

EnEff:Wärme: UrbanTurn: Transformation of the urban district heating supply

Transformation, decarbonization and digitalization of the district heating supply

1

Transformation of existing systems

Investigation of scenarios

2

Software-based and experimental investigations

Digital twin

3

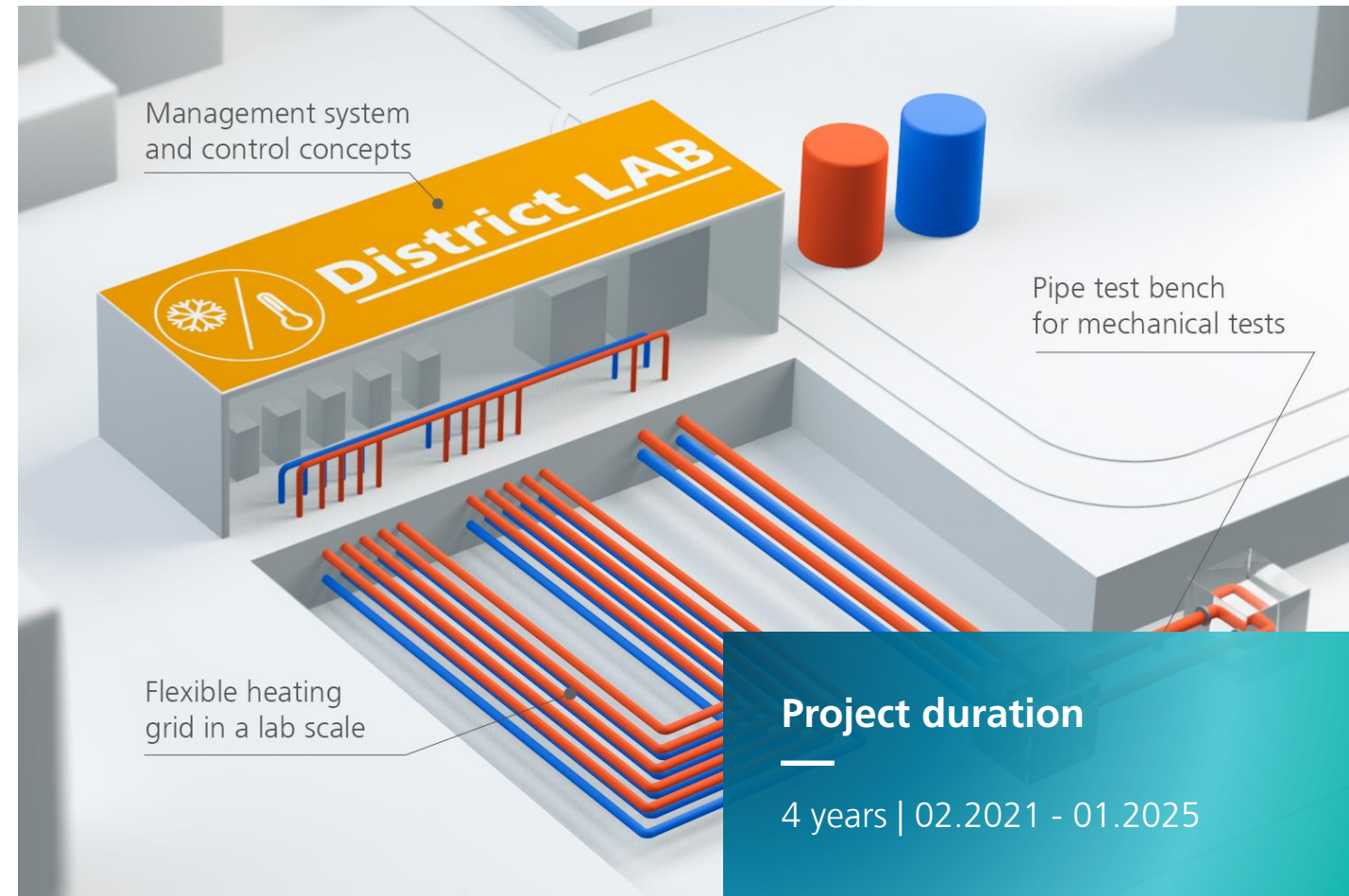
Suggestions for amendment

Regulations and design

4

Catalog of measures for network operators, suppliers and manufacturers

Transferability



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Management system and control concepts

