

Sanitation 21 A Planning Framework for Improving City- wide Sanitation Services

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A Planning Framework for Improving
City-wide Sanitation Services

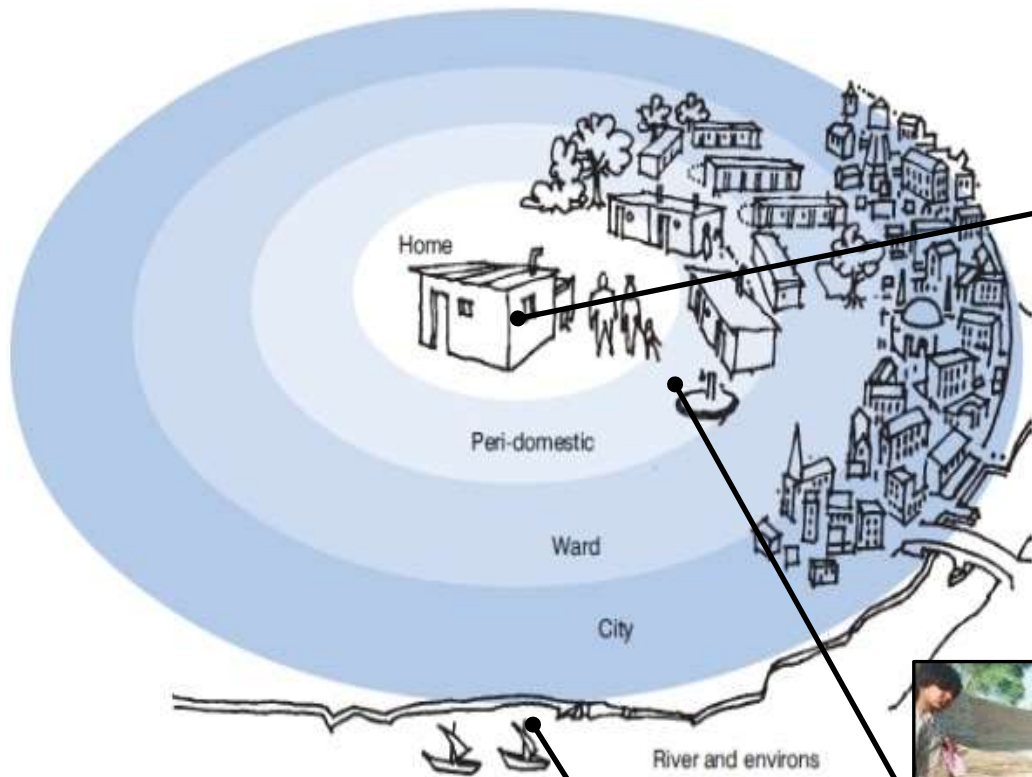
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final draft



Jonathan Parkinson
Programme Co-ordinator
IWA Urban Sanitation
Initiative

inspiring change



Transmission of diarrhoeal disease is commonplace in the home environment where sanitation facilities are poorly constructed / maintained



In many communities, households have invested in improved toilets but due a lack of sewerage and septage management, wastes are discharged into the public domain



Untreated wastewater discharged into rivers and natural aquatic systems causes widespread pollution and environmental health risks

