



**Aqua
Flanders**



Drinking water companies in Flanders

Flanders region



Brussels Capital Region

Walloon region

Belgium

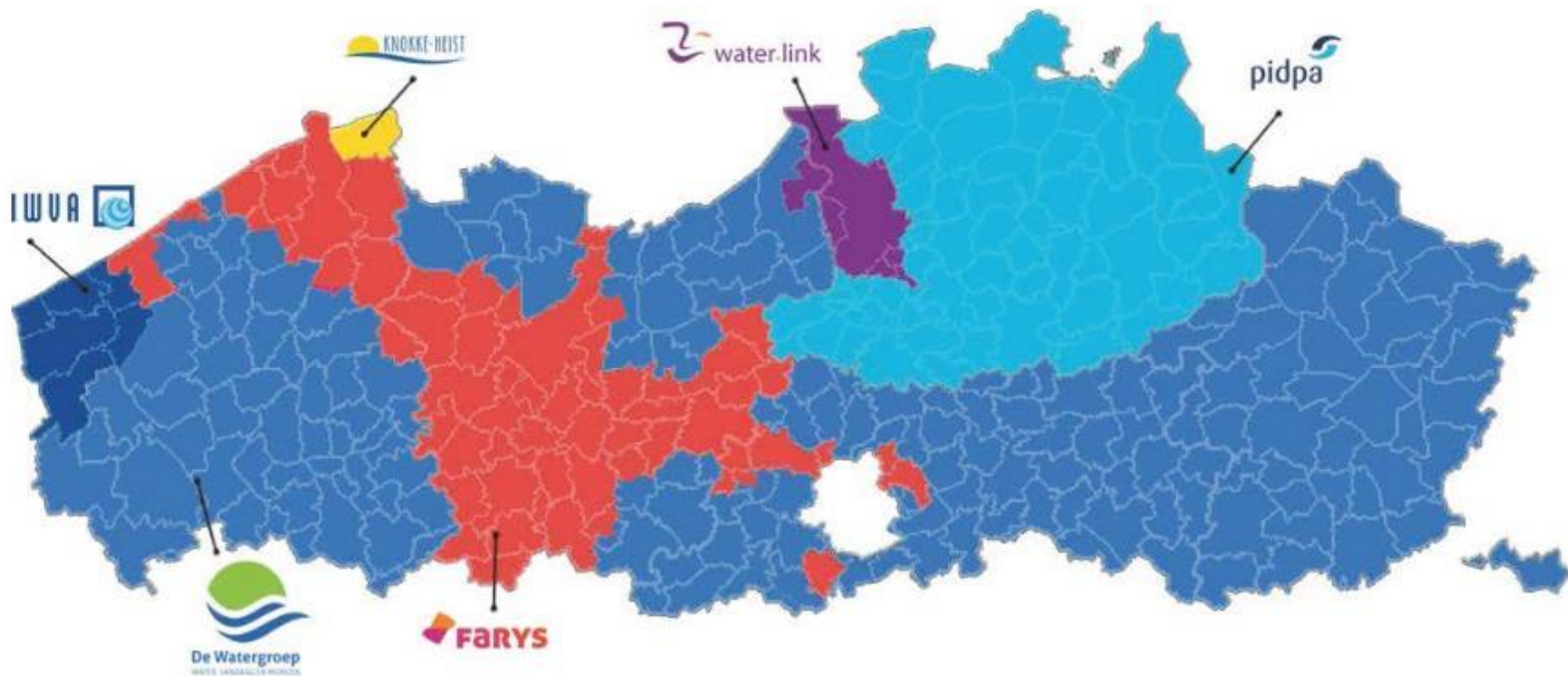
