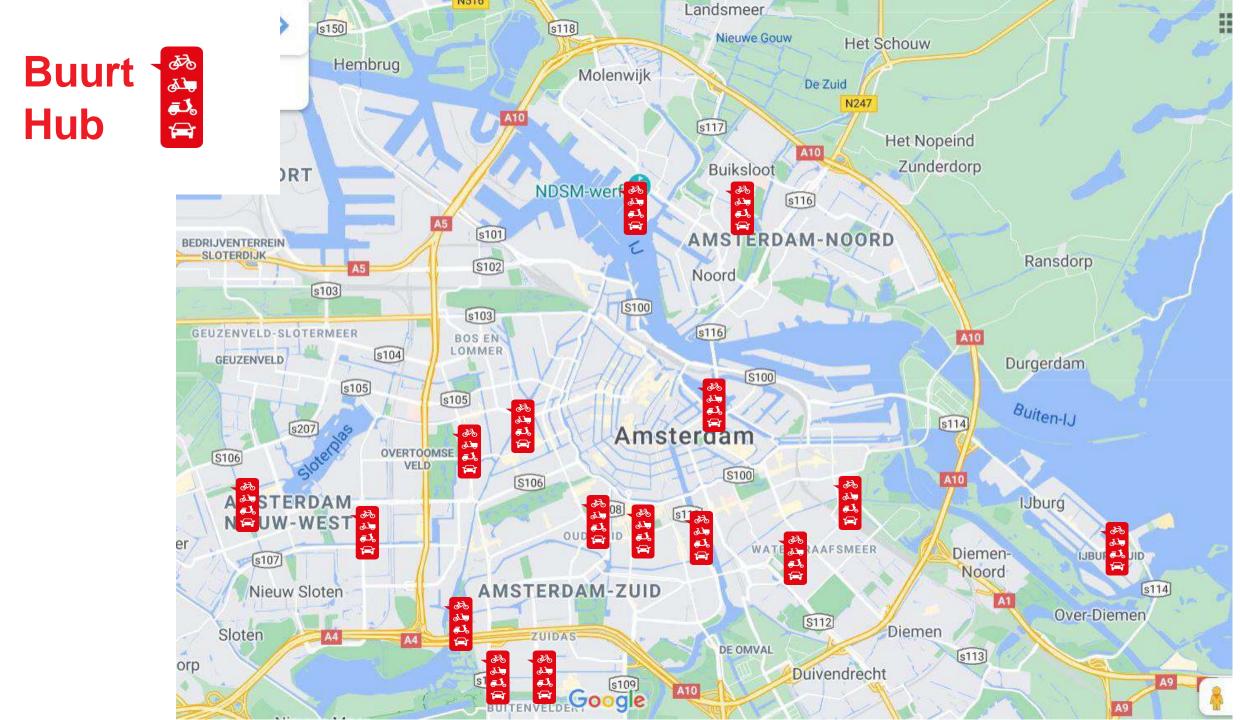
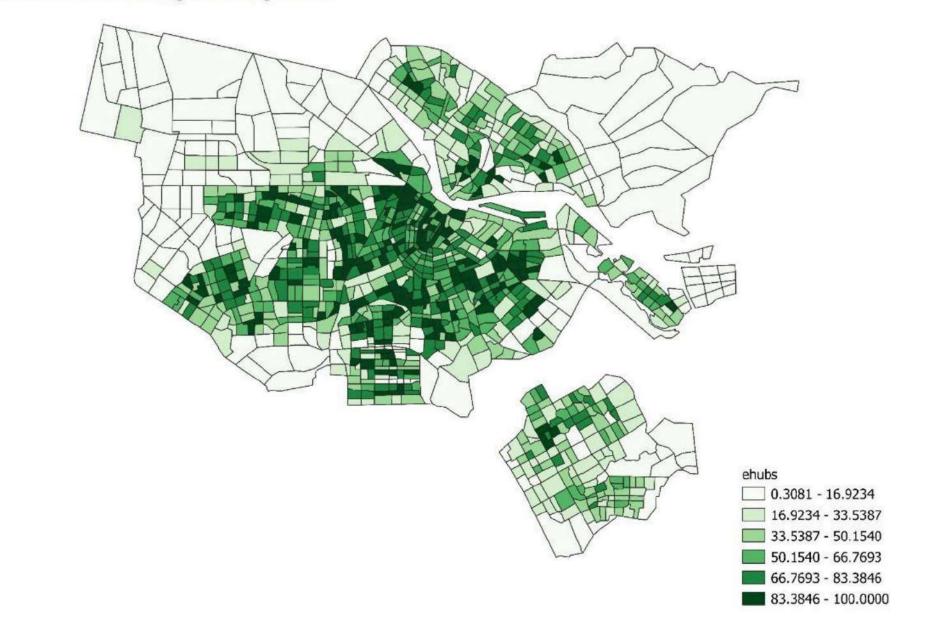
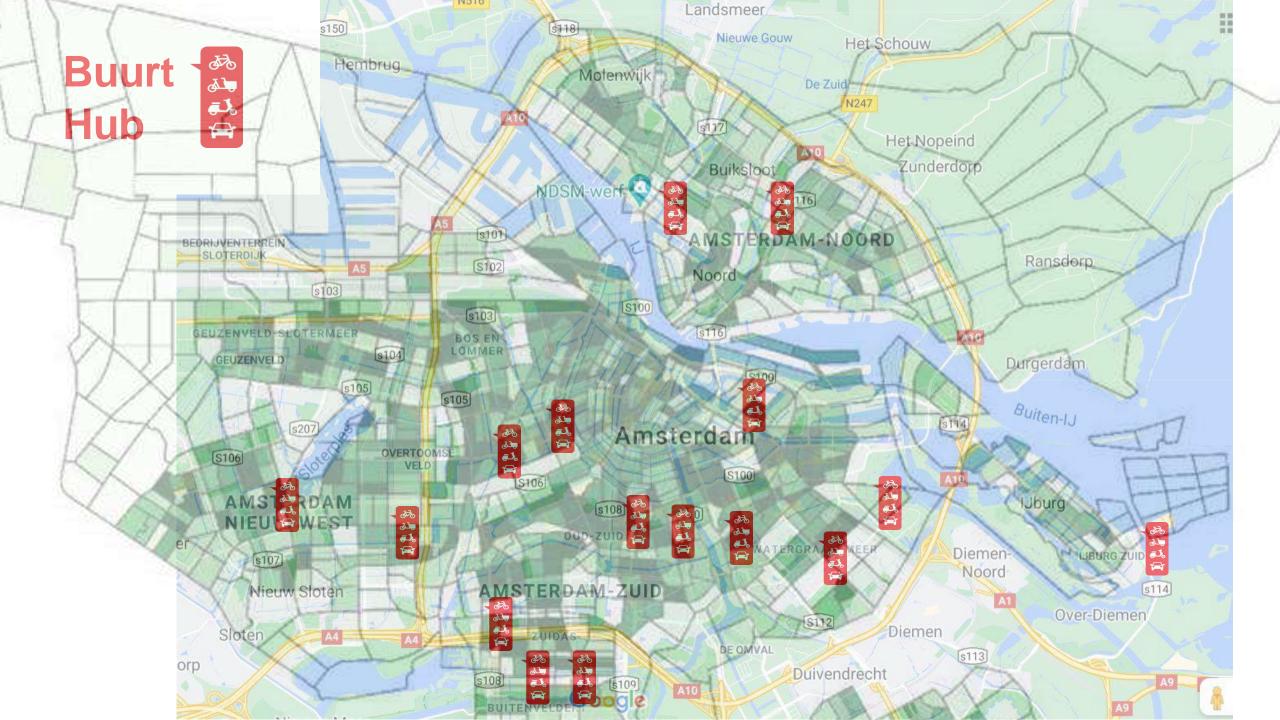


Figure 3c. Amsterdam heatmap for e-hubs potential







Voting & Menu

















Minimal requirements

- Zero-emission
- TOMP-API
- Sharing data
- Monitoring
- Privacy















Lessons

vent E

- Physical meetups really work
- User uptake seems higher
- The people that are using the eHUB/BuurtHub are more likely to get

sell their cars

- Coöperatieve hubs needs to be explored more
- Societal businesscase

Thankyou

FIL

Buurt

Loi

Hub

Diederik Basta - D.a.basta@amsterdam

+316-10 60 25 21

hid



Gemeente Amsterdam

Buurt Hub

> Deze plek is Gereserveerd voor Buurthub voertuigen

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Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau



- Reclaiming Street Space and Place Making with Car-Sharing and Mobility Hubs in Bremen (and Beyond)

Rebecca Karbaumer Sustainable Mobility Project Coordinator Free Hanseatic City of Bremen Rebecca.karbaumer@umwelt.bremen.de



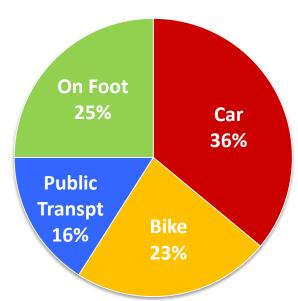


EUROPEAN UNION

European Regional Development Fund



Modal Split





570,000+ Residents

Car-Sharing Action-Plan Bremen

Target figure: 20.000 Car-Sharers by 2020

für Umwelt, Bau, Verkehr und Europa

Framework for growth

- Car Sharing stations on-street
- Integration new developments
- Integration with Public Transport
- (Own) Fleet Management
- Awareness + Information

Goal: replacing > 6,000 cars

Am 05.02.2009 bzw. 12.02.2009 haben die Deputation für Bau und Verkehr (S)

Vorlage Nr.: 17/ 295 (S) B+V Vorlage Nr.: 17/ 120 (S) U+E

Sustainable Urban Mobility Plan for Bremen

Sustainable Urban Mobility Plan Bremen 2025 Chapter 4 Opportunity and Shortcoming Analysis

34

Car Sharing

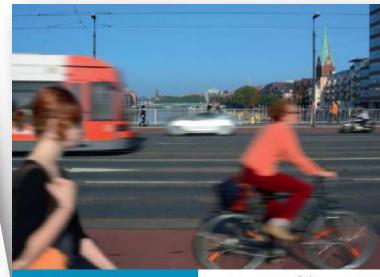
Car sharing offers a mobility service that focuses on the environmentally-friendly use of cars and puts car

A distinct advantage of car sharing is that it relieves use ahead of ownership. Public street space of parked cars — thus promoting higher quality local mobility in densely built neighingine quarty rocal mounty in univery unit negative bourhoods. Regular customer surveys of the car shar-Ing operator cambio have shown that 30% of those surveyed had got rid of a personal car. Civen the sta-SULVEYED HAD BOLTHU OF A PERSONAL CALL STREET OF BAA USEICAL AVERAGE OF 40 USERS PER CAR Sharing Vehicle, this means roughly 12 private cars are replaced by each are sharing vehicle. ' Car sharing offers a comparatively inexpensive means to reduce parking pressure. uvery mexpensive means to resuce parking pressure particularly in central neighbourhoods, and to help create better conditions for local mobility.² The planned "mini mobility points" should enhance this approach on a small scale through a dense network of approach off a stream scale unough a verse tream 2-car stations in densely built neighbourhoods.

The growth rate and the interest from car manufacthe grow unless and all interest room on managements there is a management to the sharing is gaining in importance. above all at the local level. Analogue to the national development of car sharing, cambio has become an ueveropment of car straining, camput has become an important player in Bremen over the past 20 years.



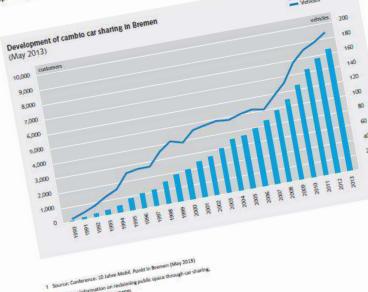
Custon - Vehicles



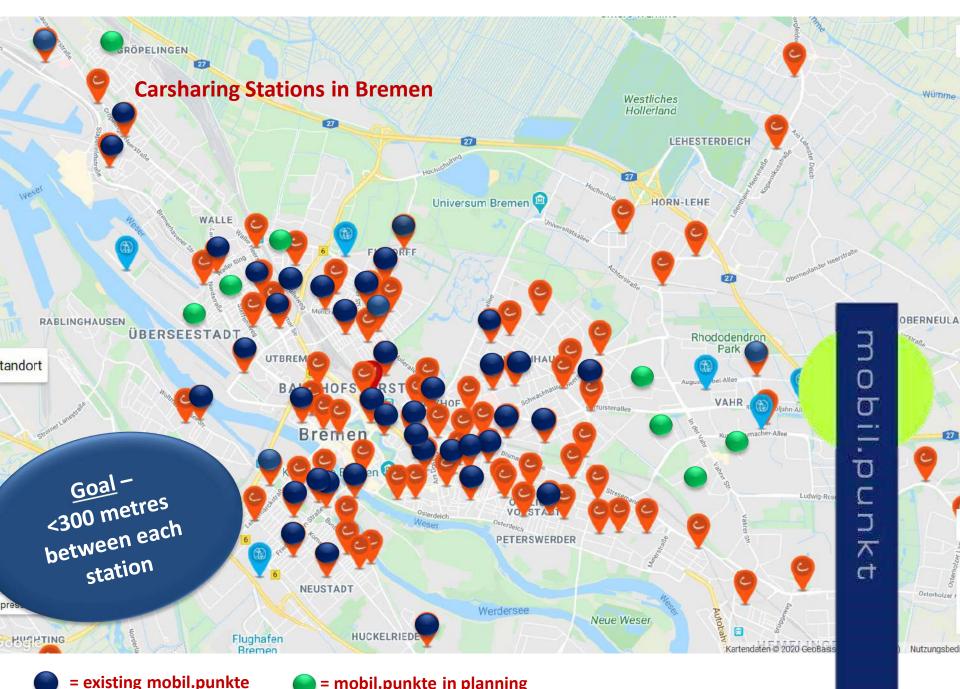
Sustainable Urban Mobility Plan Bremen 2025







remation on reclaiming public space through car sharing.



= existing mobil.punkte

= mobil.punkte in planning

Important: Visibility, Accessibility and Clear Marking/Branding

D

<u>mobil.punkte</u> (<u>est. 2003):</u> large stations with CS, PT, cycling infra. and more

Important: Visibility, Accessibility and Clear Marking/Branding

Straßen

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Call States

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HB CA 334

115

<u>mobil.pünktchen</u> (<u>est. 2013):</u> small stations in residential areas; the "neighbourhood car"

Free-Floating Carsharing Services as Part of a Combined System

Freefloating-Angebot gegeben. Bald wird es in der Hansestadt 50 Autos geben, die nicht zu einer Station zurückgebracht werden müssen.





Alle 30 Fahrzeuge für das neue Freefloating-Angebot in Bremen sind vor der ÖVB-Arena versammelt. Joachim Schwarz, Geschäftsführer der Cambio-Holding, drückt dazu die Tröte, und die Bremer Cambio-Geschäftsführerin Kerstin Homrighausen schwenkt da die Fahne. (Florian Schwiegershausen)

Das Bremer Carsharing-Unternehmen Cambio ist am Mittwoch mit einem zusätzlichen Angebot gestartet. Zu den Fahrzeugen, die an ihre Stationen zurückgebracht werden müssen, gibt es ab jetzt in Bremen auch Autos, die o Kunden einfach auf einem Parkplatz an der Straße abstellen können. Dieses Carsharing nennt sich "Freefloating", bei Cambio heißt es Smumo, was die Abkürzung für "smart urban mobility" ist, übersetzt also "smarte städtische Mobilität".

Smart ist auch das Stichwort. In anderen Städten haben sich bisher Daimler mit Smarts und BMW mit Minis mit einem Freefloating-Angebot hervorgetan. 80 Free-Floating Vehicles In addition to 370+ stationbased cars

Why Mobility Hubs?







Transport-related emissions



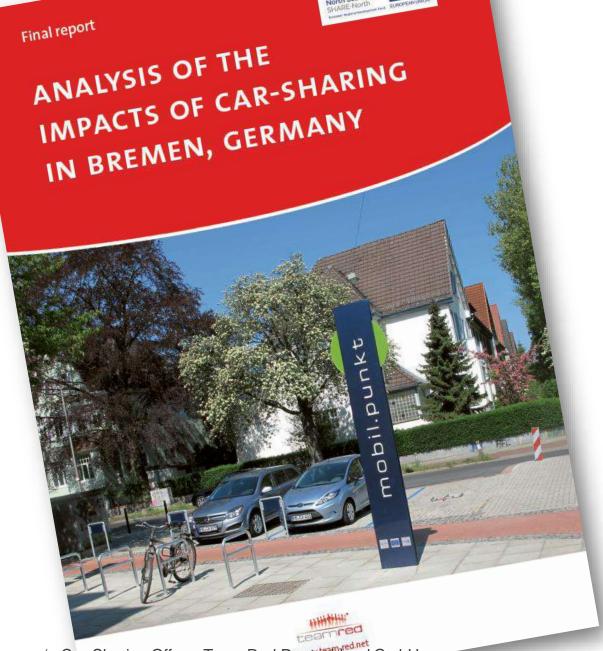




Social Inclusion and Accessibility



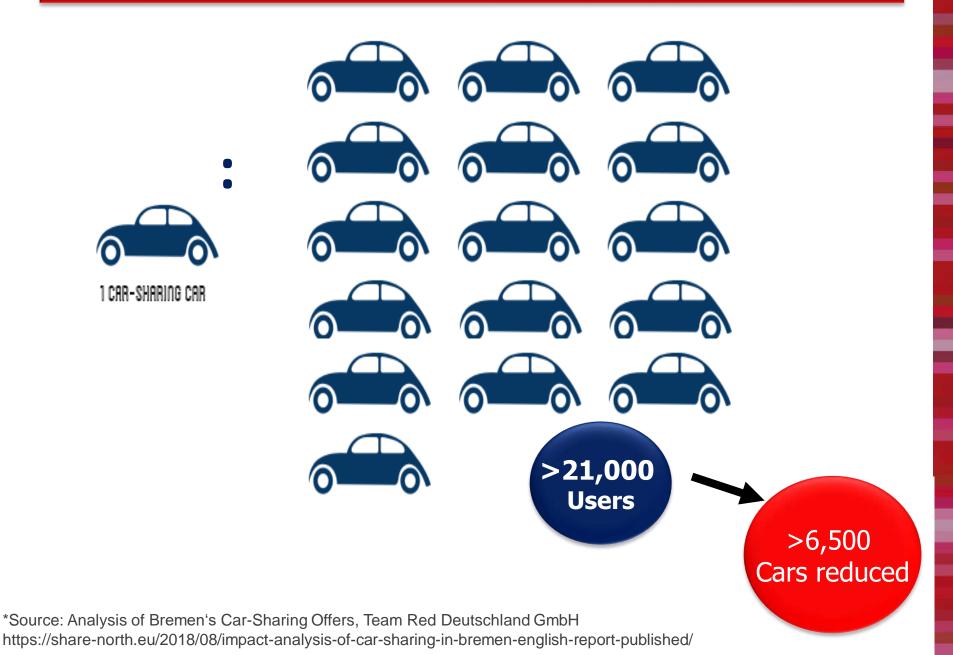
Quality of Life



terreg

*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/

Impact of Car Club Use on Car Ownership



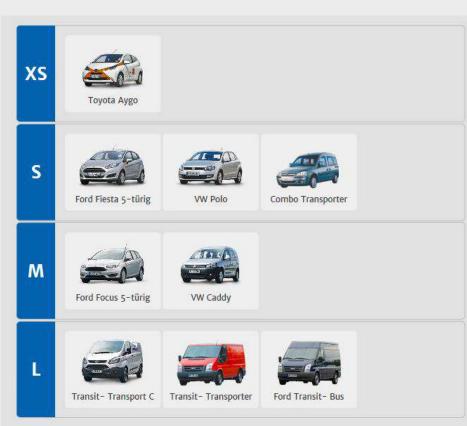
Positive Environmental Impacts

 Lower car-mileage travelled (more use of Public Transport, Rail, Cycling and Walking)

 Appropriate cars for purpose of journey (downsizing of cars)

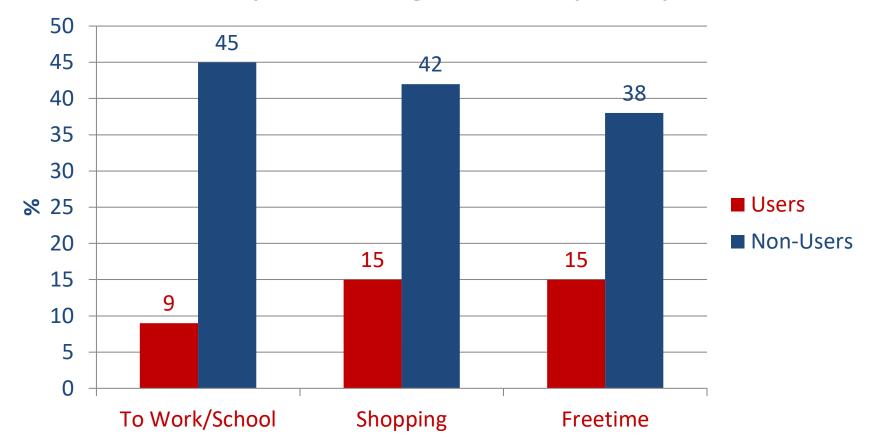
 Better cars available (above-average emission

standards)





Modal Split: Percentage of Car Use per Purpose



*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/c

Most Important Factors for User Satisfaction

Very Important:

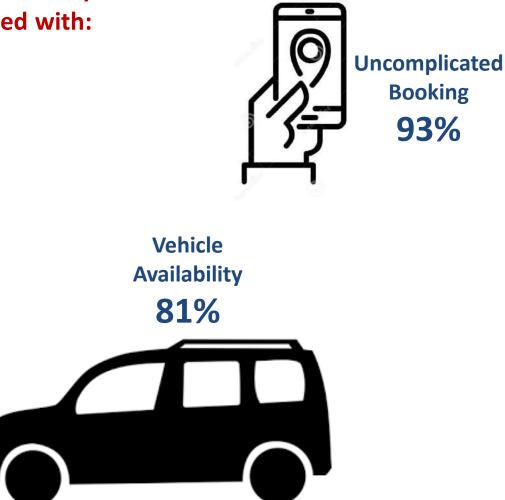


Vehicle Availability 68% Short Distance to Next Station 60%

*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/

Most Important Factors for User Satisfaction

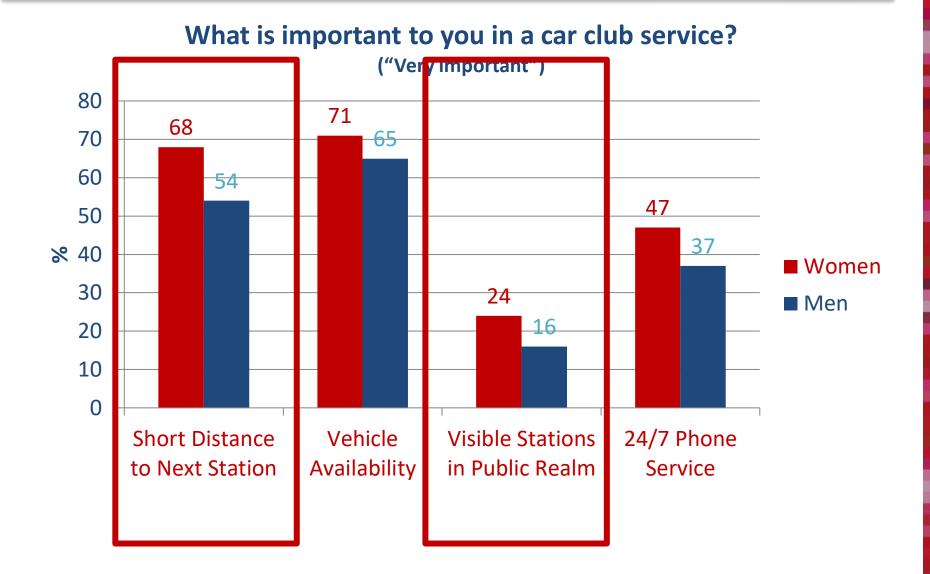
Very Satisfied/ Satisfied with:



*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/ Short Distance to Next Station 84%

Most Important Factors for User Satisfaction

– Gender Differences

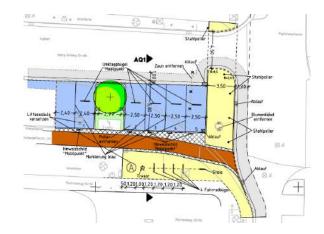


*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/

Benefits



Increased visibility and accessibility of shared and sustainable transport



Tailored solutions to meet needs of community and support transport policy goals



Joint branding includes increased visibility and political support





Rebecca Karbaumer Sustainable Mobility Project Coordinator Free Hanseatic City of Bremen Rebecca.karbaumer@umwelt.bremen.de www.share-north.eu

Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau







European Regional Development Fund

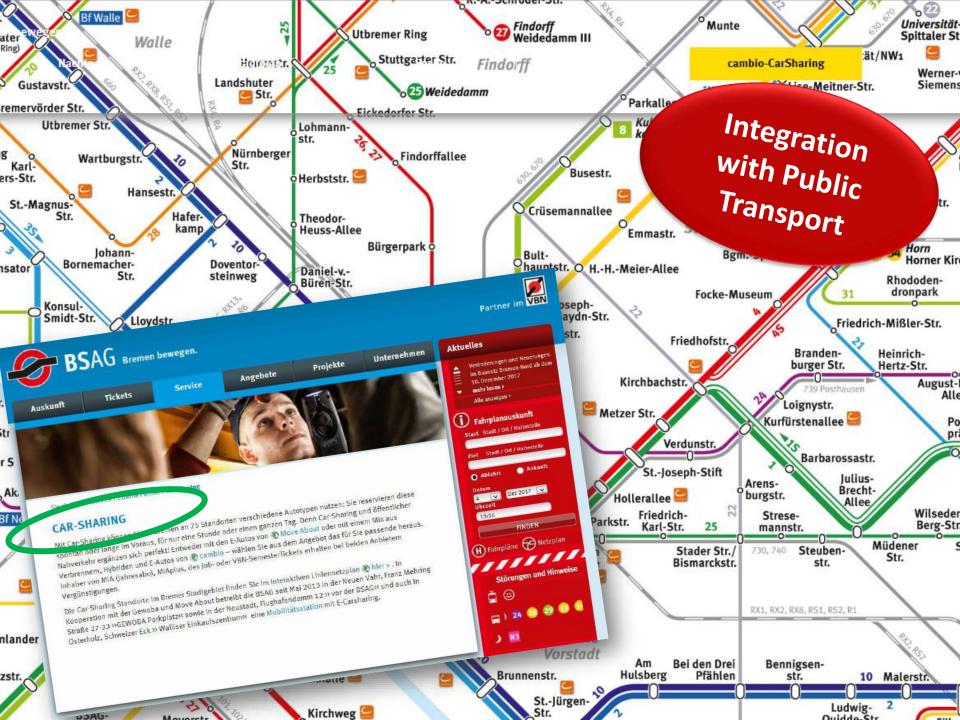
EUROPEAN UNION

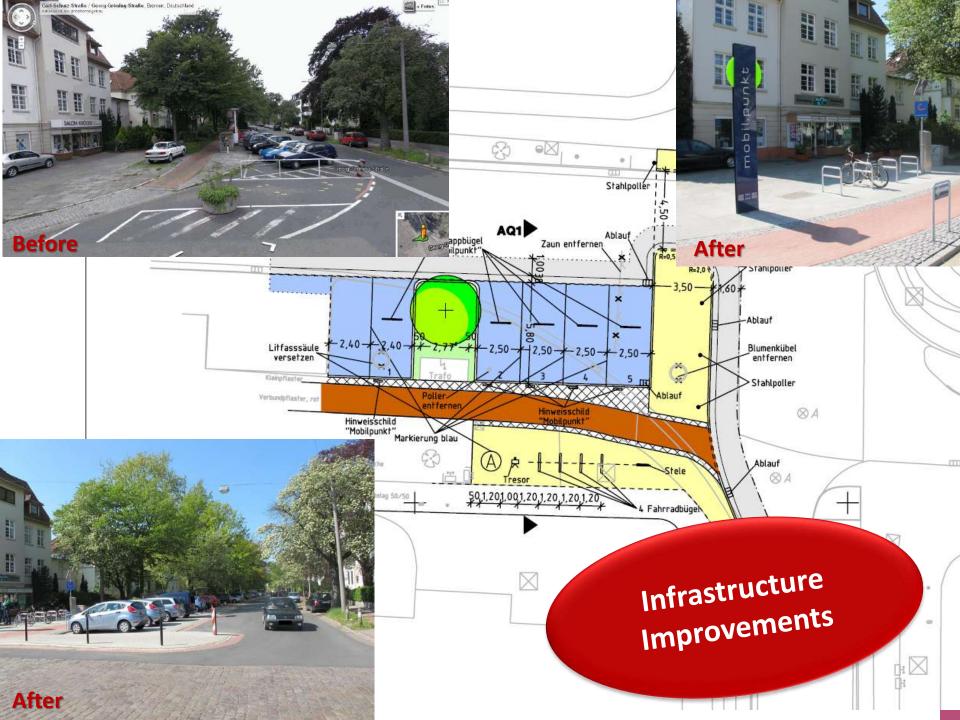
Integration in Neubauvorhaben – Beispiel Gewoba Neubau nach §9 StellplOG



