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## Introduction To The Conference



# Smart Sustainable Cities and Communities

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Human-centred design & services

Nature-based solutions

Integrated urban fabric & metabolism

Energy-Efficient

Health-Promoting

Attractive & Inclusive

Climate-Resilient

Circular Economy

Local Resources

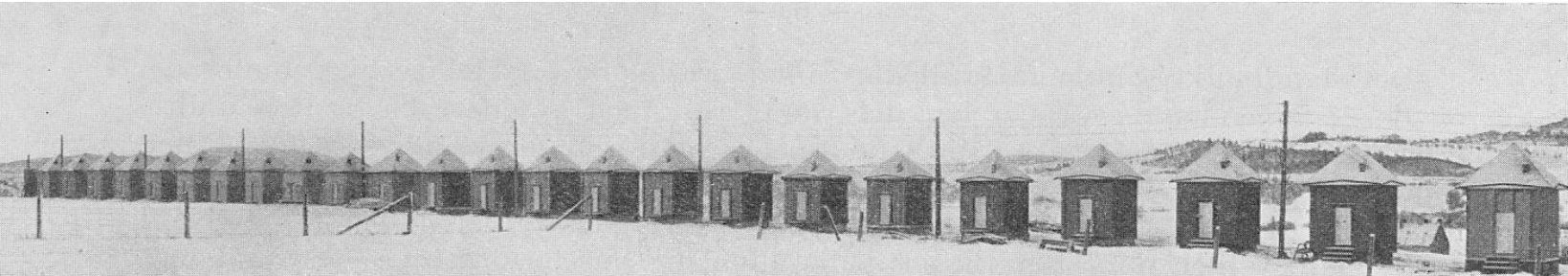
High Quality of Life

...



Trondheim

# Think 5 – 20 – 50 years ahead in time



Energy monitoring for diverse facade compositions. Andreas Bugge, professor, 1910-29, Architecture Department at NTH.

What do we need to research and develop now to **help cities reach their long-term visions** in terms of energy, greenhouse gas emissions, sustainability, attractiveness, health-promotion, inclusiveness etc?

How can we contribute to **provide robust information for risky decisions** – i.e. not *business as usual*?

Criteria, indicators, assessment methods...

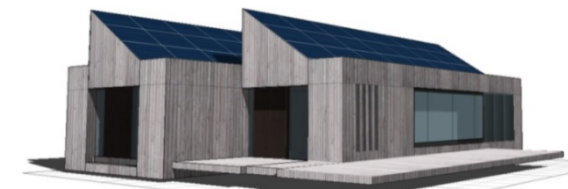
How do we transform this information into visionary and **feasible design, planning and management** of the city on a day-to-day basis?



Building conservation and transformation centre (Eir Grytli & Dag Kittang)



Powerhouse Brattøra (Snøhetta)



ZEB Living Lab, Gløshaugen (Luca Finocchiaro)



# NTNU: KNOWLEDGE FOR A BETTER WORLD



TRONDHEIM



GJØVIK



ÅLESUND

Research Centres (FME) on  
Zero Emission Buildings / Neighbourhoods in Smart Cities  
Sustainable Energy Studies  
Smart Grids  
Energy Efficiency in Industry

...



