

# TechCircle HACKATHON 2024

## Digital Citizenship in Aarhus



# HACKATHON KICK OFF

05.02.24



- 08.30:** **Welcome and introduction to the week**  
Hans Christian Bugge, TechCircle  
Anne Kirketerp, Erhvervsakademi Aarhus
- 09.00:** **Inspiration talks**  
**Smart City**  
Jesper Algren, ITK Innovation
- Working methods for complex issues**  
Sara Brixen, CFIA
- 10.45:** **Presentation of Hackathon and the three themes**  
Rasmus Cederdorff, Erhvervsakademi Aarhus
- 11.00:** **Initial group work**
- 12.00:** **Lunch**
- 12.30:** **Prepare questions for Q&A session**
- 13.00:** **Q&A session**
- 14.00:** **Thank you for today**



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# Week 6: overview

<b>Monday</b>	08.30 - 14.00	DOKK1	Introduction and inspiration day
<b>Tuesday</b>	08.30 - 15.45	EAAA	Hackathon workday
<b>Wednesday</b>	08.30 - 15.45	EAAA	Hackathon workday
<b>Thursday</b>	08.30 - 15.45	EAAA	Hackathon workday
<b>Friday</b>	08.30 - 14.00	EAAA	Pitch and award ceremony



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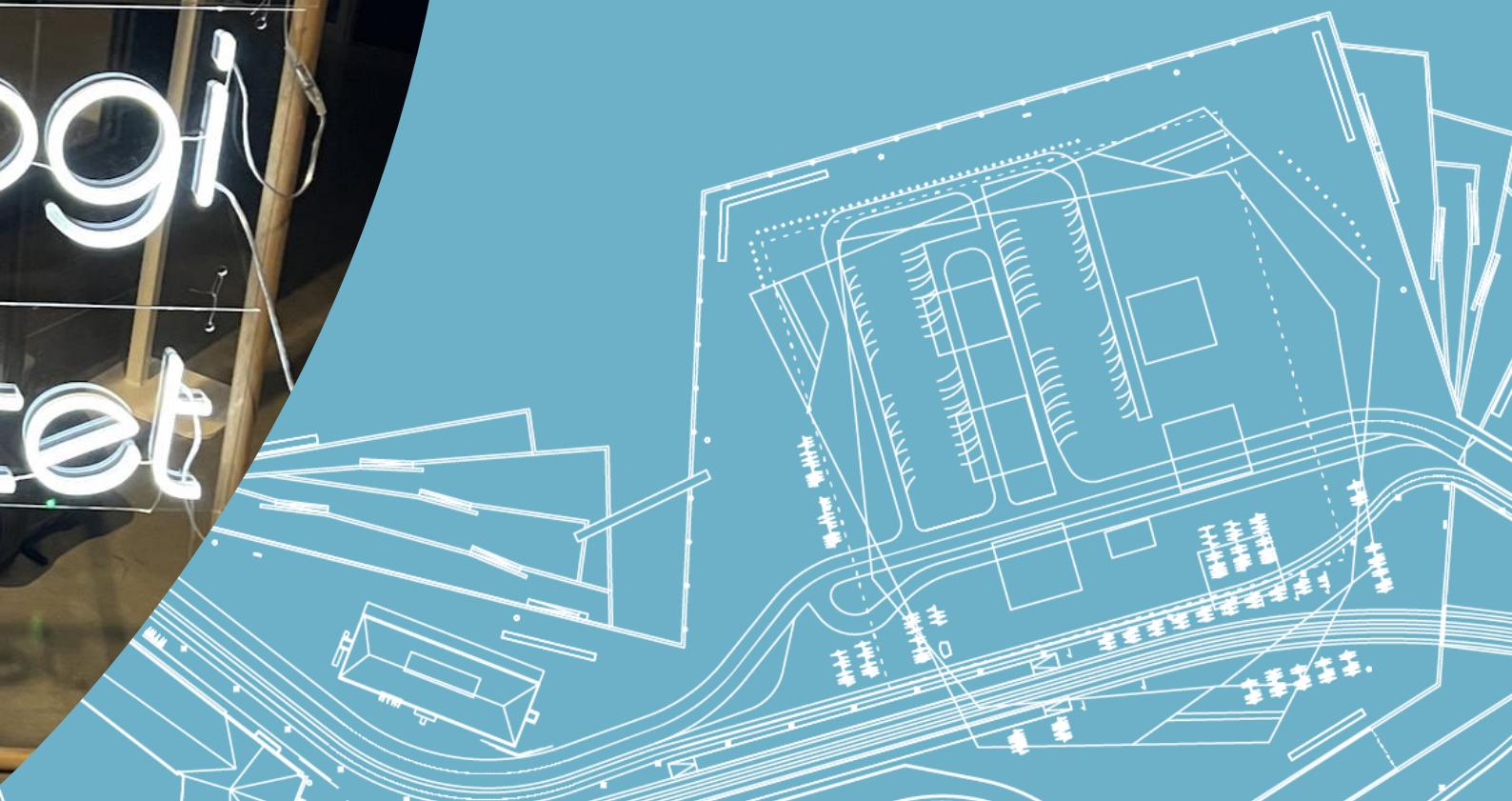
# WELCOME TO ITK