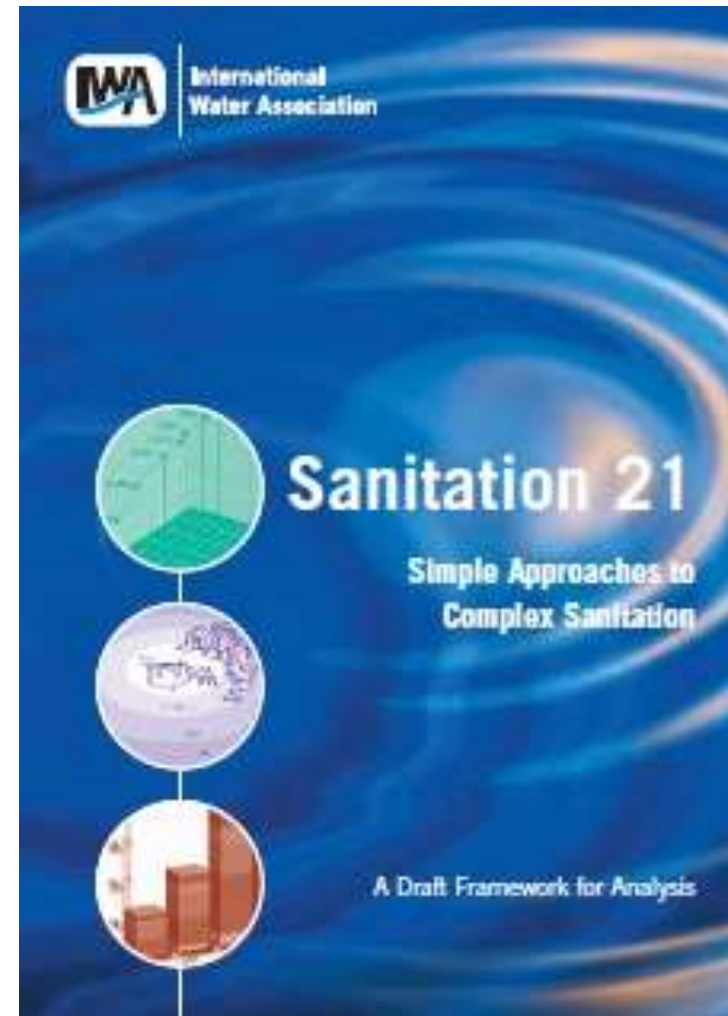
Why a need for Sanitation21?

Conventional master planning approach

- overlooks existing investments
- Too great an emphasis on infrastructure and insufficient attention on improving services
- insufficient attention to service delivery requirements for low-income and informal settlements
- insufficient attention of the role of small-scale service providers

Sanitation21 – what's new ?

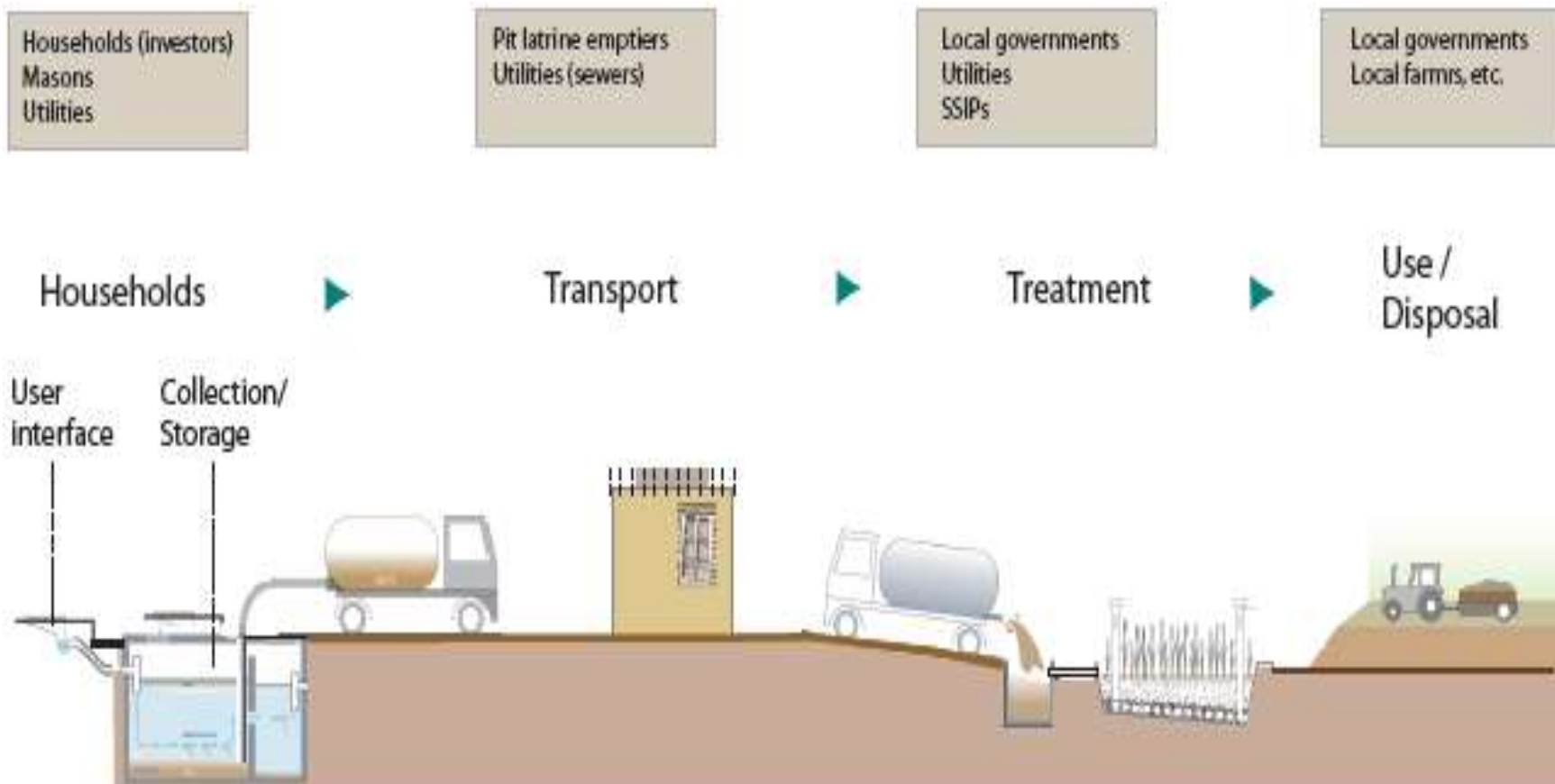
- **Builds on more recent experiences in sanitation planning**
- **More guidance on process**
- **More information about specific actions/activities that can be undertaken to support the planning process**