- 11 million inhabitants

Flanders

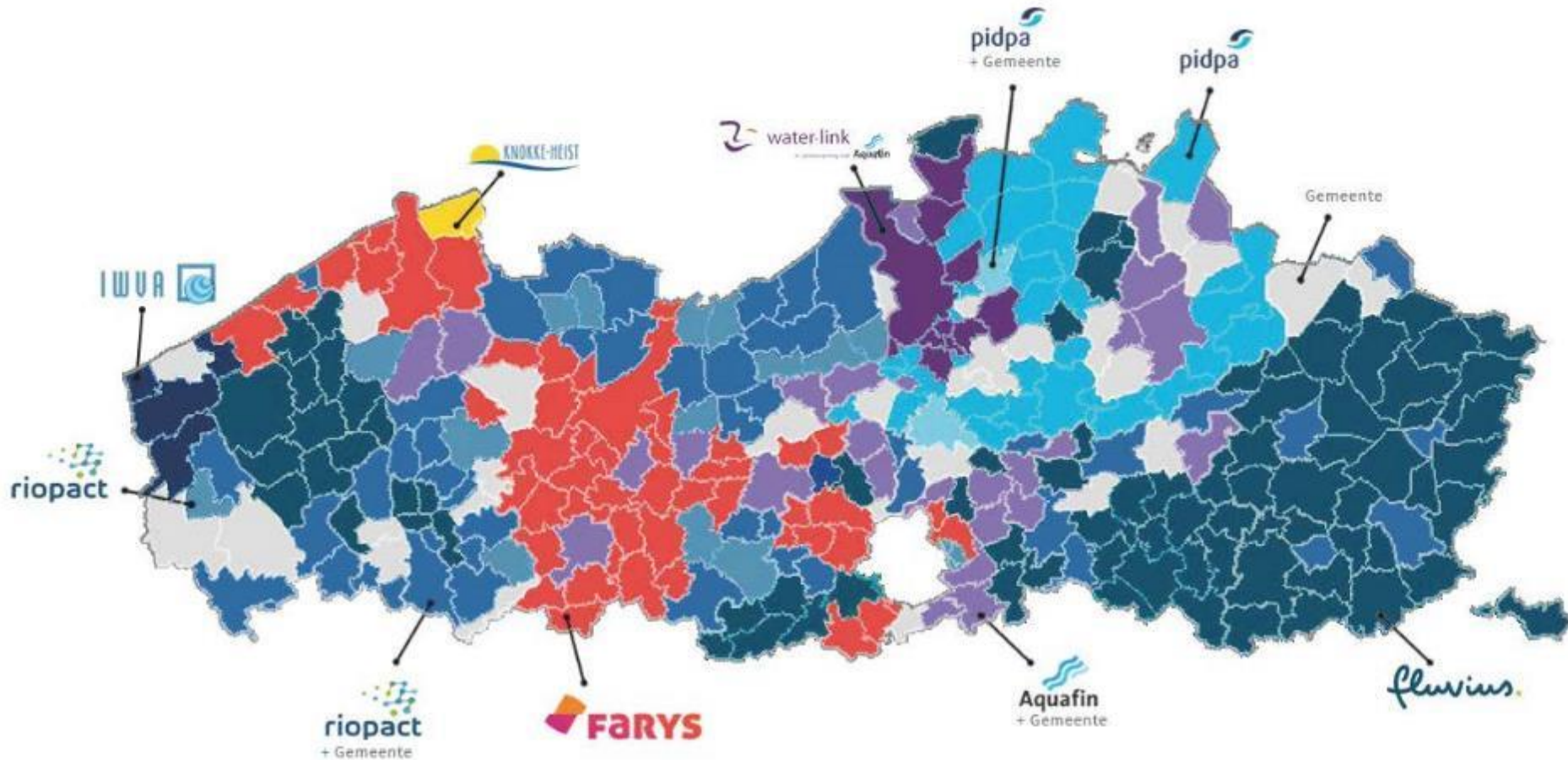
- 6 million inhabitants
- 6 drinking water companies (all public)
- 1 public waste water company (Aquafin)



