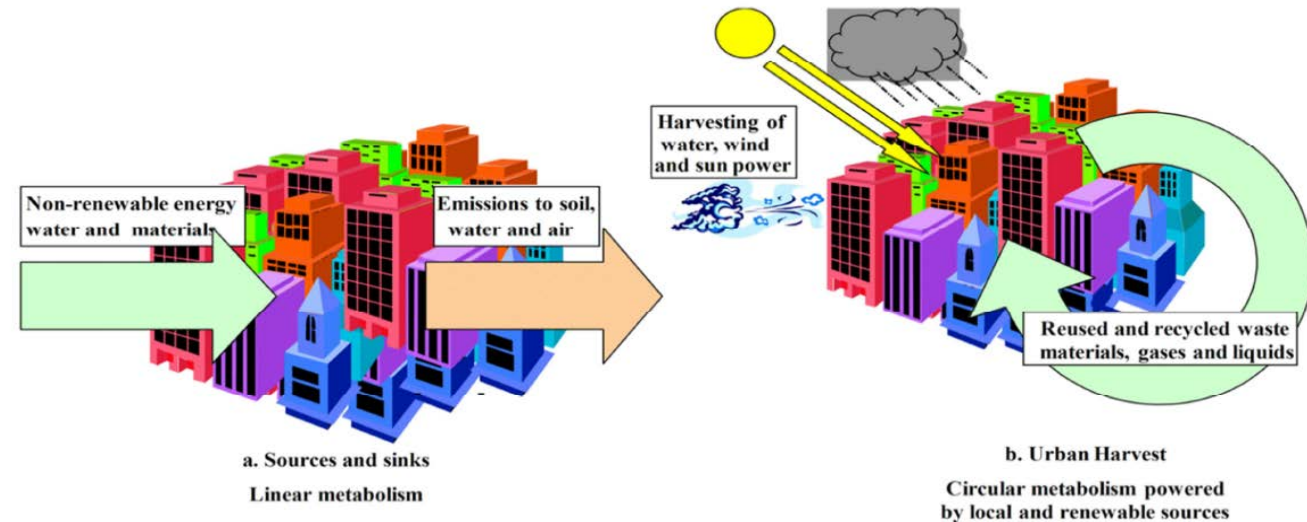




# Valuing a circular approach

An European perspective on policies and financial instruments required to facilitate Resource Recovery and Reuse

Dr. ir. Gerhard van den Top,  
Chairman, Waternet Amsterdam Regional Water Authority



# Public Water Cycle Company **AMSTERDAM**

## City of Amsterdam

- Drinking water
- Sewerage
- Storm water
- Groundwater
- Shipping

## Regional Water Authority Amstel, Gooi and Vecht

- Flood protection
- Water quality control
- Water quality control
- Waste water treatment



