



Return temperature in DH networks - Automation & Digital Optimization

Webinar, Euroheat & Power and DBDH

June 2023, Per Steffensen

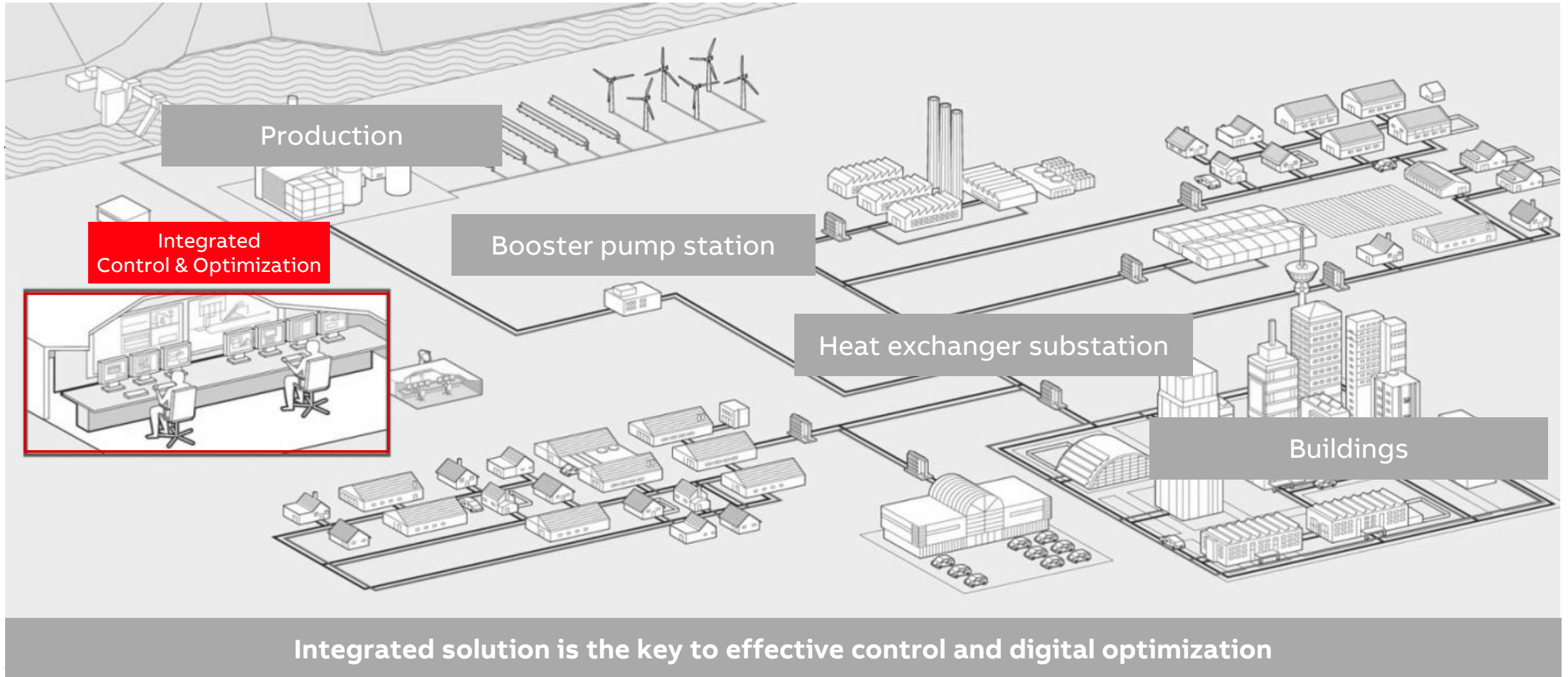




— Agenda

- ABB Integrated Solutions
- Challenges in DH networks
- Solutions and case story
- Summary

