

15 September 2020

COPENHAGEN 2025

First Carbon Neutral Capital in 2025
Jørgen Abildgaard
Executive Climate Program Director

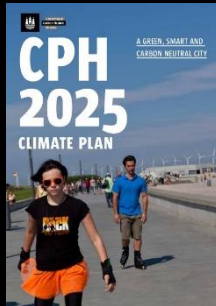


COPENHAGEN CARBON NEUTRAL IN 2025 AND FOSSILFREE IN 2050

1. Period
2013-2016

2. Period
2017-2020

3. Period
2021-2025



2012



2016



2018



2020

Addendum
to
Roadmap
2021-2025
In 2021

2021

Mid-term
Evaluation

CO-CREATE

COPENHAGEN



2014

Perspective 2050:

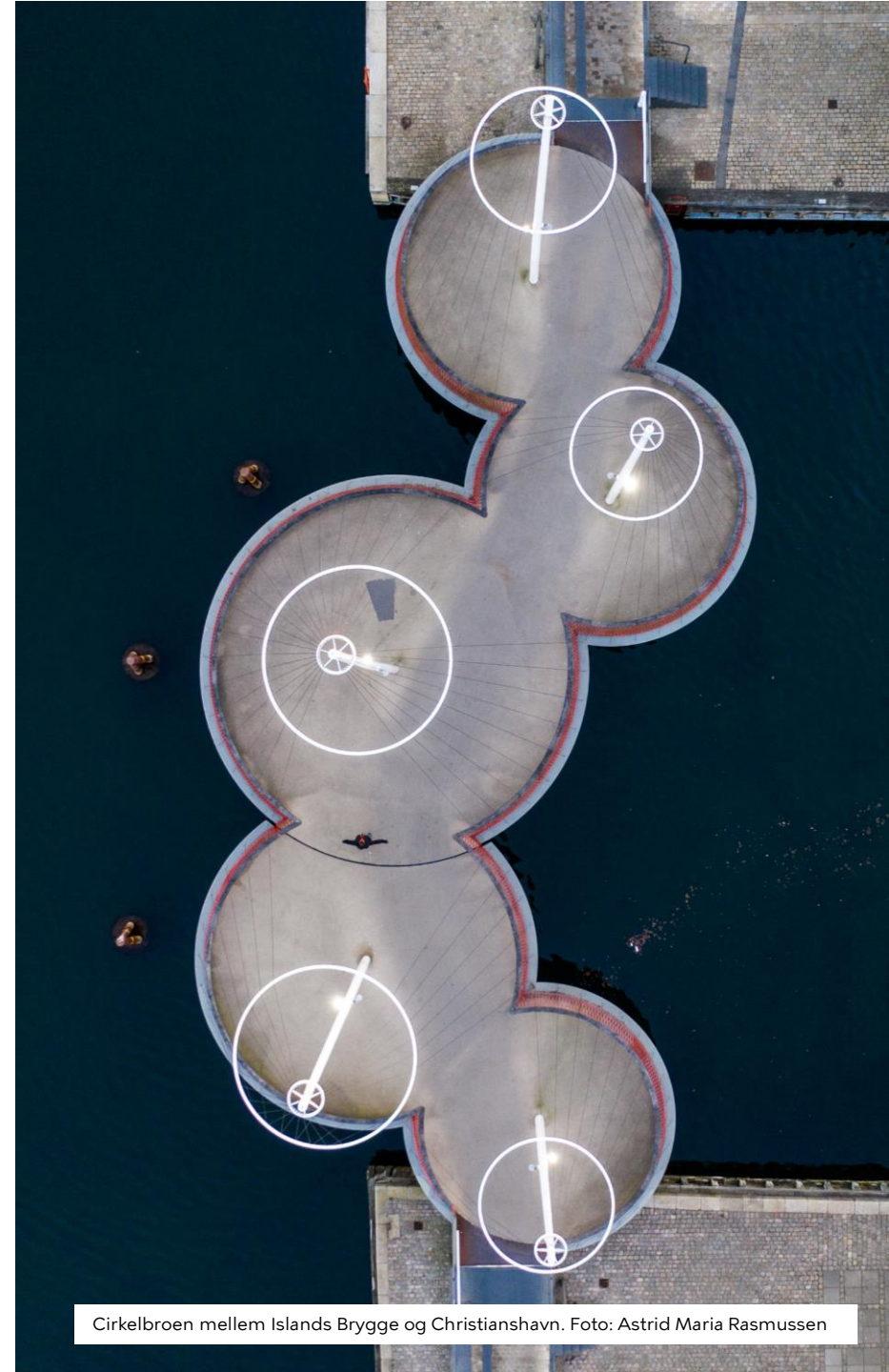
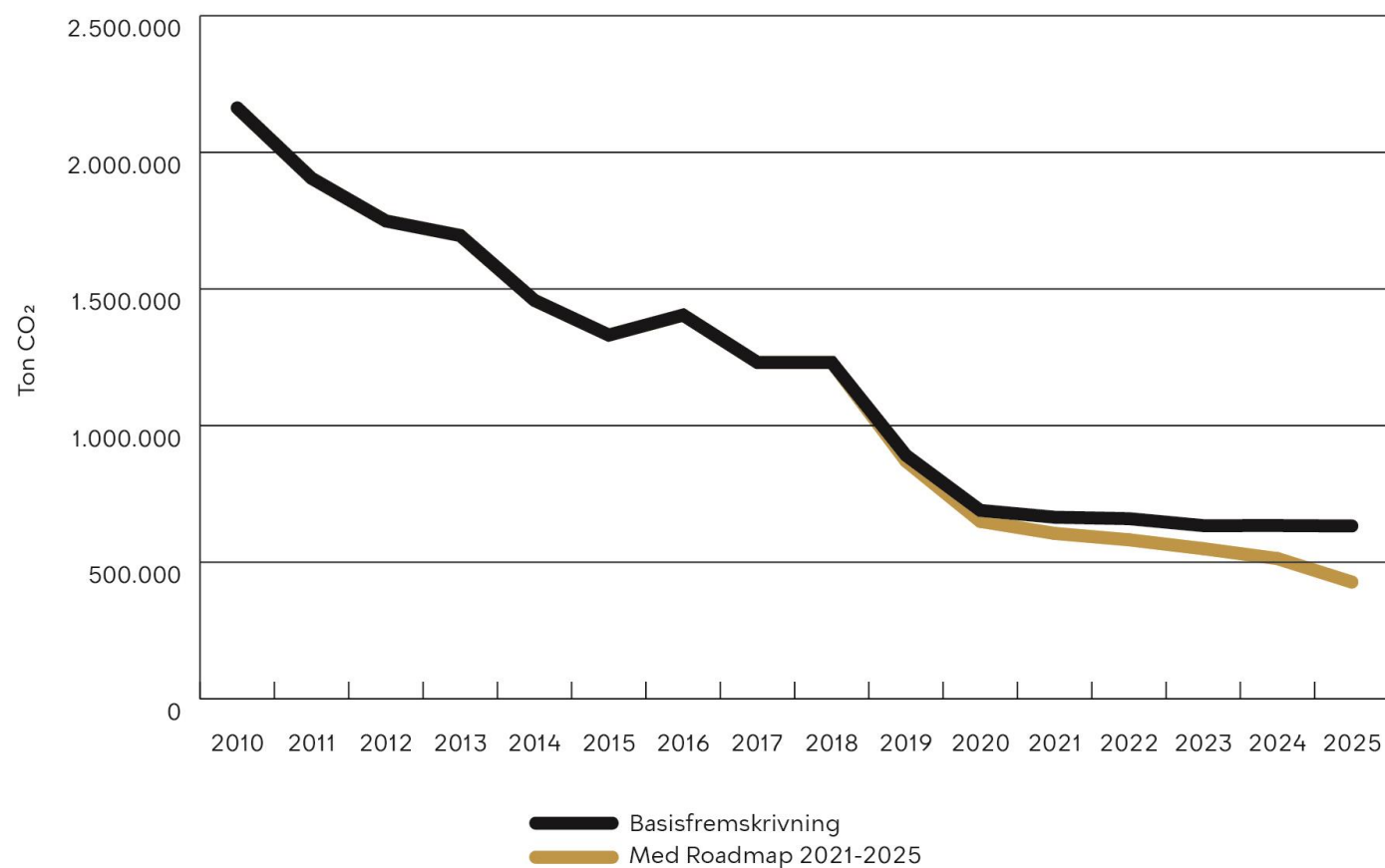
"In 2050 Copenhagen will be fossilfree with clean air, without waste and without noise from traffic"

