

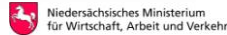


## Interreg IVA Projekt

### DeNeWa – Deutsch-Niederlandske Wassertechnologie

#### Technical solutions of waste water heat recovery

Unterstützt durch / Mede mogelijk gemaakt door:

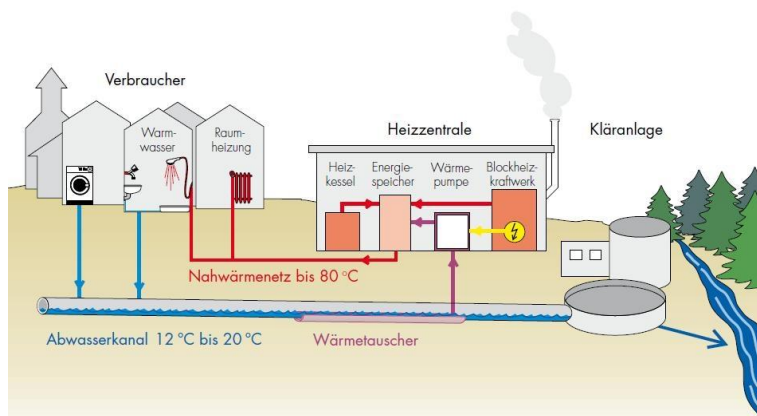


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### The Principle of Heat Recovery from Wastewater:

Waste-Water heat recovery plant

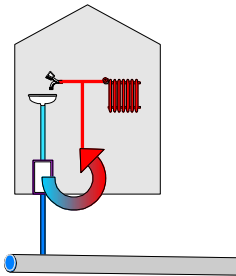


Quelle: Bundesverband Wärmepumpe (BWP)

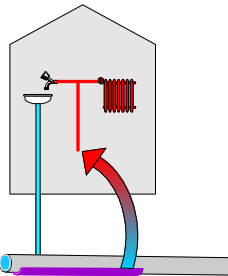
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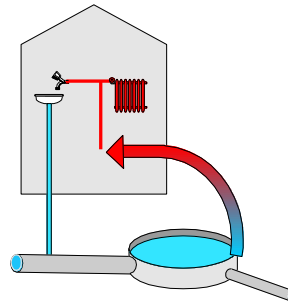
**Locations of heat recovery:**



Inside the building



Along the sewer system



At the waste-water treatment plant

Quelle: gwf Praxiswissen, C.Ziegler

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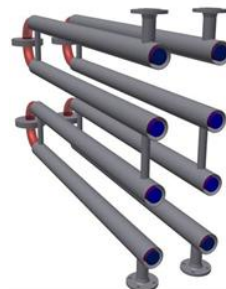


**Inside the building / primises :**

e.g. public swimming pools, industrial cooling systems, hospitals, hotels



(Quelle: Jaske & Wolf)

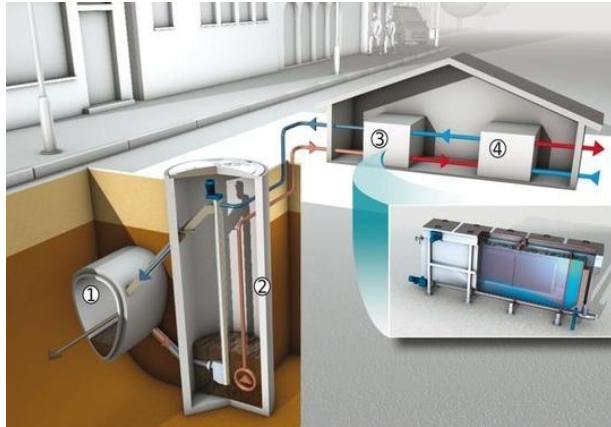


(Quelle: KASAG Langnau AG)

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## Heatrecovery along the sewer system:

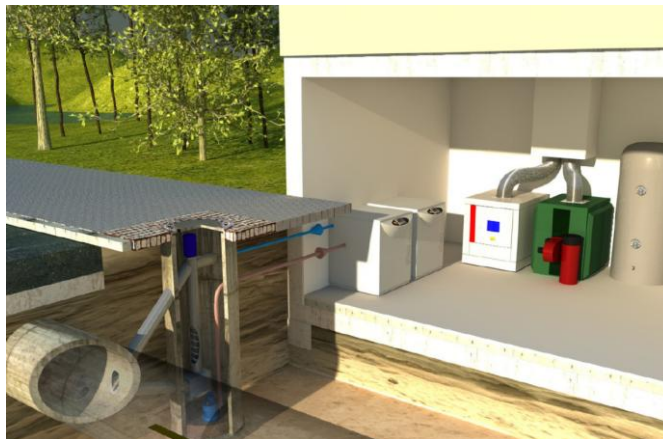
### 1. Variation: Heat-exchanger outside the sewer



