



3rd Scientific Meeting

Belo Horizonte

30th Nov – 4th Dec 2008



EU Reviews

- **2nd Review - April '08**
 - Outcome – Interesting and constructive
- **Extraordinary Review – Nov '08**
 - Very positive and constructive

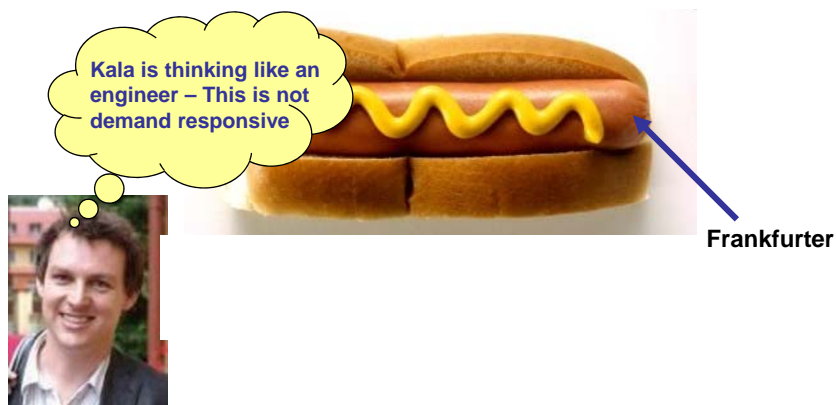
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HAMBURGER SLIDE



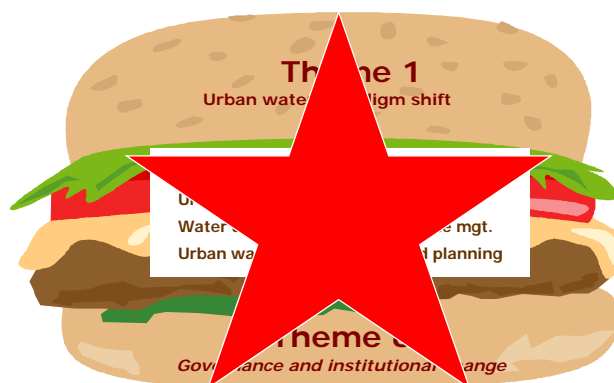
WHAT TO DO?



Demand Driven Approach



HAMBURGER SLIDE



Main Concerns of Reviewers

- Project needs to overcome complete lack of integration
 - No integration at theme level (they must better integrate emerging R&D results).
 - Lack of interaction between demonstration cities
 - Gap between general SWITCH objectives (highest level), and individual research objectives (lower level), must be integrated.
- SWITCH depends heavily on LA and Theme 1 and 6 are most important for this and must be managed more effectively

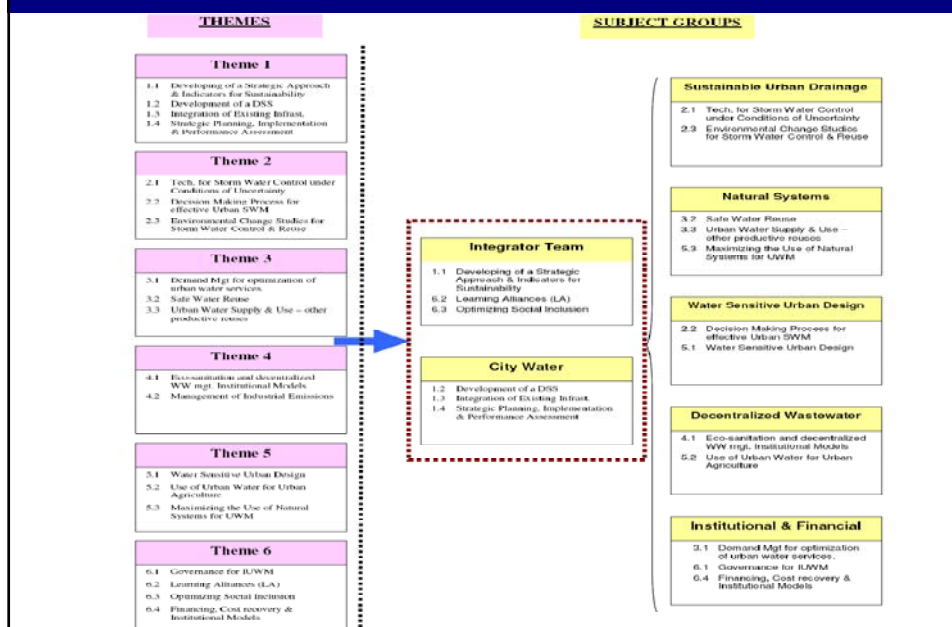
SWITCH - Integration

- All science within SWITCH is embedded within the IUWM planning and learning alliance processes.
- Science areas being delivered by SG's that work across and within work packages
 - Sustainable Urban Drainage – M.Revitt
 - Natural Systems for Treatment – G.Amy
 - Water Sensitive Urban Design – I.Wagner
 - Decentralized Wastewater Systems – A.Mels
 - Institutions & Financial Instruments – MPv Dijk

