Shared Mobility Hubs:
Wie können Pilotprojekte skaliert werden?

Themenkongress Urbane Mobilität
7. Juni 2023, HAW Hamburg
Prof. Dr. Tessa Taefi

Interreg North Sea Co-funded by the European Union
ShareDiMobiHub
1. Intro to Shared Mobility Hubs (SMH)

2. Upscaling with Digital Participatory Platform (DPP)
What are shared mobility hubs?

- Physical clusters of shared & electric mobility modes
- Can vary in size, type of location, and type of offer
- Tailored to local conditions & needs: neighbourhoods, city centres

- Bring together bicycles, e-bikes, e-cargo bikes, e-scooters and/or e-cars and charging infrastructure
- Existing public transport network may be connected
- Integrates through MaaS with transport system
Potential benefits of modal shift through shared mobility hubs

Reduce emissions through modal shift
- Improve air quality
- Reduce carbon emissions
- Reduce traffic noise

Improve liveability through sharing resources
- Improve the quality of outdoor spaces
- Guarantee accessibility
- Facilitate efficient population growth
- ...
Chicken & Egg Dilemma of Shared Mobility

- Car needed for private transport
- Space needed to park car
- No good quality shared mobility service
- No space for shared mobility
EU Interreg NSR Project ShareDiMobiHub

Communicate: Share, connect, learn

Improve: Integrate into general mobility networks

Scale up: Provide central learning platform on SMH

Car needed for private transport

Space needed to park car

No good quality shared mobility service

No space for shared mobility

ShareDiMobiHub aims to create a critical mass.

Pilots in Cities
- Skien/Porsgrunn (NO)
- Tønsberg (NO)
- Rotterdam (NL)
- Leuven (BE)

Upscaling in Regions
- Amsterdam (NL)
- Vestfold &Telemark (NO)
- Leuven (BE)
- Utrecht (BE)
- Kopenhagen (DK)
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ShareDiMobiHub builds on past projects

Building blocks providing input for pilots and upscaling actions

- Standardized communication between Shared Mobility Providers and MaaS providers (TOMP-api)
  - eHUBS project

- Standardized communication between Shared Mobility Providers and public authorities (City Data Standard - Mobility)
  - eHUBS project

- Heat maps for best locations of shared mobility hubs based on data analysis (population density, public transport availability, etc.)
  - eHUBS project

- Templates for agreement between city authorities and shared mobility providers / regulatory framework and policy frameworks
  - eHUBS project

- Implementation guide for effective public-private collaboration
  - Mobi-Mix project

- Public participation in innovative mobility methods
  - BSR-Electric project

- Best practice reports about planning shared mobility hubs in cities (bottom-up, top down or mixed approaches)
  - eHUBS project

- 10 recommendations to influence behavior towards shared mobility and to convince car owners to try out shared mobility
  - eHUBS project

- Technical and functional requirements description of shared mobility hubs
  - eHUBS project

- Several examples of public tenders to select shared mobility providers or to license them to operate in a city
  - eHUBS project

- Framework to measure impact
  - Mobi-Mix project

- Demonstrating potential applications of various types of urban e-mobility
  - BSR-Electric project

- Location selection criteria methodology
  - eHUBS project

- Insights into different business models + understanding of business case of shared mobility providers versus city societal goals
  - eHUBS project

- Examples of branding and communication material and a toolkit for behavior change
  - eHUBS project

- Insights on most interesting target groups, travel behavior change and barriers for change (nudging techniques)
  - eHUBS project

- 10 Golden rules for Shared Mobility + Book: A Planner’s Guide to the Shared Mobility Galaxy
  - ShareNorth project

- Guidance for public authorities, companies, planners and transport providers for integrating sustainable solutions into urban transport strategies
  - BSR-Electric project
Pilot Example: Leuven

