



Working on POSITIVE ENERGY DISTRICTS in Groningen (Netherlands)

8 dec. 2021

Els Struiving – sustainable demo houses

Introduction



Horizon 2020 – European Project

34 partners with Cartif (E) as coordinator

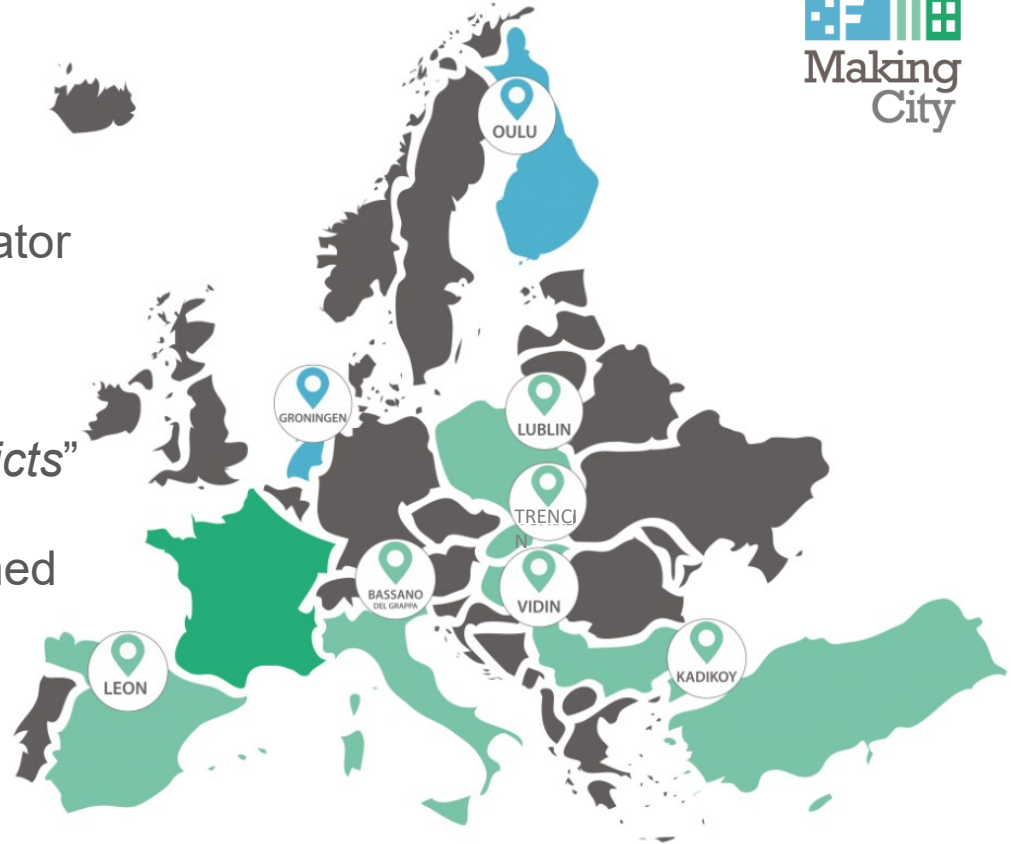
8 cities (NL, FIN, I, TR, E, P, SK, BG)

Goal: creating “*Positive Energy Districts*”

More energy generated than consumed

District level approach

Dec 2018 – nov 2023



Partners Groningen



Gemeente Groningen



Warmtestad



Rijksuniversiteit Groningen



Hanzehogeschool



Sustainable Buildings



CGI



TNO



Nijestee



Waarborg Vastgoed



Energy Valley



Grunneger Power i.s.m.



Paddepoel Energiek

PED districts Groningen



Paddepoel: residential area from the sixties



Paddepoel: active local residents



Four sustainable demohouses



Zuiderkruislaan
bouwjaar 2006



Neptunusstraat
bouwjaar 1975



Grote Beerstraat
bouwjaar 2008



Grote Beerstraat
bouwjaar 1966

Demohouse 1: Zuiderkruislaan construction year 2008



Demohouse 1: Zuiderkruislaan

- Challenges:

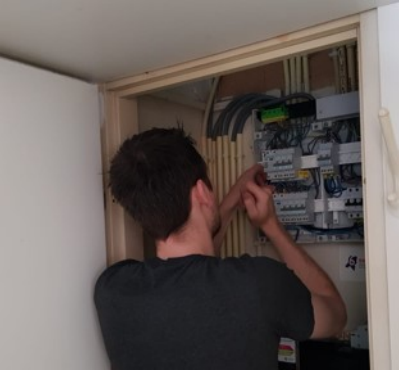
Heat pump tuning

North facing roof



Zuiderkruislaan
bouwjaar 2006

Demohouse 2: Neptunusstraat



Demohouse 2: Neptunusstraat

Challenges: Heat pump tuning in an old house, affordability, insulation



Neptunusstraat
bouwjaar 1975

Demohouse 3: Grote Beerstraat construction year 2008



- **Challenges:**

Finding the right solution + installation company

Heat pump without outdoor unit

Waiting for delivery of material



Grote Beerstraat
bouwjaar 2008

4th demohouse construction year 1966



Grote Beerstraat
bouwjaar 1966

Demohouse 4 (1966)

Challenges:

Former Social housing house

Financing renovation measures

Finding installation companies



Dissemination: spread the word!



Duurzame Huizendag
30 oktober 2021



MAKING-CITY is a 60-month Horizon 2020 project launched in December 2018. It aims to address and demonstrate the urban energy system transformation towards smart and low-carbon cities, based on [the Positive Energy District \(PED\) concept](#). The PED concept will be tested and validated in [two Lighthouse cities](#): **Groningen** (Netherlands) and **Oulu** (Finland).



Check MAKING-CITY Groningen on:
www.makingcity.eu

Follow the demohouses on:

Facebook

www.facebook.com/MakingCityDemohuizenPaddepoel/

LinkedIn

www.linkedin.com/company/67550227/

Instagram

www.instagram.com/mc_demohuizen_paddepoel/