



Heatropolis Beta

Energy Innovation Summit 2025

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Heatropolis Beta Overview

Heatropolis Project Purpose

- Pioneering technical and commercial solutions to unlock heat network flexibility.
- Drive better outcomes between heat and electricity networks.
- Enable more efficient use of electricity network capacity so that heat networks can decarbonise faster.

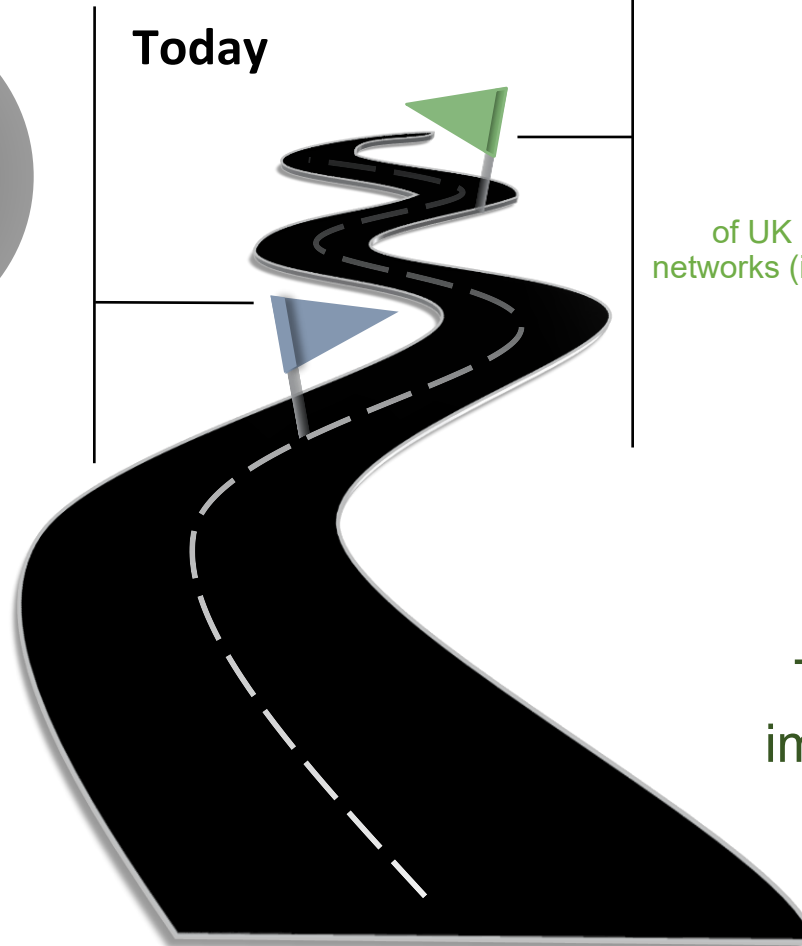
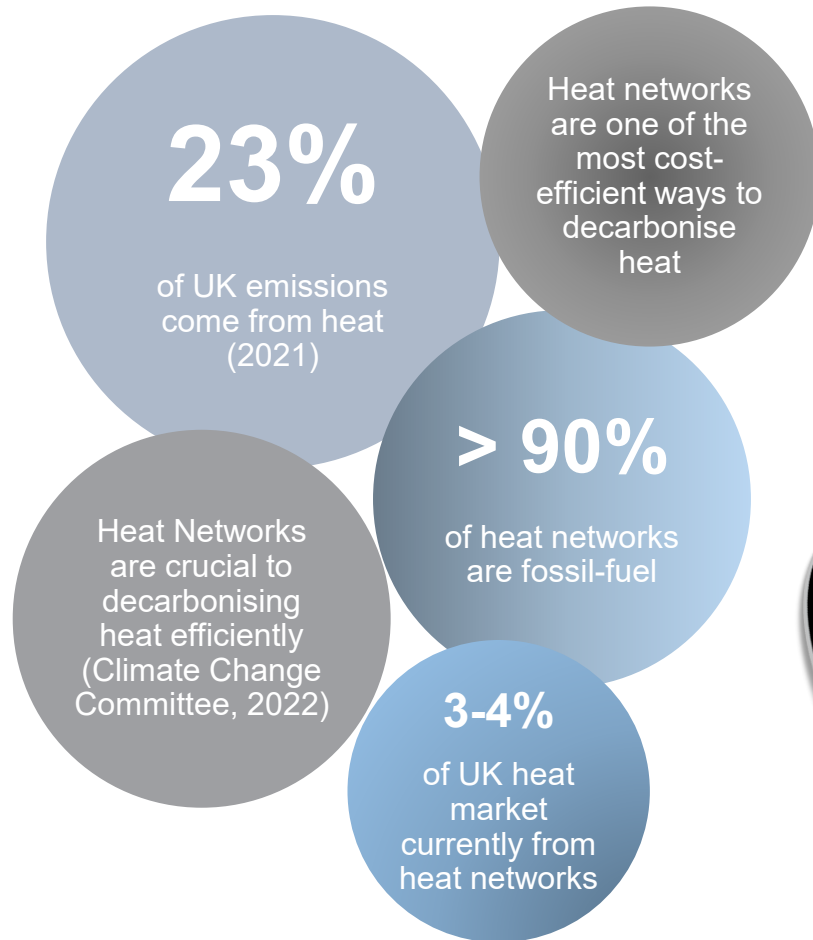
Funding Mechanism