Quelle: Huber SE

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## Direct vaporisation



Quelle: König Wärmepumpen

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## 2. Variation: Heat-exchanger inside the sewer

Subsequent installations

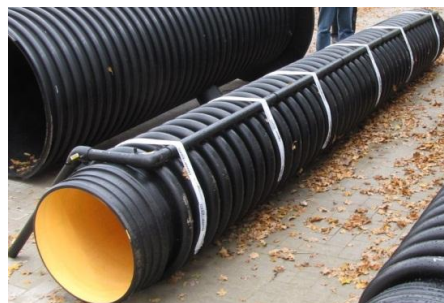


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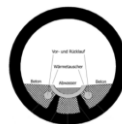


### Pipes with inbuilt heat-exchanger :

- Plastic pipes with heat-exchanger



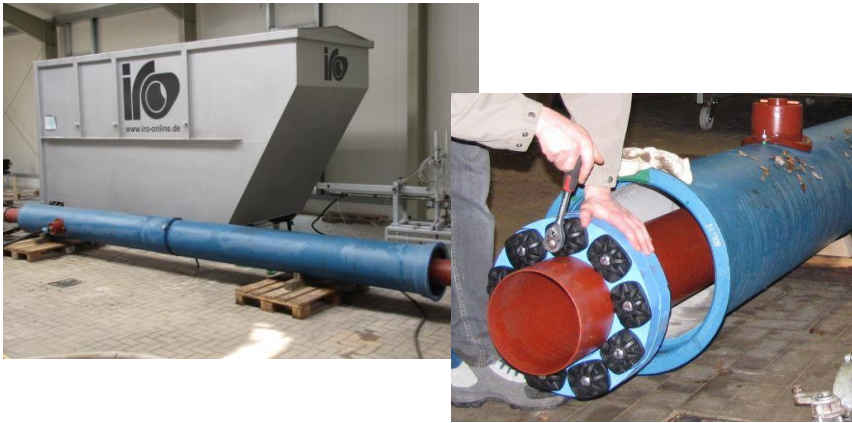
- Concret pipes with heat-exchanger



Quelle: z.T. DWA

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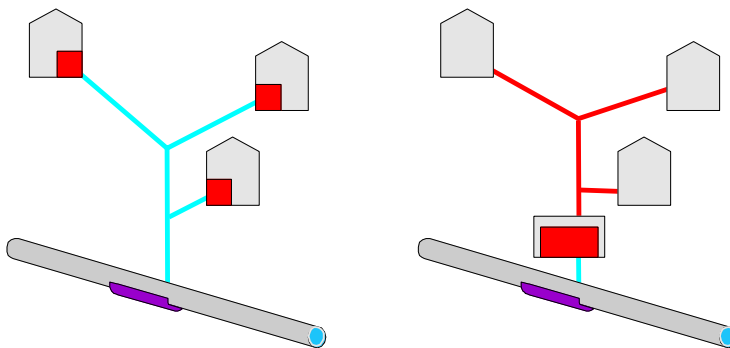
### Pipe in pipe solutions:



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### Heat distribution:

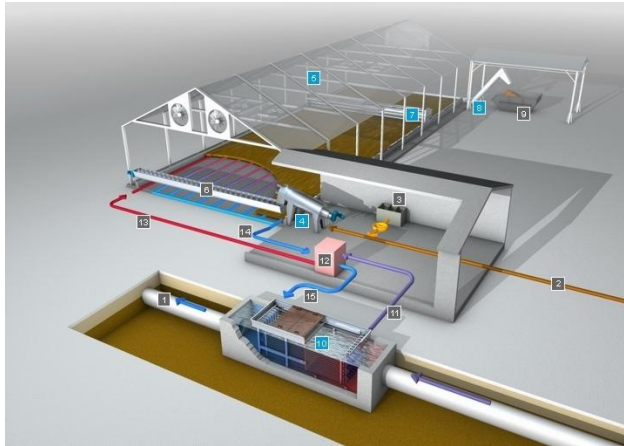
- cold local heating system
- warm local heating system



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### Sludge drying at the waste water treatment plant:



Quelle: Huber SE

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### Domestic engineering: Heat-pump-technologie



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**Hartstikke bedankt!**

**Contact:**

Mike Böge - iro GmbH Oldenburg  
boege@iro-online.de

Unterstützt durch / Mede mogelijk gemaakt door:



Niedersächsisches Ministerium  
für Wirtschaft, Arbeit und Verkehr



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