Focus on sanitation as a service

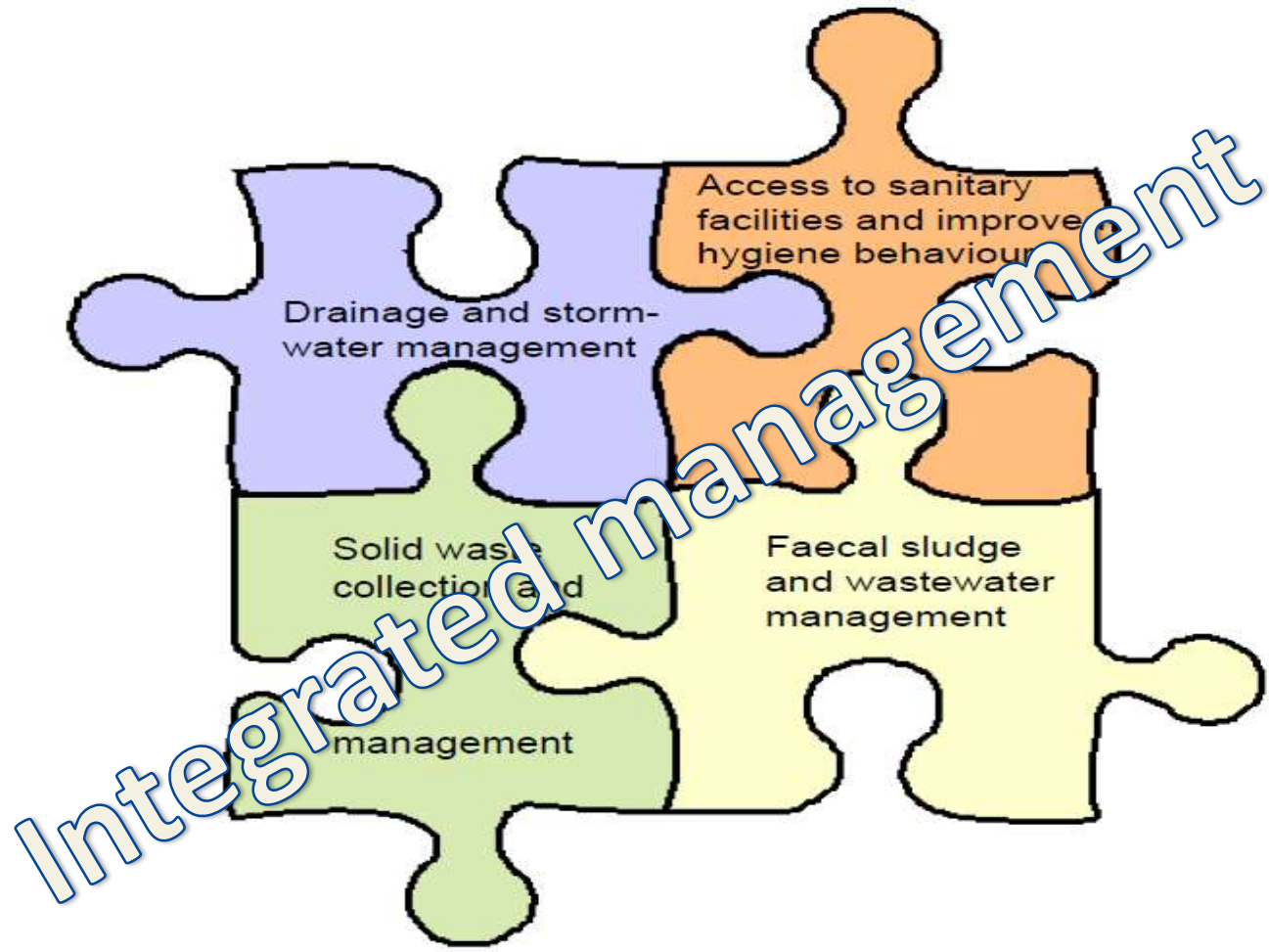
- **Ensure services are affordable and financially viable**
- **Plan for inclusive and equitable sanitation services**
- **Engage with stakeholders**