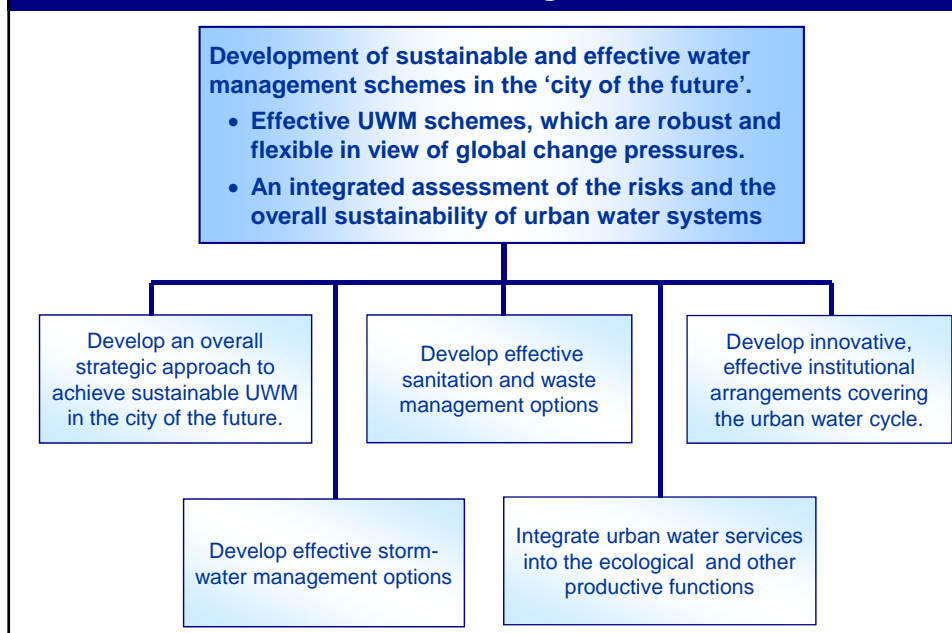
SWITCH - Integration

- **Rationale:**
 - Ensure that work on individual research areas within work packages is underpinned by a significant level of research interaction between work packages
 - Ensure that connected outputs from the research are disseminated effectively to the global learning alliance membership.

Themes and Science Areas



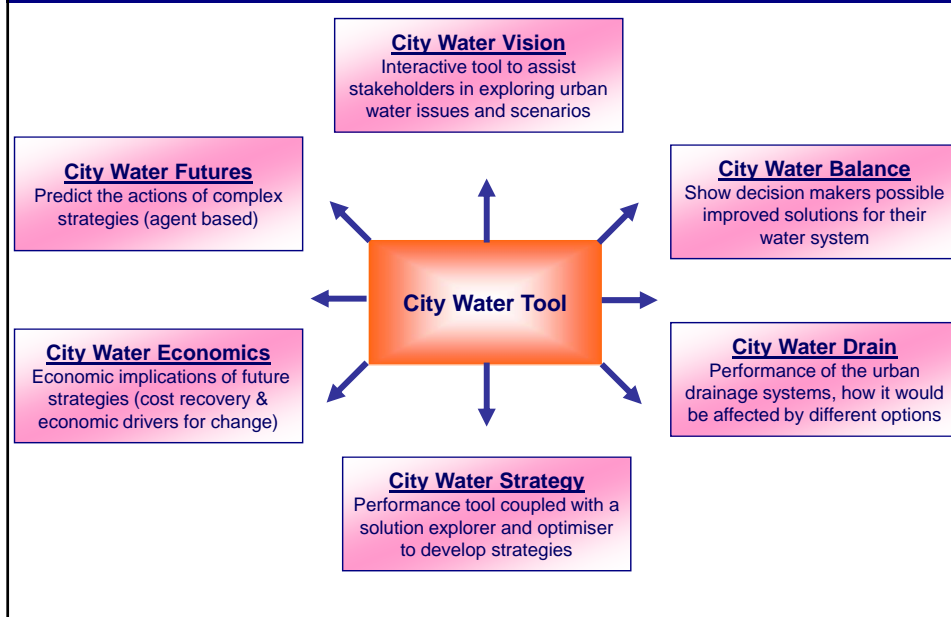
SWITCH Objectives



SWITCH - Integration

- SG's are underpinned by 'integrator team' and a City Water Tool team that embeds the science into the IUWM planning and learning alliance process.
- Hence key contributions from the SG's are integrated within the SWITCH approach:
 - the strategic planning processes;
 - the components of the DSS City Water;
 - the demonstrations used to upscale the science;
 - the training used to distribute the science across the Global Learning Alliance.

City Water – Led by R.Mackay

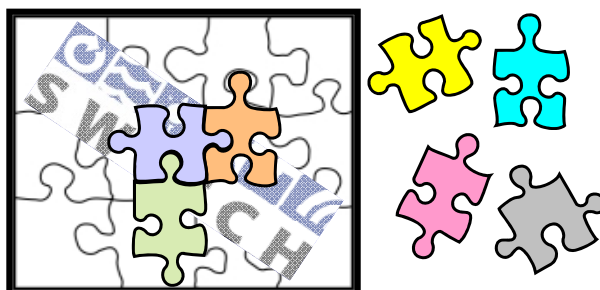


Integrator Team

- Integrator team works closely with all the SWITCH subject groups
- Is responsible for the development and implementation of the **integration tool-box**.
 - contains the main instruments required to successfully undertake the SWITCH process.
 - LA manual; strategic planning process tool; sustainability assessment framework; scenario generator; City Water Tool; and SWITCH technology innovation mapping tool
- Tool box can be considered the dominant output from SWITCH.