2 Stellplätze für Carsharing...

-und- Bikesharing-Station und -Mitgliedschaften







Welcome eHUBS International Academy, Bergen

30/09/21





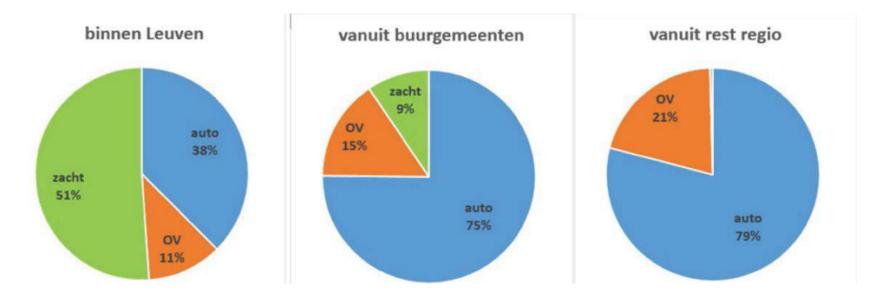
Planning process in Leuven

Hilke Evenepoel Project coordinator eHUBS Leuven





1. At the start



Car is king





2. Driving forces

- Liveability
- Accessibility
- Equality
- Sustainability



Flanders: policy about mobipoints since 2017 (HOPPIN, 2020)

\rightarrow eHUBs

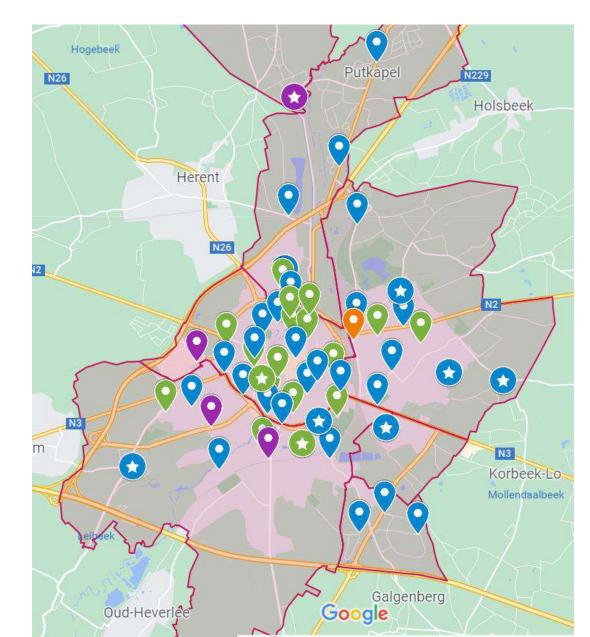
= More shared and clustered (e-)mobility services





3. Type and size of eHUBS





2 logics: 1) Network: transport nodes →Interregional →Regional →Local

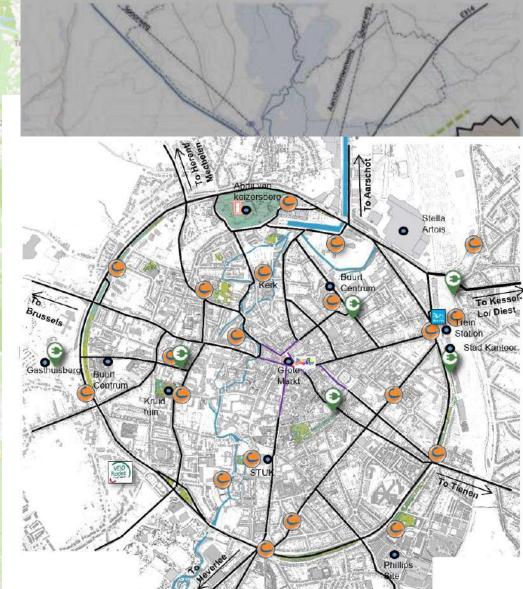
2) Proximity: →Neighbourhood



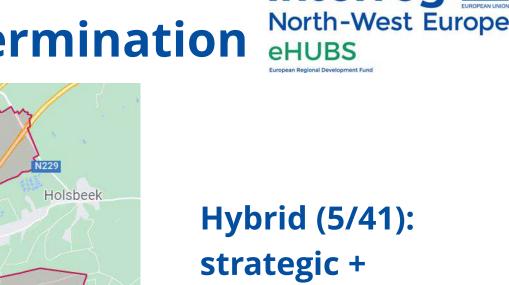
4. Location determination Strategic (32/41)

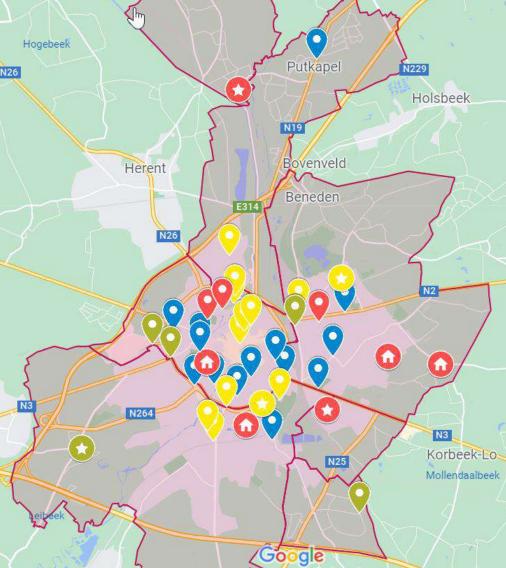


- Business and other activities (Old city centre, university, industry and research park, university hospital, ...)
- Area and population densities (>5K/km² in centre: 4 hubs/km²; elsewhere: 1 hub/2 km²) → 50 hubs
- Circulation plan
- Geomorphology
- Existing shared mobility offer and public transportation network
- Opinion of the shared mobility providers
- Potential to expand
- Charging infrastructure
- No detailed analysis of grid



4. Location determination





Hybrid (5/41): strategic + participation process

Interreg



4. Location determination

Bottom up (4/41)

- Phase 1: Submit a location
- Phase 2: Create an extensive submission file
- Phase 3: Neighbourhood meetings and swapping information
- Phase 4: Implementation of the neighbourhood mobipoints



Interreg

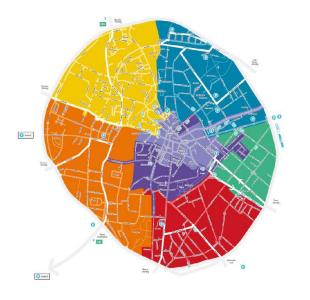
eHUBS

North-West Europe



5. Service determination







Which modes?

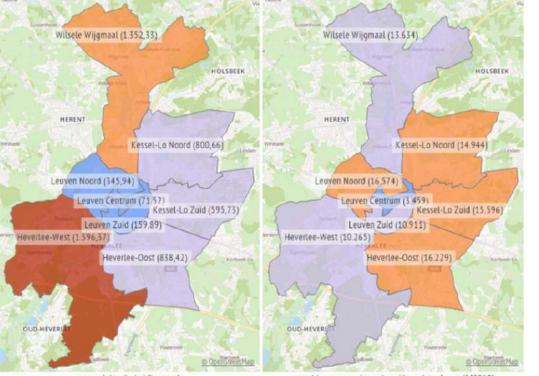
- Shared (electric) cargo-bikes
- Shared (electric) bikes
- Shared (electric) cars
- No e-scooters
- No e-mopeds

Commercial AND peer-to-peer Ban on unauthorised mobility providers



5. Service determination





oppervlakte (in ha) [hectare]

aantal inwoners volgens het rijksregister [aantal] [2019]

Bron: Statbel - statistische sectoren/officiële oppervlakte gemeenten | provincies.incijfers.be, Rijksregister | provincies.incijfers.be

How many vehicles?

- Shared electric bikes (people x activities):
 - 6/1000 in car-shy/free centre
 - 4/1000 in rest of centre
 - 2,5/1000 elsewhere
 - \rightarrow 300 in theory
 - \rightarrow 90 as pilot
- Shared (electric) cargobikes: 30 (eHUBS)
- Shared (electric) cars
 - 10% own risk





Target: 90 E-BIKES

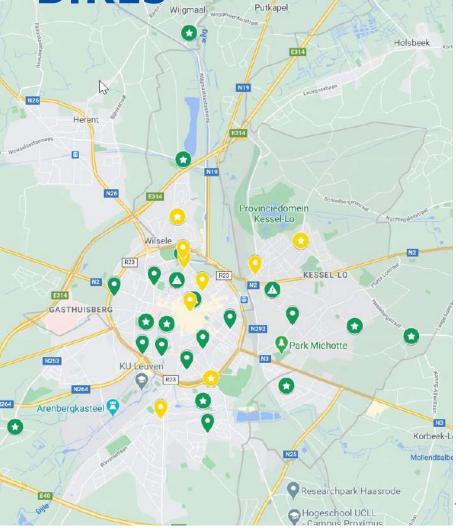
As is (pilot):

- Network + proximity logic
 → network (first/last mile)
- # e-bikes: $40 \rightarrow 25 \rightarrow 33 \rightarrow 40$
- Station based
- # stations: $15 \rightarrow 5 \rightarrow 6$
- Back-2-many
- 5-8 bikes/hub
- Standard bike racks
- Battery swap \rightarrow hybrid system
- Urbee
- 0,05 €/h (no reservation possible)





Target: 30 E-CARGO BIKES





As is (pilot):

- Proximity logic
- # bikes: $9 \rightarrow (15) \rightarrow 30$
- # station: 9 → 30
- Back-2-one
- 1 bike/hub
- Standard bike racks
- Battery swap
- Cargoroo
- 0,07 €/h (1€ for reservation)







Target: + 40 EV



Current target: +15 EV

- Proximity logic mainly
- # e-cars: 15 → 17 → 27 (July22) → 39 (2023)
- # stations:
- Fuel based cars vs e-cars
- Station based
- Charging infrastructure
- Cambio, Partago, xxx (tender
- Not yet any peer-to-peer





6. Look and feel









7. Communication + nudging





North-West Europe eHUBS

European Regional Development Fund



Mobiguateric stoches, goedkoper, gezellig

'Zelfs als je een auto cadeau krijgt, kom je nog goedkoper uit met een deelwagen'

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Home > Mobiliteit en wegenwerken

Mobipunten

De stad installeert 50 mobipunten. Je kan er vlot van he het andere vervoersmiddel overschakelen en onder met deelauto's en deelfietsen gebruiken. Er zijn al 14 mobip gebruik.

Je zocht op:

Vind een mobipunt in jouw buurt

Deelgemeente



.

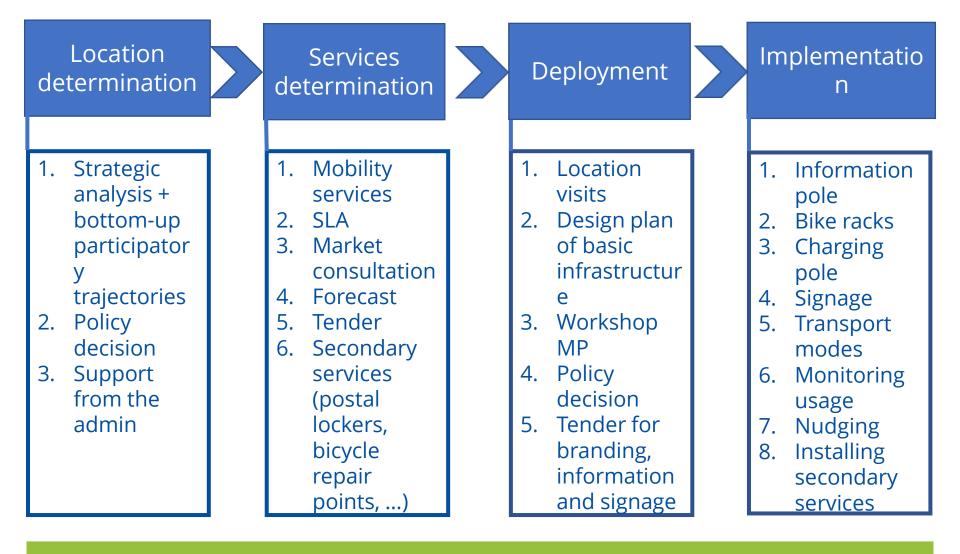
Extra diensten

- Pakiesautomaat
- C Fietsenstalling
- Laadpunt elektrische
- voertuigen
- Parking (betalend)

Vervoersmiddelen

- Bushalte op minder dan
- 300 meter
- C Deelauto
- Elektrische deelauto
- Elektrische deelbakfiets
- Elektrische deelfiets

Paleparamana elektrische deelbakfiets elektrische elek



Branding & Communication





4

Interreg Intere

European Regional Development Fund

Thank you!





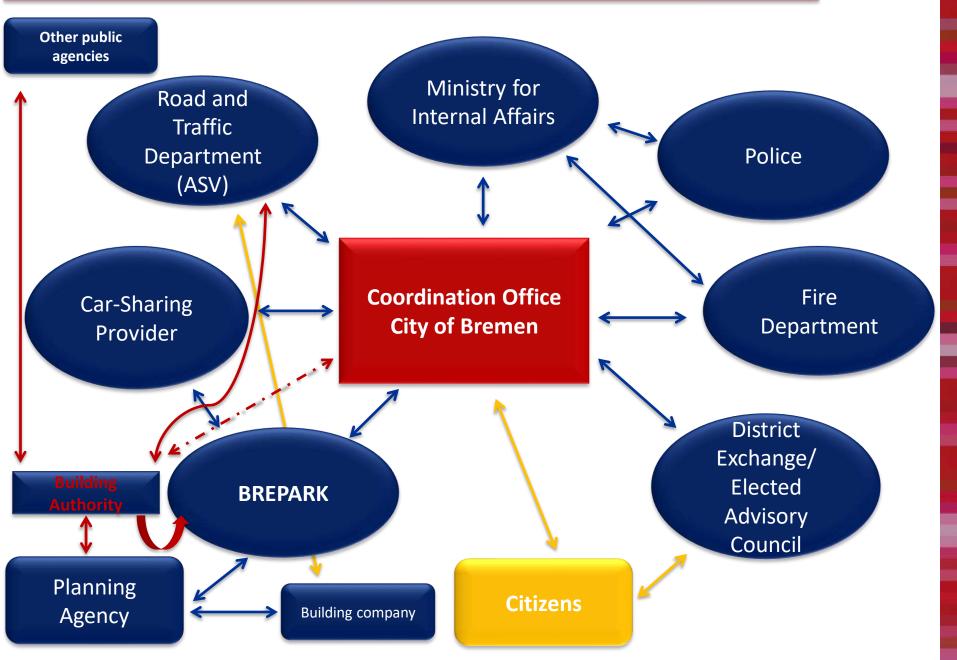
Freie Die Senatorin für Klimaschutz, Hansestadt Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau

Bremen's mobil.punkte - The Planning Process

Rebecca Karbaumer Sustainable Mobility Project Coordinator Free Hanseatic City of Bremen Rebecca.karbaumer@umwelt.bremen.de R 0 σ ----σ C J × ct

Main Stakeholders involved in Planning mobil.punkte





Build a Foundation

Select a Location

Physical Planning

Tendering/Selecting a Provider

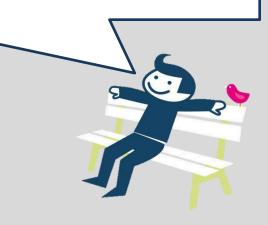
Build a Foundation

- Build basic understanding (what is car-sharing, how does it work?)
- Create a Political Framework (e.g. Car-Sharing-Action Plan)
- Generate interest in neighbourhood

Need to create (political) support for your plans? Here are some helpful tips for winning your audience over:

- Ask for <u>suggestions</u> and take them seriously
- Be <u>flexible</u> and consider their concerns (Never say, "No, that's not possible." Say, "No, but..." and suggest alternative)
- Remind them that decisions were based on their suggestions ;-)
- Be positive: Enter and leave all discussions with a smile
- Involve the <u>press</u>: if you can convince them, you can convince the public
- Be <u>transparent</u>
- Be <u>honest</u>
- <u>Tell a story</u>
- Set measures into (local) context
- End on a high note

Creating Support



Select a Location

• Involve citizen initiatives, elected officials, police, fire department and car-sharing providers

Site Visits

Rain...

1.11

MILLIA QUINT

D

or shine!

SG Ga Holler 28209 0421 30

K

SU

DH CS 1907

WELLMAN

OVD Internand

Site Selection Criteria

When selecting a location for a mobil.punkt/mobipunt, you should ask yourself:

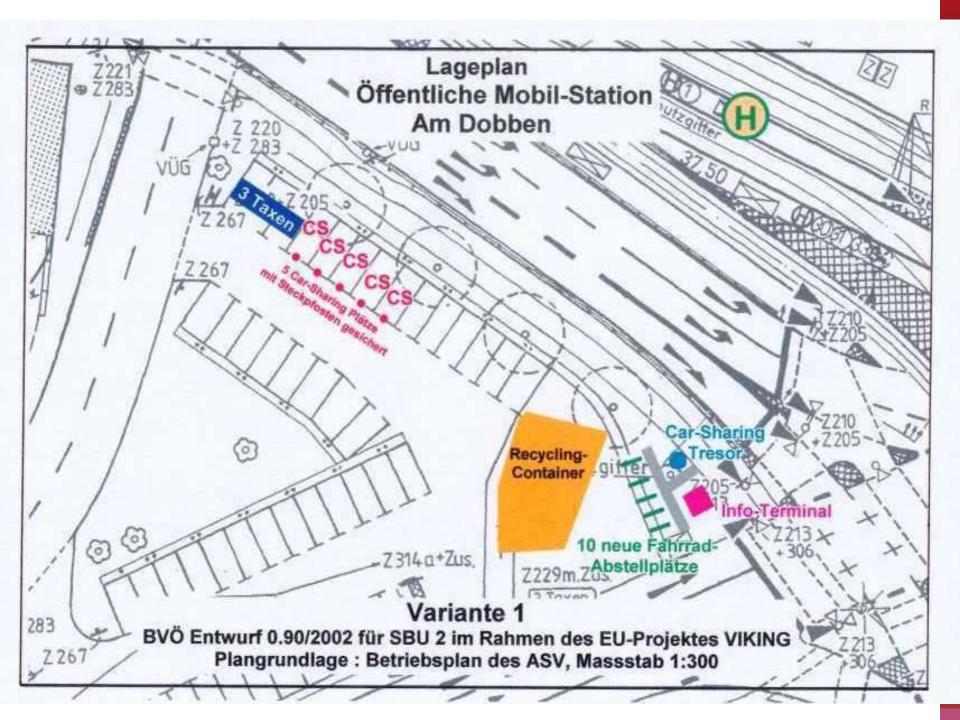
- Is the location <u>visible</u>?
- Is it easily <u>accessible</u>? On foot, by bike, by public transport?
- Can you link to <u>other modes of transport</u>?
- Does the population density provide a business case?
- Is there a <u>balance</u> of potential private and business users
- What is the <u>existing</u> offer of <u>services</u>?
- Where do <u>service gaps</u> need to be closed?
- Does the suggested site provide the <u>space</u> for the facilities you want to provide? Is it inline with land use plans?
- Does the location convey a sense of safety? (e.g. well lit, free of obstacles or hidden corners)
- What do you want to achieve? Is a mobility hub the right tool to achieve these goals?

Site Selection

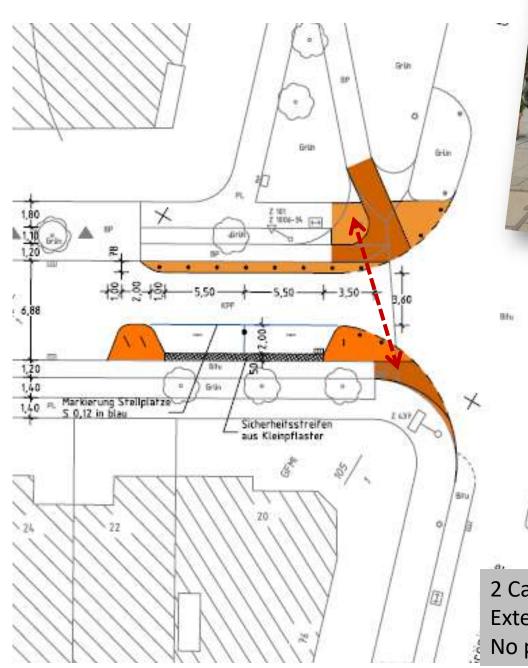
Physical Planning

Consider:

- Road safety
- The needs of physically impaired
- Accessibility
- Required infrastructure for the service you want to provide

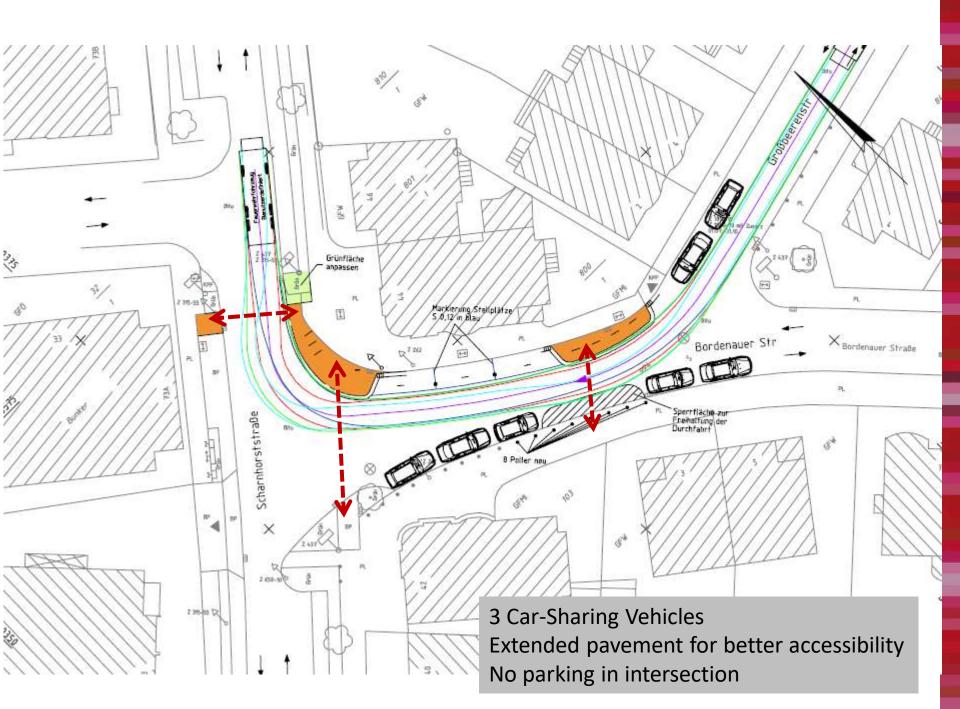


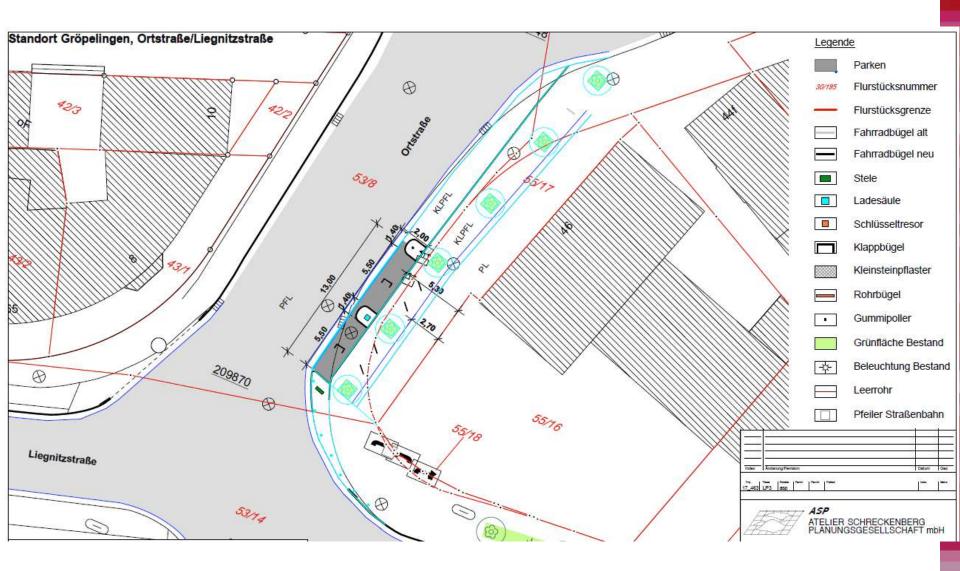




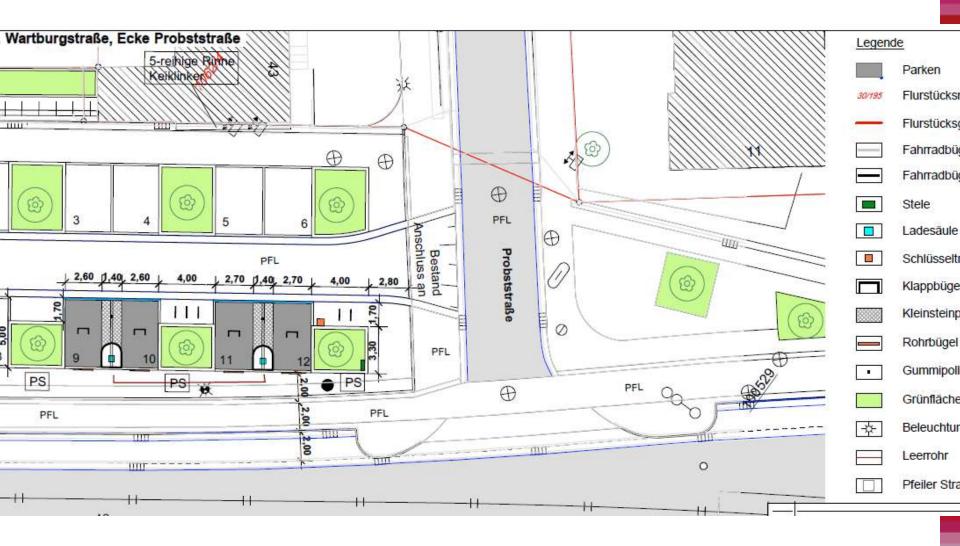
HB T1726 **Unite** Grün 8 0 £Ha 6,00 11.4 7 742 Drifts 35-1 lihi 2 1012-31 Holzpoller zurückbauen vorhance 2 Shellp Gen 2 Car-Sharing Vehicles Extended pavement for better accessibility

No parking in intersection





2 Car-Sharing Vehicles Extended pavement for better accessibility Includes charging infrastructure



4 Car-Sharing Vehicles Extended pavement for better accessibility Includes charging infrastructure



Carsharing-Fleet in Bremen

- Conventional

Ca. 2/3 Gasoline Ca.1/3 Diesel

420+ Carsharing -Vehicles

Ca. 10 Hybrid Ca. 14 Electric

Alternative



Carsharing Fleet in Bremen

"One of the biggest hurdles for starting to use carsharing is that non-users think it is complicated."



