

Systems in Transition

Innovating for a Resilient Water Future

13th Balkans Joint Conference and Exhibition

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inspiring change

our sector is under pressure



climate change



urbanization & migration



ageing assets

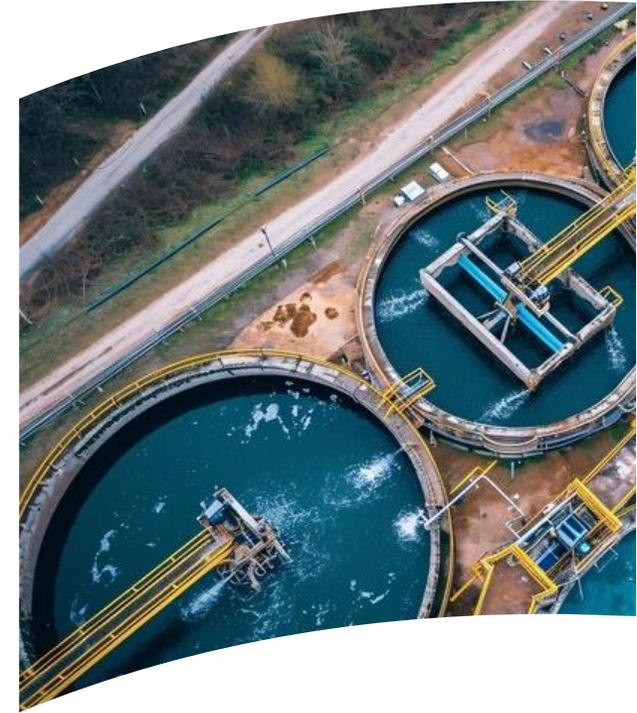


tighter regulations

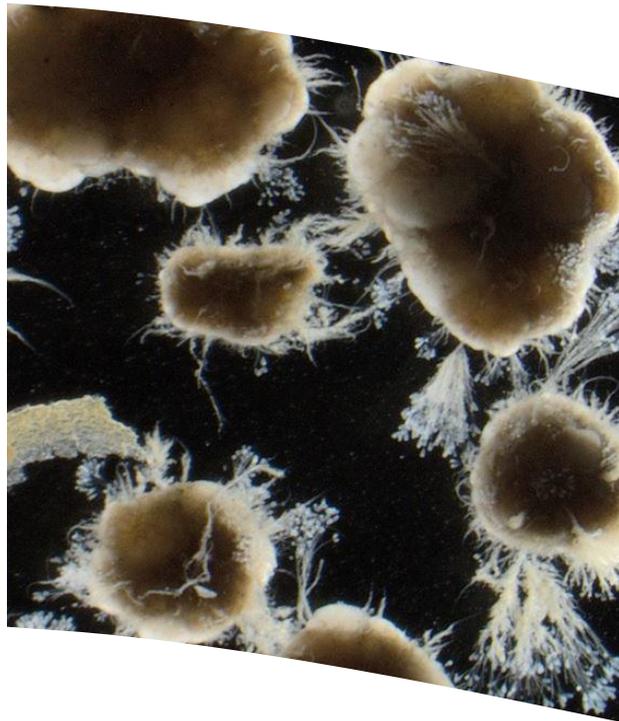
mitigation: why wastewater matters most

innovations in wastewater treatment that deliver low carbon solutions

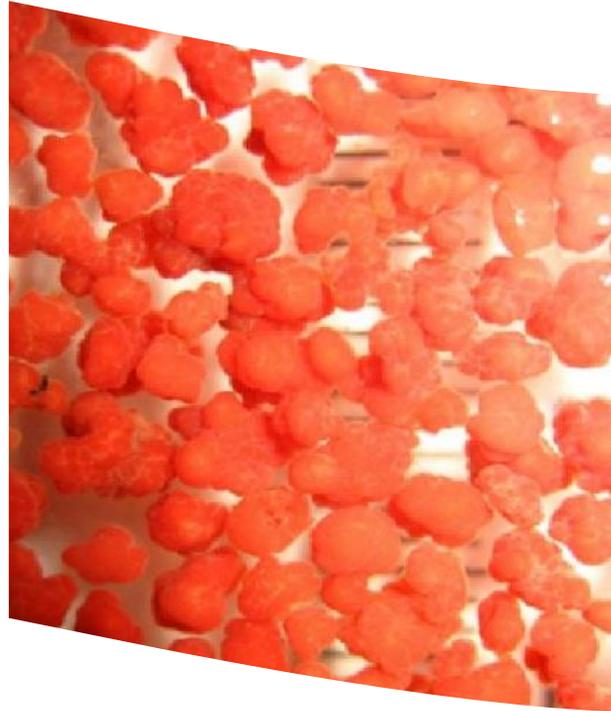
