

Workshop on Small-Scale Sanitation Systems

A Roadmap for Decentralised Wastewater Treatment in Nepal: Learning from the South Asian Experience

Kathmandu, 9 April 2018

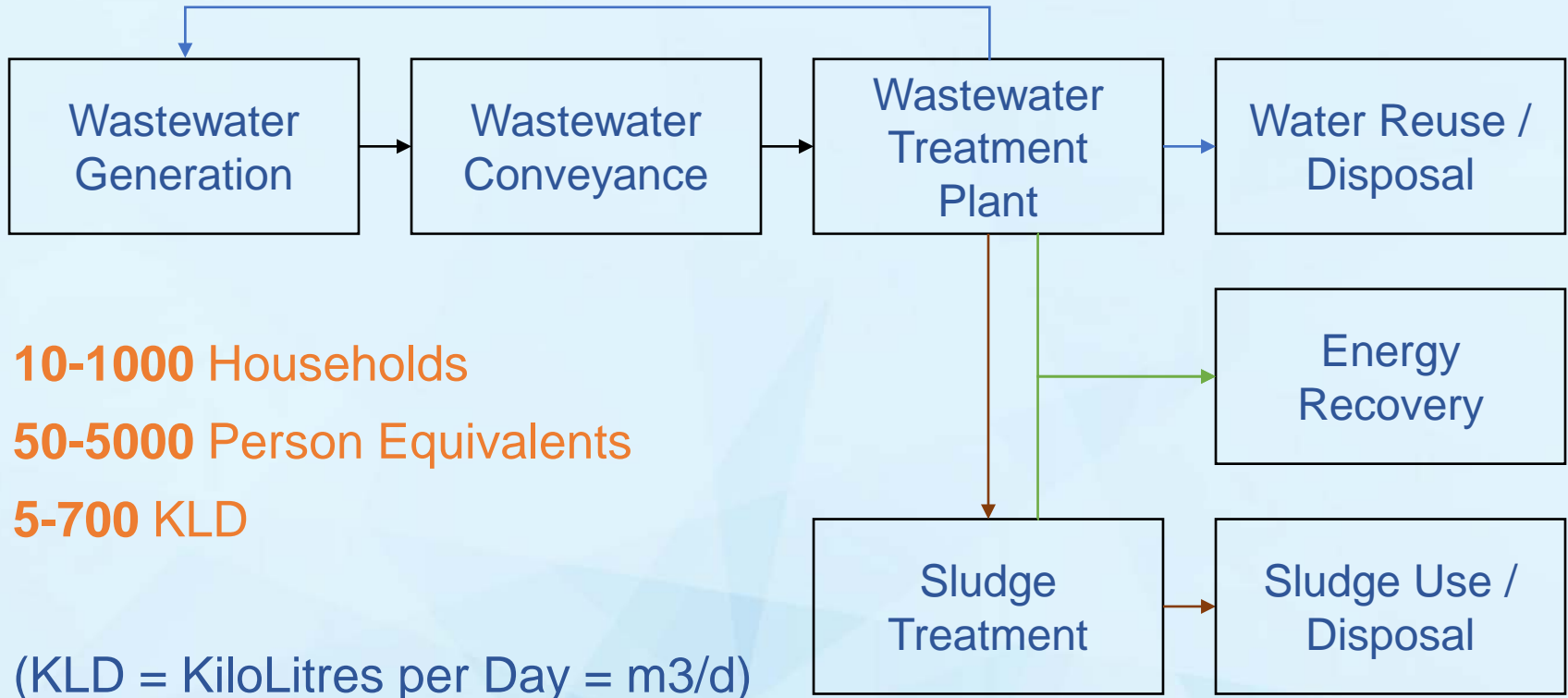
The 4S Project – Objectives and Approach

Lukas Ulrich, Eawag

Small-Scale Sanitation Scaling-Up

in South Asia

Small-Scale Sanitation...