Control and optimization of district heating systems



Challenges operating District Heating Systems

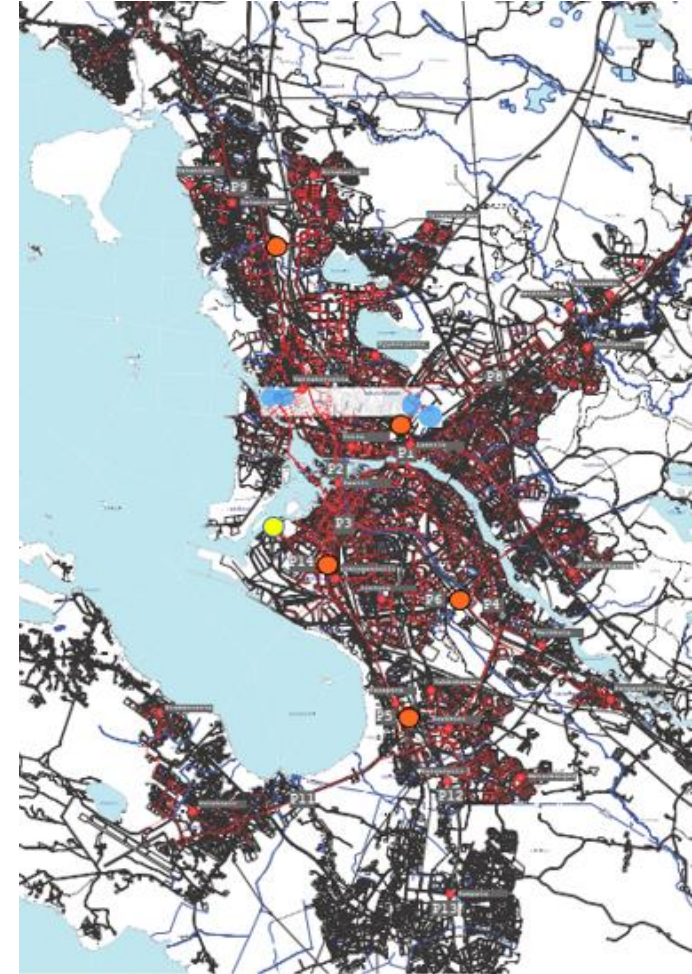
Challenges you may experience in your DH system?

- Unbalance in the network, hydraulic balancing?
- Coordinated control and optimization of heat production?
- Interconnected DH substation control?
- Heat delivery to consumers in-time (with right quality)?
- Heat loss too high?
- High return temperatures?
- Outage and disruptions due to unplanned incidence?
- Data and visibility of the DH network operation?