Integrator Team

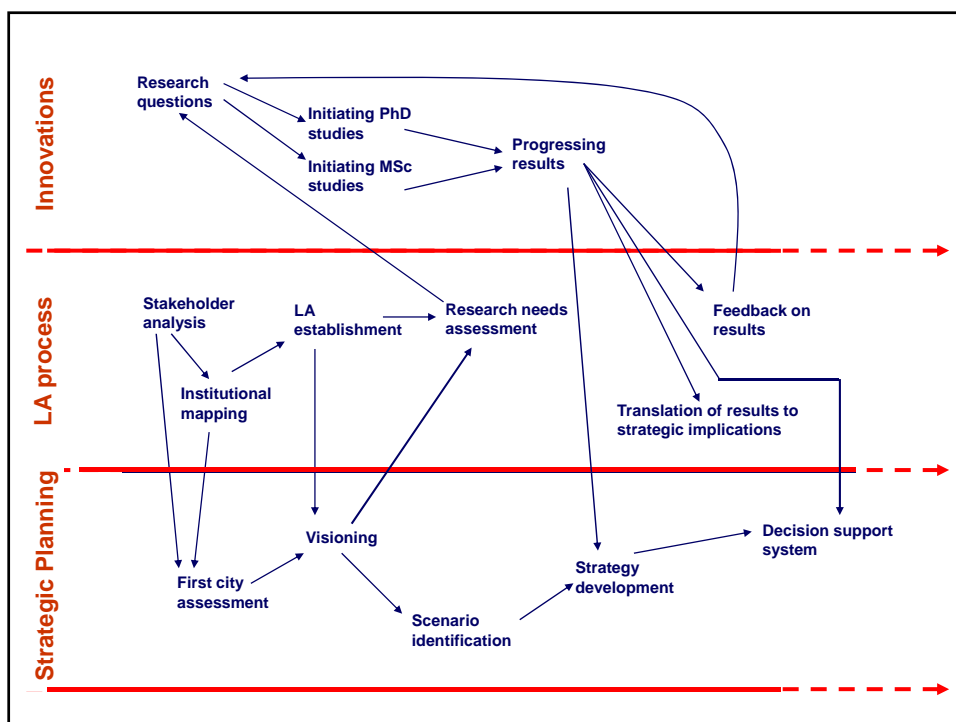
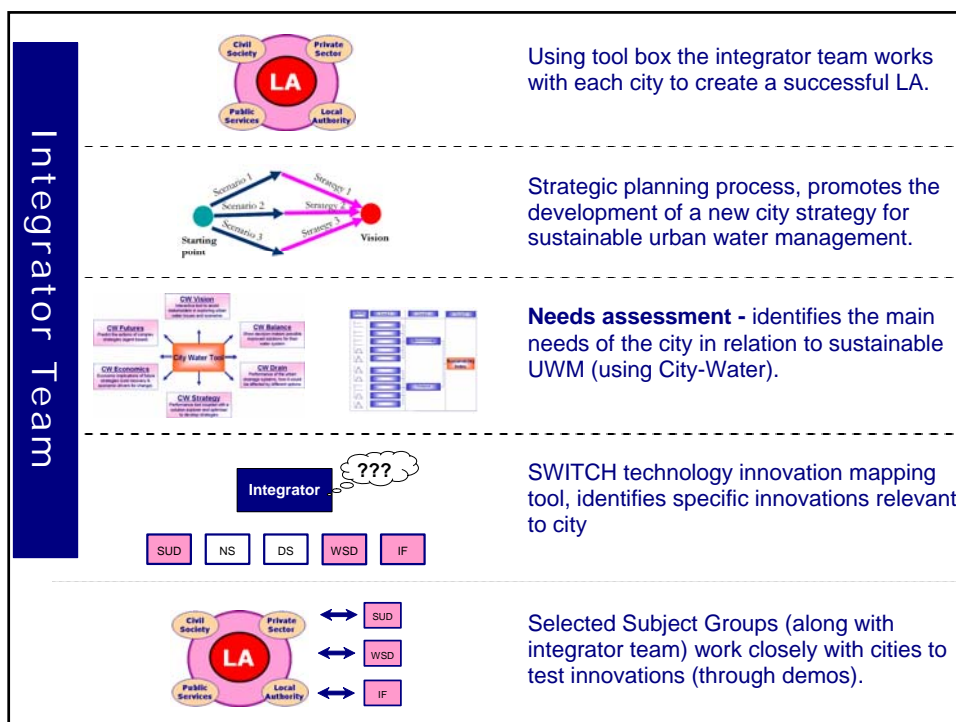
- Maintains the 'bigger' picture of SWITCH - how each of the components of the project and the associated deliverables fit into the bigger picture.

