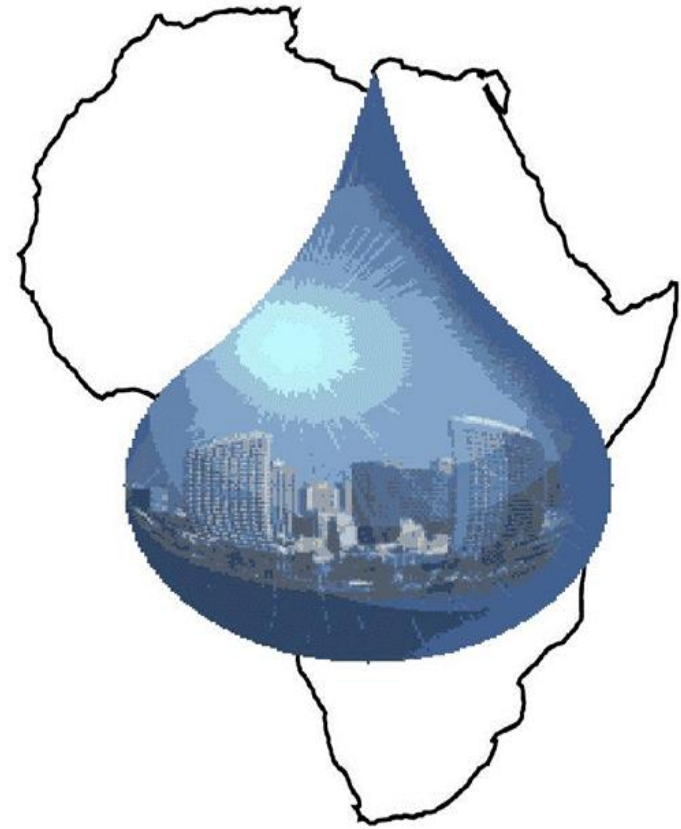


Urban Waters in Africa

Towards Urban Water Security
and Sustainable Development

Integrated Urban Water Management
Approach

Francois Brikké
GWP



An on going Partnership



Working together since 2015

- Overall approach
- Financial and Technical Partnership
- Kinshasa, Zimbabwe, Madagascar, Mozambique, Seychelles

21st Century World – We Still follow the 19th Century Model

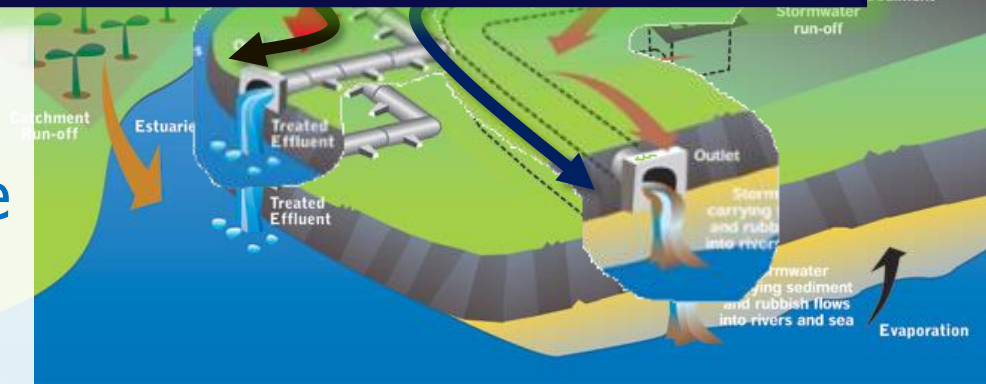
- Linear systems-- collect, redirected treat and discharge
- Systems with fixed,



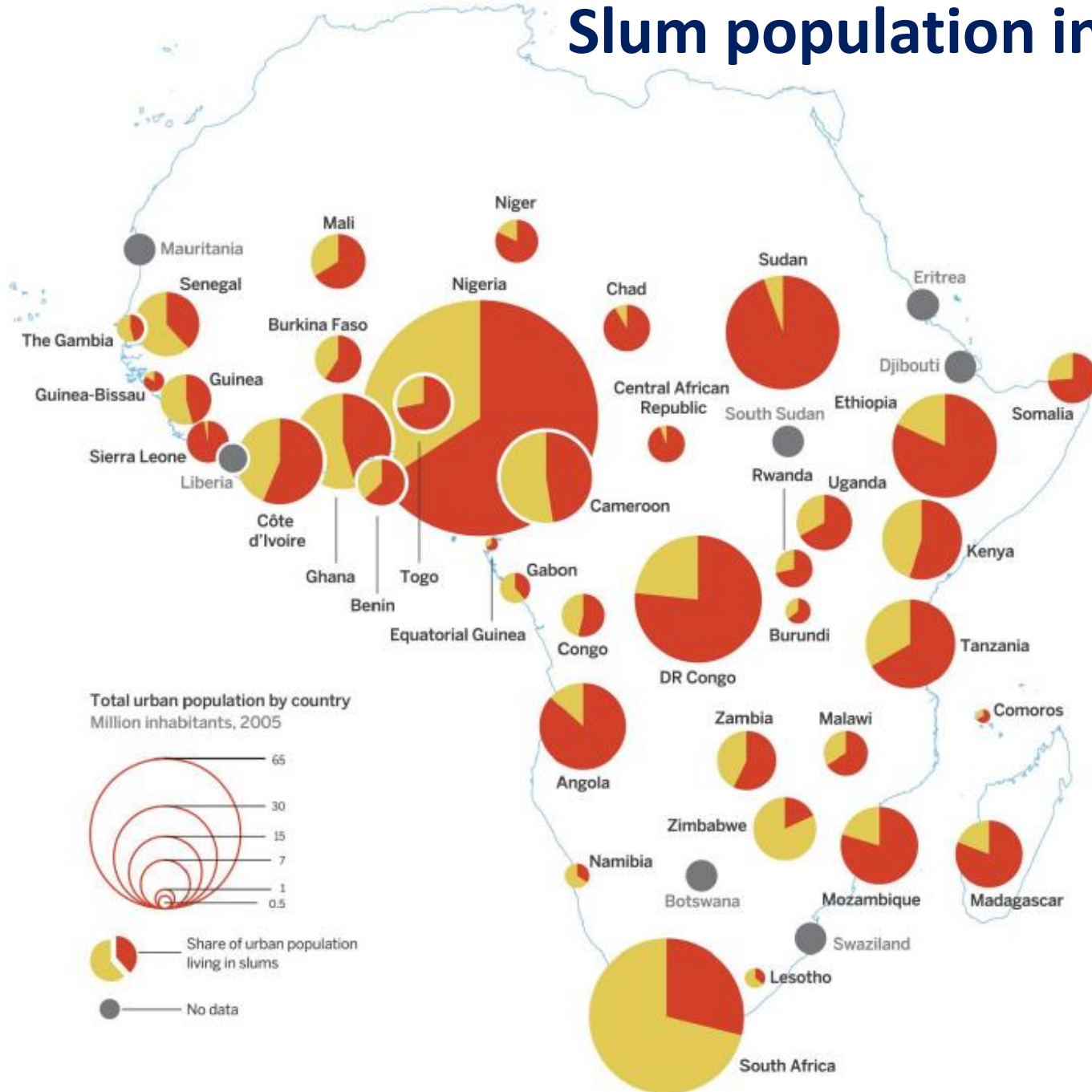
Linear, energy intensive, single quality, use once and throw away systems

