

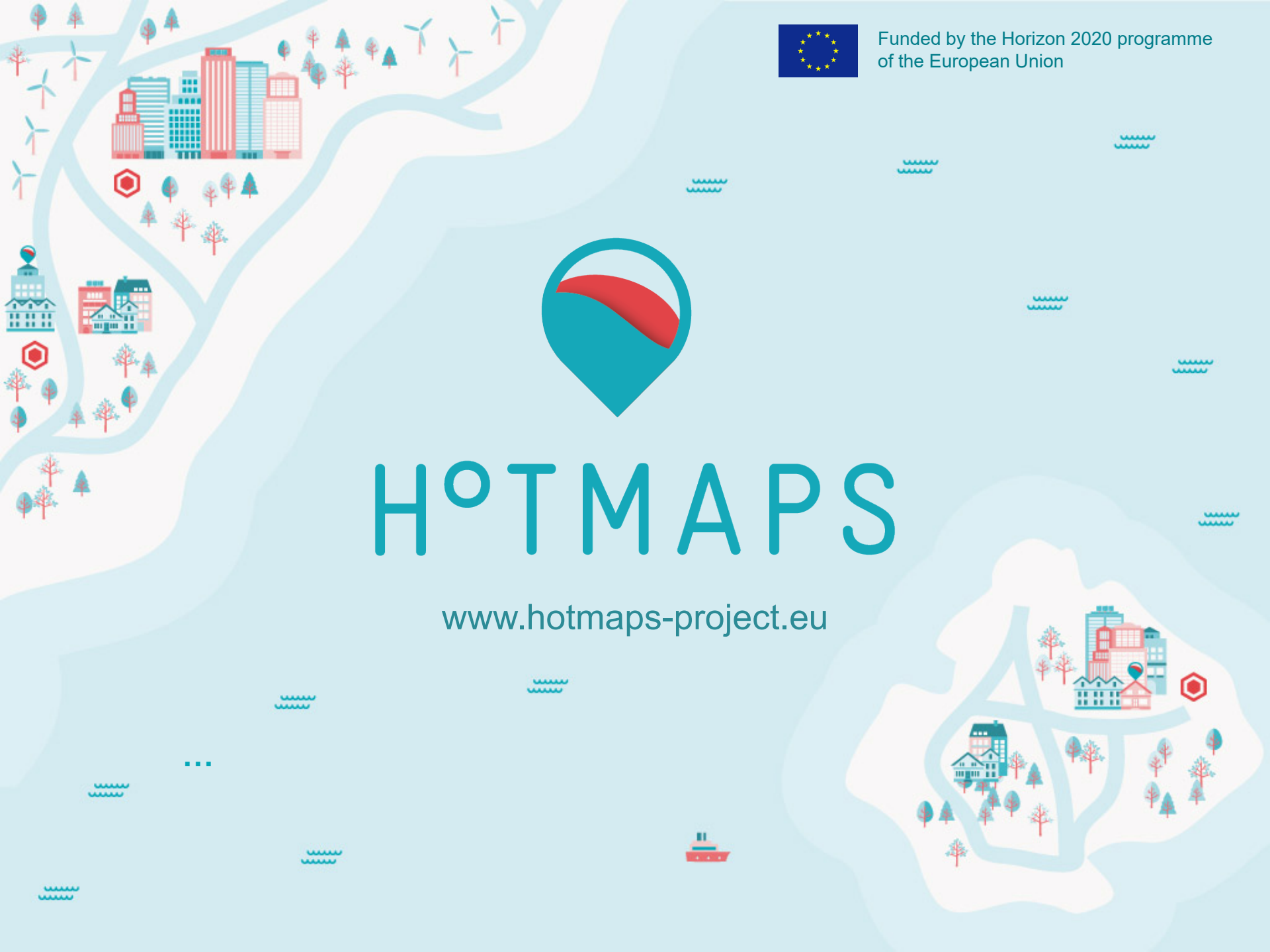


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Hotmaps

Final Conference

Frankfurt goals and strategy

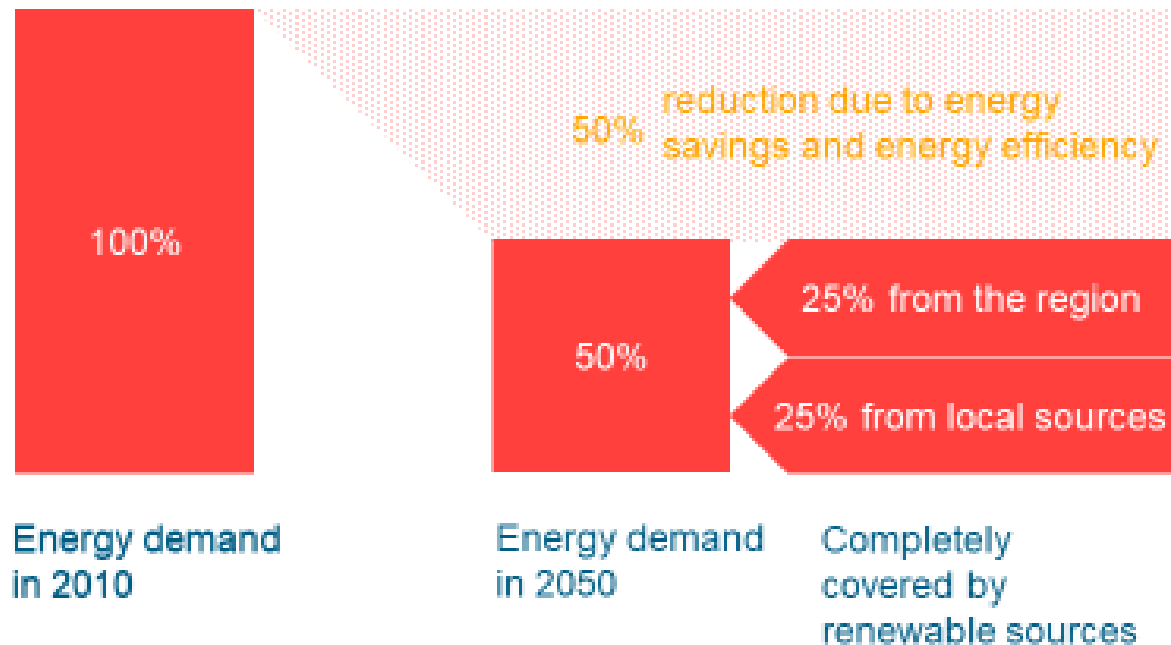
Paul Fay, Energiereferat Stadt Frankfurt am
Main

Frankfurt, 30.6.2020



Frankfurt Goals? – reduce demand by 50% and be carbon neutral in 2050

Masterplan 100% Climate Protection

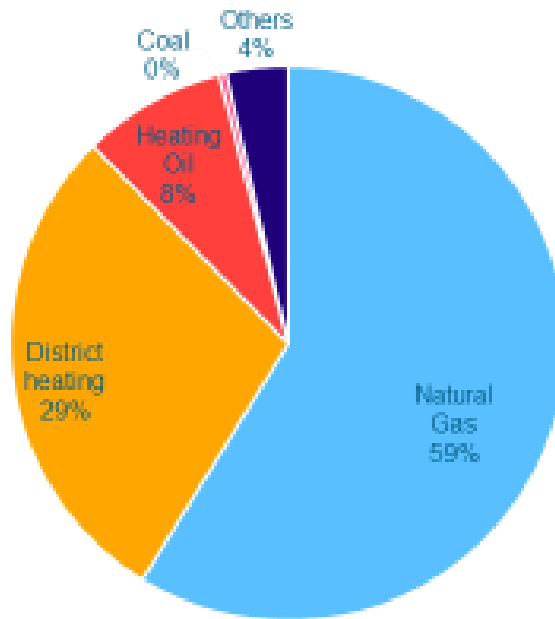




Actual situation

Heating System in Frankfurt approx 70% dependency on Natural Gas and 90% on fossil fuels

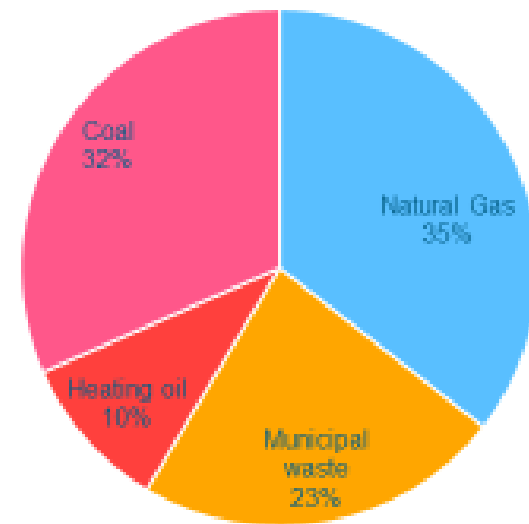
End-energy mix for heating*



* Without industrial sector

Total 7,3 TWh

Energy mix for DH



Total 2,4 TWh



How get rid of fossil fuels?

- Reduce Energy demand for heating
 - Increase refurbishment rate of buildings
- Challenge:
 - Growing population
 - Growing workplaces
- Opportunity
 - Use excess heat
 - Expand DH-Network



Findings of Hotmaps strategy development

- DH is the system with the total lowest cost for providing 100% renewable heat (gap between 50-100 €/MWh compared to decentralised solution) – but maybe no business case for the local utility
- DH is the only system available to transport the excess heat which is available to the customers which maybe far away from the source
- 80% of the Buildings in the city need to be renovated (to reduce the energy demand to 53%) in order to lower the peak energy demand in winter
- Producing renewable heat seems to be cheaper than very elaborated renovation of buildings - but the problem of peak heat demand in winter remains. It still is a challenge to cover peak heat demand without fossil fuels. In Frankfurt we have a gap of 200 MW....



Next steps

- To increase the existing cooperation in further elaborating the strategy with the local utility Mainova
 - ◊ To adapt the strategy to their needs
- To convince the local policy of the strategy, in order to get a political decision to implement the strategy
 - ◊ E.g. district heating connection and compulsory use for building owners (in defined (existing) areas)



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