Status (30/9/22)
https://leuven.be/mobipunten

- 42 HUBS (38 eHUBS)
- 30 Cargoroos (30 stations)
- [40 Urbees (5+1 stations, 2 with charging infrastructure) (till 30/6/22)]
- 24 EVs (cambio + partago) + 130 shared cars (all station-based)
- 124 shared bikes (PT)
- 60 P2P cars + 1 P2P e-cargo bike
- Extra: parcel lockers added at 14 eHUBS (pilot project ecozone: emission-free post and parcel delivery)
Leuven: Status-Quo

Michotte: bus + e-cargo bike

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Leuven: Status-Quo

Haasrode/ Gasthuisberg:
bus + e-bikes
Leuven: Status-Quo

De Becker-Remy:
bus + e-cargo bike + EV + shared cars + parcel locker
Rector de Somer:

Bus + e-bikes +
e-cargo bike +
additional services
Leuven: Status-Quo

Heverlee Station: train, bus, bikes, e-bikes, e-cargo bike and cars
Leuven Challenges: increase uptake

- **More and better offer**
  - More EVs, E-cargo bikes, E-bikes
  - More eHUBS on the longer term

- **More demand**
  - Nudging
  - MaaS
  - Specific target groups
  - Mixed user groups

- **Policy**
  - Evidence-based policies
  - More integration (e-mobility, shared and multi-modal mobility, urban logistics, smart city, public works)

Pilot's goal: Creating a sense of necessity -> to let them experience
**Pilot Example: Rotterdam Mobility Challenge**

### New Hubs
- 7 providers shared bicycles, scooters, cargo bikes
- 6 providers shared electric car (small, large, vans)
- Public transport

### Involvement
- Convert freed-up parking spaces (districts decide on usage)
- Districts decide to keep / discard after evaluation
- Other districts may decide to scale up

### Mobility challenge: 6 month in 2 districts
- Residents opt to not use car for 1 to 6 months
- Free car parking in municipal car park
- Costs covered for owned car + shared transport budget
Content

1. Intro to Shared Mobility Hubs (SMH)

2. Upscaling with Digital Participatory Platform (DPP)
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Method: Towards a DPP

Methods Partners’ Survey
1. Survey with 11 questions
2. Only partners addressed
3. 3 weeks survey period (23. Jan to 12. Feb 2023)
4. Mainly open questions to collect as much info as possible
5. Received 8 out of 16 replies (50%)
6. Clustering of answers by hand.

Methods Stakeholder Survey
1. Online-Survey with 7 questions + subquestions
2. Network / Public addressed
3. 3 weeks survey period (10. Mar to 31. Mar 2023)
4. Mainly multiple choice questions to collect leverage auto-evaluation
5. Received 46 replies
6. Bachelor thesis to evaluate results
Stakeholder survey was shared on websites & social media networks.
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**Partners’ survey results:**

Who interacts with the DPP?

<table>
<thead>
<tr>
<th>Group</th>
<th>Provide info</th>
<th>Consume info</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShareDiMobiHub Partners</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Mobility providers</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Public authorities</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Research &amp; Academics</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Interest groups</td>
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<td>3</td>
</tr>
<tr>
<td>General public</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3rd party data providers</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Stakeholder Survey

To which stakeholder group do you count yourself?

- Public Authorities / Consultants: 45%
- MaaS or mobility providers: 23%
- Interest groups / NGOs: 9%
- General public: 11%
- Research academia: 6%
- Other: 6%
- Don't want to answer: 6%

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How do you rate your knowledge on Shared Mobility Hubs?

- Expert knowledge: 26%
- Good knowledge: 24%
- Average knowledge: 18%
- Some knowledge: 17%
- Not existent: 11%

Stakeholder Survey
# Stakeholder Survey

## Learning Goals of the Stakeholder Groups

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Gain a general SMH overview</th>
<th>Receive detailed SMH expert information</th>
<th>Read other stakeholders’ SMH experiences</th>
<th>Share SMH experiences</th>
<th>Grow a personal network for SMH</th>
<th>SMH Implementation Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local and regional public authorities</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Mobility &amp; Maas providers</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Interest groups, NGOs</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>General public</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and academia</td>
<td>x</td>
<td>x</td>
<td></td>
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</tr>
</tbody>
</table>

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Partners‘ Survey: Does the DPP have a networking target?