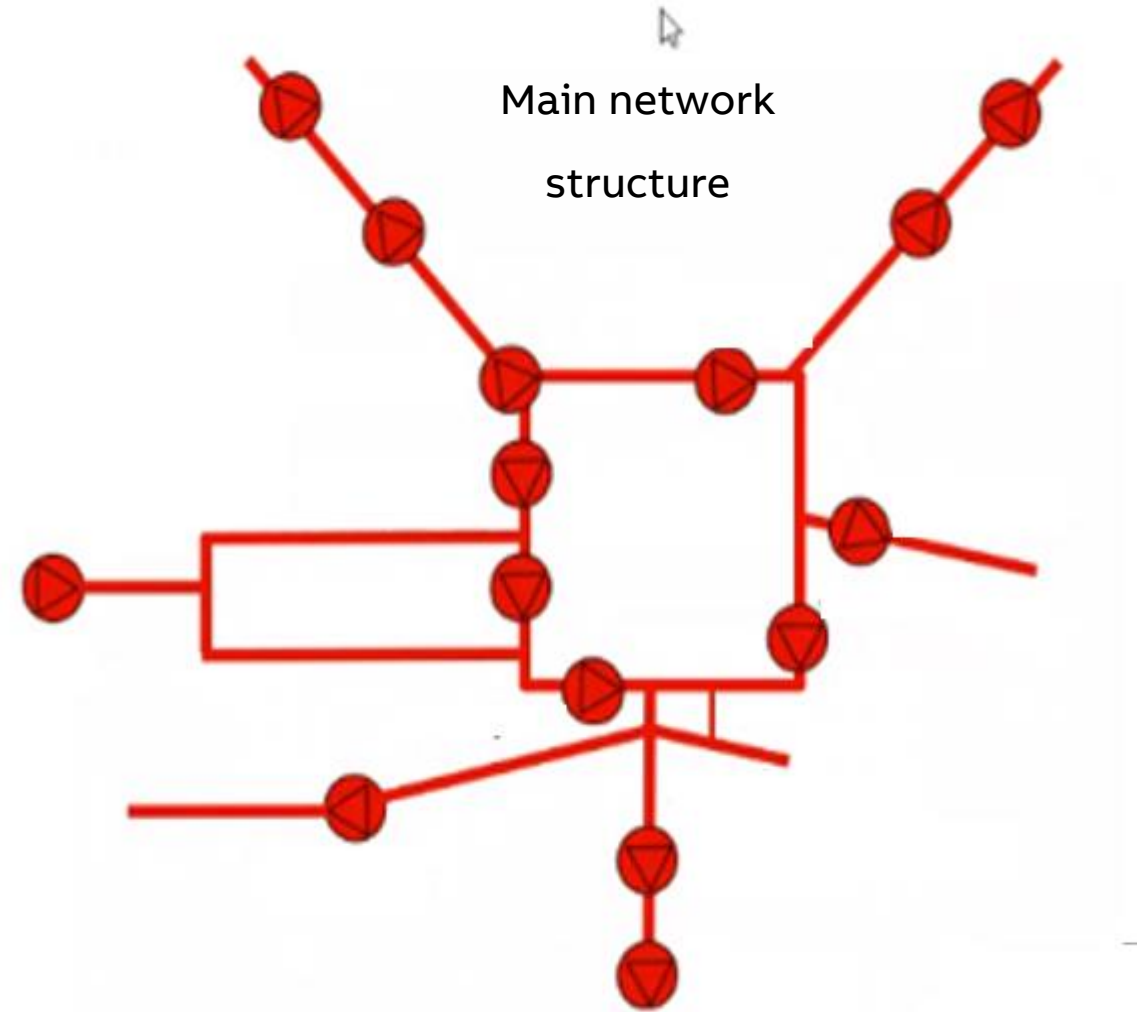
Case . Un-balanced DH network

- Complex network
- Non-connected automation
- ABB HBM (Hydraulic Balance Management) on top
