



Cities as frontrunners in the green transition

How does ambitious cities approach the climate change?

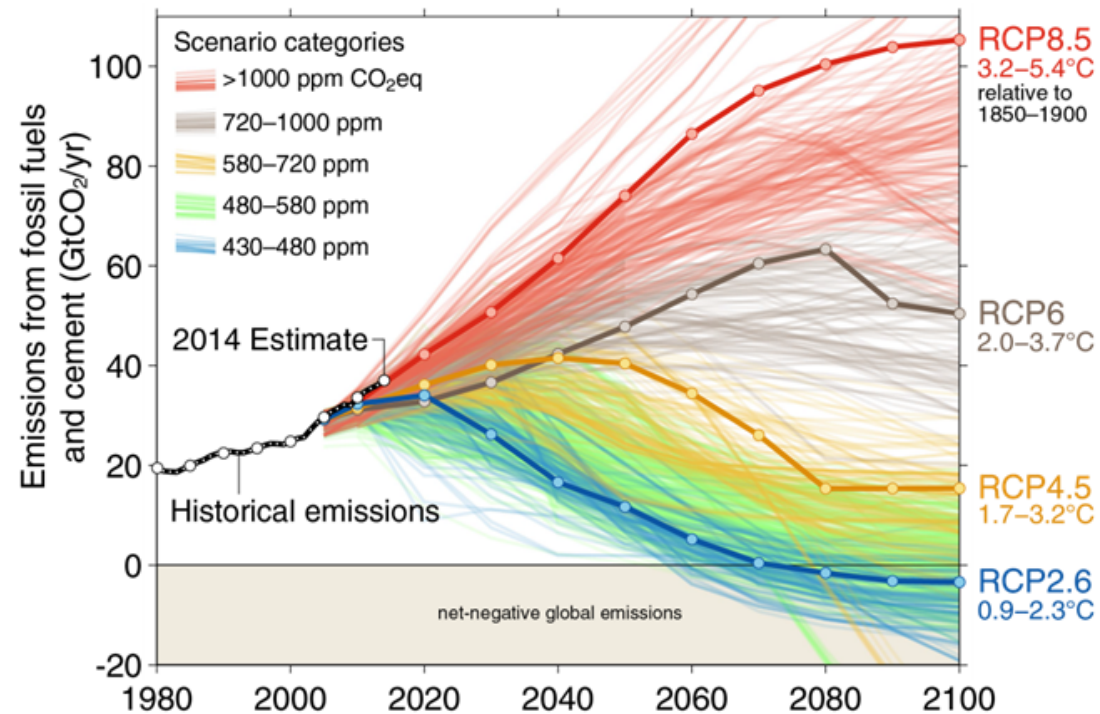
10. November 2020

Peter Rathje, ProjectZero



Future life on our planet is at risk

- and society is waking up





ProjectZero
SØNDERBORG



Sonderborg's Vision

The Sonderborg climate-journey colors society and solutions

- attracts attention and creates green business innovation and growth

Internationally:



2010

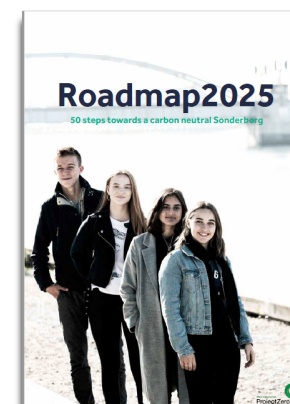
2013

2015

2018

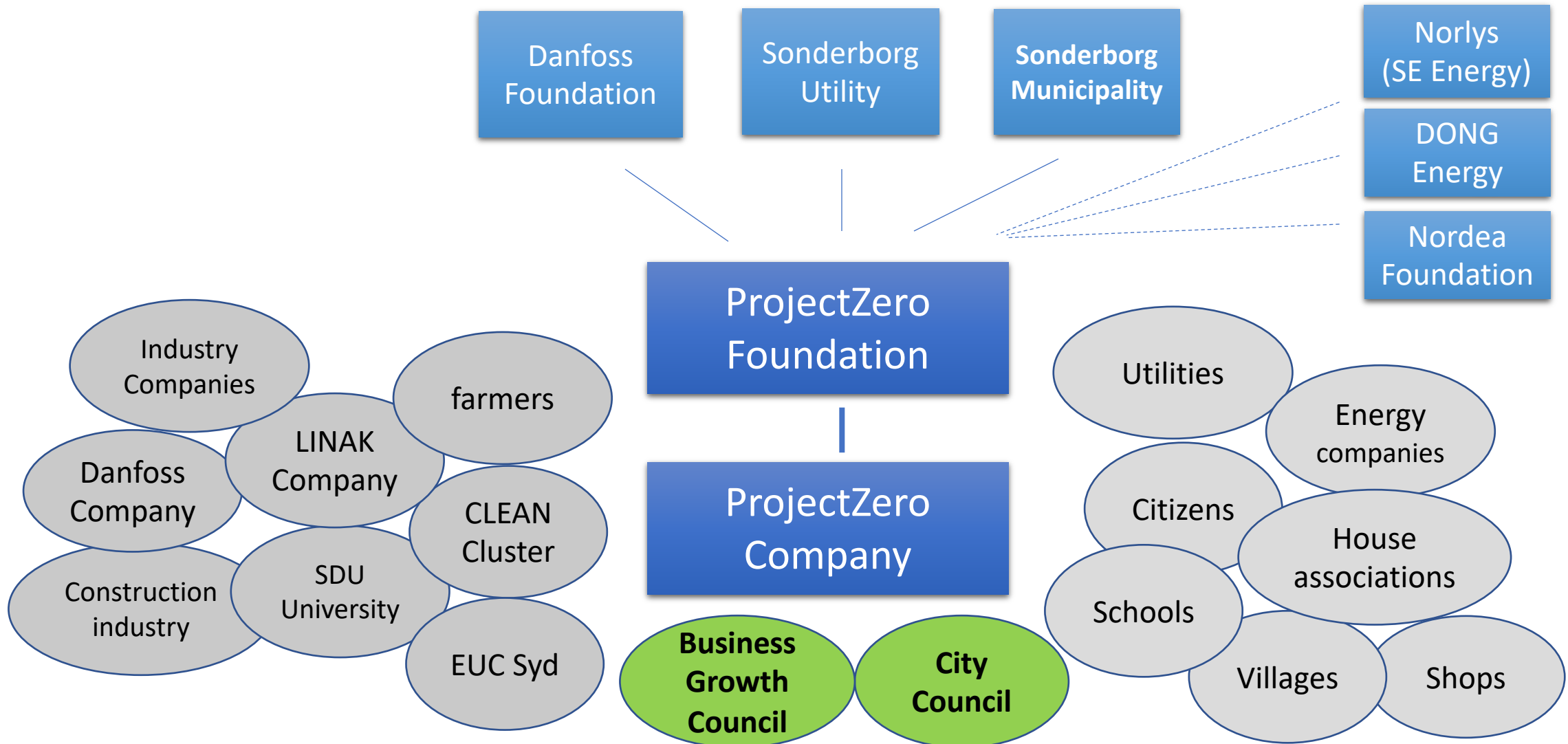
2020

Sonderborg:



ProjectZero

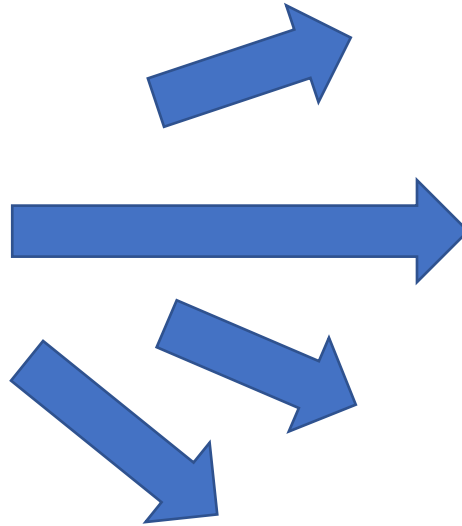
- a Public Private Partnership



Lead by examples – it started with a house

- but soon a new ZERO-mindset took over

The ZERO+ house



- new homes
- new municipal buildings
- new schools
- companies going ZERO+
- shops going ZERO+
- schools going ZERO+
- families going ZERO+
- sports going ZERO+
- urban development going ZERO+