Quelle: https://carsharing.de/alles-ueber-carsharing/studien/carsharing-sicht-nicht-nutzer-0







Improving mobility for the physically and visually impaired



HBCAZTZ

C

THE SHARED MOBILITY FAMILY







ELECTRIC



SHARING



-SCOOTER SHARING

MOPED

SHARING



RIDESHARING

RIDESOURCING













European Regional Development Fund

EUROPEAN UNION

Icons available here: www.share-north.eu/resources

Tendering/Selecting a Provider

- What kind of service do you want?
- How do you want to manage space allocation?

Requirements for Use of "mobil.punkte" in Bremen



Expression of Interest (Interessensbekundungsverfahren)

1. Public Notice /Call for Expressions of Interest from Providers

Example:

On formal tendering platform: City is offering X number of stations with X parking bays, features are...

If you meet the basic quality criteria, submit an expression of interest Invitation to Settlement Meeting (with or without competitors)

2.

Example:

Competitors can agree on who will operate which stations/parking bays

Final details of station design/equipment can be defined and agreed upon.

Expression of Interest (Interessensbekundungsverfahren)

3. Formalised Selection Criteria

Example:

If no compromised can be achieved in Step 2, the selection criteria can be formalised to be similar to a regular tendering procedure (points given for quality of service) 4. Contract for Service at mobil.punkt

Example:

Contract for use is fixed, along with fees, min. operation time frame, etc.

Managing the Space

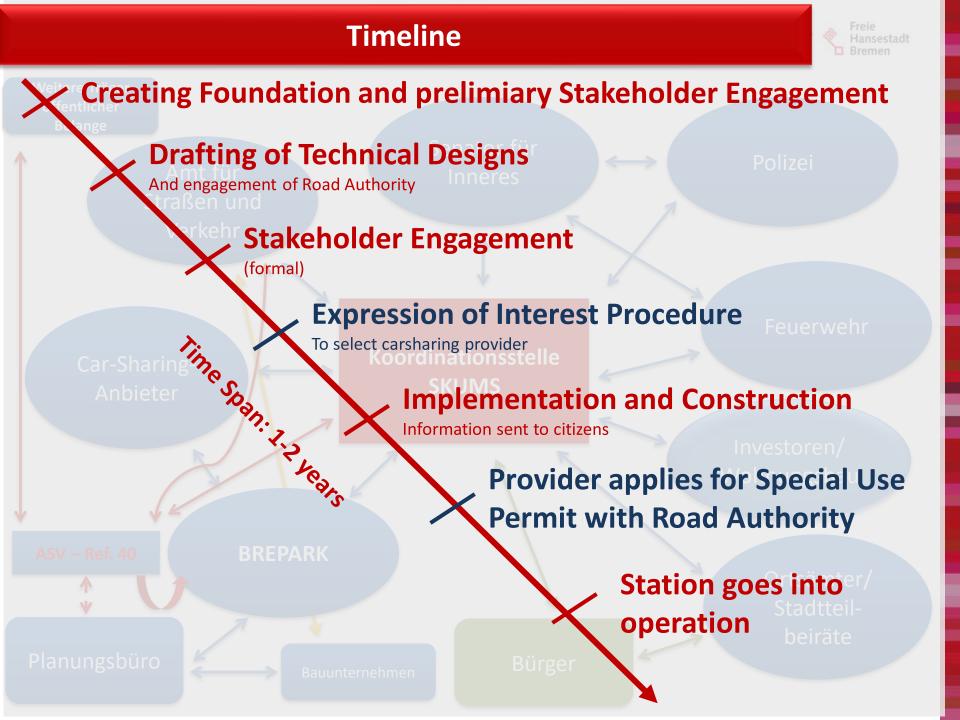


Charging a Usage Fee for Providers

Advantages

Disadvantages

- Increased acceptance among public/politicians
- Means of financing future mobil.punkte/legitimising public investment
- Increased financial hurdle/risk for providers, particularly in new market area





Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau







European Regional Development Fund

EUROPEAN UNION

For 8-10 new mobil.punkte/pünktchen per year

- Planning budget: ca. 20.000 € annually
- Construction costs: 90.000-180.000 € annually
- Staff requirements: at least 40% of a full time position
 - Coordination of Planning Process (Planning + Tendering + Construction are external)
 - Coordination of Stakeholder Participation
 - Communication
 - Expression of Interest Procedure and Market Assessment















EHubs in Flanders: a regional story

eHUBS academy Thursday 30 september 2021







www.mobipunt.be





PUBLIC SPACE

















PUBLIC SPACE



ACCECEBILITY











2019: a new policy

Started as different pilot cases and projects

Became a part of a new Flemish vision off public transport

➔ From a supply-based system to a demandoriented system

➔ Mobihubs as a public mobility solution: welcome Hoppin (2020)





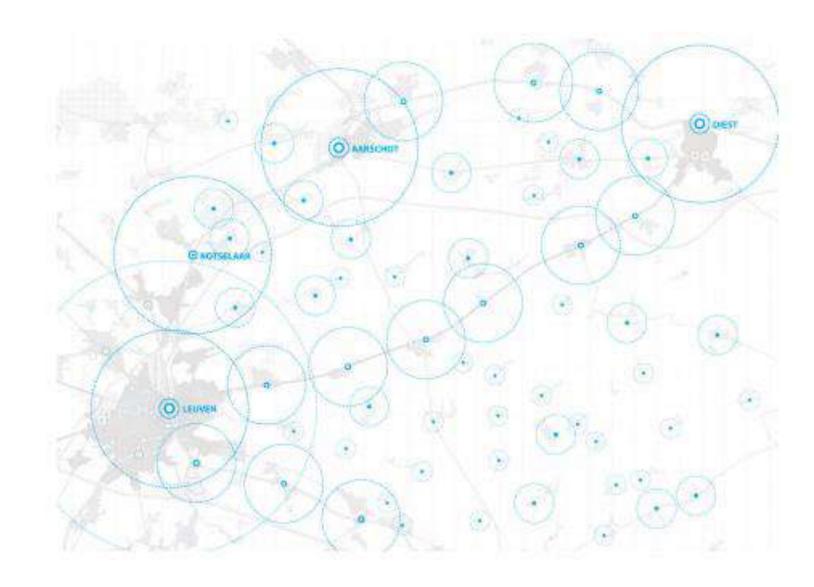








Mobihubs: a network





2019-2024: implementation

The goal:

- A goverment run (closed) MaaS system •
- Including public transport, shared bikes and shared cars •
- Tailor-made transport •
- Goal: 1000 mobihub's in 2024 •
- At the moment more than 1500 mobihub's planned •

Policy <-> Vision

eHubs





PUBLIEKE





Interreg North-West Europe eHubs







www.mobipunt.be

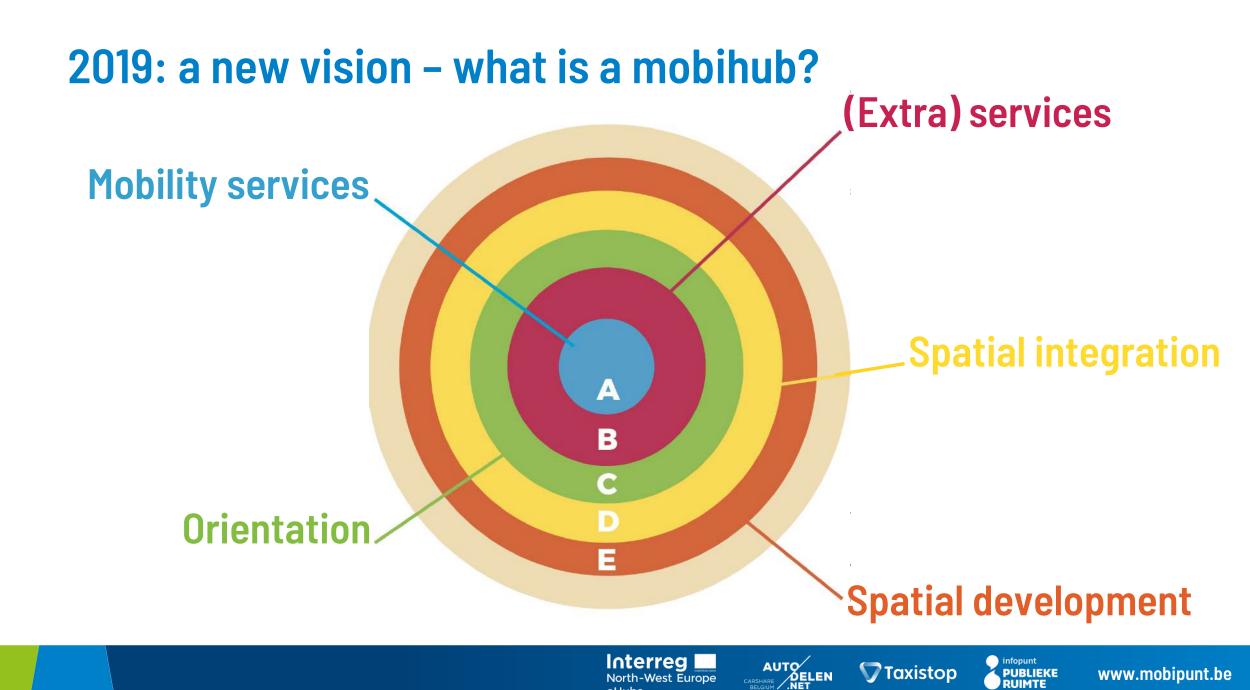












eHubs



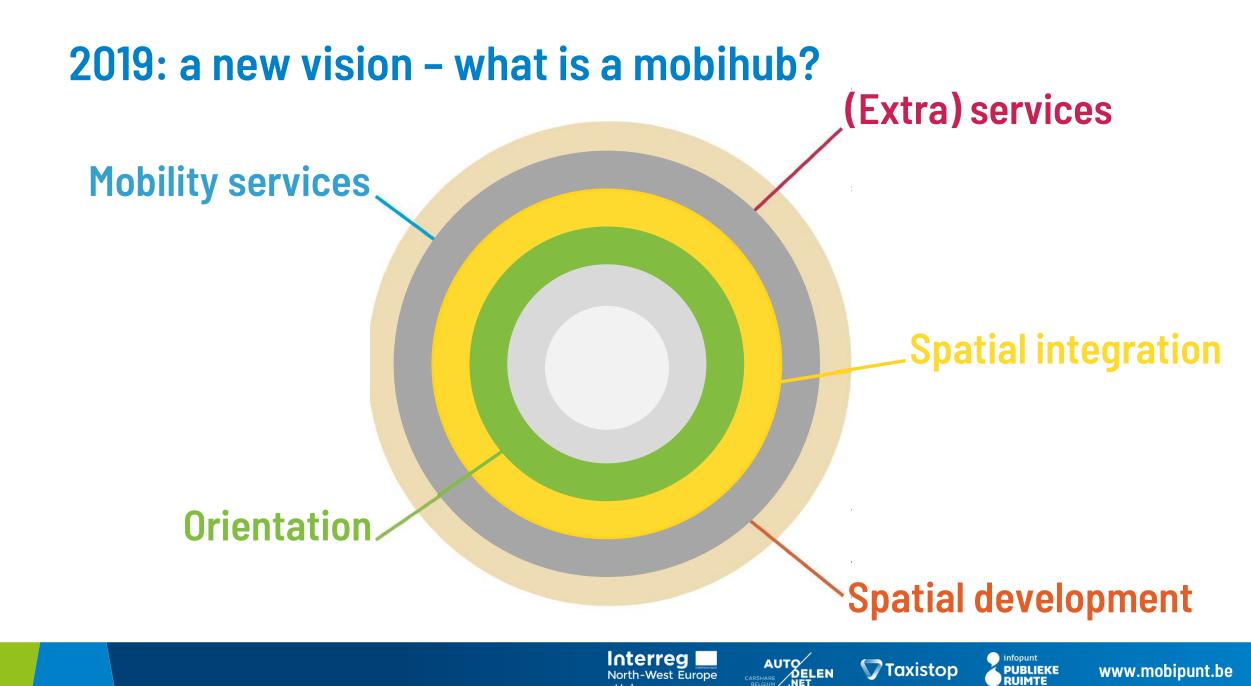








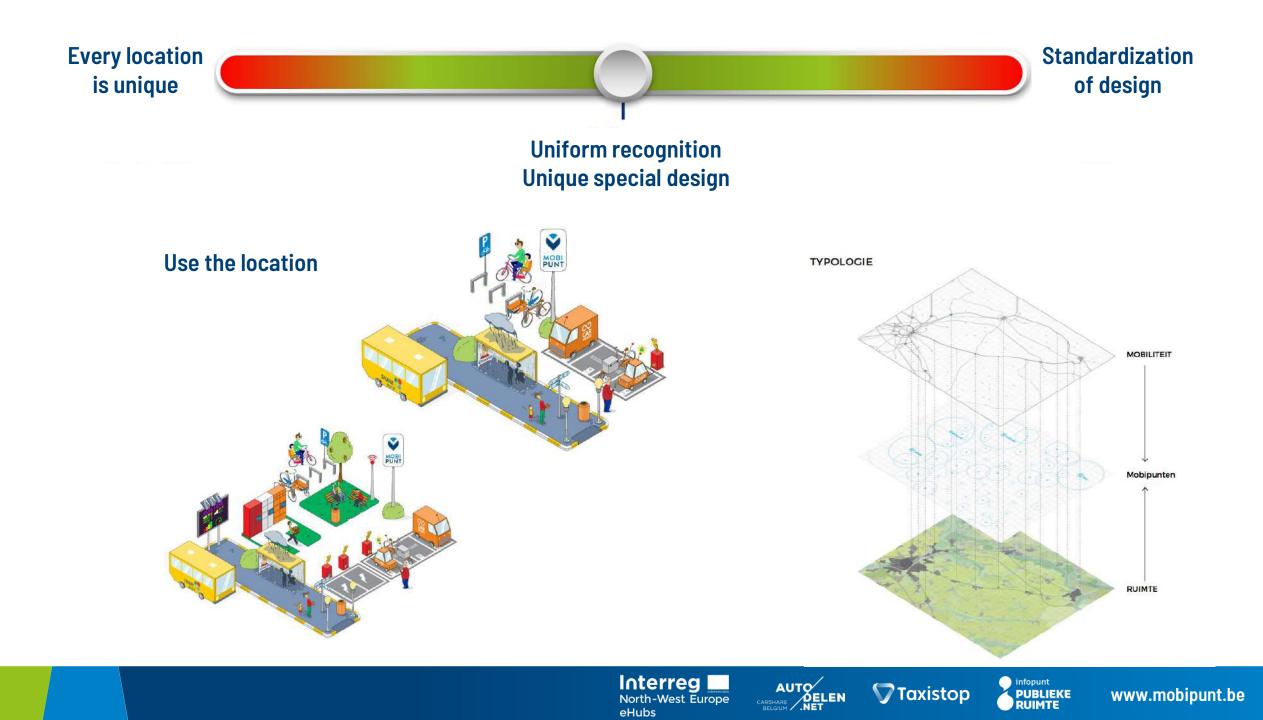




eHubs









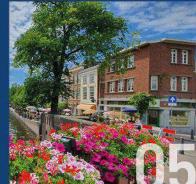
Policy plan: public space Flanders































1/ Shared space with multiple use cases













2/ Robust and adaptable space













3/ Recognition, orientation and visual attractiveness















4/ Valuation of public heritage and the landscape













5/ Biodiversity and ecology













6/ Climate-robust design













7/ Renewable energy













8/ Health















9/ Inclusion













10/ Economic vitality













Public Space













Two important thresholds for travelers

- Perceived safety as concern number one!
- Combined mobility = more transfers











Public Space

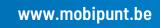






Interreg North-West Europe eHubs

AUTO CARSHARE BELGIUM .NET



Taxistop



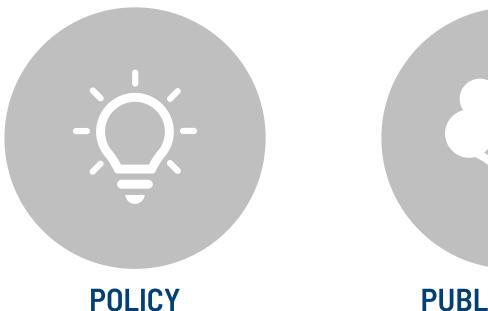


















PUBLIC SPACE









Accessibility: Key focus in Flanders

"Everybody must be able to independently move at the mobihub."









Accessibility: Key focus in Flanders

- Blind guidance to every mode of transport
- No steps without independent accessible wheelchair ramp
- No thresholds above 2 cm
- Completely accessible public transport (elevated bus stop)
- Wheelchair accessible touchscreens and ticketing

Not every mode of transport can be accessible.











PUBLIC SPACE















Bram Roelant - Coördinator +32(0) 456 37 77 08

K.M. Hendrikaplein 65B, 9000 Gent info@mobipunt.be www.mobipunt.be

Mobipunt vzw was founded by









Share North 29.-31.09.2021

E-mobihubs in Stavanger and in the region Nord Jæren

Imme Dirks Eskeland

advisor for climate and environmental issues

Municipaility of Stavanger



Stavanger – the fourth biggest municipality in Norway

- 144 000 inhabitants
 - 272 000 inhabitants in the region Nord Jæren
- "Oil capital" of Norway
- Pulpit Rock, beaches, city centre...





Mobility hubs and the Climate plan

- The «climate and environmental plan»`s «action plan» of Stavanger (2018-2022)
 - In 2030, direct GHG emissions from the transport sector have been cut by 80 per cent in relation to 2015, and 100 per cent by 2040.
 - T4 Establish places for common transport solutions in the districts
- www.stavanger.kommune.no/klimaplan



Klima- og miljøplan 2018-2030 Handlingsplan 2018-2022

Vedtatt av Stavanger bystyre 26.11.2018

How did we start?

- Inspired by the EU-prosjekt Share North (spring 2019)
- Applied for money from a national fund in 2019 (Klimasats) to establish Stavangers first mobility hub
 - Kr. 500 000,-
- Partners:
 - Department for Climate and environmental issues (project leader)
 - Smart city
 - Road department
 - Traffic signs are important!
 - Security...
 - Bicycle department
 - Department for city and community planning
 - Department for car-parking
 - Regional mobility provider Kolumbus
 - Regional electricity provider Lyse AS





1 Hvordan velge lokasjon?

Dette er det første steget, det som setter rammene, det som er vurderingsgrunnlaget for et godt mobilitetspunkt.

KONTEKST	Ja/Nei	Volum	Vekting
Egenskaper		500m radius	1-2-3
Overordnet			
Hvor mange innbyggere/boliger?			
Hvor mange ansatte/bedrifter?			
Hvor mange skoler og barnehager?			
<pre>Knutepunkt/Hvor mange passasjerer? (Kundegrunnlag)</pre>			
Hvor mange butikker og service?			
Er området i vekst/transformasjon?			
Er lokasjonen sentrumsnær?			
Praktisk			
Hvor stort areal er aktuelt?			
Er arealet allerede opparbeidet/reg.?			
Er det tilgang på strøm?			
Er det ladeinfrastruktur på plass?			
Tilgjengelighet (synlig, påkoblet vei)			
Trygghet (gange, sykkeltilgang)			
SUM			





First mobility hub at Hillevåg torg (autumn 2020)

- High freequent Bussway right beside
- E-Car sharing
- E-city bikes
- E-scooters
- Safe bicycle parking
- Station for garbage
- Post boxes
- Take away
- Sign (pilot)

What`s next in Stavanger?

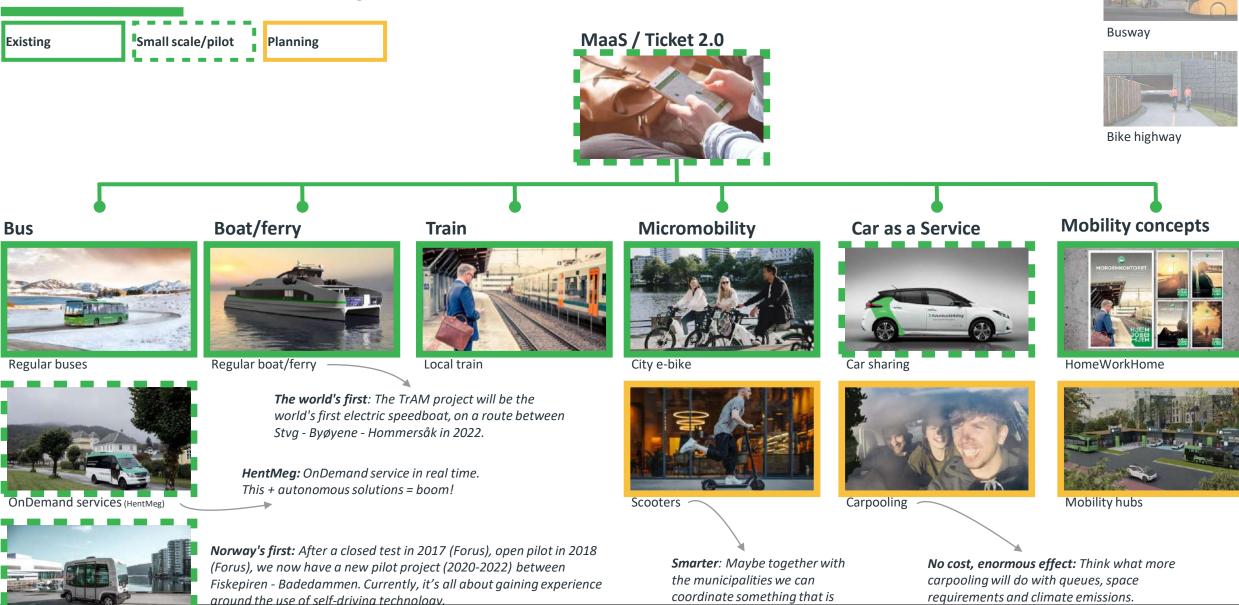
- Four more mobility points in neighbourhoods in Stavanger (finished spring 2022)
- «Guideline» for mobility hubs in the municipal plan's area section (2019-2034) is scheduled to become a «provision» in the new area section
 - We do not have to ask for mobility hubs anymore...
- Working togehter with our regional mobility provider Kolumbus...





Seamless mobility





Regional work on mobility hubs

- We work on mobility hubs with the regional mobility provider Kolumbus



Nord-Jæren: Lokal Task Force - work in progress



Mandate/overall purpose

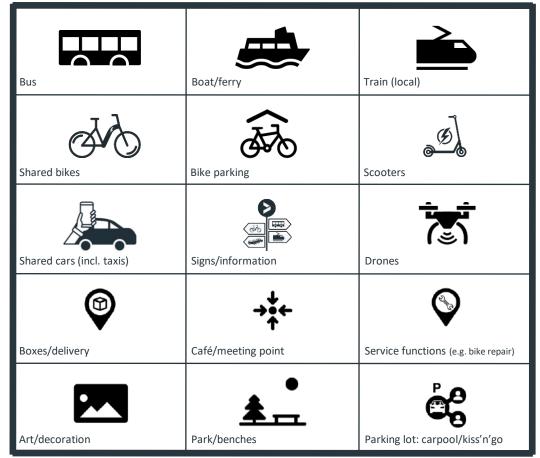
 Make one common plan for (larger) mobility hubs at Nord-Jæren.

Other main tasks:

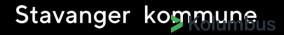
- ► Develope/make an overall flow chart for public plans.
- Define Kolumbus' responsibility, mandate and role in these processes.
- Define content of services and functions, as well as design/signs (national process).
- ► Define locations and sizes of mobility hubs (S-M-L).

Some kind of a menu

Different alternative services that a mobility hub could include, depending on location.



• We envisage somewhere between 10-25 mobility hubs (M-L size) in the region.





AUTO DELEN BELGIUM

eHUBS Academy

0

90%

Tendering and MaaSintegration

Who is Autodelen.net?