Small-Scale (Decentralised) Sanitation: Big Opportunities, Growing Market



India:
20'000+ Systems
300+ Companies

Nepal:
60+ Systems

Flexible
Comple-
mentation of
Large-Scale
Systems



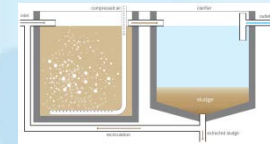
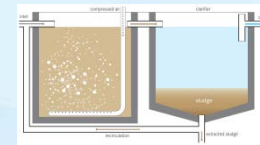
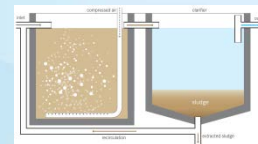
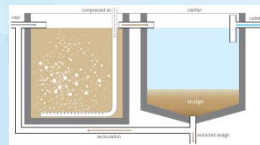
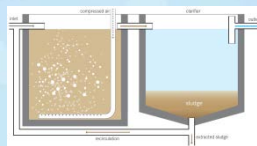
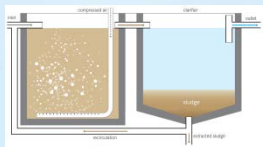
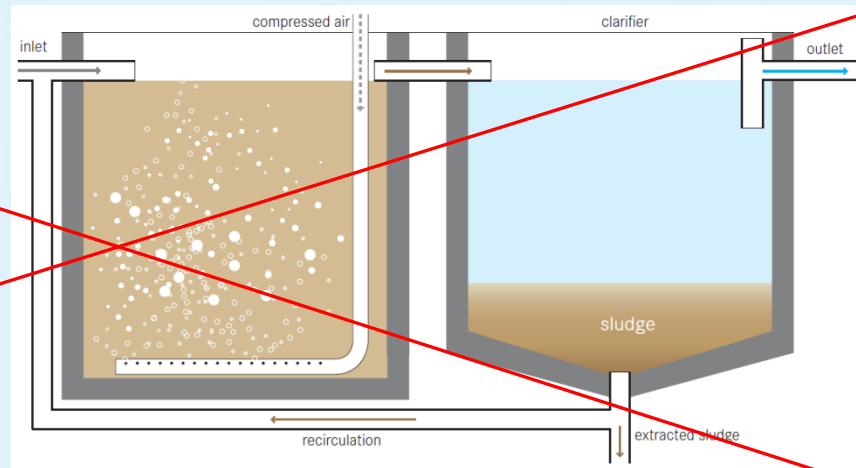
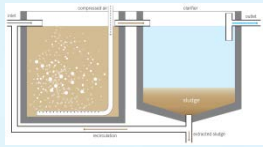
Targeted
Pollution
Abatement