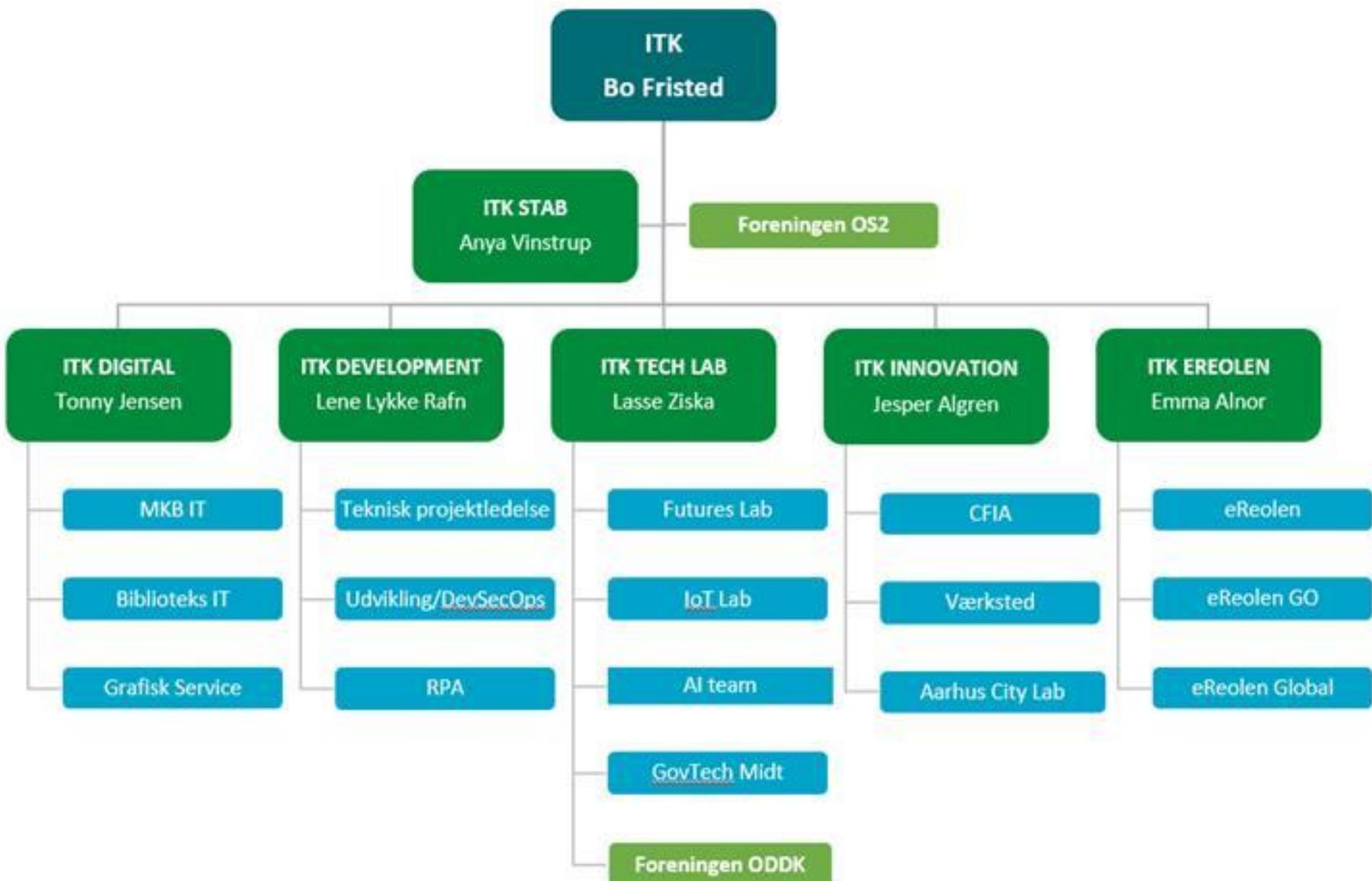


Specialised teams

Aarhus City Lab,  
CFIA, IoT Lab,  
GTM

Based on  
interdisciplina  
projects







# ITK Innovation – City of Aarhus

Jesper Algren

**Head of ITK Innovation**  
// Center for Innovation  
// Aarhus City Lab

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# AARHUS CITY LAB

- Test facility and showroom for innovative smart city solutions – both small and large scale
- A tool and forum for dialogue between citizens, businesses, research and the city
- Single-point-of-entry that facilitates the contact to companies, across the whole municipality



# CENTER FOR INNOVATION IN AARHUS

- *Together we design new ways for welfare in Aarhus*



Innovation partner



Meeting Place and Workshop



Innovation Capacity

# SMART AARHUS

The background of the slide is an aerial photograph of a coastal landscape. It features a wooden boardwalk or path leading towards a body of water. On either side of the path are stone walls and some greenery. The water is a deep blue-green color. The overall scene is a mix of natural and man-made elements.

A city where citizens, authorities,  
companies and knowledge/research  
institutions collaborate to develop and  
run the city.

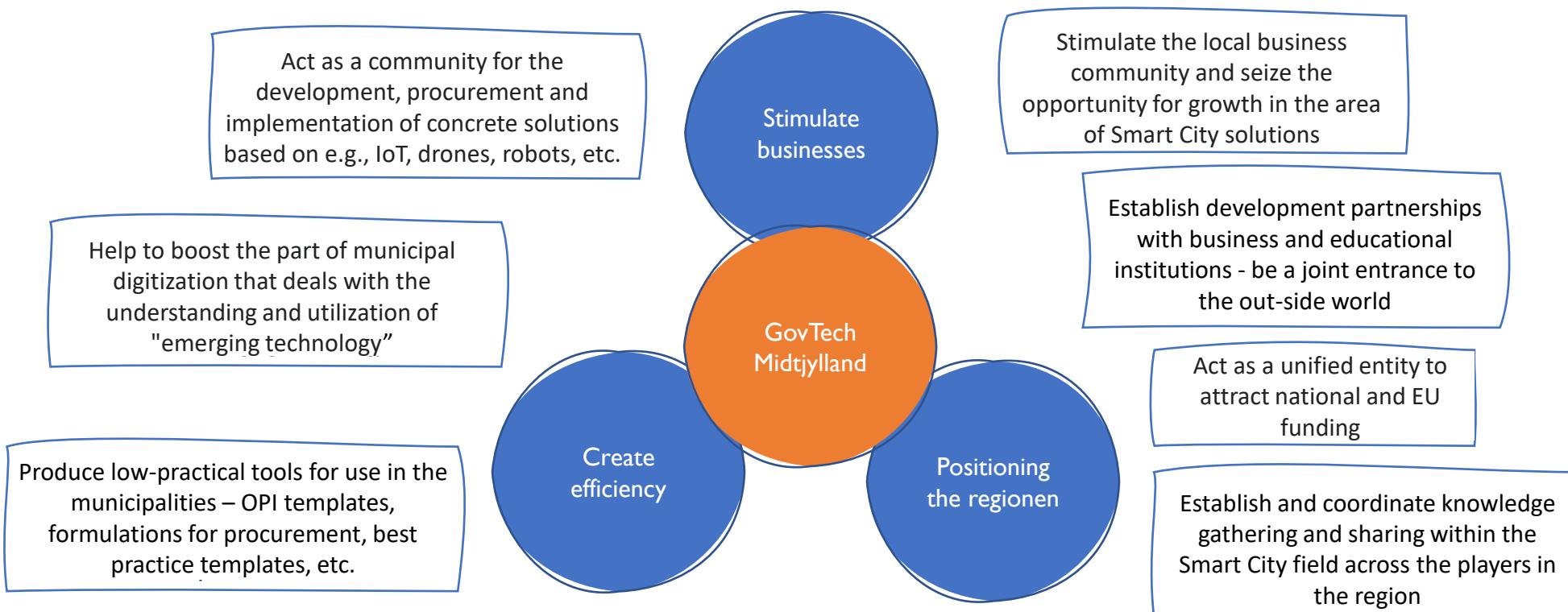
A city where resources are used better and more  
sustainably.

A city where digitalization is a means to  
achieve the goal of creating a good city  
for everyone.