The Strategic Innovation Fund (SIF) aims to help transform gas and electricity networks for a low-carbon future. It is funded by Ofgem and managed by Innovate UK.

Leadership and Partners



The Heat Decarbonisation Challenge



Today

Looking Ahead

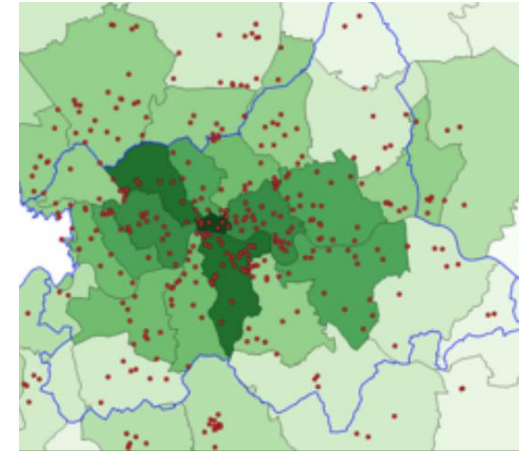
20%

of UK heat market from heat networks (increase from 3-4% today)

> 80%

of heat networks will be driven by electricity and heat pumps

This growth will have a significant impact on **peak electricity demand**



The Heatropolis Solution

Existing system: Gas-powered boiler and CHP system

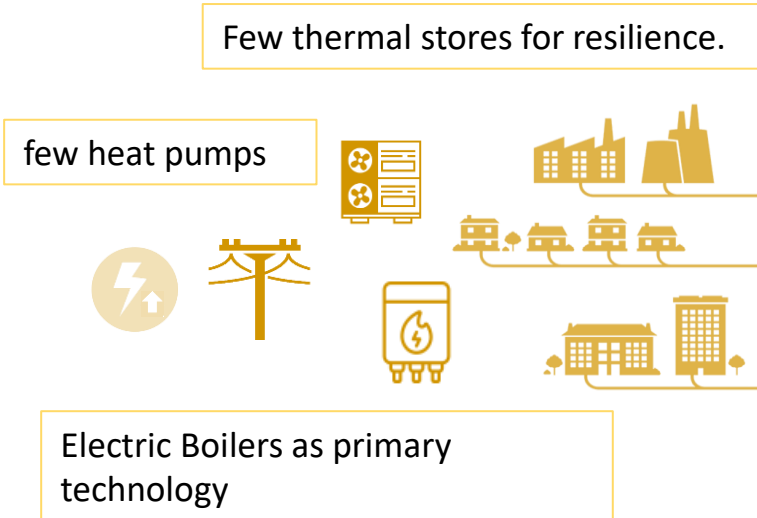


Fossil- fueled system

Few thermal stores for resilience.

