

CELSIUS Talk: OPTi-mising district heating solutions

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Short overview of the OPTi framework



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OPTi Project – Quick Facts



- Projekt details:

- Start date: 2015-03-01
- Duration: 32 months
- Grant total: 2.1M€

- Pilot sites:

- Luleå Energi AB (Sweden)
- Sampol (Mallorca/Spain)

- Coordinator:

- Wolfgang Birk
- Arne Gylling

- Contact:

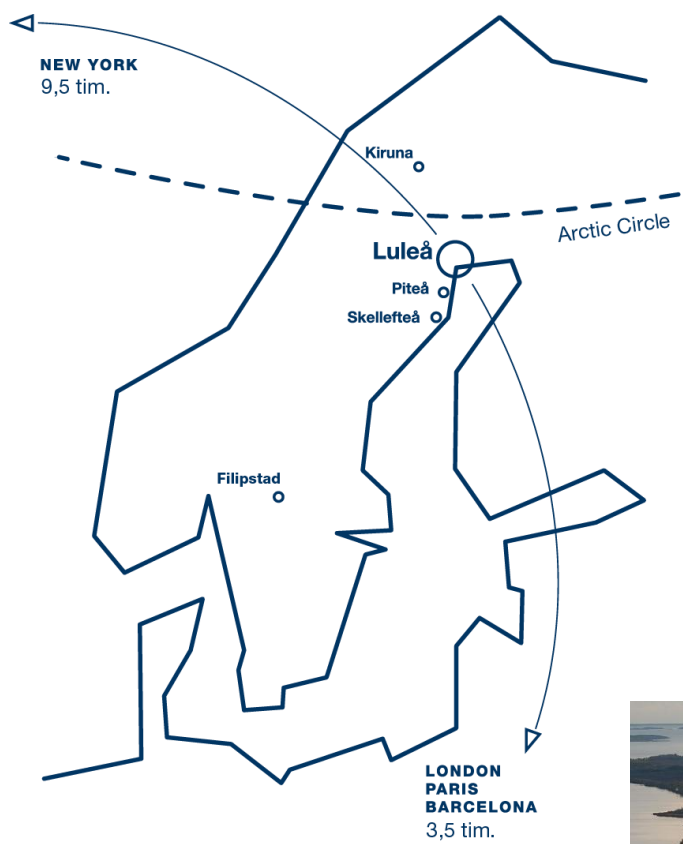
- www.opti2020.eu
- contact@opti2020.eu
- Twitter: @OPTi_h2020

- Targets:

- 5-10% less energy consumed
- 40% peak load reduction
- Validated virtual twin
- Widened comfort zone (2°)
- Increased economic benefit (15%)



Background - A Typical Scenario



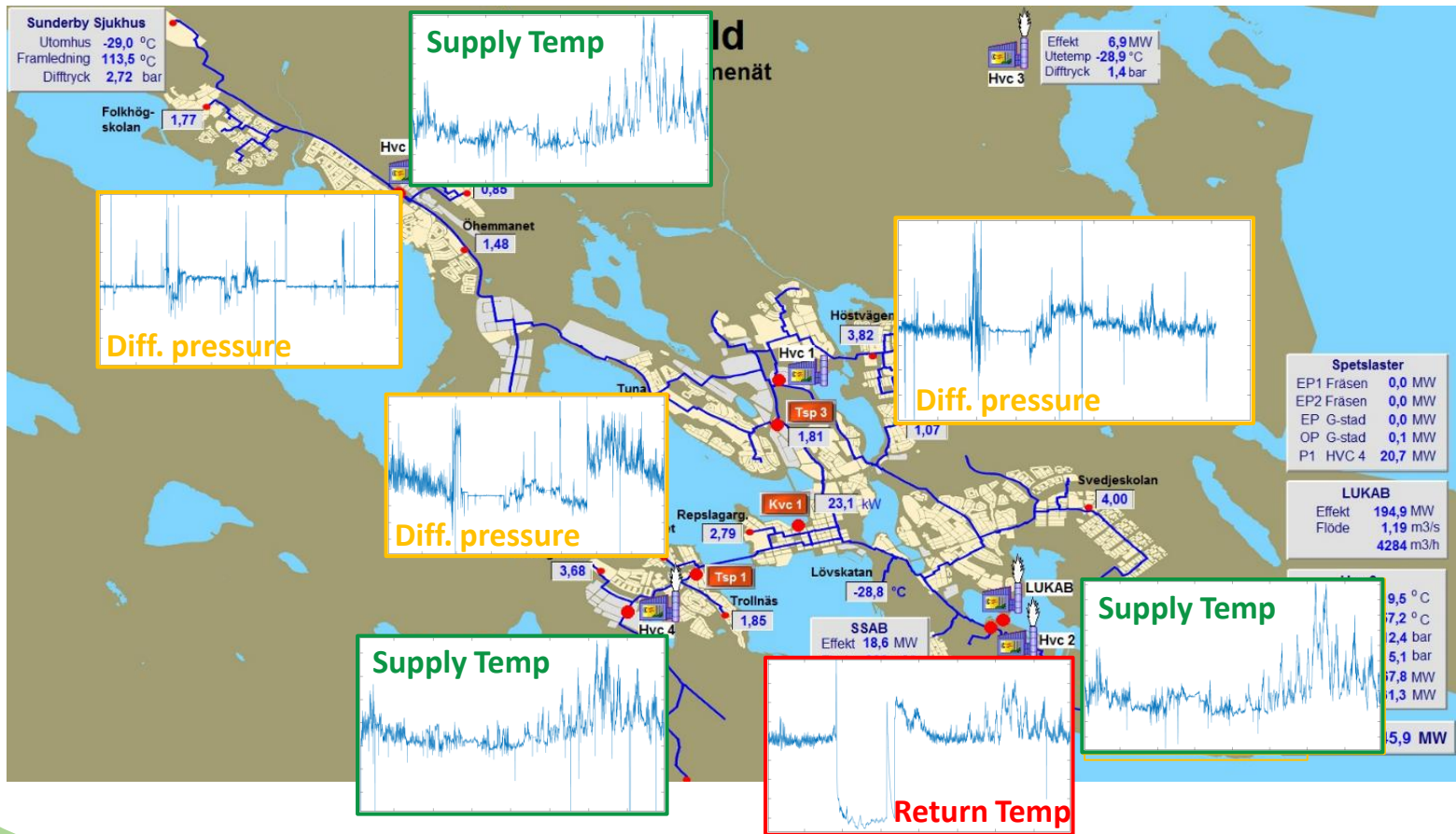
A glimpse on the complexity:

- > 46000 pipes
- > 800km total pipe length
- > 9000 buildings





A Typical Scenario – Low level view



A Typical Scenario – Some Reflections

What is missing?

- The control system usually remains invisible.
- It is also assumed it works properly and is well tuned.

In that context:

- Is the control strategy really optimal?
- Are the controllers adequate?
- Are all components really adequate?
- Do we really need to supply the determined amount of heat/cold?