GOAL

To maximize the ecological, social and economic benefits from shared mobility trough... Combining and defending the interests of all providers Interred

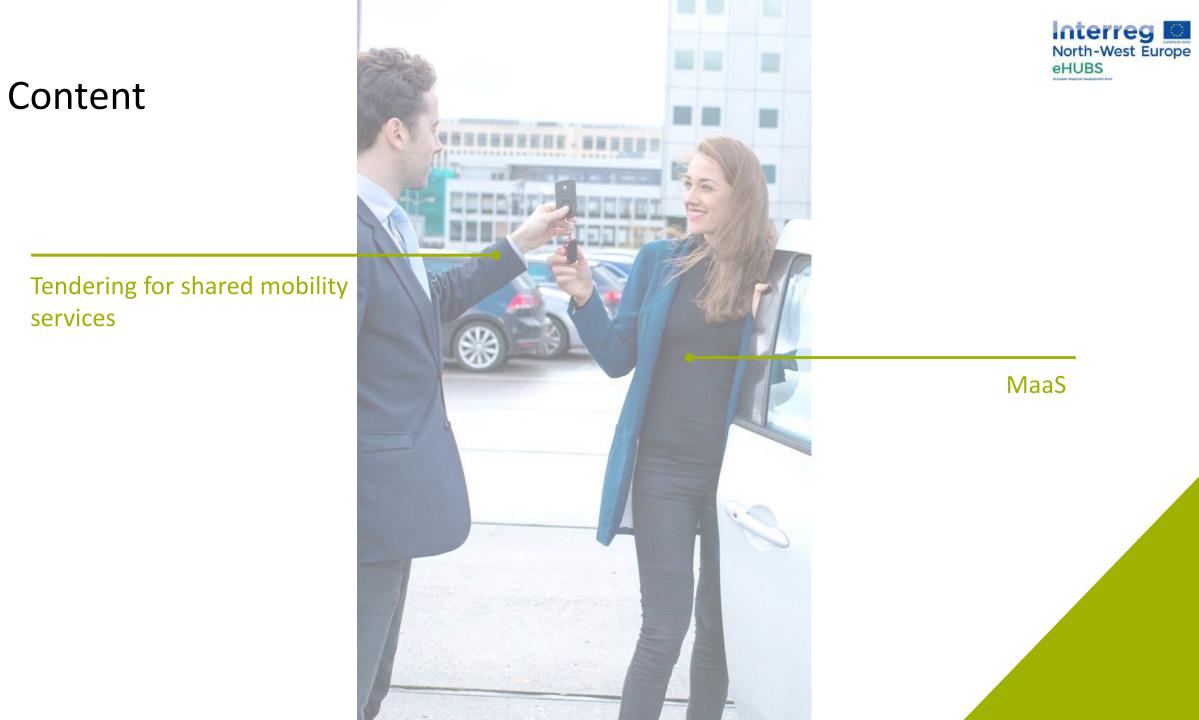
eHUBS

North-West Europe

To represent it in front of (local) governments

The development of the general concept of car sharing and shared mobility

Innovation and pilot projects





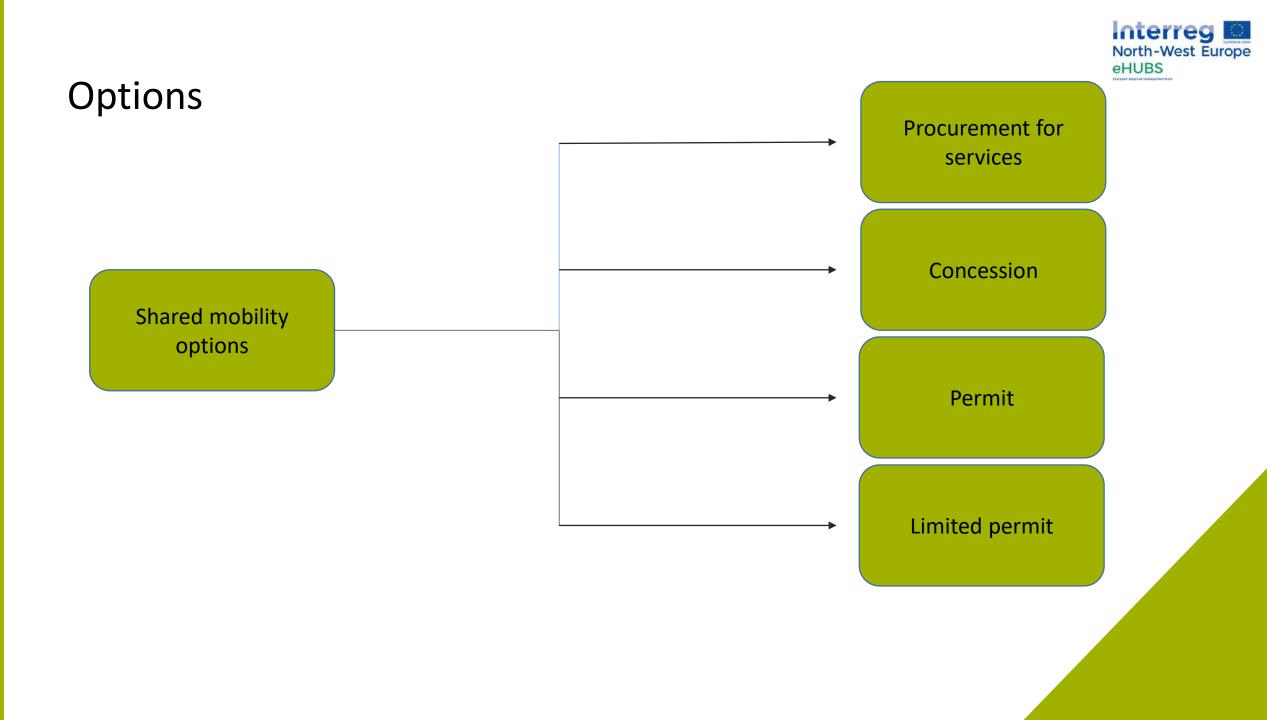














Suburban and rural area: procurement for services (car sharing)

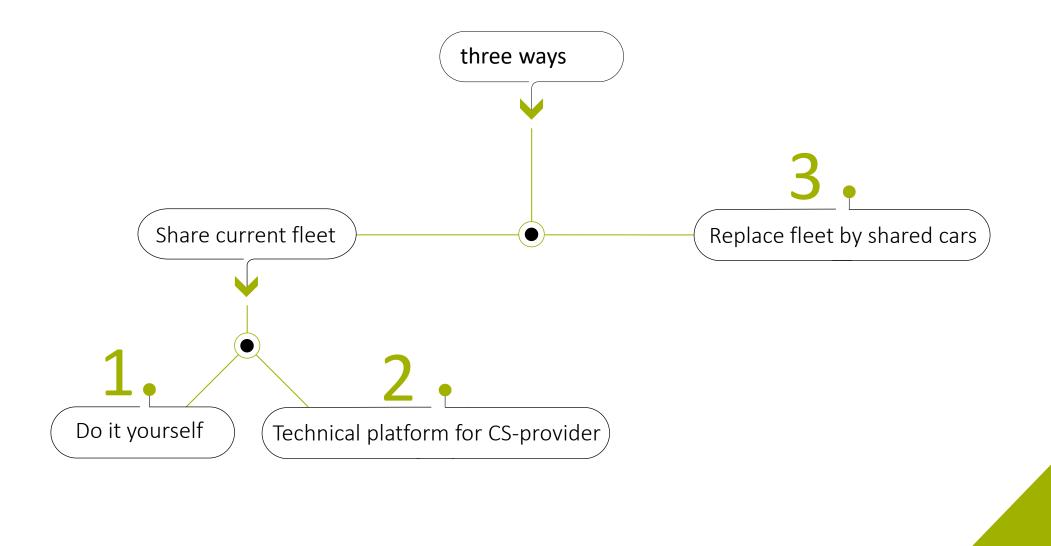
- Less interest from the market
- (Monthly) funding limited in time
- Points of attention:
 - Charging infrastructure
 - Cost for City and end-user
 - Technical specifications
 - Support
 - Data sharing
 - Not only offer, but also stimulate demand and create framework
 - Max. cost: €9000/year (Belgium)



Tip: City as user



How to e-carshare?





Suburban and rural area: procurement for services (bike sharing)

- Less interest from the market
- (Monthly) funding (limited in time)
- Costs (all-in): €60.000/year







City: concession or (limited) permit (car sharing)

- Commercialy interesting area
- Linked to local framework
- Rights (f.e. parking spots) vs. Duties (f.e. data)
- Limited permit: not the case in Belgium
- Points of attention
 - Diversification based on impact
 - "real" carsharing -> definition
 - Close to the end-user
 - 24/7 single contract
 - All-in pricing per time/distance/usage
 - Maximum per hour

Tip: support sharing of private cars

Erkenning als autodeelorganisatie in Gent

Lees voor

Wil je in orde zijn als autodeelorganisatie in Gent? Hier vind je de erkende autodeelorganisaties en hoe je een erkenning kunt aanvragen.

- Erkende autodeelorganisaties in Gent
- · Erkenning als autodeelorganisatie
 - Aanvraag en evaluatie voorlopige erkenning
 - Aanvraag en evaluatie definitieve erkenning
- Parkeervergunningen voor autodeelorganisaties
- Meer weten?

Erkende autodeelorganisaties in Gent

Op dit moment (03/09/2021) zijn de erkende organisaties:

Cambio ↔, Cozywheels ↔, Partago ↔, Dégage! ↔, Battmobility ↔, GreenMobility ↔, Valckenier Share ↔ (voorlopige erkenning tot 17/02/2022).

Regulation City of Ghent

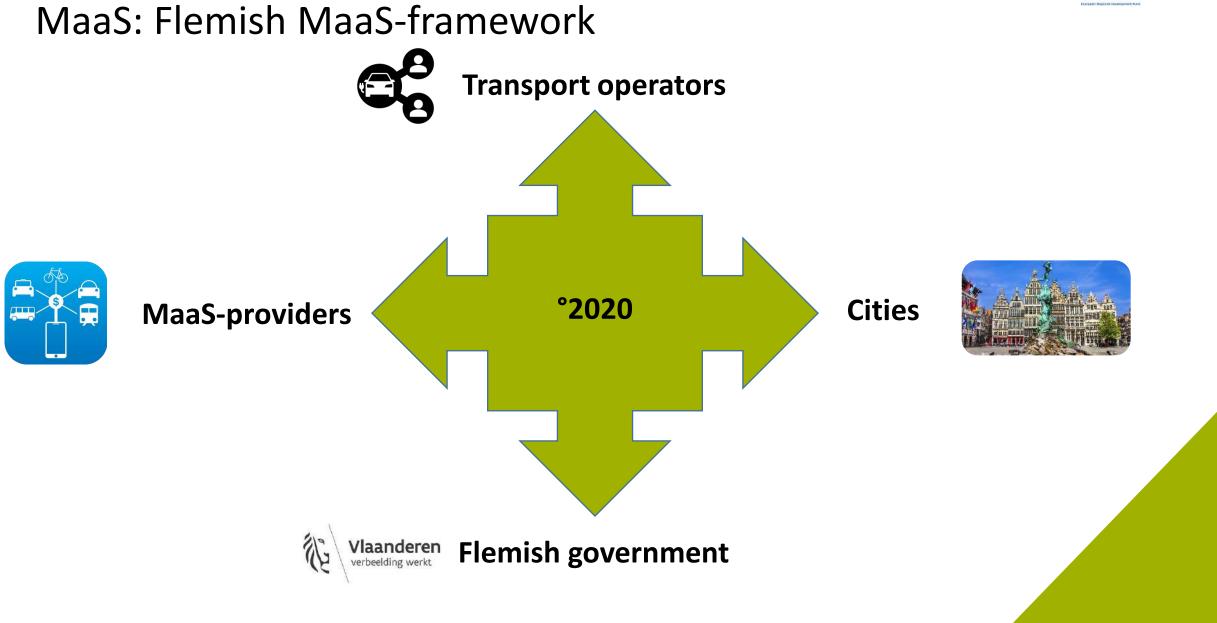


City: concession or (limited) permit (bike sharing)

- Commercialy interesting area
- Linked to local framework
- Rights (f.e. parking spots) vs. Duties (f.e. data)
- Limited permit: micromobility in Antwerp
- Points of attention:
 - Diversification
 - Charging infrastructure
 - Quality standards bikes and battery's
 - Theft security
 - Support: onboarding, reservation, damage,...
 - 24/7 signle contract
 - Data sharing and monitoring

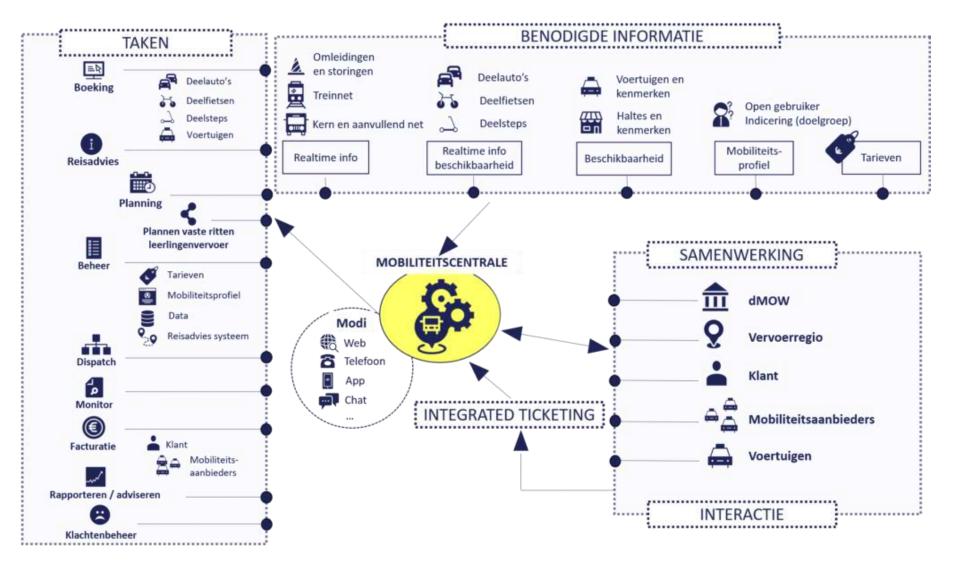
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Basis for Flemish public MaaS "Hoppin"





Things we learned...

- Difficult proces with compromised, suboptimal end-result
- Many questions are still open...
 - Businesscase for (B2C) MaaS?
 - Client relationship
 - Commissions: added value
 - Complaints handling
 - Substainability
 - MaaS for everyone?
 - Shared mobility is no public transport



THANKS!

Bram Seeuws bram@autodelen.net



https://www.linkedin.com/in/ bram-seeuws-5b27b6a2/ eHUBS: the behaviour change perspective

Dr. Loes Kreemers Amsterdam University of Applied Sciences – Research Group Psychology for Sustainable Cities PUNT

What modalities?

Which locations?

Charging infrastructure



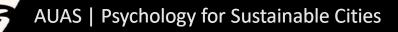
Business models

Digital accessibility

Legal procedures

Public space planning

Which providers?





Behaviour change?

What modalities?

Which locations?

Charging infrastructure



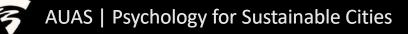
Business models

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Legal procedures

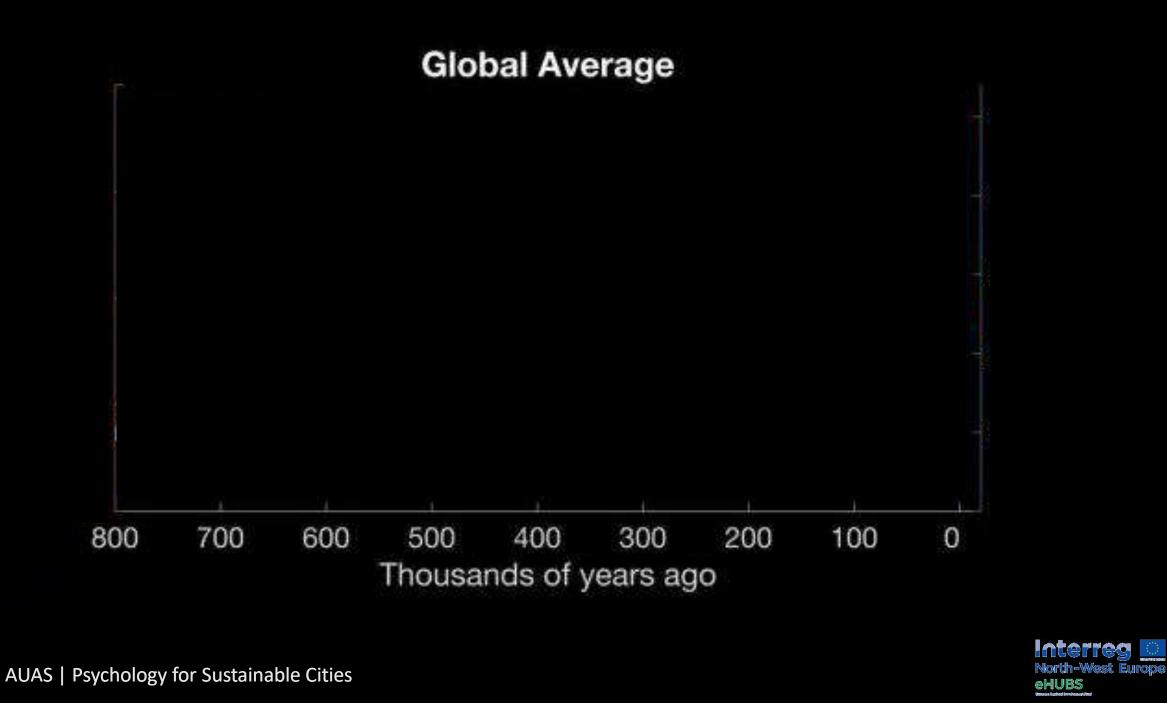
Public space planning

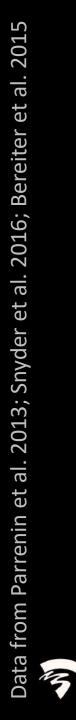
Which providers?

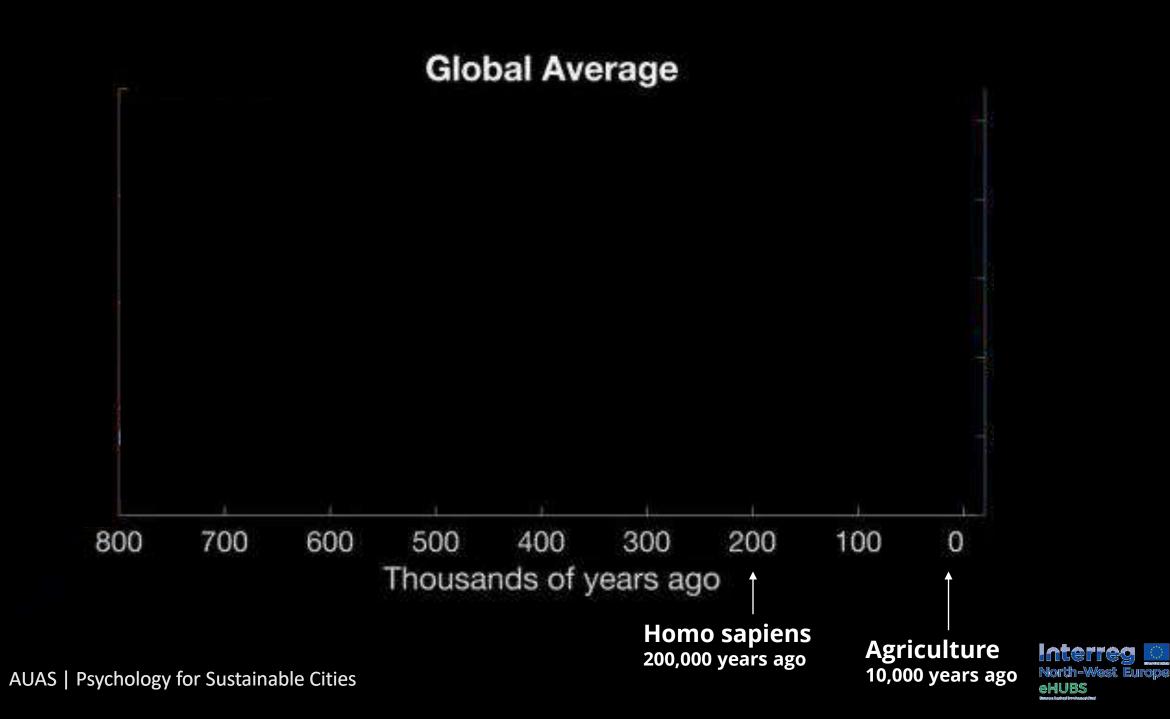


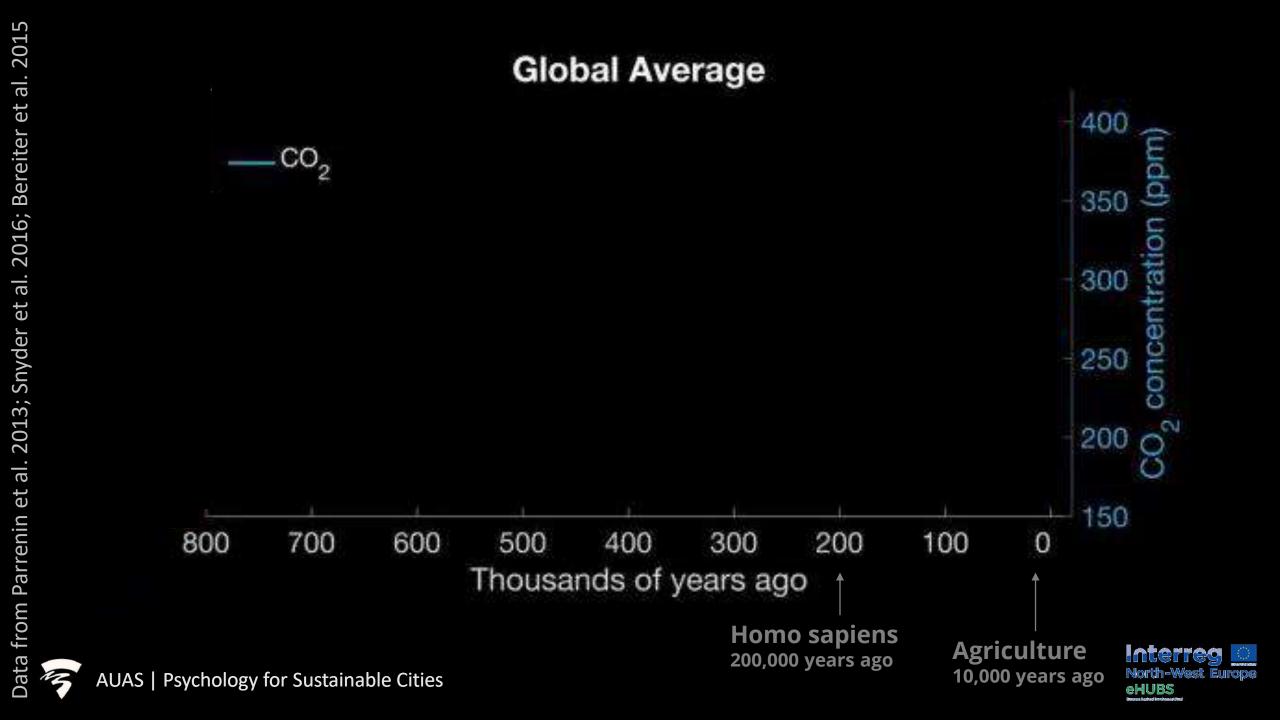


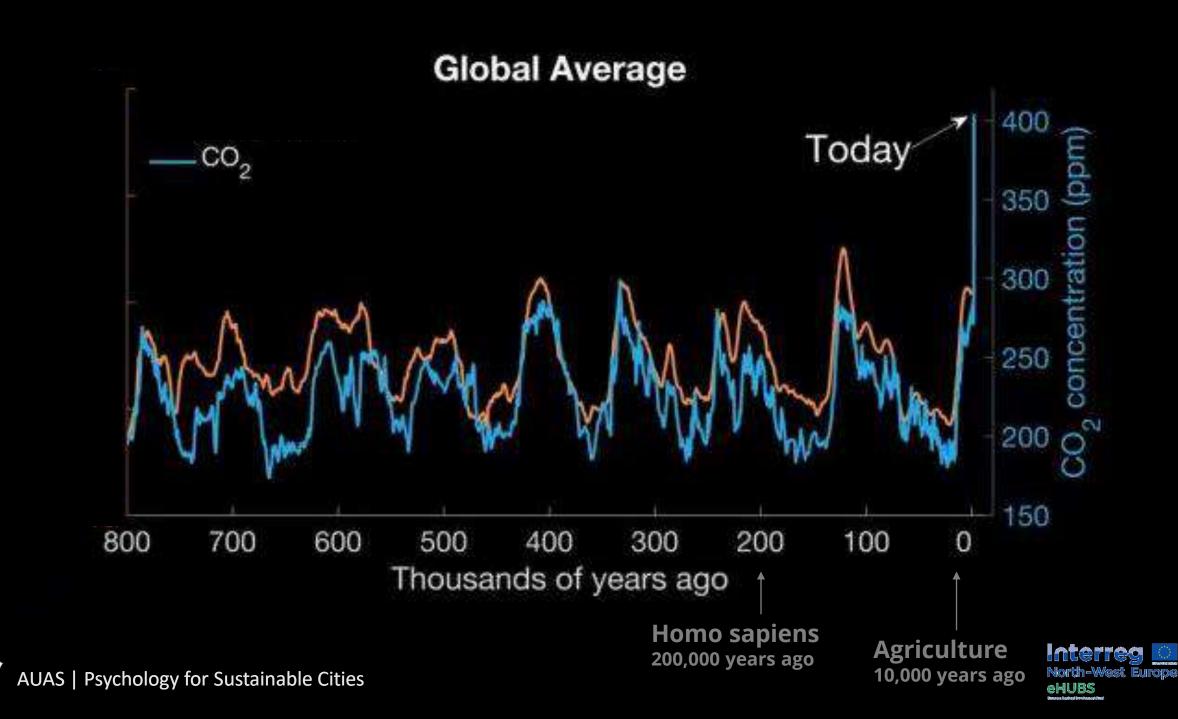
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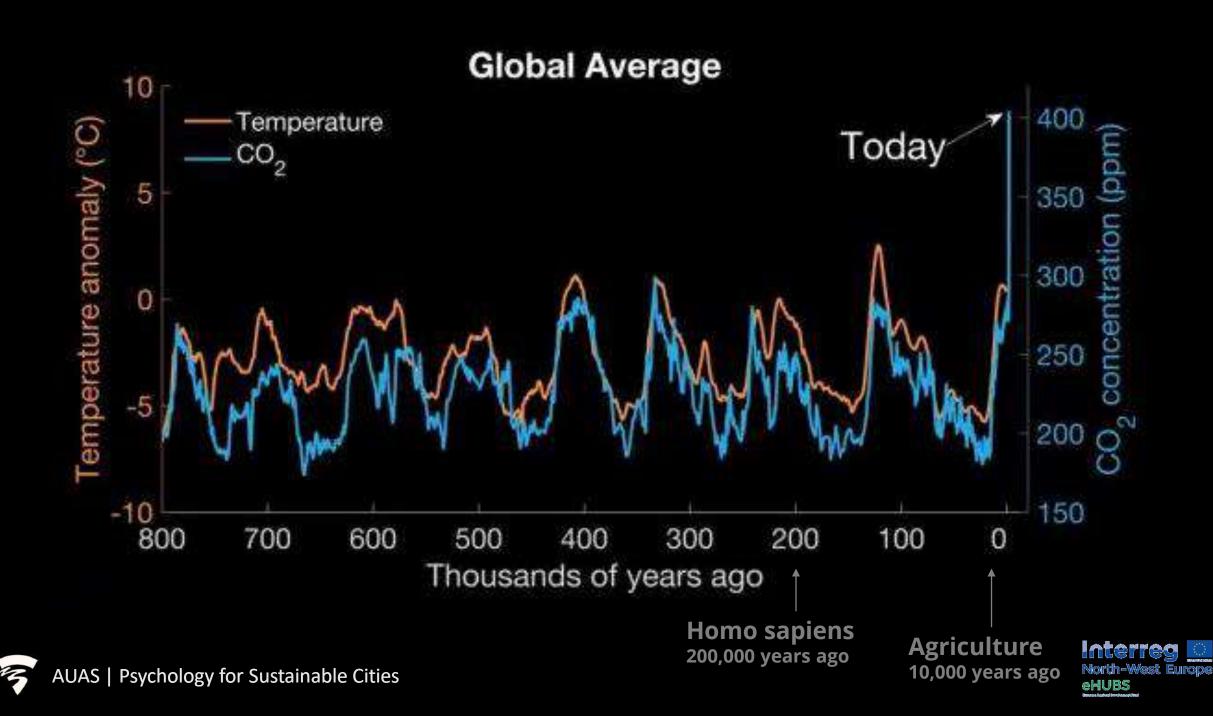










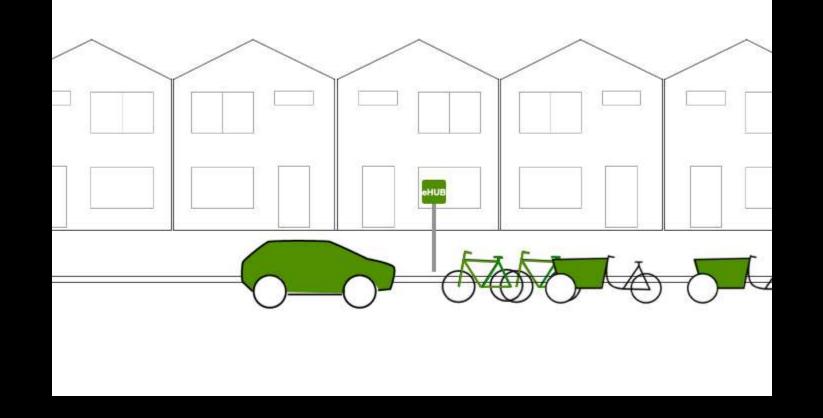




CARBON NEUTRAL CITIES

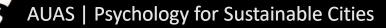


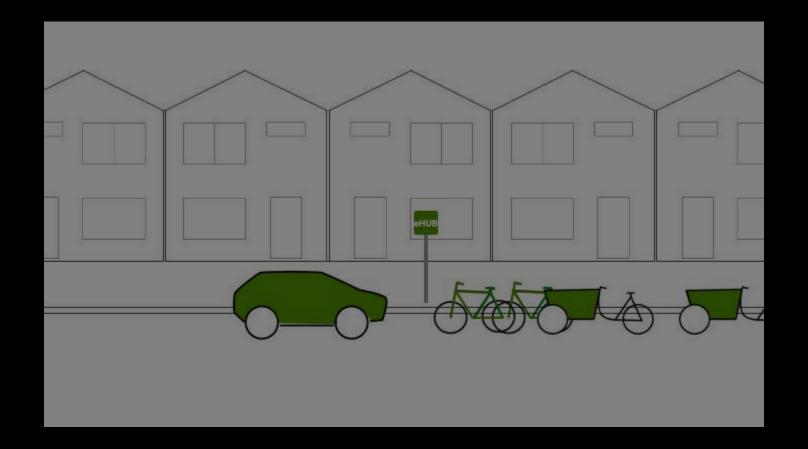




An eHUB is an intervention to change travel behaviour

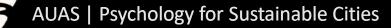






Who needs to change? What behaviour needs to change?





