



REUSEHEAT

“Roadmaps are ready: now what??

Exploring the realities of the heat transition”

Brussels, February 13th, 2019

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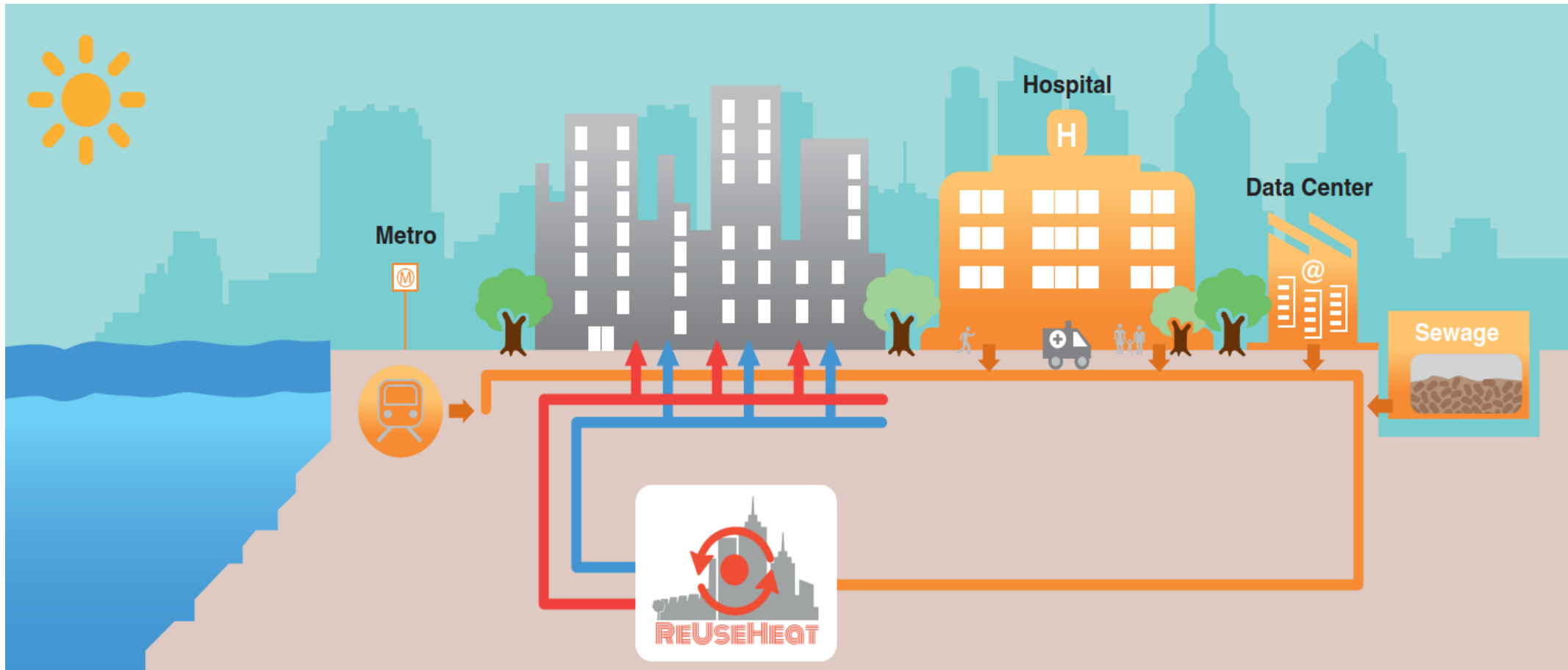
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 767429.

www.reuseheat.eu

@ReUseHeat



The ReUseHeat vision- smart cities heat themselves



ReUseHeat facts

- **Nine countries**
- **15 partners**
- **H2020, Innovation Action**
- **5 MEURO**
- **4 years (started in October 2017)**



ReUseHeat



Objective: Demonstrate first-of-their-kind, advanced, modular and replicable systems enabling the recovery and reuse of urban excess heat.

