

**From ambition to reality:
weaving the threads
of net-zero delivery.**

Climate work in Helsinki- Uusimaa Region

**October, 27th 2021, 2.00
pm**

«Ecomondo» Fiera di Rimini

Global challenges and regional development



Regions as facilitators for systemic change "Quintuple Helix"

Environment

Planetary boundaries, monitoring

Society

Climate Pact, PPPP, Nudging, civic panel debates

Public sector

Engine, facilitator, navigator, financier

Co-operation

Climate neutrality

Private sector

Towards co-development with ecosystem development, innovation portfolios and piloting

RDI sector

Solution provider
RIS3->RIS4



CLC: Carbon handprint tool

Environment responsibility, climate commitments (AVIA Network Green deal Manifesto, Espoo PPP work)



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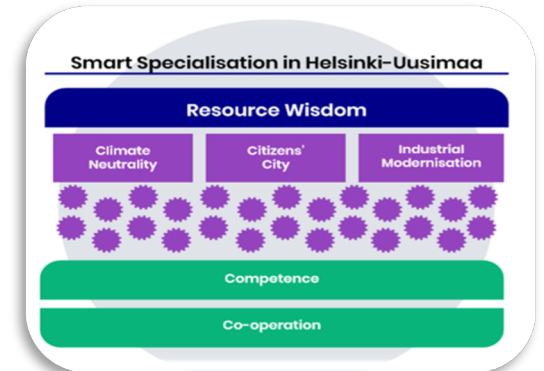
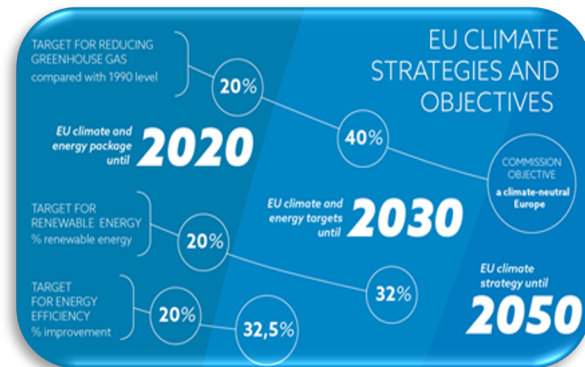
Carbon neutral Helsinki-Uusimaa region 2035

*The roadmap towards
common goal*

hiilineutraalisuomi.fi/

CANEMURE

From global targets to local actions. From local actions to global impacts.



