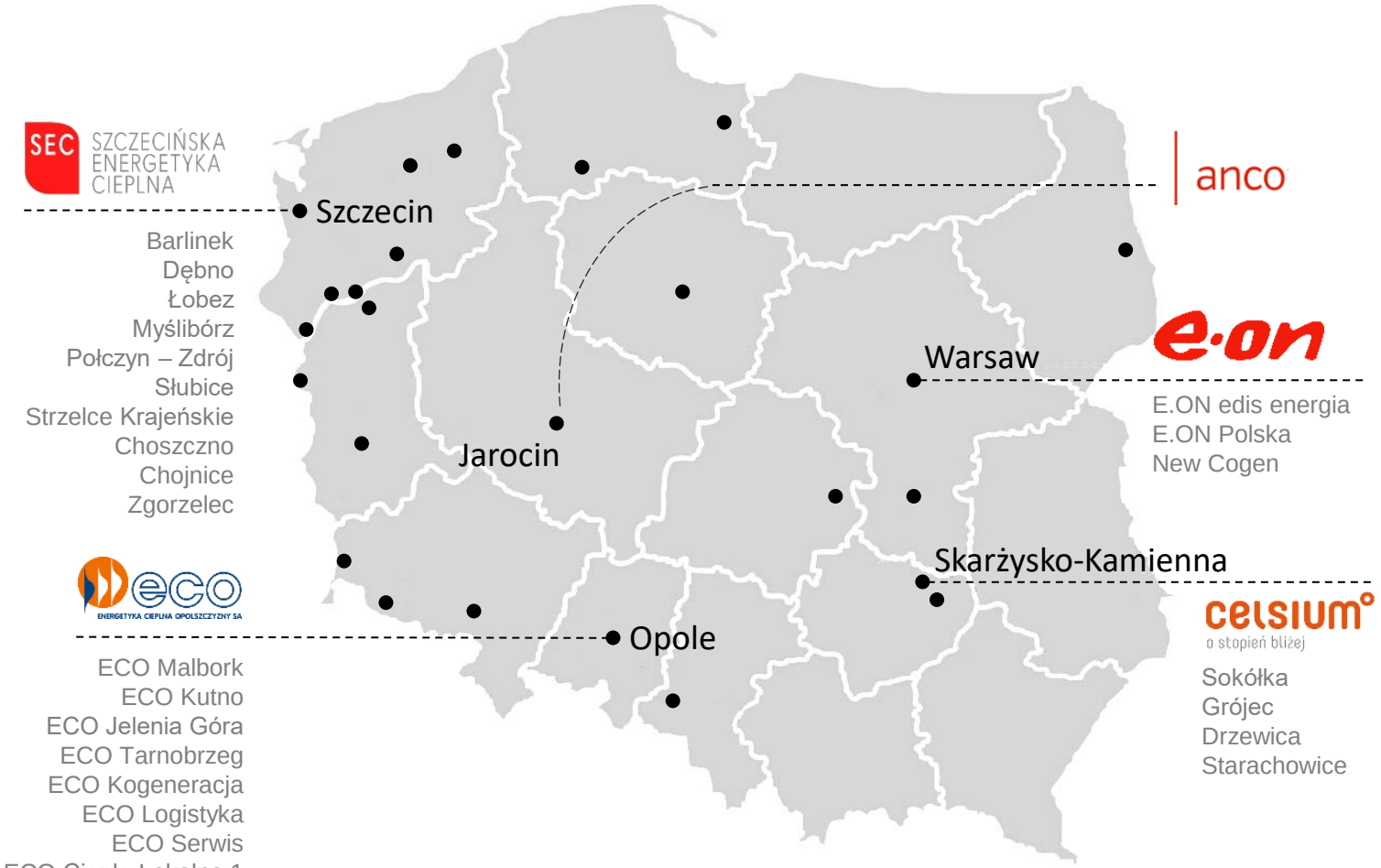
SEC SZCZECIŃSKA ENERGETYKA CIEPLNA

e·on

Project Łasztownia

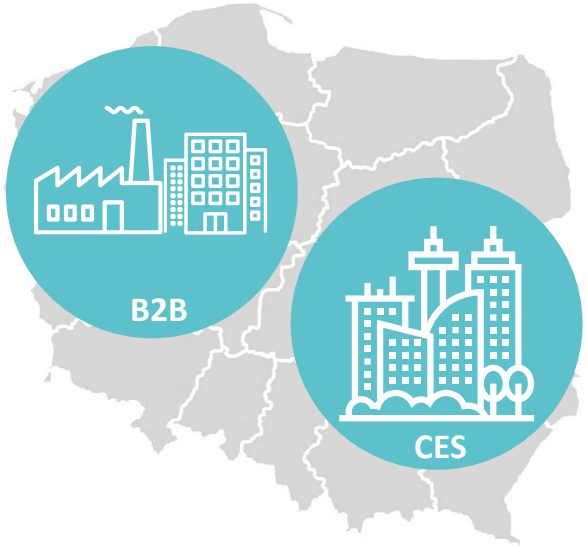
ectogrid™

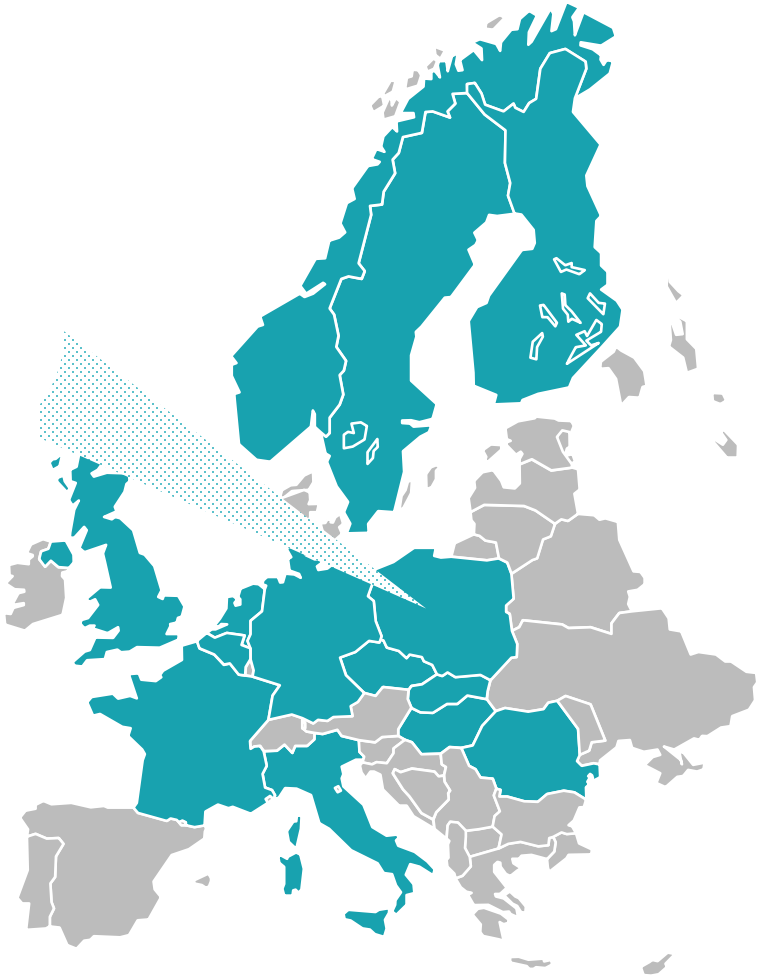
E.ON EIS Polska



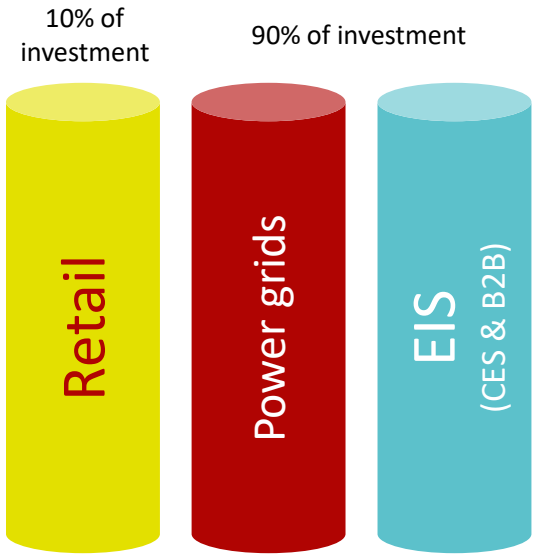
E.ON Energy Infrastructure Solutions in Europe and Poland

E.ON Energy Infrastructure Solutions
we have used for years in cooperation with companies, cities, developers and public institutions.