What we don't want: dirty trips











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What we do want: active & clean trips



If that is your aim, are eHUBs the right solution?



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Shared mobility: what does it replace?

active rides

Public Transport



car use





Early users people without cars?

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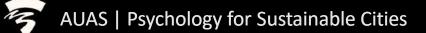


Target group

CAR OWNERS







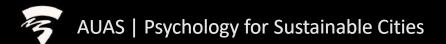
CAR

- Status quo
- Fits needs and goals
- Habit



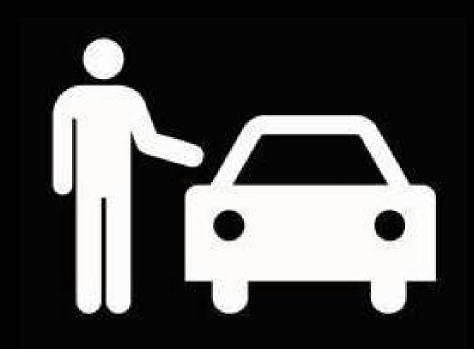


Trying out electric shared modalities from eHUBs by car owners





Trying out electric shared modalities from eHUBs by car owners



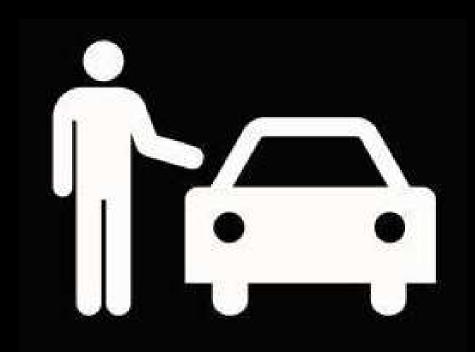
Aim of this behavioural research:

- Understanding what motivates car owners to try out eHUBs.
- Gaining insights for the development of behavioral change interventions.



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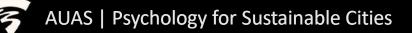
Trying out electric shared modalities from eHUBs by car owners



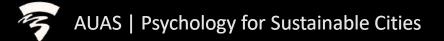
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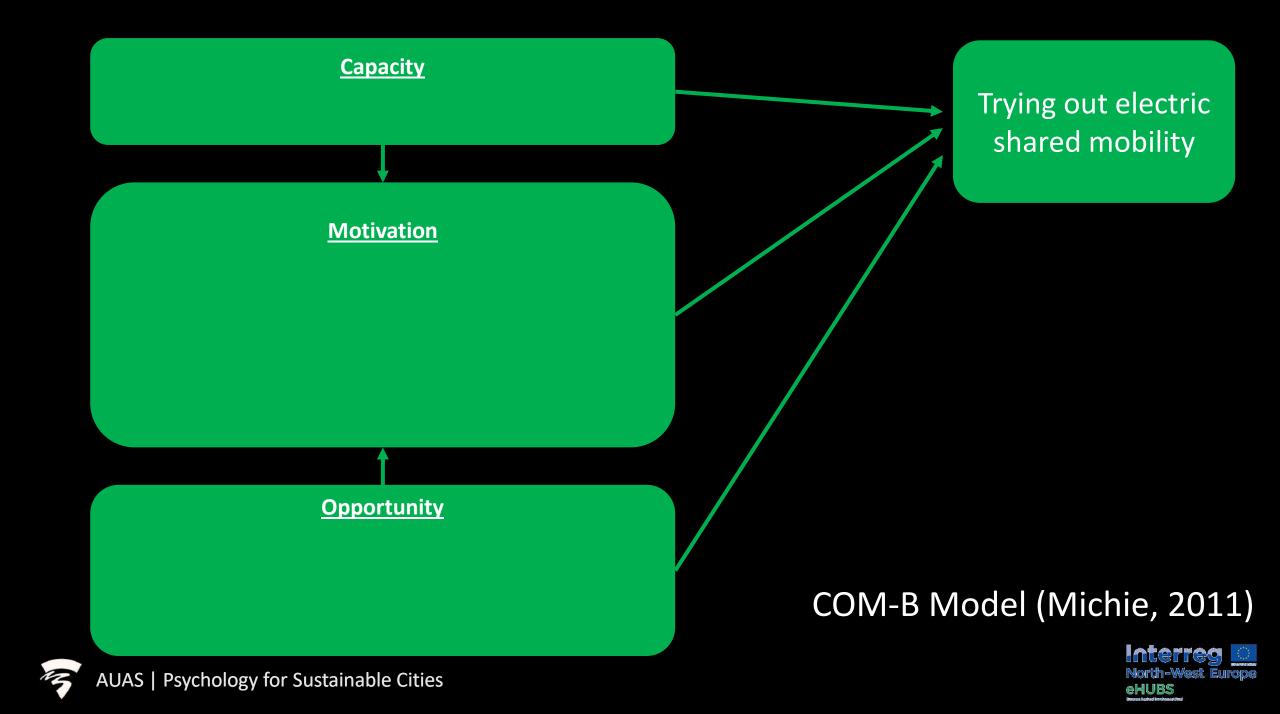




Trying out electric shared mobility







Knowledge about opportunity to try out electric shared mobility

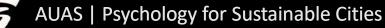
Trying out electric shared mobility

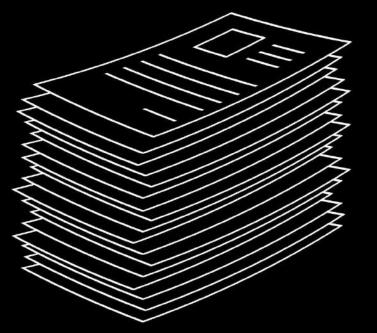
Motivation

- Self-efficacy
- Perceived use of trying electric shared mobility
 - Hedonic motives
 - Gain motives (i.e., practical, financial)
 - Normative motives (e.g., status, environmental ideals)
- Trust electric shared mobility
- Attitudes

Opportunity

- Social environment
 - Descriptive norm
 - Injunctive norm
- Accessibility shared mobility
- Physical environment







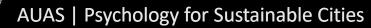
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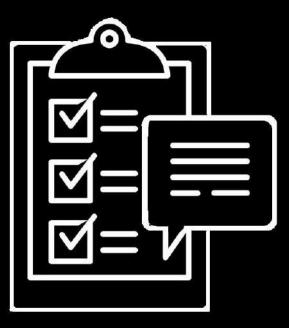
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554 car owners Amsterdam 249 car owners Leuven



Trying out electric shared mobility



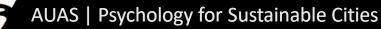
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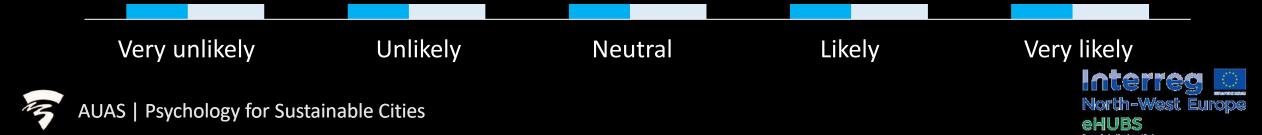


Trying out electric shared mobility

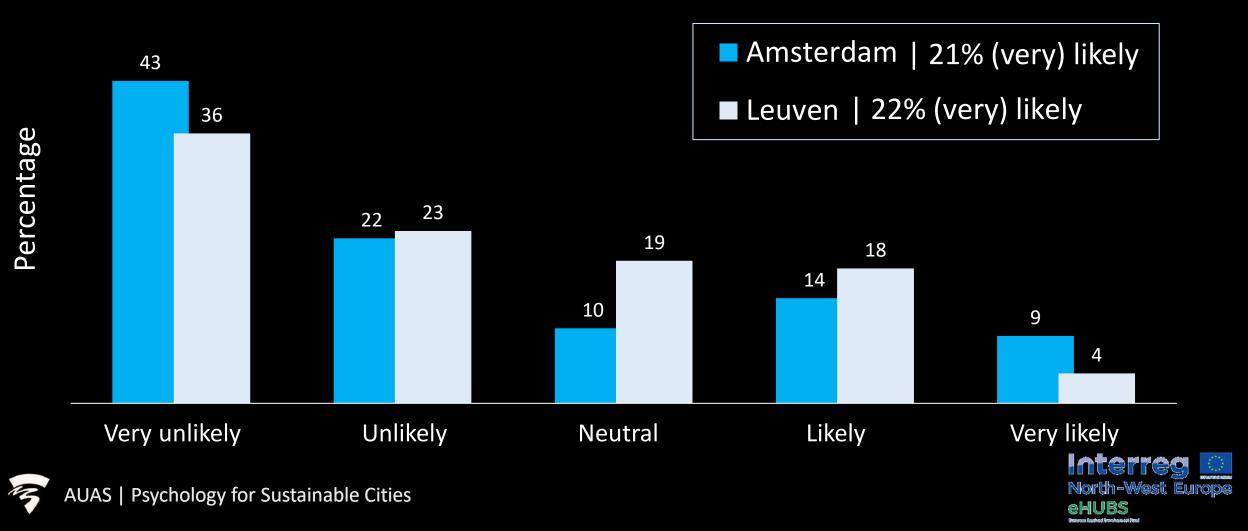




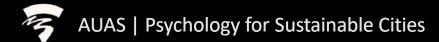
Would you try out an electric vehicle from an eHUB in the coming month?



Would you try out an electric vehicle from an eHUB in the coming month?



WHY DO OR DON'T CAR OWNERS WANT TO TRY OUT eHUBs?





WHY DO OR DON'T CAR OWNERS WANT TO TRY OUT eHUBs?

What do they say themselves?





Open-ended question: What would be your main reason **not** to try out the eHUB?

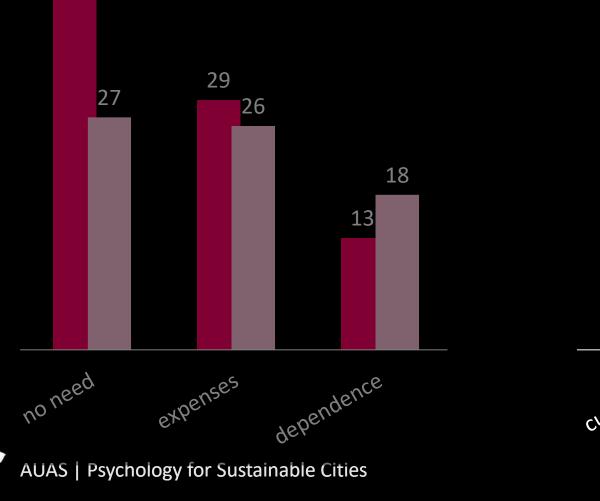
📕 Amsterdam 🛛 🔳 Leuven

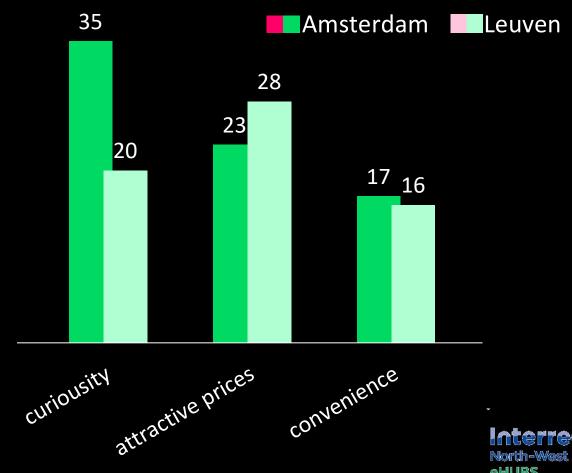


44



Open-ended question: What would be your main reason (not) to try out the eHUB?





Percentage

44

WHY DO OR DON'T CAR OWNERS WANT TO TRY OUT eHUBs?

What do they say themselves?





WHY DO OR DON'T CAR OWNERS WANT TO TRY OUT eHUBs?

What do they say themselves? What does the data say?





Knowledge about opportunity to try out electric shared mobility

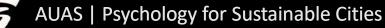
Trying out electric shared mobility

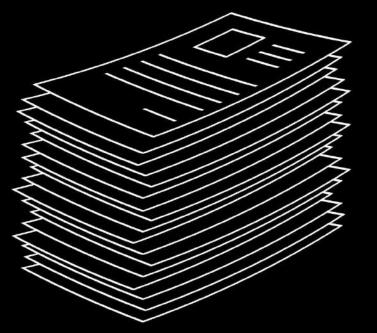
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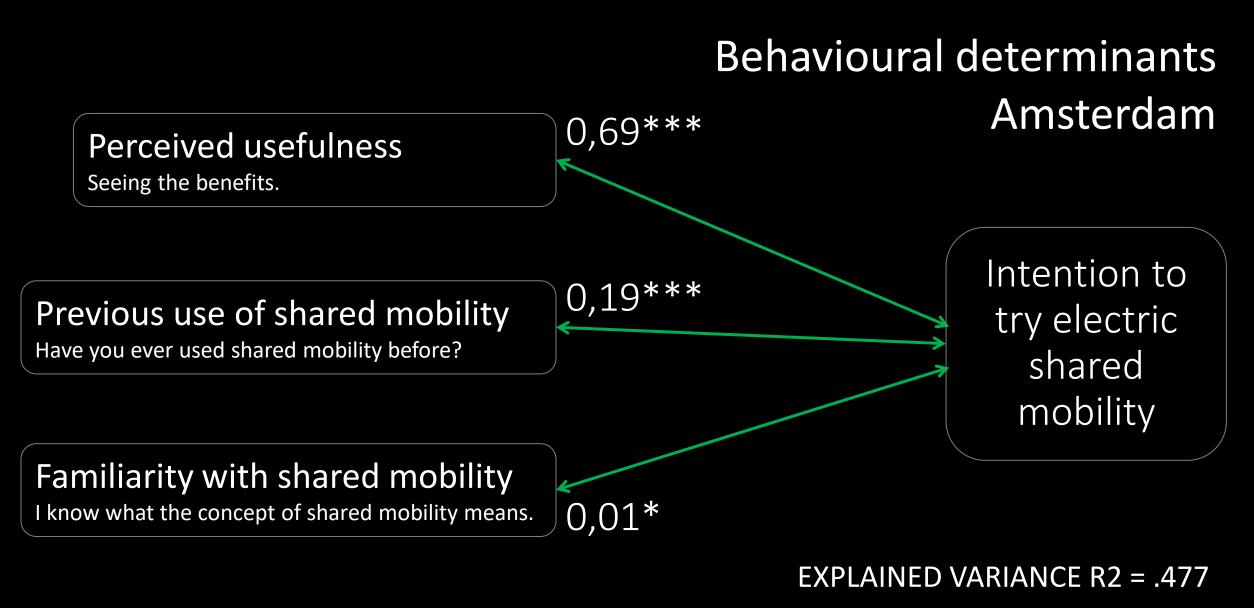
Opportunity

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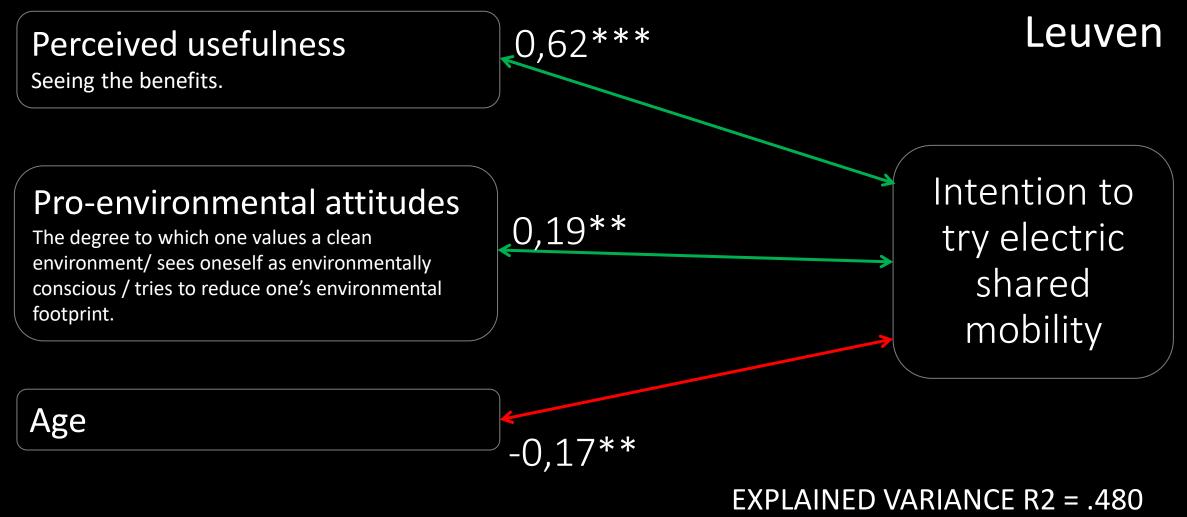


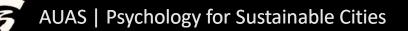
AUAS | Psychology for Sustainable Cities

Note. **p* < .05, ***p* < .01, ****p* < .01



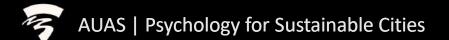
Behavioural determinants





Note. **p* < .05, ***p* < .01, ****p* < .01







Gain goal

Is focused on maintaining and increasing personal resources (e.g., money, status). e.g., do I get something out of it?

Hedonic goal Is aimed at improving how one feels (e.g., pleasure/comfort) E.g., does it feel good?

Normative goal Is focused on acting in line with (personal) values. E.g., Does it benefit the society?



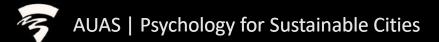


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Normative goal

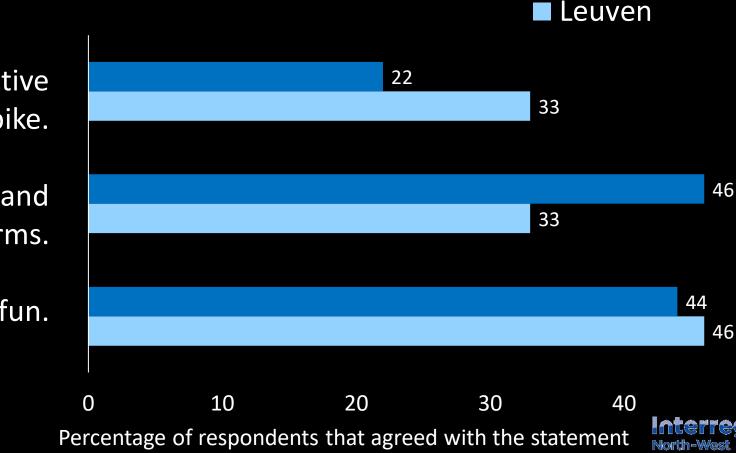
Is focused on acting in line with (personal) values.

e.g., Does it benefit the society?





(Trying) electric shared mobility from eHUBs



...seems financially more attractive than owning a car/bike.

> ...fits my (personal) values and norms.

> > ...is fun.

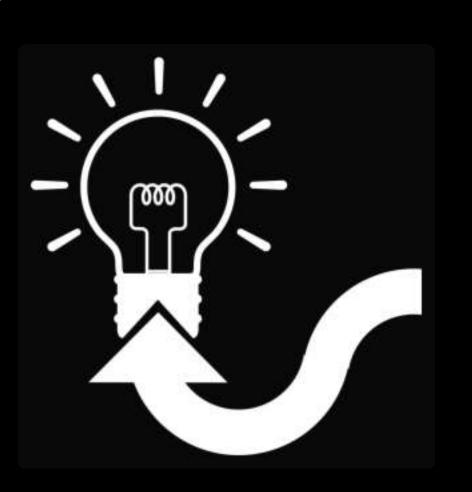
Psychology for Sustainable Cities

50

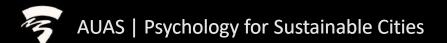
Amsterdam

Recommendations

How to encourage car owners to try out electric shared mobility

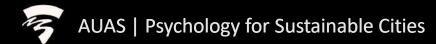








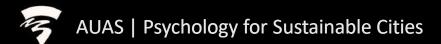
Most car owners, 70%, don't see the need for trying out shared modes as they already have a vehicle.





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Car owners are largely satisfied with their own car, so they automatically filter out messages about alternative travel modes (attentional bias).





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Car owners are largely satisfied with their own car, so they automatically filter out messages about alternative travel modes (attentional bias).

In communications, address the attentional bias to be able to reach car owners.





Recommendation 2: emphasize benefits

Finding: perceived usefulness is the most important determinant.

Emphasize in communications the benefits of (trying out) shared mobility.



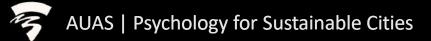


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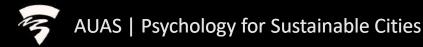
Emphasize in communications the benefits of (trying out) shared mobility.

The three different goals (gain, hedonic and normative) have a strong positive association with each other. In a campaign, all three goals can be addressed.



Gain goal: financial aspect

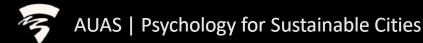
- Offer discounts for trying out shared mobility.
- Increase the understanding of financial benefits of eHUBs compared to a private car.
- Particularly relevant for groups with limited use of their private car.
- Note: financial motives are diffuse. People sometimes still choose the comfort of a private car even though it is more expensive.





Gain goal: financial aspect

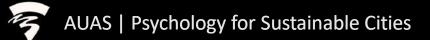
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Gain goal: practical aspect

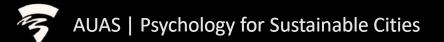
- Reduce hassle: ensure that trying out shared mobility is as easy and enjoyable as possible.
- Emphasize benefits of trying out: gaining experience with electric mobility, learning how it works etc.
- Emphasize practical advantages of long-term use of eHUBs: unburdening of tasks related to car ownership, flexibility, vehicle that fits your needs etc.





Hedonic and normative goals

- Ensure that trying out shared mobility is a fun and pleasant experience.
- Emphasizing the green framing of eHUBs creates positive associations.





Recommendation 3: change the environment

Provide an environment that makes car use and car ownership less attractive,

thereby changing cost-benefit analyses of eHUBs vs own car.



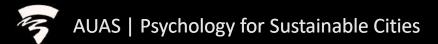


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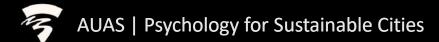
Systematic review of reviews on low-carbon mode adoption: it is primarily infrastructure that determines mobility mode choice, not individual or social characteristics.





Most important take-aways

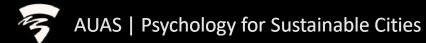
• Shared mobility doesn't necessarily lead to carbon neutral cities





Most important take-aways

- Shared mobility doesn't necessarily lead to carbon neutral cities
- If you want to have impact, car owners need to change their behaviour...
- ...who are mostly satisfied with their car use





Most important take-aways

- Shared mobility doesn't necessarily lead to carbon neutral cities
- If you want to have impact, car owners need to change their behaviour...
- ...who are mostly satisfied with their car use
- It take extra efforts to get this group on board.