Drinking water companies in Flanders

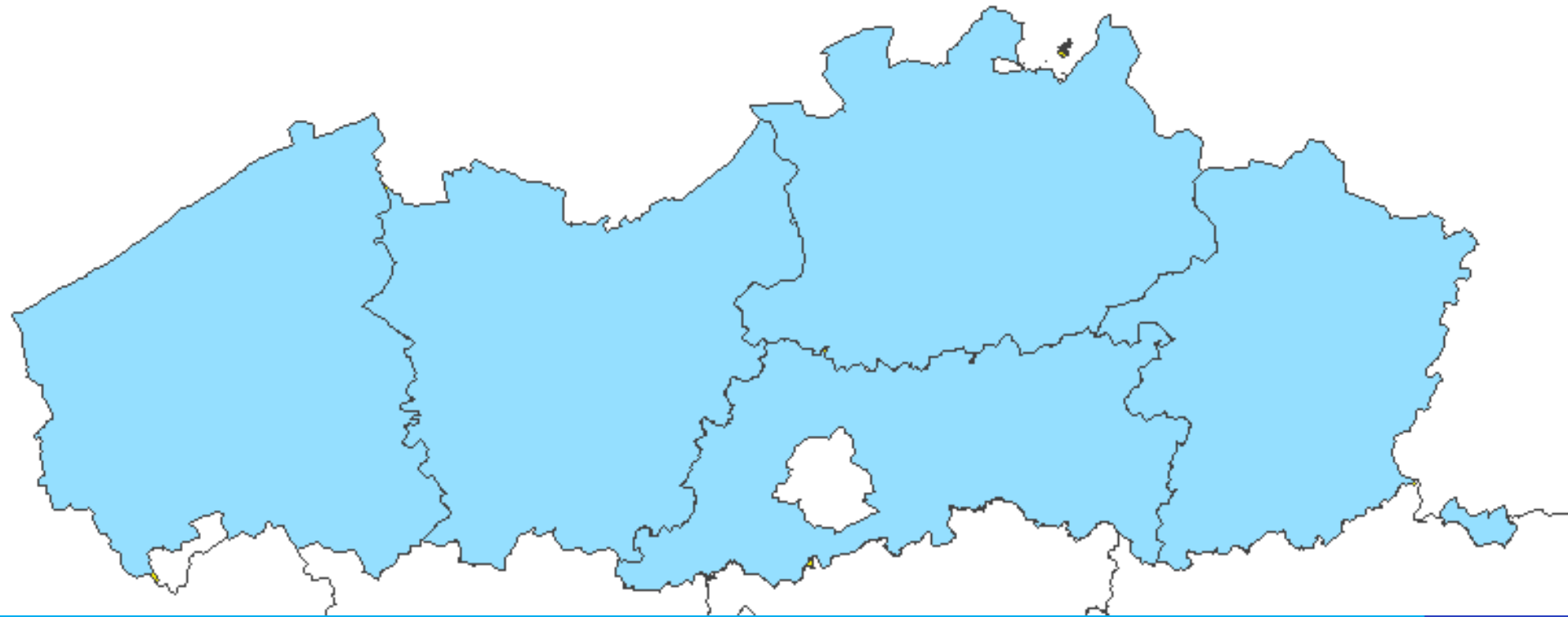


Sanitation in Flanders



- **Sanitation:** operated by the municipality or a drinking water company

Waste water treatment in Flanders



- One public company for **waste water treatment:**
AQUAFIN





Material recovery from drinking water byproducts

Experiences of De Watergroep

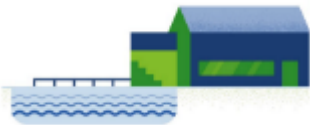
3 juli 2019

Water resources of De Watergroep

- **75% groundwater – 25% surface water**