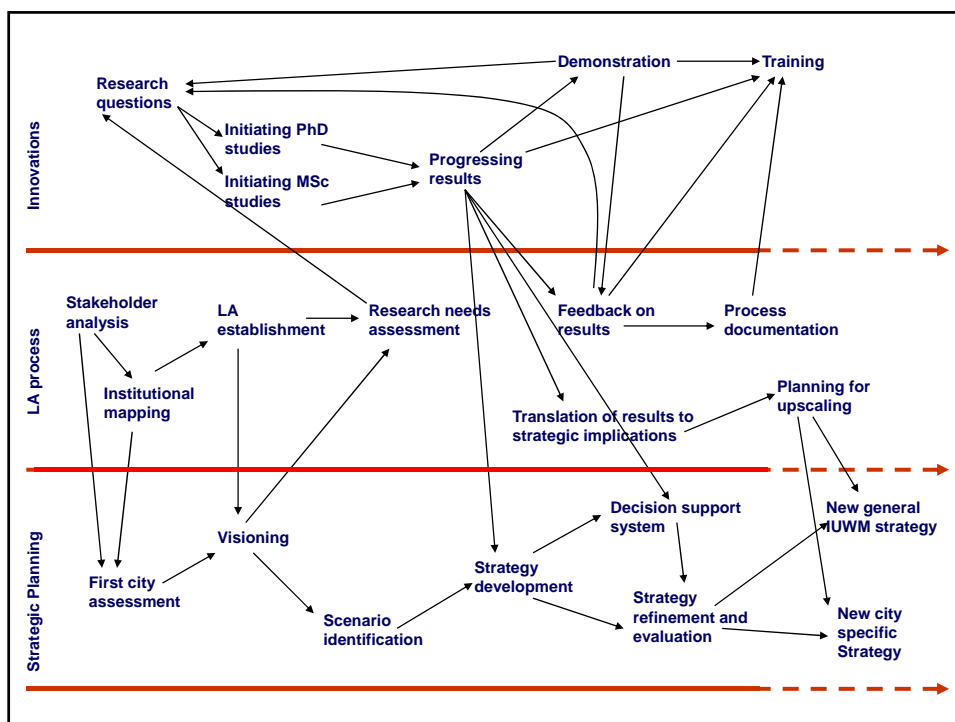




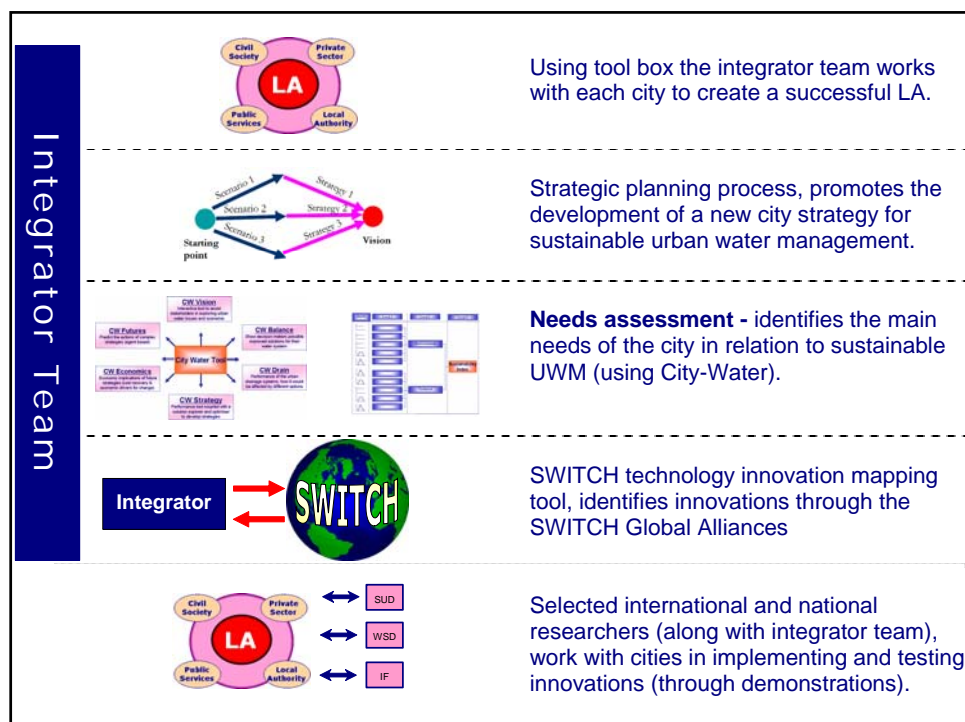
Integration - Cities

- Diversity of SWITCH cities and demonstrations allows results to be readily replicated around the world
- Strong training program and dissemination activities supports this
 - Provides feedback to researchers to ensure that demonstration can be adapted to various global conditions.
 - E.g. learning's from Soil Aquifer Recharge demo in Tel Aviv (highly developed) is being adapted to Accra (developing).