COMBINE TECHNOLOGY DEMONSTRATION WITH SOFTER ITEMS

(risk, business model, contracts, bankability, potential analyses)

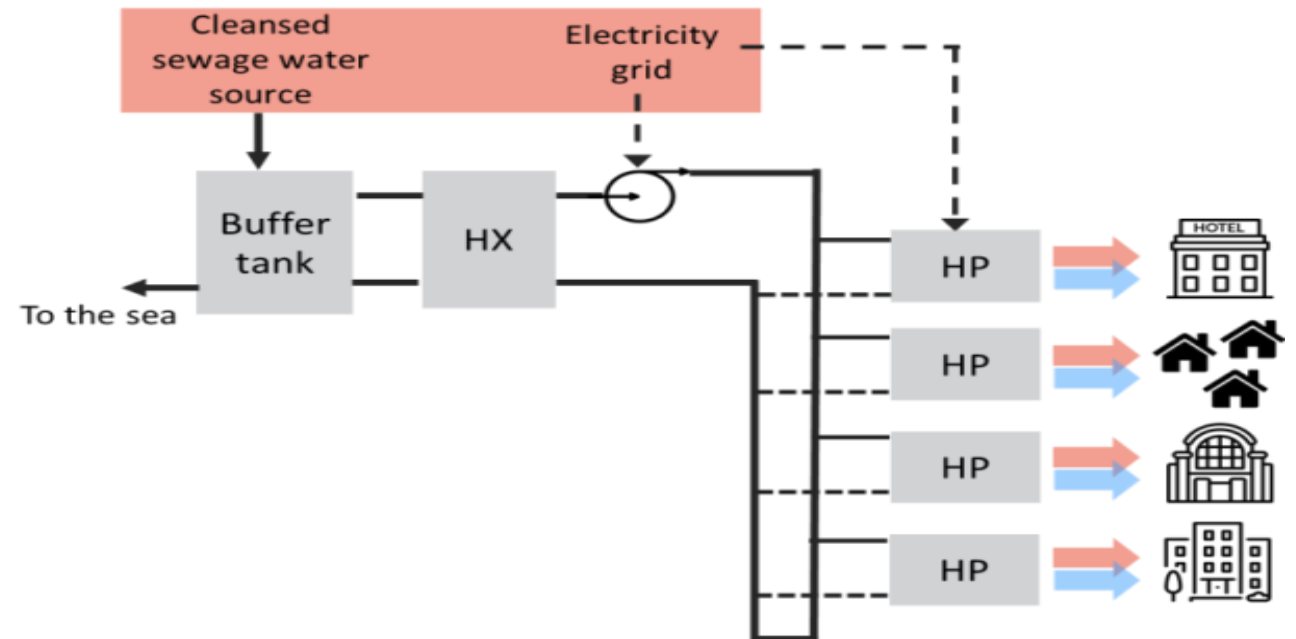
Expected results: Useful insight for future investors (by means of a handbook)

- Efficient **technologies** and solutions
- Suitable **business models and contractual arrangements**
- Estimation of investment **risk**
- **Bankability** and impact of urban waste heat recovery investments
- **Authorization procedures** are examples of handbook content

Demosite 1

Waste heat recovery from sewage water network (Nice)