**'All or nothing proposition'
Unaffordable to 2/3 of the planet**

- Regulations stall innovation, are inflexible -
- Urban form created with little input from water professionals



Slum population in urban Africa



A key challenge for urban water and sanitation is serving the unserved

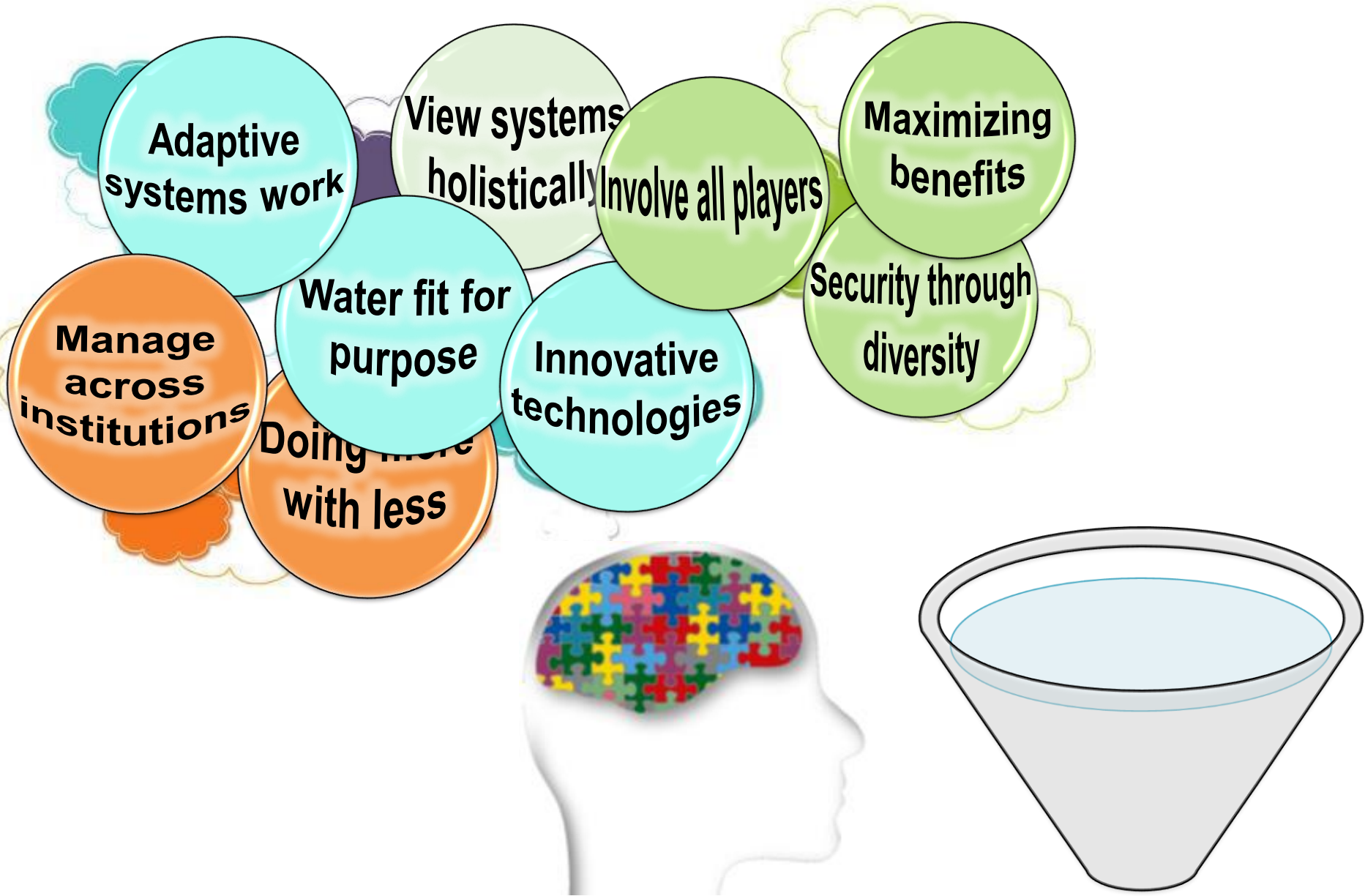


Information, Infrastructure and Institutional Challenges

Integrated Urban Water Management (IUWM)