- **Annual production De Watergroep 2017: 130 million m³**
 - 94 million m³ from groundwater
 - 36 million m³ from surface water
- **85 WPC based on groundwater**
5 WPC on surface water
- **De Watergroep desserves 3,2 million inhabitants of Flanders**
(1,2 million connections)



Infrastructure for production, storage and distribution



- 85 groundwater WPC
- 5 surface water WPC
- 64 pressure stations



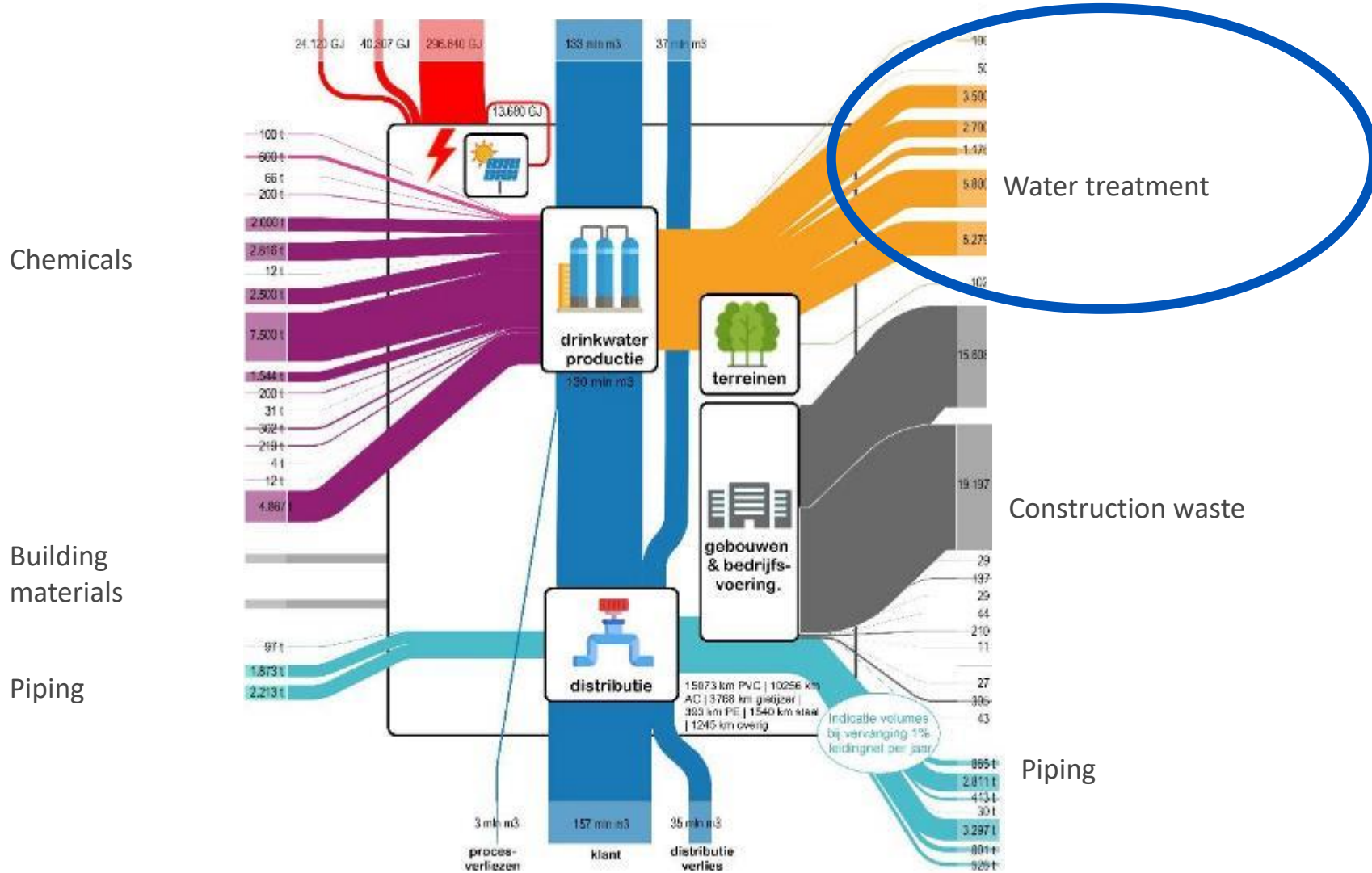
- 160 watertowers & reservoirs
- Total storage capacity 400 000 m³



