

HeatCOOP

prototype of
an **Innovative Organisation Model**
for decarbonisation of heat supply
in urban neighbourhoods
based on **Heating Cooperatives**

Ownership of the Building

The house is in share ownership,
i.e., it is owned by individuals on the basis of their shares.
The house has a total of 9 co-owners

Building Construction and Technical Condition

The structural system of the house is a masonry wall
longitudinal structural four-stroke.

Heating is solved at the level of individual apartments.
The heating is provided by an electric storage heater
and gas wafers.

There are no ventilation or cooling systems in the building.

Domestic hot water is heated at the level of individual
apartments. Electric boilers are used to heat hot water.

In terms of the energy performance of the building,
the house in question falls into energy class E

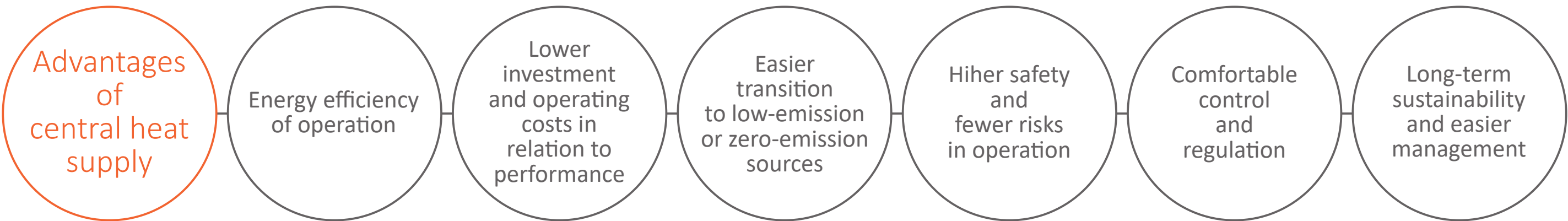
Information on
the **LIVING LAB**
in the **Czech Republic**



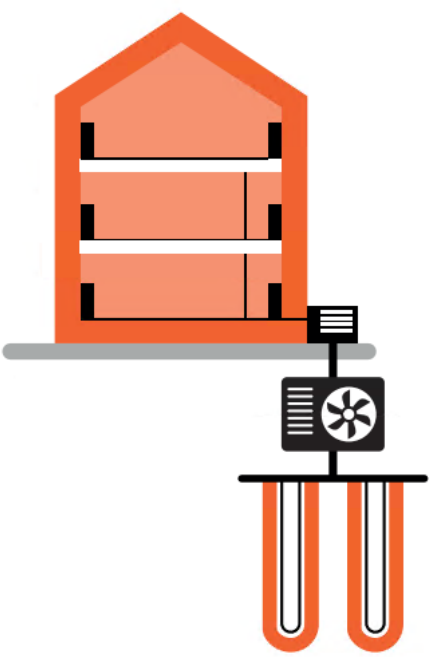
Prague
Holešovice district



More about
HeatCOOP and Living lab
www.svn.cz/heatcoop



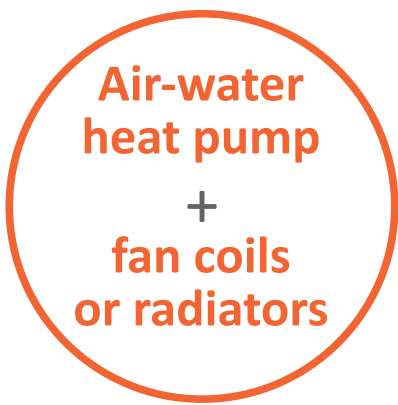
Phase I



- **Contacting the owners of the selected property**
- **Agreement to conduct a feasibility study**
- **Development of a technical solution and financial analysis**
- **No insulation = higher power requirement**
 - Heat source: 160 kW
 - cascade of commercial heat pumps required
- **Installation in courtyard/basement**
 - increased costs for handling, acoustics, permits.
- **Ground/water Heat pump - Complicated in this area**
 - Densely built-up area, heritage conservation zone
 - A geological study and special approval are required

Comparison of the most suitable solutions for the building

The most
economical and technically
feasible solution:

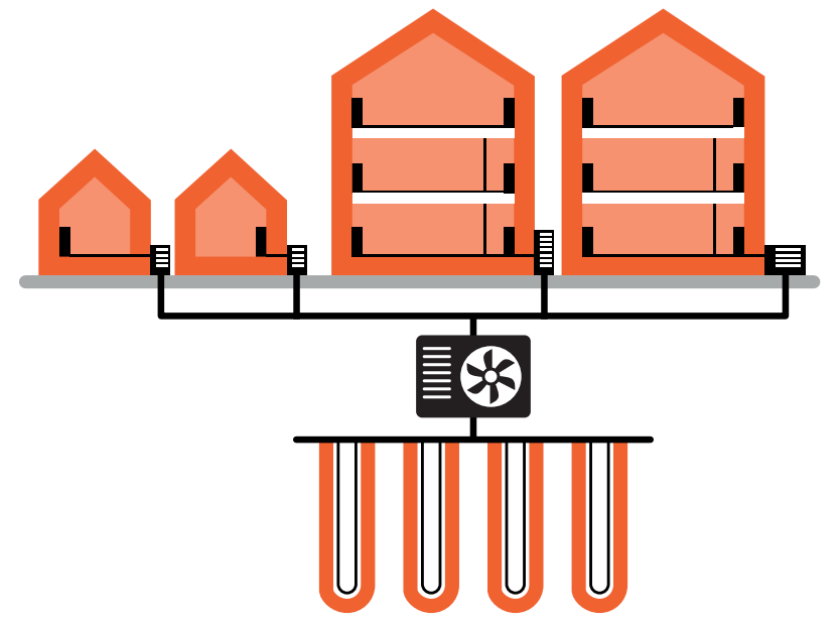


	Heat Pump Air-Water + radiators	Heat Pump Air-Water + fan-coils	Heat Pump Air-Water + ceiling systems	Heat Pump Ground-Water + ceiling systems
Total investment cost [thousand €]	240 - 280	300 - 340	360 - 400	500 - 560
Installation difficulty	Low	Medium	High	High
Heating comfort	Low	Medium	High	High
Cooling option	No	Yes (Air)	Yes	Yes
Operating costs	Medium	Medium	Low	Low
Need for construction modifications	Low	Medium	High	High

The ceiling system is elegant solution, but difficult to install and coordinate with tenants
Fan coils also enable cooling and provide greater comfort

Phase II

- **Inviting neighbouring buildings to join the project and ultimately enlarge its scope.**



- Gas heat sources are cheaper than heat pump solutions in the Czech Republic in terms of investment and operating costs.
- To choose a heat pump, building owners need to focus more on the environmental and social aspects than just the economic ones.

Barriers

- **High investment costs of heat pump systems for the whole building.**
- **Building-wide construction works.**
- **Reaching agreement among the owners.**

Project partners:



This project is co-financed from the state budget
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NÁRODNÍ
PLÁN OBNOVY



Driving Urban
Transitions



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