

PROSPERITY

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Topic Guide

Integration of shared mobility approaches in sustainable urban mobility planning

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Introduction

Opportunities

- The new multimodal mobility options can offer municipalities a way to reduce moving and stationary automobile traffic as well as some commercial traffic
- Including ‘shared mobility’ as a pull factor can be an important way to promote ecomobility
- Instead of owning → using! This model can changed mobility routines!

Numerous challenges

- Most of the new offers come from private companies making bicycles, e-scooters, e-motorbikes and both electric and conventional cars available digitally and for a fee – in the public space (!).
- These offers (e.g. ride sharing and ride hailing) create direct or indirect competition to local systems of public transport financed by municipalities
- consider possible rebound effects created through free-floating car sharing, whereby sharing offers tempt public transport users to switch to cars if the quality of public transport is low.

SUMP principles and SUMP steps in the context of shared mobility

- Shared modes are related to many planning topics → creating an interdepartmental core group is helpful
- In order to identify specific potential, challenges and needs for action when developing measures and implementing new sharing offers, a thorough survey should be made of existing sharing services, the modal shift in the use of sharing types and other parameters
- What objectives can sharing offers help achieve? How can they support a sustainable (multimodal) mobility strategy?
- Where can accessibility be improved?
- Are sharing offers intended to improve accessibility in the exurbs and suburbs, or for the last mile or for night service in the city?
- How can the effects of sharing offers be assessed?
- The participation process should include the users, but also the suppliers of private-sector sharing services.

• ...

Public bike sharing systems

Municipalities should

- explore the legal steering options and decide on a strategy;
 - issue and monitor clear, uniform and binding regulations;
 - request that providers make contact persons available for local authorities;
 - maintain steady communication with providers;
 - authorise only providers with transparent websites that include all information about locations, prices, terms and conditions, and data protection (before an app is downloaded); and
 - require compliance with all relevant data privacy policies.
- numerous planning guidelines and handbooks on bike sharing existing 5

Aspects of a public bike sharing-system, strategic instrument – regulatory policy

Strategic instrument		
Public service	Goals	Specifications for providers
Quality standards	Tender	Multimodality
Operator model / Infrastructure	Inclusion of freight bikes / pedelecs	Rates
System issues (fix, flex, mix)	Financing	station structure
Regulatory policy		
Controllability	Traffic safety	Excessive sharing
Special uses	Complaint management	Legal basis
Administrative costs	Space allocation	



Stadtrad Hamburg (©Martina Hertel)

E-scooter sharing

Not enough experiences until now!

- parking problem creating in limited public space, vandalism,...
- large number of accidents, some of them fatal, further undermine their potential
(In Barcelona, a 90-year-old woman was killed in an accident with an electric scooter, now Spain has banished the electric scooters from the pedestrian path again (Jahberg 2019)).

Possible regulations

- They may use bicycle paths. If there are no bike paths, e-scooters may use roadways.
- They must be insured and have an insurance sticker on the vehicle.
- The maximum permissible speed is 20 km/h.
- The devices may be carried on public transport.
- Helmets are not required.
- The driver need not have a moped certificate.
- Failure to comply with the regulations is viewed as an administrative offense, which is punishable by a fine and an entry in the central traffic register.
- The lack of insurance may result in criminal charges for breaching the law on compulsory insurance.



E-Scooter von Bird in Bamberg (©Stadtwerke Bamberg, photographer: Matthias Hoch)

E-motorbike sharing

- Convenient offer: vehicle and one or two helmets provided; easy handling: driving licence and a smartphone
- Can create motorised competition for cycling and walking in short distances

Challenges / measures

- E-scooters are usually used in European city centres that have good public transport
- Critically topics: (municipal) regulations for parking, data protection and vandalism, as well as competition with cycling
- No empirical findings for municipal e-motorbike sharing services
- integration into the SUMP should be critically reviewed using the 8 SUMP principles



Emmy in Berlin und Hamburg, Source: Electric Mobility Concepts GmbH (2019a)

Car sharing

Station-based, free-floating, peer-to-peer car sharing

- one station-based car sharing vehicle can replace between 15 (UBA 2017) and 20 (bcs) private cars
- Reduced parking spaces demand and more efficient use of the transport infrastructure
- Combining e-mobility and car sharing promise even greater potential in terms of energy efficient, low-emission mobility in metropolitan areas



Source: Bundesverband CarSharing e.V. (2018b)

Challenges / measures

- The number of providers and the diversity of vehicles are growing (BCG 2016) and creating new challenges for urban planning
- car sharing is another form of motorised individual transport (MIT) → new offers must ensure a real reduction in MIT and not induce more
- conducting pilot projects for one to five years → Evaluation

Car sharing

Administrative procedures or planning procedures

- Incorporate car sharing concepts into urban SUMP or TDP,
- Car sharing as a supplementary measure in thematic sections such as climate change or air pollution control plans,
- Adoption of a municipal car sharing action plan

Mobility Packages / Mobility Stations / Cooperations

- Mobility packages as the best joint offer of the environmental network
- connecting car sharing stations and other modes of transport to mobility stations (car sharing and public transport, charging points, bike sharing, etc.)
- providing financial assistance for car sharing start-ups and cooperation with service provider in the context of business car sharing

Communication and marketing opportunities

- the municipality as a role model
- using advertising (special offers and campaigns) to promote car sharing

Ride sharing, ride hailing

- **Ride sharing** (Lift, car pooling, van pooling,...): additional passengers are added to an existing car journey on a joint route to make unused seats available to other passengers. Non profit
- **Ride hailing** (ride sourcing, ride selling,...): a service that allows passengers to connect with other passengers by using their personal vehicles for the travel for a payment, ride sharing model with unlicensed driver/private driver with private car (e.g. Uberpop, Wundercar) banned in some countries

Opportunities / Challenges

- Ride sharing/hailing systems a new, flexible environmental friendly transportation system, but only as an additional service component in local public transport if car journeys are substituted

Measures

- Priority for pooled vehicles in urban areas
- Discounts for pooled cars and vans on toll roads
- Free ride sharing coupons and public transport passes for pooling employees
- Possibility for taxis to use pooling services
- Parking and stopping privileges at airports and other congested areas for ride sharing providers – in case of poor public transport ...