- Auto-selected control points



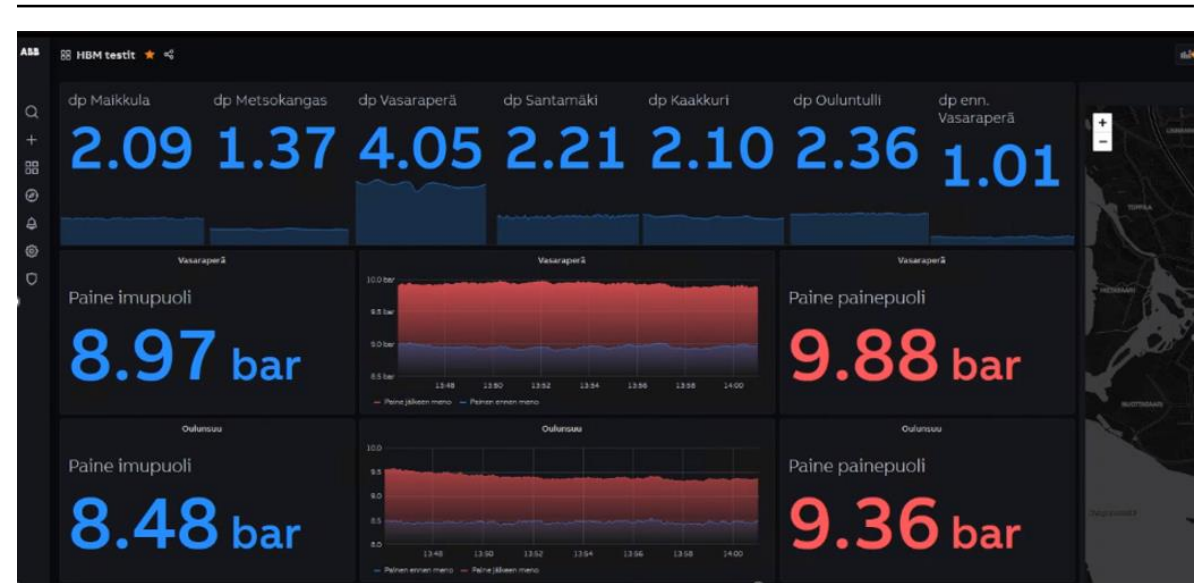
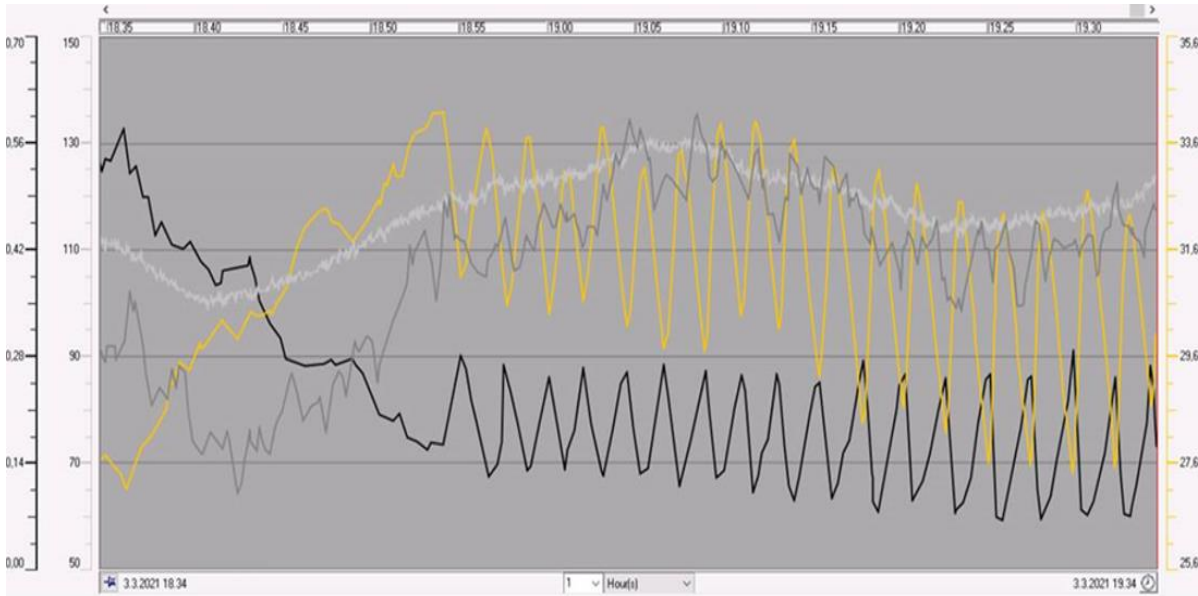
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Case. Pressure in DH Network