- 1.436.000 connections to customers (households and industry)
- 34.000 km network lengt
- 3.232.000 inhabitants served by De Watergroep

De Watergroep in een notendop

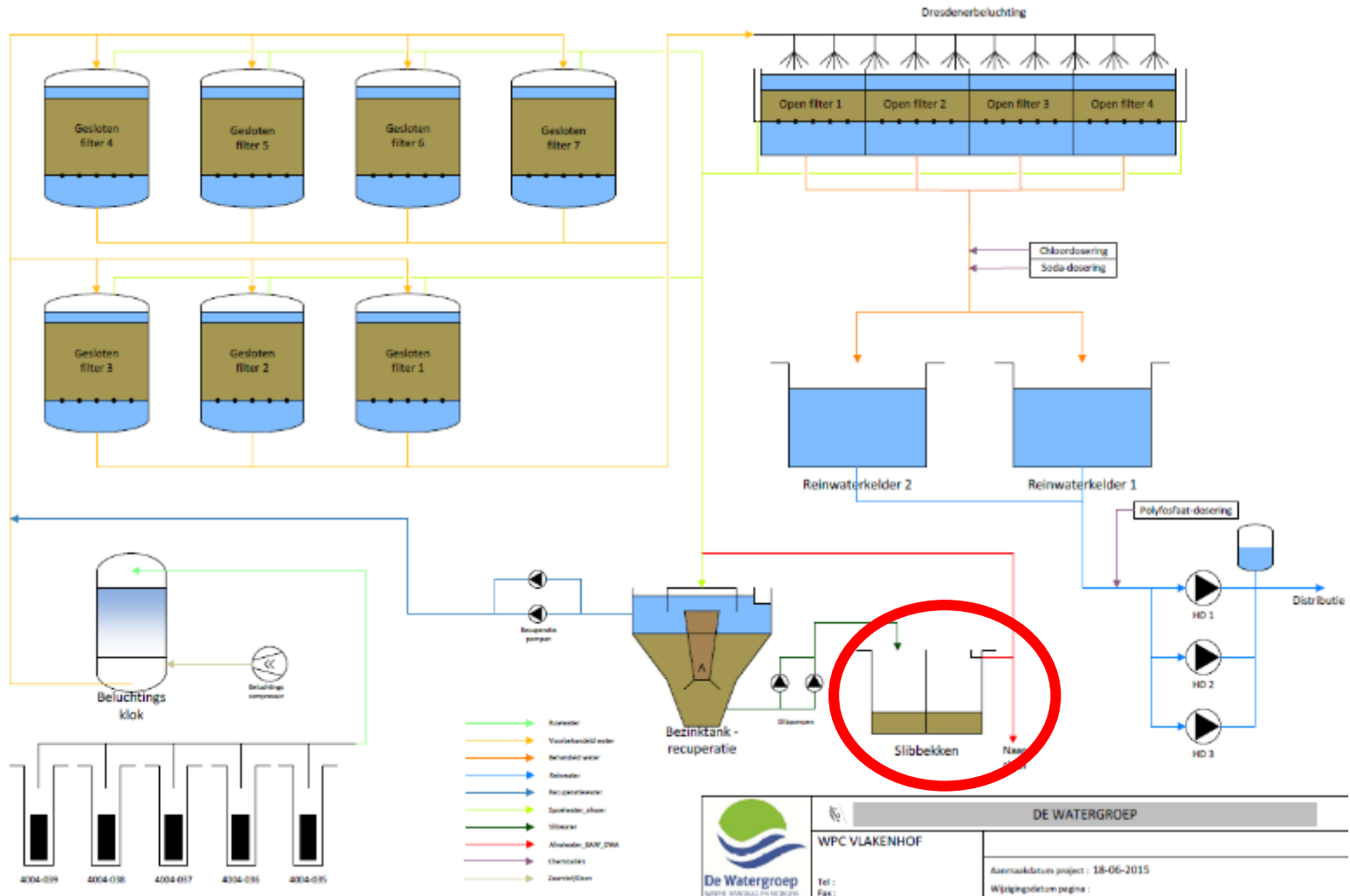
Materialstream



Content

- **Production and treatment**
 - Iron sludge
 - Aluminum sludge
 - Lime sludge
 - Lime grains
- **Reuse applications of the byproducts**
- **Future outlook**
- **International collaboration for sludge reuse**