SWITCH Approach



SWITCH Approach Key Challenges

SWITCH Main Principles

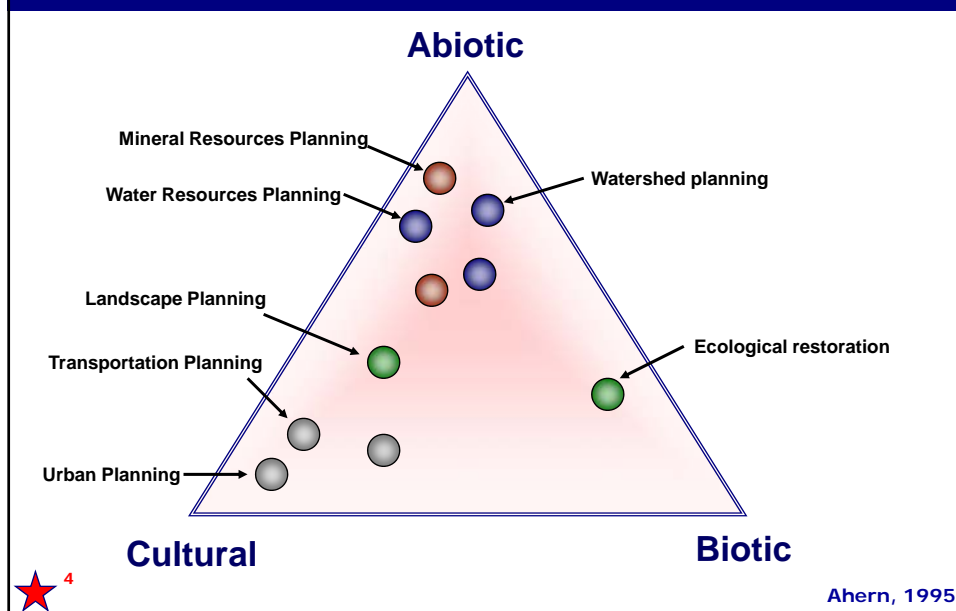
- **Demand-led research**
 - approach is placed within a holistic framework embracing all aspects of the water system in a city
 - initiated through the learning alliance via a demand led process
- **Sustainable, robust & flexible technology**
 - the challenge of doing more with less (while having a small resource footprint)
 - adaptability in the face of uncertain future conditions.
- *Also needs to deal with problems of transitioning from the present to a future sustainable city*

Imperative for Change ?

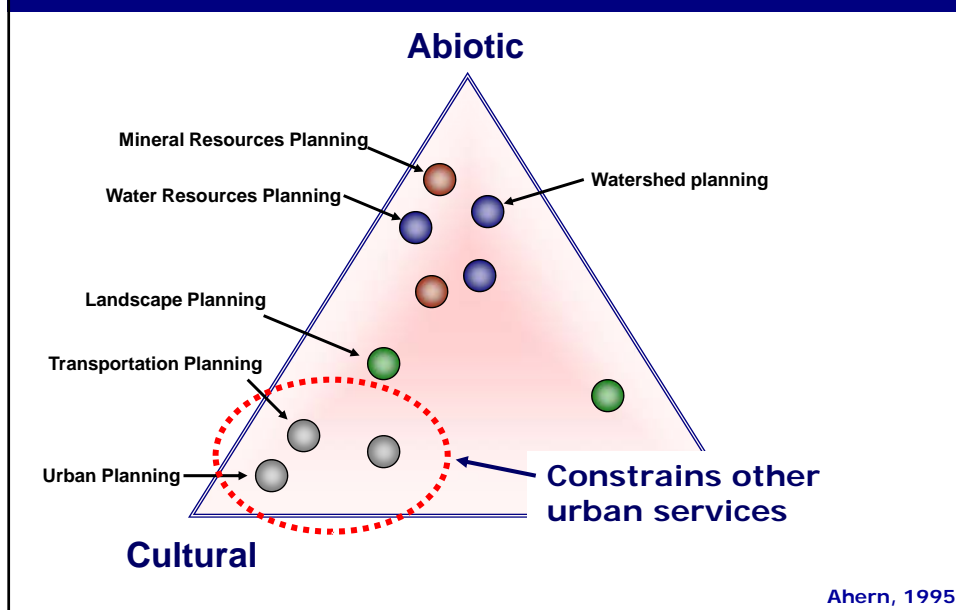
- **Biggest challenge is creating an imperative for change**
- **In most cities there is well functioning but unsustainable urban water systems**

