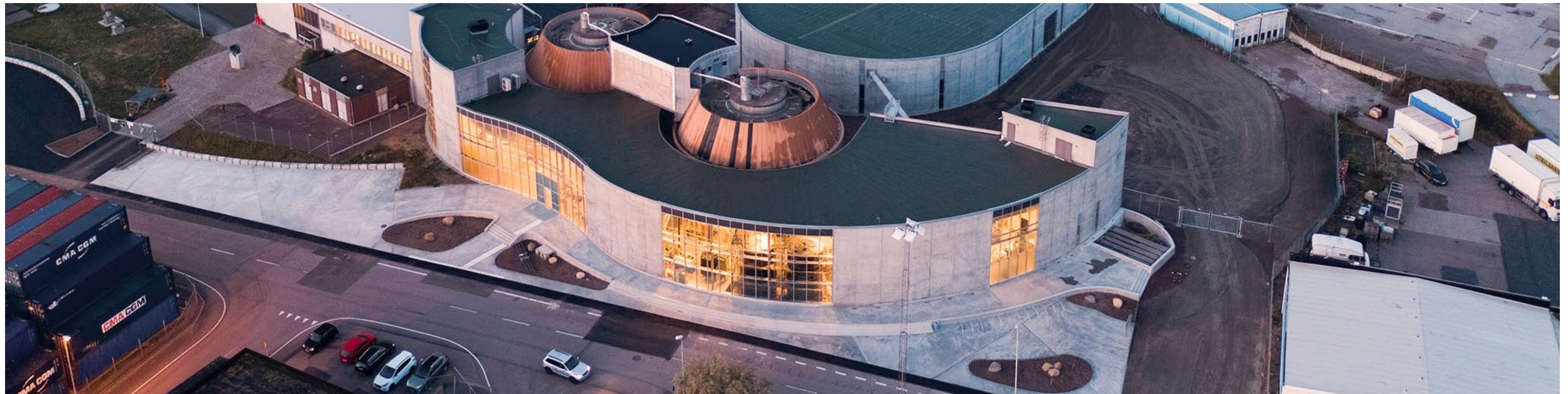