Principles of sanitation service delivery: Improve sanitation service delivery chains



Principles of sanitation service delivery:

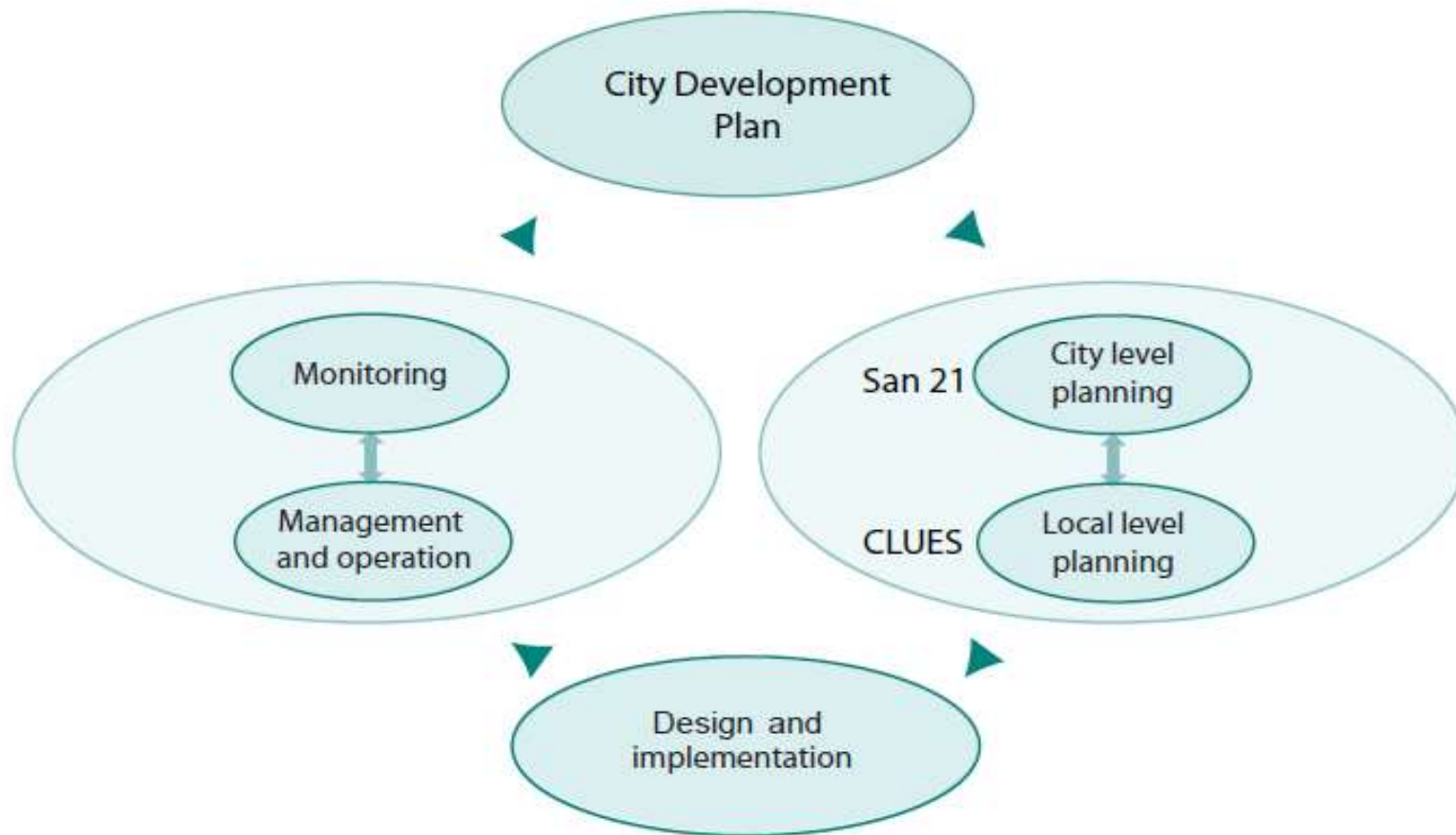
Link sanitation with other municipal services