CARBON NEUTRAL IN 2025 – STATUS 2019

- **59 % CO₂ reduction (2005-2019)**
- **1,6 t CO₂ per capita in 2019 or 66 % reduction per capita since 2005**
- **2 % CO₂ increase in transport (2010-2018)**
- **24 % increase in population (2005-2019)**
- **48 % increase in economic development (2005-2017)**
- **59 % CO₂ reduction in heating (2005-2019)**
- **63 % CO₂ reduction in electricity (2005-2019)**

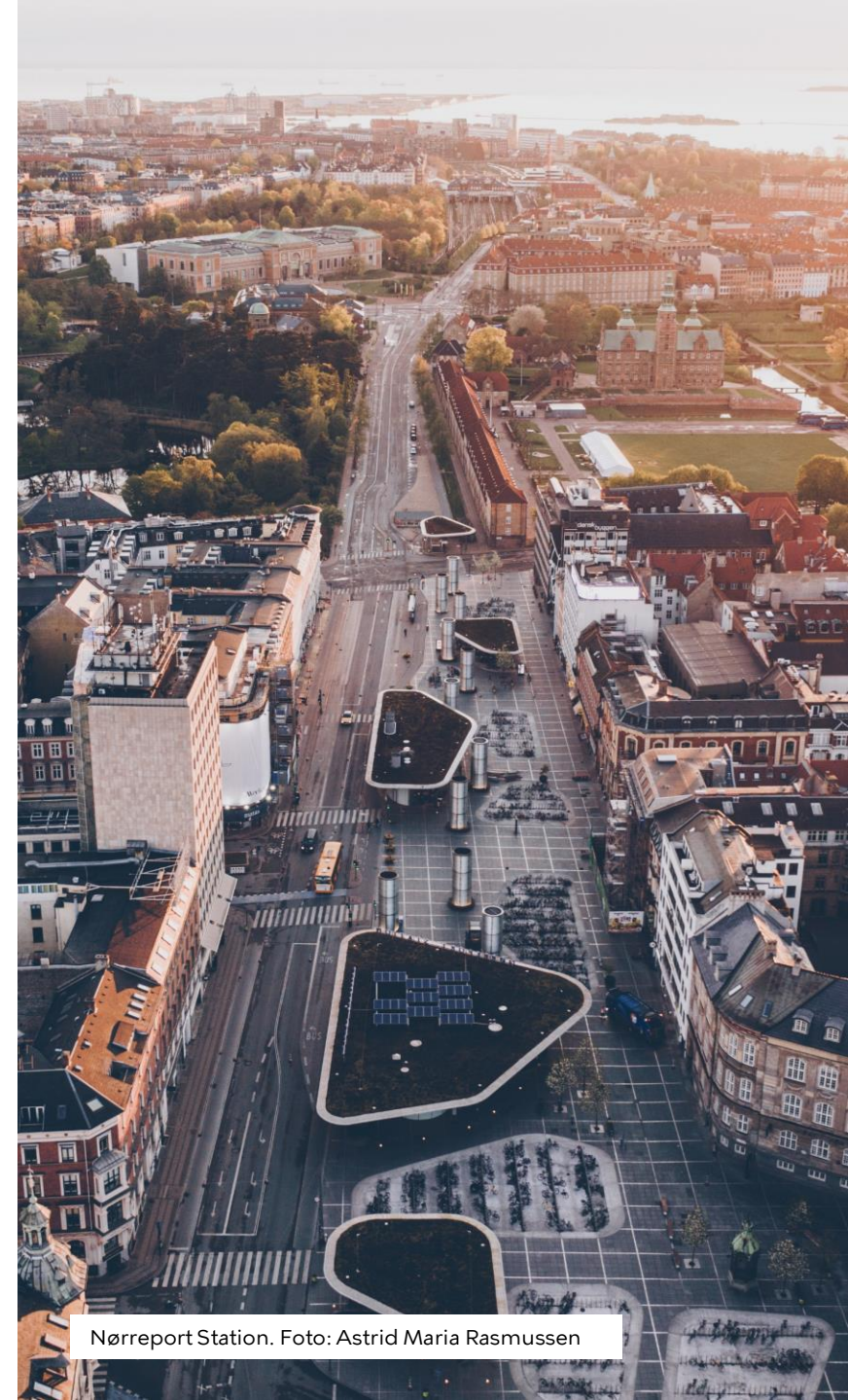


Carbon Emissions in Copenhagen 2010-2025



Roadmap 2021-2025


- Third and last Roadmap for the CPH2025 Climate Plan
- 47 initiatives in four pillars for the period 2021-2025.
- Initiatives in Roadmap 2021-2025 are expected to contribute to a Carbon reduction of 200.000 tonnes of CO₂ in 2025.
- An Addendum to the Roadmap 2021-2025 with additional reductions will be submitted to the City Council in second half of 2021.



Nørreport Station. Foto: Astrid Maria Rasmussen

ROADMAP 2021-2025 FOUR PILLARS





Energy Consumption

- 20% reduction in heat consumption
- 20% reduction in power consumption in commercial and service sectors
- 10% reduction in power consumption in household
- Installation of Solar Cells corresponding to 1 % of electricity consumption.

Partnerships are key

COPENHAGEN CLIMATE PROJECTS

ENERGY LEAP

Purpose

- Reduce energy consumption in buildings
- Establish partnership with building owners, developers, organizations


Actions

- Benchmarking, network, knowledge sharing, workshops, communication and target setting
- Focus on active energy management and retrofitting of building

Results

- 43 partners
- ~20 pct of the building stock in Copenhagen
- 4 pct reduction in energy consumption in 2017-2018
- 40-50 partners before 2020





Energy Production

A need for flexibility

- District Heating will be Carbon Neutral by 2025.
- Electricity production is based on wind and biomass and will, in total, exceed the city's electricity consumption.
- Separation of plastic from households and businesses.
- Biogasification of organic waste

An aerial night photograph of a city, likely Copenhagen, showing a dense cluster of historic buildings with dark roofs and many lit windows. A river flows through the lower part of the frame, reflecting the city lights. The sky is a mix of orange and blue from the twilight. Overlaid on the upper left is the text '99% District Heating' in a large, white, sans-serif font.

99% District Heating



Wind Power

Program - 460 MW



Sidenhoved


14

Copenhagen Hill

Waste to Energy & Carbon Capture



**70% reuse of house and
commercial waste in 2024**
Sorting in 8 bins

An aerial photograph of the Nordhavn Energy Lab development in Copenhagen, Denmark. The image shows a dense cluster of modern and historic buildings along the waterfront. A prominent feature is a large, circular building with a white and grey checkered facade. Several construction cranes are visible, indicating ongoing development. The water is a deep blue, and the sky is clear. The text "Nordhavn Energy Lab" is overlaid in large, white, bold letters on the right side of the image.