**waternet**

waterschap amstel gooi en vecht  
gemeente amsterdam



**world**

**waternet**

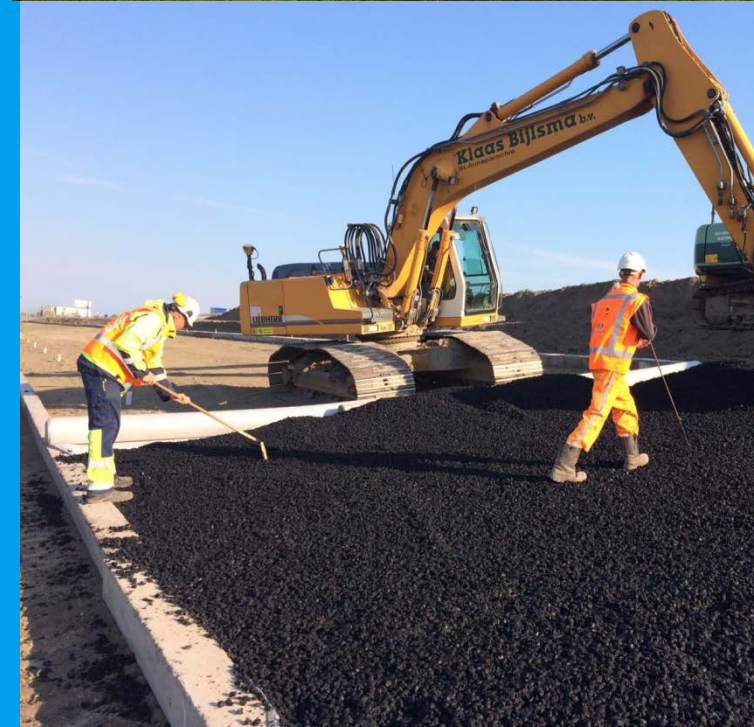


**waternet**

waterschap amstel gooi en vecht  
gemeente amsterdam

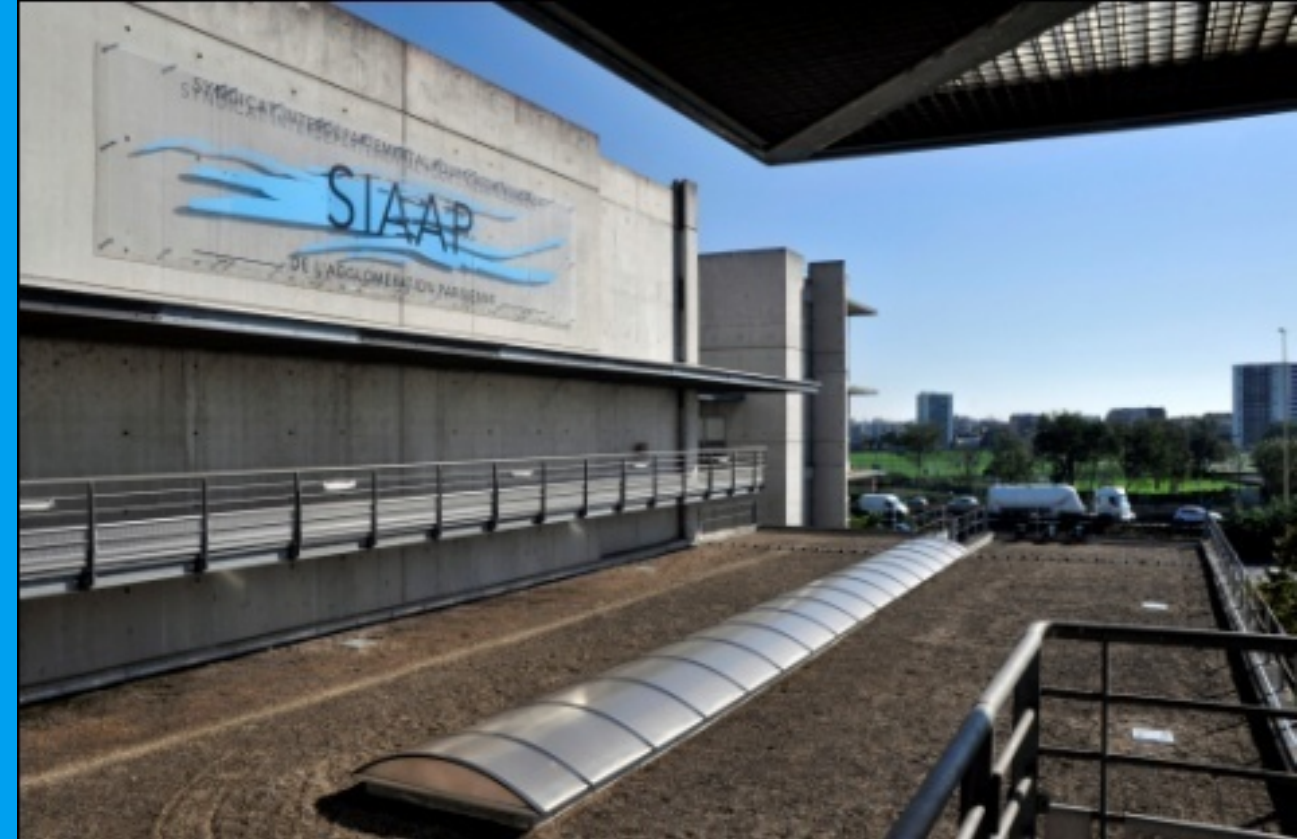
# From Waste to Value: financing energy & resources from the water cycle