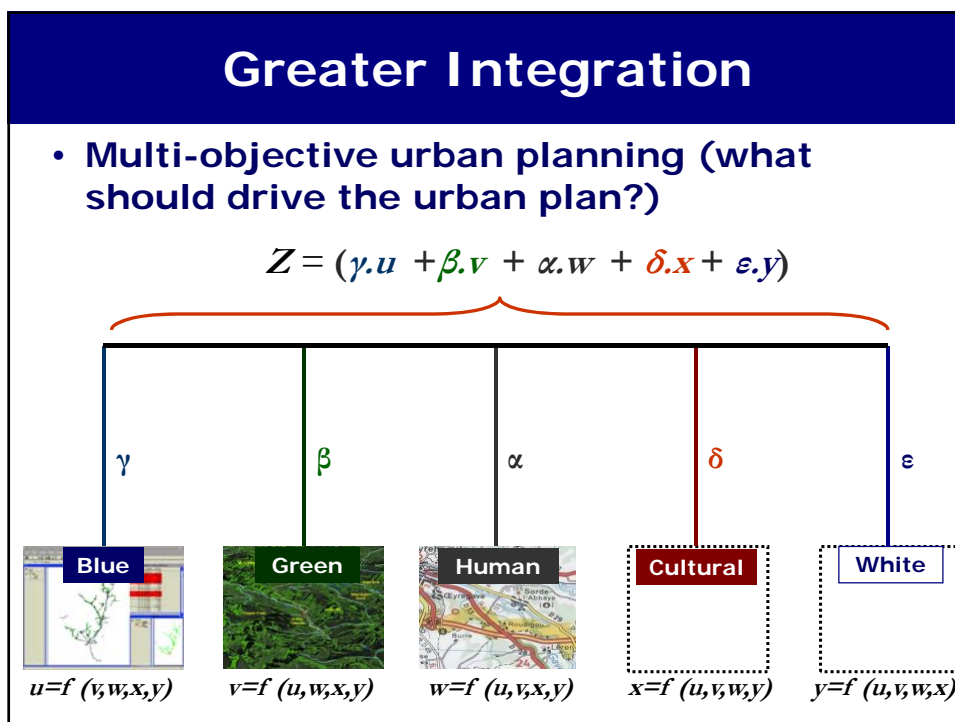
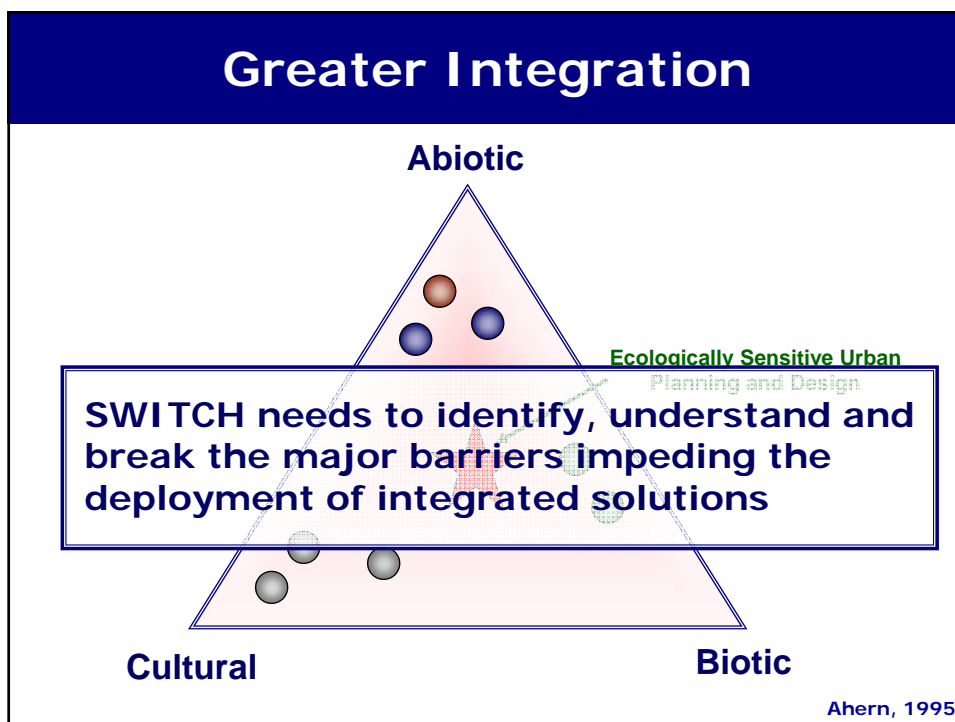


Planning - Lack Integration



Planning - Lack Integration





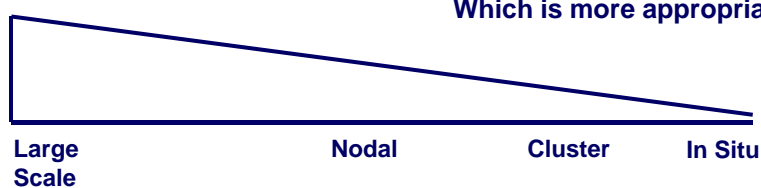
Greater Integration

Allows optimizing
within a continuum
of options

Which is more efficient?

Which is more sustainable?

Which is more appropriate?

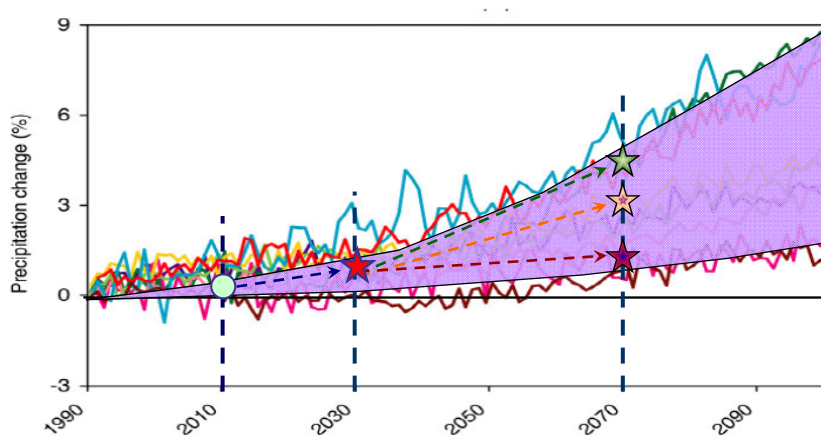


Highly
Centralized

Highly
Decentralized

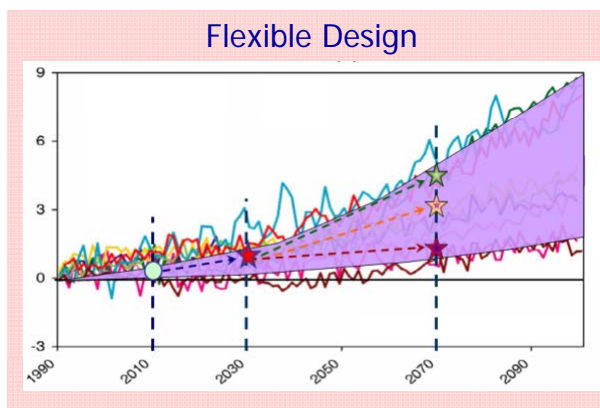
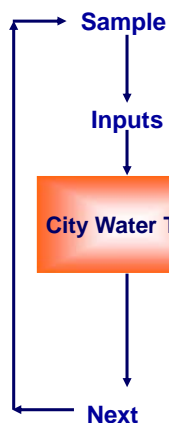
a global network for water professionals