big focus on intensification



Carbon Redirection



Aerobic Granular Sludge

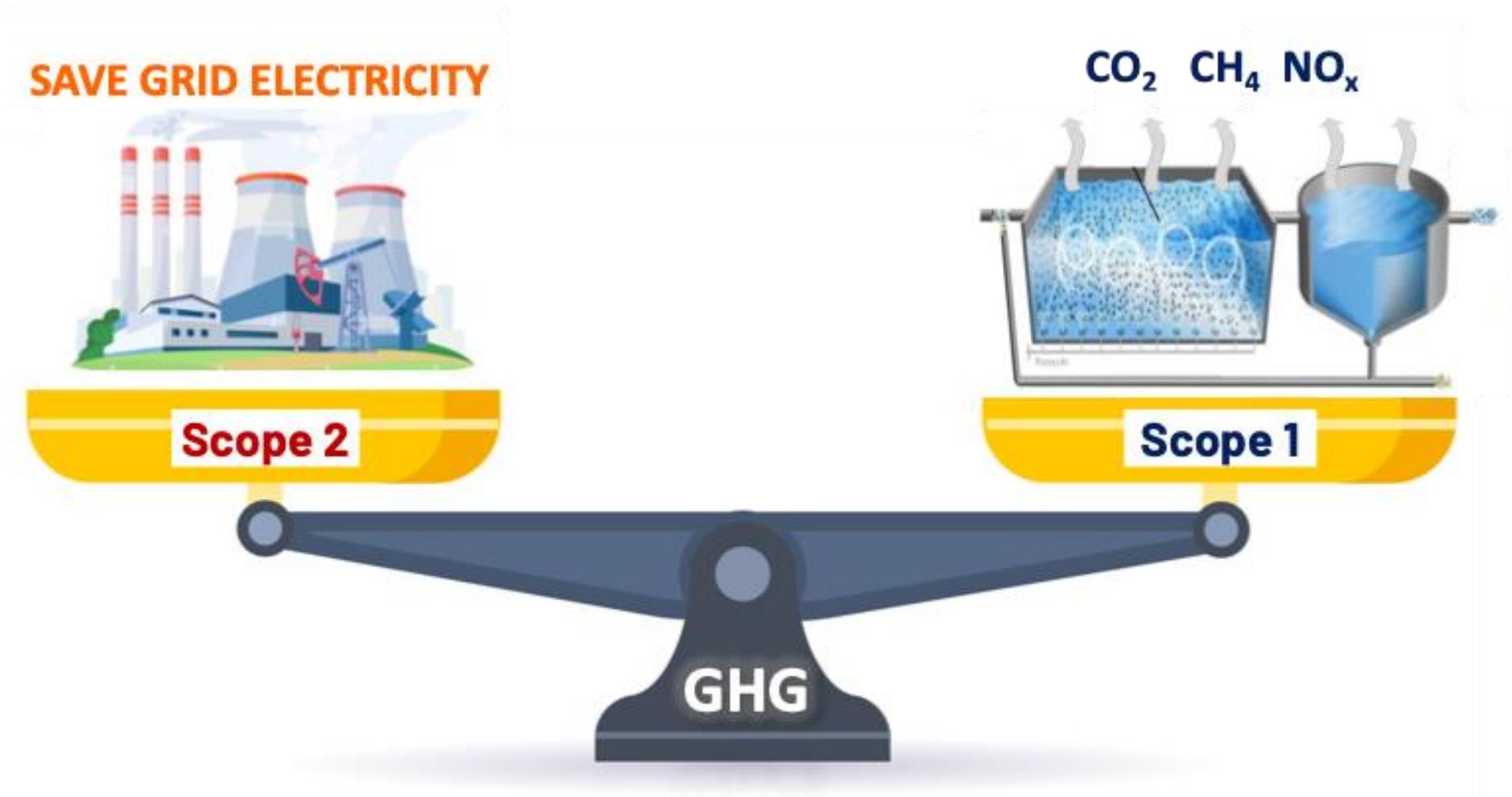


Anammox



Thermal Hydrolysis

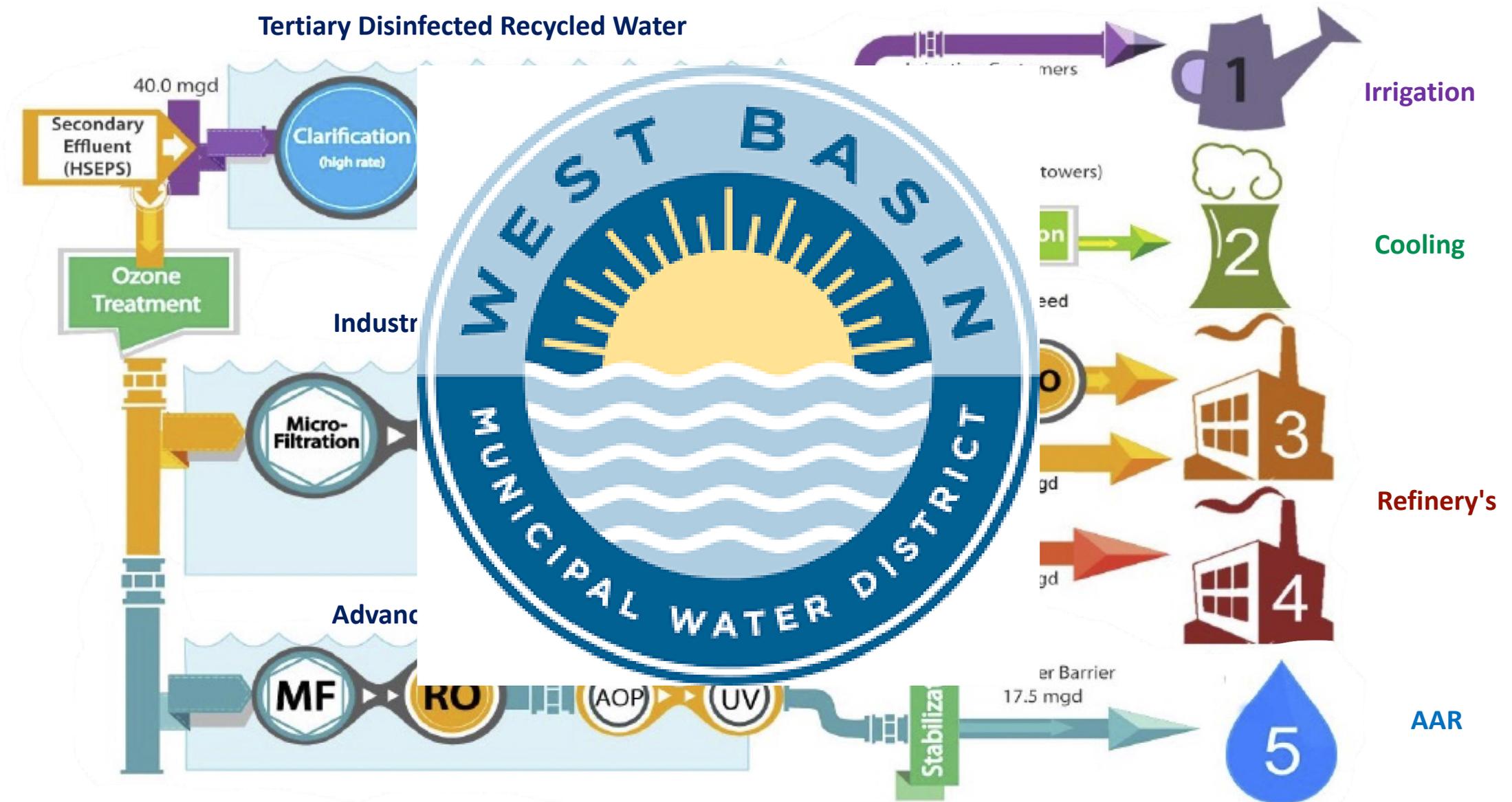
energy cuts \neq GHG cuts: know the difference