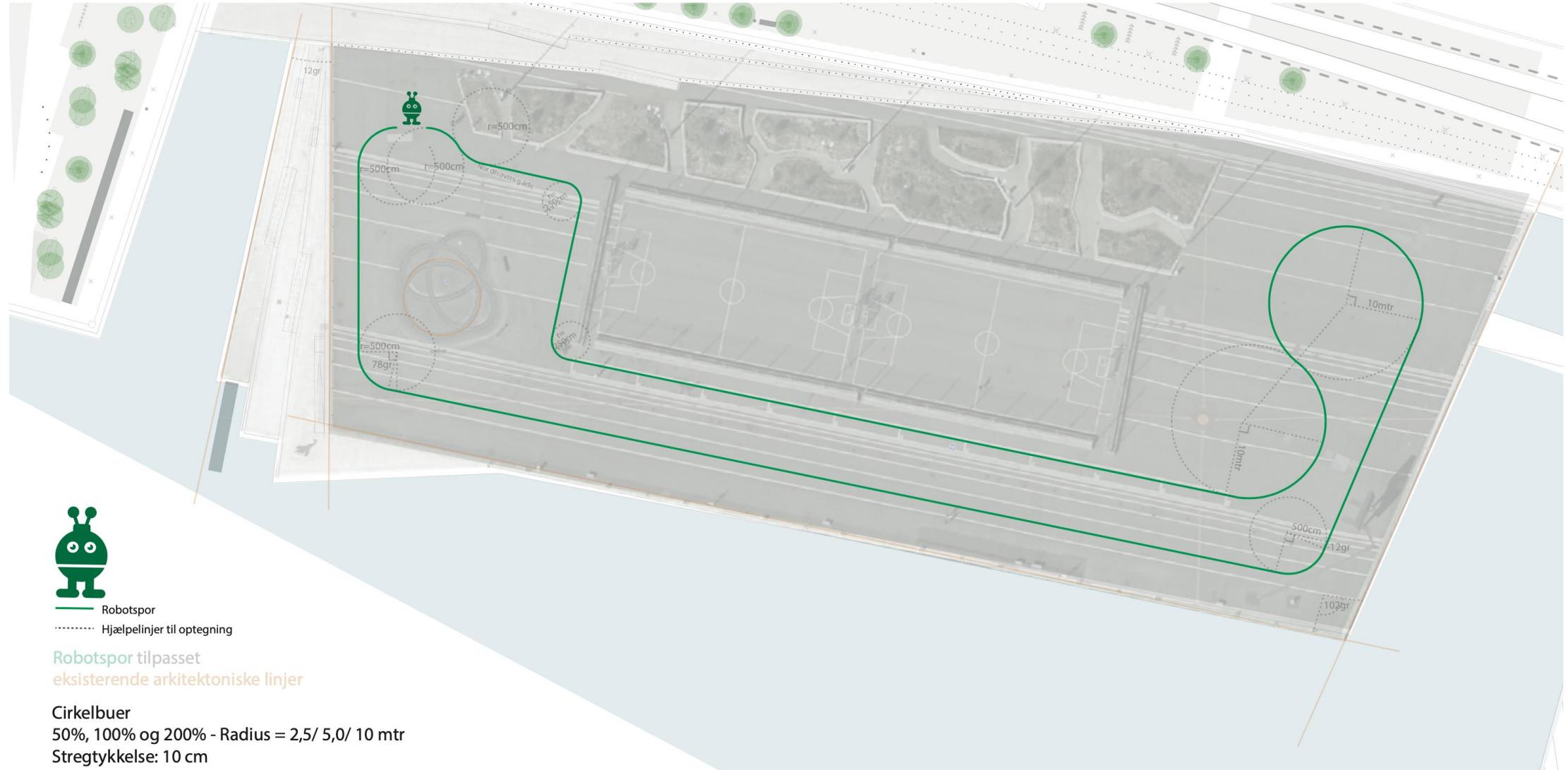


## GovTech Midtjylland

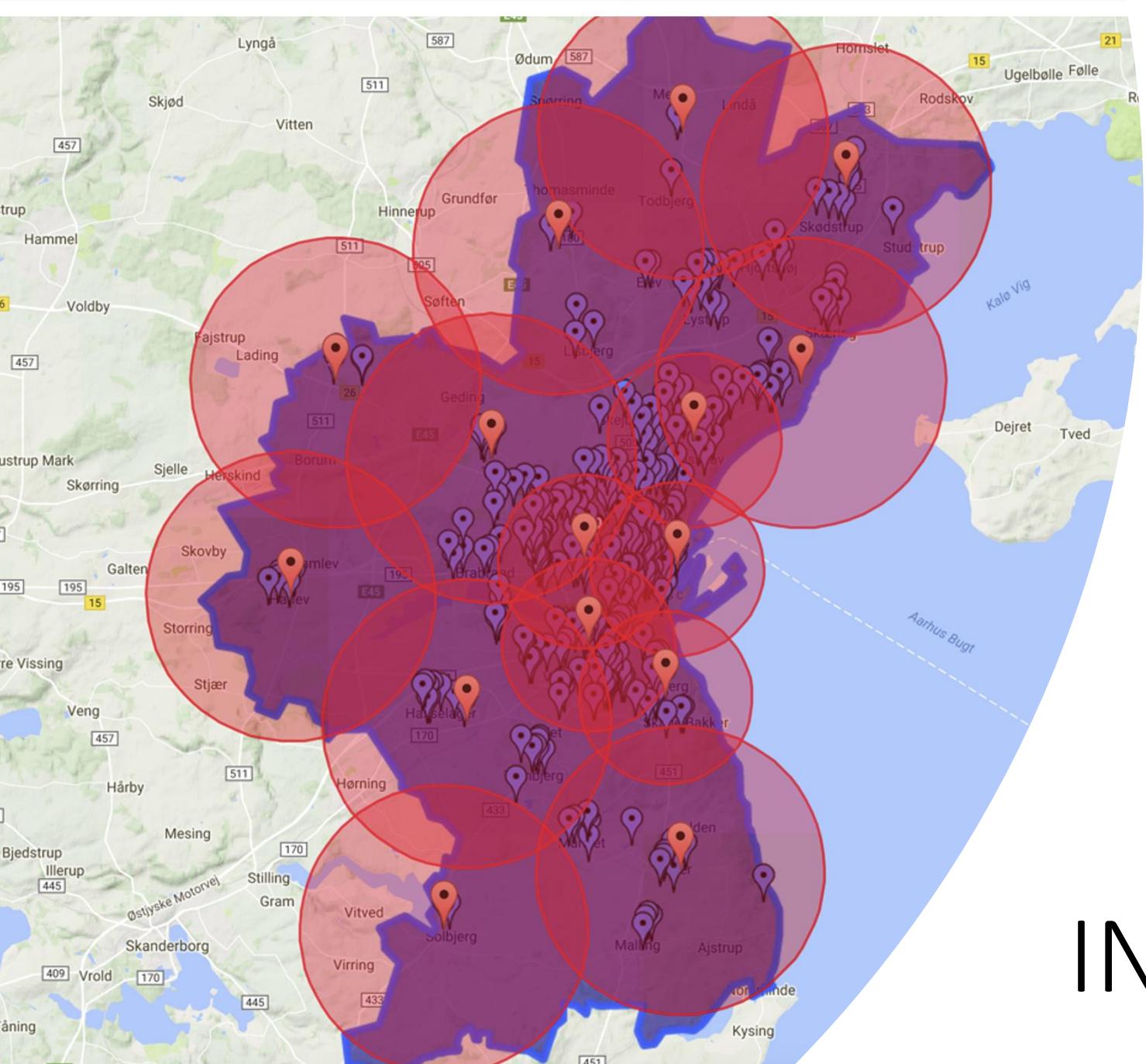
GovTech Central Denmark is a working community that supports work with new technology, across 12 municipalities and the Central Denmark Region.



