

# Annex HP in PED Projects Sweco

30/01/2023

# Overview

**Climate transitions on a district level with a focus on energy (concept phase)**

## **Finished**

'Buurtkracht' – Fossil free districts in Bruges

*City of Bruges*

Climate District Ter Elst

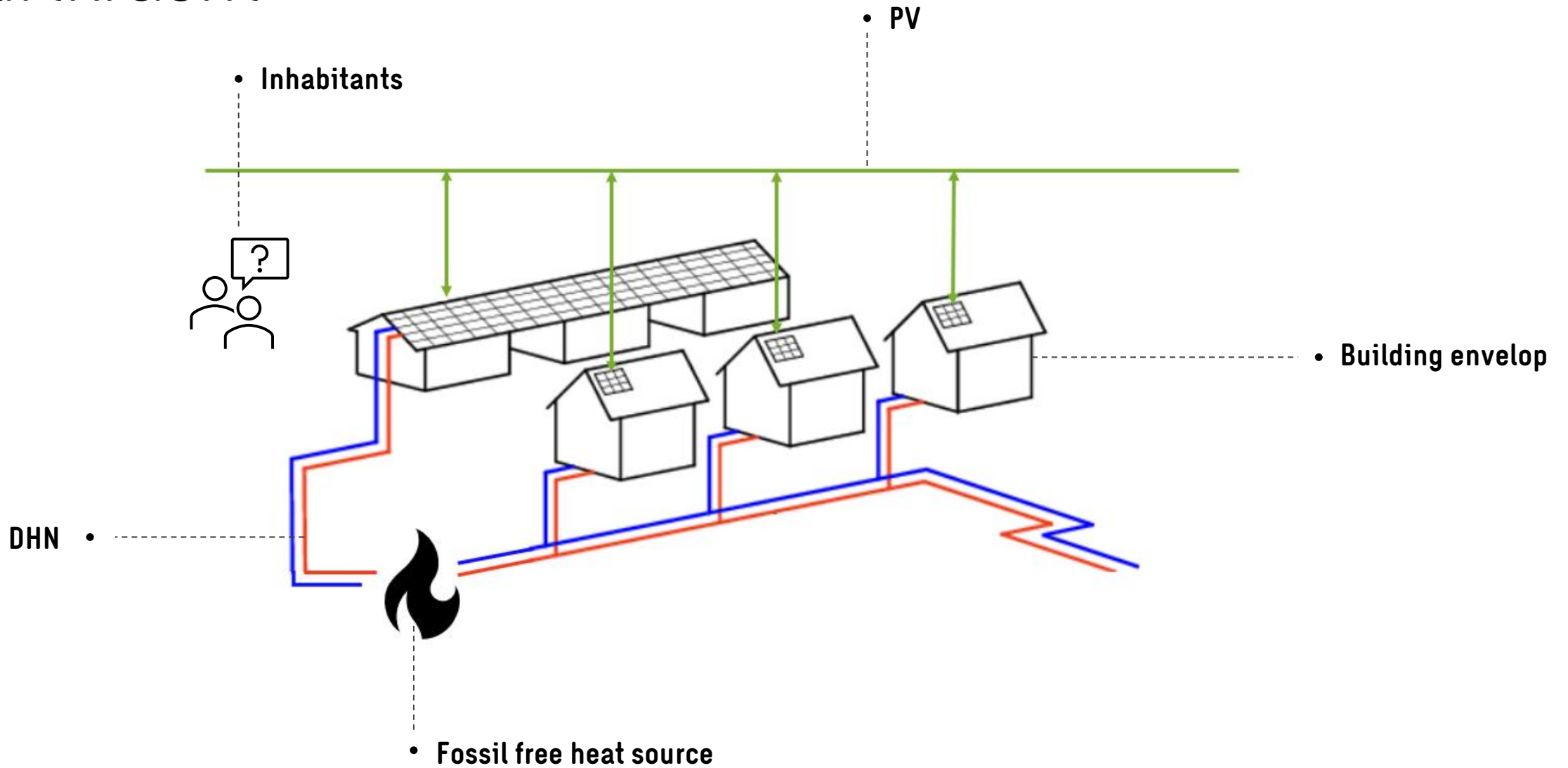
*Department for environment*