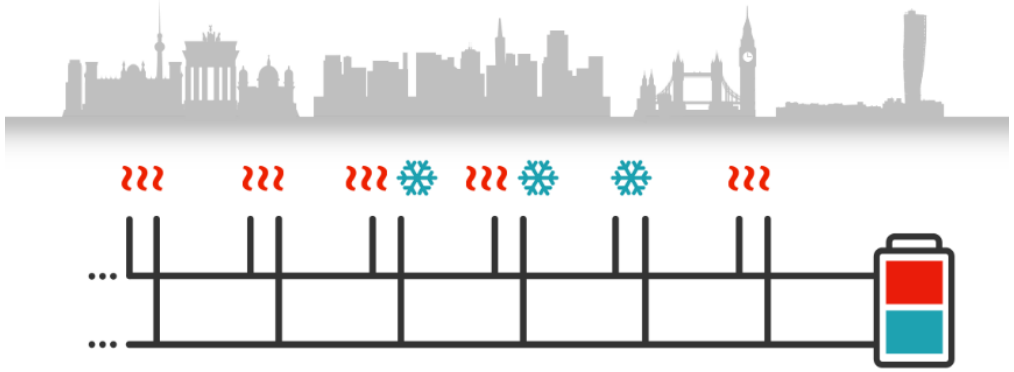




Three main pillars of E.ON



ectogrid™



E.ON ectogrid™

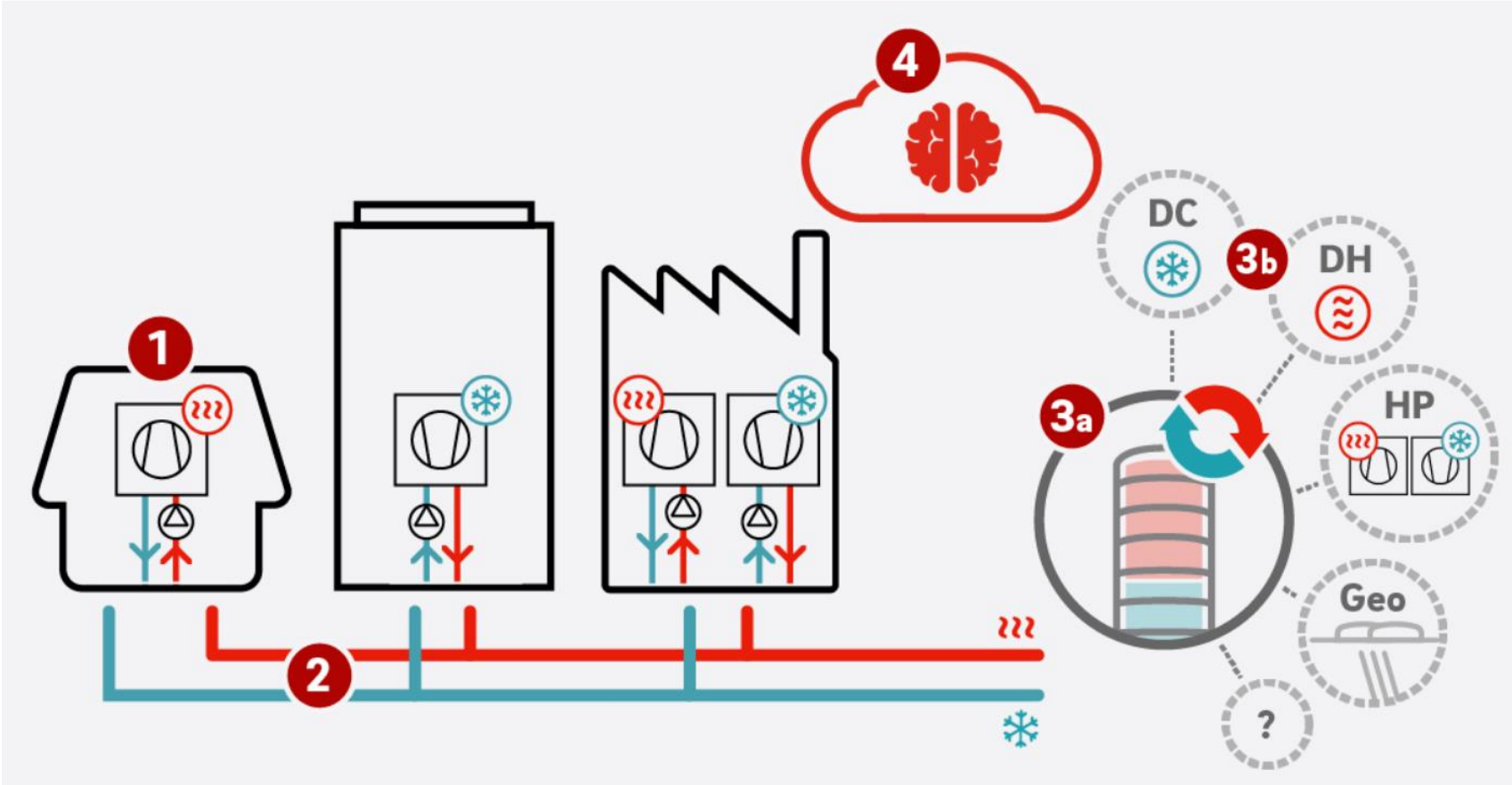
- One energy system for both heating and cooling
- Automated with innovative cloud technology – reduces operating costs
- Utilizes standard components – flexible and simple to scale up
- Low temperature network enable energy sharing between buildings and reuses low-level waste energy, reducing the climate footprint