# ROBOT TRACK

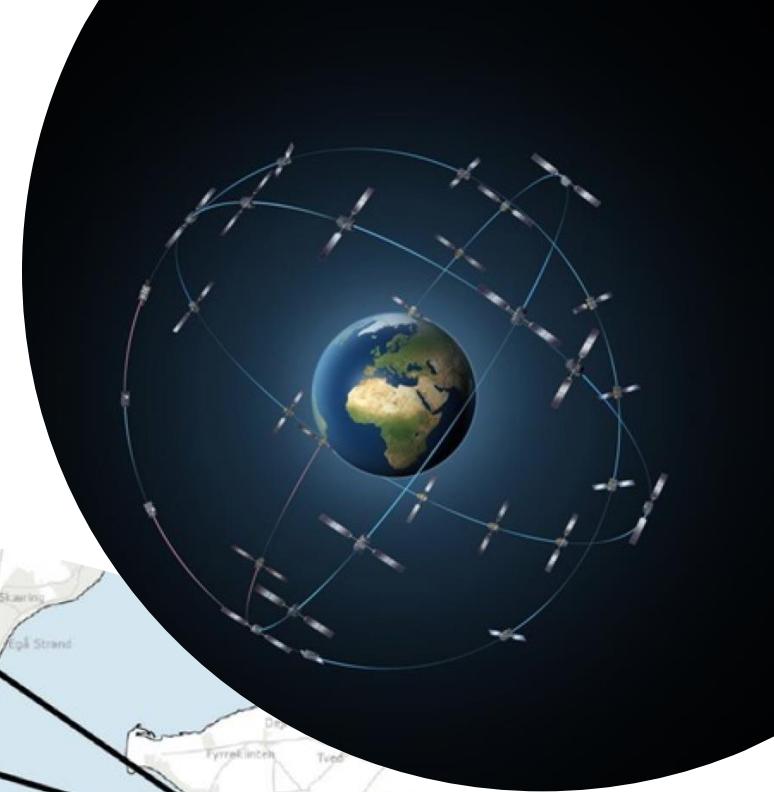
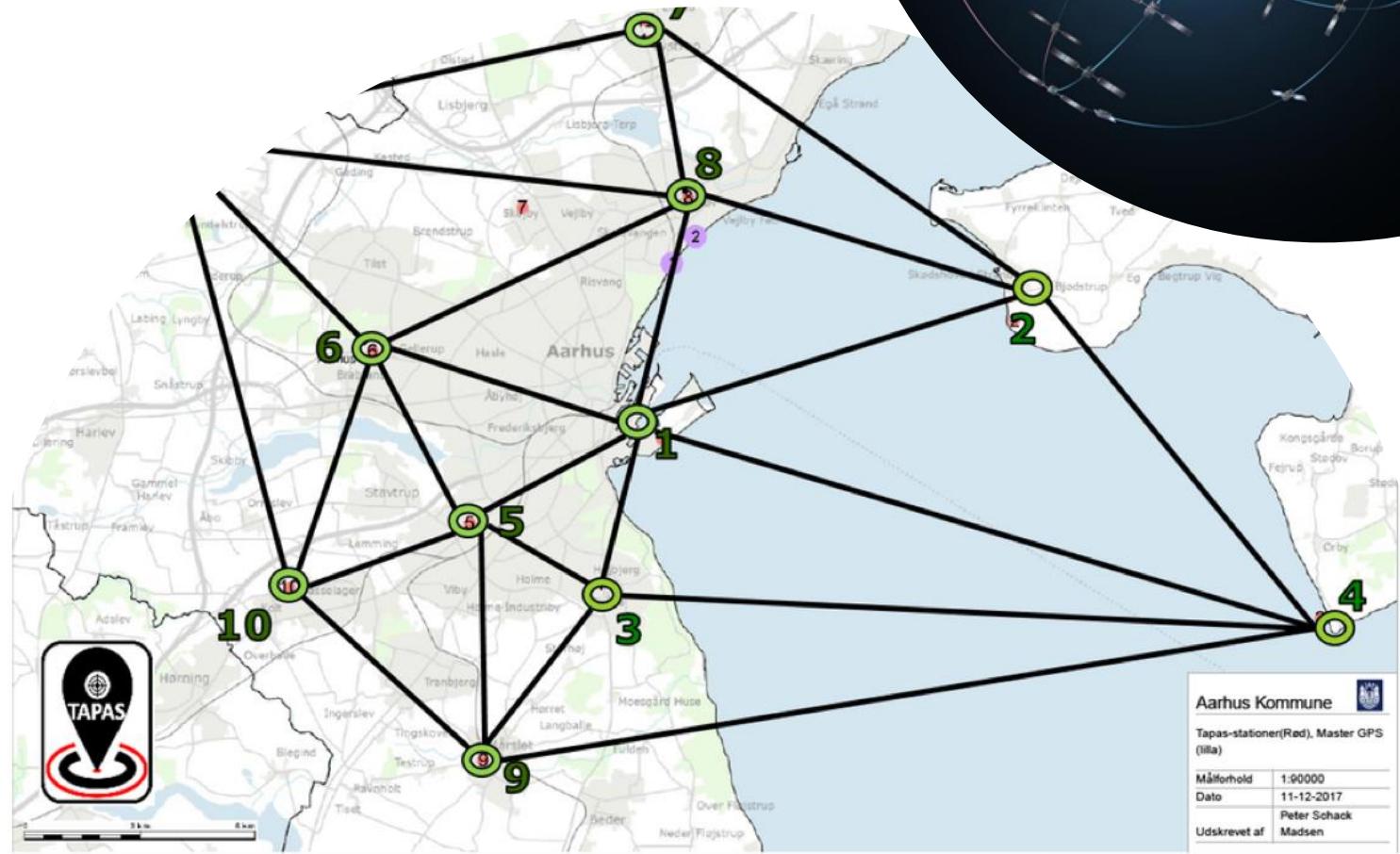




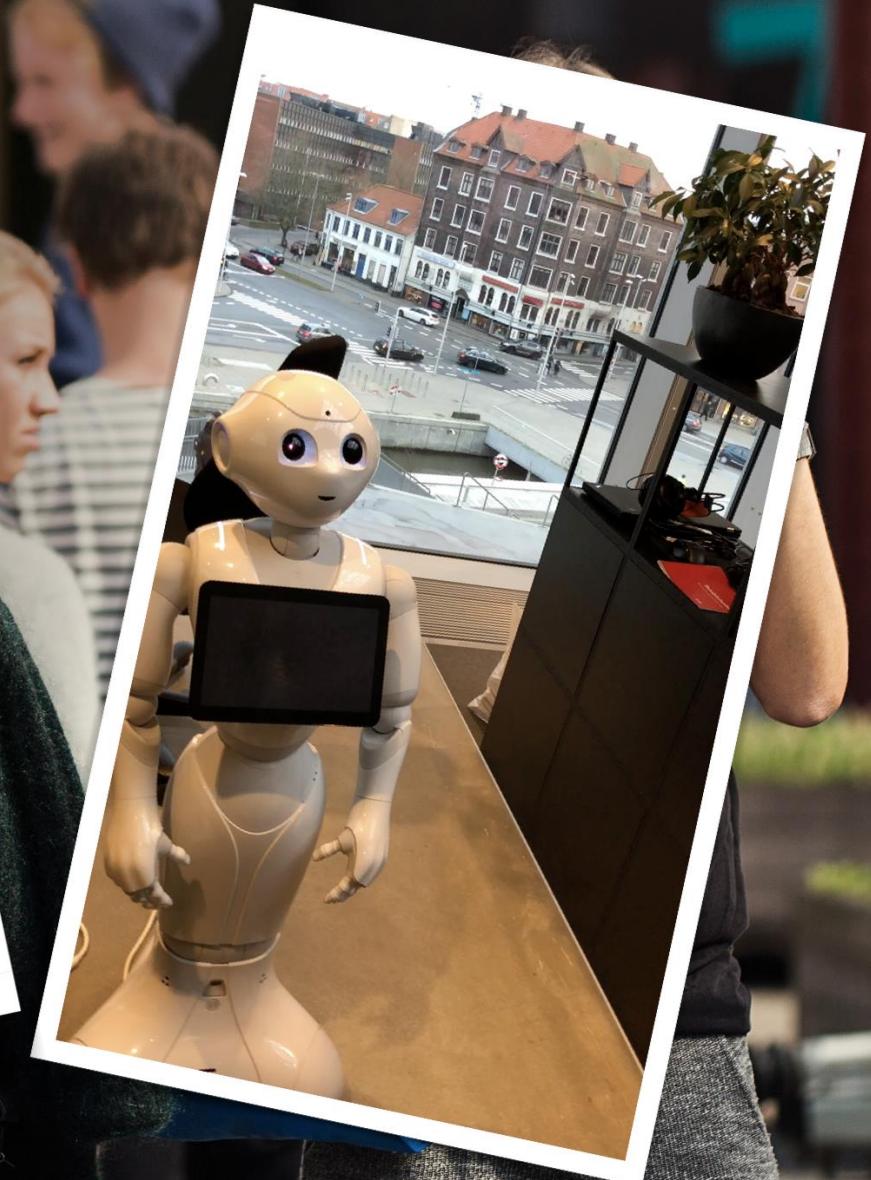
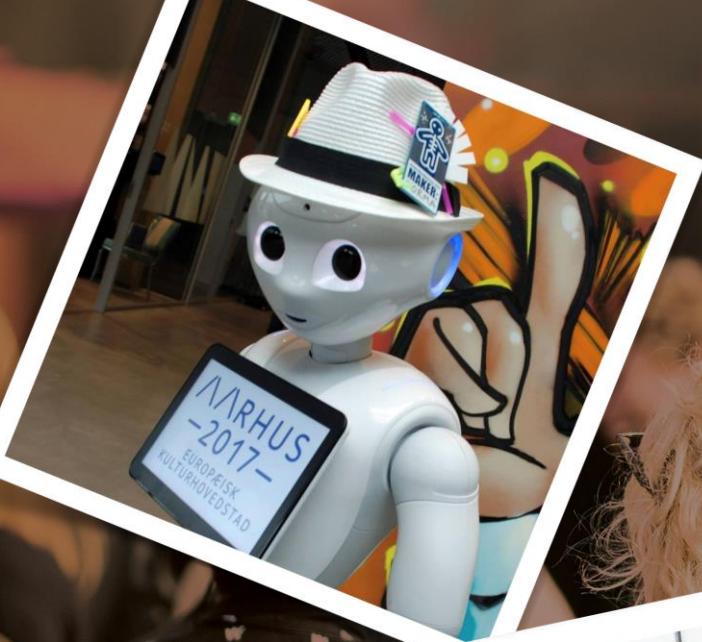