## **Just started**

Climate Districts – Social Districts

*Department for environment*

# Buurtkracht



# Thermal solution

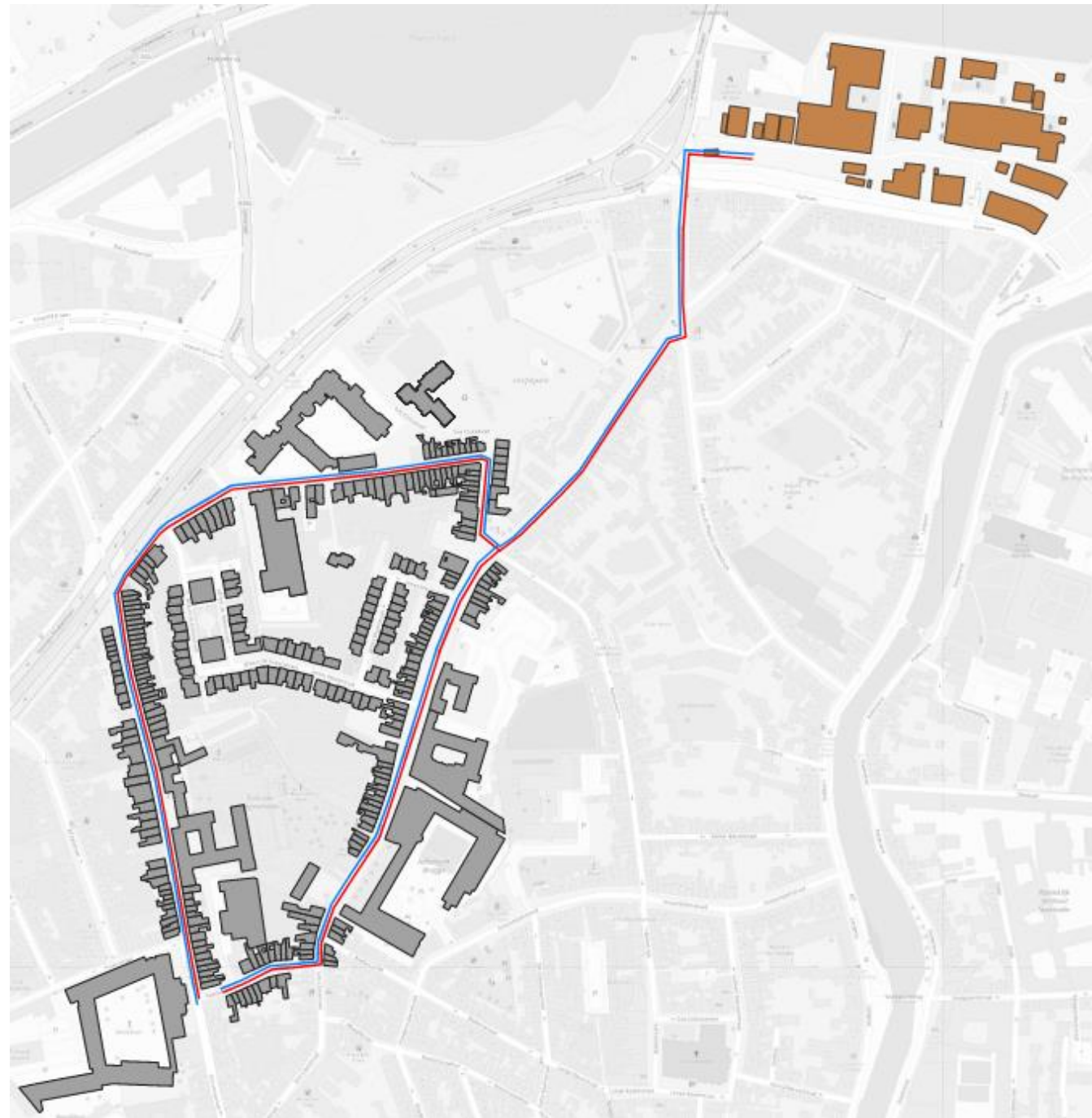
DHN based on residual heat

- Central heat pump – 70°C network
  - Individual heat pump – 30°C network
  - Optimizations in design and control due to complementary consumers
- Further research