Before and after Hydraulic Balance Management



Dashboard presenting key KPI's using heat meter data

Used for reducing return temperature (Other KPI's: Forward temp., pressure, flow, heat consumption...)

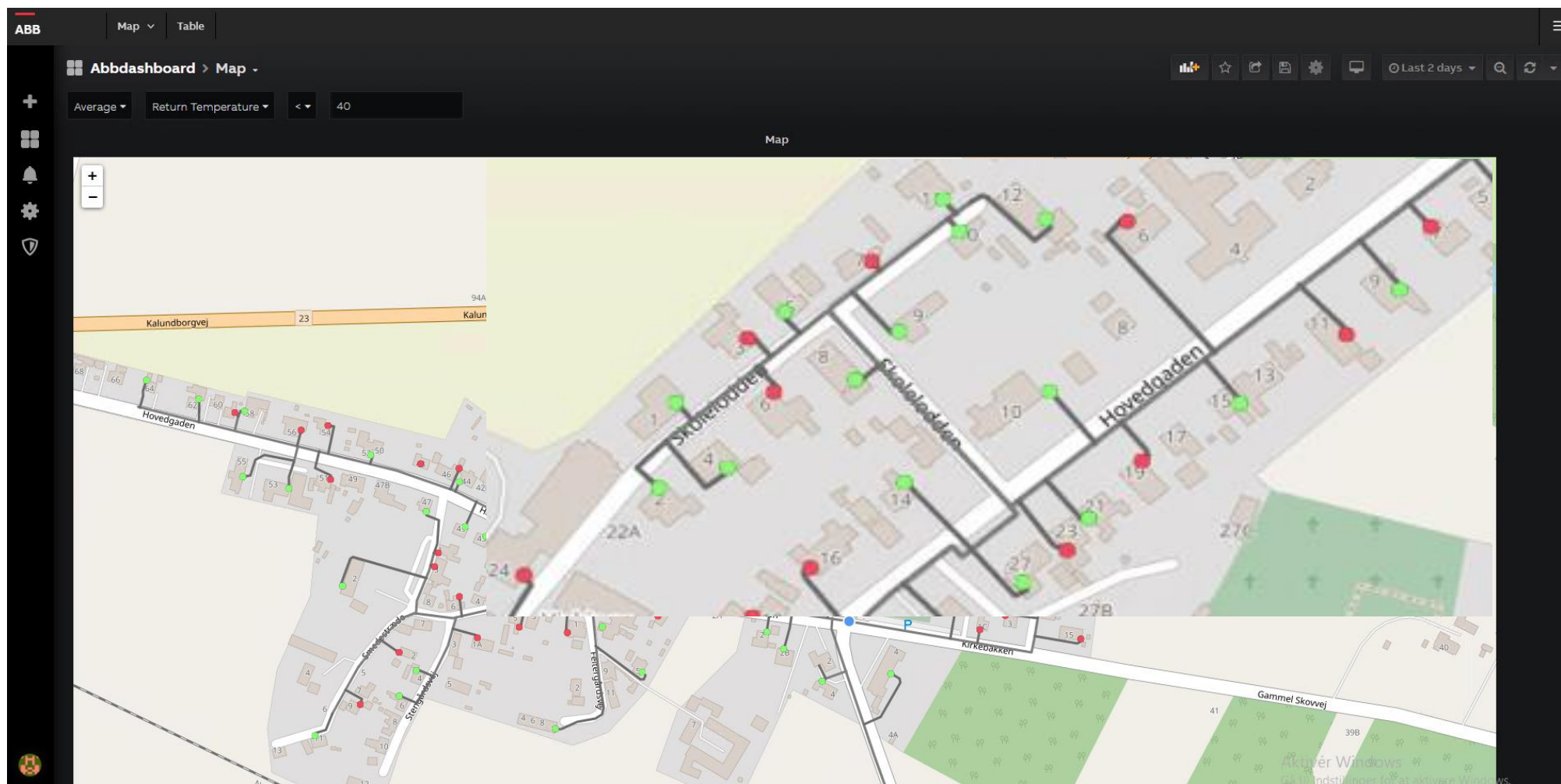
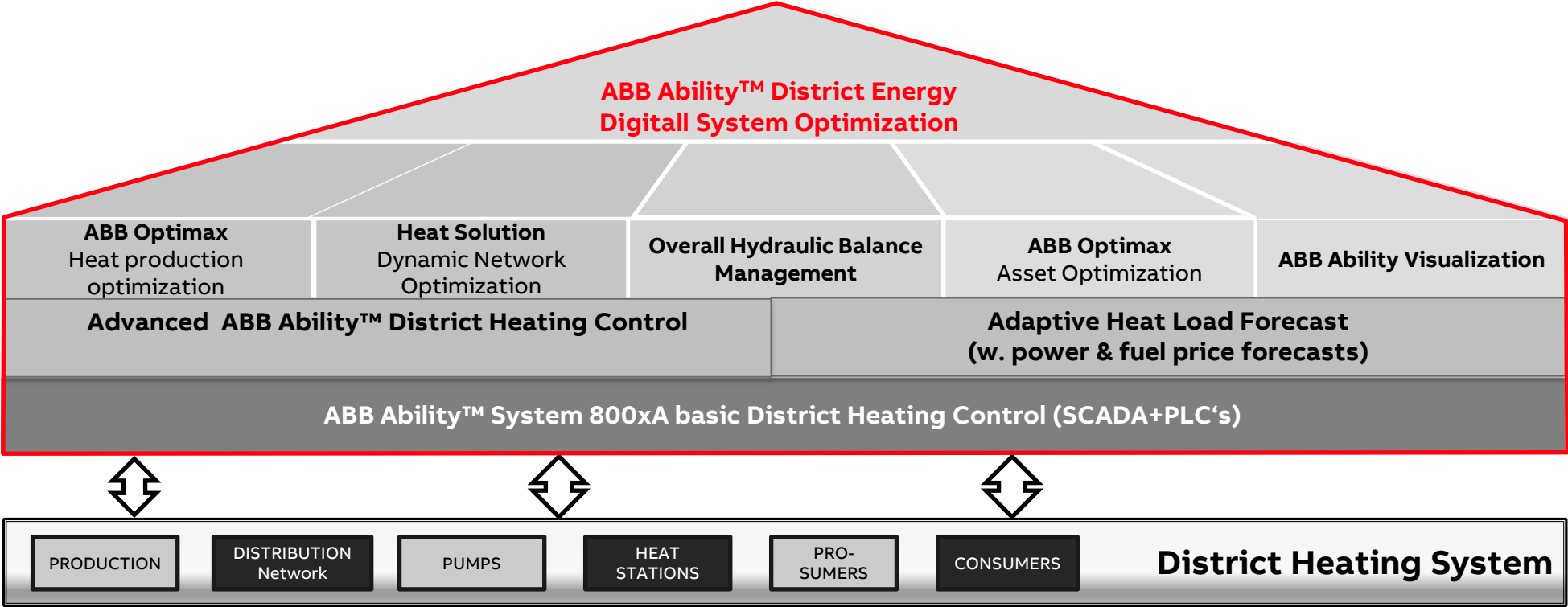


ABB Ability™ Automation and Digital Solution for District Heating Systems



The ABB way of solving DH challenges, improving performance and reducing cost

Questions?

Thank you for your attention

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