# INFRASTRUCTURE

# TAPAS & “5G”



# PROJECTS





# SKODROBOTTEN

Cigaret butt collector

03-30-21 | WORLD CHANGING IDEAS

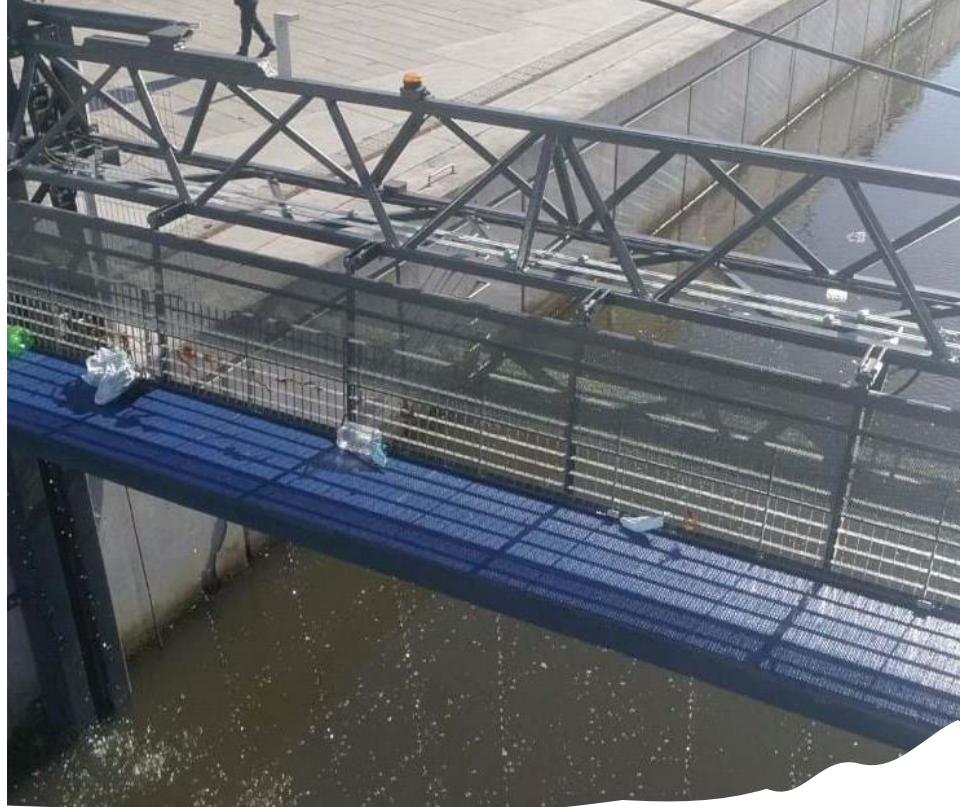
## These drones look for trash in waterways—and then send sailing drones to clean it up

Together, flying drones and sailing drones are helping to clear rivers of plastic waste and oil spills.



FAST COMPANY

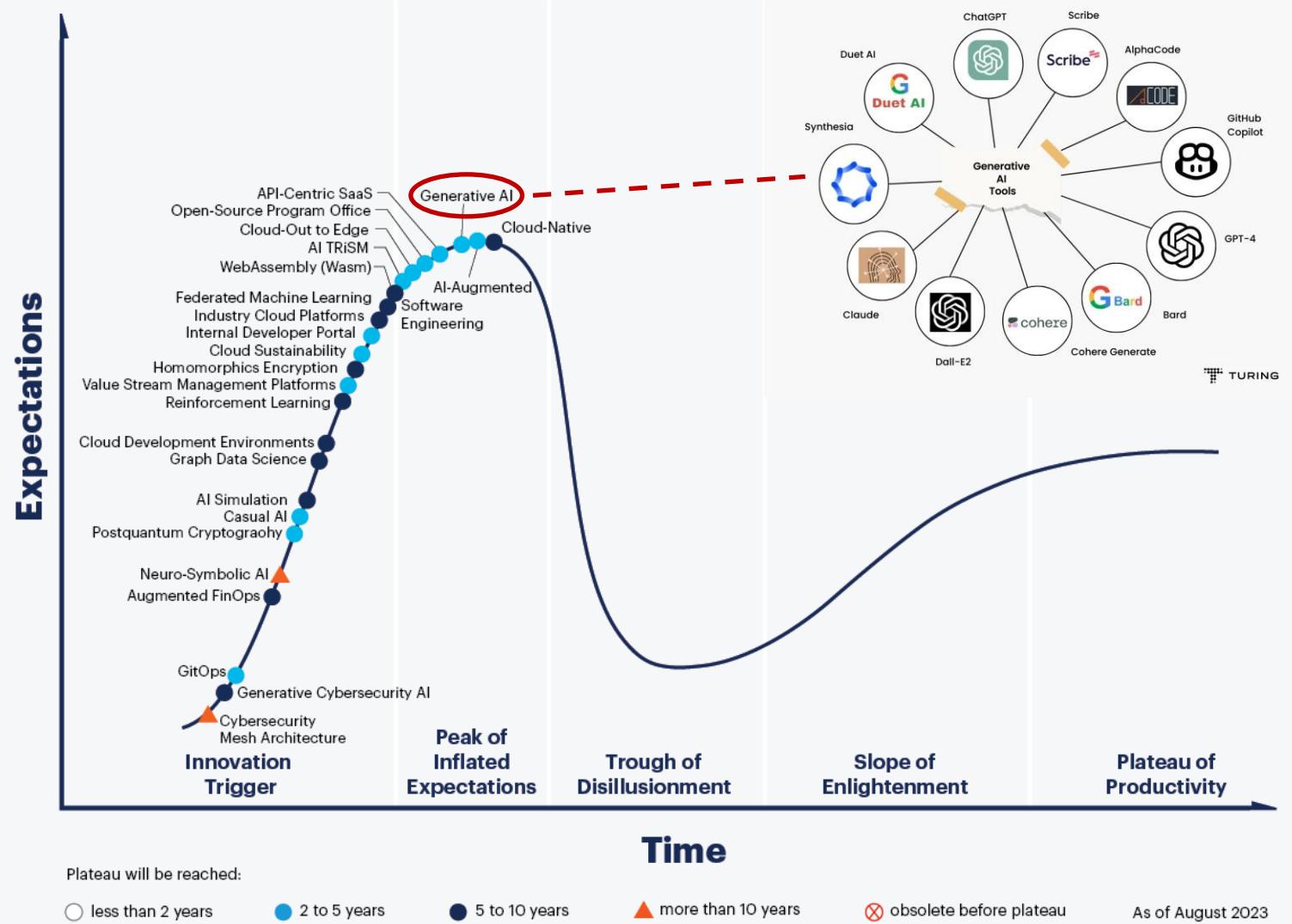




SEA PROTECTOR ONE



# Hype Cycle for Emerging Technologies, 2023



gartner.com

Source: Gartner  
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Gartner®



*“...enabling the public to co-create with AI, powerful, thought-provoking visions...”*