adaptation - supply chain resiliency

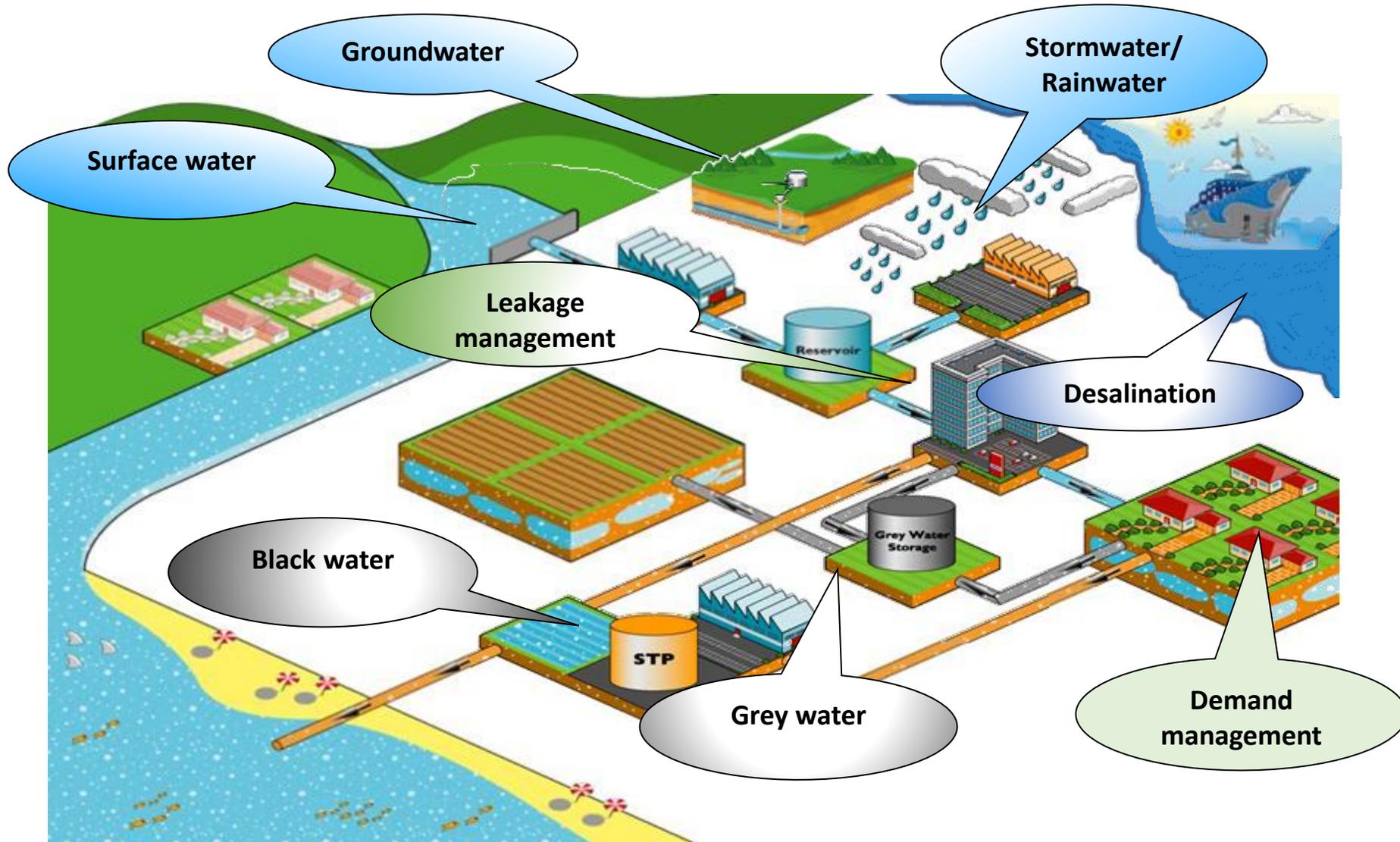
innovations focus on **water productivity** - matching quantity & quality to use;
and **circular approaches** that recover valuable resources from wastes