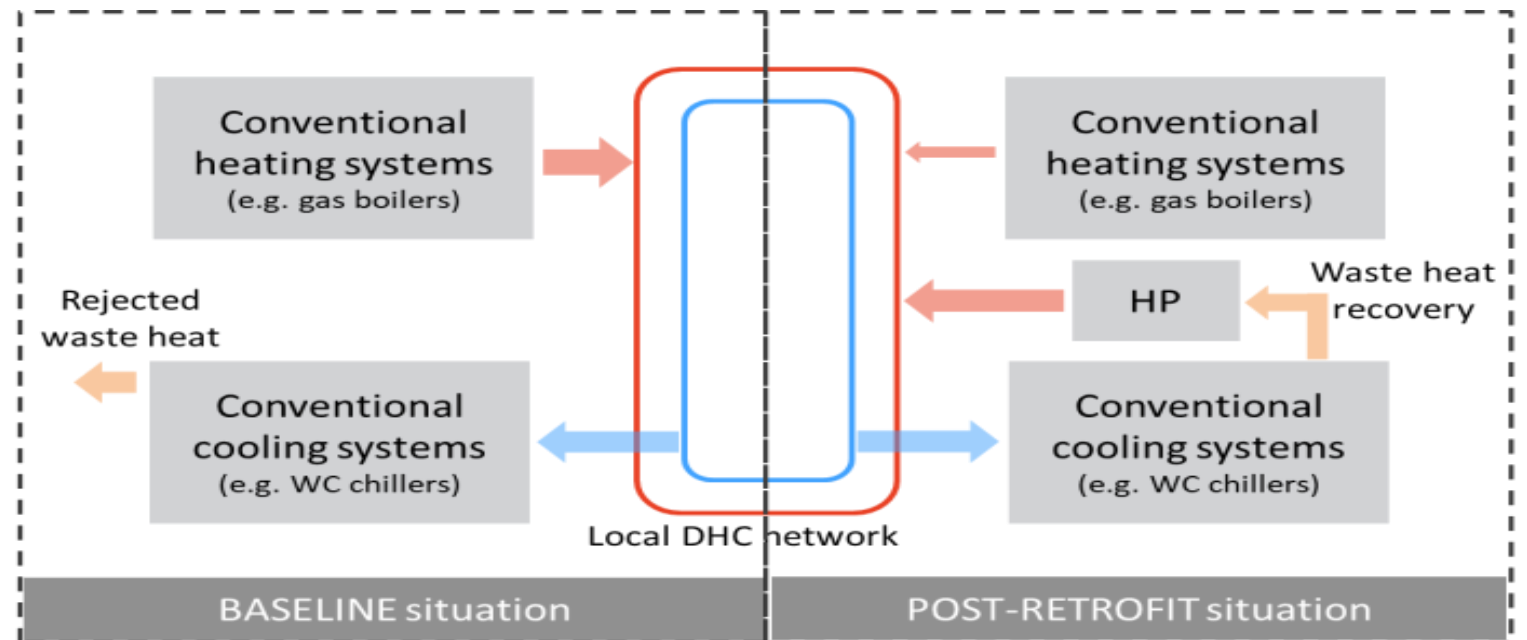
- Heat source: Cleansed water downstream WWTP
- LTDH network + reversible HP at substation level
- Waste heat source temperature: ~26C (summer); ~12C (winter)
- Enabler of high-efficiency heating/cooling operation at network level



Demosite 2

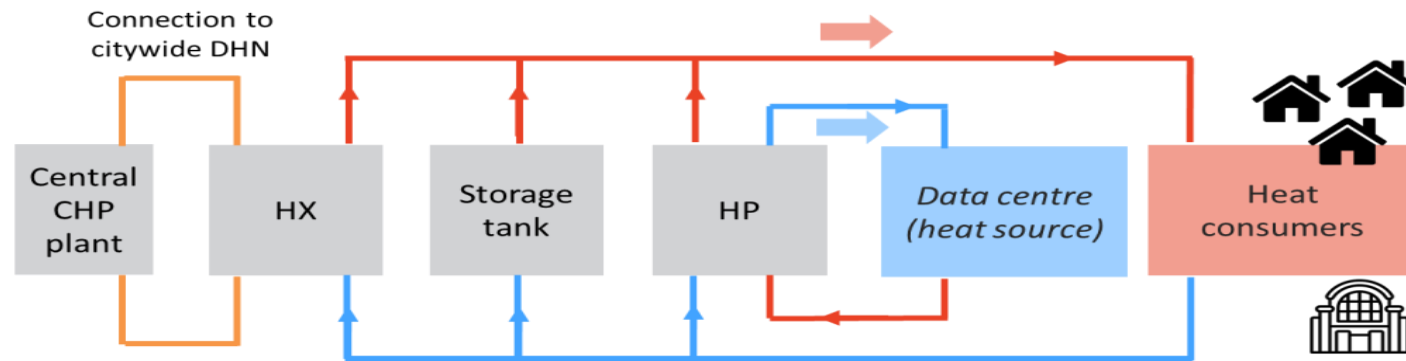
Waste heat recovery from cooling systems in tertiary buildings (Madrid)