## &gt; Inventory

GENUS

No data

SPECIES

*platanus x  
acerifolia*

STREET NAME AND NUMBER

No data

▼ Risk    Health & Vitality    Environment    Benefits

## Ecosystem services

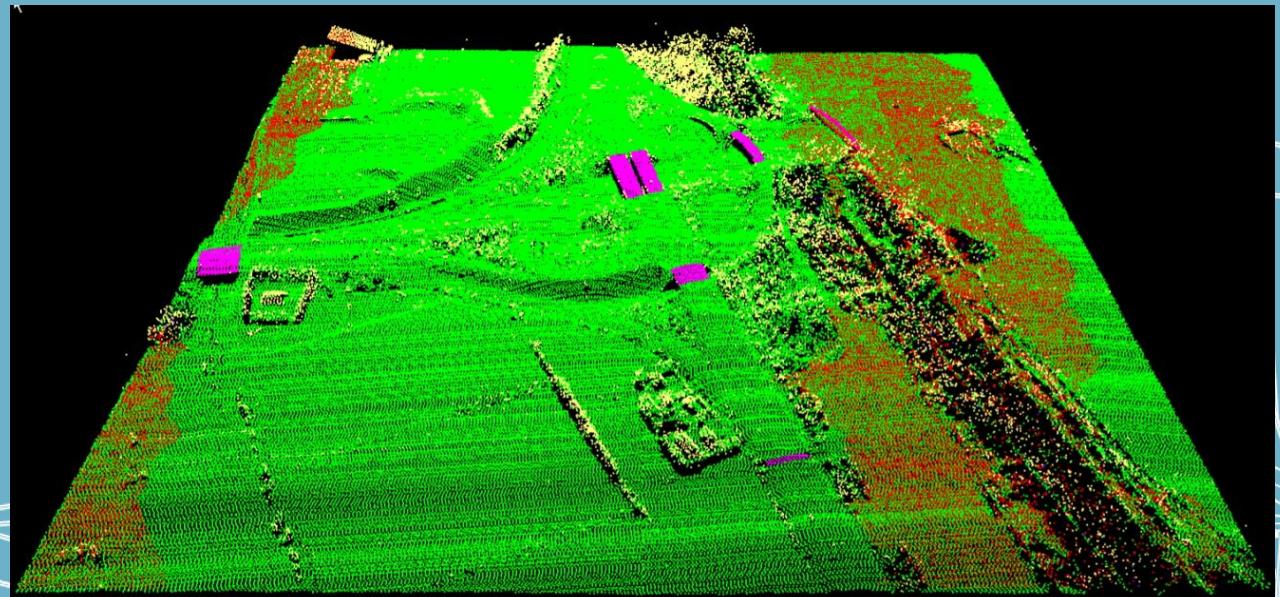
Carbon storage	<b>590.40 kg</b>	CO	3 g/yr
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Gross CO <sub>2</sub> sequestration	<b>37.50 kg/yr</b>	NO <sub>2</sub>	27 g/yr
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O <sub>2</sub> production	<b>99.90 kg/yr</b>	O <sub>3</sub>	110.10 g/yr
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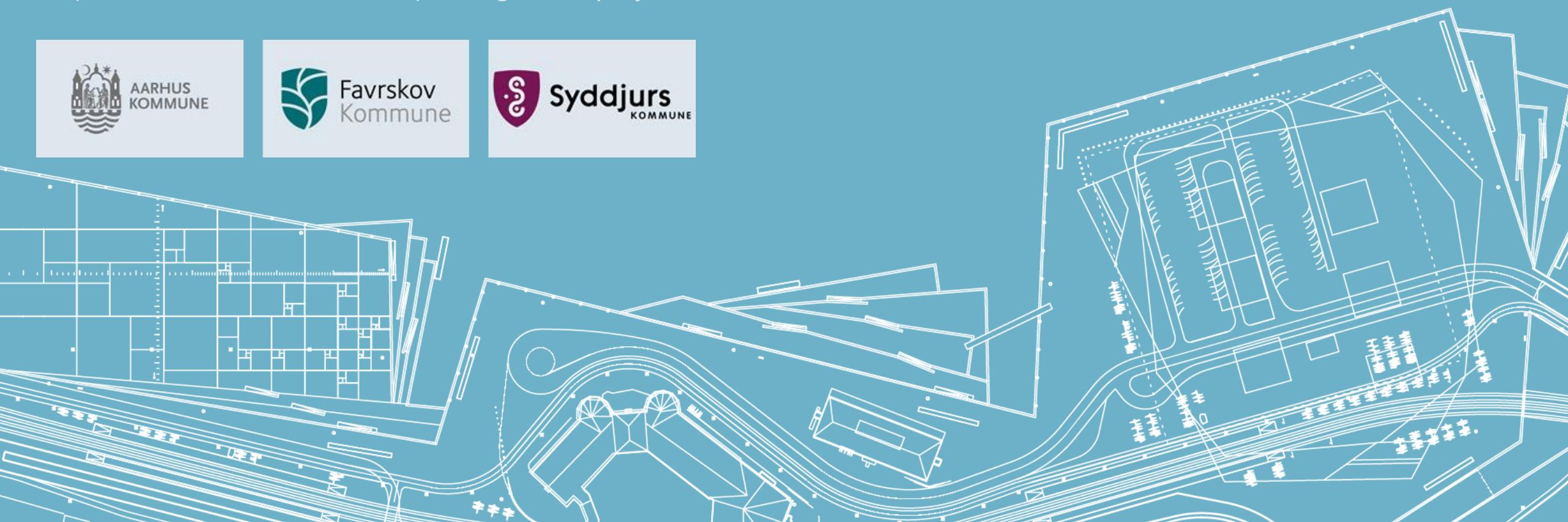
PM <sub>2.5</sub>	<b>7.20 g/yr</b>	SO <sub>2</sub>	0.50 g/yr
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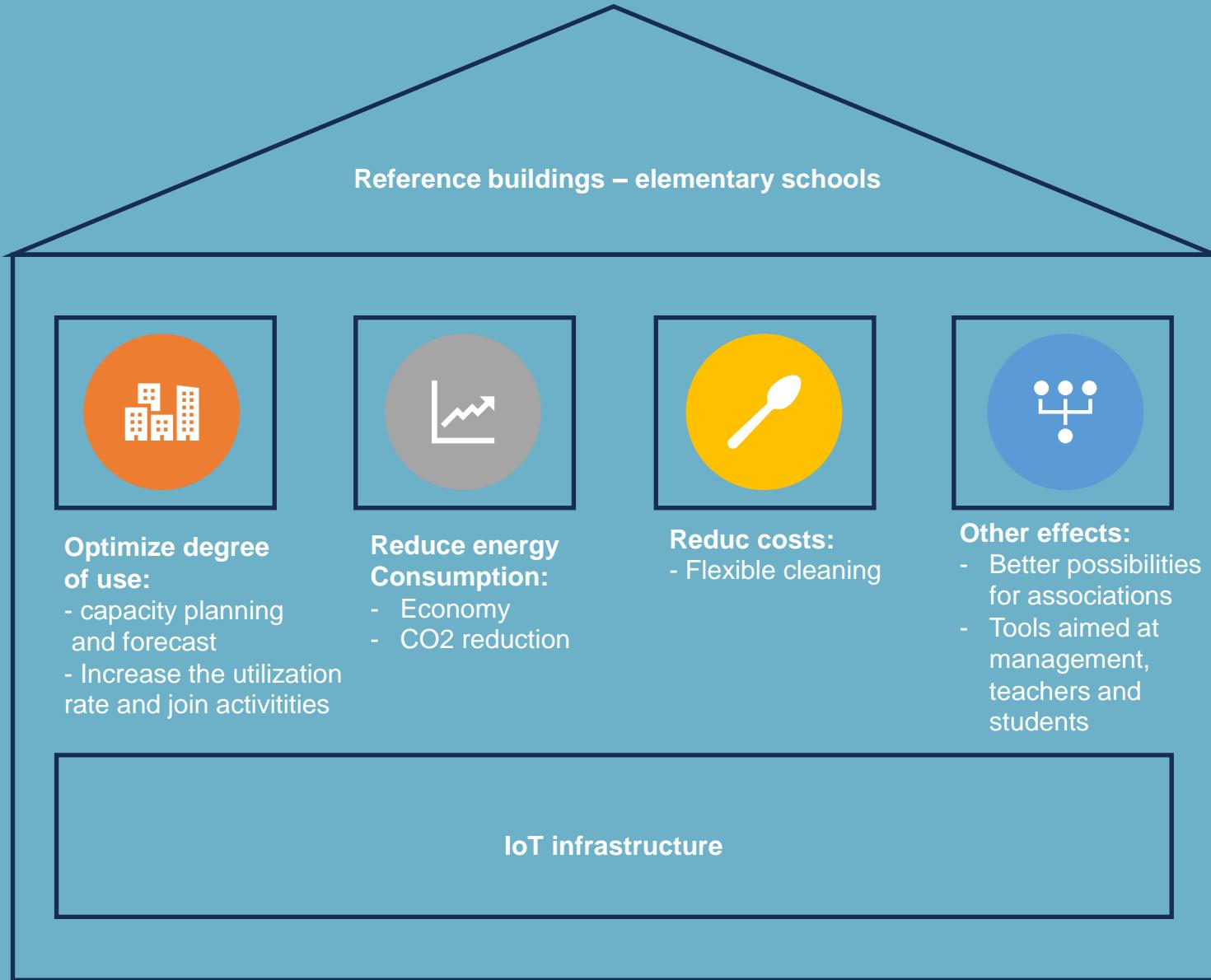
# Digital Twins

