

Upgrading the performance of district heating networks in Europe: the Upgrade DH Project

Dominik Rutz, Rita Mergner

Upgrade DH webinar
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Improve the performance of district heating networks in Europe
by supporting selected demonstration cases for upgrading, which can be replicated in Europe



Picture: D. Rutz



Pictures: D. Rutz







Picture: D. Rutz



Classification of upgrading measures

1. CONSUMPTION

Heat Transfer
Station

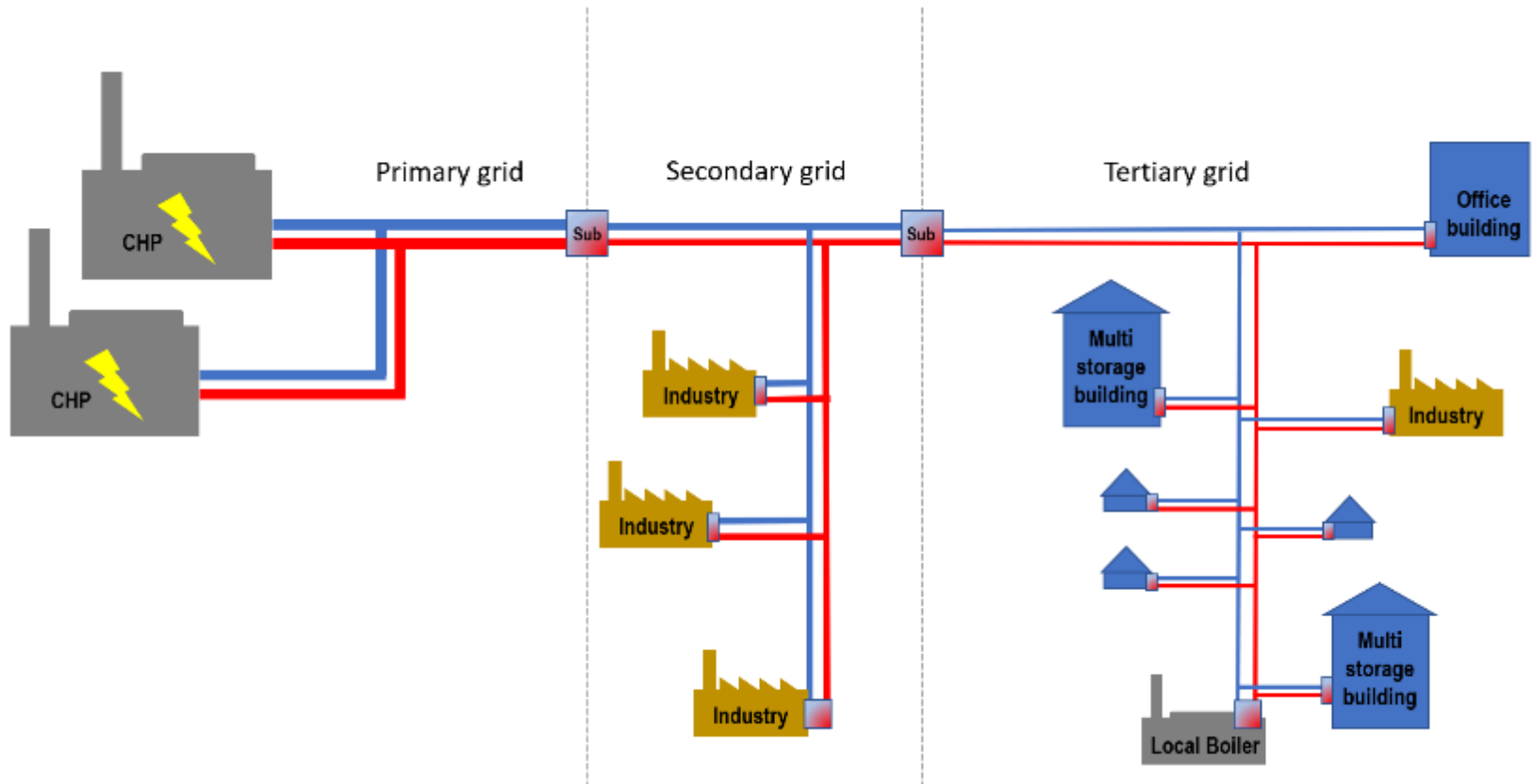
2. DISTRIBUTION

Primary Grid
Secondary Grid
Others: Pumps

3. GENERATION

CHP Plants
Boilers
Heat Sources

Complexity of the DH system influences the upgrading process



- Often, old centralized, fossil fuel powered DH needs to be upgraded
- A key question is related to the current and future purpose of the **energy (power) generation facility**
 - Future changes in the power sector
 - Efficiency requirements
 - Future heat demand

