



WATER IN 2050

Korneel Rabaey





Center for Microbial Ecology and Technology













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Denny Parker





€50 billion already invested €0,2 billion annual cost

>30.000 km for just Watergroep Can cost €250.000 per kilometer



Decentralized technology for:

- Urine source separation
- Greywater treatment
- Blackwater treatment
- Drinking water production









Greywater treatment:

- 50% reduction in water consumption (data corresponds to own model)
- Could save 400 kWh of heat

So 102 m³ per year for family of 3. Investment ~3500 EURO. For 1 billion we install 285714 installations, so 29 million m³ less drinking water consumption per year

Blackwater / effluent treatment:

- similar pricing to grey water
- avoiding sewerage can save up to 16000 EURO per house in decentralized setting.

Urine source separation

- removes nutrients from water purification
- Up to 20% less sewer corrosion
- Up to 50% less energy consumption water purification, increase capacity by 20%
- P recovery



Decentralized technology \neq smaller technology







Cost reduction through mass production

Innovation through close interaction with the consumer

Sony Xperia Z Ultra

Charging that car: ~2250 kWh per year for the average 15000 km = 15 m² extra Treating water for household ~500 kWh for independence = 3-4 m² extra



CHALLENGES

- Safety
 - Monitoring systems needed
 - Impact failure is limited

CAPTURE

– Economics

Water as a service, both from drinking water and wastewater perspective – What about large systems? It is an AND story, not an OR





Korneel Rabaey

korneel.rabaey@ugent.be

http://cmet.ugent.be

http://www.capture-resources.be