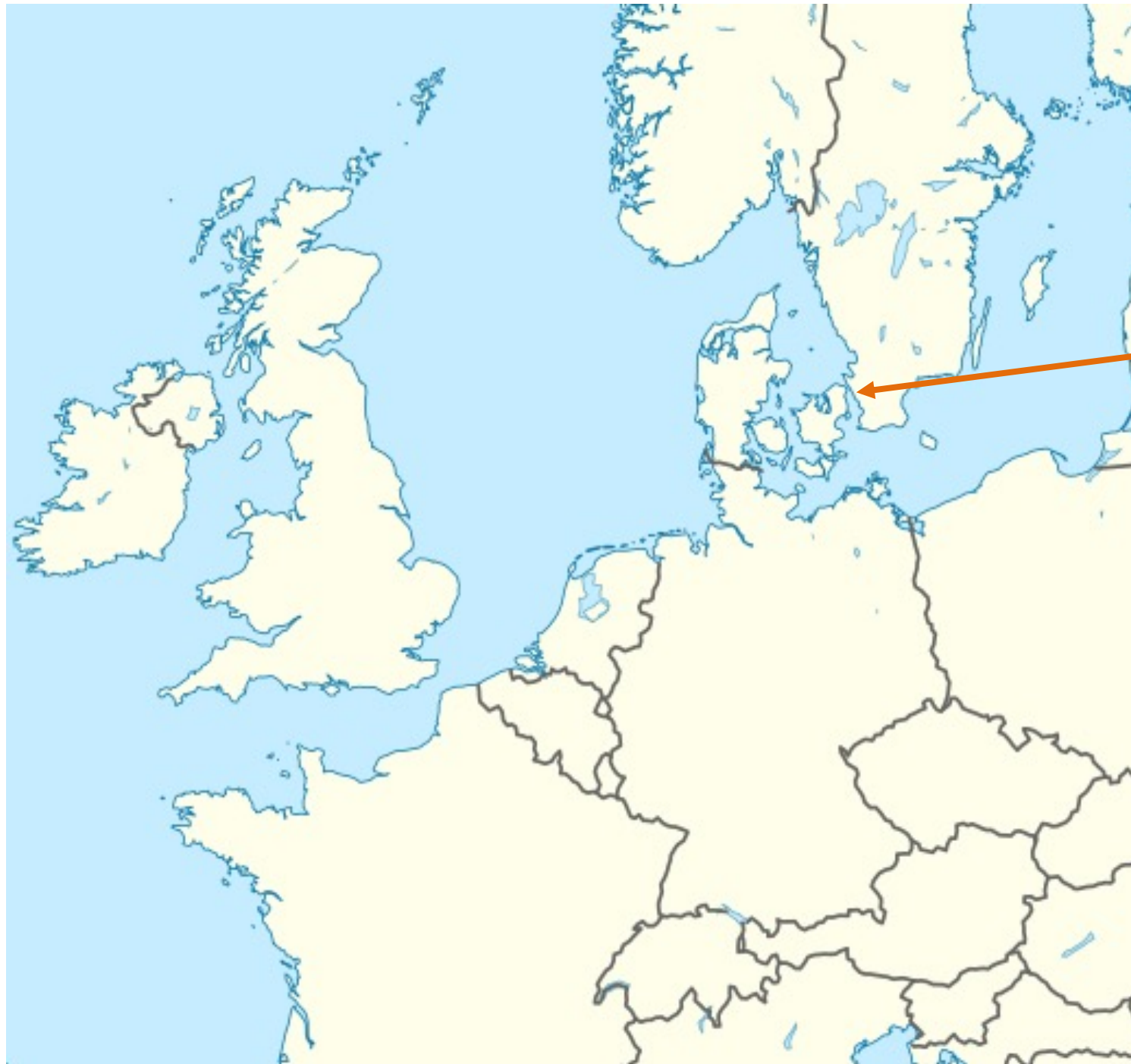