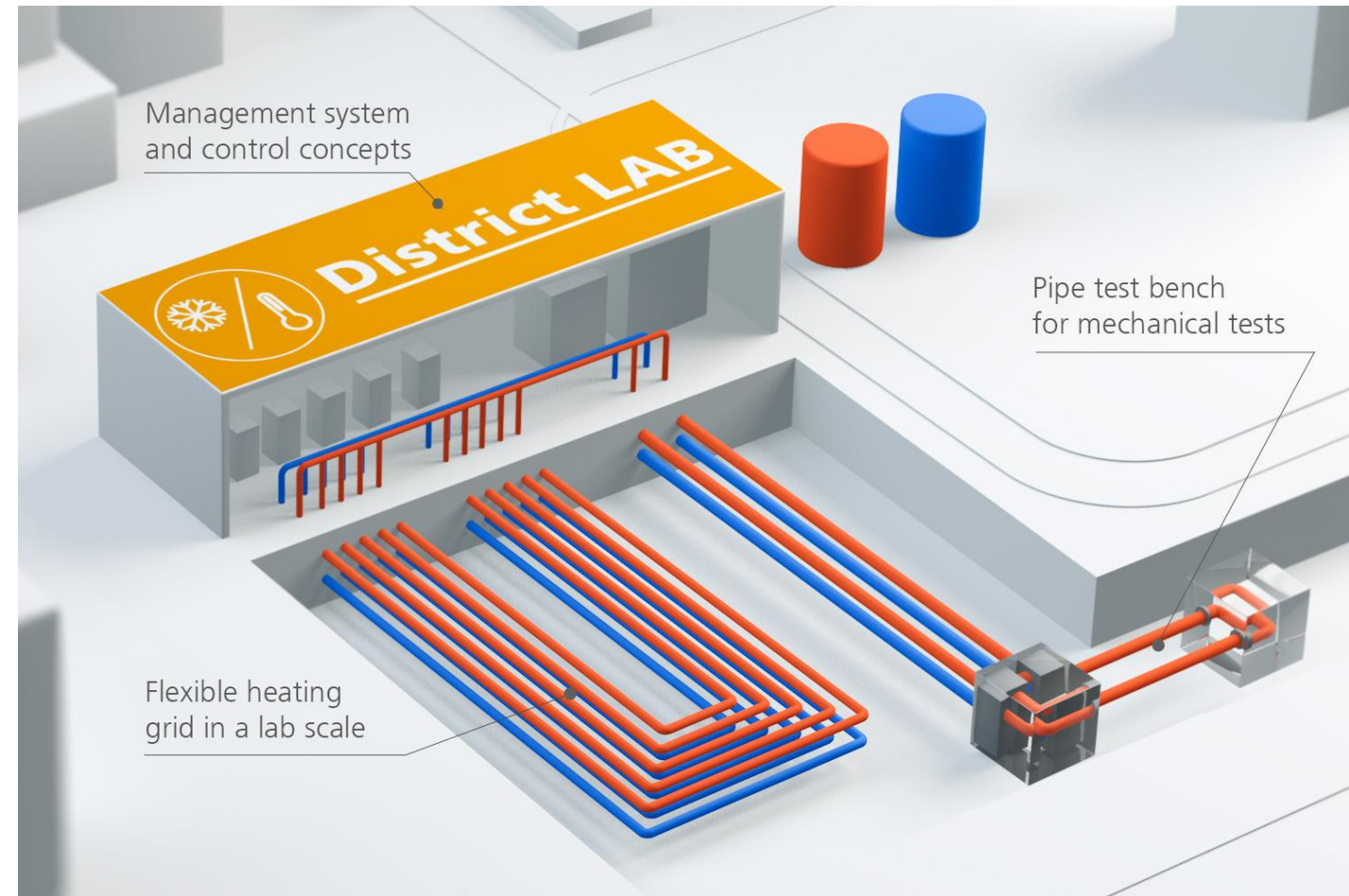
- Hardware-in-the-loop units
- Sources and sinks
- Software-hardware interface > Digital twin
- New operation and control strategies

Flexible heating grid in a lab scale

- Supply > Volatile and bi-directional
- Critical supply variables
- Analysis of potentials and obstacles

Pipe test bench for mechanical tests

- Analysis of interaction between pipe and soil
- New bedding materials
- New laying techniques



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