1. No Networking, only inform
2. Basic Links point to networks, i.e. MAAS Alliance, internal city networks
3. Deep Links from SDMH examples to experts or responsible for outputs, products, services
4. Active Networking Build network of experts and cities with different levels of shared mobility
Stakeholder Survey

In which ways do you like to learn?

- Physical meetings: 17
- Simultaneous online exchange (real-time): 17
- Non-simultaneous online exchange: 10
- Consumption of presented knowledge: 28
Q: Who are the main stakeholder groups / who should be addressed?
A: Main stakeholders condensed into two personas

Emma
Mobility Decision Maker, Senior Level, Public transport officials in NSR

➢ Prior knowledge:
  Master level education, broad idea of SDMH, fluent in English

➢ Motivation:
  Improved decision-making capacity with regard to local/regional development

➢ Capacity:
  low due to heavy day-to-day workload:
  2-3 h max

Practical use for hands-on knowledge to decide on design, build and drive shared and digital mobility hubs

Hans
Young professional in SMEs, Civil Organisations / NGOs; Master student

➢ Prior knowledge:
  Master level education, broad idea of SDMH, fluent in English

➢ Motivation:
  Contribution to improving and expanding mobility services on own local/regional scale. Networking and exchange of good-practices

➢ Capacity:
  medium/large: 60 h max

Involved in operations, with exploitation and upscaling potential
Stakeholder Survey: Example content related question

6a. Which goals of shared mobility hubs should have their own category/tag?

- Other
- Reducing mobility poverty
- Improvement of personal mobility connectivity
- Reduction of automotive traffic density for urban goods...
- Reduction of automotive traffic density for private...
- Reduction of inhabitants’ vehicle ownership per capita
- Improvement of climate protection
- Reduction of local environmental pollution

Highest score

- Strongly agree
- Agree
- Undecided
- Disagree
- Strongly disagree
6a. Which goals of shared mobility hubs should have their own category/tag?

- Other
- Reducing mobility poverty
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- Reduction of automotive traffic density for urban goods
- Reduction of automotive traffic density for private
- Reduction of inhabitants' vehicle ownership per capita
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- Reduction of local environmental pollution

Second highest score: 1,16
6a. Which goals of shared mobility hubs should have their own category/tag?

- Reducing mobility poverty
- Improvement of personal mobility connectivity
- Reduction of automotive traffic density for urban goods...
- Reduction of automotive traffic density for private...
- Reduction of inhabitants' vehicle ownership per capita
- Improvement of climate protection
- Reduction of local environmental pollution

No tag required?

0.84

0.68

Partner survey
Stakeholder survey
Q: Complexity & Content
A: Three main levels

Increasing complexity moves “outside-in” from European context to concrete assessment action on local/regional level
Q: Storyline and Curriculum:
A: Pre-phase, sequence of 5 increasingly complex modular assignment cycles, and fade-out

- Opportunities + Challenges
- Concepts + Technologies
- Development + Implementation
- Funding + Procurement
- Benefits + Implications
Summary

Shared Mobility Hubs

➢ Many best practice examples & knowledge
➢ Chicken & egg problem not overcome
➢ Needs integration & upscaling

Upscaling with DPP

➢ Bring together stakeholders
➢ Enable regional learning
➢ Include urban goods
➢ HAW Hamburg is proud to take part in shaping sustainable urban mobility

Quelle: https://www.hvv-switch.de/de/hvv-switch-punkte/
Thank you
Prof. Dr. Tessa Taefi
tessa.taefi@haw-hamburg.de
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Sources: All unnamed figures and graphics where provided by the ShareDiMobiHuib project partners