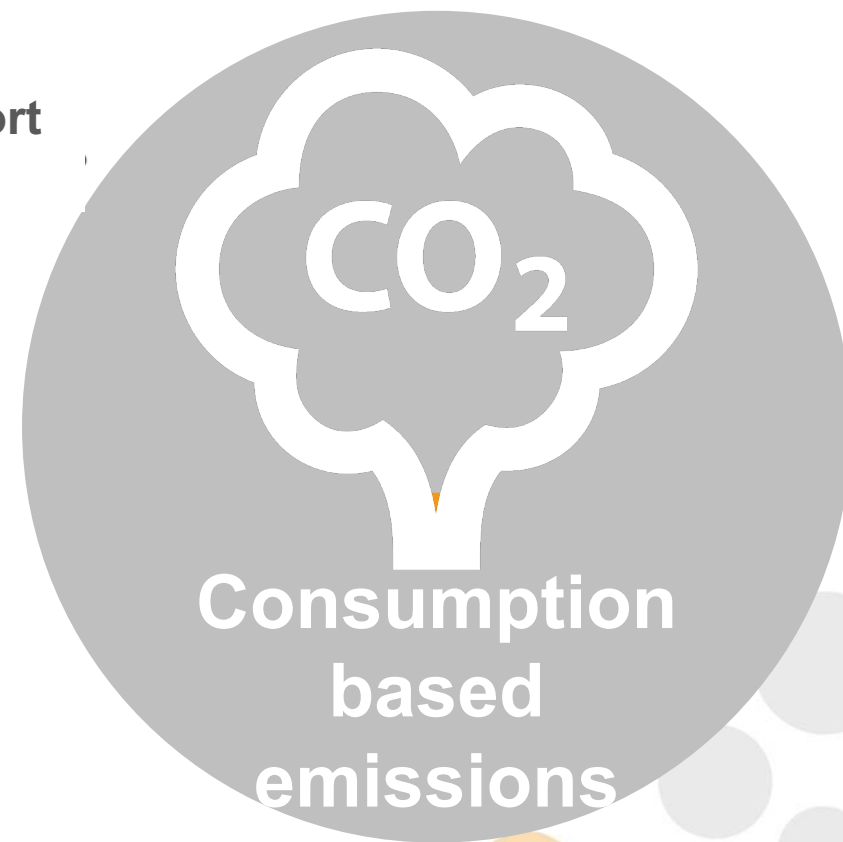
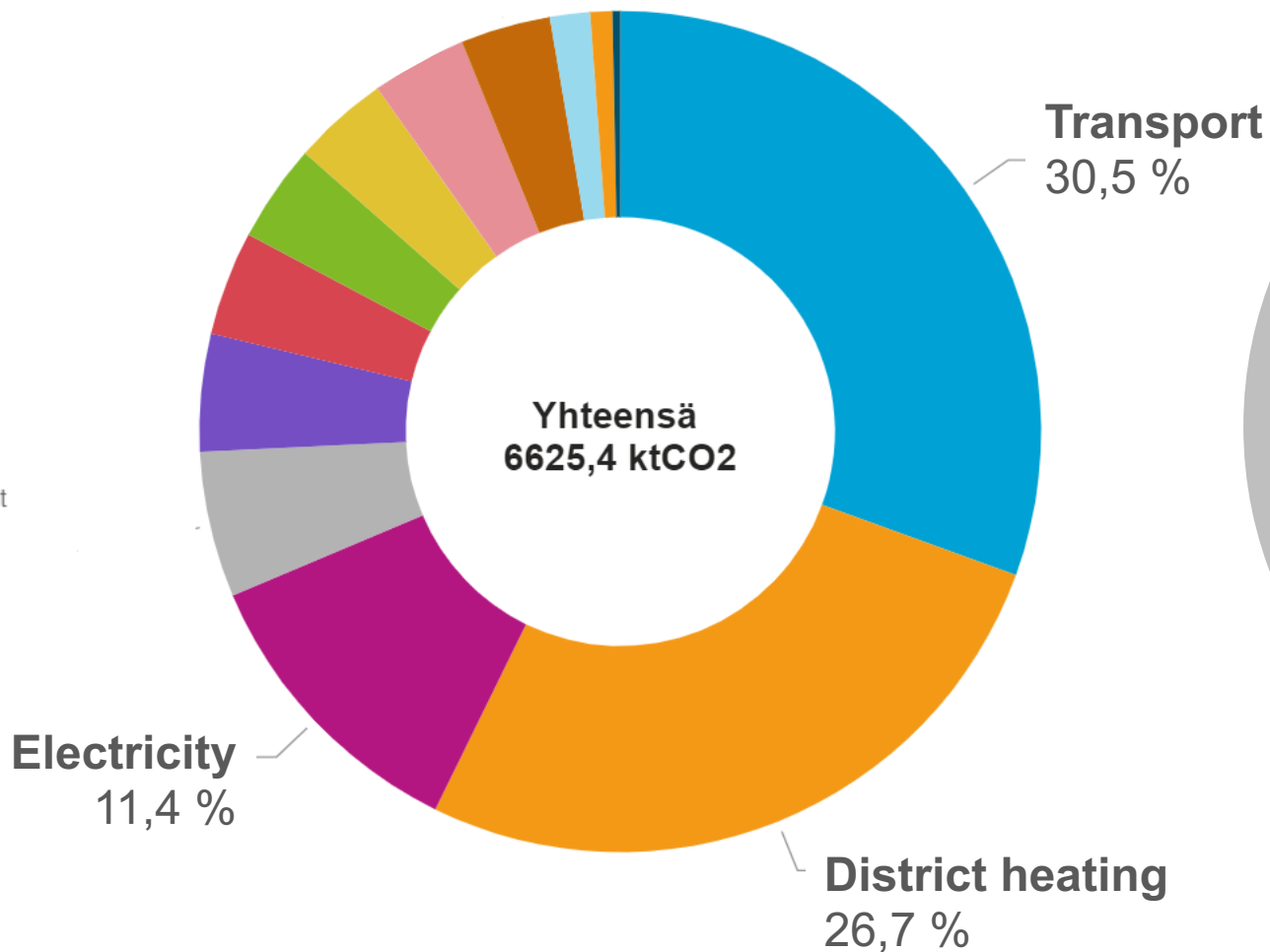
Carbon Neutral Finland 2035 (2019)

