End consumer engagement as a key to successful implementation of 4th Gen DH

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How would you feel?
Key challenges during the installation

• minimum disturbance for the citizens (parking, access to their houses, noise, dirt)
• maximum safety for the installed systems (cables, pipes, etc)
• maximum saving of plants and trees
Involved in key Phases

- Design
- Operation
- Installation
- End consumer
Involved in key Phases

- Design
- Operation
- Installation

End consumer
Purmerend District Heating

City north of Amsterdam
Serving 25,000 customers
Renovation of 4,000 house connections
Veolia Romania in Otopeni - a green city
Veolia (Dalkia) – Otopeni RO

All main streets untouched
30% installed into the existing ducts
Installation times reduced by 75%
Aarhus example
Low Energy houses: Wörgl in Tyrol/Austria

Carefree Heat for low temperature Houses 60 / 40°C

Biomass/ Industrial waste heat

Affordable houses Designed for a social housing developer
Low Energy houses
Ready for young families

The technical solution proposed for Wörgl

The houses were made with a wooden construction based on a low-energy concept. A smart and sustainable heat and sanitary water supply was vital to secure an affordable comfort level for the residents of Wörgl.
Conclusions

- End consumer play a key role in 4th DH projects
- During Design, Installation and Operation, depending on the project
- Motivation factors for cooperation:
  - Good communication from the start
  - Minimum disturbance during installation
  - Care free & cheap heating/hot water/cooling
  - Getting rewarded on energy saving behaviour
Taking care of energy and the environment

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Thank you!
Please share your comments.

Let's connect!
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