First ectogrid™ - Medicon Village, Lund, Sweden

E.ON ectogrid™ is a closed grid with low temperatures where heat pumps and cooling machines in every building adjust the temperature according to need. In this process, each building sends excess heating or cooling to other buildings, depending on their needs.

Through sharing, balancing, and storing energy in rotation, E.ON ectogrid™ efficiently uses all available energy flows before adding new energy.

This drastically reduces energy consumption – and in turn costs and environmental impact.



1. Heat pump/cooling machine | 2. Low-temperature grid | 3a. Passive balancing unit | 3b. Active balancing unit | 4. Intelligent control

MEDICON VILLAGE

Medicon Village, Sweden

e·on

MEDICON VILLAGE

15
commercial and residential buildings

14 GWh
heating and cooling – before E.ON ectogrid™

170
Life Science companies, 2 600 people

65 %
expected decrease of added energy using E.ON ectogrid™

” E.ON ectogrid™ is an energy solution that goes very well with or goal and vision– a sustainable and inventive research park for science and innovation.”

Erik Jagesten
CEO Medicon Village

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Łasztownia – New Heart of the City

Funding- REWARDHeat

The overall objective of the REWARDHeat project is to demonstrate a new generation of highly efficient district heating and cooling (DHC) networks, capable of recovering renewable and waste heat available at low temperature.

The REWARDHeat project has eight Demonstrators:.

Helsingborg and Mölndal, Sweden
Alberslund, Denmark
Heerlen, The Netherlands
Milan, Italy
Topusko, Croatia
Toulon, France
Szczecin, Poland
Gardanne, France

REWARDHeat

www.rewardheat.eu

Public Funding information

- Call: European Union's Horizon 2020 research and innovation programme
- Project win: 2021 (joined consortium during project phase)
- Won funding amount: 1.04m€ for both sites, mainly for personnel costs on development and research
- Project duration: 4 years from 2019 to 2023

