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Sustainable Cities A pipe dream or realistic future?

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Our 19th century approaches have not worked well in many LDC's



~780 million without access to improved water

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

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

~2.5 Billion without access to improved sanitation



Global change pressures will make things even more difficult



Window of opportunity is small

Shenzhen

1980



*Fishing village of
several thousand*

Today



*City of 7 million – big in
electronic manufacturing*

Context of the workshop

Choices before us

Stay in Lane -
Business as
Usual

Try Harder,
Spend More for
Traditional Sys

Truly Different
Approach

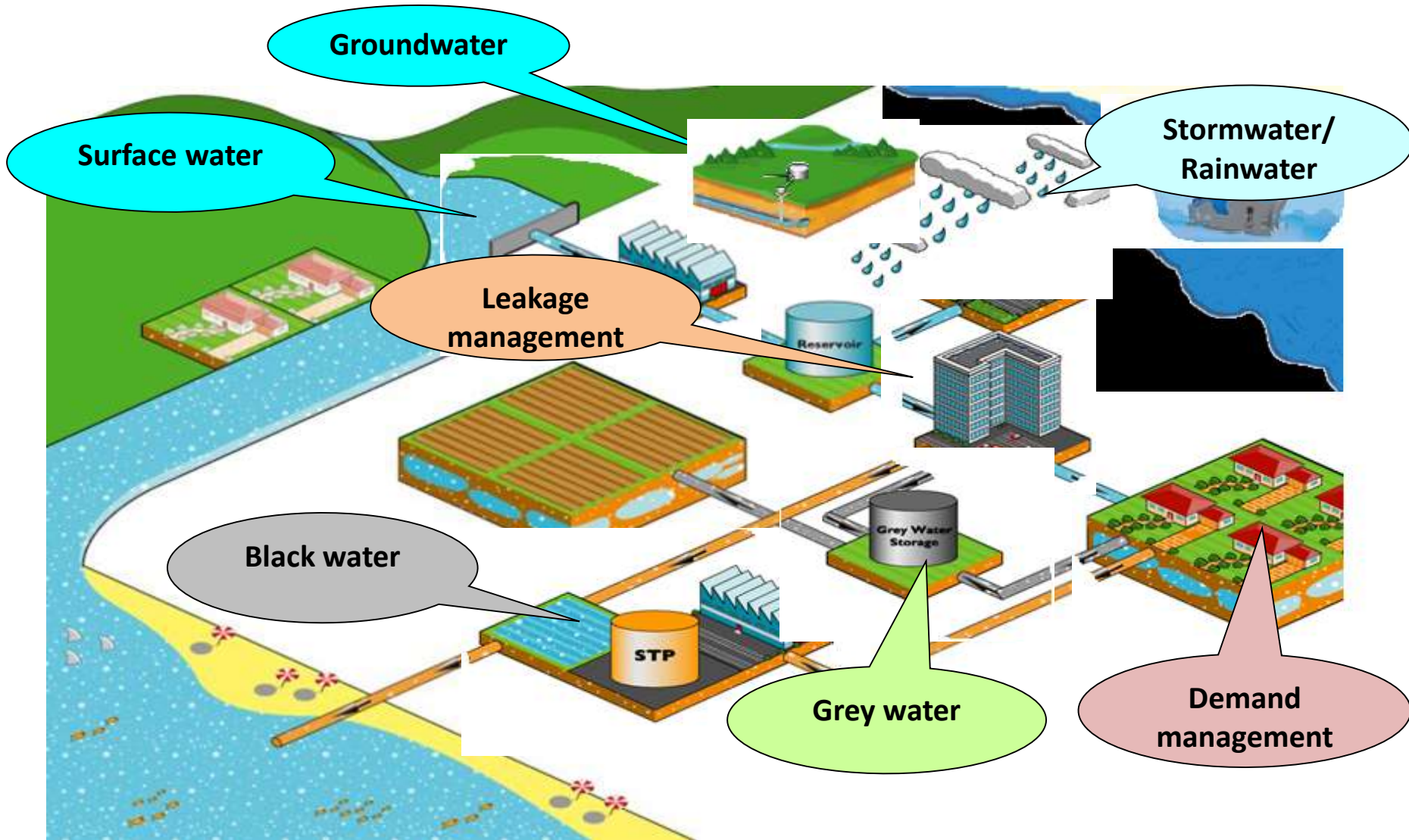




major change in perspective

productive use of water

We need to have a systems perspective of the water cycle





major change in perspective

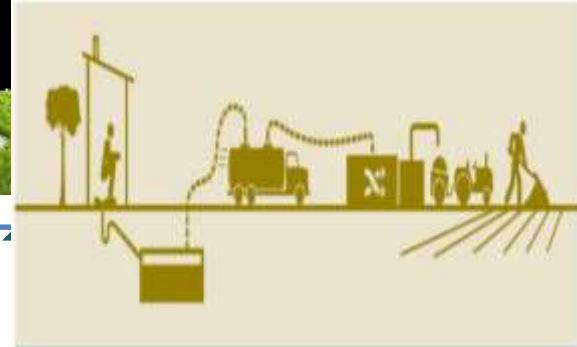
waste as a resource

Changing our perspective creates opportunity to do things differently

Productive Use



Quality A **Struvite** B



Quality C **LaDePa Machine**



1
Irrigation



2
2nd+RO+MF: **AAR**

Durban Water Recycling



CHP + Ash + Water

Mondi



Algae/Biofuel

SAPREF



3
Cooling



4
RO: **Refinery**



5
RO(x2): **Refinery**



Need to recognize that main challenges are political and institutional in nature

Political & Institutional Barriers



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

Need a diverse stakeholder platform

PUBLIC

PRIVATE

**CONSUMER
GROUPS**

NGOs

DONORS

INVESTORS

PHILANTHROPISTS





Thank You

Kalanithy Vairavamoorthy