- New products, new markets
- New partnerships
- New financing
- Public and/or Private

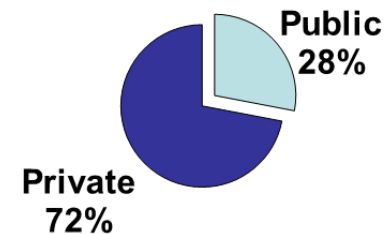


# France/Paris

- France: municipal water management -> public authority with a public or private operator
- Paris city: Private operation after 25 year in 2009 back to Public (Veolia & Suez -> Eau de Paris)
- Main reasons: political choice. protest from public about price (to expensive)
- SIAAP currently operates a cogeneration facility with private operator



**Water supply management**  
Pop served : 64 Millions



**Sanitation management**  
Pop served : 51 Millions



# Berliner Wasserbetriebe

- Water Supply, Waste water, Sewerage and Energy
- 1999 Public -> Private 1,7 blj euro's from RWE & Veolia
- 2013 Private -> Public
- Transition climate neutral city 2030: need for Green Energy
- Public investment (100 mln euro)



# Green Gas

- A'dam, Copenhagen, Berlin, Paris
- Getting Climate neutral
- Energy basic need (good product)
- Mostly Public Funded
- Waternet 2017: Orange Gaz brings the green gas to the market
- Waternet 2020: biogasproduction to a private company