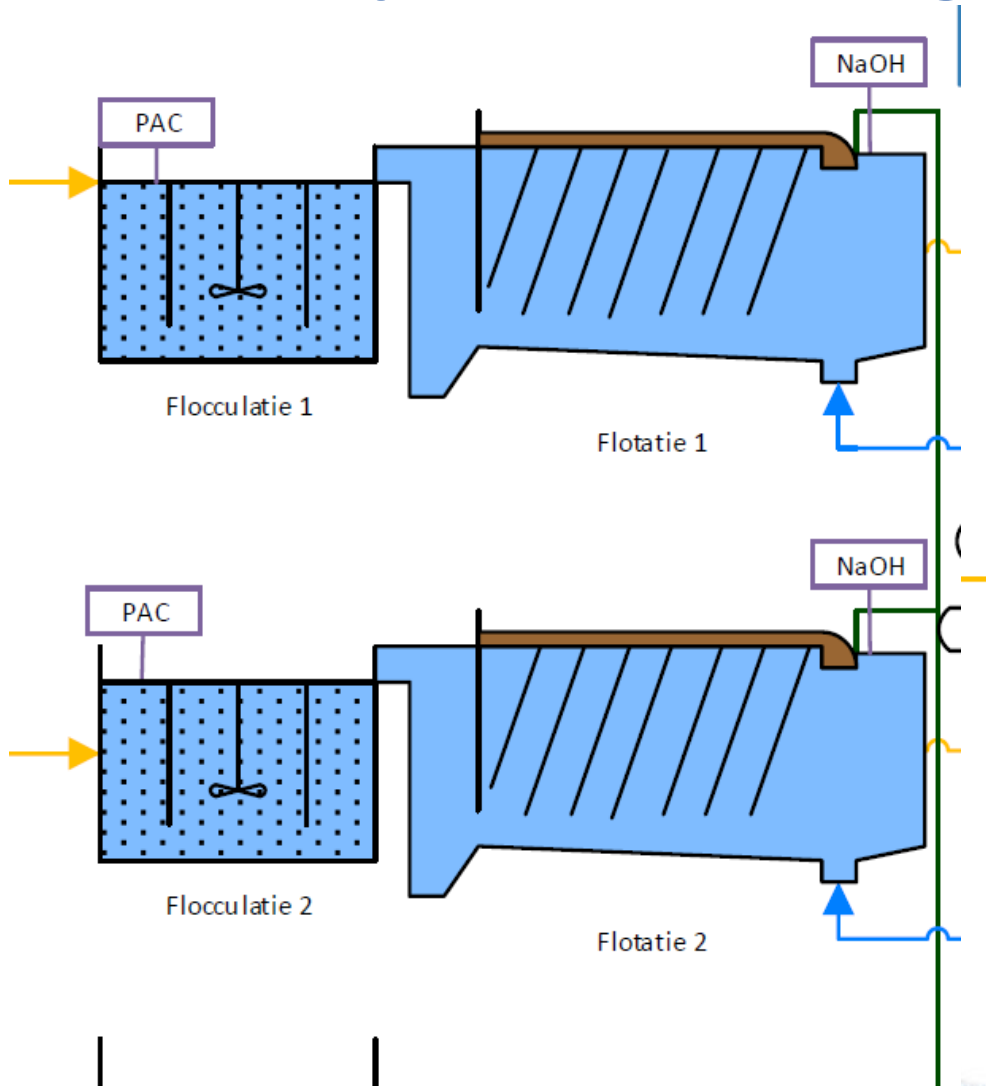
Groundwater: production of iron sludge



Groundwater: treatment iron sludge



Surface water: production sludge



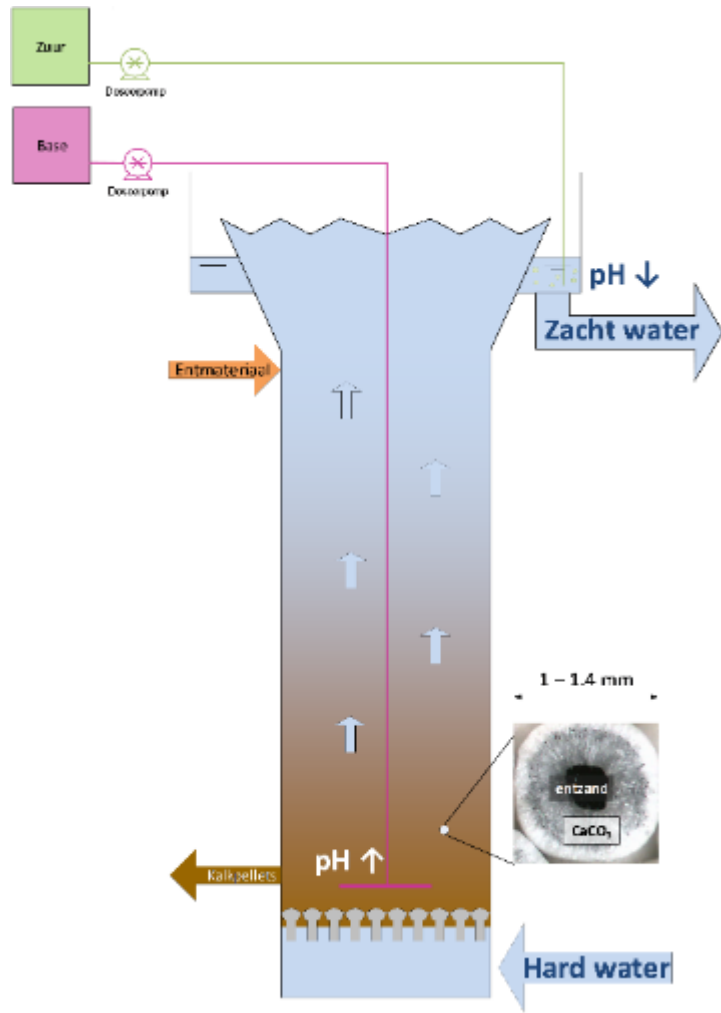
Surface water: treatment sludge



Sludge's buffering



Production lime grains



Lime grains



Waste?



Useful
reuse
externally?

Useful
reuse
internally
?

Iron Sludge: bio-fermentation



Lime sludge: Agriculture



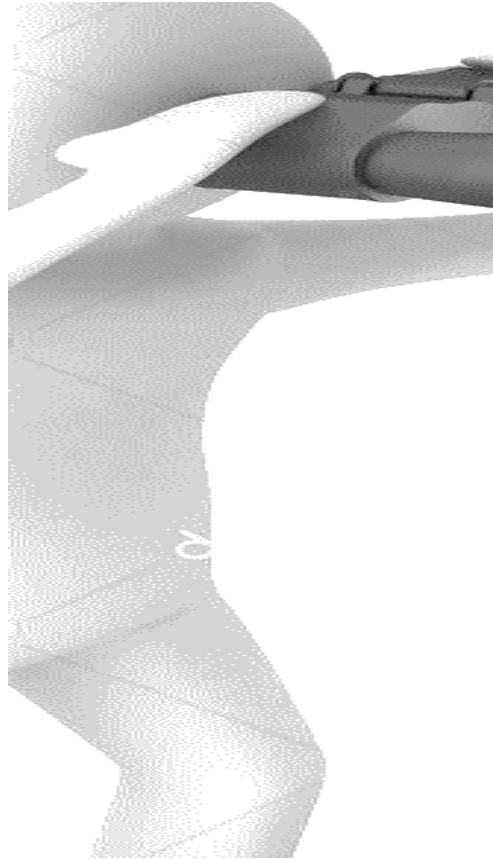
Lime grains: tiles, insulation, composite