*Heating demand met through **natural gas** combustion.*

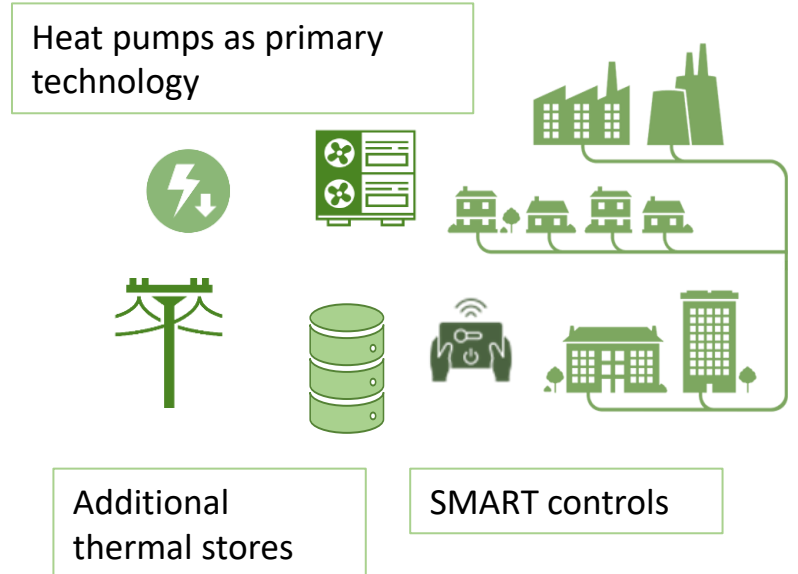
Counterfactual: Transition to electric boilers & few heat pumps



Electric Boilers as primary technology

***Inflexible load** contributes to peak network load **increase** on DNO.*

Heatropolis: Transition to heat pumps and thermal stores



***Highly flexible load** from thermal **optimises** use of electricity network.*

Heatropolis Project Timeline: Discovery to Beta



Discovery Phase

April 2023 – July 2023

Developed a **business case** comparing a **counterfactual heat decarbonisation** plan, with a new **smart system** design and defined the overall value proposition.



Alpha Phase

October 2023 – April 2024

Explored what **commercial mechanisms** are needed to unlock this value and **test the feasibility** of the technologies that will be needed to realise this benefit.