designer waters, waters of different flavours

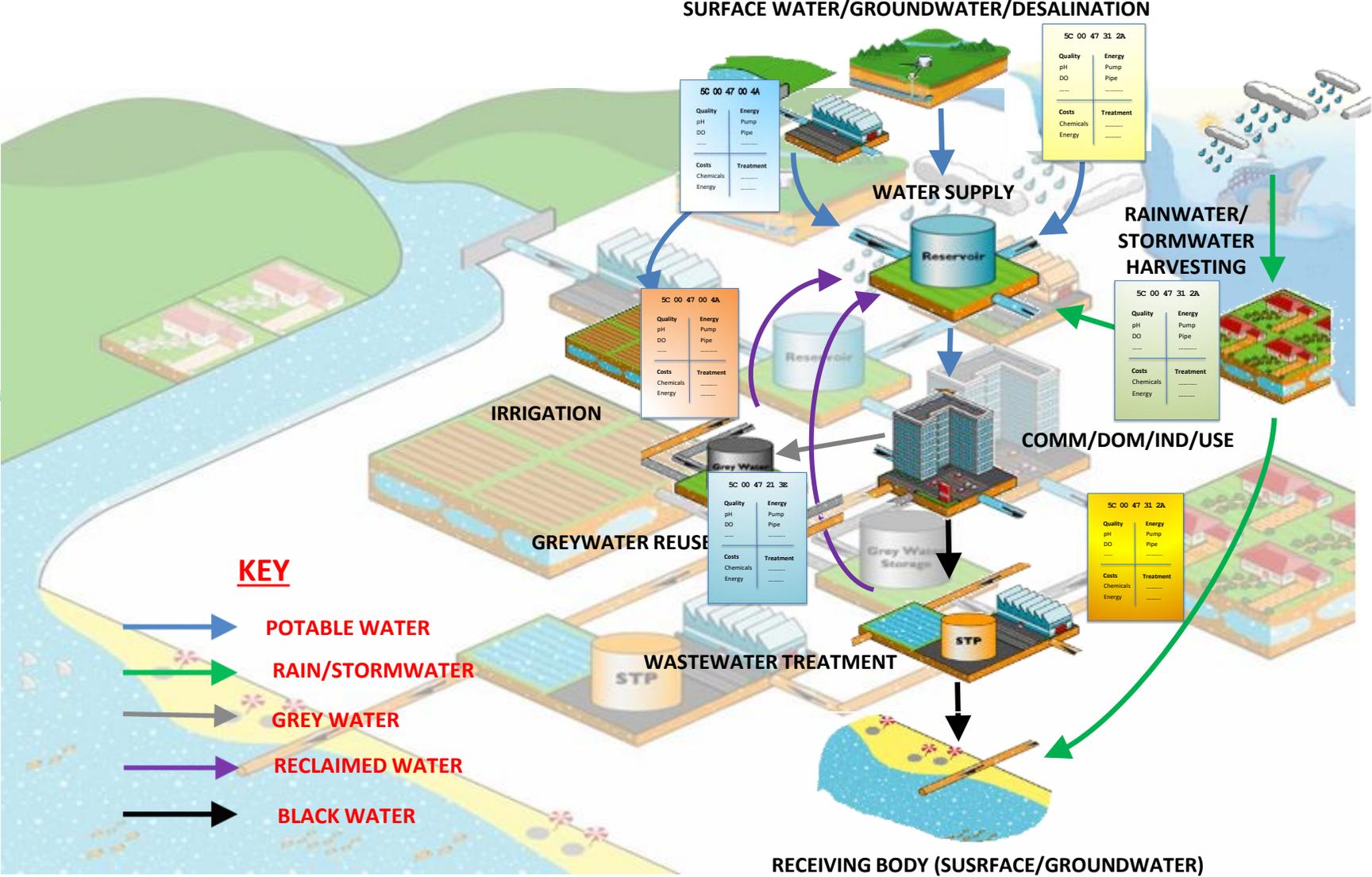


all water is good water

trick is to match quality and quantity to purpose



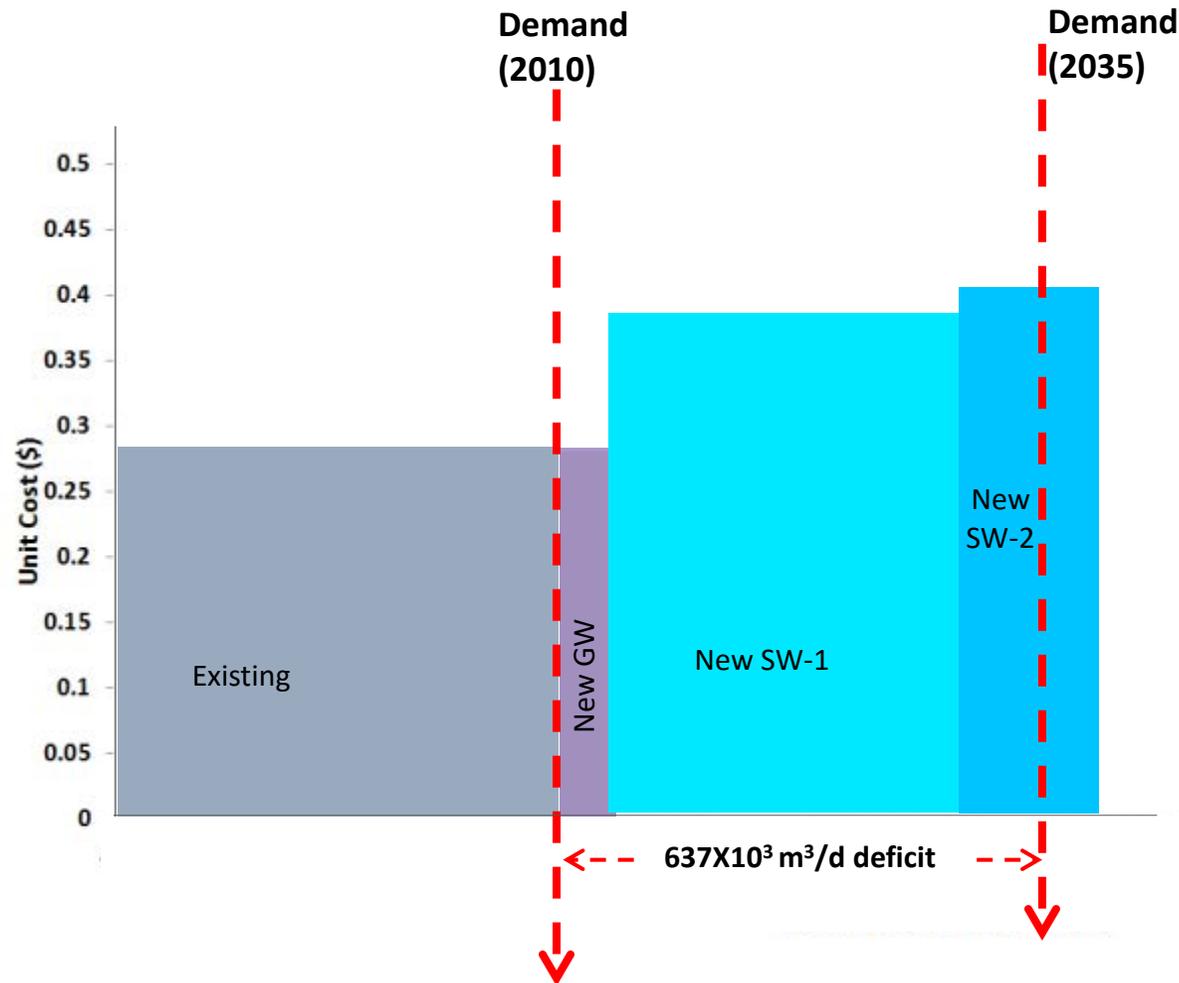
linking flows through modeling



common fix in Nairobi

import more water to meet growing demand

- Unit costs of US\$ 0.36/m³



consider a portfolio of options