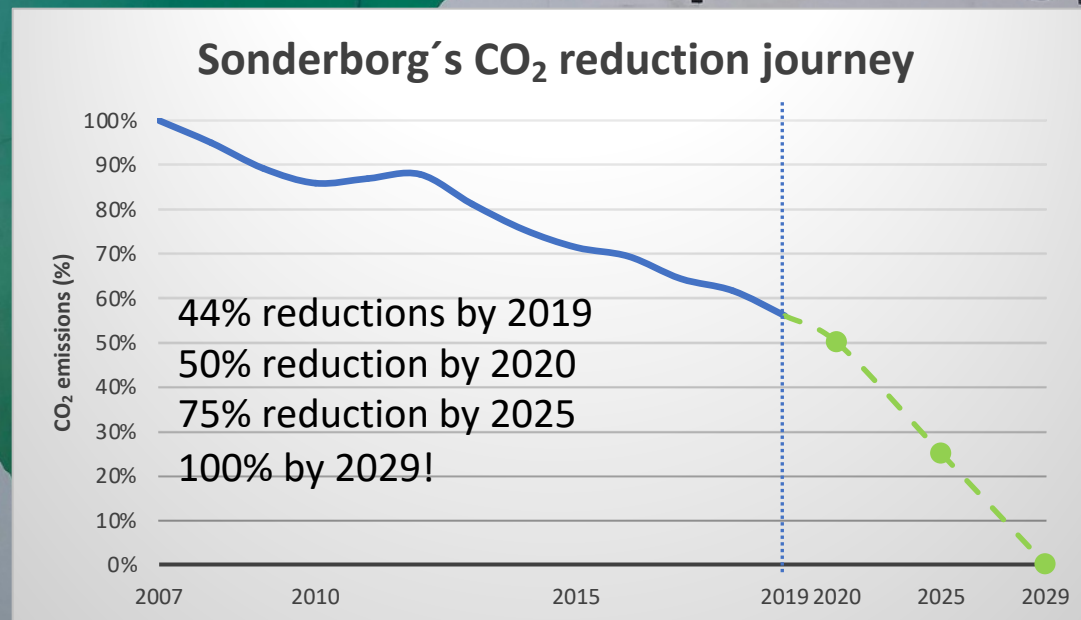
Frank Gehry



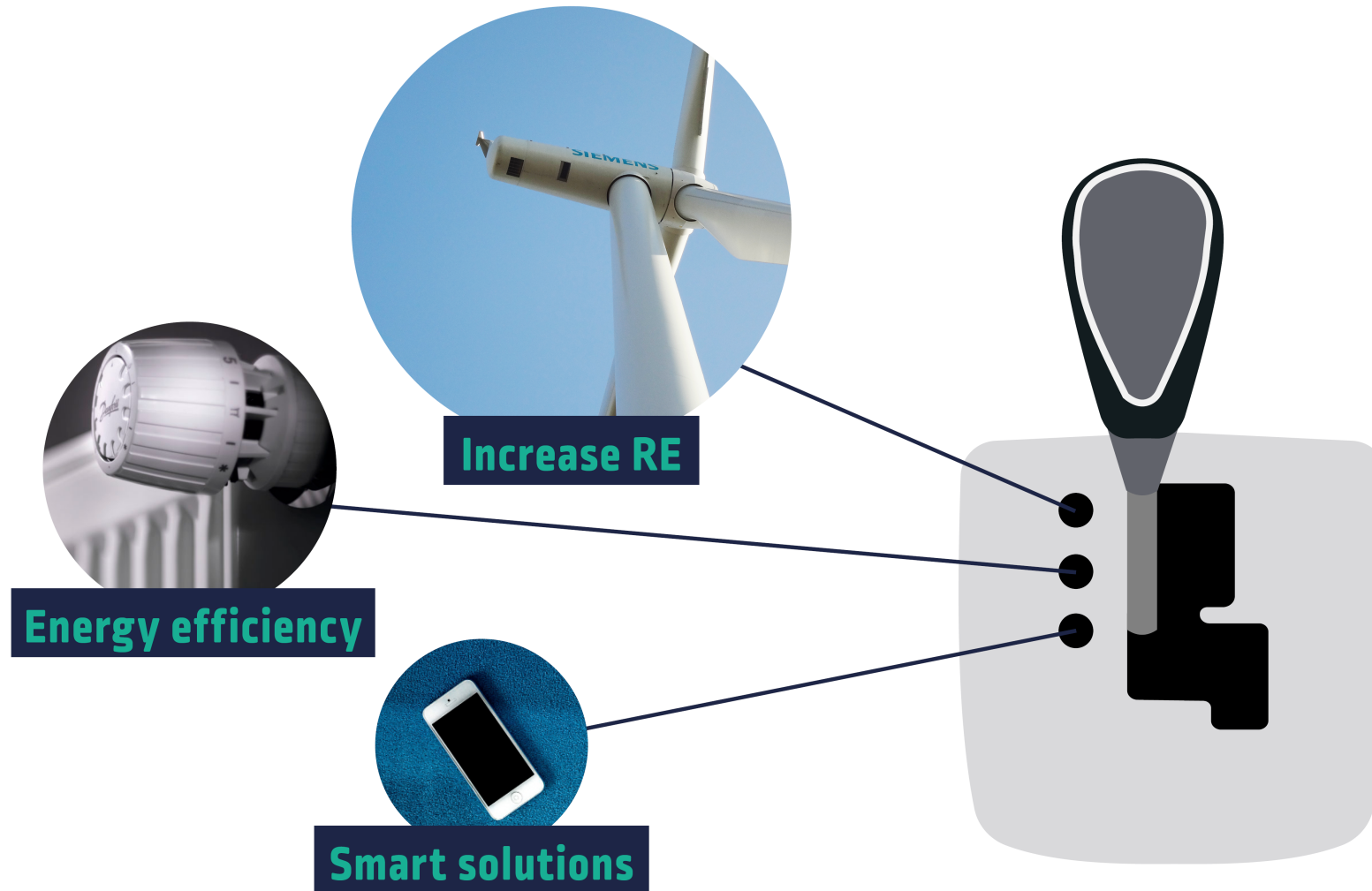
The Gehry Harbor Project



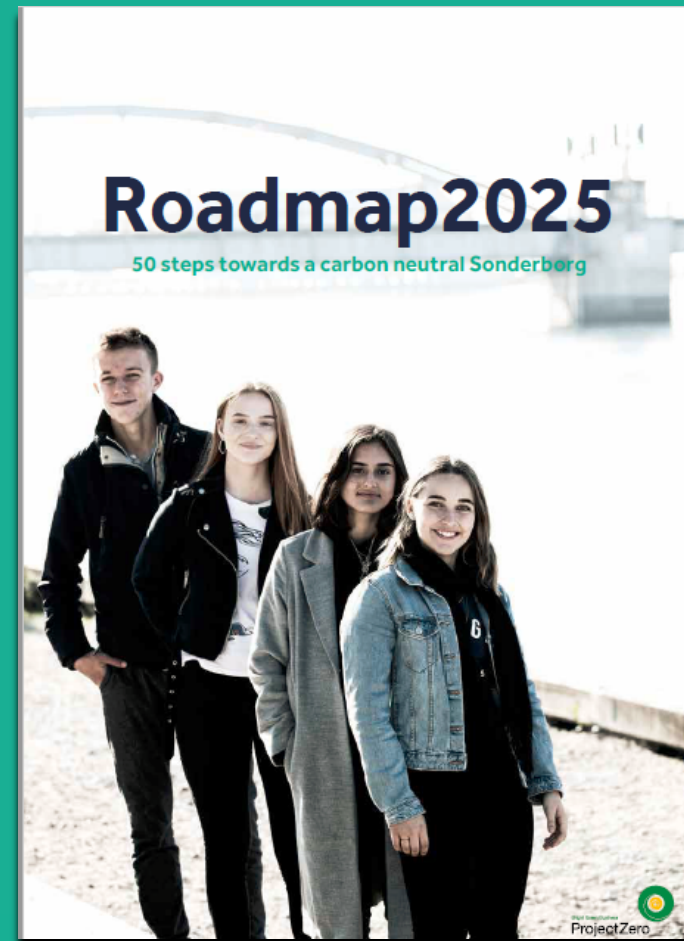
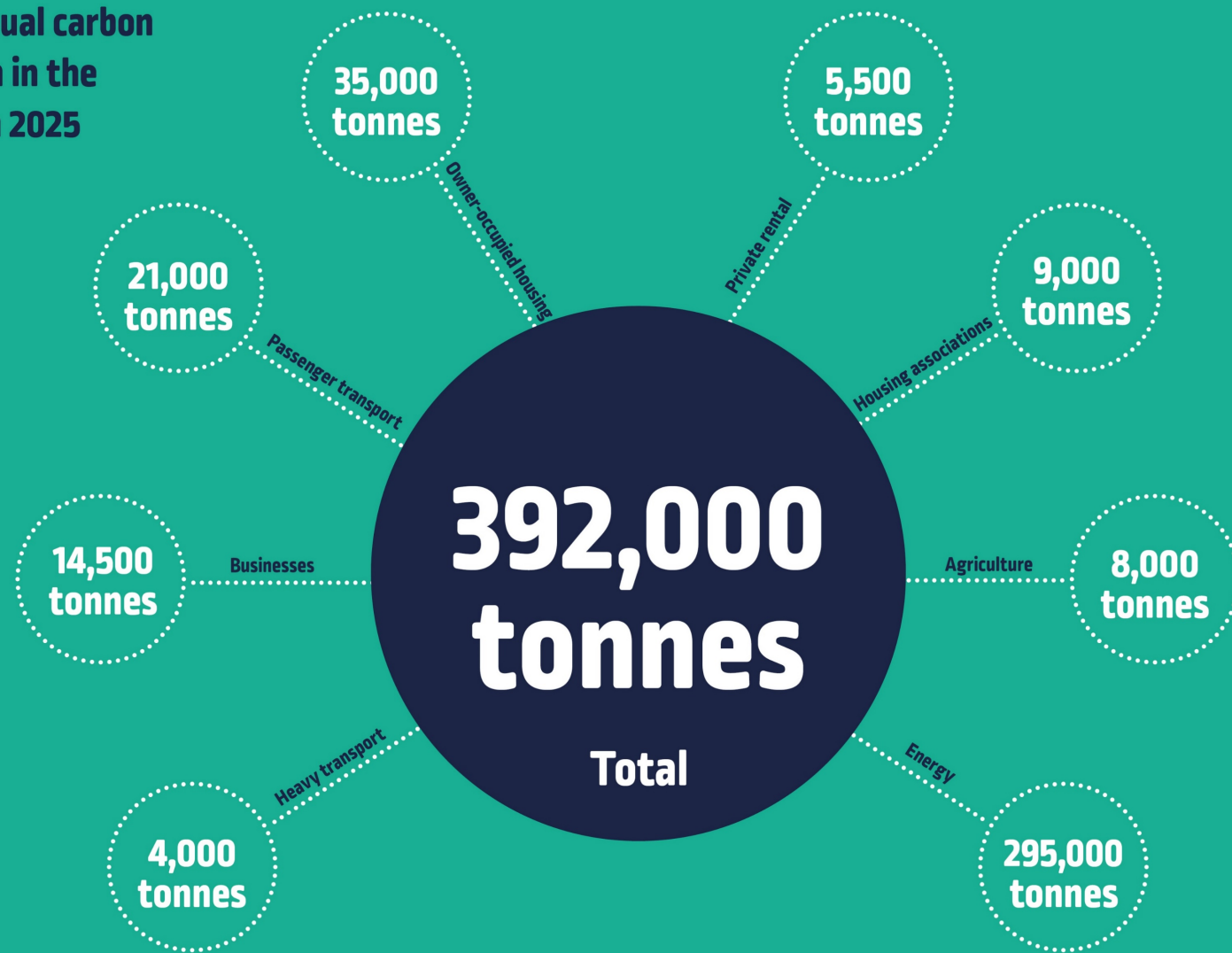
Sonderborg: 700,000-ton CO₂-emissions in 2007 ZERO by 2029



Shifting gear towards more Renewables and Data-smart Solutions



Total annual carbon
reduction in the
8 areas in 2025



Joint planning planning approach

- created a common and shared plan

Engaging key local stakeholders

- City council ownership – endorsement and approval
- 100+ people involved – local experts and stakeholders
- On a joint journey into the unknown future
- Creating a robust local story-telling
- Creating a strong foundation for the implementation