**Carbon Neutral Helsinki-Uusimaa 2035 (2017)
Smart specialisation Strategy (2020)**

Carbon neutral targets of cities, municipalities and many actors in the region

Transport, district heating and electricity are the three largest emission sectors in Helsinki-Uusimaa Region

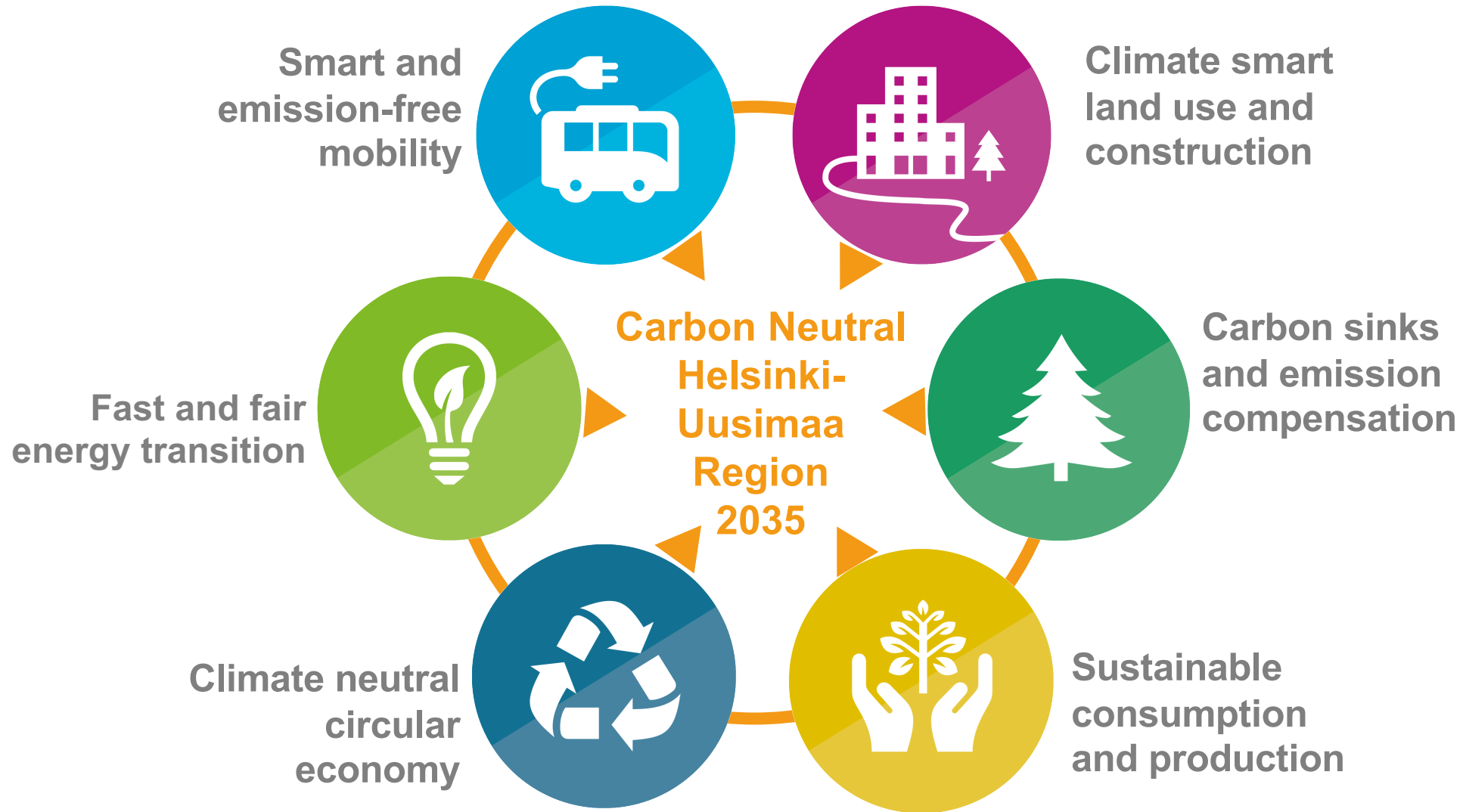
- Electricity
- Electric heating
- District heating
- Oil heating
- Other heating
- Industry
- Machinery
- Road transport
- Rail transport
- Water transport
- Agriculture
- Waste treatment
- F-gases