think about non-conventional sources

- Unit costs of US\$ 0.31/m³

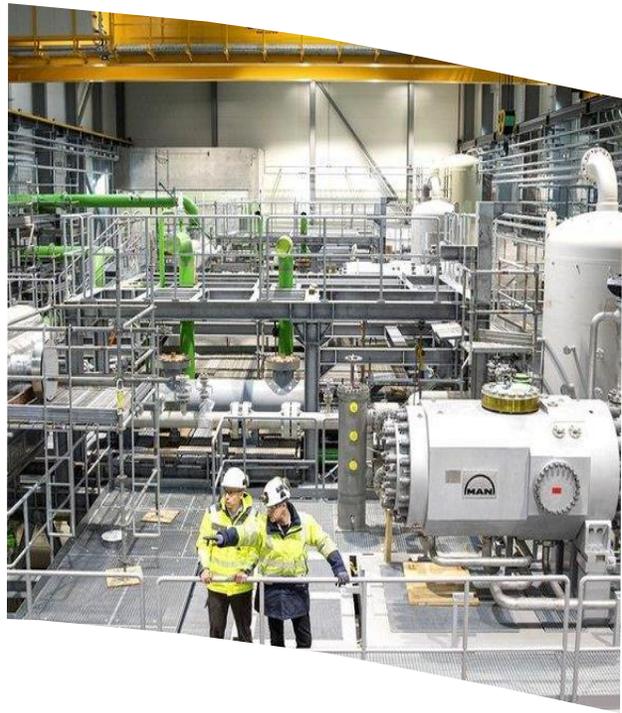


from wastewater to wealth

resource revolution needs smart business models



biogas



heat-pumps



struvite



bioplastics

from tonnage to value

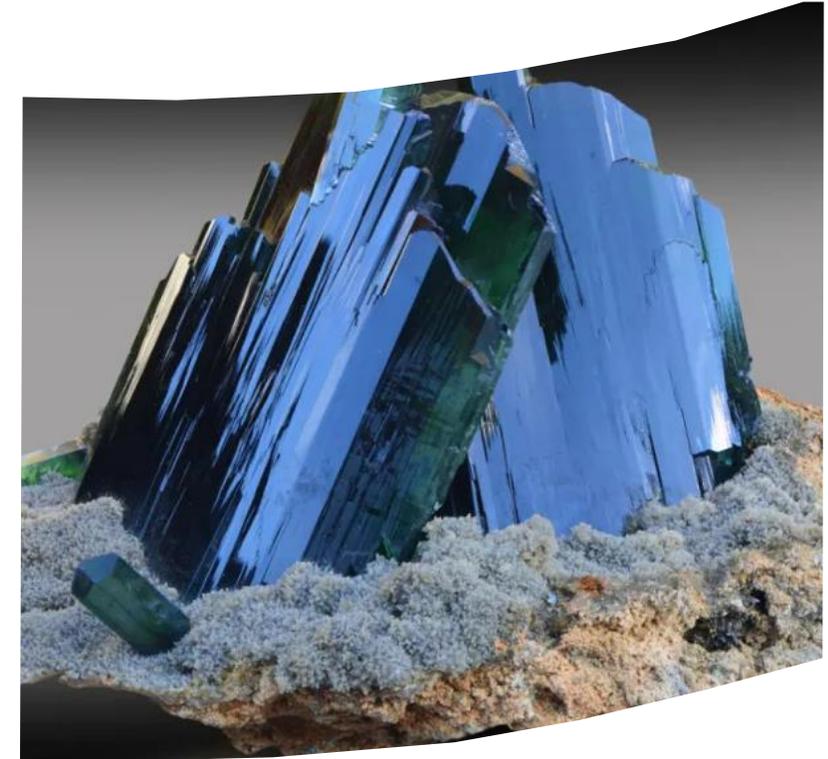
smarter separation, higher returns – transforming treatment