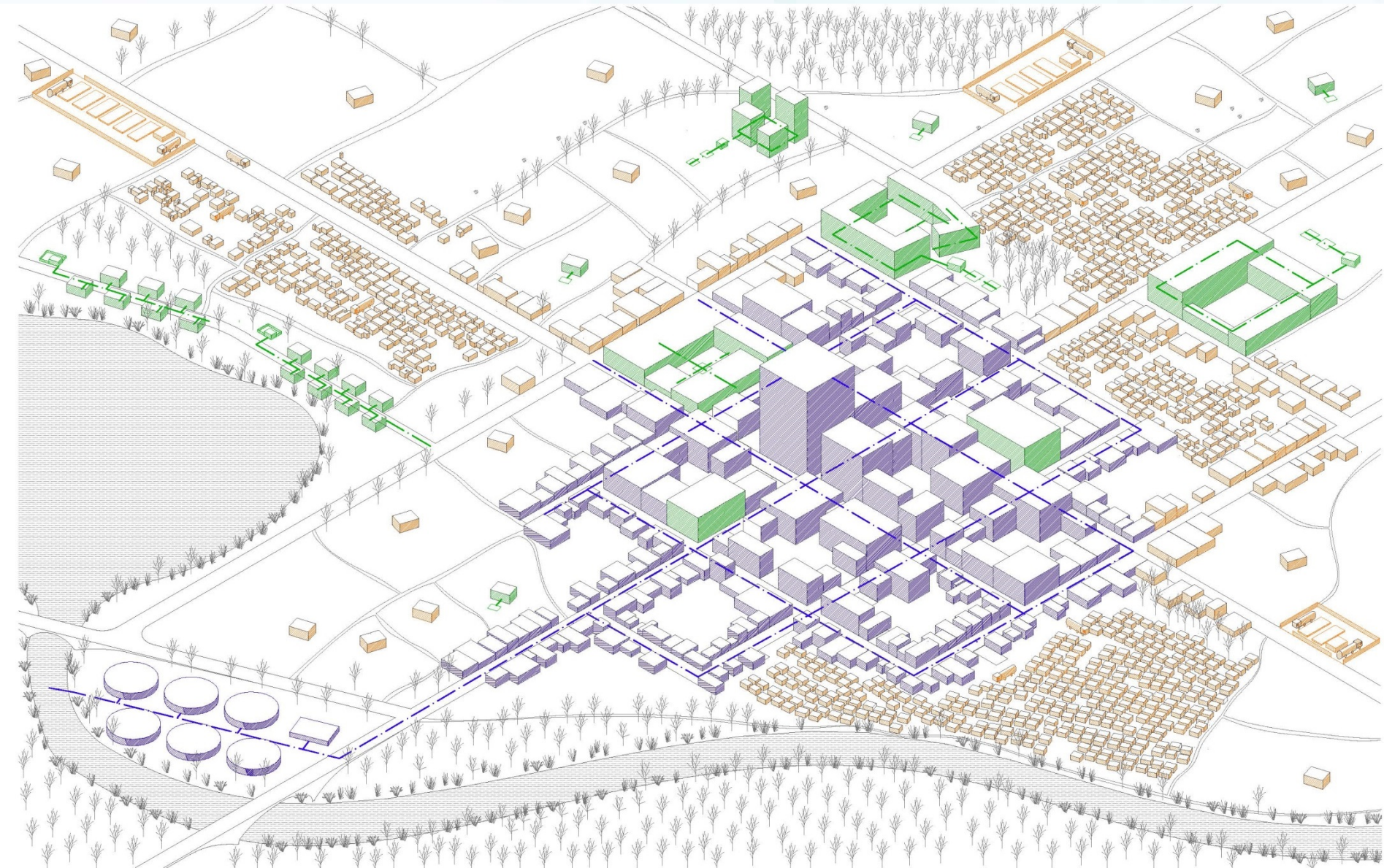
Freshwater
Saving
Through
Reuse



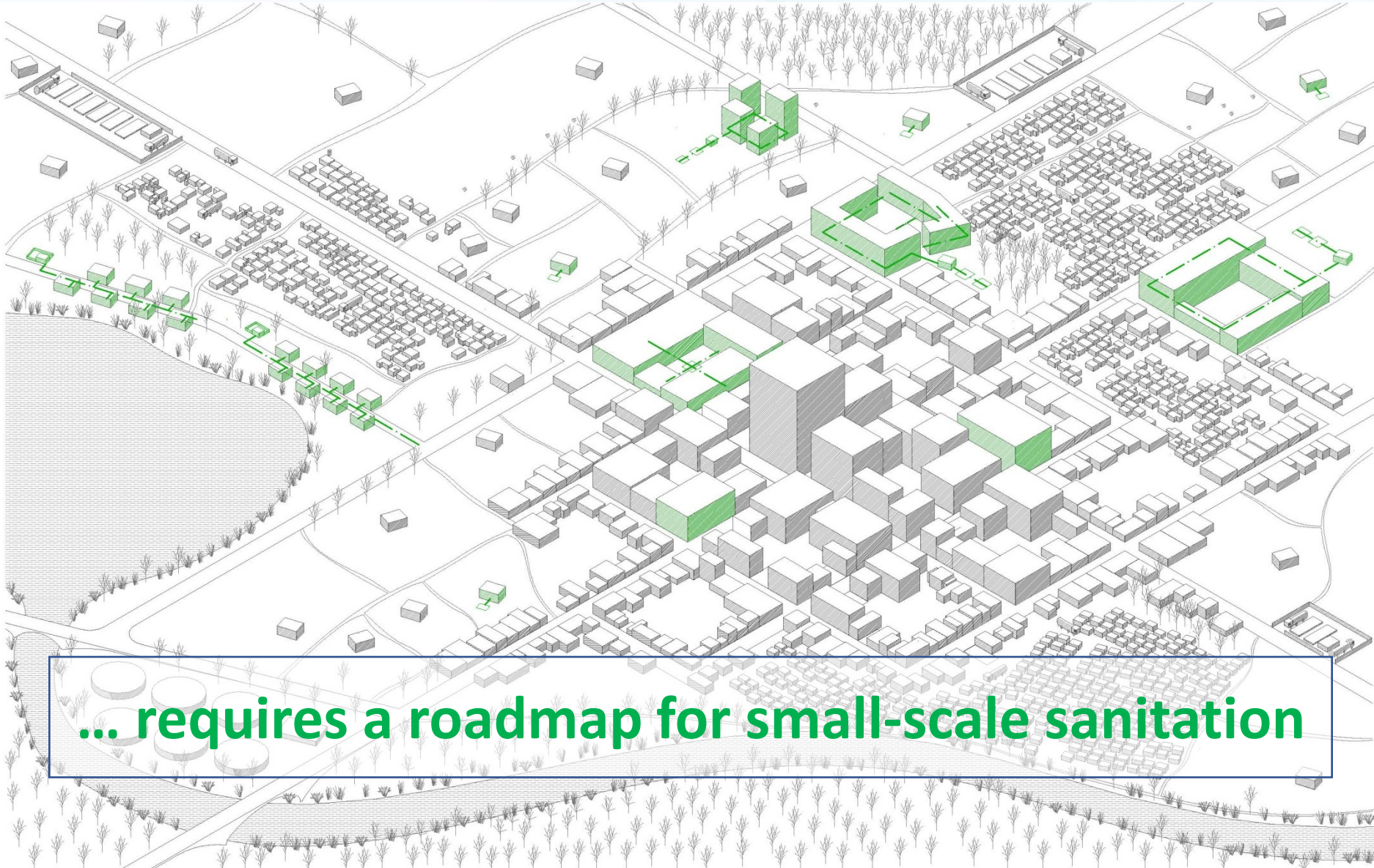
... Scaling-Up



Scaled-Up Urban Sanitation



Scaled-Up Urban Sanitation



... requires a roadmap for small-scale sanitation

Why this Project?

- ✓ Previous research focused mostly on **technology**, not management
- ✓ Continuously **increasing** numbers of small systems
- ✓ Sanitation as **policy priority** of South Asian governments
- ✓ Interest in **viability of small-scale systems** in comparison with conventional approaches