Nordhavn

Energy Lab

Mobility

Major goals for 2025

- 75% of all journeys in Copenhagen are on foot, by bicycle or by public transport
- 50% of all journeys to place of work or study are by bicycle
- 20 % more passengers using public transport compared to 2009
- Public transport is carbon neutral
- 20-30% of all light vehicles use new fuels like electricity, hydrogen, biogas or bioethanol
- 30-40% of all heavy vehicles use new fuels

**Out of the car and use
bicycle, public transport or
walk**

Bicycle Snake

More than 20.000 bikers a day

The Metro

New Initiatives

- **Analysis of Mobility in Copenhagen - New Roadplan**
- **Offshore windpower in Øresund**
- **Higher Parking Fees – Both for annual licenses and payment per hour**
- **New Cycle Superhighways**
- **New bike initiatives**
- **Construction Machines**
- **Climate Task Force**



City Administration initiatives

Major goals for 2025

- Reduce energy consumption in city administration buildings by 40% compared to 2010
- Municipal new build up to meet requirements of 2020 classification
- All city administration vehicles run on electricity, hydrogen or biofuels
- Energy consumption for street lighting in Copenhagen is halved compared to 2010
- A total of 60,000 sqm of solar cell panels on existing municipal buildings and new build have been installed.

A Good Example



ANALYSIS OF MOBILITY IN COPENHAGEN

- **New Roadplan**



New Cycle Superhighways New bike initiatives





HER BYGGER KØBENHAVNS KOMMUNE
kk.dk/anlaegsprojekter



Vi omdanner parkerings- pladser til grønne byrum og cykelparkering på Linnésgade og Rømersgade

Vi anvender fossilfri og eldrevne arbejdsmaskiner
som led i kommunens grønne omstilling.

Projektet forventes afsluttet i april 2021

Tilsyn

Teknik- og

planlægning

@kk.dk

Hovedentreprenør

Scheller, Hougaard &

Byggeservice

621799

Underentreprenør

Hansen & Rasmus-

sen

621799

CONSTRUCTION MACHINES

- Fossilfree heavy machines and trucks
- 5-10 pilotprojects with construction sites and buildings

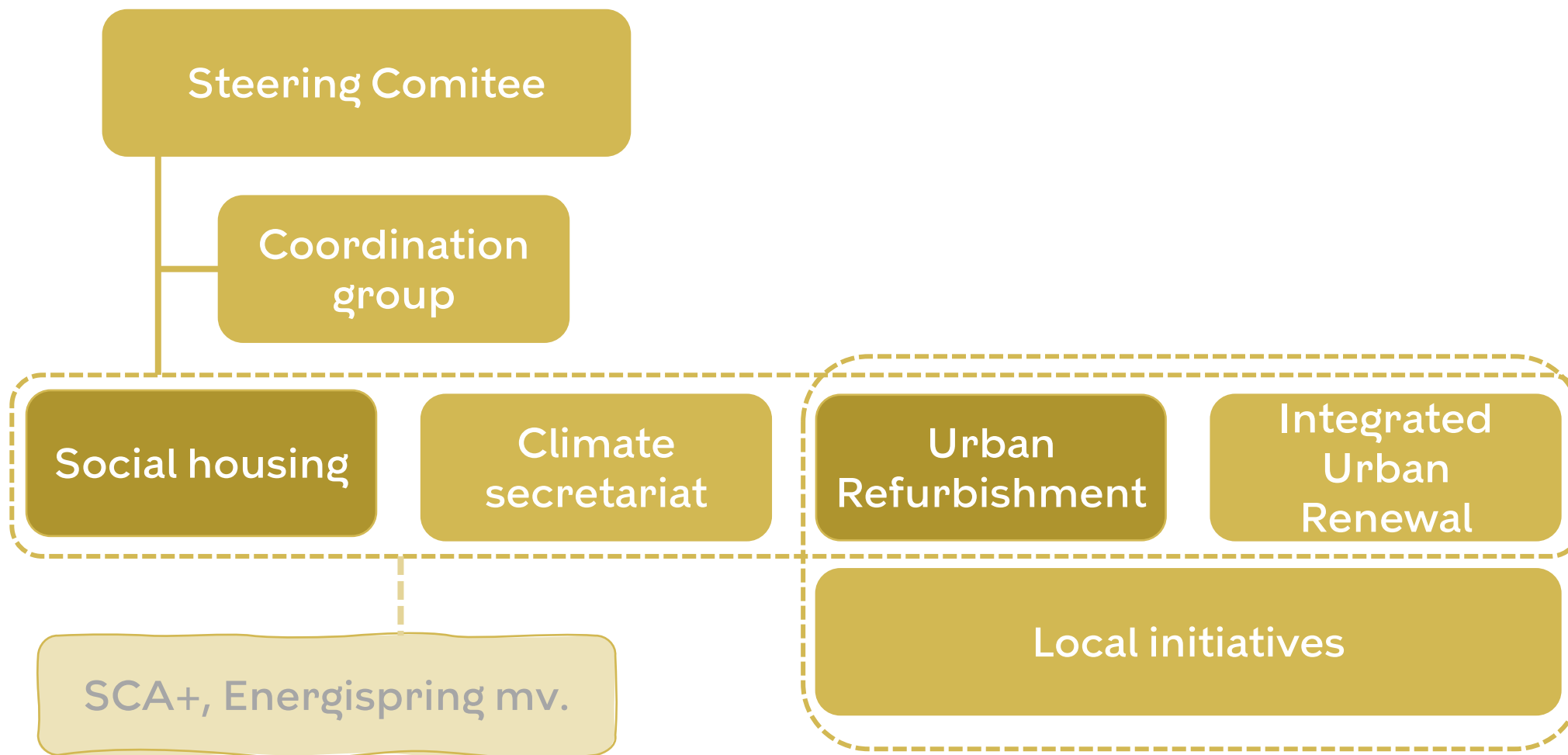




The Goal of Climate Task Force

- Integrate the KBH2025 Climate Plan into **local demonstration areas** around Copenhagen
- Engage citizens in the green transformation
- Use the local demonstration areas as Living Labs – **scale the 'good solutions'** to other parts of Copenhagen