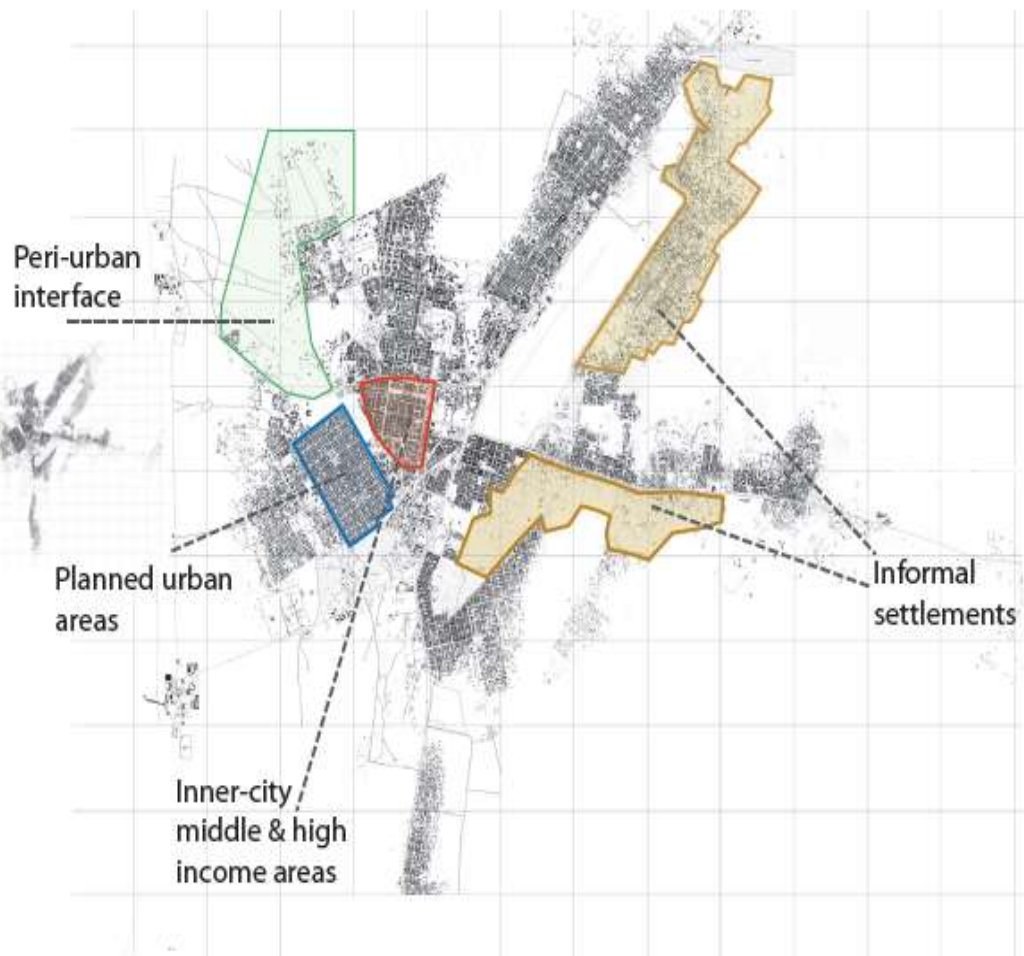
Planning in context: relationship between city sanitation with city development and implementation plans