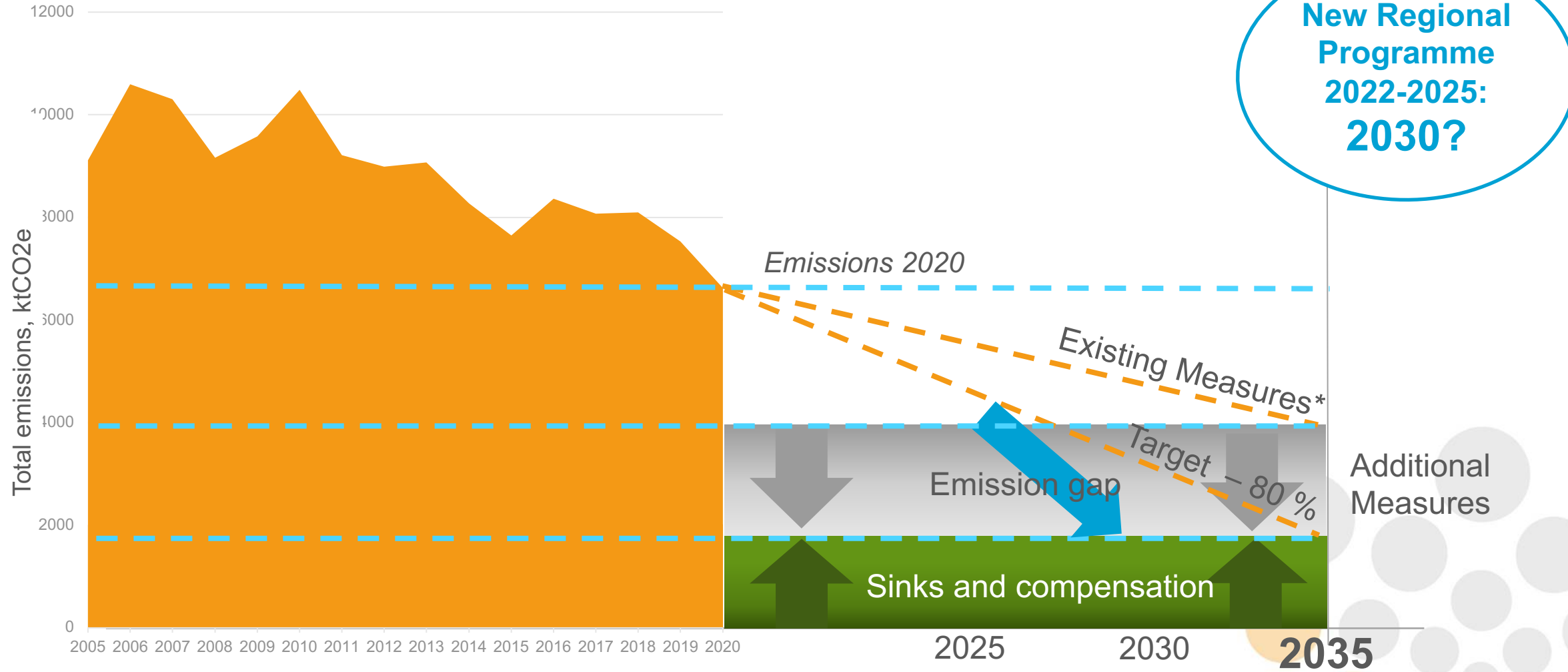
Lähde: Suomen ympäristökeskus

Uudenmaan ilmiö // Nylands förbund // Helsinki-Uusimaa Regional Council

Six focus areas of regional climate work



Carbon Neutral Helsinki-Uusimaa Region 2035



New Regional Programme
2022-2025:
2030?