Shared freight mobility

- **Collaborative transport** common use of storage facilities (hubs, consolidation centres, etc.), delivery vehicles and other resources or processes in the transport chain to help delivery firms save operating costs by increasing efficiency along the chain → reduce transport and emissions
- Need agreements or partnerships between companies that the packages and goods are not stored, transported and delivered separately by each firm
- **Crowd shipping or crowd sourcing** denotes shipments brought to the recipient by private individuals in their own cars, allowing for deliveries to be made more quickly, efficiently and cheaply than by traditional services

Challenges / measures

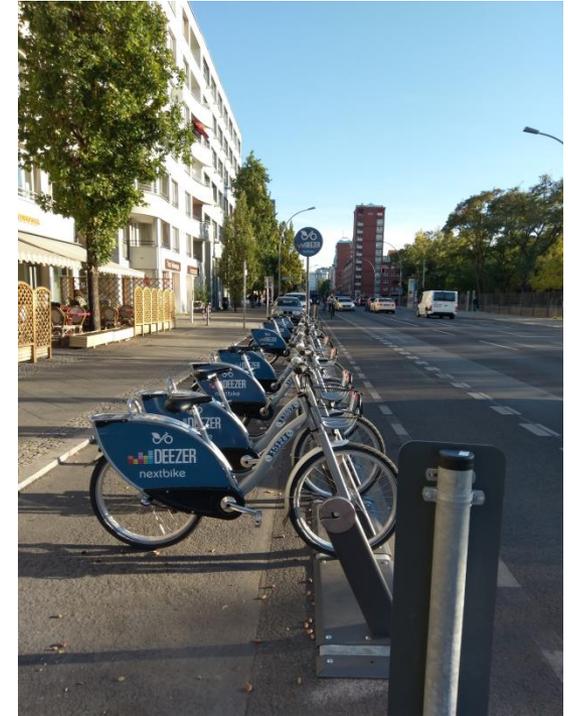
- A regulatory framework is needed for shared commercial transport
- Control of labour conditions (maximum working time for driver!)
- Distribution of public and street space must also be reconsidered: loading zones, micro hubs and pick-up points
- Time restrictions for vehicles in particular districts, as well as parking regulations (loading zones), restricted access (green zones)

Recommendations

stakeholder	potential	challenges	recommendations for municipal action
• municipalities	<ul style="list-style-type: none"> • supplementing public transport and strengthening the environmental network • optimal mobility solution for the first respectively last mile 	<ul style="list-style-type: none"> • accumulation of supply in inner city areas and less or no supply in suburban or rural areas • cannibalization of the offers of the environmental association 	<ul style="list-style-type: none"> • act as providers or initiate close cooperation between the operators and municipalities • establish rules on parking, the minimum technical equipment of the sharing vehicles and the operational quality (with deadlines) of the sharing system
	<ul style="list-style-type: none"> • saving of areas and negative ecological effects (noise, air pollutants...), provided that car journeys are substituted by the offers • contribution to the achievement of municipal transport, environmental and social policy objectives • increasing the visibility of mobility alternatives in the urban area • contribution to a sustainable transport development 	<ul style="list-style-type: none"> • unorganized parking of bicycles • negative appearance in public space • BS: special use vs. common use • investment and operating costs: offers need subsidies ("start-up aid") - especially in sparsely populated areas 	<ul style="list-style-type: none"> • release parking spaces in public areas • reserve parking spaces and arrange for discounts / exemptions from parking fees for sharing vehicles • include offers in urban mobility communication (e.g. linking to the provider on the municipal website, integrating locations into urban route planners, etc.) • plan financial resources for a demand-oriented offer in the budget
• providers (of sharing services, platforms, intermodal platforms)	<ul style="list-style-type: none"> • integration of CS as part of the mobility planning for new buildings • possibility to reduce the required number of car parks (and reduce construction costs) • strengthening the image of the municipality (e.g. with bicycles as "own brand") 	<ul style="list-style-type: none"> • hardly any parking possibilities (e.g. in connection with public transport) • BS: occupied parking areas by cars • CS: Illegally parked vehicles on designated CS areas and significant speeding during rental) 	<ul style="list-style-type: none"> • consistently sanction illegal behavior, especially against moving and stationary automobile traffic stationary (e.g. illegal parking). • require operators of sharing systems to comply with standards on data protection, payment processes and registration conditions • initiate the development of a needs-based charging infrastructure
• customers (private and commercial)	<ul style="list-style-type: none"> • BS: Reduced number of bicycles on trams, buses and (underground) trains • fewer delivery trips (commercial transport) 	<ul style="list-style-type: none"> • lack of charging infrastructure for e-vehicles • profit interest may contradict the traffic benefit • sinking bundling of journeys 	<ul style="list-style-type: none"> • contractually regulate that relevant user data from providers are transmitted to the municipalities for urban and mobility planning purposes • define responsibilities and criteria for evaluation and impact research with regard to M&E of the traffic impact on urban traffic • take on regulation of delivery services as a municipal task
• cooperation partners			

A message from the experts

- Antal Gertheis on bike-sharing
- Mohamed Jama Mohamed on Shared Ridesourcing
- Martina Hertel on Parking management



Thank you for your attention!

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