Too good an opportunity to miss

IUWM is not a methodology but a mindset - a different way of thinking

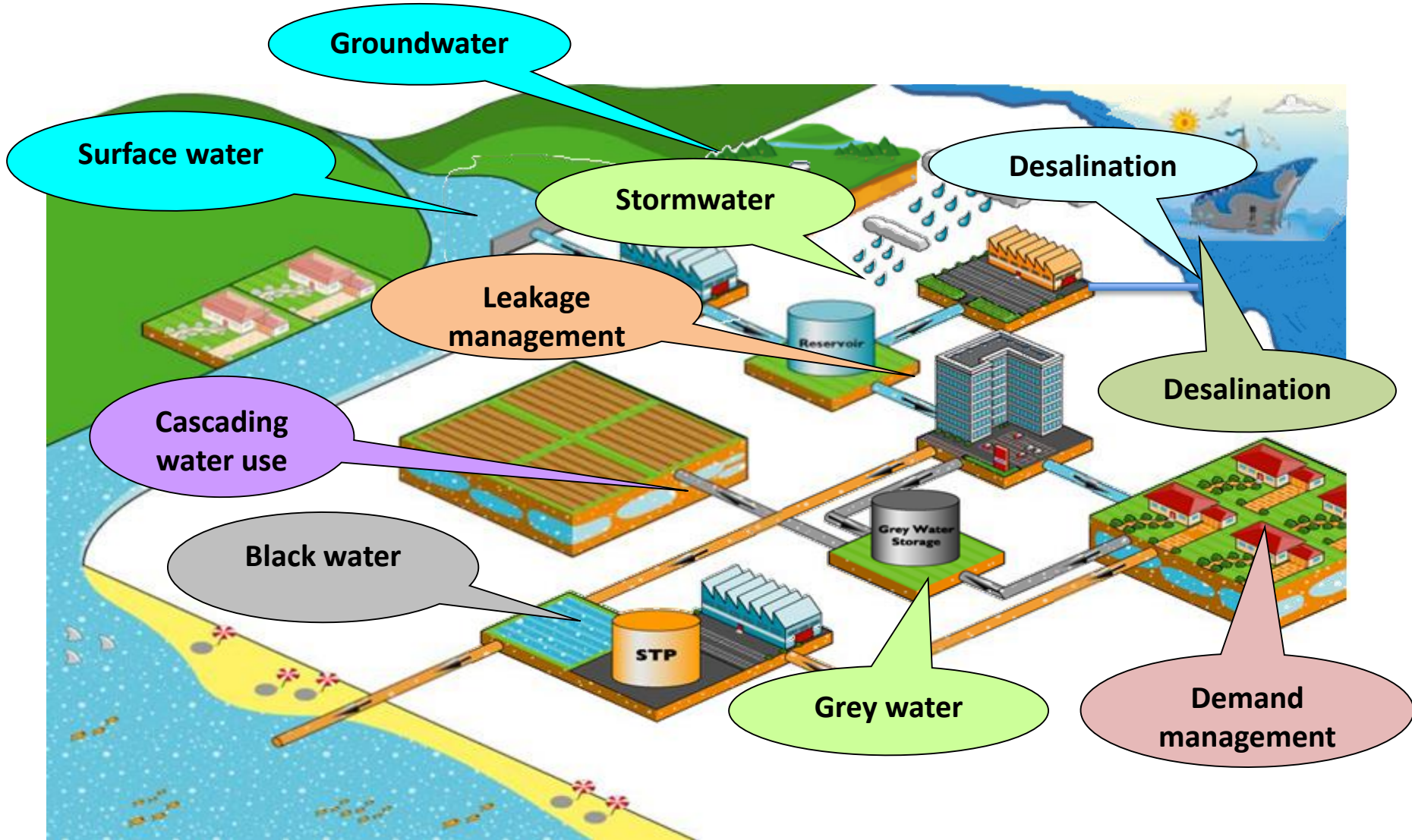




major change in perspective

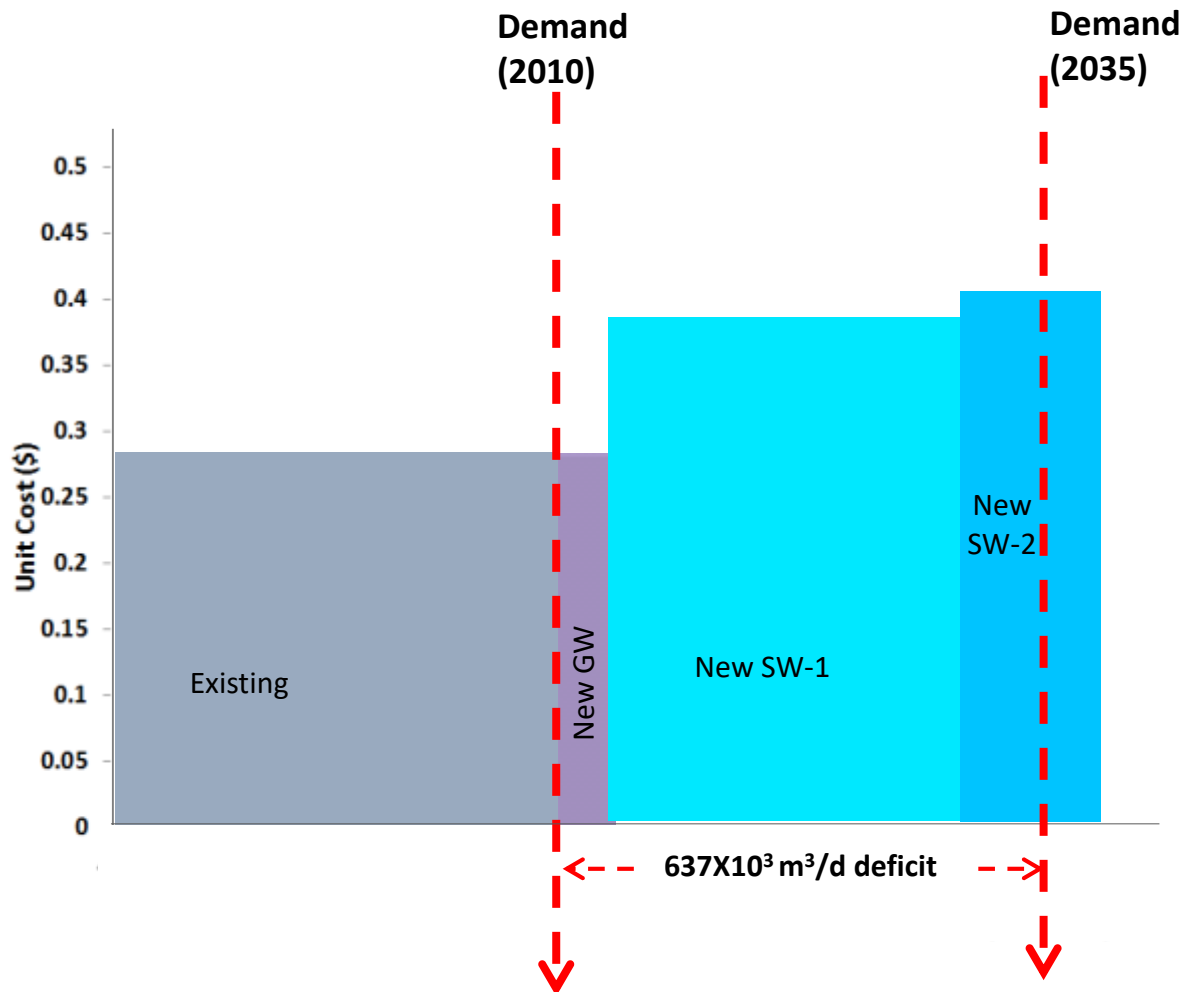
productive use of water

We need to have a systems perspective of the water cycle



