Application of Co-Design in Shared Mobility Solution finding

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Background

Shared mobility faces challenges at multiple levels: at the macro level, coordinating stakeholders with diverse goals and timelines is difficult; at the meso level, service providers and designers often struggle to engage end-users or to understand city planners' priorities; and at the micro level, the varied and evolving needs of individuals can be hard to capture. Co-design, meaning involving users and stakeholders throughout the design process, might help address these barriers and ensure that the resulting solutions are relevant, effective, and feasible, ultimately reducing private car use. However, co-design has often been used as a "buzzword," with interpretations that extend beyond its actual meaning, and there is a notable lack of documentation regarding its application in the shared mobility sector.

Central Research Question

How useful it is to create solutions for shared urban mobility by inviting citizens to work with professionals, in other words, by "Co-Design"?

Case Study

Autonomous ferry project, Fredrikstad, Norway

Fredrikstad, as one living lab of "Seamless Shared Urban Mobility" EU project (SUM), is introducing a new electric ferry, which will eventually be autonomous, into its public transport system to reduce car use. The ferry is undergoing a 12-month test on a route between Kråkerøy and the industrial area Øra with its 2,500 employees. The case study engages citizens, employees, planners, industry partner and service providers in co-designing shared mobility solutions, to make the commuting experience including the ferry journey better.

source: Fredrikstad Kommune

Ideal Study Outcome

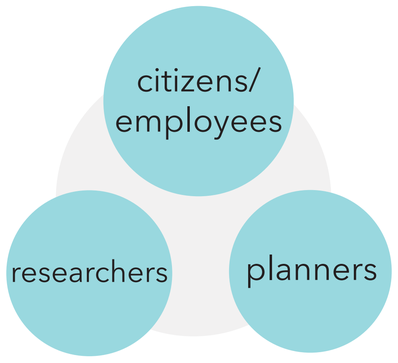
1. Understanding the usefulness of co-design in developing shared mobility solutions and determining the appropriate stage of product development to apply it.
2. Services and solutions that meet latent or tacit needs in the commuting journey are created and evaluated.
3. Learnings about collaboration and coping with project uncertainties when applying co-design.

Methodology

"Co-design application" in this study means **a series of co-creative workshops with local citizens, from need-defining, service-creating, to solution-evaluating.** With interactive research as an approach, the case study aims to create both practical and theoretical knowledge, as well as to achieve mutual learning for the stakeholders for participating in the process. Hence, workshops are developed flexibly according to the stage within the study, the stakeholder needs and the ferry project itself. **"Fun"** is the mindset when designing the workshops to support the government in engaging citizens, to foster mutual learnings and to create the social value of bottom-up bonding and collectively having a good time.