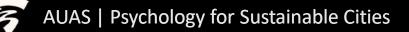


Specially for Leuven

For a quick uptake, target the following two groups of car owners:

Younger car owners Car owners with high proenvironmental attitudes





Specially for Amsterdam

Two other determinants that are associated with willingness to try out shared mobility in Amsterdam:

- Previous use of shared mobility
- Familiarity with the concept

(Practical) knowledge supports willingness to try, so:

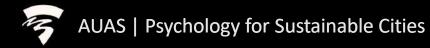
- \rightarrow provide information
- \rightarrow invest in trial opportunities



End of presentation 1st of october 2021

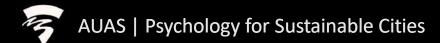




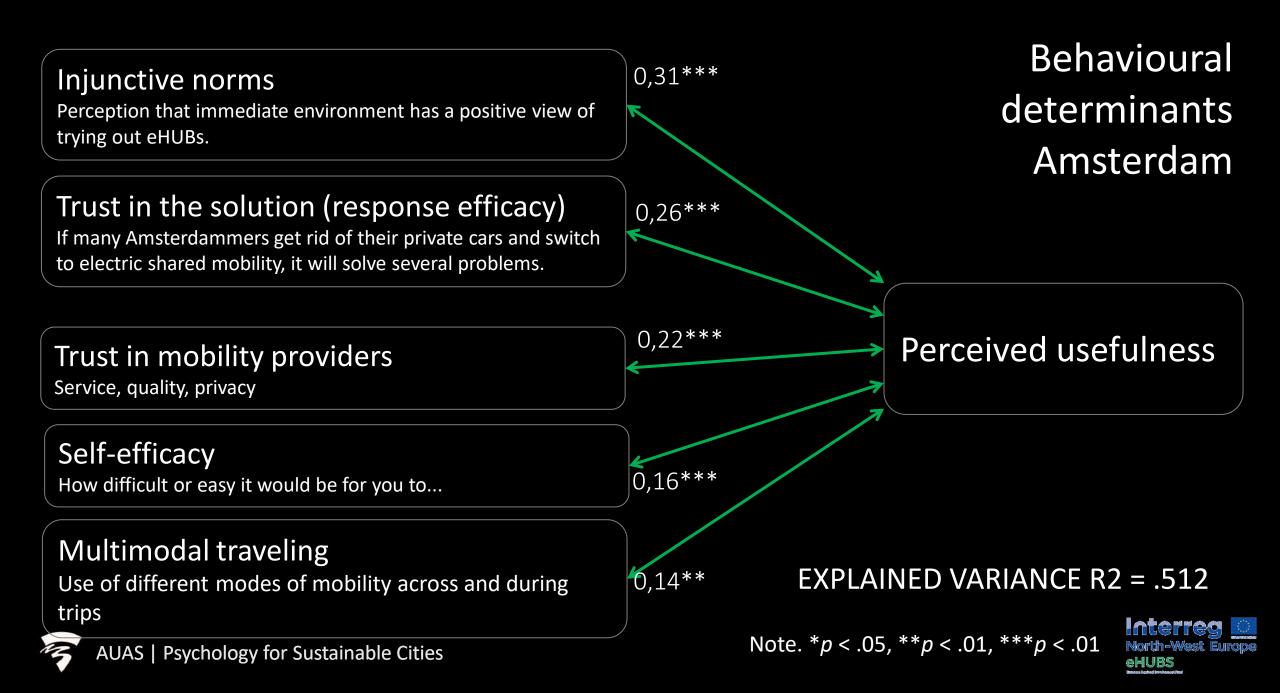


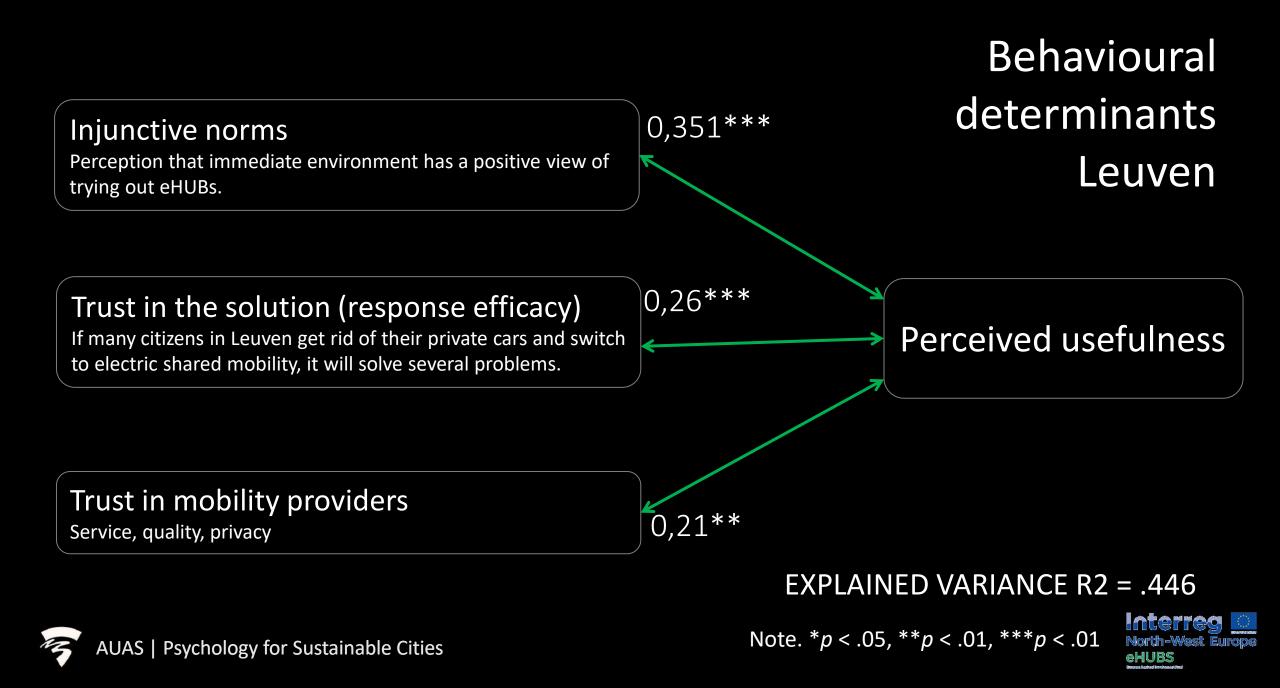


Additional data and recommendations perceived usefulness



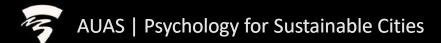






Injunctive norms

Most of the people in my immediate environment.





Injunctive norms

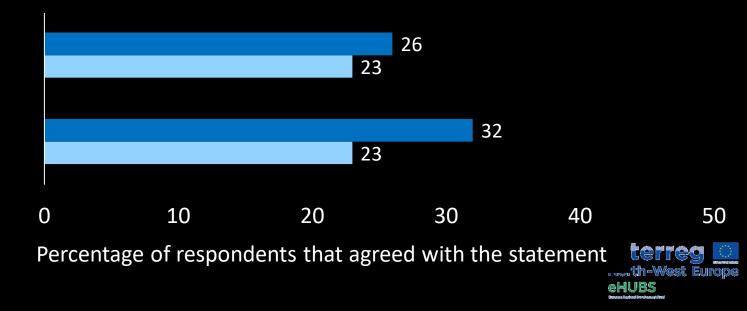
Most people in my immediate environment..

Amsterdam

Leuven

...would appreciate it if I tried electric shared mobility.

...have a positive attitude towards trying electric shared mobility.



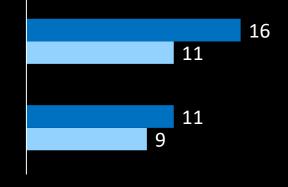
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Descriptive norms

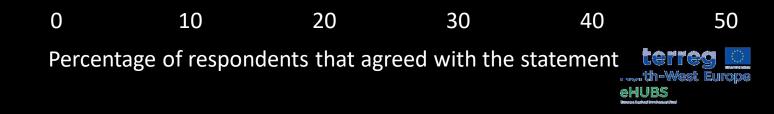
Most people in my immediate environment..

...have tried electric shared mobility before.

... use electric shared mobility.



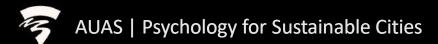




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Trust in the solution (response – efficacy)

If many citizens get rid of their private cars and switch to electric shared mobility...





Trust in the solution (response – efficacy)

If many citizens get rid of their private cars and switch to electric shared mobility...

....the air will be cleaner.

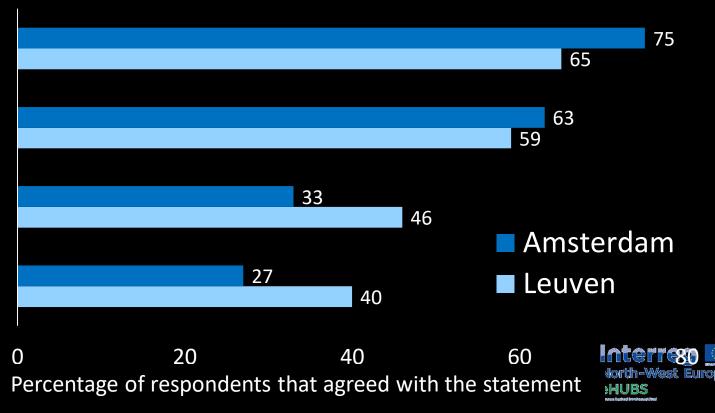
... it will help to combat climate change.

....there will be less traffic congestion and jams in the city.

...there will be more mess in the public space.



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Trust in shared mobility providers

I trust that...





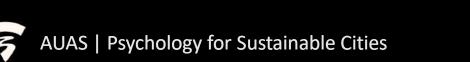
Trust in shared mobility providers

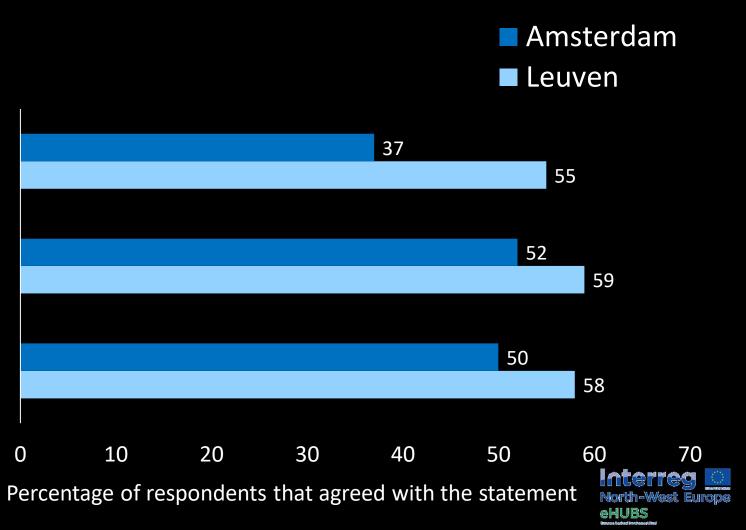
I trust that...

...the mobility providers handle my personal information well.

...the vehicles in the mobipoints/eHUB are of good quality.

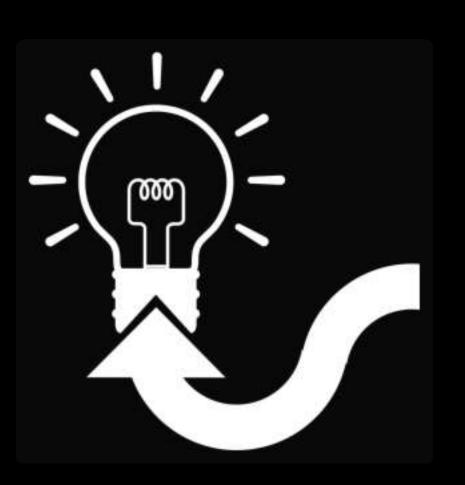
... the mobility providers offers a good service.





Recommendations

How you can influence perceptions of perceived usefulness

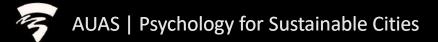




Injunctive norms

Finding: Car owners who subscribe to the injunctive norm are more likely to see the benefits of trying out electric shared mobility.

Emphasize the injunctive norm in your communications (e.g., many people think eHUBs are important/good for the city).

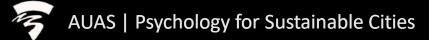




Trust in the solution

Finding: car owners who see electric shared mobility as a (partial) solution to problems in the city tend to be more aware of the benefits of trying it out.

Emphasize the advantages of eHUBS/electric shared mobility for the city (e.g., clean air, more space, better for the environment, less congestions).

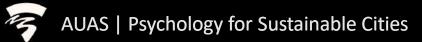




Trust in mobility providers

Finding: Car owners who have more trust are more likely to see benefits of trying out electric shared mobility.

- Emphasize in communications the quality of the vehicles, the service and particularly the privacy policies.
- Credible source: Use a communication source that people trust, such as a fellow citizen or the municipality.



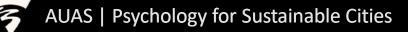


Specially for Amsterdam

Finding: Car owners that have more trust in their own capabilities (i.e., self-efficacy) are more likely to see the benefits of trying out electric shared mobility.

- Provide support for developing this capacity through good and clear instructions.
- Communicate how easy it is to use/try it out.
- ➢Offer assisted try-outs.



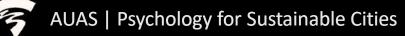


Finding: multimodal travelers are more likely to see the benefits of trying out electric shared mobility.

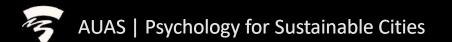
Specially for Amsterdam

This subgroup of car owners can be addressed by showing examples of how to make electric shared mobility part of multimodal travelling.





Additional information





Overview of survey findings

Descriptives

- Survey respondents
- Ownership and usage
- (Practical) knowledge about electric shared mobility
- Intention to try it out
- Reasons to try it out
- Opinions on electric shared mobility

- Trust in own capability
- Social environment
- Trust in the quality of the mobility providers
- Trust that electric shared mobility is part of the solution
- Worries about the climate and pro-environmental attitudes





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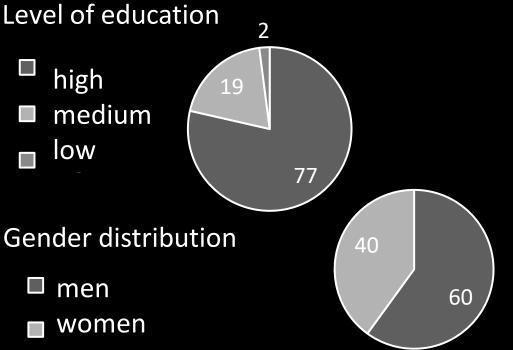




RESPONDENTS

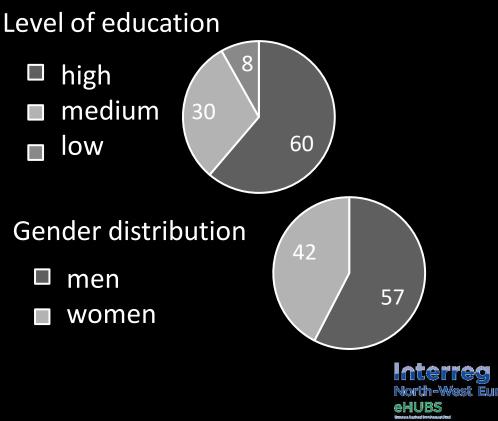
AMSTERDAM N= 549

58 years on average 45% between 59 and 78 years



LEUVEN N = 254

54 years on average 42% between 60 and 80 years



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- Trust that electric shared mobility is part of the solution
- Worries about the climate and pro-environmental attitudes





OWNERSHIP AND USAGE

AMSTERDAM

About a third of car owners use a car four or more times a week. One in five considers themselves as a car driver. Half see themselves as using the same mode of mobility most to all of the time.

89% has a private car and 12% a company car.

Car use: 34% uses a car 4x a week to daily 50% 1 to 3x a week 15% monthly or less

Car owners see themselves as: 21% as car driver 32% as versatile user (of various means of mobility) 37% as cyclist

LEUVEN

About half of the car owners use a car four our more times a week and consider themselves as a car driver. More than half see themselves as using the same mode of mobility most to all of the time.

87% has a private car and 13% a company car.

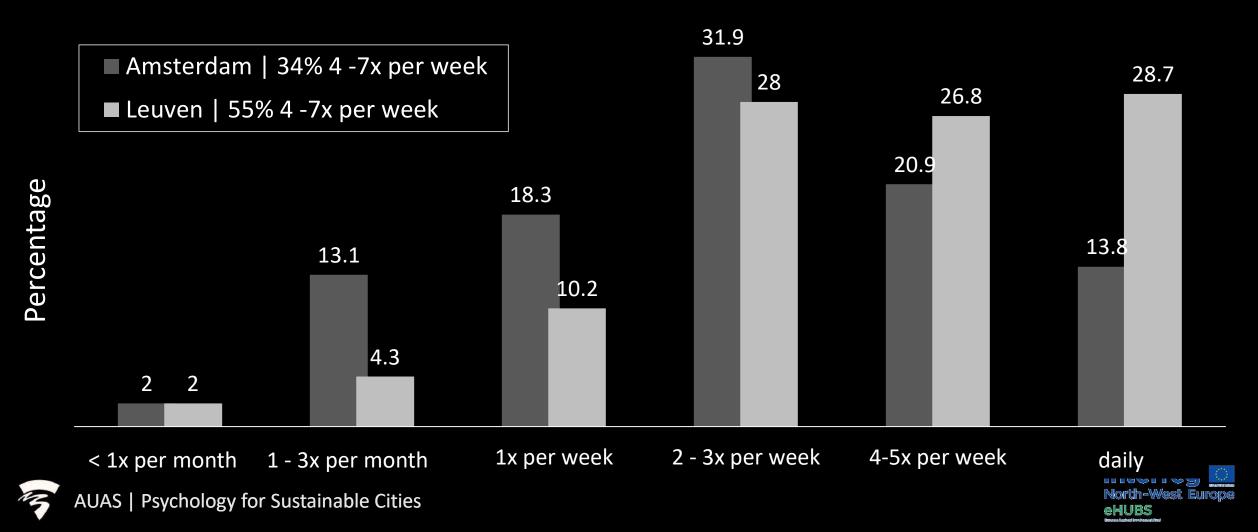
Car use: 55% uses a car 4x a week to daily 38% 1 to 3x a week 6% monthly or less

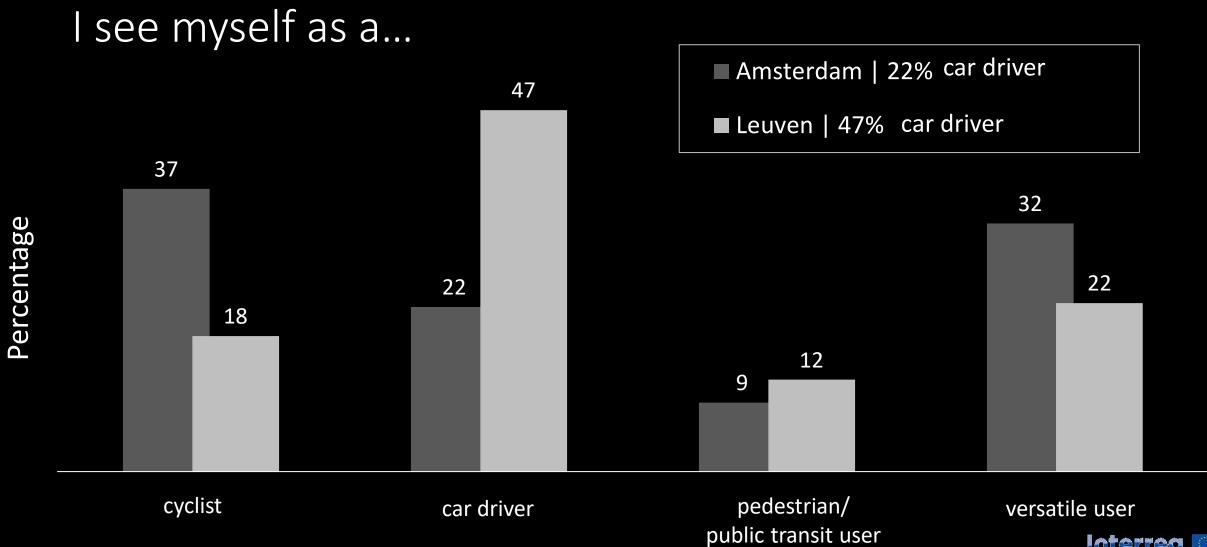
Car owners see themselves as: 47% as car driver 22% as versatile user (of various means of mobility) 18 % as cyclist

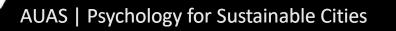




How often do you use your car?







Interreg

Overview of survey findings

Descriptives

- Survey respondents
- Ownership and usage
- (Practical) knowledge about electric shared mobility
- Intention to try it out
- Reasons to try it out
- Opinions on electric shared mobility

- Trust in own capability
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(PRACTICAL) KNOWLEDGE ABOUT ELECTRIC SHARED mobility

In general, most are familiar with the concept of electric shared mobility. Fewer people have actual experience with using it. Some indicate not knowing whether electric shared mobility is "well organized". For some, lacking knowledge is a reason not to try electric shared mobility.

AMSTERDAM

More than two thirds are familiar with what shared mobility means. Practical experience with shared mobility (40%) is higher than in Leuven, but still much lower than familiarity with the concept as such.

27% of car owners indicate that they do not know enough about trying out electric shared mobility to do so.

LEUVEN

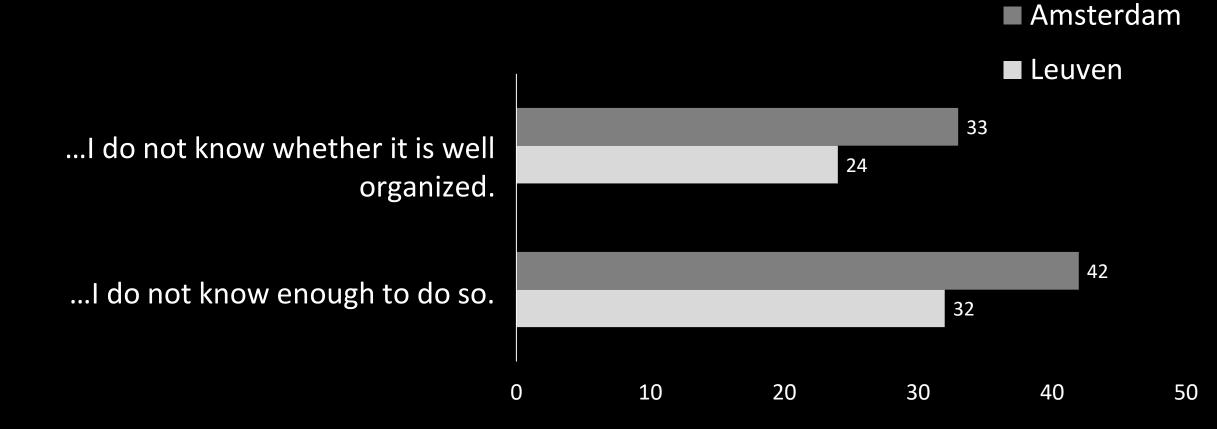
Most (65%) are familiar with the concept of shared mobility. Practical experience is lacking for 83% of people.

40% of car owners indicate that they do not know enough about trying out electric shared mobility to do so.



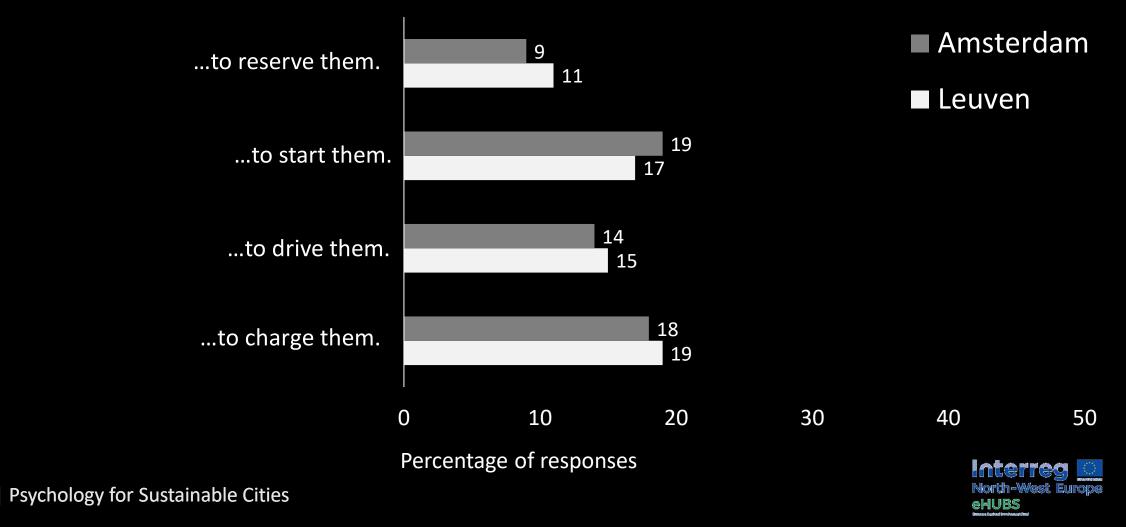
North-West Europe

Regarding the trying of electric shared mobility...



Percentage of respondents that agreed with the statement – scores 5,6 and 7 on a scale from 1 to 7

Regarding electric vehicles from eHUB/mobipoints, I do not know how difficult or easy it is...



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INTENTION TO TRY IT

Respondents think that eHUBs/Mobipoint are a valuable addition to their city. Trying them out gets a satisfactory grade, on average. One fifth (21%-22%) plan to actually try out a vehicle from an ehub/Mobipoint in the next month. Discounts on journey rates would encourage more people to try it out. In fact, if there were a discount, more people would plan to try out a vehicle than without a discount. People are particularly interested in trying out an electric car. The kind of ride for which vehicles would be used varies.

AMSTERDAM

Score for trying out eHUB: 6.5 57% give a sore of 7 or higher.

38% of car owners mainly want to try out the electric car.

26% do not want to try out anything.

A quarter (27%) would like to try the eHUB to drive to friends or family and another quarter (26%) would also try the eHUB to drive around without a set destination.

LEUVEN

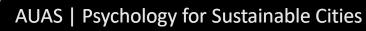
Score for trying out mobipoints: 6,3 50% give a sore of 7 or higher.

44% of car owners mainly want to try out the electric car.

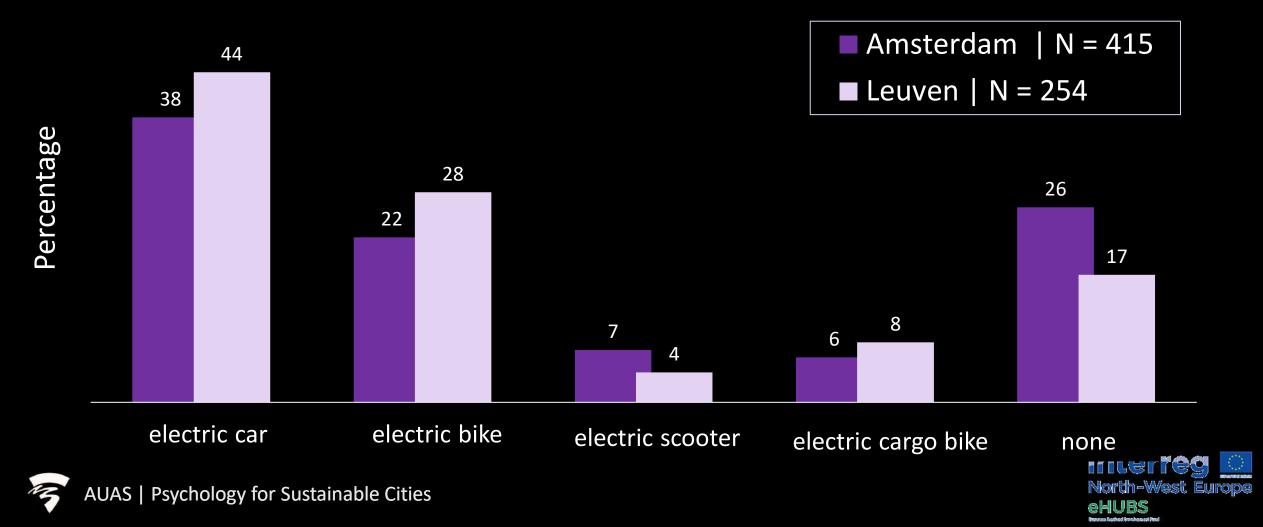
17% do not want to try out anything.

Many would try the mobipoints to run errands (38%) or to drive around without a set destination (36%).