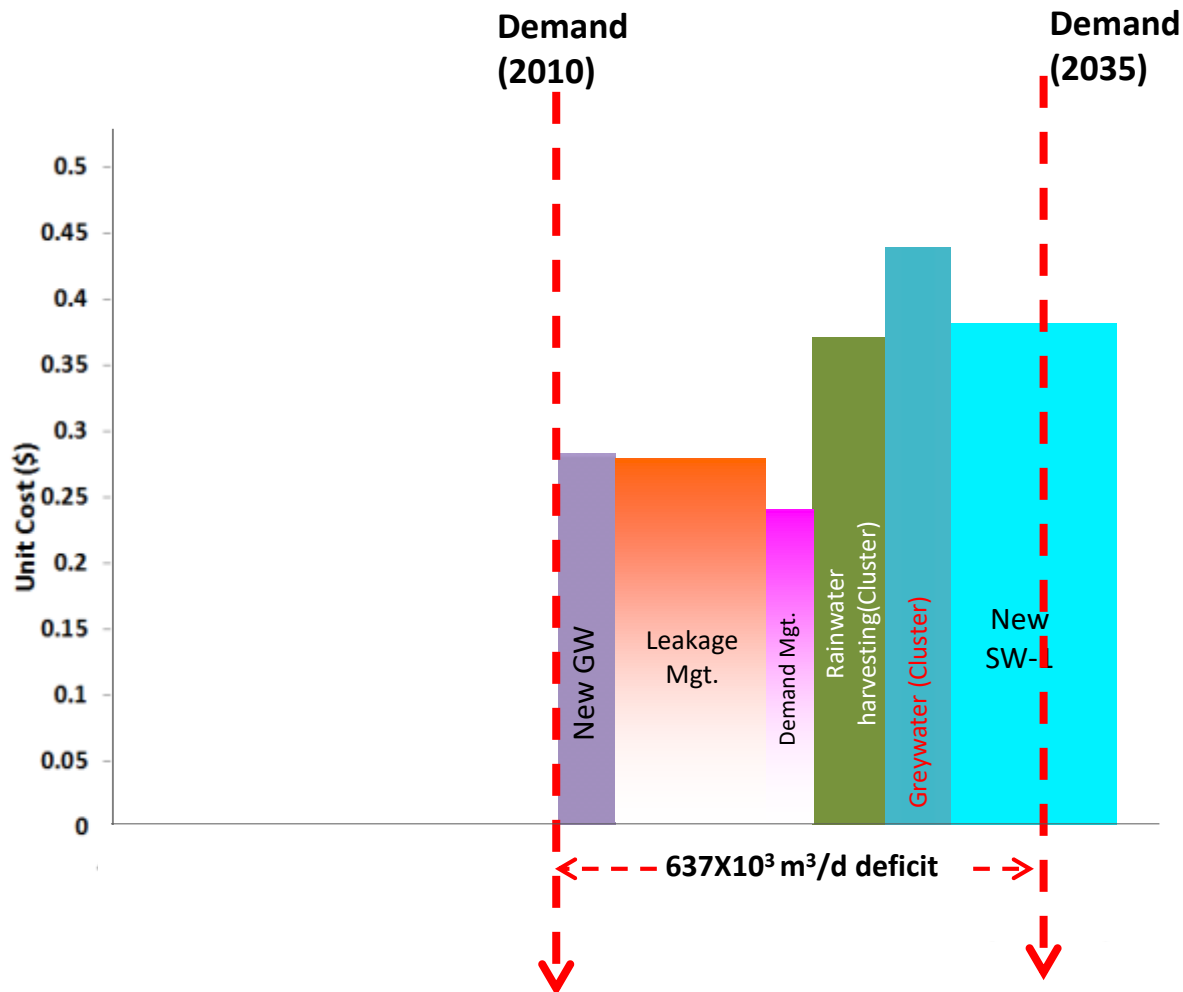
Typical solutions - import more water to meet growing needs (Nairobi)

- Unit costs of **US\$ 0.36/m³**

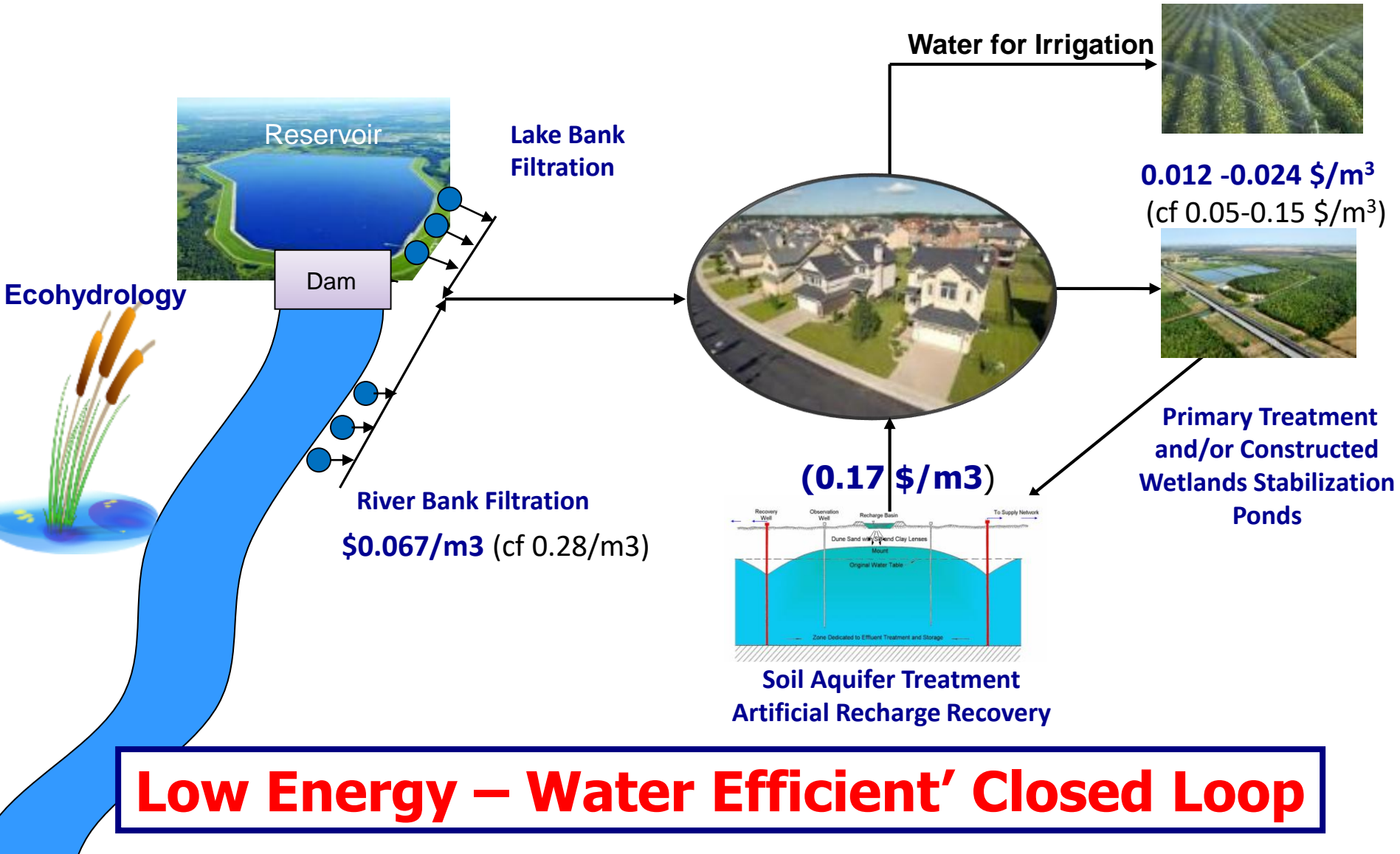


Need to consider non-conventional resources – a portfolio of options

- Unit costs of **US\$ 0.31/m³** (cf. to 0.36)