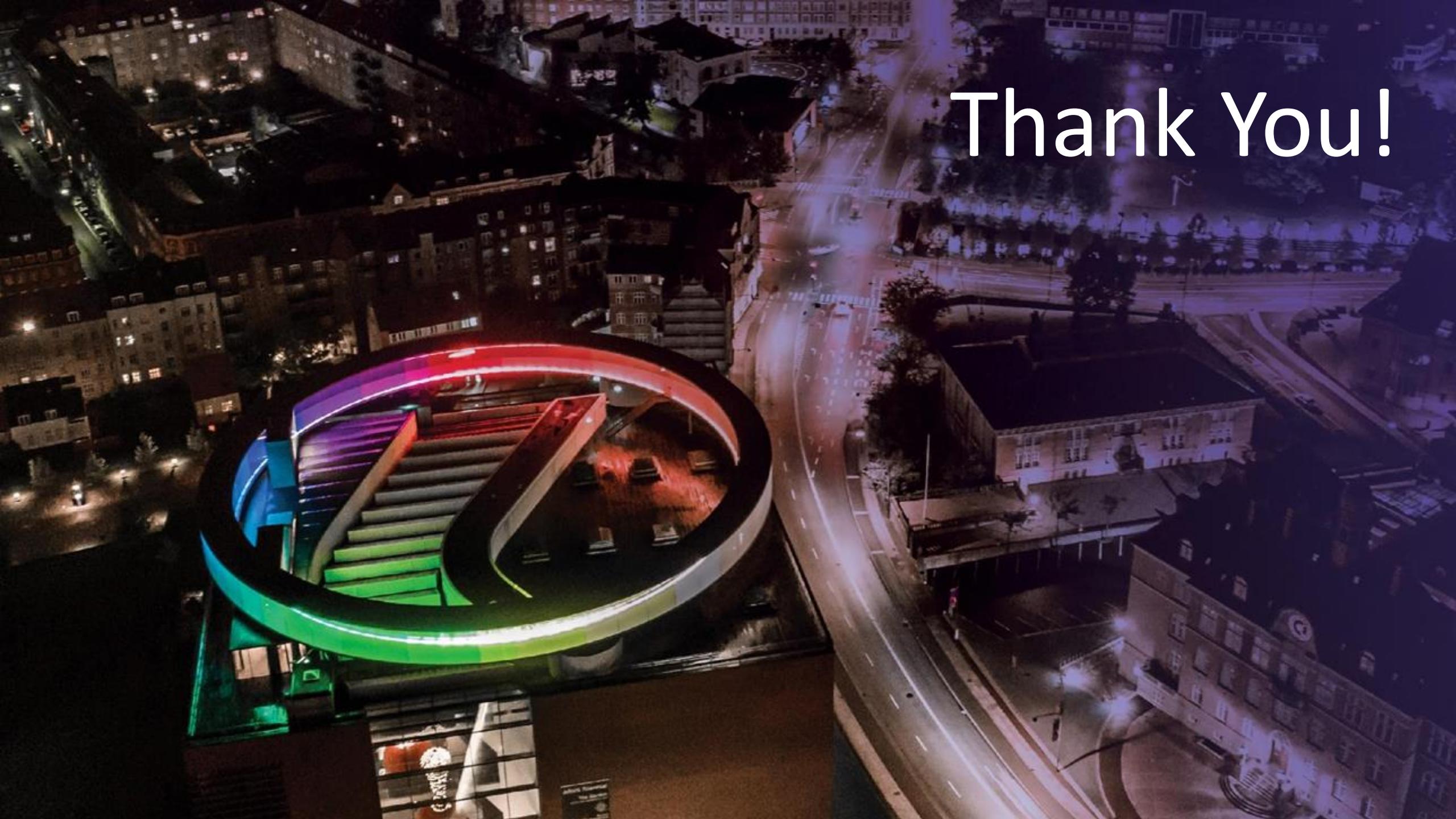


# Optimization of energy consumption and use of buildings

KL (Local Government Denmark) - AI signature project





An aerial night photograph of a city street. In the foreground, a large, brightly lit circular mural on a building features a stylized figure with a red and green gradient. The city below is filled with lights from buildings and streets.

Thank You!