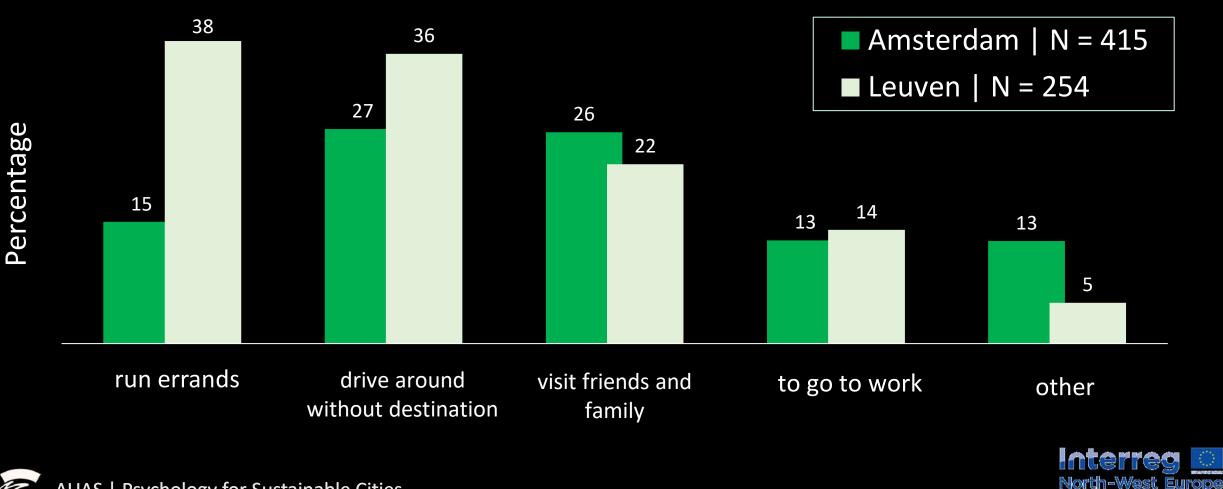




Which vehicle do you want to try out?



For which kind of ride would you try it?



AUAS | Psychology for Sustainable Cities

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Most important reasons for **not** trying out the eHUB

In the survey, 70% indicated that trying out electric shared mobility is not interesting for them because they already have their own means of mobility. The objections people mention in the open question can be grouped into two themes: avoiding unpleasant feelings (hassle, dependence) and avoiding losses (money, time). Especially in Amsterdam people do not see the benefit of electric shared mobility and it doesn't fit their travel needs. In Leuven, costs and wanting to remain independent play a somewhat more important role than in Amsterdam. For many people (45%-58%) having the certainty that vehicles will be present is a requirement for trying them out.

AMSTERDAM

For 33%, the main reason for not trying out the eHUB is that they do not think it would be necessary. For 21%, costs are the main barrier.

Hassle (9%) and depending (8%) on shared service for mobility are also cited as main reasons.

68% do not expect to save time when trying it out.

Another objection is concern for safety. 42% would not try it out because of hygiene concerns related to corona.

LEUVEN

For 18%, the main reason for not trying out the mobipoints is that they do not think it's necessary. For 17%, costs are the main barrier.

Hassle (12%) and depending (10%) on shared service for mobility are also mentioned as main reasons.

59% do not expect to save time when trying it out.

Another objection is concern for safety. 61% would not try it out because of hygiene concerns related to corona.





Most important reasons to try out the eHUB

The reasons people mention are the same across Amsterdam and Leuven. Some reasons are mentioned more often as a main reason in one city than in the other. Three themes recur: pleasure (curiosity, fun), profit (cheaper and convenient) and norms and values. In Amsterdam, pleasure is an important trigger and in Leuven, cost and pleasure are almost equally important for many people.

AMSTERDAM

For 19%, curiosity is the main reason for trying out the eHUB.

An affordable price would be the main reason to try out the eHUB for 13% of car owners.

For several people, practical advantages are the main reason for trying it out, such as convenience (9%), no alternative (8%) and necessity (5%).

Environment is mentioned by 7% as the main reason for trying out the eHUB.

LEUVEN

For 14%, cost weighs most heavily as a reason to try out the eHUB.

For 10%, curiosity is the main reason for trying out the eHUB.

For several people, practical advantages are the main reason for trying it out, such as convenience (8%), no alternative (8%) and necessity (4%).

Environment is mentioned by 7% as the main reason for trying out eHUB.



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OPINIONS ON ELECTRIC SHARED mobility

People have different views on electric shared mobility. We asked people to what extent they agreed with various reasons for and objections against trying out shared mobility. Objections are described below. Reasons for trying electric shared mobility are described on the next slide.

AMSTERDAM

A large proportion (71%) of car owners believe that the eHUB is not interesting because they already have an own vehicle.

Other objections are that it is less practical (having to walk a bit; 50%), it does not save time (68%), there is uncertainty about the availability of vehicles (45%) and hygiene concerns in relation to corona (42%).

"Not daring" (6)% seems to be less of a barrier for people.

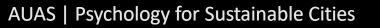
LEUVEN

A large proportion (69%) of car owners believe that mobipoints is not interesting because they already have an own vehicle.

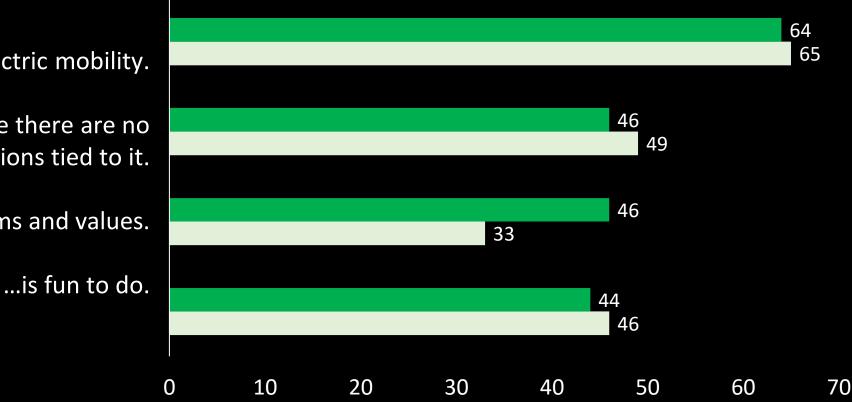
Other objections are hygiene and corona (61%), uncertainty about the availability of vehicles (58%), that it is less practical (having to walk a bit; 55%) and that it does not save time (59%).

A smaller proportion (20%) does not have the nerve to try it out.





Trying out electric shared mobility from an eHUB/mobipoints...



... is a good way to test electric mobility.

...is convenient because there are no obligations tied to it.

...does fit with my norms and values.

Amsterdam

Leuven

Percentage of respondents that agreed with the statement



AUAS | Psychology for Sustainable Cities

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TRUST IN OWN CAPABILITY

Although people lack practical experience with electric shared mobility, the majority of people think they could use it without problems. 'Planning a ride' (24%-26%) and 'charging' (11% - 23%) are actions that more people think are difficult. For some of the car owners, lack of self-efficacy is a barrier to try it out, but for others it is not.

Quite a lot of car owners have no idea how difficult or how easy the different actions that are part of trying out an eHUB/Mobipoint are. For example, between 17% and 19% have no idea whether it is difficult or easy to start an electric car. Between 10% and 20% of respondents answered: "I do not know".

AMSTERDAM

About 60% of car owners expect to be able to try shared mobility without difficulty. One-fifth (21%) seems to find it complicated.

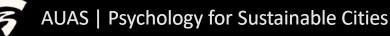
Only 6% find it unnerving.

LEUVEN

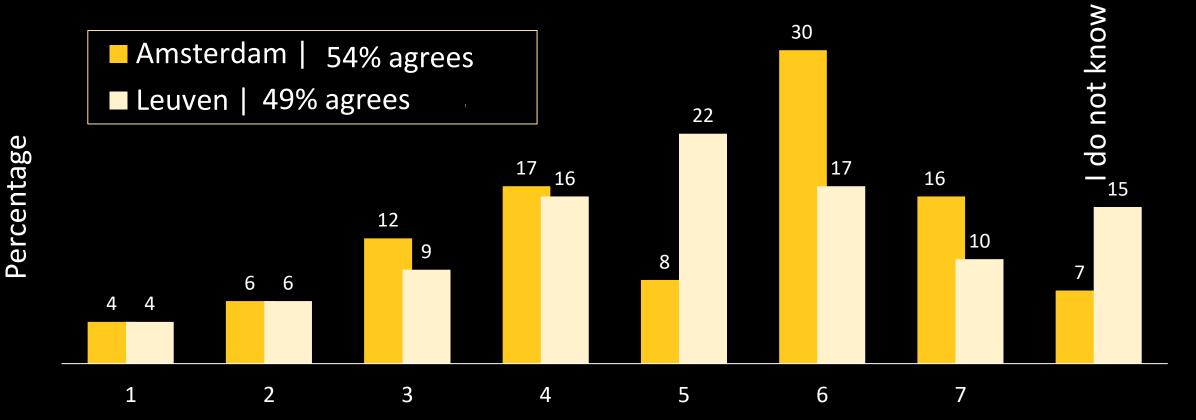
About half of car owners expect to be able to try shared mobility without difficulty. A quarter (26%) thinks it is complicated.

One fifth finds it unnerving.





If I wanted to, I could try out electric shared modalities from the eHUB without any problems

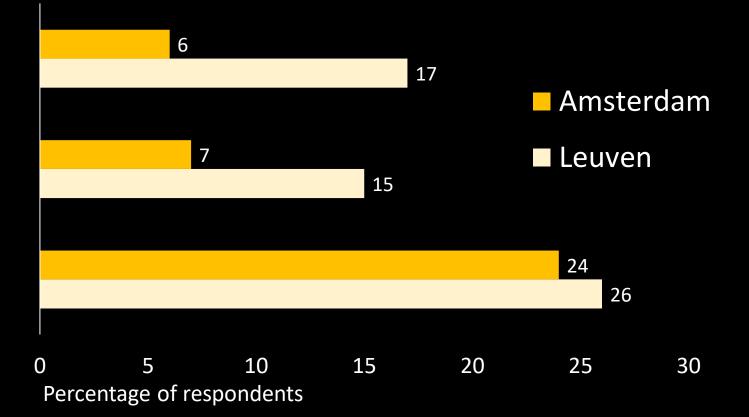


Strongly agree Interreg North-West Europe eHUBS For me, using electric mobility vehicles from an eHUB/Mobibunt, it seems difficult...

...to download the app.

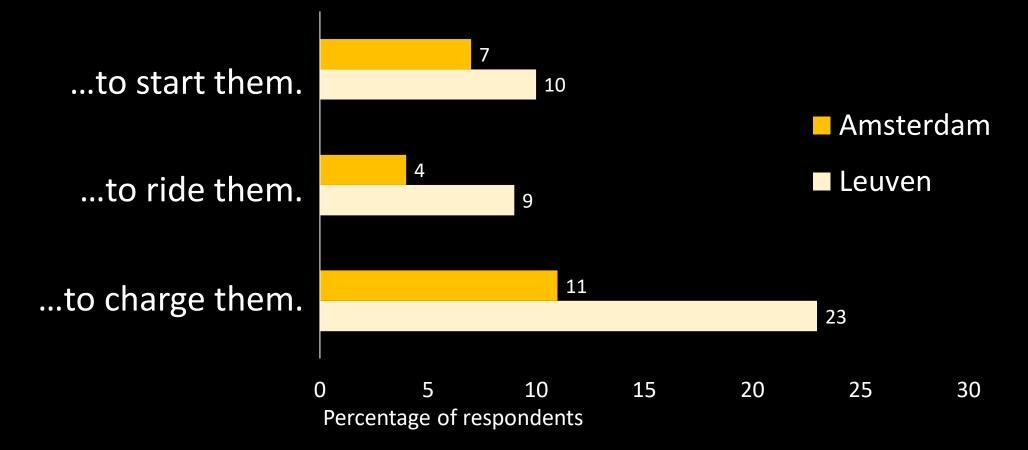
...to make a reservation via the app.

...to plan a trip in such a way that the battery does not run empty.

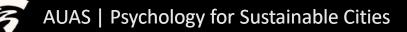




For me, using electric mobility vehicles from an eHUB/Mobibunt, it seems difficult...







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SOCIAL ENVIRONMENT

People's social environment is not very supportive of trying out electric shared mobility. People do not encounter it much in their immediate social environment and they are not sure that their immediate environment would have a positive attitude towards them trying electric shared mobility.

AMSTERDAM

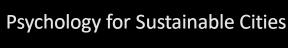
32% expect that their immediate environment has a positive attitude towards electric shared mobility and 26% expect that they would appreciate them trying it out. About 15% do not expect their environment to be positive about it.

33% does not know what their immediate environment thinks of electric shared mobility or what it would think of it if they tried it out.

LEUVEN

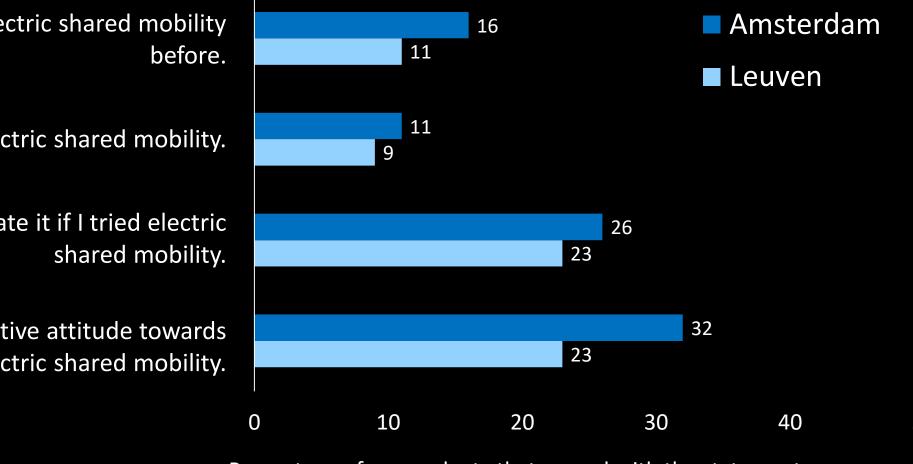
23% expect their immediate environment to be positive towards electric shared mobility and that they would appreciate them trying it out. There are more people (28%) who do not expect their environment to have a positive attitude towards electric shared mobility.

29% do not know what their immediate environment thinks of electric shared mobility or what they would think of it if they tried it out.





Most people in my immediate environment...



...have tried electric shared mobility

... use electric shared mobility.

...would appreciate it if I tried electric

...have a very positive attitude towards trying electric shared mobility.

Percentage of respondents that agreed with the statement

UAS | Psychology for Sustainable Cities



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TRUST IN THE (QUALITY OF THE) MOBILITY PROVIDERS

Most people have confidence in the vehicles and providers (55-59% score a 5, 6, or 7 on all three statements). Yet, also quite a few people have uncertainties or distrust. People seem to have the least trust in the privacy aspects. In particular, car owners from Amsterdam are critical of the privacy aspects, but about half of the Amsterdammers are convinced of the good service and quality of the vehicles. A substantial number of car owners (18%) does not have an opinion (yet) and fills in 'I do not know' for questions about trust.

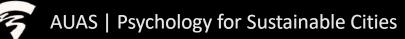
AMSTERDAM

52% are (somewhat to completely) confident that the eHUB offers vehicles of good quality.

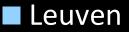
LEUVEN

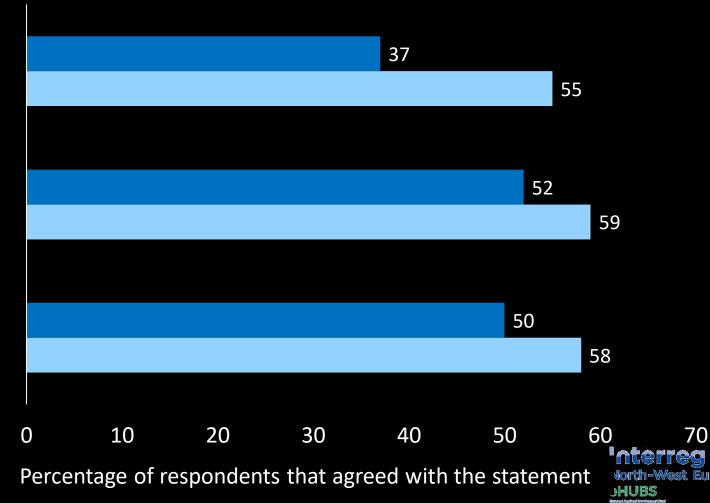
59% are (somewhat to completely) confident that the mobipoints offers vehicles of good quality.





Amsterdam





I trust that...

...the mobility providers handles my personal information well.

...the vehicles in the mobipoints/eHUB are of good quality.

... the mobility providers offers a good service.

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TRUST THAT ELECTRIC SHARED mobility IS PART OF THE SOLUTION

Most car owners imagine both positive and negative effects if many people traded their private car for electric shared mobility. Shared mobility can add value to the city (better air and climate, less congestion). However, negative consequences are also likely, such as more mess in public space and an overload of the power grid.

AMSTERDAM

If a large proportion of Amsterdammers were to get rid of their cars and switch to shared mobility this would lead to...

...cleaner air - 75% agree

...combating climate change - 63% agree

...less traffic congestion - 33% agree

...more litter in public spaces - 27% agree

... overloading of the power grid - 35% agree

LEUVEN

If a large proportion of citizens in Leuven were to get rid of their cars and switch to shared mobility this would lead to...

...cleaner air - 64% agree

...combating climate change - 59% agree

...less traffic congestion - 46% agree

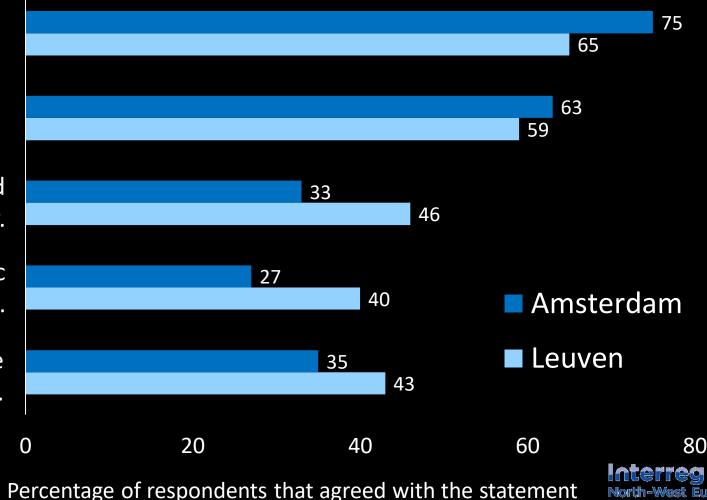
...more litter in public spaces - 40% agree

... overloading of the power grid - 43% agree





If many people in cities get rid of their private cars and switch to electric shared mobility...



...the air will be cleaner.

... it will help to combat climate change.

...there will be less traffic congestion and jams in the city.

...there will be more mess in the public space.

...the power grid will be overloaded.

JAS | Psychology for Sustainable Cities

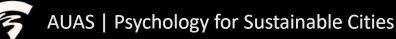


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WORRIES ABOUT THE CLIMATE AND PRO-**ENVIRONMENTAL ATTITUDES**

Overall, there is a high level of concern about the climate. The overwhelming majority thinks it is important to live in a healthy and clean environment (84-89%). This might be an interesting angle for persuasion. However, a much smaller proportion is trying to reduce their environmental footprint. Interestingly, in Amsterdam, three quarters are stating that they are actively trying to reduce their footprint and in Leuven only 38%.

AMSTERDAM

82% consider themselves as environmentally conscious to some degree.

89% consider it important to live in a healthy and clean environment.

77% are concerned to some extent about the negative consequences of global warming.

77% expect negative consequences of climate change in the city in the near future.

74% try to actively reduce their environmental footprint to some extent.

LEUVEN

84% consider themselves as environmentally conscious to some degree.

84% consider it important to live in a healthy and clean environment.

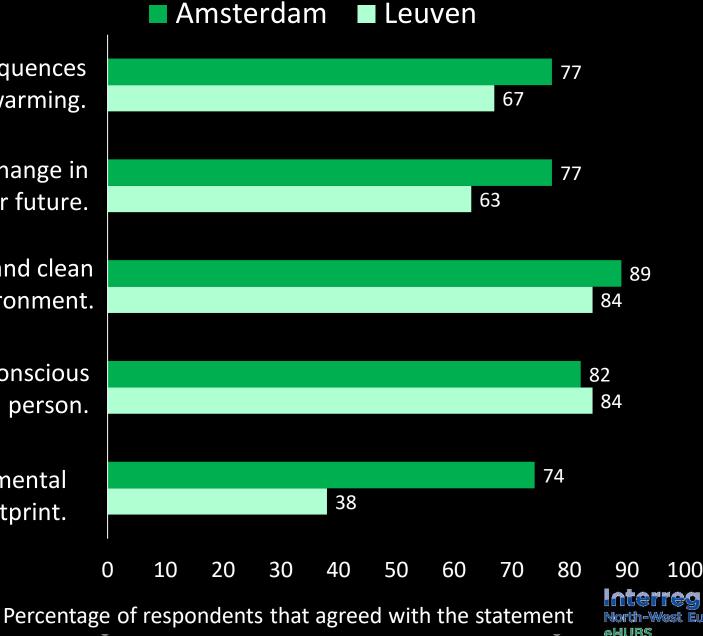
67% are concerned to some extent about the negative consequences of global warming.

63% expect negative consequences of climate change in the city in the near future.

38% try to actively reduce their environmental footprint to some extent.







I am concerned about the negative consequences of global warming.

I expect negative consequences of climate change in the city in the near future.

I find it important to live in a healthy and clean environment.

I see myself as an environmentally conscious person.

I try to actively reduce my environmental footprint.

AUAS | Psychology for Sustainable Cities



Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau



Bremen's mobil.punkte

Communication Strategies for Specific Target Groups

Rebecca Karbaumer Sustainable Mobility Project Coordinator Free Hanseatic City of Bremen Rebecca.karbaumer@umwelt.bremen.de mobil.punkt

Build a Foundation

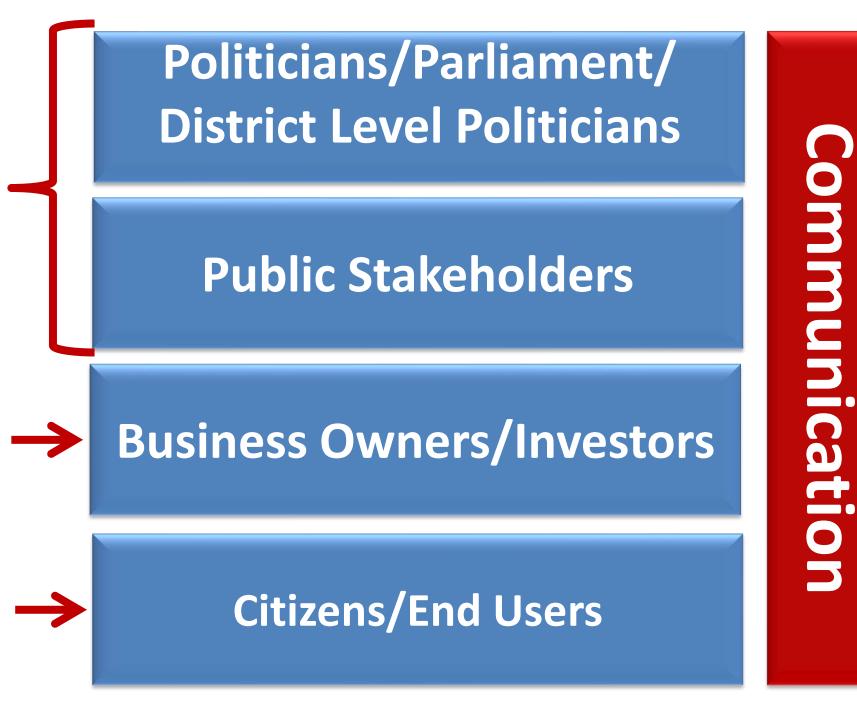
Select a Location

Physical Planning

Tendering/Selecting a Provider

Who you want to reach? What do you want to accomplish?

CONSIDER YOUR TARGET GROUP





- Focus on the **challenges** faced and how your measures can help solve them. Remind them of the **impact** of your activities and intended services.
- Allow them to experience the services and impact first hand.
- Remind them of committments they have made.

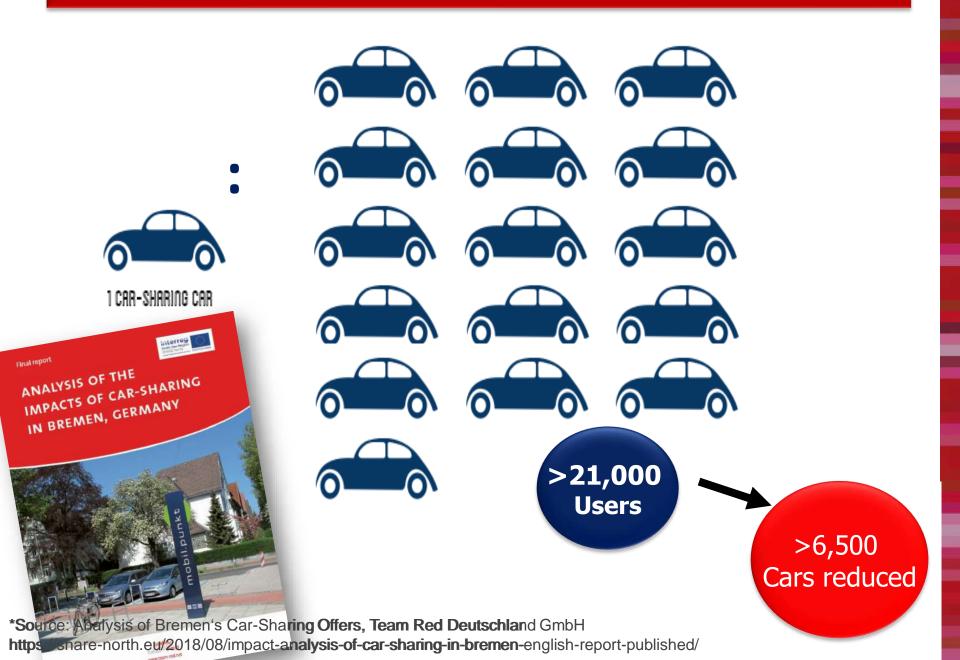
Politicians and Public Stakeholders



Bremen Example

Franz Gauker wohnt and dor Cab

Impact of Car Club Use on Car Ownership









Car-Sharing Action-Plan and SUMP



Business Owners/Investors

- Get them involved.
- Focus on what they can get out of it.

Consumer Behaviour of Car-Sharing Users

Use of Shopping Facilities

("Almost daily/1-3 times per week")



*Source: Analysis of Bremen's Car-Sharing Offers, Team Red Deutschland GmbH https://share-north.eu/2018/08/impact-analysis-of-car-sharing-in-bremen-english-report-published/

Integration in New Housing Developments – Many Options!

P 🗲 🛰

Many Benefits! Savings from reduced need to building parking spaces

Bremen Example

Increased Attractiveness of Property

HB CA 924

Mobility Needs of Residents Lower Building Cost =Contribution to Affordable Housing

- Get them involved. Or at least inform them about what is happening and why.
- Respond to constructive suggestions from the public.
- Focus on how the services can make their lives more convenient. Appeal on an emotional level and be consistent.

Citizens/End Users

Bremen Example

Mit freundlichen Grüßen

Im Auftrag

In Woltmershausen wird mit dieser Station das erste "mobil.pünktchen" im Stadtteil eingerichtet. In UN VOULIEISTIAUSET WITH THE DESEL STATION DAS EISTE "HIDDILPUTIKETET HIT STAULEH EITGERETHEL. IT Zukunft sollen es mehr werden. Die "mobil.pünktchen" Standorte werden in enger Abstimmung mit Zukumt sollen es menr werden. Ule "mobil.punktchen" standorte werden in enger Abstimmung mit Ihrem Stadtteilbeirat, mit Feuerwehr, dem Amt für Straßen und Verkehr und dem Senator für Inne Comfetting genetitt und beschlossen Einen Planauszug für das entstehende "mobil pünktchen" finden Sie auf der Rückseite dieses Schreibens. Mehr Information über Car-Sharing erhalten Sie im beigelegten Flyer oder unter. www.mobilpunkt-bremen.de.