Predefined Process & Organization

- A structured process – predefined and safe!
 - 8 step model based on SmartEnCity IEP-process
- Segmentation into 8 working groups
- Timeline: April => December 2018

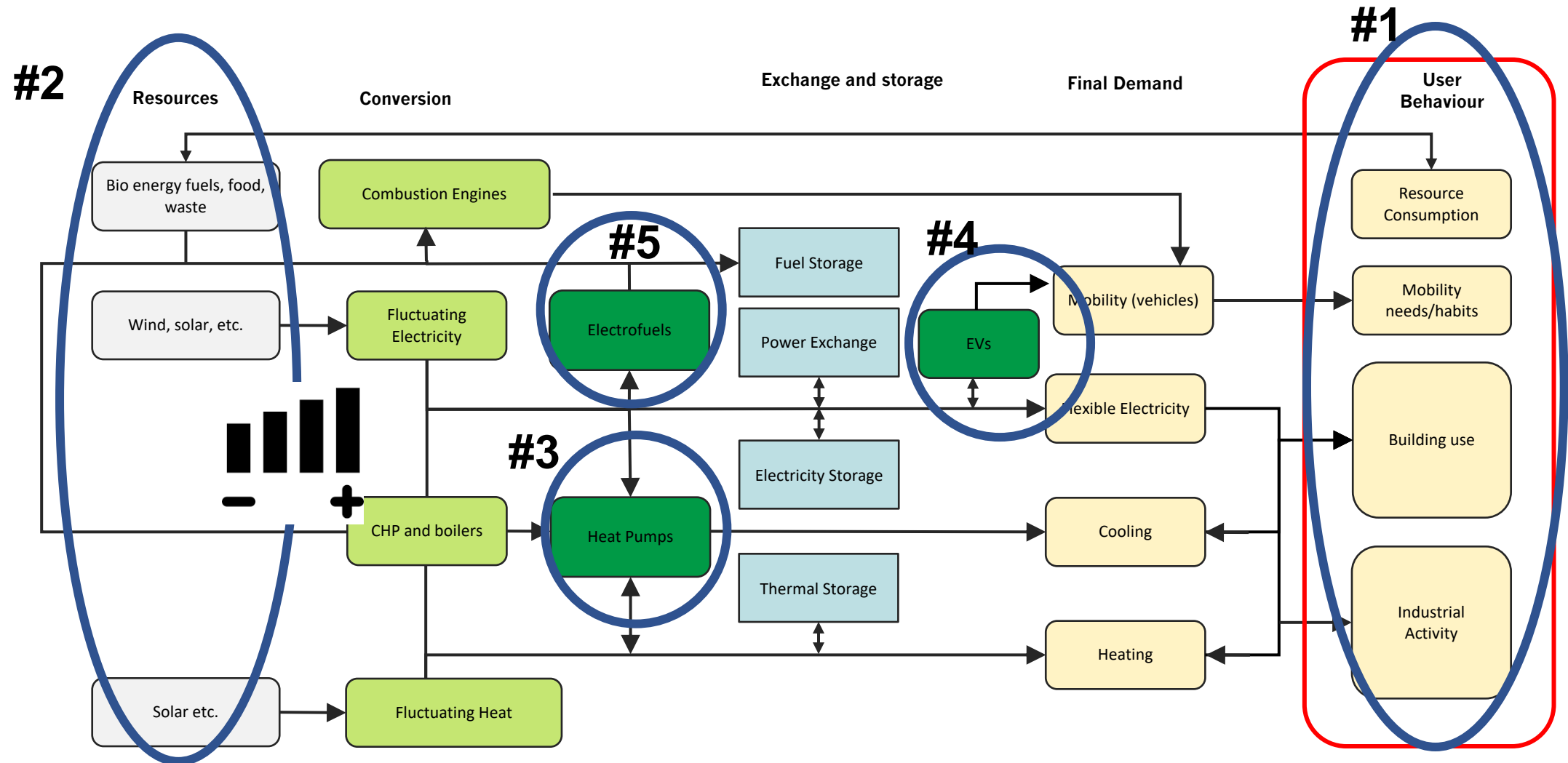
Implementing and executing Roadmap2025

- Same stakeholders are now busy supporting the execution of the Roadmap and their 52 projects