Klima Task Force – Breaking down silos

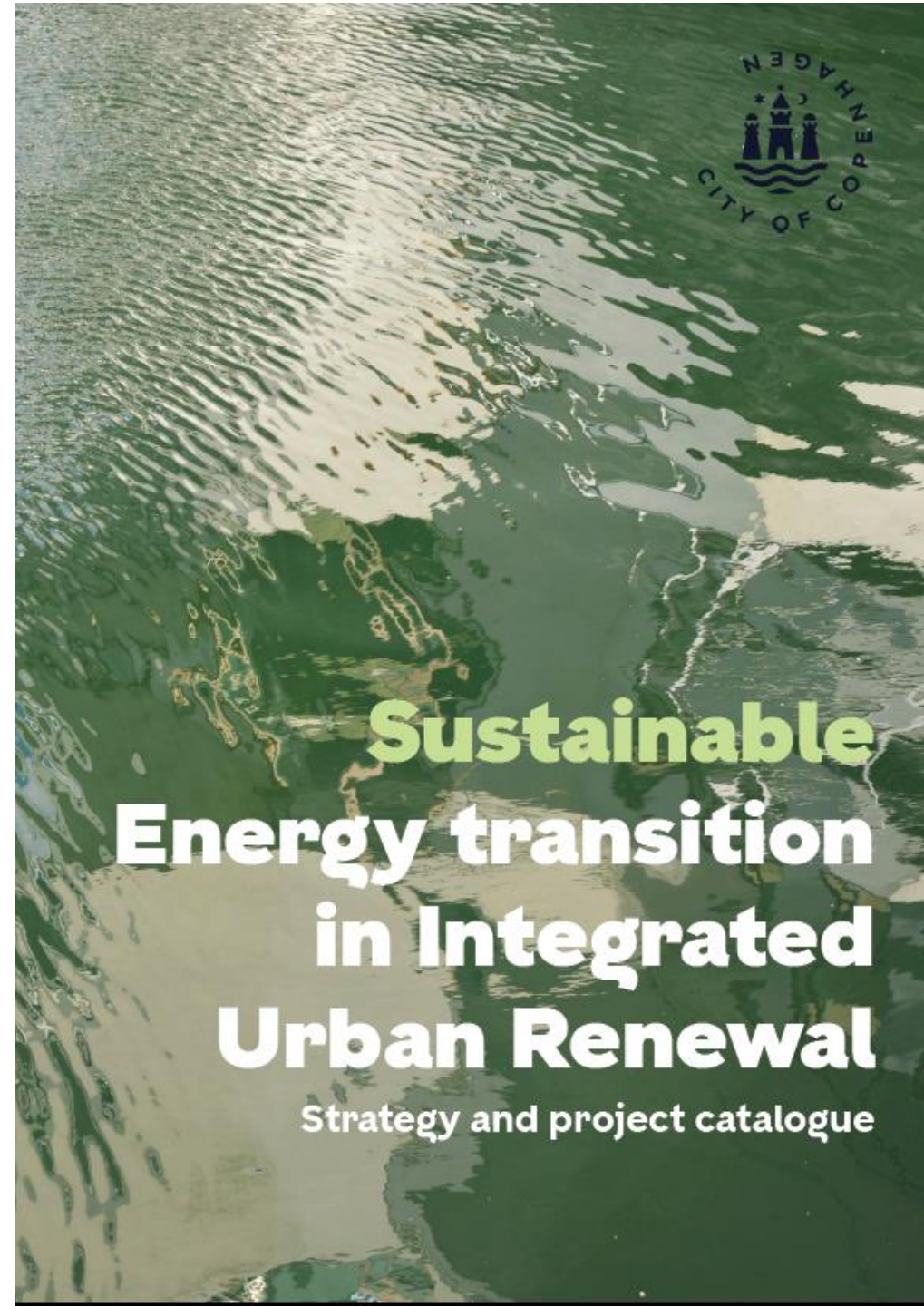


Sustainable energy transition Catalog

Team of Climate employees in the
Urban Renewal

Interdepartmental work-groups
between the two departments

Ideation workshops between the two
departments – ideas for new project
proposals with climate in focus