Die Stellplätze des "mobil pünktchens" werden durch die Stadtgemeinde einem Car-Sharing-Anbieter gebührenpflichtig zur Verfügung gestellt. Um die Flächen nutzen zu können muss der Car-Anbieter gebunrenplijkning zur verflugung gestellt. Um die Hachen nutzen zu konnen muss der Car-Sharing-Anbieter festgelegte Qualitätskriterien erfüllen - zum einen müssen Kriterien des bekannten Snanng-Anbieter restgelegte Qualitätskriterien erfullen - zum einen mussen Kriterien des bekannten Umweltzeichens "Blauer Engel" für Car-Sharing (RAL-UZ 100) erfüllt werden, zum anderen muss ein renelmäßiger Nachweis erbracht werden in welchem Maße der öffentliche Datreum entbetet wird onnwenzenchens "Diauer Enger iur Car-Shanng (האו-2000) enun werden, zum anderen muss ein regelmäßiger Nachweis erbracht werden, in welchem Maße der öffentliche Parkraum entlastet wird.

hiermit möchten wir Sie informieren, dass demnächst kleine Umgestaltungsarbeiten in der Parkbucht der Weltenersbeuter Stelle nabe der Schälingetreße durchgeführt um den Andiener Stelle wird ein niermit mocnten wir Sie intormieren, dass demnachst kiene Umgestaltungsarbeiten in der Parkoucht der Woltmershauser Straße nahe der Schillingstraße durchgeführt werden. An dieser Stelle wird ein Gesennten mehil nitektehen" einstellteten dem klieftig zwei Cer Shering Februare der Arbiti der woimersnauser Straise name der Schningstraise durchgerunnt werden. An dieser Steite wird ein sogenanntes "mobil pünktchen" eingerichtet an dem künftig zwei Car-Sharing-Fahrzeuge des Anbieters cambio Ihrer Nachbarschaft zur Verfügung stehen werden. Mit der Einrichtung dieser Car-Sharing-Station wird einer Anregung aus Ihrem Stadtteil gefolgt, um die Erreichbarkeit von Car-Sharing-Station wird einer Anregung aus inrem Staditeil gefolgt, um die Erreichbarkeit von Car-Sharing-Angeboten für die BewohnerInnen Woltmershausens zu verbessem. Diese Station trägt zur Stang-Angeboten un die bewonnerinnen woltmersnausens zu verbessem. Diese Station tragt zu Erweiterung eines vielfältigen und nachhaltigen Mobilitätsangebots in der Stadt Bremen sowie zur Reduzierung des Parkdrucks bei denn iedes Car Sharing Estizetu in Bremen entlastet den öffent Erweiterung eines vieiraitigen und nachnaitigen Mobilitatsangebots in der Stadt Bremen sowie zur Reduzierung des Parkdrucks bei, denn jedes Car-Sharing-Fahrzeug in Bremen entlastet den öffent-

Mobil.pünktchen – Car-Sharing-Station bald in Ihrer Straße!

Der Senator für Umwelt, Bau und Verkehr Contrescarpe 72, 28195 Bremen An die Anwohner der Woltmershauser Straße und

Der Senator für Umwelt, Bau und Verkehr

umzu

Bremen Auskunft erteilt

Freie Hansestadt

Frau Karbaumer

rebecca.karbaumer @umwelt.bremen.de

(bitte bei Antwort angeben) ED.8 Bremen, 24. August 2017

Car-Sharing –

Inform Impacted Residents Eine Strategie für intelligente Mobilität und effektives

Bau und Verkehr

Parkraummanagement

Der Senator für Umwelt,

mobil.punkt

Freie Hansestadt b Bremen

What? Why? How? When?

Für ein Glas Milch gleich eine Kuh kaufen?

Bremen Example





F

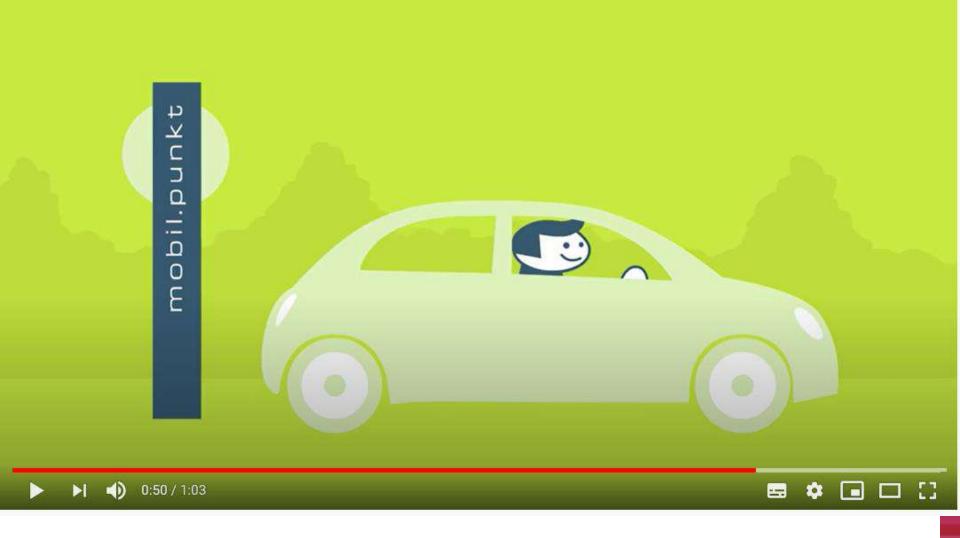
Udo chillt lieber!

Nutzen statt besitzen! Als Mitglied von Car-Sharing kann ich meine Zeit anders nutzen als sie mit der Fahrzeugpflege oder Suche nach einem Parkplatz zu verbringen. www.mobilpunkt-bremen.de

Salar and a second

Der Senator für Untwelt. Bau und Verkehr

Freie Hansestadt Bremen



https://www.youtube.com/watch?v=5seE_26FYFA

Danke!

Interreg

Anud.

GIUT AUFGEST?

20.000 Bremerinnen und Bremer nutzen Carsharing! Seid Ihr auch dabei?

www.mobilpunkt-bremen.de

P

PKW

The second



Thanks!

Rebecca Karbaumer Sustainable Mobility Project Coordinator Free Hanseatic City of Bremen Rebecca.karbaumer@umwelt.bremen.de www.share-north.eu

Die Senatorin für Klimaschutz, Umwelt, Mobilität, Stadtentwicklung und Wohnungsbau



Freie Hansestadt Bremen





European Regional Development Fund

EUROPEAN UNION

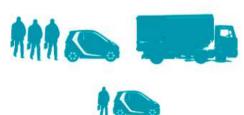


CITY OF Bergen

EHUBS: THE PLANNING AND DESIGN 20.10.2021









SHARE North



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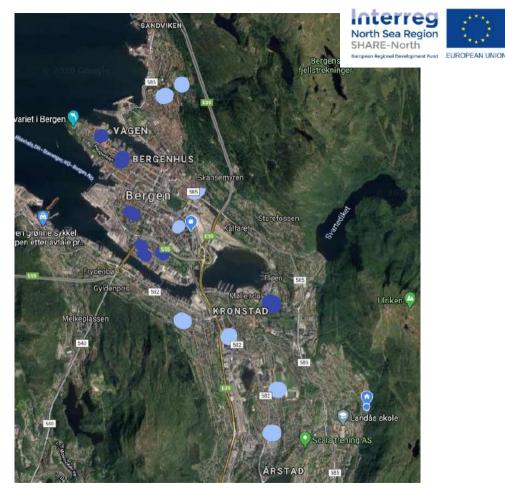






The scale

- 6 hubs in operation
- 8 new planned, ready for construction
- Working on action plan for new locations, also suburban
- **Range**: mostly small urban residential hubs so far



Existing mobility hubs in dark blue, new planned and approved locations in light blue.



Charging for car-sharing and private cars

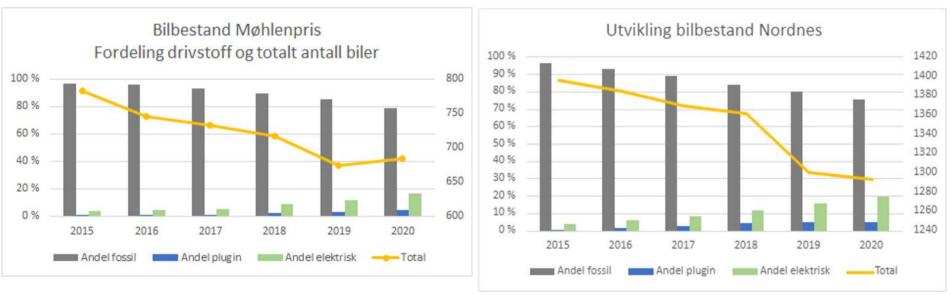








Impact?





New mobility hub: Kiellands gate

- 4 parking bays for e-car sharing (with charging facilities)
- One car charging bay for the disabled
- Bike sharing station for 19 bikes
- New lighting, planters, trees and urban furniture
- Total budget:
 € 170 000
- Completion: Q2 / 2021





New mobility hub: Søndre skogveien

- 4 parking bays for electric car sharing (with charging facilities)
- New "parklet" with plants, trees and benches
- Total budget: € 90 000
- Completion: Q2 / 2021



New mobility hub: Erik Pontoppidans gate, City centre



- 7 parking bays for e-car sharing (with charging facilities), + new trees
- Total budget: € 223 000
- Completion: Q2 / 2021





New mobility hub: Nymark



- Residential area near the main football stadium and light rail stop
- 4 parking bays with charging for
- 2 parking bays with charging for private electric cars
- Upgrades for cyclist and pedestrians

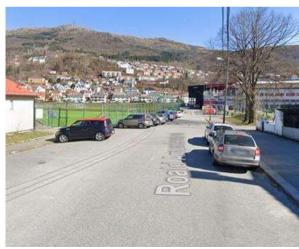
eks, tortau v

1.45

nondover til nyt

- More green space, new trees
- Total budget: € 88 000





New mobility hub: Nicolaysens vei, Minde

- 4 parking bays for ecar sharing (with charging facilities)
- 2 parking bay with charging for private electric cars
- Upgrades for pedestrians
- Total budget:
 € 100 000
- Completion: Q2 / 2021



Fortau afvides 110/441

Helf ber Hippes

Eksitherunde Landtang

Vegeta junivers affares ved beha

1 tibre tibl

isstarende sandtang. Ht bjølgeslak etableres prisering varderes på stødet

Report tiporses

al six broade living

tof I and brockle ! mater for

Arkjeriel strange ogs

a - distigning og for plassering

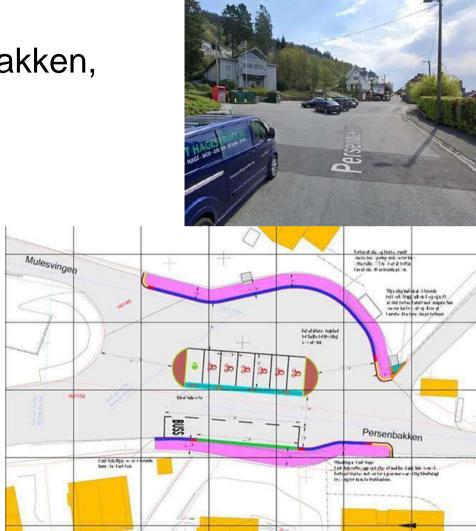
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New mobility hub: Persenbakken, Sandviken

- 6 parking bays for ecar sharing (with charging facilities)
- One parking bay for private electric car charging
- Part of larger project in the area, upgrading terminal bus stop
- Planning cost: € 45 000
- Completion: Q2 / 2022?





ByGarasjen – mobility hub?







= Onntatt

Residential parking



Ledig	
Toyota Yaris 3x17502	
kr 20,50 per time	00-
• Ledig	
Toyota Yaris sx17702	
kr 20,50 per time	0-0
• Ledig	
Toyota Yaris SX17185	
kr 20,50 per time	(物) (物)
• Ledig	
Toyota Auris STV 3V90549	
kr 28,50 per time	
unin Jan	
Ledig	
Toyota Prius+ sv88571	
kr 33,00 per time	_003
	NYE SANDVIKSVE BEBOERPARKERING 4.0 km
 Delvis ledig 	
Toyota Yaris 5X13418	Ledig
kr 20,50 per time	Skoda Citigo E E820835
	kr 15,00 per time
Delvis ledig	Ledig
Toyota Yaris SX17190	Nissan Leaf EK61364
kr 20,50 per time	kr 20,50 per time
 Opptatt 	e Ledig
Toyota Yaris SX14354	Toyota Auris STV SV88343
kr 20,50 per time	kr 28,50 per time
and the	
= Opptatt	 Delvis ledig
Toyota Auris STV SY88345	Toyota Yaris sv9949z
kr 28,50 per time	kr 20,50 per time
A REFIRTOR EN 44 km	Opptatt Skode Office E
	Skoda Citigo E E831805 kr 15,00 per time
	kr 15,90 per time
	Opptatt
	Skoda Citigo E EB61713
	kr 15.00 pertime

-1 Opptatt

Toyota Yaris \$\$17186

kr 20,50 per time -1-

BIRKEBEINER BEBOERPARKERING 4.3 km



60 nye biler på to måneder

Bildeleringen svarer på økt etterspørsel med å utvide. Siden slutten av april har 60 nye biler blitt anskaffet.

01. juli 2020 04:05 | Bergensavisen, side 3 Av: AKSEL HALMØY Mob.

- Det har vært et stort trykk de siste månedene, sier styreleder Jonas F. Henriksen.BILDELING
Bildeleringen er et samvirkeforetak, som betyr at det eies av medlemmene.



New players:





HYRE

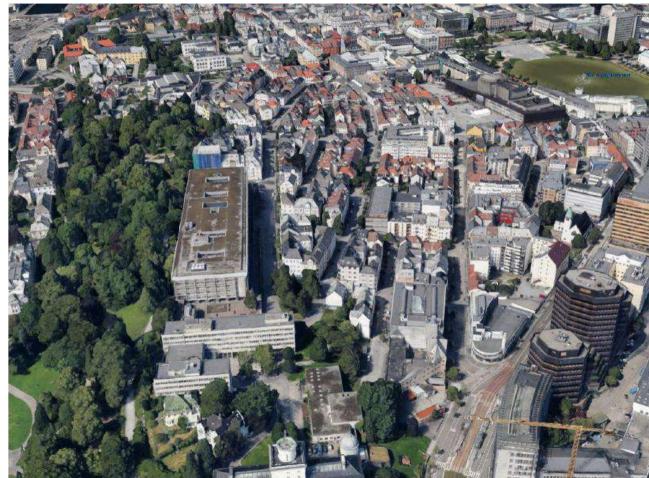








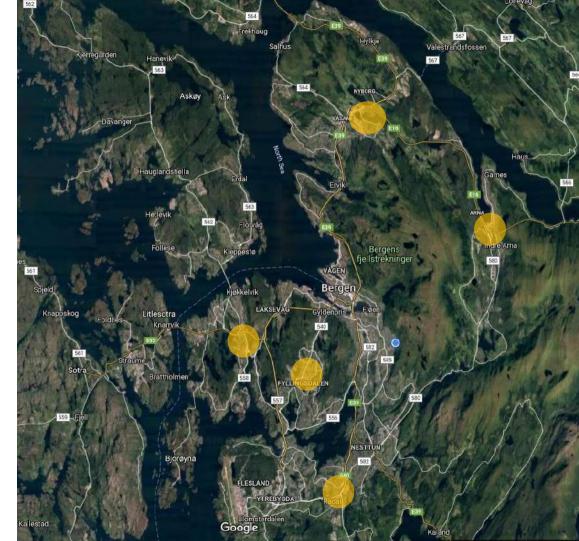
Nygårdshøyden «car-free» area







Next phase: Suburban mobility hubs





Grid capacity – decisive factor for locating the service?



A	В	C	U	E	+	G	н	
_				Lagt til grunn 0,8 fra kVA til kW			Lagt til grunn 0,8 fra kVA til kW	No. 1
Nettstasj onsnr. 🗖	Navn	• Trafo1 [KVA]	 Belastning T1 	T1 - Ledig kapasitet [kW]	Trafož 🖸	Beiastning T2	T2 - Ledig kapasitet (kW)	Avstander fra nærmeste trafo med tilgjengelig kapasitet (m) Til ensket utbygging
1	SANDVIKSTORGET	800	50 %	920	800	50 %	320	
9	TYPOGRAFBYEN	800	90 %	64			6	
20	KRUGERBAKKEN	800	91 %	57,6	800	100 %	0	50 m til Gjeble pettersonsgt. Elle 100-150 til Tartargt.
47	ROTHAUGEN	800	50.%	320	800	110 %	ile.	
88	SANDVIKEN TRANSFORMATORSTASJON		90 %	80				
111	HEIEN	800	90 %	64	1			
168	SUDMANNSVEI	500	115 %	(60)				
189	PRAHLSVEI	1250	90 %	100				
234	BREISTØLEN	800	105 %	12				
277	LAMBERTSVE	1250	60 %	400				
294	ØVRE SANDVIKSVEIEN	800	96.%	100	800	85 %	96	
297	KIRKEGATEN	1250	70 %	300				
333	WILHELMINEBORG	800	60 %	256				
360	SKUTEVIKEN	600	75 %	120				
383	MUNKEBOTTEN	000	95.%	24	1 C			the second s
467	LADEGARDEN	500	98 %					
481	NYE SANDVIKSVEI	500	80 %	80	- 6			
613	AMALIE SKRAMSVEI	800	60.%	256	1.1			
727	NYE SANDVIKSVEI 84	800	70 %	102				
2201	LADEGÅRDEN SYKEHJEM	800	60 %	250				
2767	BAGLERGATEN	800	75 %	190				
2798	ROTHAUGEN SKOLE	800	65 %	224				
2919	EKRENGATEN NR.1	800	95 %	32				

Lessons learnt - electric car sharing



	From Date	2020-01-01	End Date	2020-12-31
	Charger	NIA Saeeinne	Total Duration (hh:mm)	Total Energy (kWh)
	Holberg01	586	4813:53	4469,97
	Holberg02	522	4471:11	4381,89
	Holberg03	579	5189:12	4536,15
ALLE	Holberg04	540	4841:50	4434,90
	Holberg05	479	4593:49	3884,88
	Holberg06	403	3463:30	3589,75

- Initial scepticism replaced by enthusiasm
- Careful planning with power grid company
- Public ownership of infrastructure on public roads
- Running the charging service can be outsourced
 - Service for car sharing easier than for private cars
 - Control over (strategic) pricing must be retained
- No need for fast charging at mobility hubs for shared cars
 - 3,6 7,4 kW (230V) is enough
 - 10-15 kWh needed per day on average per car
 - 50 kW sufficient for 20 shared cars, with intelligent power control



Micromobility regulation pilot – main aims:

- To provide safety, clear passage and tidyness in city streets and public space
- To learn more about whether and how micromobility can contribute to a sustainable transport system

...by developing and testing a new digital regulation tool

DNR

Regulation principles

- Operators must share their data with the city
- Operators must receive regulation data from the city
- Dynamic street use fee (or subsidy)
- Dynamic digital zones and times
- Environmental standards
- Handling of wrongly parked scooters
- Other rules: Winter service, customer information, etc.











CITY OF Bergen

EHUBS: SHARED AND ELECTRIC MOBILITY POLICIES 20.10.2021



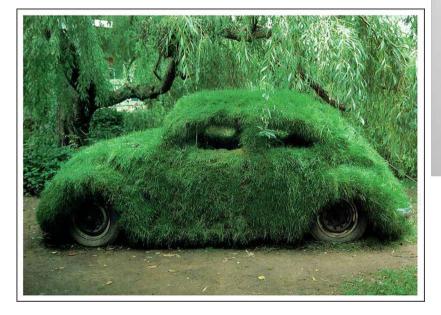
Policies: Shared mobility and electrification

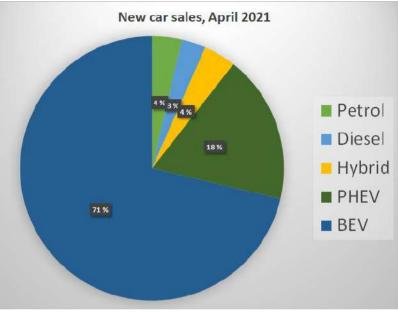
Lars Ove Kvalbein Mobility advisor, Agency for Urban Environment

Fossil-free Bergen 2030



Context – electric facts





Bergen:

- 85% Battery electric new cars August 2021
- 27,5% battery electric of total fleet of private cars

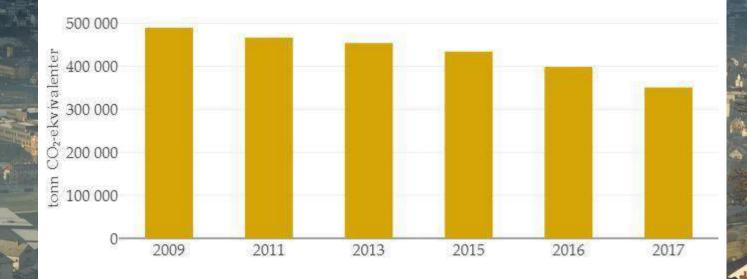


National level taxes - Price example

Volkswagen golf	Volkswagen e-Golf	
Import price: 18 914 Euro	Import price: 27 215 Euro	
CO ₂ tax: 3 333	CO_2 tax: 0	
Nox tax: 237	Nox tax: 0	
Weight tax: 2 254	Weight tax: 0	
Scrapping fee: 251	Scrapping fee: 251	
25% VAT: 6 247	VAT: 0	
Retail price: 31 236 Euro	Retail price: 27 466 Euro	Source OFV

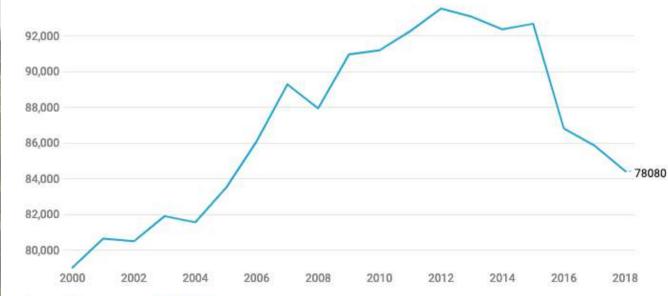


Fossil-free Bergen 2030



Trafikkutvikling i Bergen 1999-2018

Trafikkutvikling i bomringen - retning Nygårdstangen/Bergen sentrum (7 Bomstasjoner)



Source: Statens vegvesen - Get the data

Bomring

Toll ring

800 m

Diesel car,

Electric,

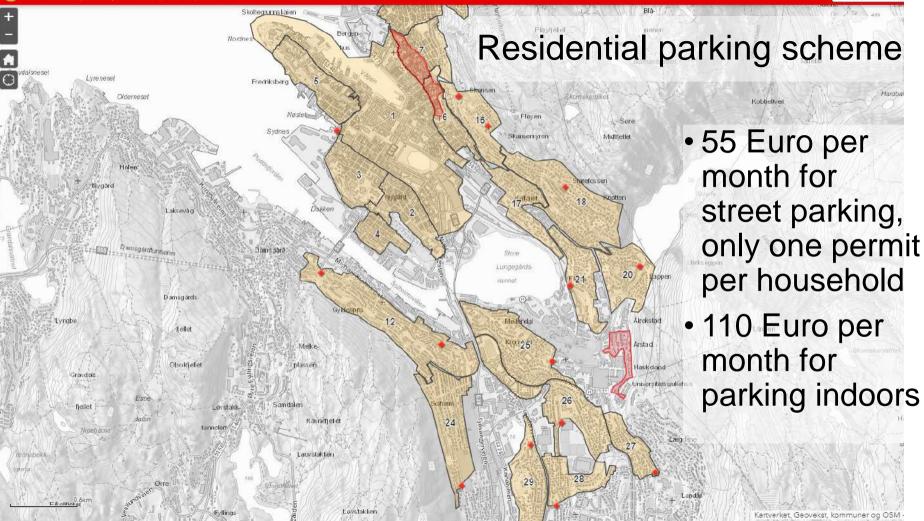
off-peak:

rush hour: € 6









New parking strategy

- The end of street parking in urban areas
 - Only deliveries and HC + car sharing
- Key instrument: Residential parking scheme
 - Funding public off street parking facilities



Trend: Street parking on the decline



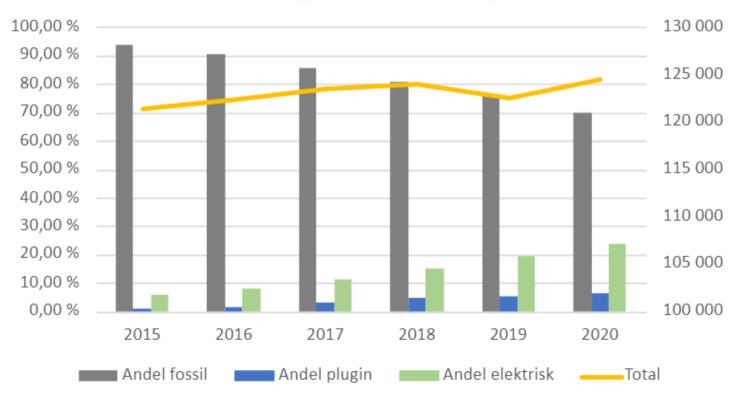
Figur 1 - Utvikling antall solgte boligsonekort

- The diagram shows number of valid street parking permits in urban residential parking scheme
- For inner zones (1-7): A significant decline
- For zones 8-29 the increase is due to new zones added to the scheme, not more cars in the zones
- For the first half of 2020, the trend reverses for the first time, with a slight increase for all zones. Corona affecting private car ownership?



Impact?

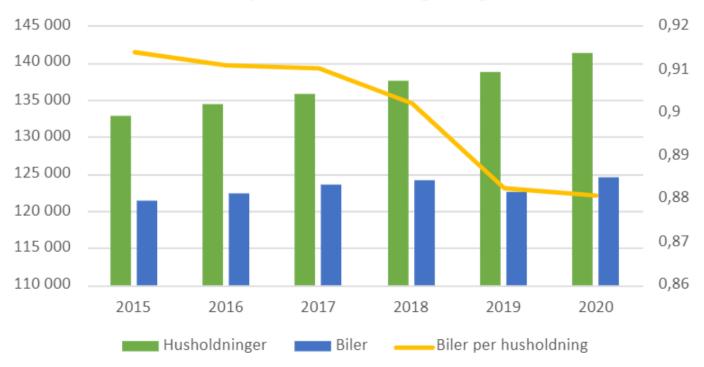
Utvikling bilbestand Bergen





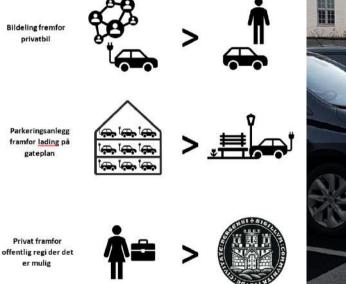
Impact?

Biler per husholdning Bergen





Public charging infrastructure



Charging provided by the city: For shared electric cars Public residential parking facilities Street level charging in urban residential areas (limited) Support for common charging facilities in housing co-ops

Fast charging provided by private operators (with some public support)



Commercial charging operators