- Offices, commercial, hospitals, supermarkets, etc.
- Heat source: rejection of heat from cooling plants



Demosite 3

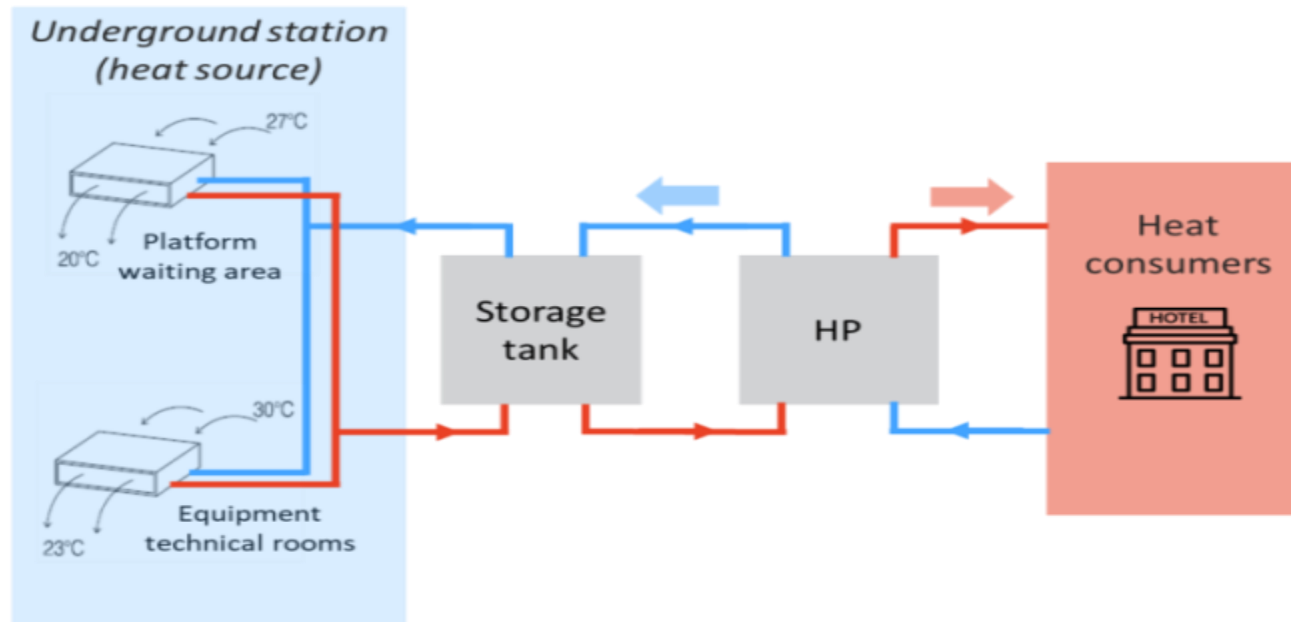
Waste heat recovery from data centers (Brunswick)



- Residential and commercial consumers in LTDH network
- Energy supply from (i) city-wide CHP-based DHN and (ii) HP capturing/upgrading excess heat from the data center
- Waste heat source temperature: 18C- 25C
- HP double simultaneous useful effect: (i) DC cooling, (ii) heating supply

Demosite 4

Waste heat recovery from underground railway stations (Berlin)



- Heat sources: energy dissipation from train brakes + electric equipment (traction, lighting, HVAC, etc.)
- Fancoils at platforms, in tunnels
- Booster HP injecting upgraded heat recovery into DHN / local thermal plant

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Thank you for your attention!

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