Transitioning the energy-system

- by a prioritized approach



EU SmartEnCity

50 mio. dkk EU-funding to co-create a SCC Lighthouse DEMO-platform



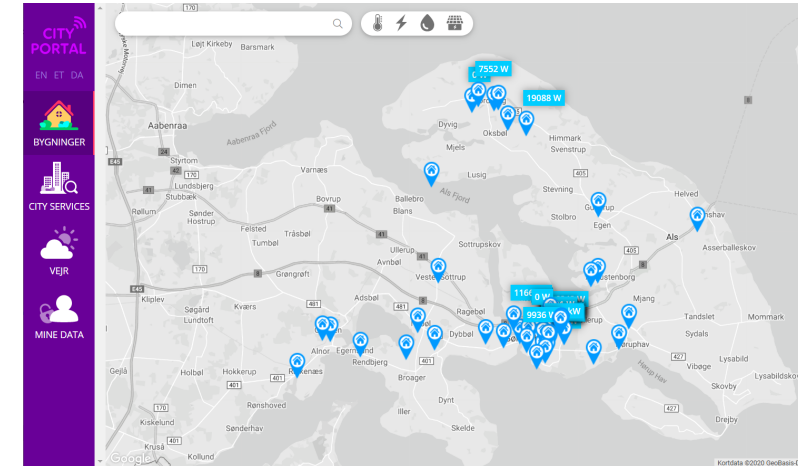
- B42, SØBO, SAB Energi building retrofit
 - 1,000 homes energy-retrofitted
 - Roof-integrated PV and battery solutions
- Green mobility
 - 24 EV-chargers established – Sonfor, DC, Bilka, 1864, Rønhaveplads, the Court ... in cooperation with EoN
 - 44 biogas-busses replaced diesel-busses
- CIOP - City Information Open Platform
 - Based on Telia Esti smartcity-platform
 - Hackaton competition with SDU/EASV & companies
- Roadmap2025 planning process (IEP)
- SmartEnCity Network
 - Now 55 European member cities





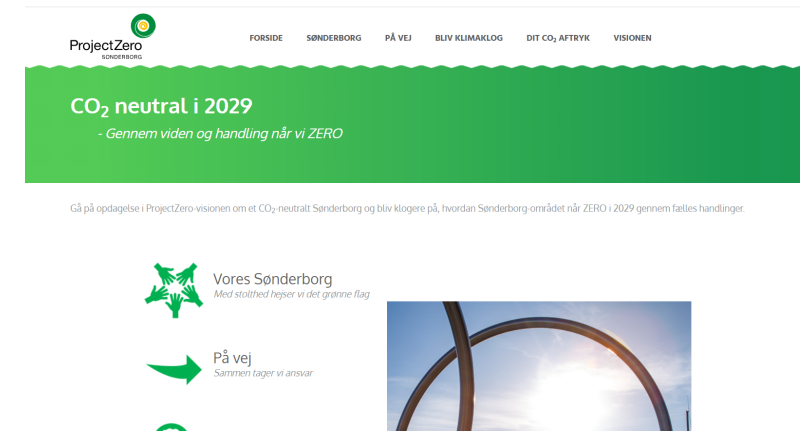
CIOP - Digital Citizen Engagement

- CIOP: City Information Open Platform
 - Today 700 sensors collect data around the entire Sønderborg-area
 - Municipal buildings, house associations, ...
 - Geo data/information regarding locations for EV-chargers, public toilets, windturbines, SWIP-box locations, ...
 - DIY climate-tools for citizens
- The ambition is in 2021 to boost data-collection by factor 10 based on company and citizen participation
 - Attractive services & APPs
 - Co-financed by the EU SmartEnCity
 - Local innovative SME's as partners
- KlimaKlogSonderborg.dk as a CIOP landing page



www.smartcitysonderborg.dk

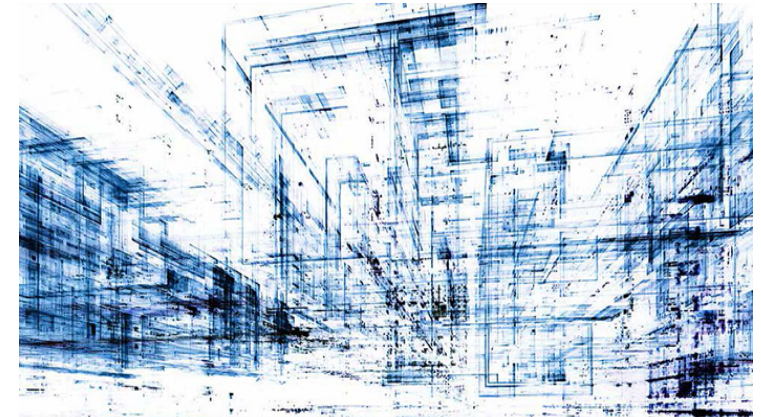
www.klimaklogsønderborg.dk



Digital challenges ahead

- Sonderborg

- Executing Roadmap2025 in a changing world – phasing in large amounts of renewables and improve (large) company participation
 - SmartCity toolbox
 - Higher frequency performance monitoring based on BigData – Energinet Datahub and CIOP
 - Citizen and company engagement based on new CIOP-applications
 - PDCA approach with high check/plan-frequency
 - Secure the Roadmap2025-execution by cooperation, (digital) competencies and support
- Integrate green job creations
 - 100+ new green knowledge jobs before the end of 2022