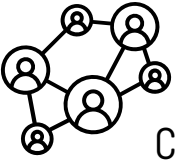
More recent district:

- Encourage their ambition for a fast transition
- “Robust” individual solutions
  - PVT
  - Air source heat pump
- Optimizations to small collective solutions → further research

→ Heat pump technology is crucial in energy transition

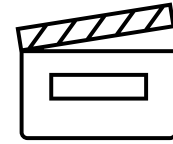


# Actions and challenges



## Commitment of stakeholders on all levels

- Integrate climate actions in all urban activities
- Convince inhabitants to participate in collective solutions
- Conclude agreements with other important stakeholders (public and private sectors)



## From plan to action

- Actively offer
  - Renovation scans
  - Collective renovation actions
  - → min 3% renovation rate
- Inform and sensitize the inhabitants
- Participation of all stakeholders

→ District energy charter

# Climate district Ter Elst – Leuven



Transition from garden districts to climate districts

- Water
- Mobility
- Renovation
- **Energy**
- Finance
- Action plan  
→ participative strategy

Boundary conditions and challenges

- Maintaining the uniform appearance
- Ownership

Governances urge to collective solutions

- No business case could be found for a DHN
- Collective rollout of individual heat pump  
→ “Energy box”  
→ Opportunities of the modal shift

2023



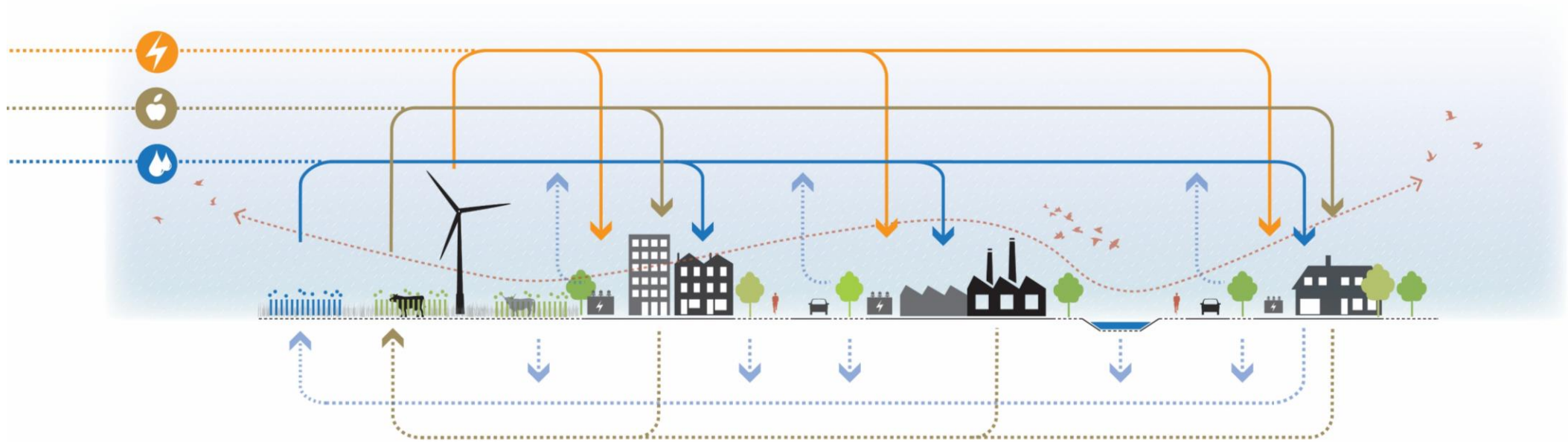
2050



# Climate districts – social districts

Goal: integral sustainability vision for social districts to make the transition to climate neutral districts

- General track: generic transition guide for social districts in general
- Proof of concept with example districts in Bruges in Eeklo



# Climate districts – social districts

## **Different topics**

- Houses and renovation
- Spatial structure and quality
- Energy systems
- Inhabitants and support base
- Process and organisation
- Finance
- Climate adaptation

## **Current phase:** research to challenges and opportunities

- Specific socio-economical mix → finance
- More tenants → lever to collective solutions
  
- Literature study
- Work sessions with different stakeholders on different topics