RecoLab [recovery lab]

A collaboration between Öresundskraft, NSR, NSVA and the City of Helsingborgs



Wastewater as a resource



Helsingborg

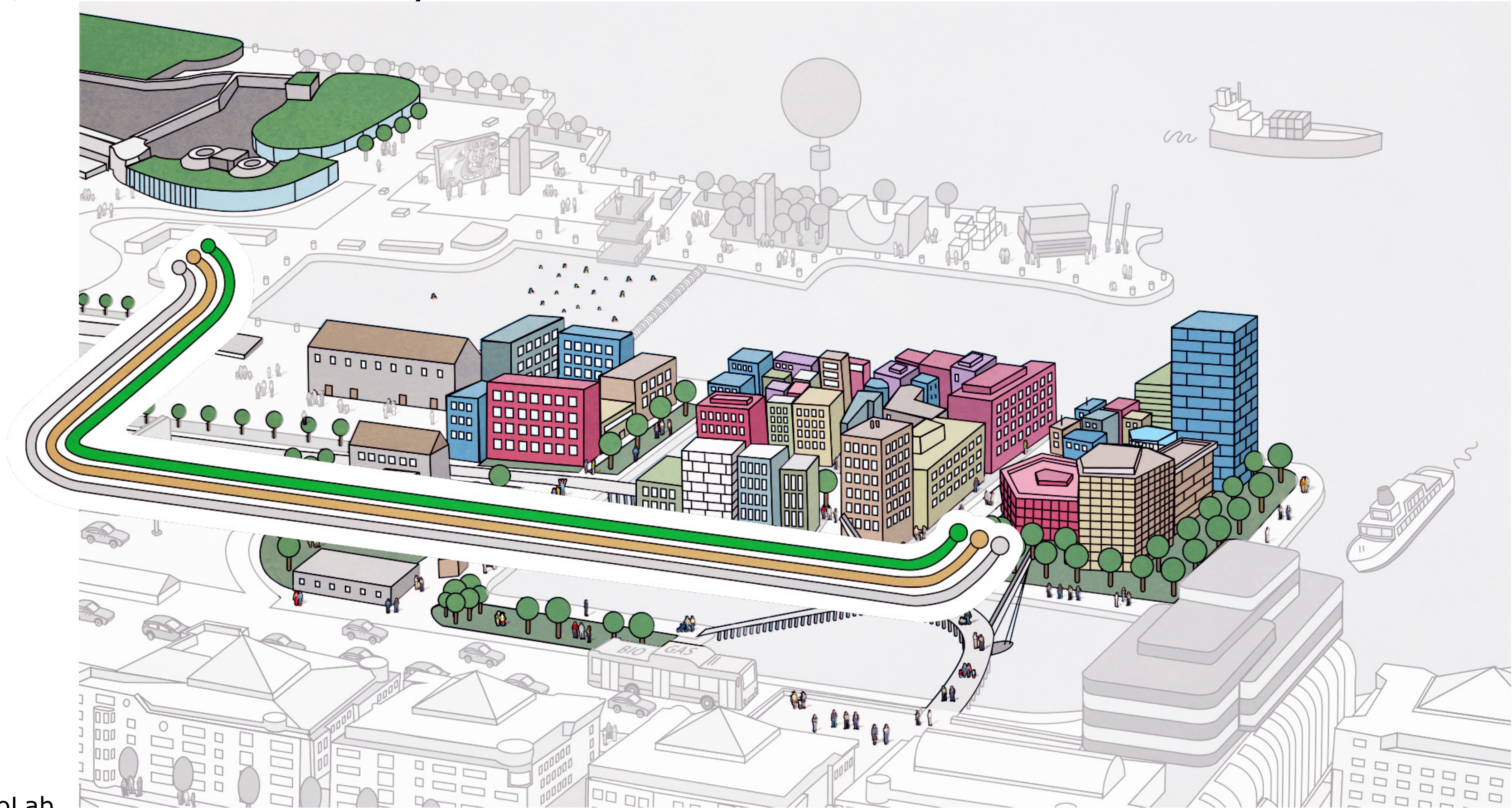


H+ is the biggest city development project in Helsingborg in modern time



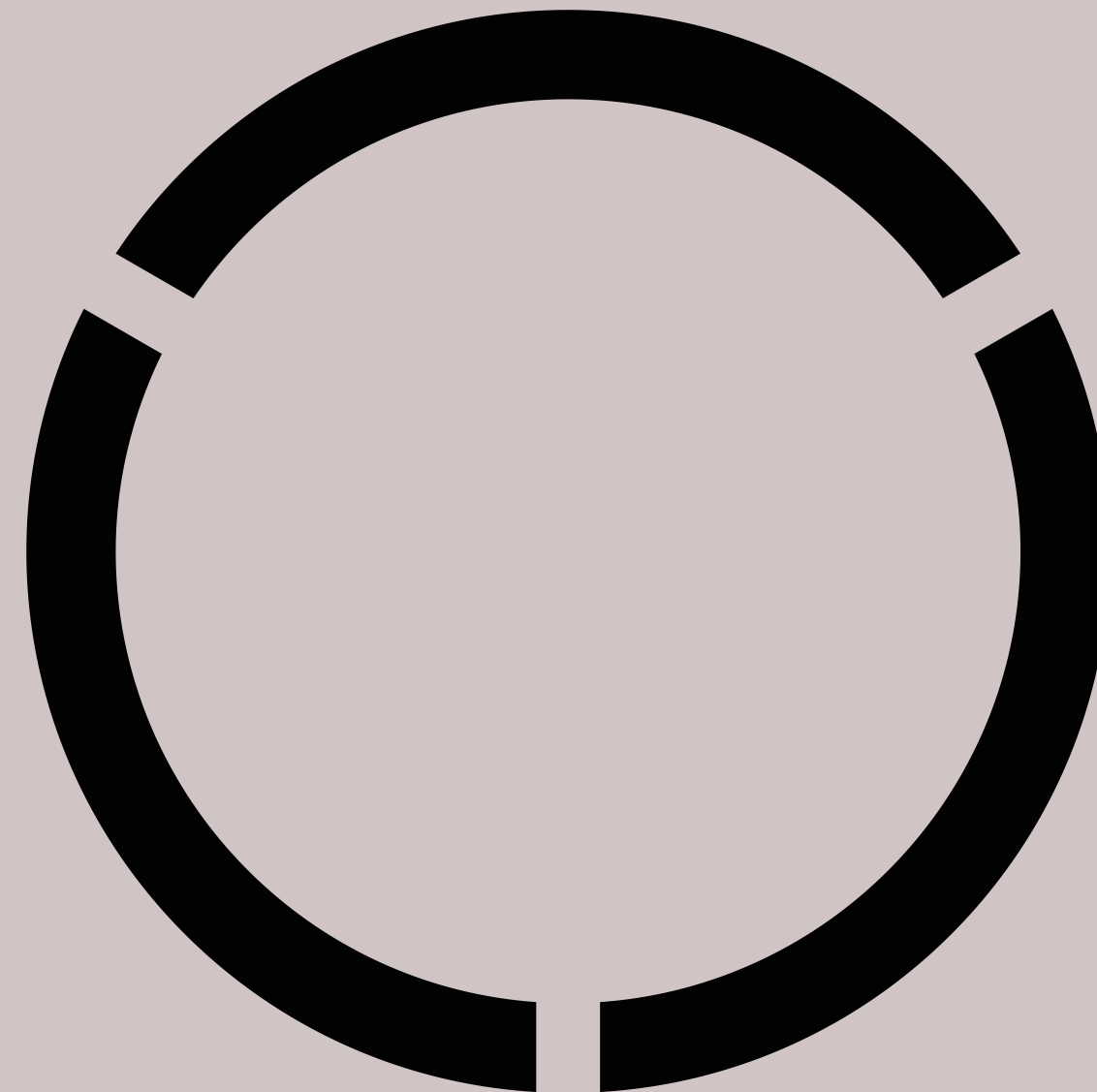
Oceanhamnen (the Ocean Harbour) is one area within H+

The city of Helsingborgs, NSVA (wastewater company), and NRS (waste company) have together developed the concept **Three pipes out** as the future system of wastewater and waste.



Three pipes out

- The properties in Oceanhamnen are being built with a source-sorting sewage system - Tre Rör Ut.
- Separated sewer streams mean new opportunities for caring for resources in the sewer.
- RecoLab gets a central and attractive location in the city. Inviting green areas by the sea become public and public areas.