Additional Measures

Sinks and compensation

Emission gap

Existing Measures*

Target - 80%

Emissions 2020

Total emissions, ktCO₂e

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

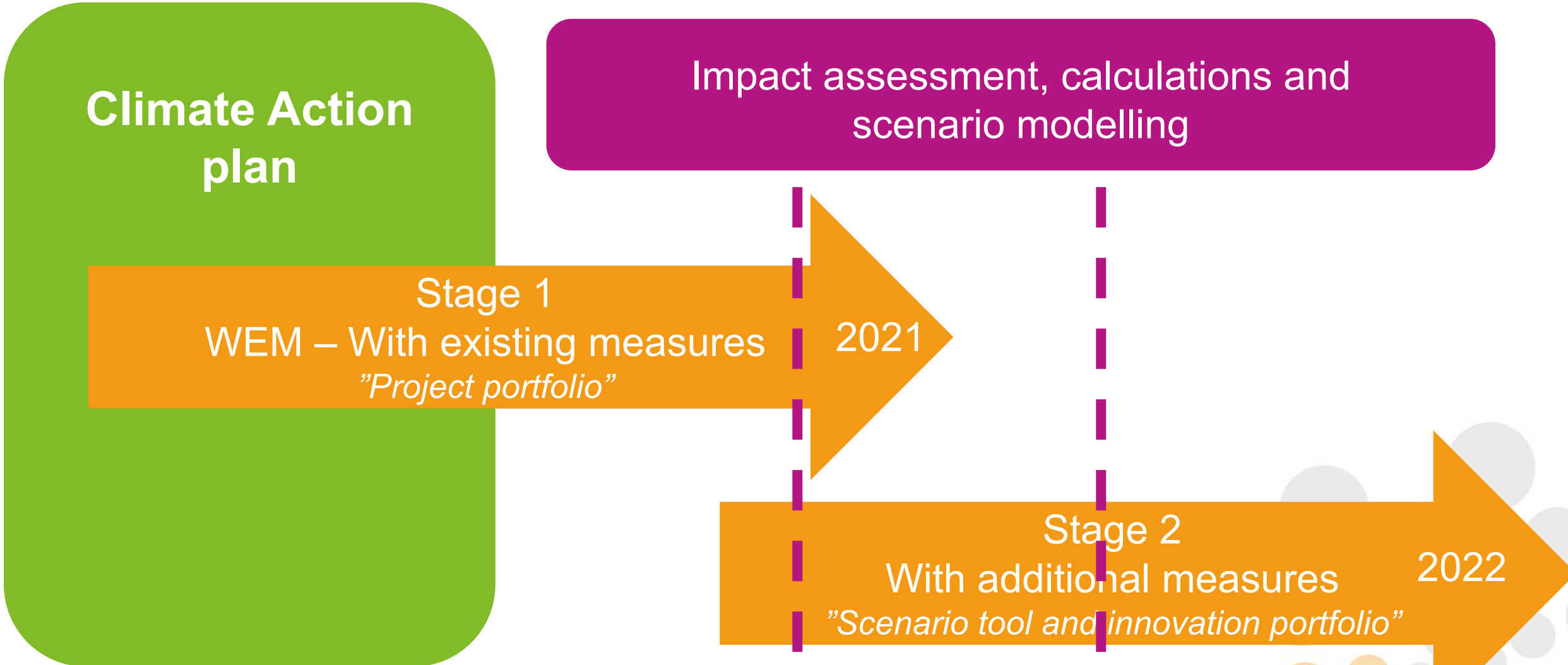
2025

2030

2035

*calculations and scenario by Finnish Environmental Center 2018

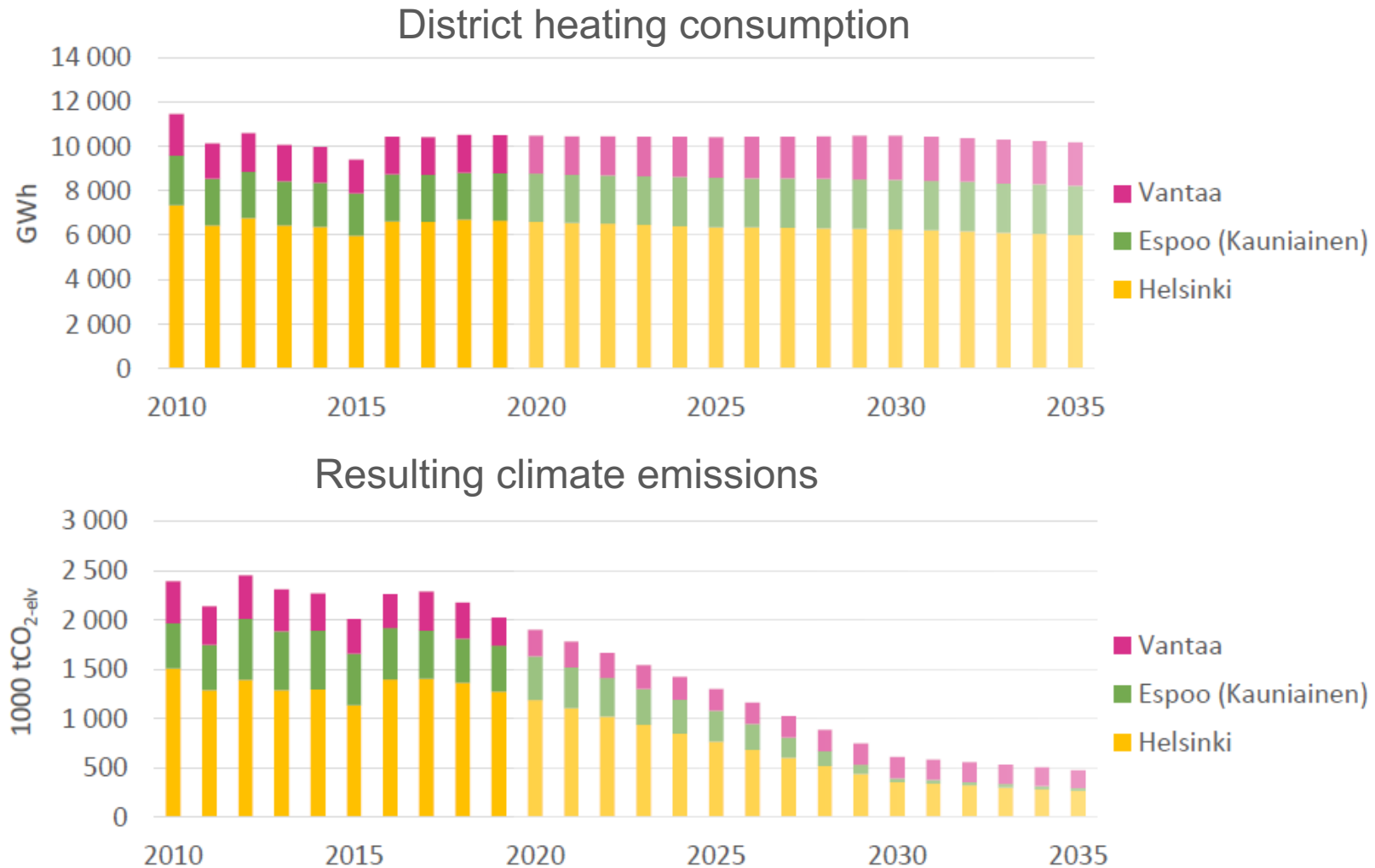
Complementary process: from existing measures to additional measures





Fast and fair
energy
transition

Scenario 2020: District heating consumption and resulting climate emissions in Helsinki capital region*



Measures planned in the Capital region (10/2021)

Fortum (Clean Heat: Espoo, Kauniainen and Kirkkonummi district heating carbon neutral 2030, coal free 2025)

- Suomenoja, a 20MW heat pump has been put into operation
- Data center project in Hepokorpi, target 2023 at the beginning of the first phase implementation, will increase the utilization rate until 2025
- Otaniemi St1 geothermal (deep heat) slightly delayed, flow tests in early December, commissioning in 2022
- Otaniemi + Vermo air to water heat pumps 1MW heat, district cooling 1-1.5MW as a pilot for Vermon 10MW air to water heat pump; Kerana also pending

Helen (Carbon neutral Helsinki 2030, Helen's production completely carbon neutral 2035, coal free 2029)