Natural systems can help reduce the energy foot-print



Changing our perspective creates opportunity to do things differently



Quality A

Quality B

Quality C



Mondi

SAPREF



A
Domestic Reuse

B
Irrigation Parks

C
Rivers

D
Irrigation Fodder



1
Tertiary: Irrigation



2
2nd+RO+MF: AAR



5
RO(x2): Refinery



3
Nitrified: Cooling



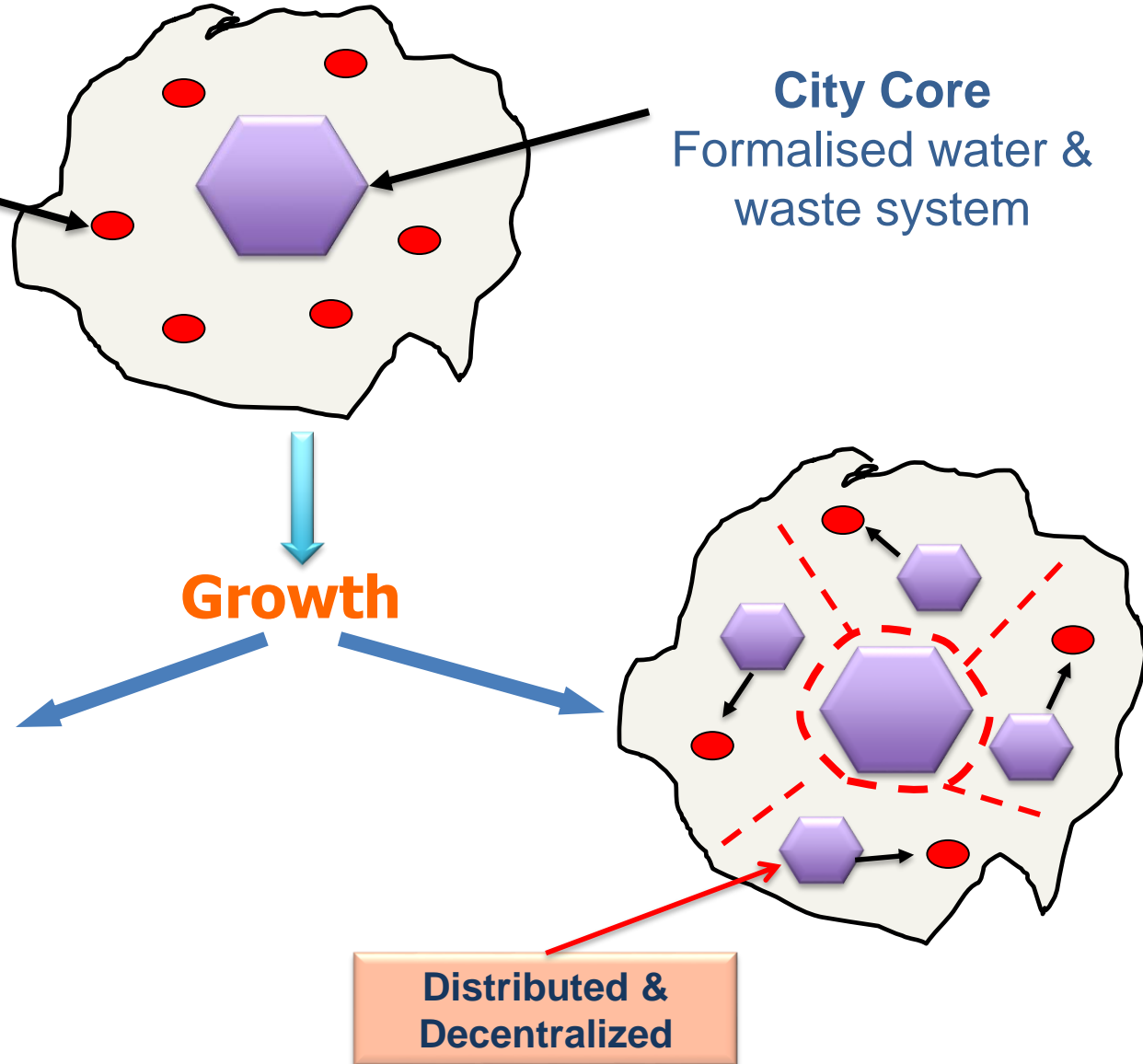
4
RO: Refinery



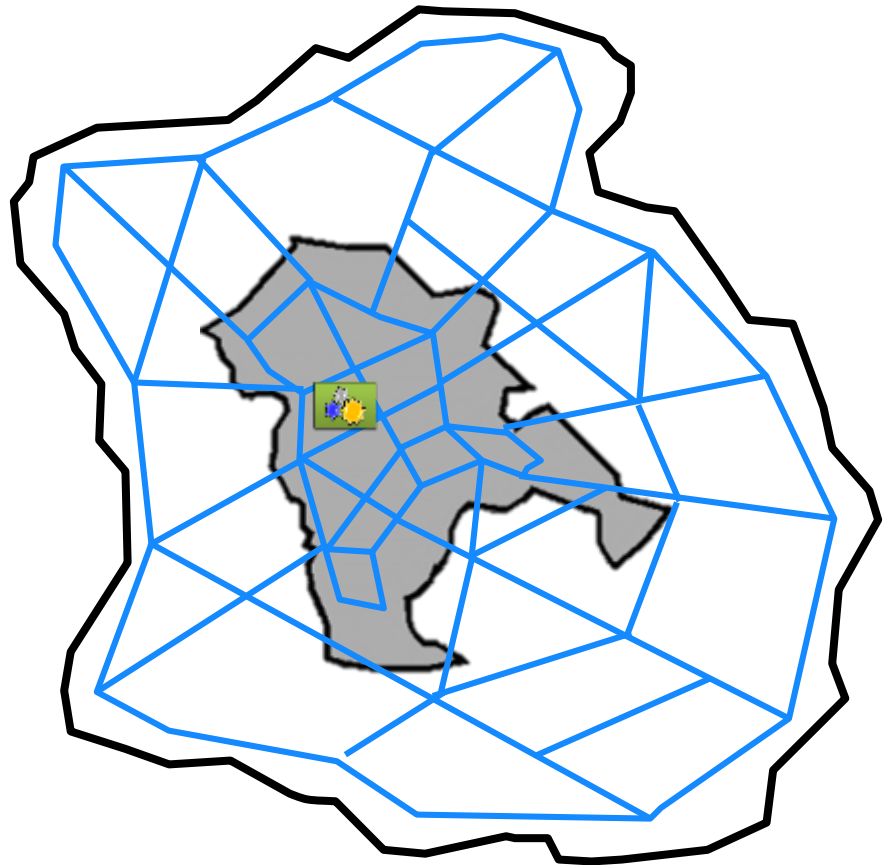
Look for opportunities to create new paradigms (not extend old ones)