Decision Making in Uncertain World



Source: Hadley Centre

SWITCH Risk Assessment Framework

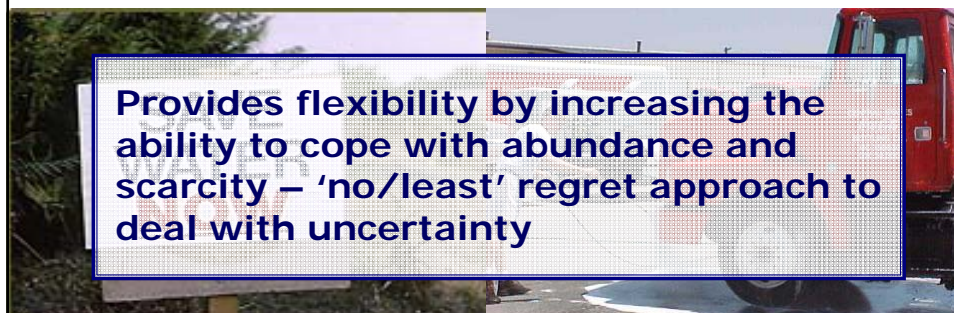


Examples of activities

Doing more with less:

- Water saving technologies
- Reuse - DSS to maximize security thro' diversity

Demonstrations: Zaragoza, Accra, Alexandria



Examples of activities

Sustainable Urban Drainage

Demonstrations:

Belo-Horizonte, Birmingham, Hamburg



SUDs provides modular diversity that increases flexibility resulting in a complex adaptive system (see COFAS method in Sieker et al., 2008)



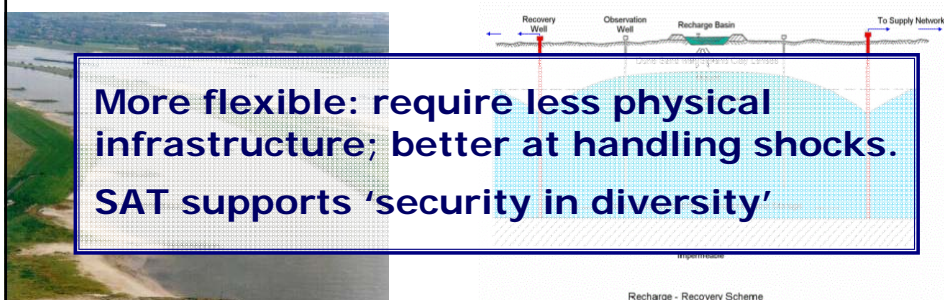
Examples of activities

Bank filtration and soil-aquifer treatment:

Demonstrations:

Tel-Aviv, Beijing, Birmingham

More flexible: require less physical infrastructure; better at handling shocks.
SAT supports 'security in diversity'



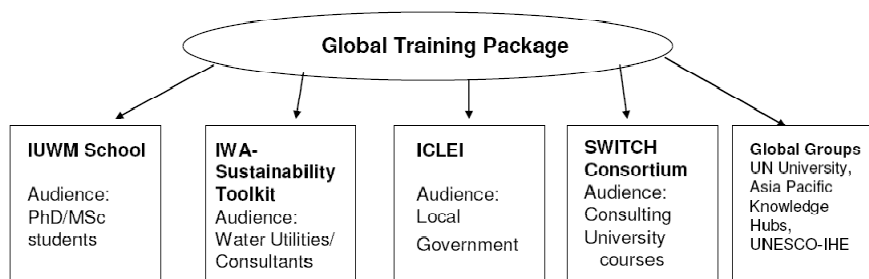
Before Next Review

We need to:

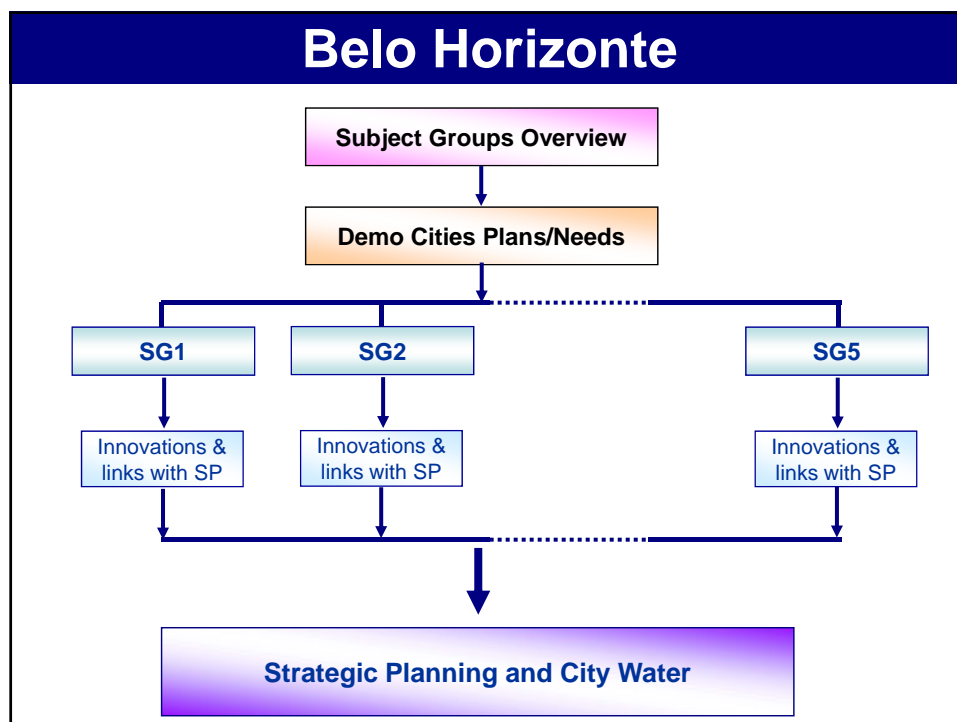
- Move away from what **we will do** to what **we have done**
- Be clear on what are the key deliverables and key scientific publications
- Have clear plans for the sustainability for at least 3 - 4 Learning Alliances
- Have targeted resources to get the 'biggest bang for our buck' (in R&D, cities, etc.)
- Have greater city-to-city dialogue and exchange – Future City Summit?