STAGE 1

learning from citizens

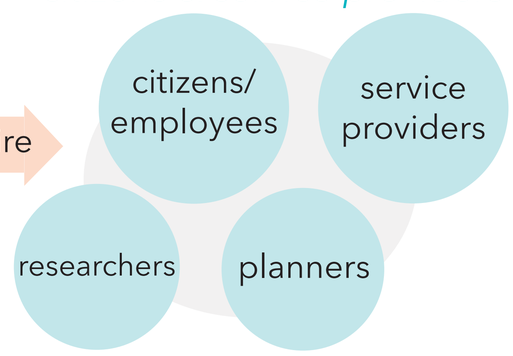


"mapping with yarn"
need-defining workshops

inspire

STAGE 2

co-creating with citizens & service providers

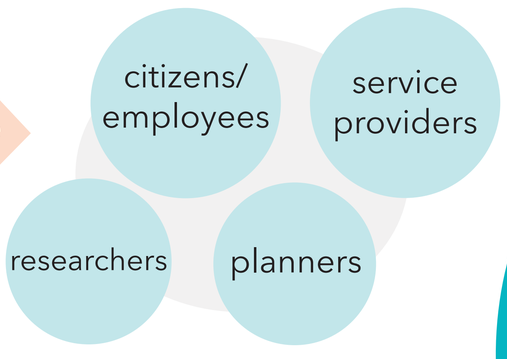


"elicitation & enactment"
service ideation workshop

guide

STAGE 3

evaluating solutions with citizens & service providers



workshop method TBD

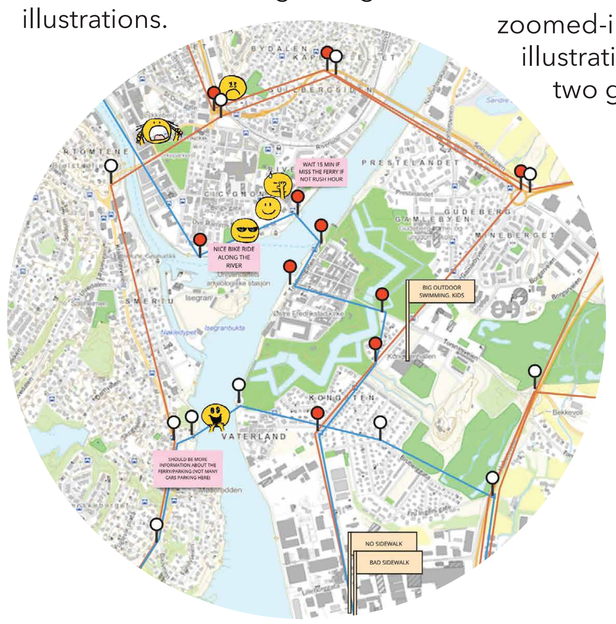
Initial Results

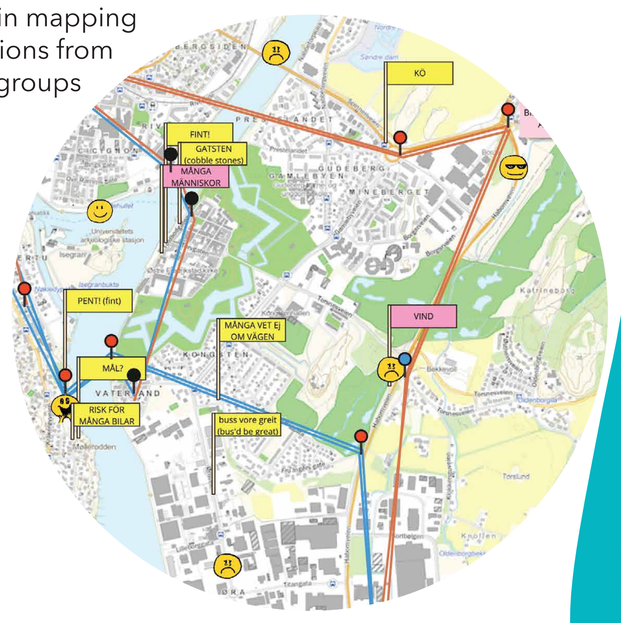
First Findings

- **One main obstacle** of taking the new ferry to work was found as it is challenging to bike or walk through a specific area.
- **A school bus line** is of great interest to be added to connect the new ferry line so that many parents who drive their kids to a local international school can instead choose more sustainable traffic modes.
- **Need to provide information** was defined about the free car parking lot near the ferry stop for potential "park & ride", as even nearby residents are unaware of it.
- Some **local attractions** were identified and will become strategies to enhance the shared mobility commuting experience.
- **Tolls and queues** at certain roads were mentioned which are opportunities for promoting shared mobility alternatives.

The 1st stage workshops collected employees' needs from vibrant discussions and physical models added with their daily routes, moods, thoughts.
The physical model results are documented through digital illustrations.

zoomed-in mapping illustrations from two groups





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Your Opinion Here!

1.

"I ___ heard of co-design."

A. (probably) have

VOTE HERE!

B. have not

VOTE HERE!

2. "I think, co-design ___."

A. is quite useful

VOTE HERE!

B. isn't practical, actually

VOTE HERE!

C.

WRITE & POST HERE!