Outskirts
Demand met by
informal systems

City Core
Formalised water &
waste system



Semi-centralized is cheaper? (Uganda)



Average Annual Costs
5,148,000 US\$



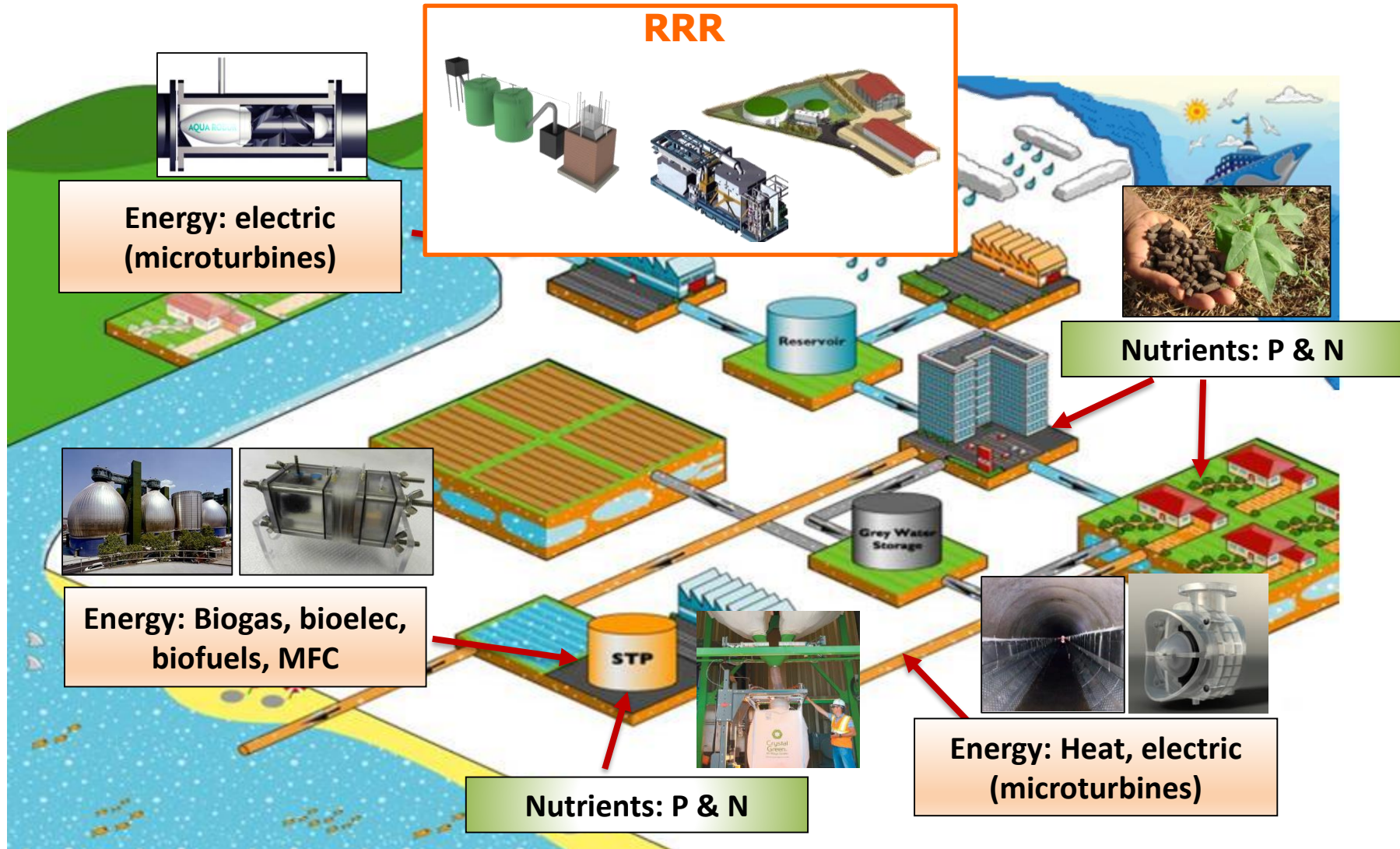
Average Annual Costs
3,787,000 US\$