Challenges in upgrading

- High system temperatures
- Hydraulic issues
- Old pipes
- Air pollution
- Over dimensioned networks
- Network limitations



The Upgrading process

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- DH -> **high potential** for the transition of the heat sector
 - Upgrading process consists of **single** or **several** upgrading measures
 - Should be very **carefully planned in the long-term**
 - Upgrading process often **complex** and **sophisticated**
 - Ideally, **involve stakeholders** in the process

Example about retrofitting process

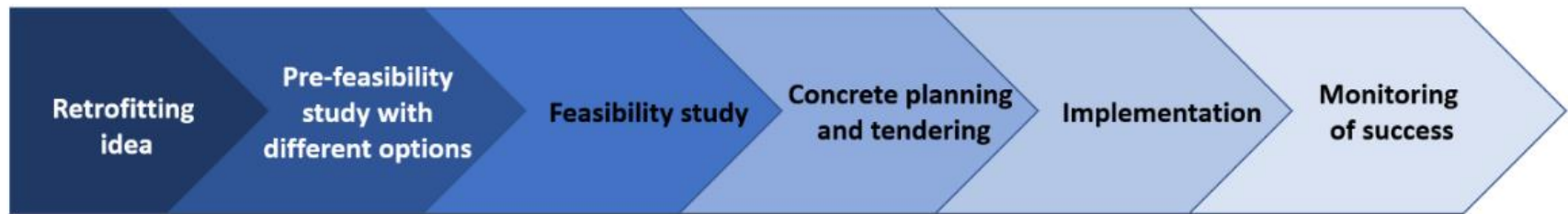
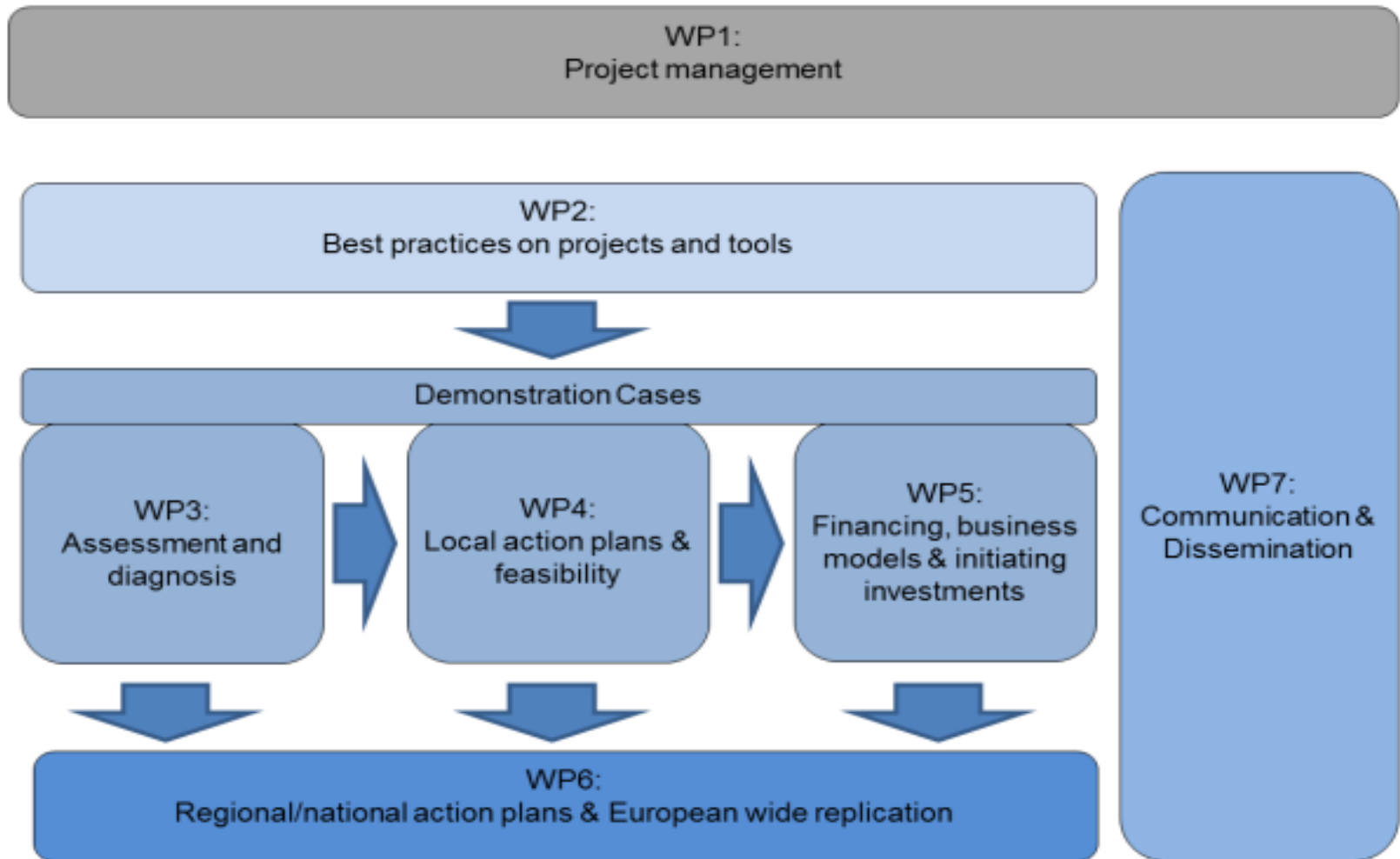