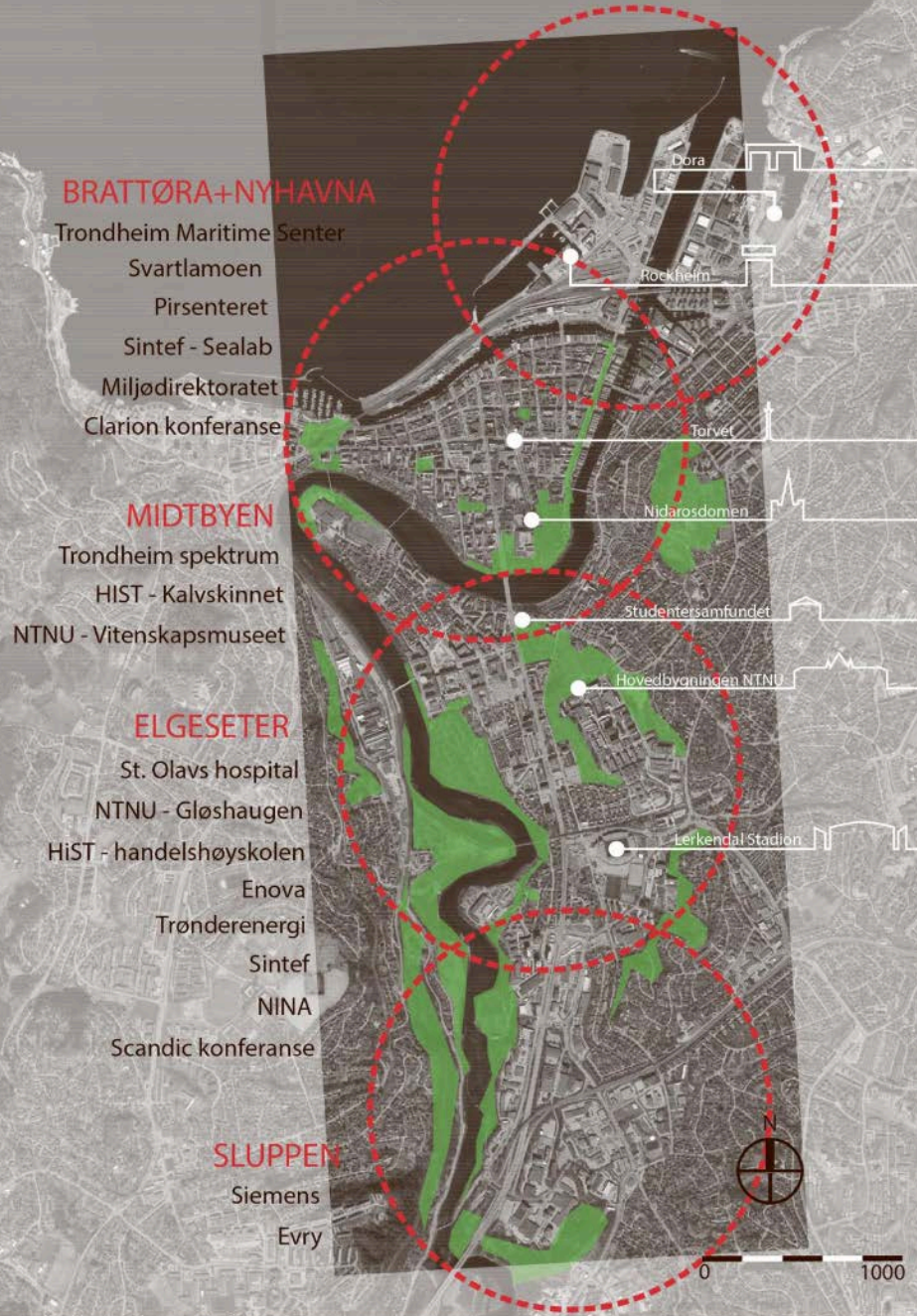
BÆREKRAFT



ENERGI



# Knowledge Axis Trondheim



## Trondheim Living Lab, Demonstration projects on energy, transport and ICT

New/better data: sensors, satellite, cell phones, GIS / Better use of data in planning and design

Zero Emission, High Quality Built Environment

Smart integrated energy system, electric/thermal

Mobility Management: environment-friendly, «superbuss», public transport, e-mobility, non-motorised transport, accessibility...