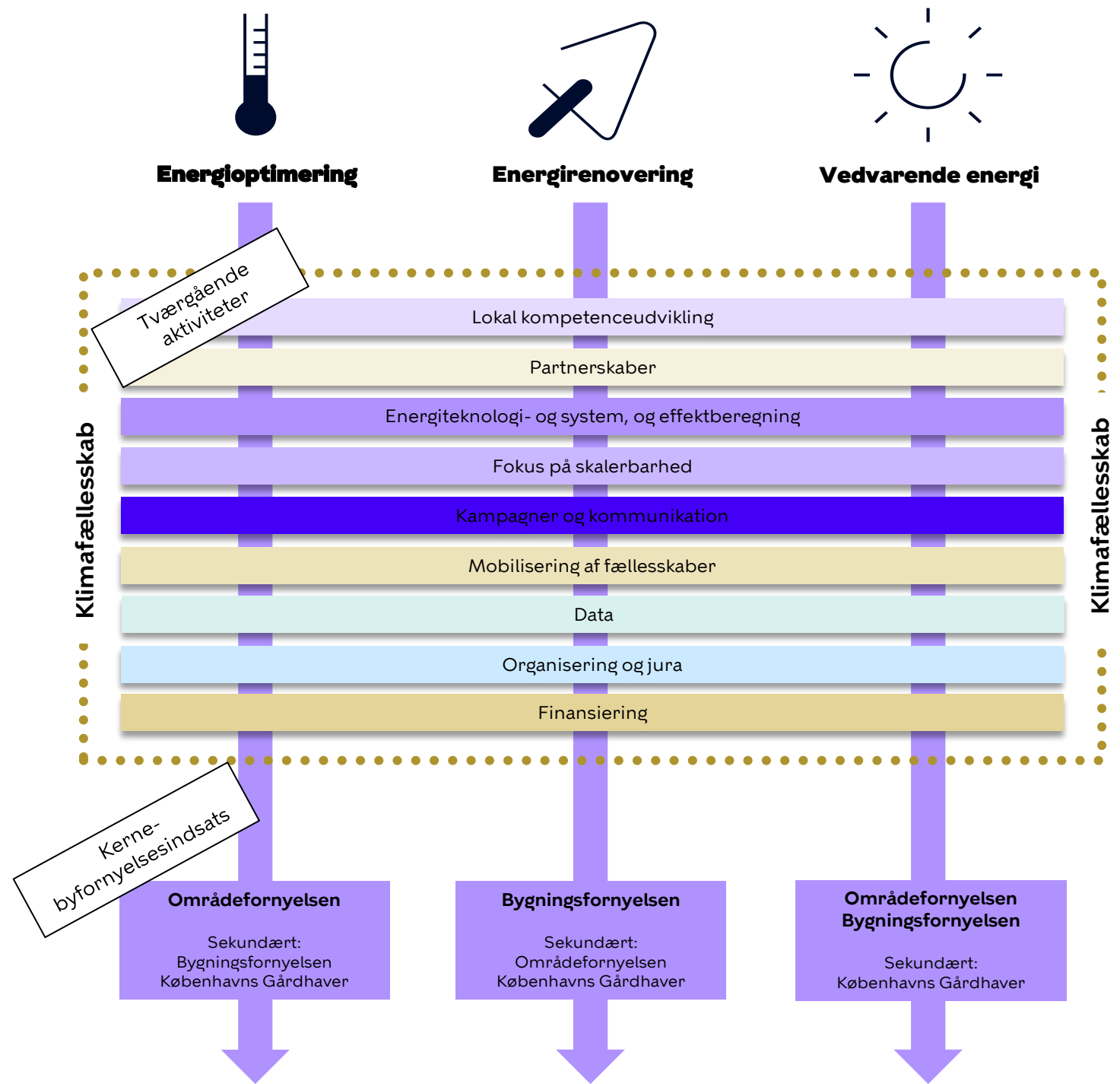


Three thematic tracks

- Optimization
- Retrofit
- Renewable energy

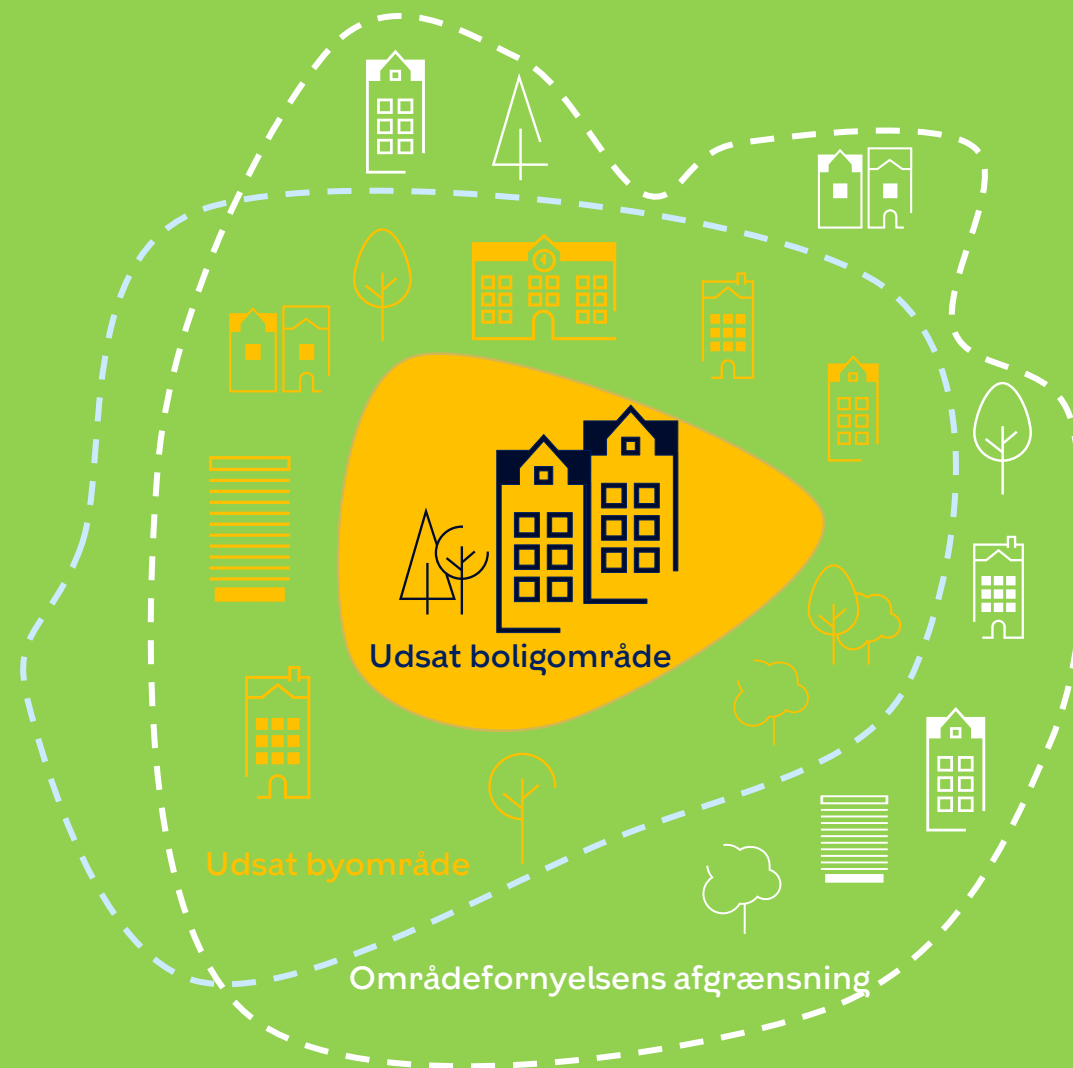
Nine cross theme initiatives

- Empowerment and engagement
- Partnerships and governance
- Technology and scalability
- Campaigns and dissemination