lithium & magnesium



short chain fatty acids



vivianite

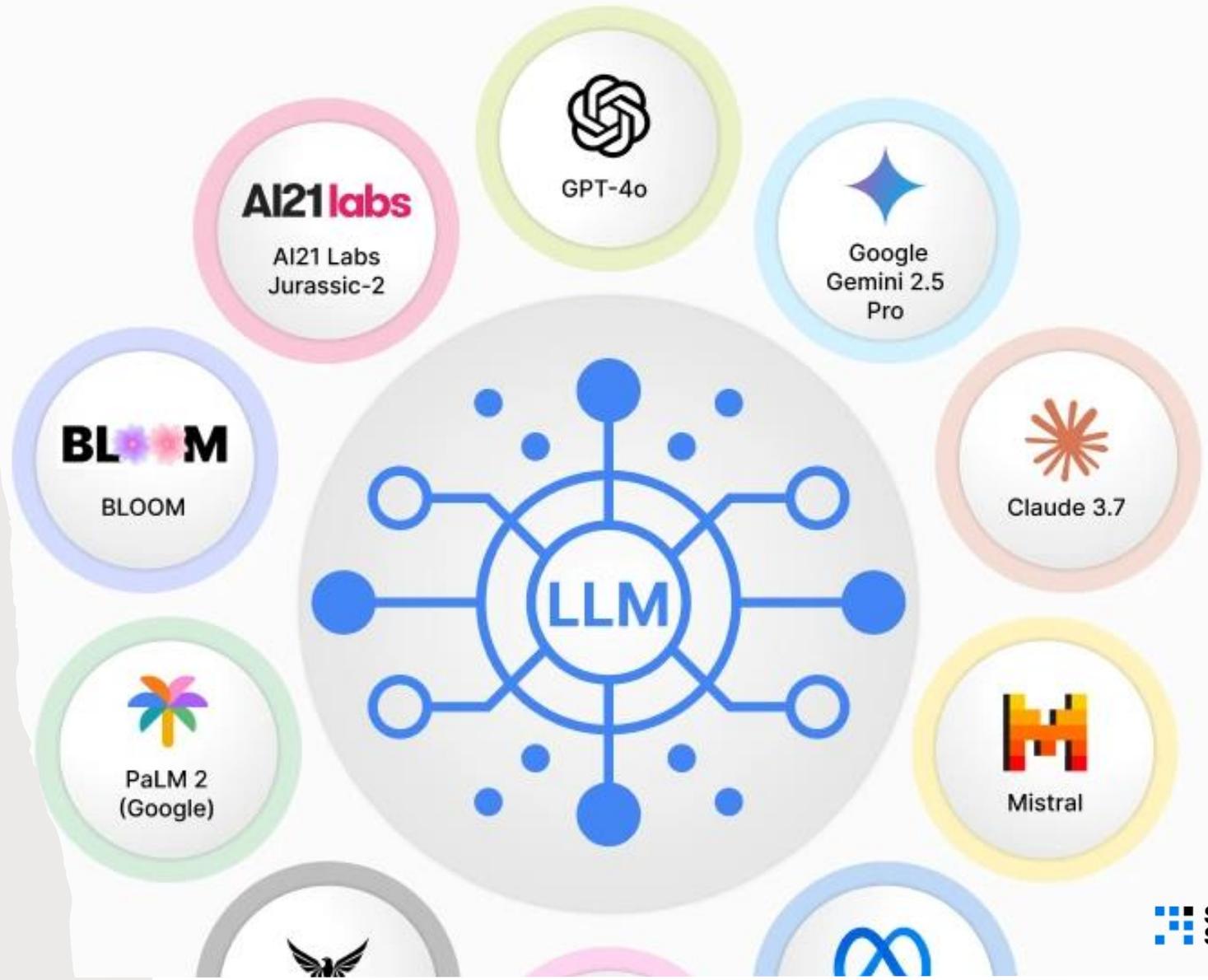
it takes an ecosystem - but you can't do it all
success comes from partners and the right recovery niche