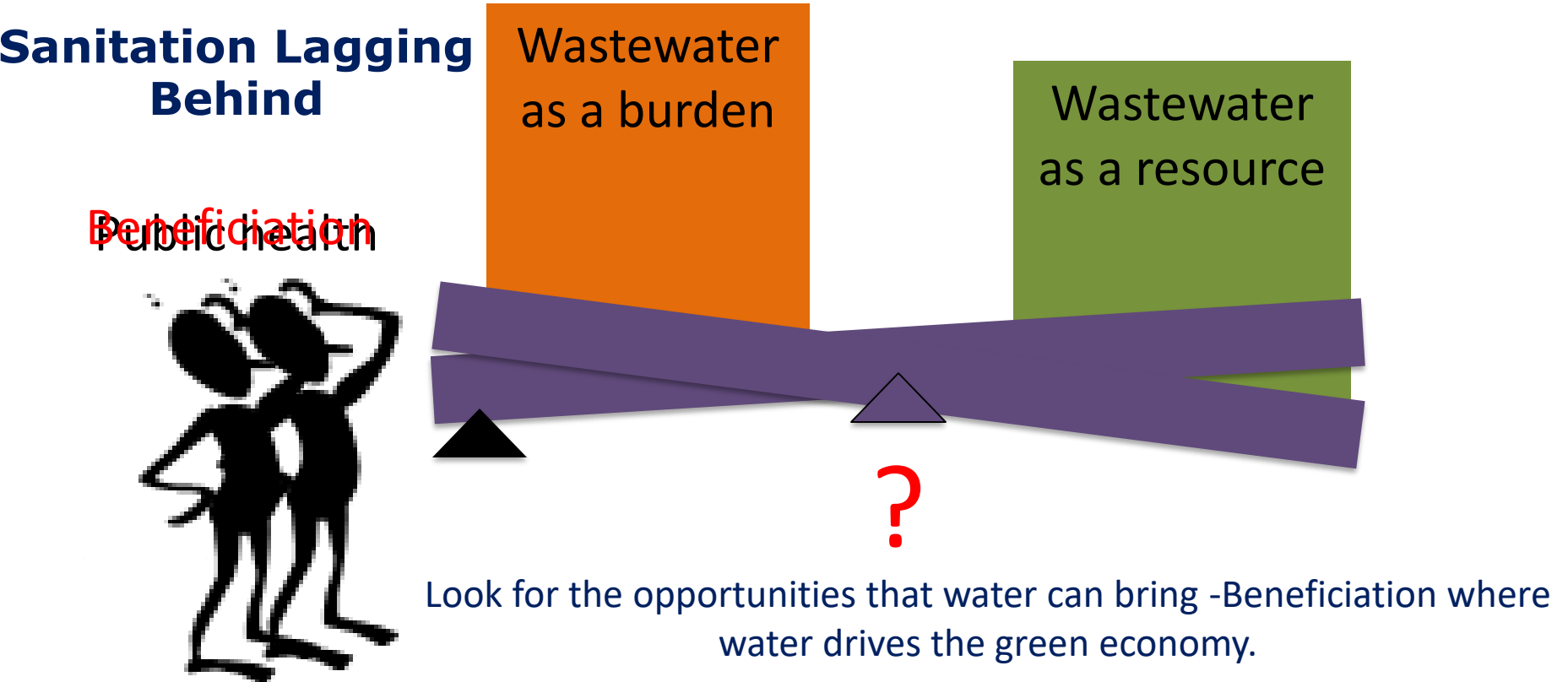
major change in perspective

waste as a resource

Changing our perspective creates opportunity to do things differently



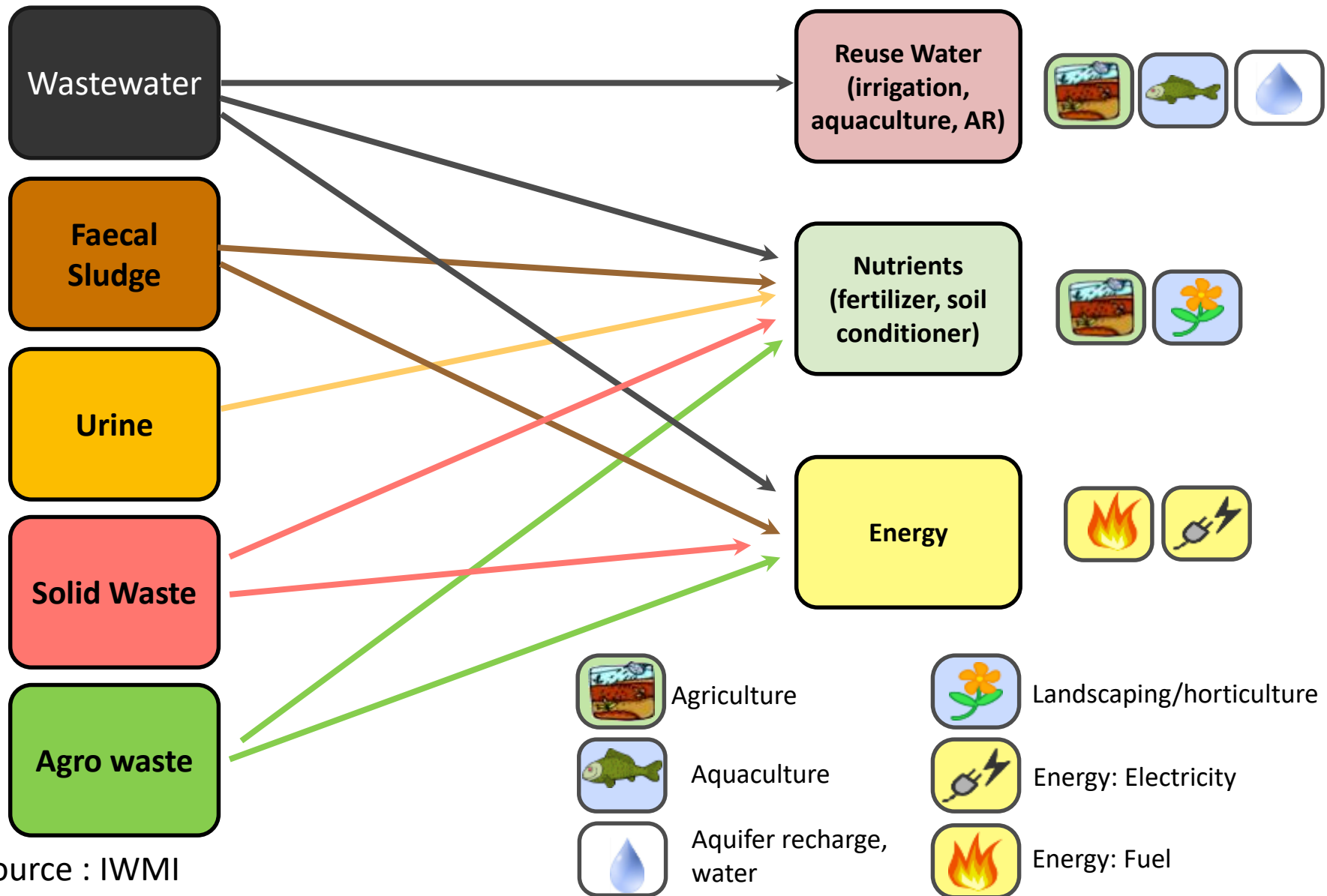
Waste Water Management Should Not Only be Focused on Public Health