# THE CALCITE FACTORY

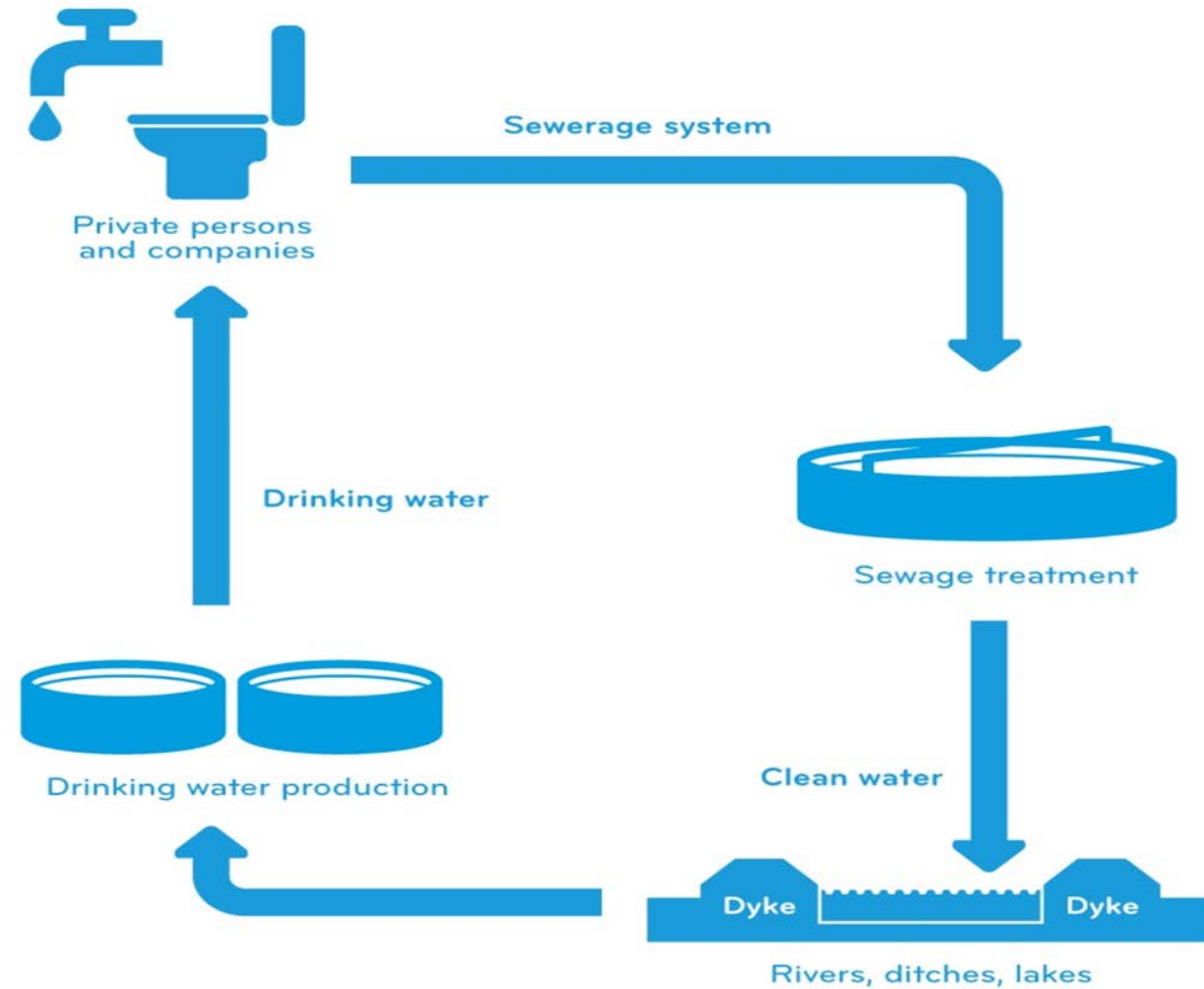


- Production Calcite as product water supply (Waternet-public)
- Improve it for market (Advanced minerals-private)
- Explore and Approach market (Aqua minerals-private)
- Pilot 5.000 m<sup>3</sup>/y -> full scale 50.000 m<sup>3</sup>/y
- Scale up if 1 more water supply company & contract customer



# Strategies & Choices

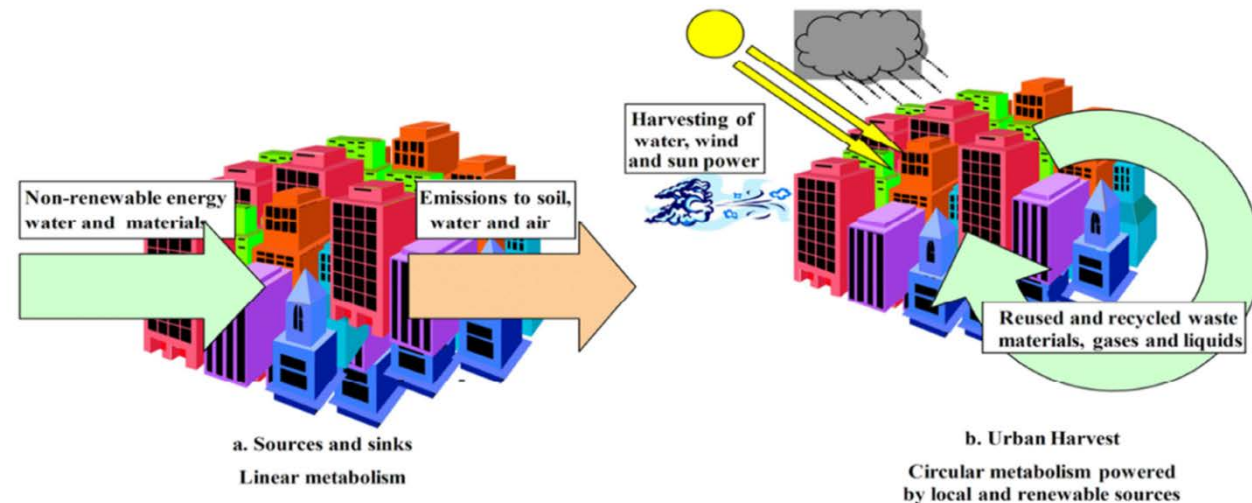
- Integrated packages
- Selection of Element(s)
- Dilemma's: spread risks and/or cherry picking