unleashing the power of generative AI

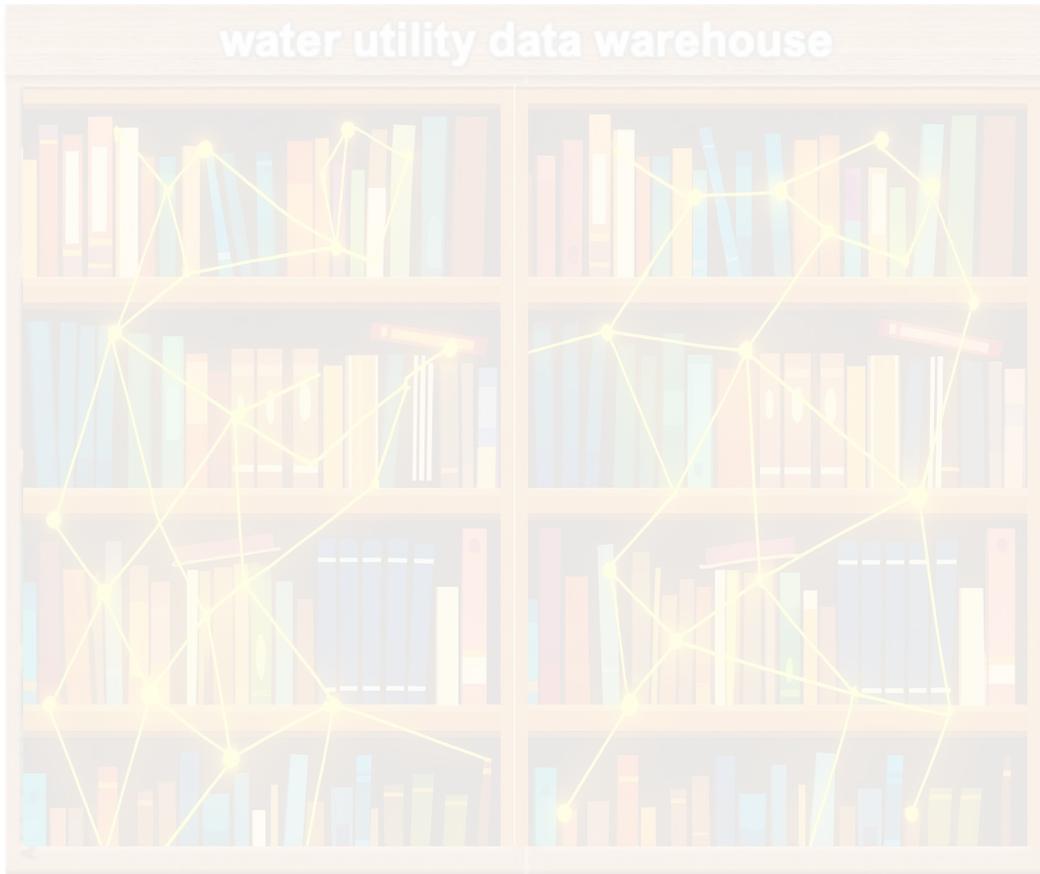
unlocking hidden insights across all our water systems

from complexity to clarity:
integrating **structured**,
unstructured, and **tacit** data



from data blindness to data brilliance

Connected Data



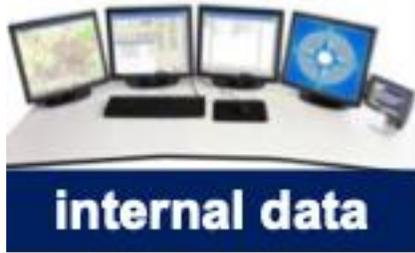
Connecting fragments of knowledge - linking numbers, notes, & memories into intelligence

Empowered People



Everyone's a programmer now — using plain language to unlock complex insights

tacit knowledge



Operator briefings
Repair team stories
Pipe fitter opinions



Weather related
Traffic loading
Soil condition
.....



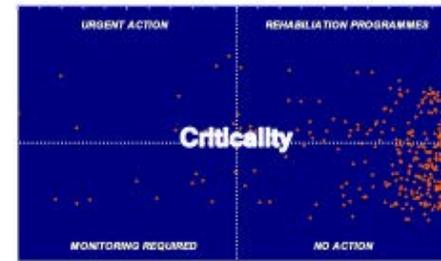
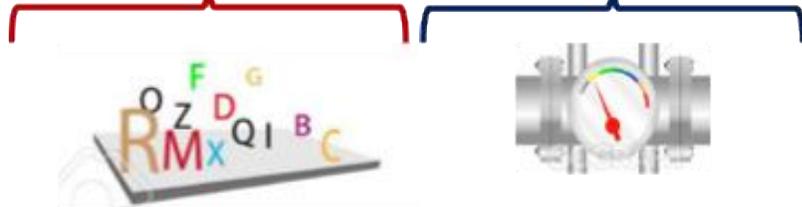
GenAI

Unstructured Data

- Quality of contractors
- Maintenance logs
- Customer complaints
- Emails on failures

Structured Data

- Pressures & flows
- Water quality
- Age, material...
- Stress & strains



Pipe Condition Assessment

choices before us