4S Objectives

Project partners



Funding



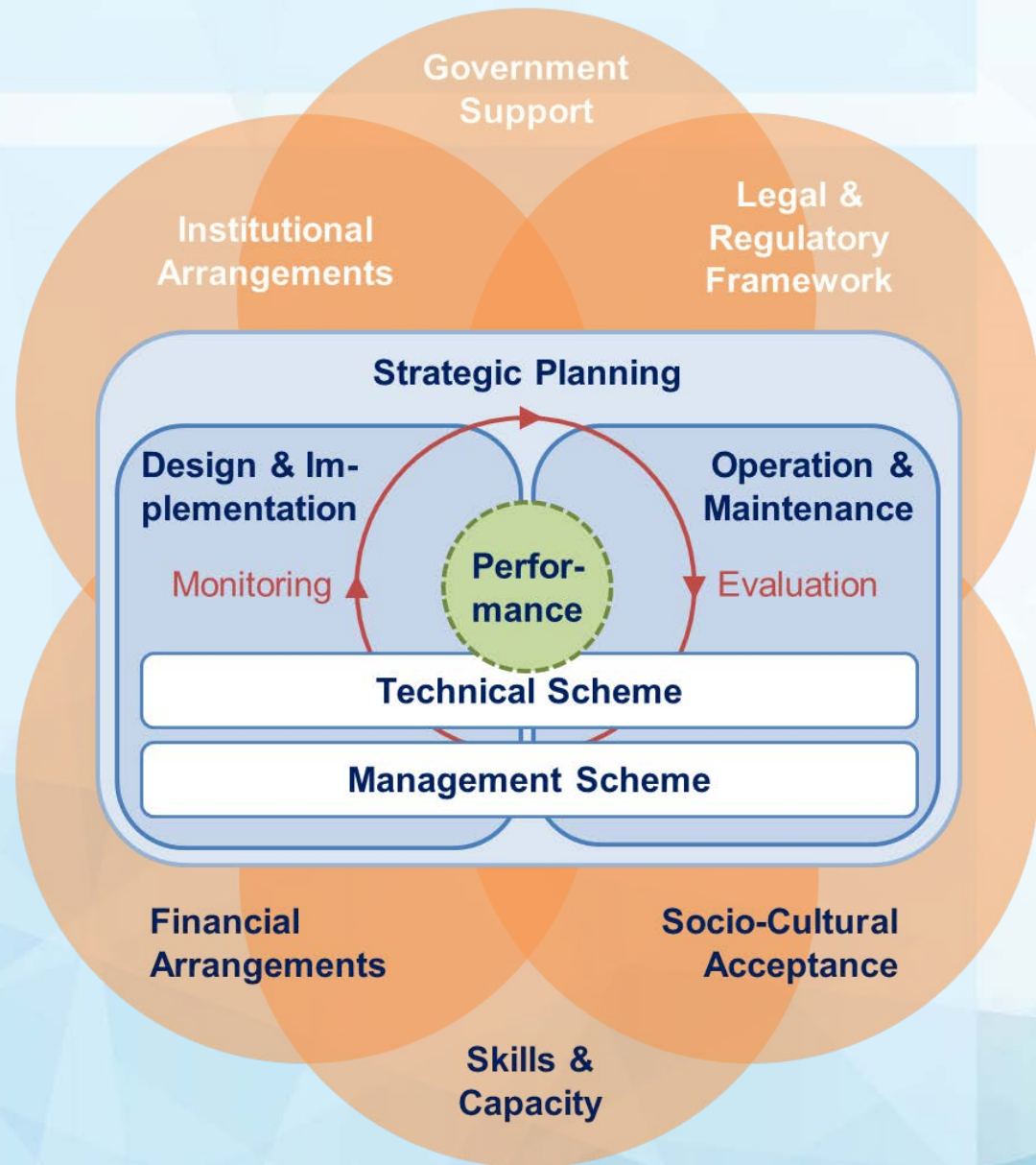
- Investigate technical, financial and management performance of existing small-scale sanitation systems
- Develop a cause-impact framework for the success and failure of small-scale sanitation systems
- Investigate the management and institutional schemes required for effectiveness, and how to include the private sector
- Carry out a simplified comparative cost-benefit analysis, incl. capital, operational and asset maintenance requirements for varying scales of operation
- Determine in which contexts a small-scale approach is optimal and sustainable
- Develop policy recommendations for scaling-up

4S Approach

1. Landscape Study
2. Basic Assessment of Systems
3. In-Depth Analysis of Performance
4. Policy, Institutional and Governance Analysis
5. Financial Analysis

Governance Level

Sanitation System Level



Main Project Outputs

- **Project report** summarizing the main findings (technical, financial and institutional)
- Small-scale sanitation **technology factsheets** with key information
- **Policy brief** with recommendations for sustainable scaling-up of SSS sector



Thank you!

www.sandec.ch/4S