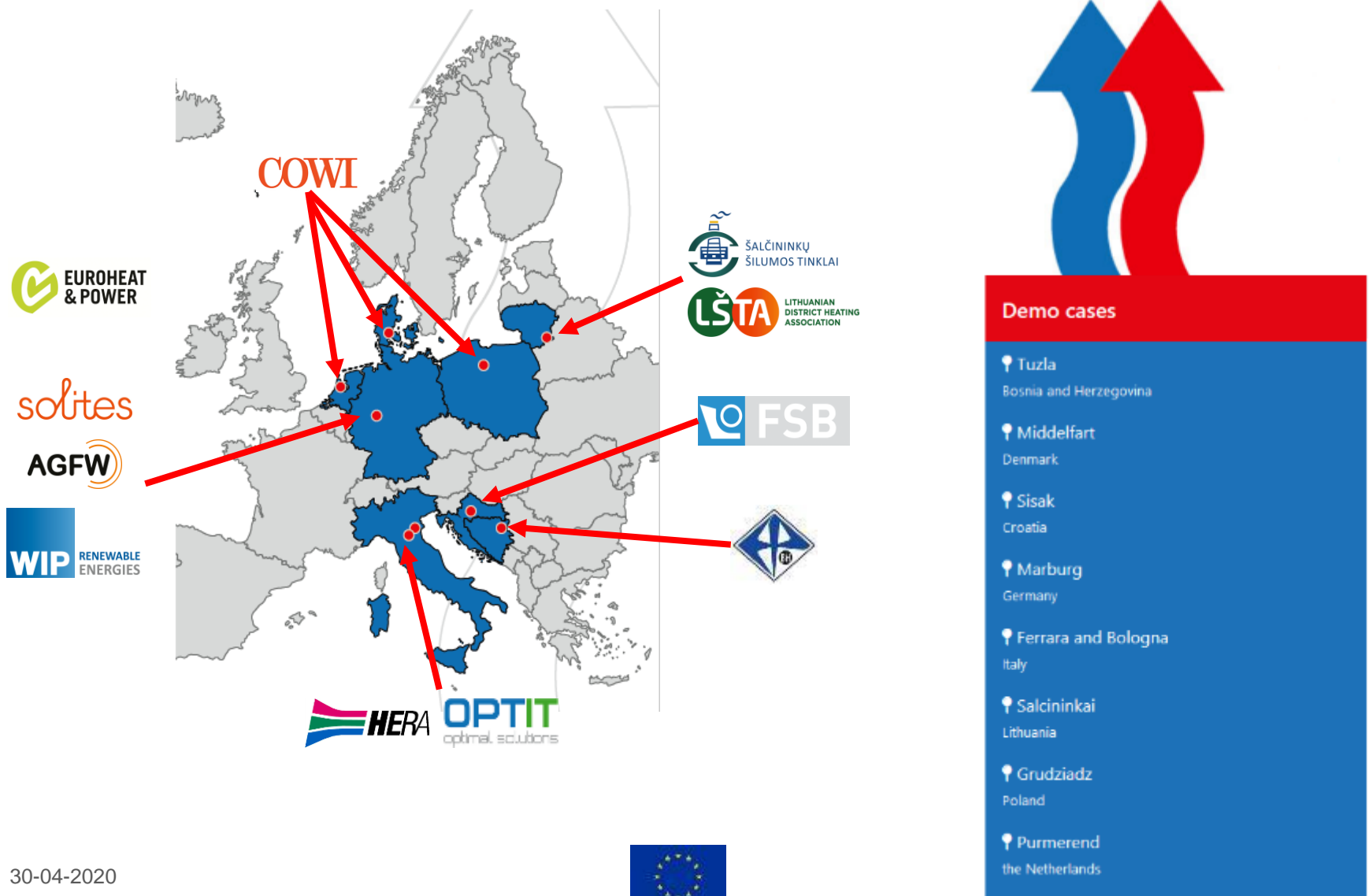
Figure 1: Simplified scheme of the retrofitting process