Aluminum sludge



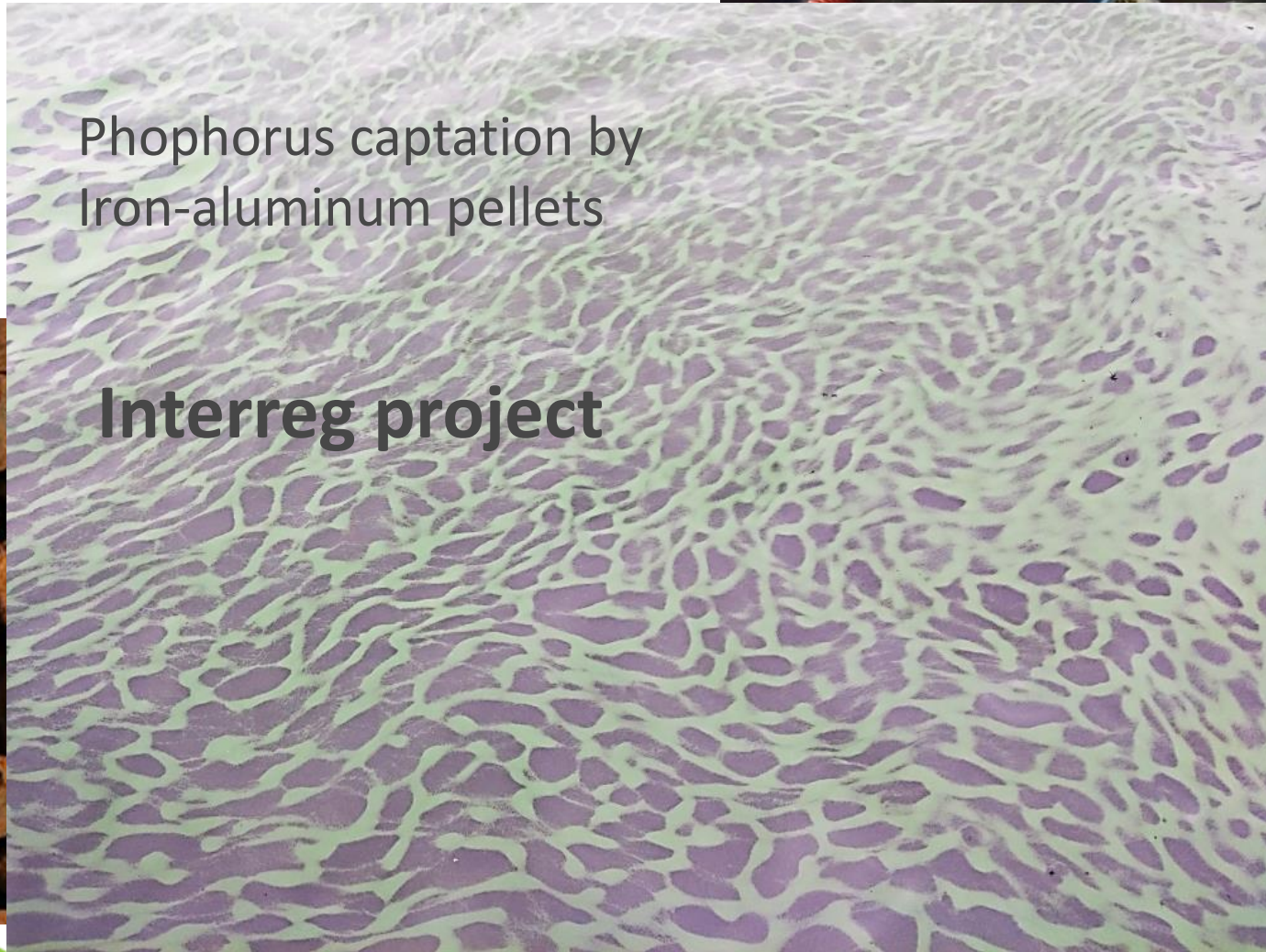
Future projects



Nuredrain

Phosphorus captation by
Iron-aluminum pellets

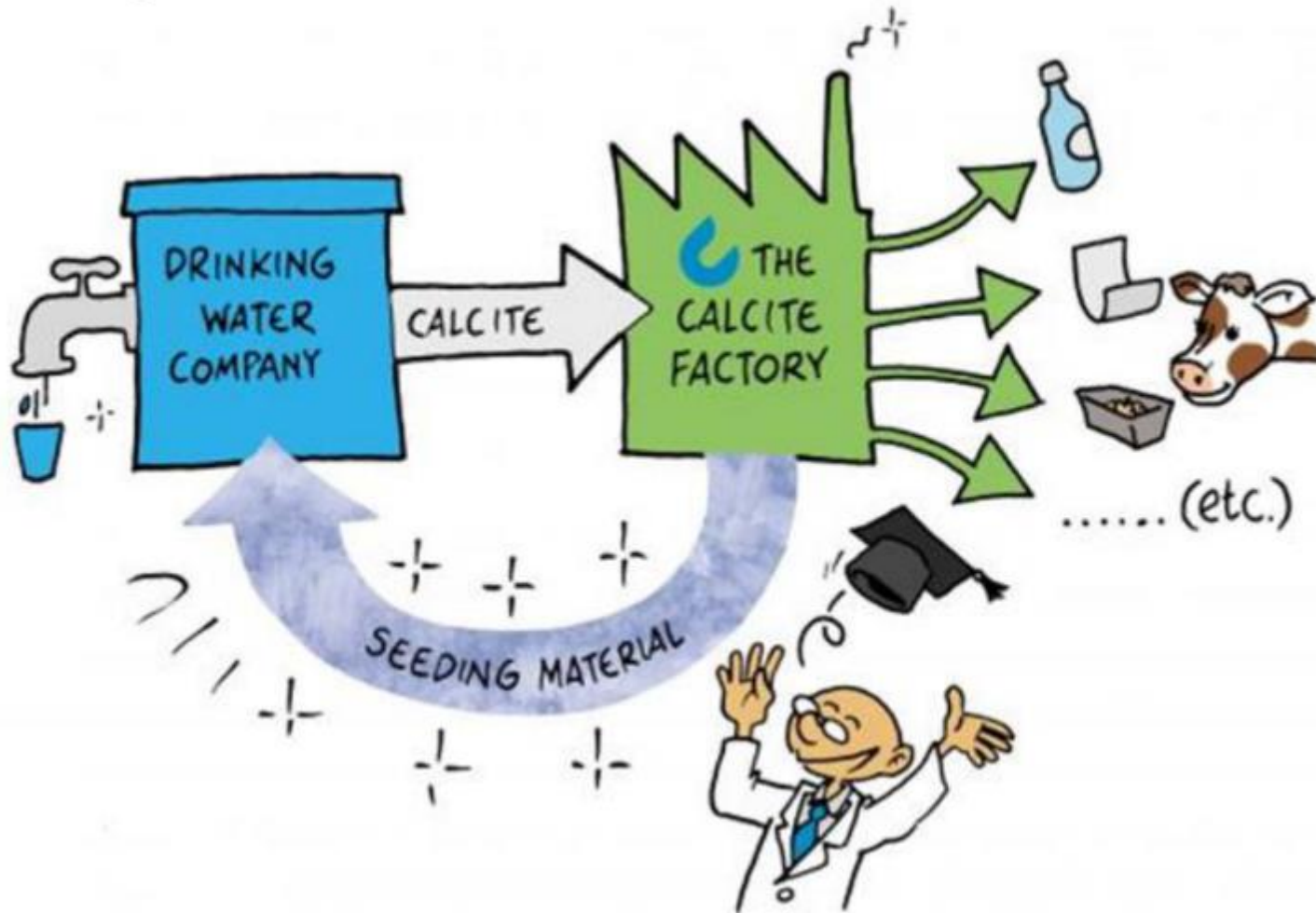
Interreg project



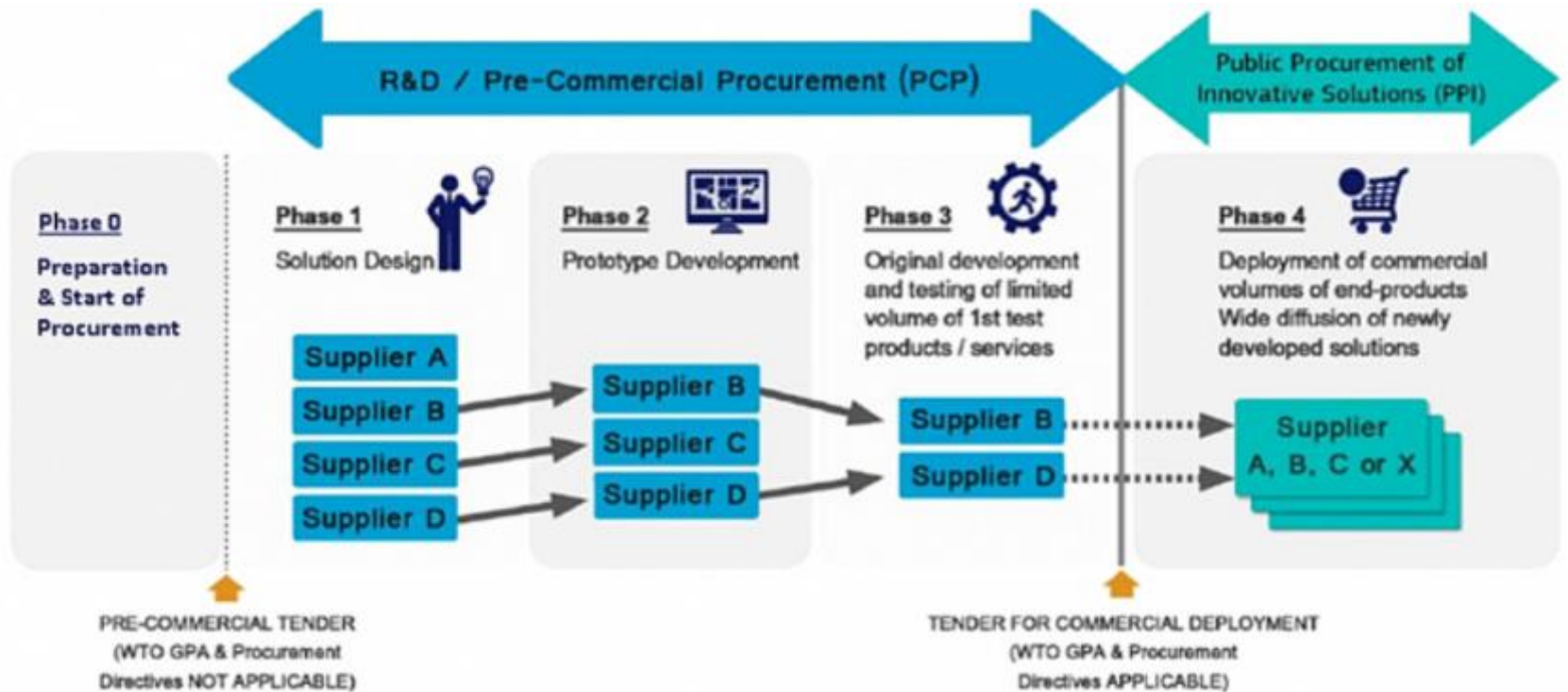
Glass industry



Lime grains: a circular project



AluCircle



Marketing in collaboration with AquaMinerals

• AquaMinerals BV

- *The Dutch water sector's partnership (drinking water companies and waterboards) that give resources from the (waste) water treatment a second life.*
- *De Watergroep is the only foreign partner.*

• Purpose of the collaboration

- Supply-demand balancing
- Supply size: minimum volume
- Continuous development of the market and of new applications
- Knowledge sharing between partners



Thanks