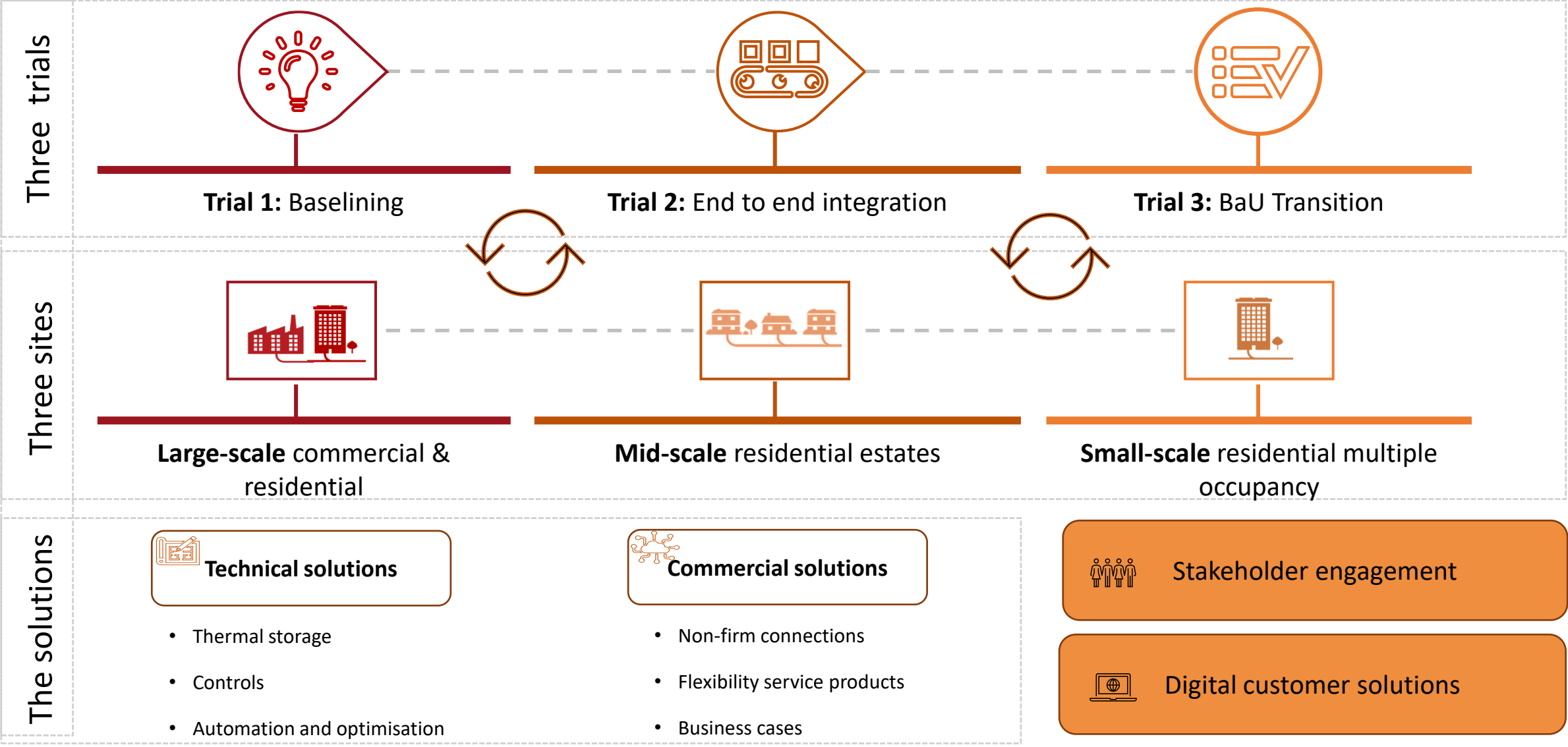


Beta Phase

November 2024 – December 2028

Trialling the system in a live environment, validating assumptions, and refining both the technology and commercial models ahead of **full-scale deployment**.

Heatropolis will conduct trials at three heat network sites



Heatropolis trial 1: Baselineing



Large-scale commercial & residential (King's Cross)



Mid-scale residential estates (Chilton Woods)



Small-scale residential multiple occupancy (TBC)



Technical solutions

Building level peak demand reduction trials.



Commercial solutions

Capturing baseline ahead of the decarbonization.



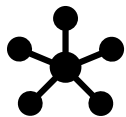
Customer engagement

Capturing customer experience of the Heatropolis solution.

Heatropolis Progress to date: Consumers Primary Research

We have been conducting primary research to understand the views of wider UK heat network end consumers.

60%



Willing to **share heating usage data** to support more efficient demand management.

73%



Are comfortable using **digital tools or smart controls** to monitor or manage their heating.

3/4



Are open to **flexible heating**, especially if it leads to **lower bills or rates**.

75%



Care about the **environmental impact** of their heating supply, while 63% believe **heat networks can be more environmentally friendly** than alternatives.

61%



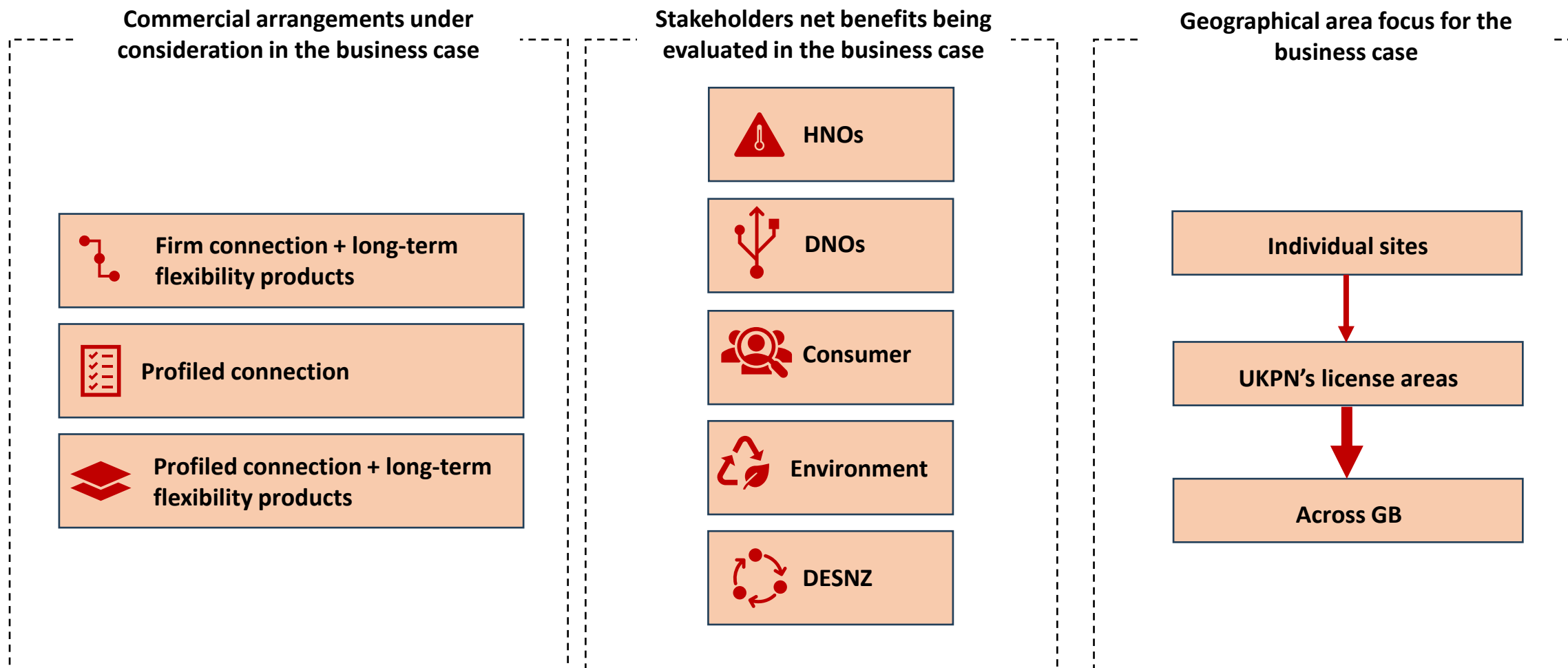
Heat networks customers are **satisfied** with the **comfort levels** provided by their heating.

