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TRASHH: Mindset and corporate culture needed to encourage street cleaners to use-cargo bikes

Velo-city 2019, Session 6B - Cargo Bikes - Reshaping Cities

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TRASHH: Opportunities for E-Cargo Bikes in Municipal Waste and Cleaning Services



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Research project:

- TRASHH: Technological and economic analysis of the application possibilities of cargo-bikes in communal companies through the example of Stadtreinigung Hamburg (SRH)
- The project is funded by the German Federal Ministry of Transport and Digital Infrastructure within the National Cycling Plan 2020 (NRVP)
- Implemented in cooperation with the German Aerospace Centre's (DLR) Institute of Transport Research
- Timeframe: 2016 to 2020



Radkutsche Trike Musketier @ MYCARGOBIKE



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DLR analysis prior to pilot testing:

- 12 out of 23 analysed cleaning processes have high potential for use of cargo bikes
 - Approx. 62 platform trucks could be substituted by e-cargo bikes
 - Substitution of platform truck by three cargo bikes is cheaper (annual total cost of ownership) & can transport same weight and volume
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- **Pilot testing of seven e-cargo bikes in different work processes / SRH cleaning operations**
 - **Main interest: is upscaling useful?**



Veleon clean city e-motion @ Stadtreinigung Hamburg



Challenges

- Cargo-bike market is still in its infancy
- Technical challenges with one bike

Personnel

- After a few months on the cargo bike one out of two drivers switched back to the platform truck
- Finding new drivers for additional bikes has proven to be rather difficult
- Most team leaders were not enthusiastic about the e-cargo bikes as they required change of work flows



Bakfiets Cargo Trike Wide @ Stadtreinigung Hamburg



From pickup trucks to e-cargo bikes?

- How to encourage people to use e-cargo bikes for their daily work or **what type of person** is needed for commercial e-cargo bike operations?
- How do **identities and status** need to change in a public company with more than 3,000 employees to give bike operations a realistic chance?
- Can **incentives** help to encourage workers to use bikes instead of pickup trucks?
- And what does it take to get **supervisors** on board even if efficiency as measured today decreases using e-cargo bikes?

> Qualitative interviews with e-cargo bike drivers, supervisors, colleagues and those who didn't want to use the bikes





Cargo-bike drivers

- 5 out of 8 drivers have no driving license
- 6 drivers are using bicycles as main mode of transport in private life
- 5 voluntarily decided to participate in the pilot
- Advantages: independence and possibility to organize time and work freely
- Disadvantages: weather-dependency, cycling infrastructure for cargo-bikes
- All drivers have daily contact to their colleagues and feel supported by them





Required personalities

Factors supporting willingness to use e-cargo bikes

Person/ driver

- Sense of responsibility
- Own initiative
- Self-organisation
- Motivation
- Interested in mobility increase
- Identification with bicycles

Organisation

- Change and innovation are company objectives
- SRH sustainability strategy and climate change objectives
- Opportunity to increase mobility options
- Visibility
- Change Agents

Technology

- Technology task fit
- Bike design
- Bike features
- Bike storage close to point of use



Required personalities

Factors hindering willingness to use e-cargo bikes

Person/ driver

- Convenience
- Weather dependency
- More visibility of individual work performance
- Missing willingness to change
- Own advantage not visible
- Fear to loose vested rights and privacy

Organisation

- Point of introduction
- Voluntary basis
- Missing integration into hierarchy

Technology

- Technical defects with introduction
- Size of cargo bikes
- Apprehension about technology



Supervisors as change agents

- Authority: employees trust supervisor takes the right decision
- Rationality: supervisor explains importance and rightness of change to potential drivers
- Process management supports change and offers assistance in change management
- Catalogue of possible applications for e-cargo bikes
- Adjustment of performance evaluation
- Leading by example: company bicycles for supervisors
 - Control trips
 - Meetings within proximity to work place



Workshop with supervisors and drivers @ Stadtreinigung Hamburg

Corporate mindset & culture



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- Current culture is built on directions from above, bottom-up process is weak
- freedom of decision making leads to perception of lower legitimisation and importance
 - change needs to be introduced and led from the top
 - with time acceptance grows
 - incentives can support change

” New is always stupid, until new becomes old, then it’s cool. ”

We heard this statement several times with regards to culture change at SRH, mainly from supervisors and colleagues of cargo-bike drivers.

Incentives supporting change



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Innovators of first phase:

- Small individual incentives – possible due to small number of e-cargo bikes in use, for instance
 - Taking the cargo bike home after work
 - Overnight storage of e-cargo bikes close to point of use > shorter commuting travels
 - Participation in publicity events
 - Stories on SRH Intranet, employee's magazine, etc.



Article in SRH magazine @ Stadtreinigung Hamburg



Incentives supporting change

Ideas for incentives in case of upscaling:

- Equating e-cargo bikes to other motorized vehicles
 - Daily set-up time
 - Driver contracts for cargo-bikes incl. small extra pay
 - Extra pay if others with a lower pay level drive the bike
- CO2 account per region
 - Credit for days when cargo bikes are used – in line with SRH goals to reduce fuel consumption and minimise inner-city traffic

SRH fleet @ Stadtreinigung Hamburg





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Preliminary findings

An increasing number of our employees only have a driving license for passenger cars or no driving license at all, for them e-cargo bikes

- are a mobility increase
- offer extended working options that wouldn't exist without means of transport

For SRH, e-cargo bikes can be an option to

- overcome the shortage of truck drivers
- integrate employees with special needs



SRH employees @ Stadtreinigung Hamburg



Preliminary findings

Increased visibility in the urban landscape

- Closer proximity to citizens
- Higher visibility – customized cargo-bikes are still a novum and eye-catcher
- Back to the roots – the cargo-bike could be today's version of the traditional sweeping cart

Improved cleanliness

- On a bike one is closer to the dirt and rubbish on the ground and it's easier to see it, stop and pick it up



Urban Arrow Flatbed XL @ Stadtreinigung Hamburg



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Thank you for your kind attention...



Sortimo ProCargo @ Stadtreinigung Hamburg

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