Influence citizen behaviour by better visualisation, communication and participation

Decision support for green transition and growth, moving away from business as usual

Integrated models for planning & management

Better cooperation across the value chain

More effective investments

New jobs, e.g. in data certification, data management, smart infrastructures

# The Research Centre on Zero Emission Neighbourhoods in Smart Cities (ZEN, 2017-2024)

Oslo: Furuset

Bergen: Zero Village Bergen

Elverum: Ydalir

Trondheim: Knowledge Axis

Bodø: Airport area

Steinkjer: Residential area

Evenstad: Campus

Population of 30 000 people

Built floor area of more than 1 million m<sup>2</sup>

ZEB Flexible Lab office building, NTNU Campus

ZEB Living Lab residential building, NTNU Campus



*Illustration: FutureBuilt*



# The Norwegian EU network on smart cities



Capacity building

Project  
workshops

Mobilising  
stakeholders

Presentations of  
regional activities

Learning from  
each other

Joint positioning  
in EU / Brussels

# Cooperation between Nordic 5 Tech Universities

NTNU

DTU

CHALMERS

KTH

AALTO

Facilitate more successful diffusion of smart sustainable cities innovations and expertise in **Nordic regions** and towards the **Chinese market**

- integrated, modular and openly accessible **database** of Nordic smart sustainable cities solutions
- methods for **impact assessment** and citizen-centred applications
- **incubate** smart sustainable city projects
- strategic research and innovation **agenda** for smart sustainable cities
- assess and test **replicability** of Nordic smart sustainable cities solutions towards China, and facilitate engagement of Nordic smart cities experts towards the Chinese market

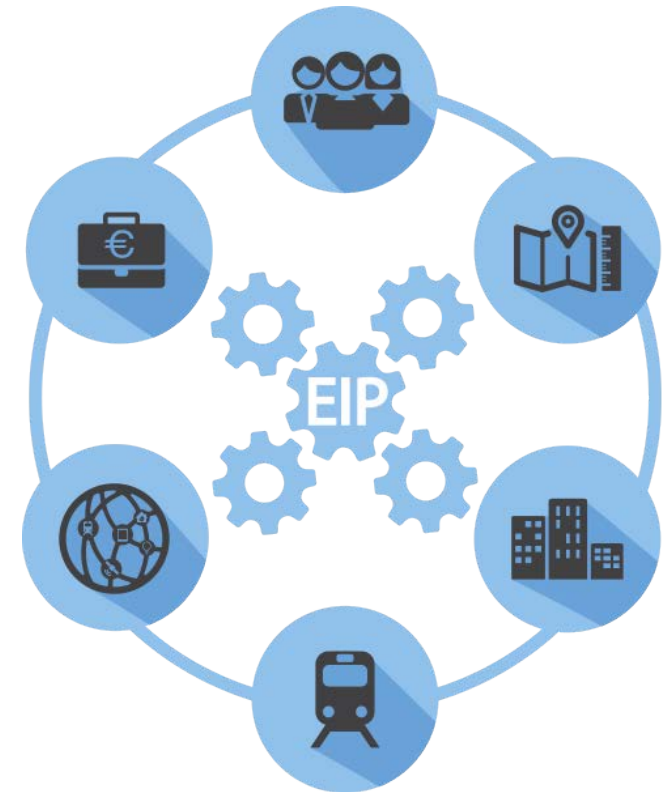


# European Smart City Guidance Package, «From planning to implementation» Initiative, European Innovation Partnership on Smart Cities

Develop guidance package supporting replication and upscaling, tools for decision making and from planning to implementation

## The Smart City Landscape

- Definition and scope of Smart City strategies and plans
- Smart City contexts (main clusters of different situations)
- Smart City Actors
- Develop Smart City strategies and involve stakeholders
- Tools for decision making (from other initiative)
- Implementation, obstacles, solutions and workarounds
- Describe role of KPI's, monitoring and evaluation
- Replication and upscaling



# EU-China innovation platform on sustainable urbanisation (H2020, under application)

Promote and develop **Joint Policy Strategies** for EU-China cooperation on sustainable urbanization

Create a Nursery of **Joint Projects**, from a broad range of low-threshold to a few high-performance projects

Promote **Brokerage of City-Industry-Science Partnerships** using virtual and face to face meeting places





# NORDIC SMART CITIES AND COMMUNITIES CONFERENCE

Scandic Lerkendal Hotel 6-8 September 2016 - Trondheim, Norway



Photos: CH/Visit Trondheim

## Policies – Partnerships – Projects Welcome!