<50%

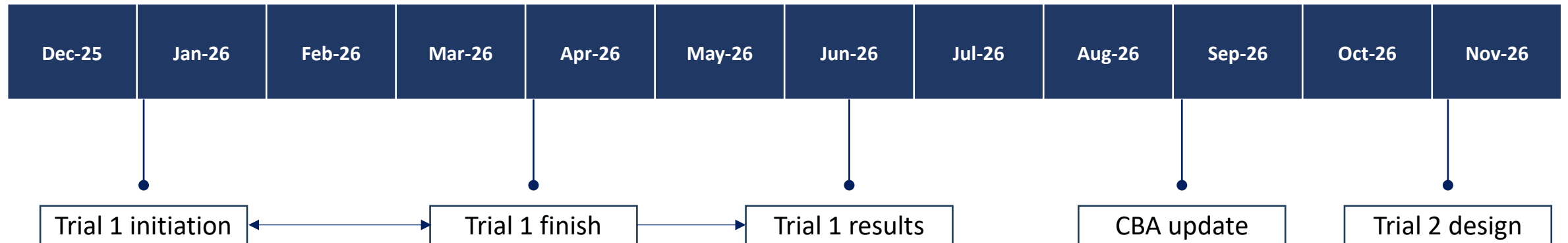


Understand how heat networks work or how **heat charges** are calculated

Heatropolis Progress to date: Commercial Arrangements and Business Case



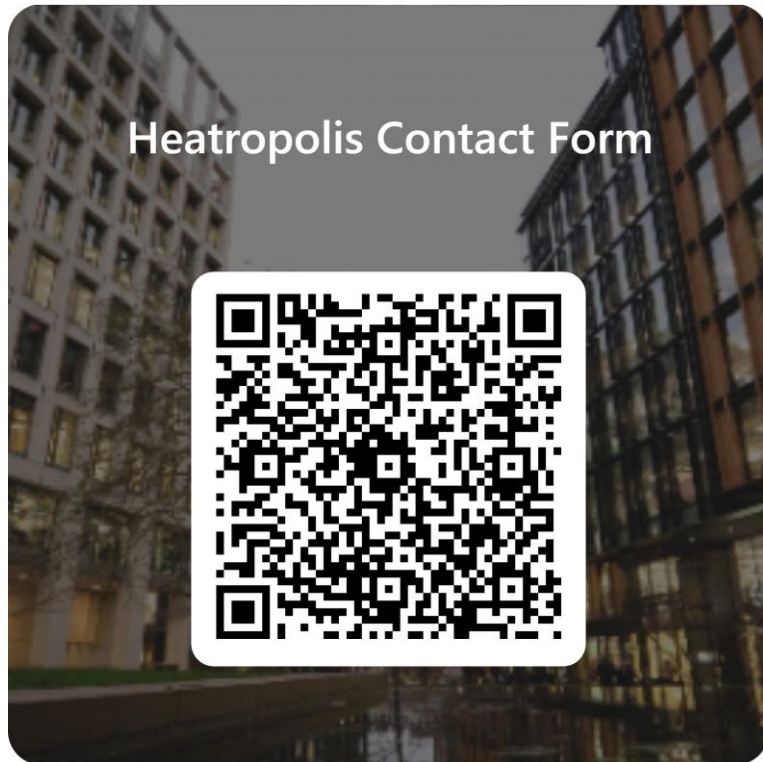
What's next



Stay in touch

Sign up through the QR code

Scan the code to receive project updates and stay connected.



Reports & updates

Find all project outputs on:

 [Heatropolis - UKPN Innovation](#)

Questions or collaborations?

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