Global training package

Modular toolkit for multiple audiences
encouraging integrated management



Belo Horizonte Meeting



Subject Groups

Parallel Sessions

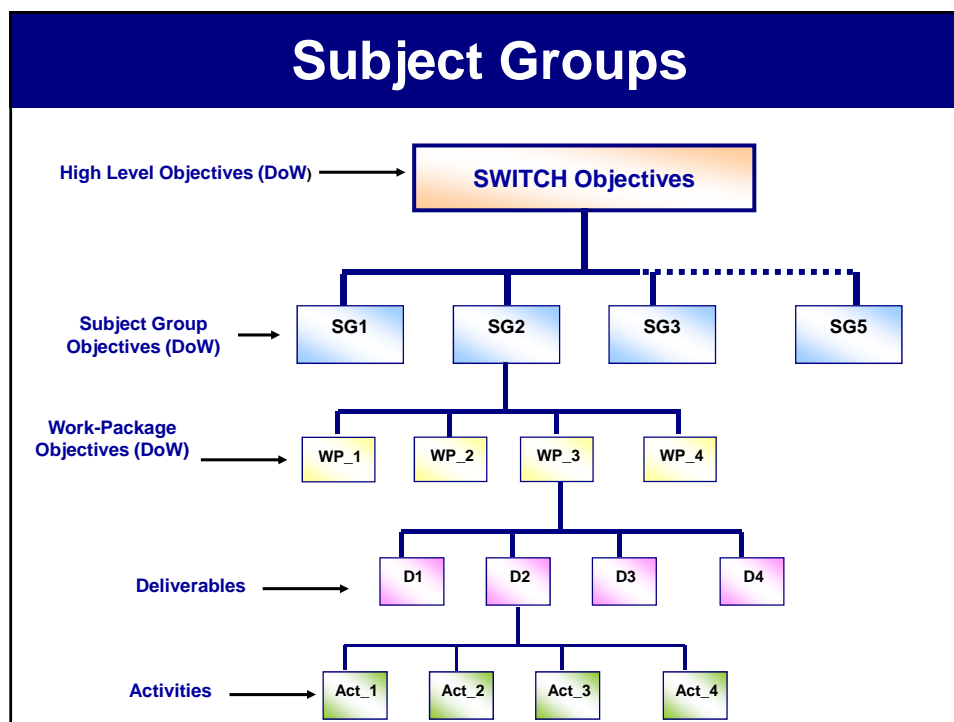
- What will be the most significant science developed by the subject group?
- How do you see this science being embed into the IUWM planning and learning alliance process?
- What will be the most significant (key) deliverables generated by the subject group?
 - Incl. key scientific publications generated (journal name, expected date of publication, authors etc.)

Subject Groups

Parallel Sessions

- How will these key deliverables be integrated within the SWITCH approach:
 - strategic planning processes;
 - components of the DSS City Water;
 - demonstrations used to upscale the science;
 - training used to distribute the science across the Global Learning Alliance.
- Do you see any need for modifications/additions to the activities of your subject group to maximise its contribution/impact on the SWITCH approach

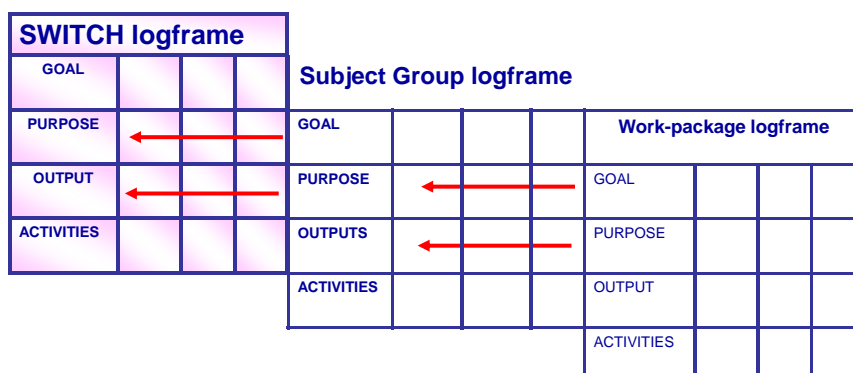
Subject Groups



Subject Groups

Post Belo Horizonte

- Subject groups to develop a short note on the objectives map (e.g. log-frame approach):





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Thank You