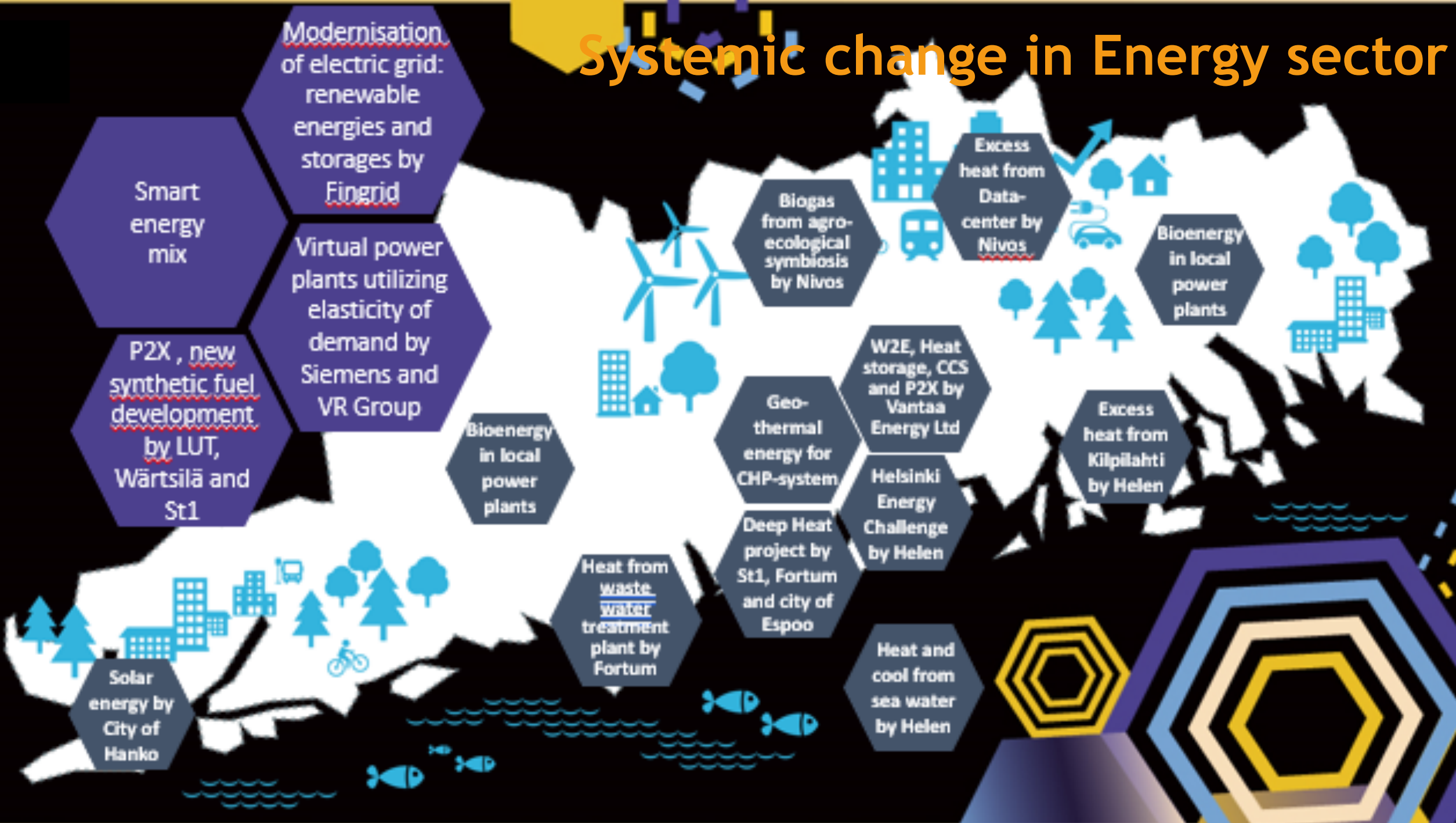
- Closure of Hanasaari coal-fired power plant in the spring of 2023; replacement with Vuosaari wood chip power plant
- Katri Vala 6 and 7 heat pump
- Mustikkamaa heat storage
- Vuosaari seawater heat
- Experimental geothermal energy pilot plant in Myllypuro
- Replacement of Salmisaari: Seawater heat pump and utilization of Kilpilahti waste heat in the study; the realization of both would also make it possible to give up Vuosaari's natural gas.
- More wind power coming; Nationally, wind power is being built strongly

Vantaa energy (Carbon neutral 2030, fossil free 2026):

- decommissioning of peat in Martinlaakso power plant
- ccv green wood (durable wood) combustion boiler in Martinlaakso instead of coal boiler 2025
- VTE 2 Longmossabergen's 80 MW W2E boiler next to the old one will be completed during 2022: getting rid of coal in Martinlaakso
- Longmossabergen Hazardous Waste Incineration Plant 2024; of these two summer heat seasonal storage; get rid of heating centers (with natural gas)
- Kuusikonmäki thermal storage completed in 2026
- Power to gas Synthetic gas production for a waste-to-energy plant site after 2026

-> **New scenario 2022**

Systemic change in Energy sector



*Finnish
Environmental Center:
Emissions 2020
in Helsinki-
Uusimaa region*



2019–2020
-12%



Thanks

October, 27th 2021, 2.30 pm

«Ecomondo», Fiera di Rimini