Energy Valley Glansager

- creating a new innovative playground for sector coupling and Ptx-solutions

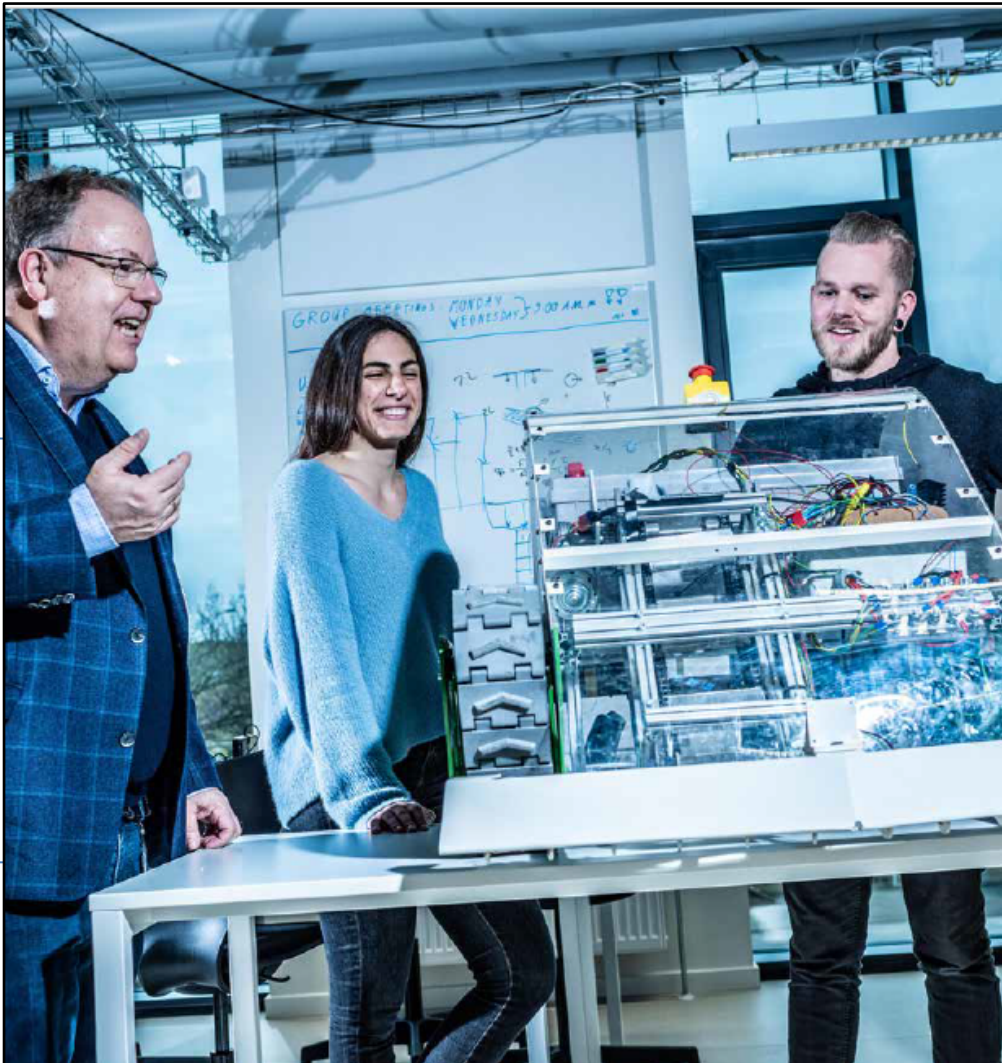
- Recycle- & Reuse of Waste
- District heating production based on solar heat and gasification of wasted-biomass
- Wind turbines (Mintebjerg)
- PV-park Glansager (Better Energy)
- Biogas Glansager (Nature Energy)