Differences in buildings

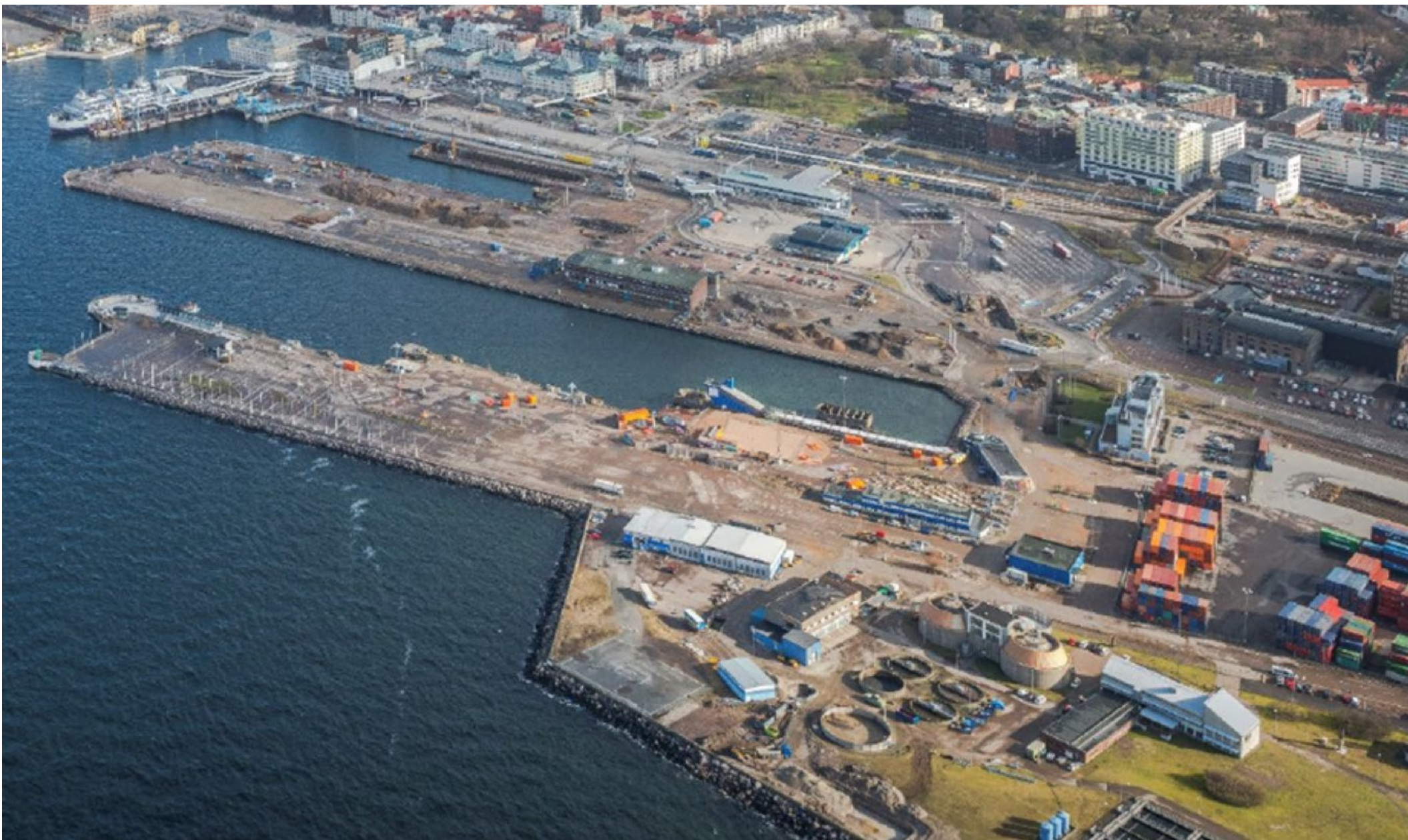


Food waste grinders



Vacuum toilets

2013



2030





Showroom →

Recovery plant →

Test bed →

Showroom

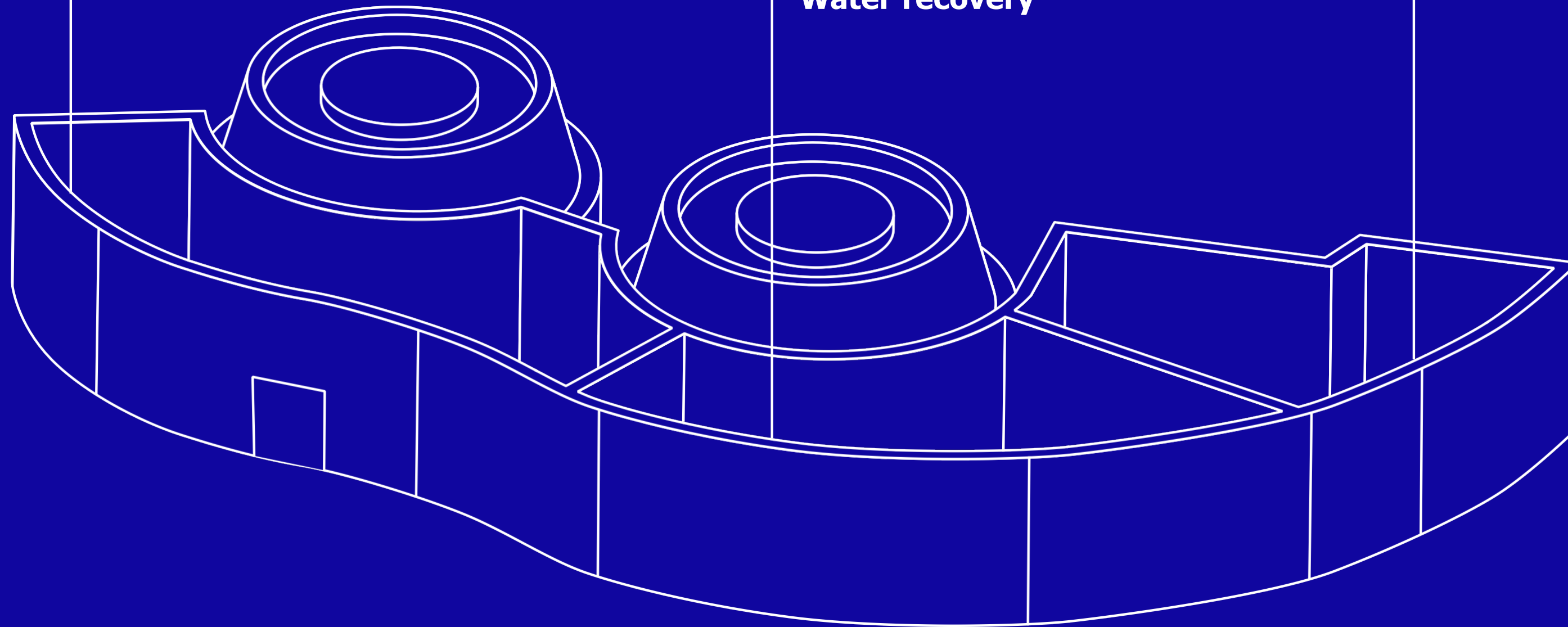
Meeting place
Exhibition
Workshops
Business spaces

Recovery plant

Biogas production
Nutrient recovery
Removal of organic micropollutants
Heat recovery
Water recovery

Testbed

Businesses and universities
test new technology



Resources from recovery plant



Nutrients

We will recycle three times as much phosphorus (in cleaner form) and seven times as much nitrogen, compared to conventional sewage management.



Energy

Thanks to a concentrated and separated flow of black water and food waste, we can produce 60-70 % more biogas per person per year.



Clean water

Thanks to a sorted sewage system, grey water can be recycled into water with possibly drinking water quality. With heat exchange, we recover the heat.



Other resources

The system also means reduced emissions of climate-affecting gases, nitrous oxide and carbon dioxide, as well as an energy-efficient removal of pharmaceuticals.

Development plant maximum capacity 2500 pe

Today about 700 pe connected

Greywater treatment opened in May 2021

Blackwater and food waste treatment September 2021

Continuing start-up period, about 3-5 years for stable operation and evaluation





Resources from recovery plant on farmland



Recycled water



Our goal

The goal of RecoLab is to contribute to the sustainable development of our society. An interactive exhibition environment serves as a common knowledge platform and catalyst for creating cross-industry discussions. Together with partners, we will find synergies and circular economies that bring benefits to society, today and in the future.

Common goal

A common drive for change for sustainable city development has been the backbone of the collaboration between the organizations. The city of Helsingborg had a vision early on and has pushed for the vision to become reality through the collaborating organizations.



RecoLab

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RecoLab



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Development engineer



www.macrosystem.se



Social Evaluation of New Sanitation Experiments



www.run4life-project.eu