Local Demonstration areas

The Climate Task force aims to accelerate the implementation of new climate solutions through five different local demonstration projects around the city of Copenhagen.



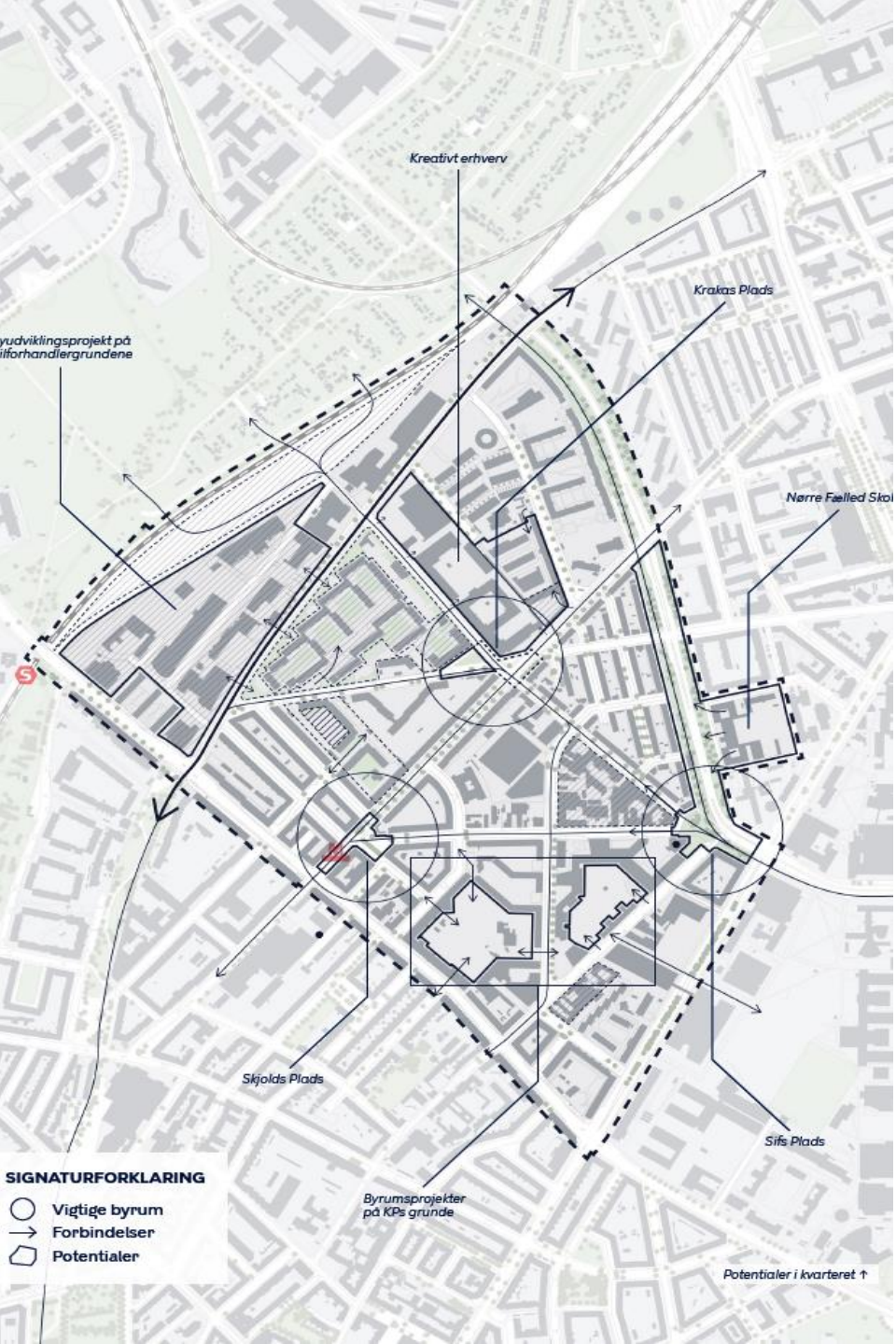
Københavns Kommune
The City of Copenhagen