To be integrated into a unique resource-efficient & systemic smart facility

- - Data collection and CIOP-integration

Demonstration & learning Lab for kids and University students

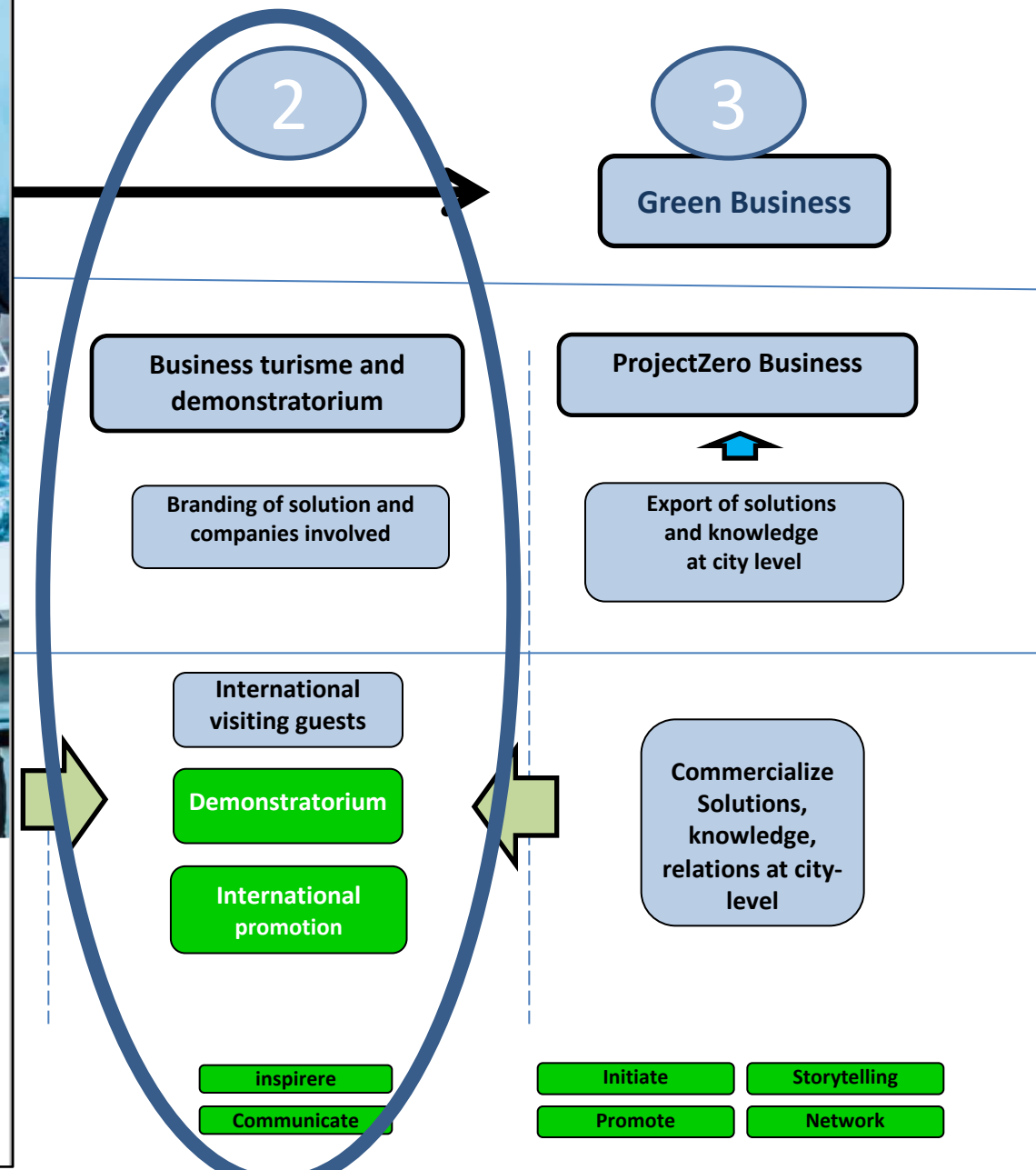




GRØN VÆKST

SØNDERBORG

New Green Business creation



Scaling up the best practice city learnings

- focused on non-capital cities

- Energybyerne.dk
 - 7 independent Danish municipalities
- SmartEnCity Network
 - 55 European cities focused on smart energy solutions
- Covenant of Mayors Europe
 - > 10,000 municipalities demonstrating climate commitment
- DK2020 based on C40 CAP Framework
 - Soon a new platform for Denmark



The 14. Climate-partnership is local and makes things happen in local society – across sectors!



ProjectZero: engaging citizens, companies & the local community across sectors
– local coordinated actions

Landtransp

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Bygge & an

Life scienc

Ha

Produkti

Finans

Energi & fors

Det blå

Energitu

Fødevarer

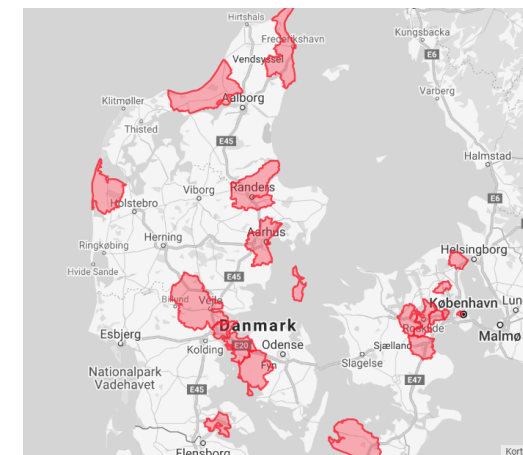
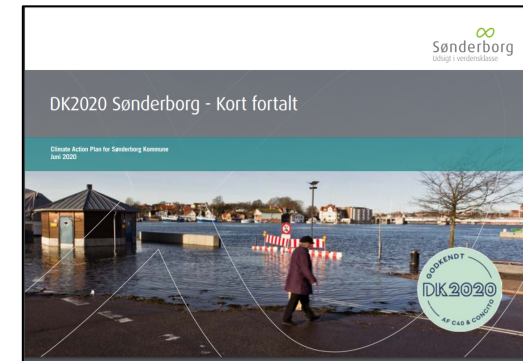
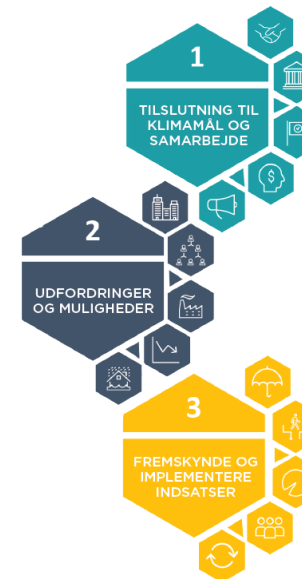


DK2020 – implementing the Paris Agreement

- creating a new national DK CAP-platform



- Based on C40 Climate Action Planning Framework
 - Climate mitigation (buildings, energy, transport), adaptation and farming
 - Define binding targets, political commitment, PPP-cooperation, integrated inclusive planning
- 20 danish municipalities in process, remaining will follow
 - Sønderborg, Samsø & Roskilde completed
 - Another 40 + 20 will follow 2021 + 2022
 - Will improve local/regional climate action competences and commitment
- Supported by Realdania, Danske Regioner, KL
- After planning: next stop is how to ramp up and scale actions !



Cities across the world are **taking actions to combat climate change**. Driven by responsibility, citizen pressure and new green job-creation.

New common **city-platforms are being developed** and will help cities speed up their actions and provide a local platform for coordinated climate planning and actions engaging citizens, companies and stakeholders.

ITC and sharing data are the most important next step challenges on the City Transition Journey.



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