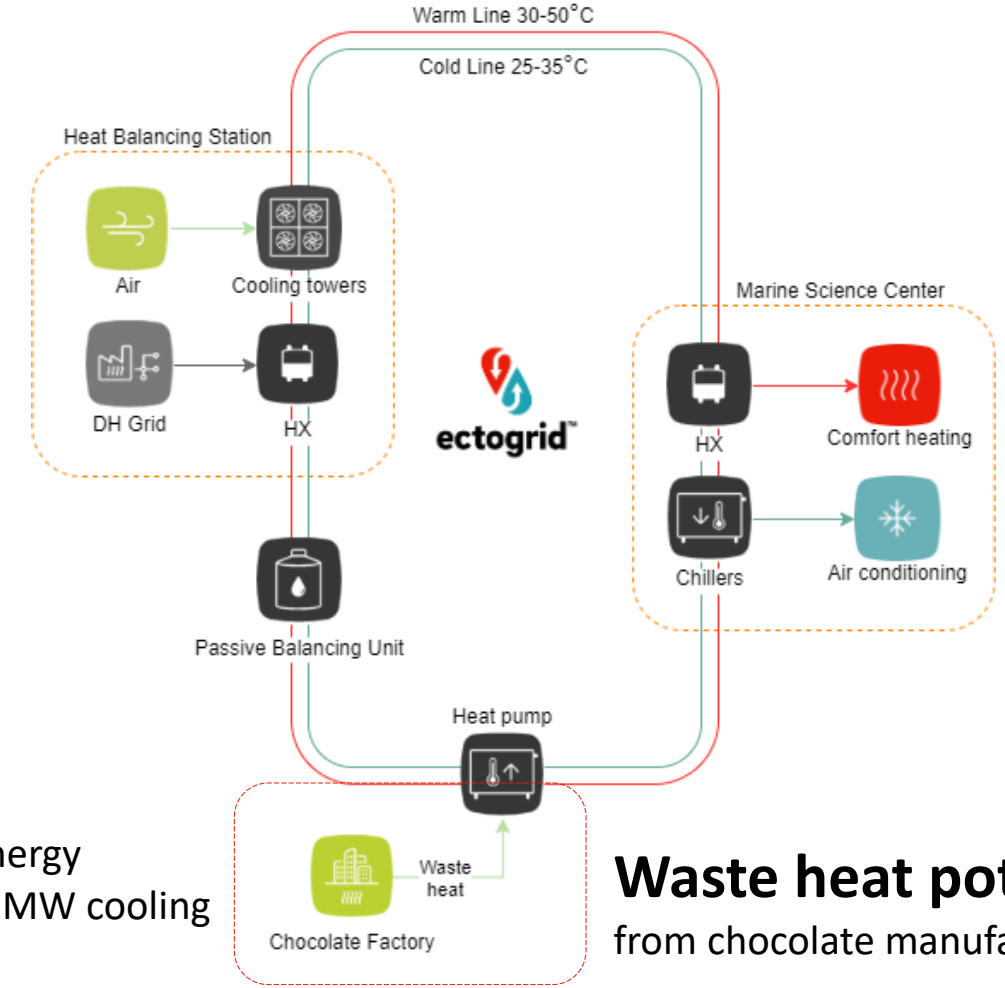
EU landmark project on low temperature heating and cooling networks in collaboration with strong international partners.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **N. 857811**.

Project description

Heating Balancing Station

- up to 1,2 MW heating via DH
- central 800 KW cooling with air coolers
- passive Balancing Unit storing up excess energy
- possible extension to 3,5 MW heating, 2,4 MW cooling



Waste heat potential

from chocolate manufactory

Marine Science Center

- low temperature comfort heating
- air conditioning with use of chillers
- partial heating of DHW

2019 2020 2021 2022 2023

Benefits and challenges

Final benefits of solutions on Lasztownia island

- ✓ Cooling production
- ✓ Reduction of heat losses
- ✓ Using waste heat from buildings
- ✓ Establishing prosumer relationships and strengthening cooperation with waste energy generators
- ✓ A step towards decarbonization of the energy sector in the area
- ✓ Scalability of the project
- ✓ Creating opportunities for RES usage

Challenges of the project

- ✓ Integration of existing buildings on Łasztownia Island
- ✓ Need to divide the project into stages
- ✓ Complexity of planning
- ✓ Connecting new buildings to the network

Thank you for your attention