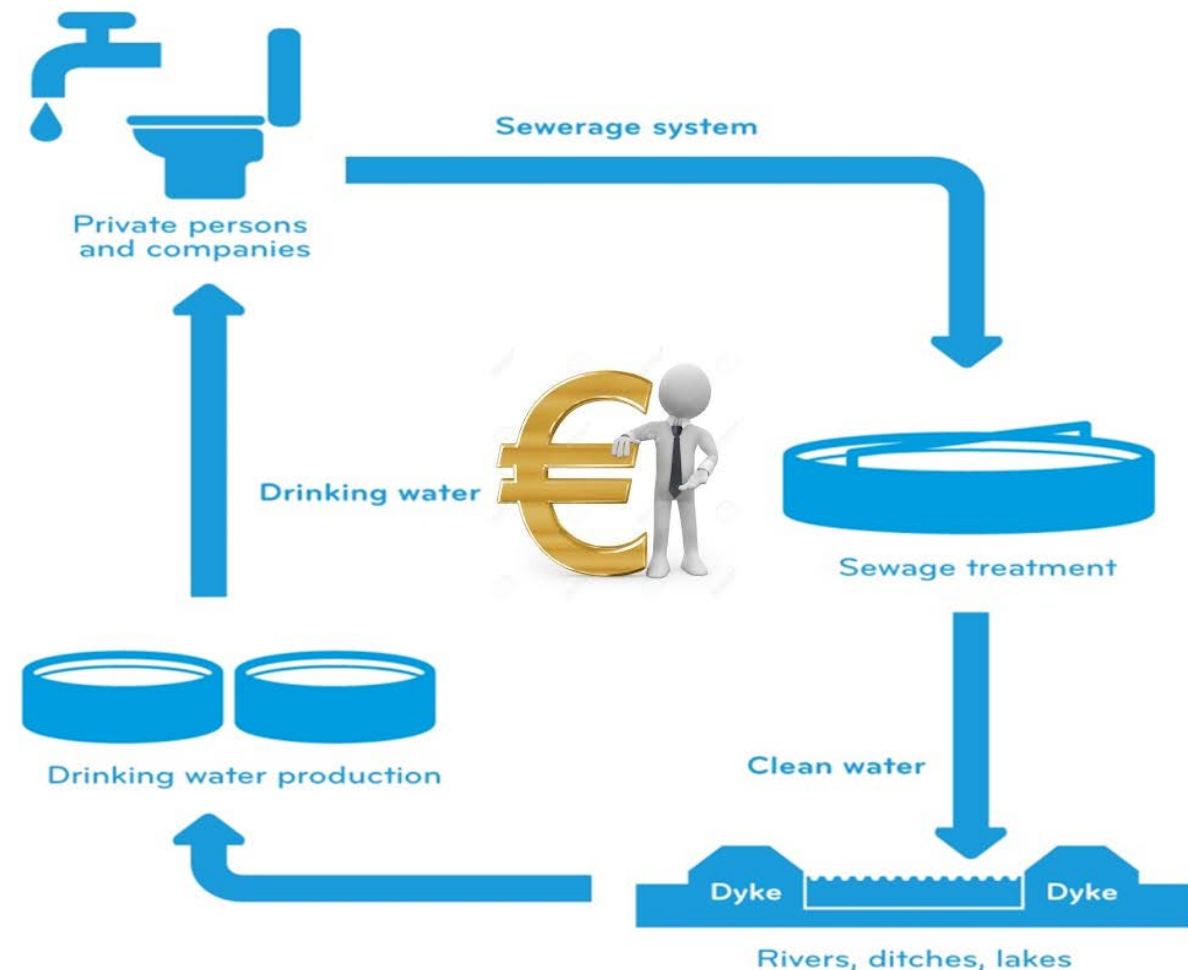
# Policies

- Responsibilities: water utility or energy company
- Waternet: separated company best option for energy production
- VAT-rules: drinking water 6%; wwt & sewerage no VAT
- Regulation: effluent as source for fertilizer
- European Circular Economy Package



# Financial approach

- Public funding & financing to leverage and enable private investment
  - Long term orientation
  - Risk mitigation
  - Social and environmental goals
- Early private sector engagement
- Contextual approach & mix



# Public Private Circular

- Institutional (legislative environment)
- Opportunities for Leveraging
- Experimental space
- Resource, scale, location specific



Thank you  
for your  
attention

Save the Date:  
**Amsterdam International  
Water Week 2017**  
30 October - 3 November  
Amsterdam,  
the Netherlands