Waste streams

Resource

Reuse



Source : IWMI

The 5X multiplier effect



low cost
fertilizer producer

designer water
producer & supplier

green energy
provider



buy & sell reuse
products

financers &
investors

branding & marketing
reuse products

sell, support & distribute
technologies

Distributed
PPP, Inertia

collection & transport
of wastes



Way forward

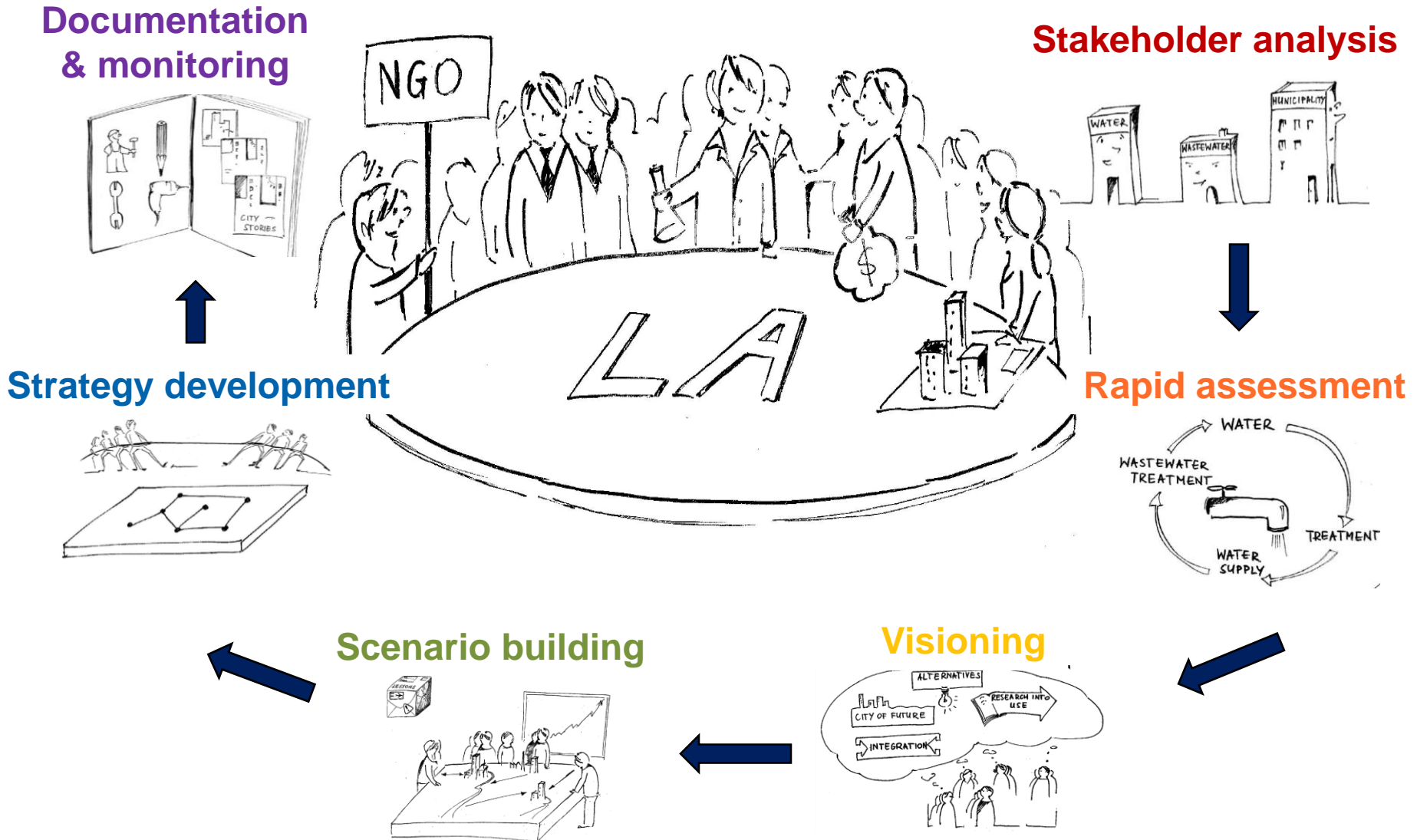
Institutional issues

Main challenges are political and institutional

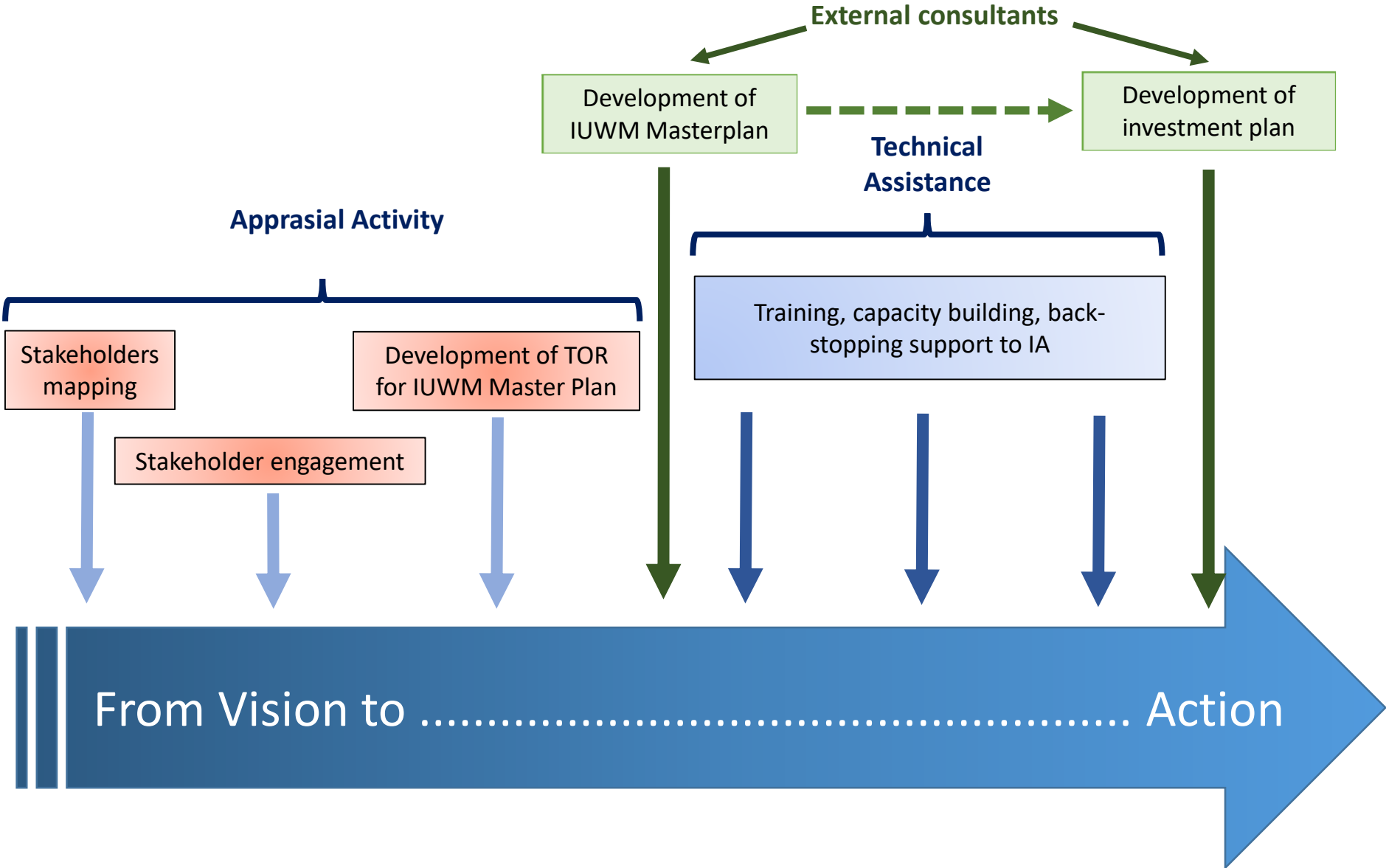


Need **collaboration, cooperation, clear roles and coordination** between institutions

We need to break down barriers



IUWM in practice – creating change



For an innovative approach in
urban water management
in Affrica

Thank You