# Relevante links

- Center for Innovation i Aarhus <https://cfiaarhus.dk/>
- Foreningen Open Data Danmark <https://www.opendata.dk/>
- Foreningen OS2 <https://os2.eu/>
- Foreningen eReolen <https://ereolen.dk/foreningen>
- GovTech Midtjylland <https://govtechmidtjylland.dk/>
- ITK <https://dokk1.dk/om-itk>



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# HACKATHON

# Complex challenges

Center for Innovation i Aarhus

# WHO ARE WE?



**Sara Brixen**  
INNOVATION CONSULTANT  
Designer

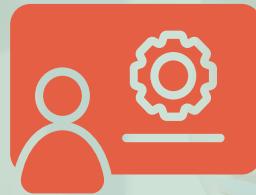


**Vigdis Bork Fasting**  
INNOVATION CONSULTANT  
Design Management

# CENTER FOR INNOVATION I AARHUS



Innovation  
partner



Meeting place and  
workshop



Innovation  
capacity

# COMPLEX CHALLENGES

- What are complex challenges?
- What is it like to work with complex challenges?
- A complex challenge can appear to be a pile of entangled yarn which leaves you wondering where to even begin



# LEARNING TO BE IN THE CLOUD...



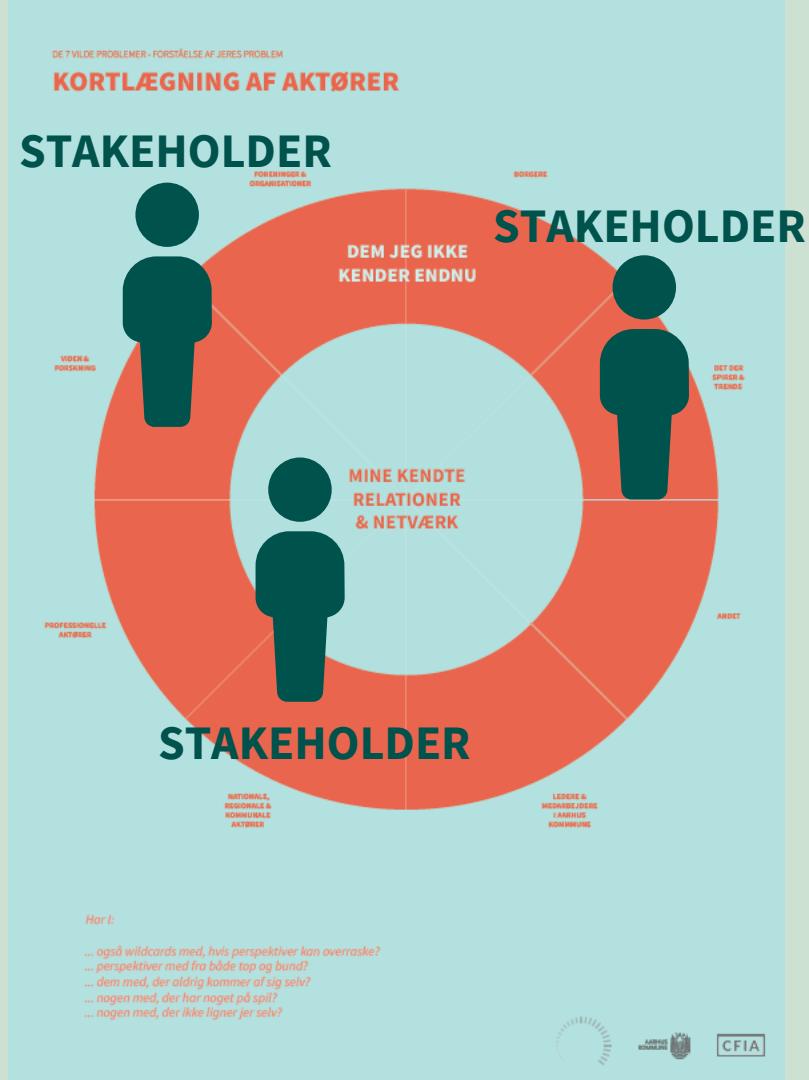
# CASE: THE MENTAL HEALTH OF YOUNG PEOPLE

- The wicked problems of Aarhus Kommune
- This case is relevant to the themes you will be working with today;
  - It is a complex problem that often leaves you in the cloud
  - It offers insight into a number of different research methods
  - It addresses how we might give young people a voice
  - It addresses the importance of empathy and safe spaces during research



# DESK RESEARCH AND STAKEHOLDER MAPPING

THEMES



# SCIENTIFIC INTERVIEWS AND DATA PATTERNS



# DESIGN PROBES AND WORKSHOPS



# CARVING OUT BITS OF UNDERSTANDING...



# WE ASK THE PEOPLE THE CHALLENGE CONCERNS

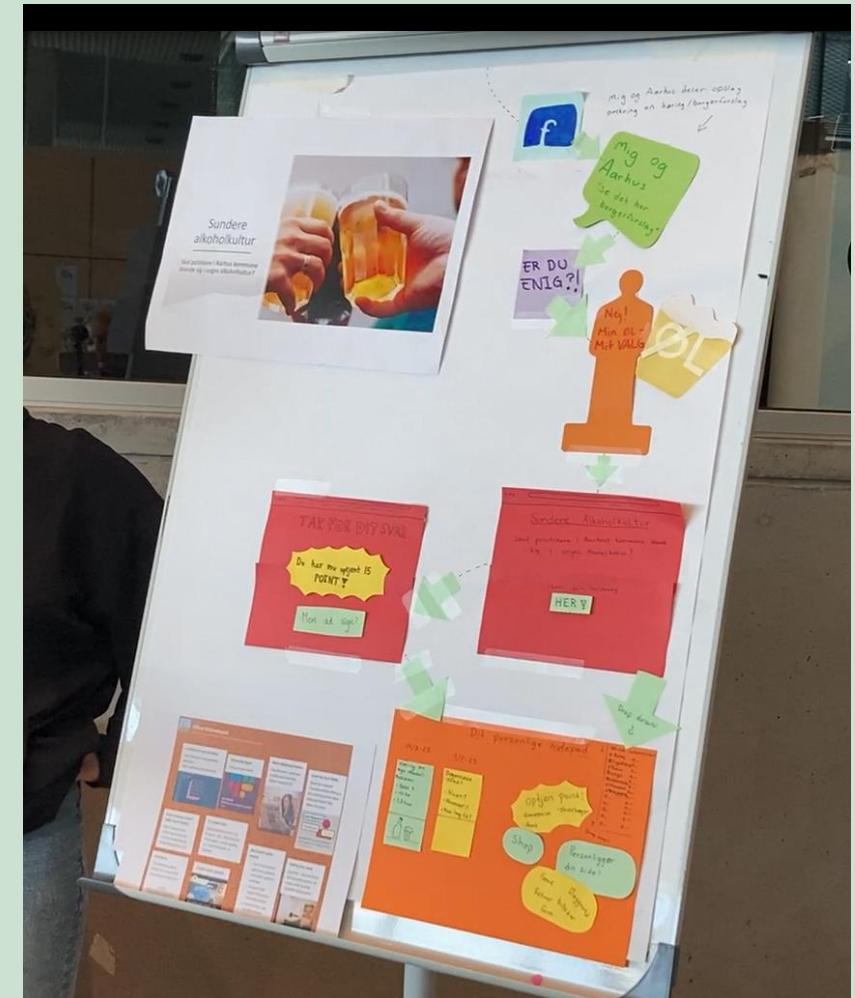
Why do young people vote less in municipal elections?

Co-creation workshop



# PROTOTYPES OF DIGITAL CITIZEN INVOLVEMENT

Involving the target group in making prototypes



# Øvelse

Ifølge loven skal alle borgere over 15 år bruge Digital Post for at modtage mails fra det offentlige.

Mange unge får dog ikke tjekket deres digitale post, og går derfor glip af vigtige informationer.

**Med inspiration i de metoder vi har talt om, hvordan ville I undersøge denne udfordring?**

# Exercise

According to the law all citizens above the age of 15 must receive their mail from the Danish authorities digitally through Digital Post.

However, many young people do not check their Digital Post inbox. Therefore, they miss important information.

**With the methods we have just discussed as inspiration, how would you research this challenge?**

# QUESTIONS

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TECH**CIRCLE**