Demonstration areas for climate transition in Copenhagen

Nordvest
Bispeparken kvarteret
Aldersrogade kvarteret

Bavnehøj
Sundby

Folehaven
Industritrekanten



Aldersrogadekvarteret

Working with the area to become:

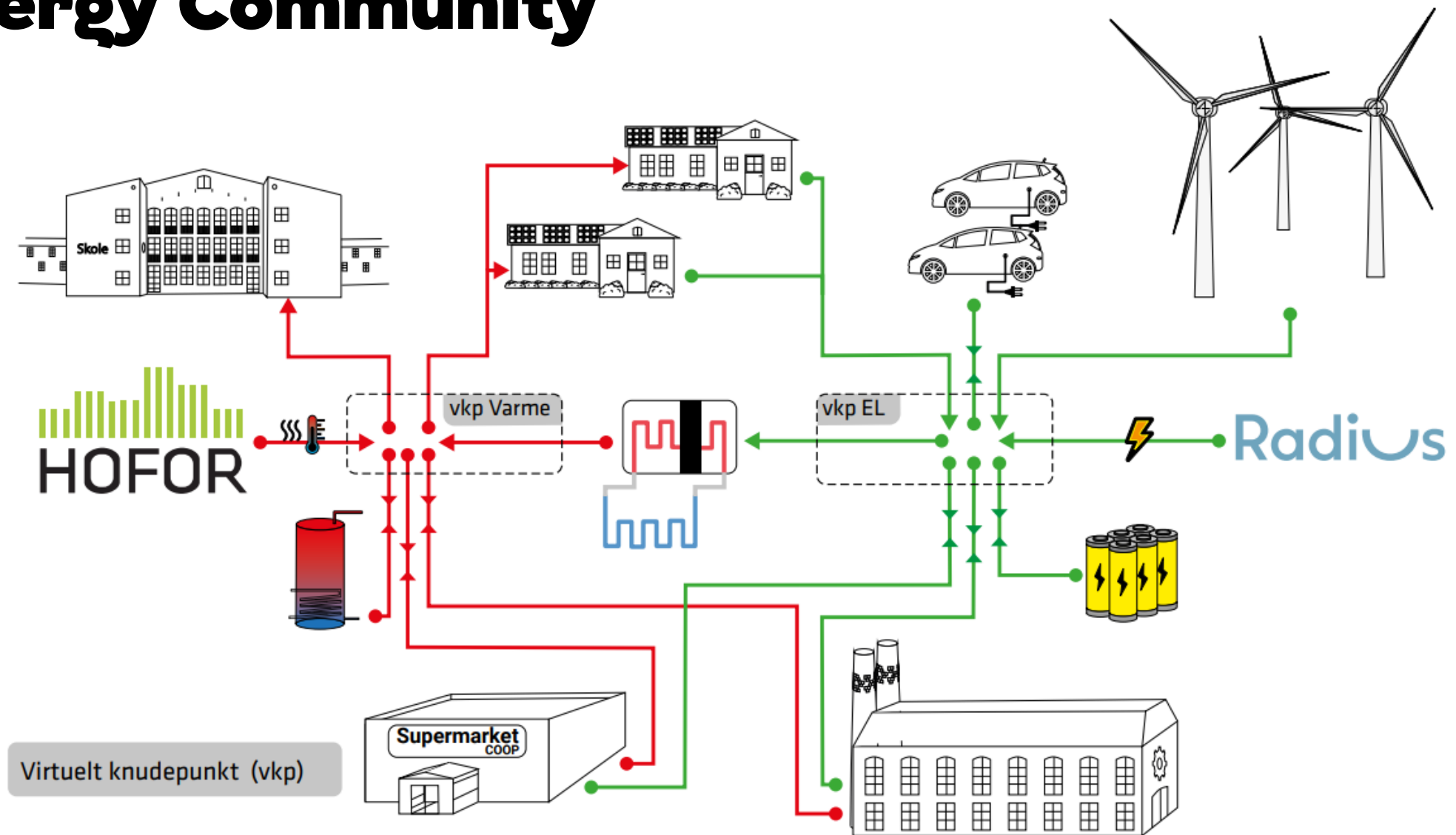
- more open and diverse
- better connected to the rest of the city
- a safer and more healthy area
- a family-oriented area

Local planning process

- Mapping the energy consumption
- Mapping potential for renewables
- Mobilizing climate communities

Energy Communities

Energy Community



Folehaven

- 951 appartements in 26 blocks
- Community center
- Shops
- Nursing homes
- Daycare institutions
- School
- Church



Some questions for reflection

- How do we mix top-down with bottom-up?
- How do we unlock the citizens engagement?
- How can a City progress without national support or regulative changes?



Thank you

A person is silhouetted on a balcony of a modern building, looking out at a bright sunset. The sun is a large, glowing orb on the horizon, casting a warm orange light across the sky. The building has large windows and balconies, some of which are lit from within.

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