<https://www.biofit-h2020.eu/publications-reports/BioFitHandbook-2020-03-18.pdf>

Upgrade DH project structure



Upgrade DH case studies



Upgrade DH Consortium



WIP Renewable Energies, Germany
Dominik Rutz, Dominik.Rutz@wip-munich.de
www.wip-munich.de



AGFW-Projektgesellschaft für Rationalisierung, Information und Standardisierung mbH
Sebastian Grimm, grimm@agfw.de
www.agfw.de



Steinbeis Research Institute for Solar and Sustainable Thermal Energy Systems, Germany
Carlo Winterscheid, winterscheid@solites.de



University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Croatia
Tomislav Pukšec, tomislav.puksec@fsb.hr
www.fsb.unizg.hr



Lithuanian District Heating Association, Lithuania
Audrone Nakrosiene, audronenakrosiene@gmail.com
www.lsta.lt



COWI A/S, Denmark
Reto Michael Hummelshøj, rmh@cowi.com
www.cowi.com



Salcininku Silumos Tinklai, Lithuania
Elena Pumputienė, elena.pumputiene@sstinklai.lt
www.sstinklai.lt



OPTIT Srl, Italy
Matteo Pozzi, matteo.pozzi@optit.net
www.optit.net



Gruppo Hera, Italy
Alessandra Fornasier, alessandra.fornasier@gruppohera.it
www.gruppohera.it



JP Elektroprivreda BiH d.d., Bosnia and Herzegovina
Anes Kazagic, a.kazagic@epbih.ba
www.elektroprivreda.ba

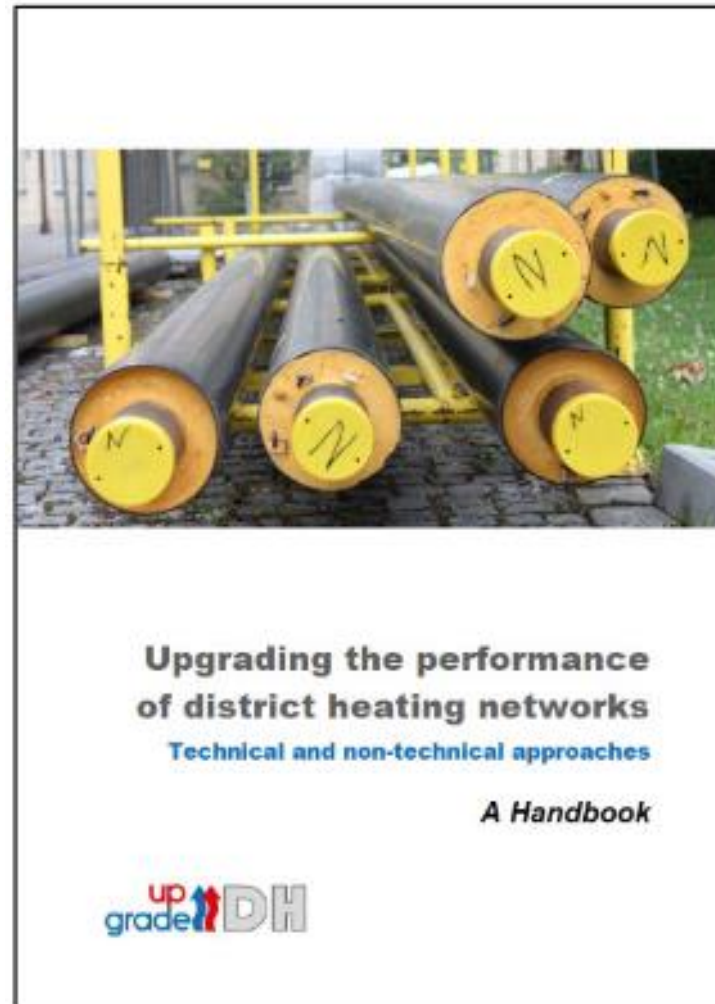


Euroheat & Power – EHP, Belgium
Alessandro Provaggi, ap@euroheat.org
www.euroheat.org



The handbook is available in the following languages:

- English
 - Bosnian
 - Croatian
 - Danish
 - Italian
 - Lithuanian
 - Polish
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- As hardcopy/ pdf
 - See www.upgrade-dh.eu



Thank you for your attention !!

Dominik Rutz, Rita Mergner

Dominik.rutz@wip-munich.de

www.upgrade-dh.eu