Planning in context: Planning as part of the service delivery cycle



Planning in context: Linking city-level planning with local initiatives



sanitation 21 planning process

Stage 1: Define institutional framework for service delivery



Stage 2: Understand the existing context



Stage 3: Derive strategies for sanitation system improvement



Stage 4: Formulate appropriate management arrangements



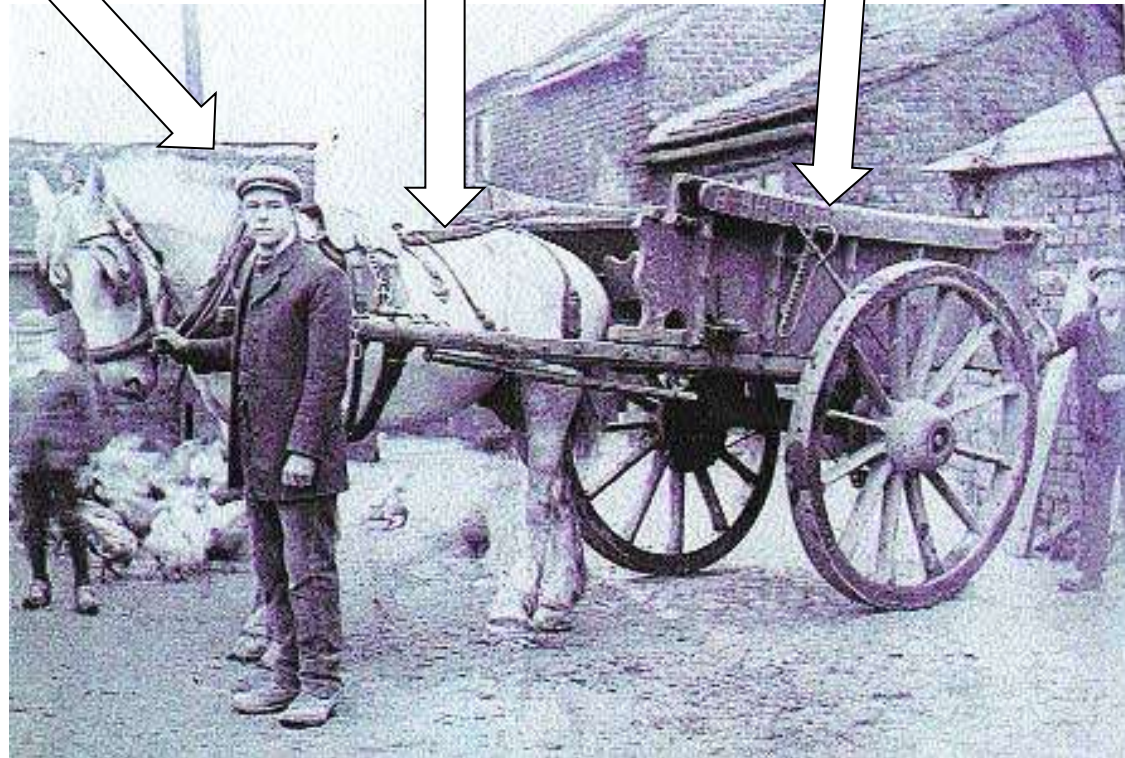
Stage 5: Prepare for implementation

1. Identify stakeholders; assess key priorities and incentive
2. Define collective vision of and priorities for improved sanitation
3. Establish city sanitation task force, agree upon the process driver and the planning process

Local authority

Task Force

City sanitation plan



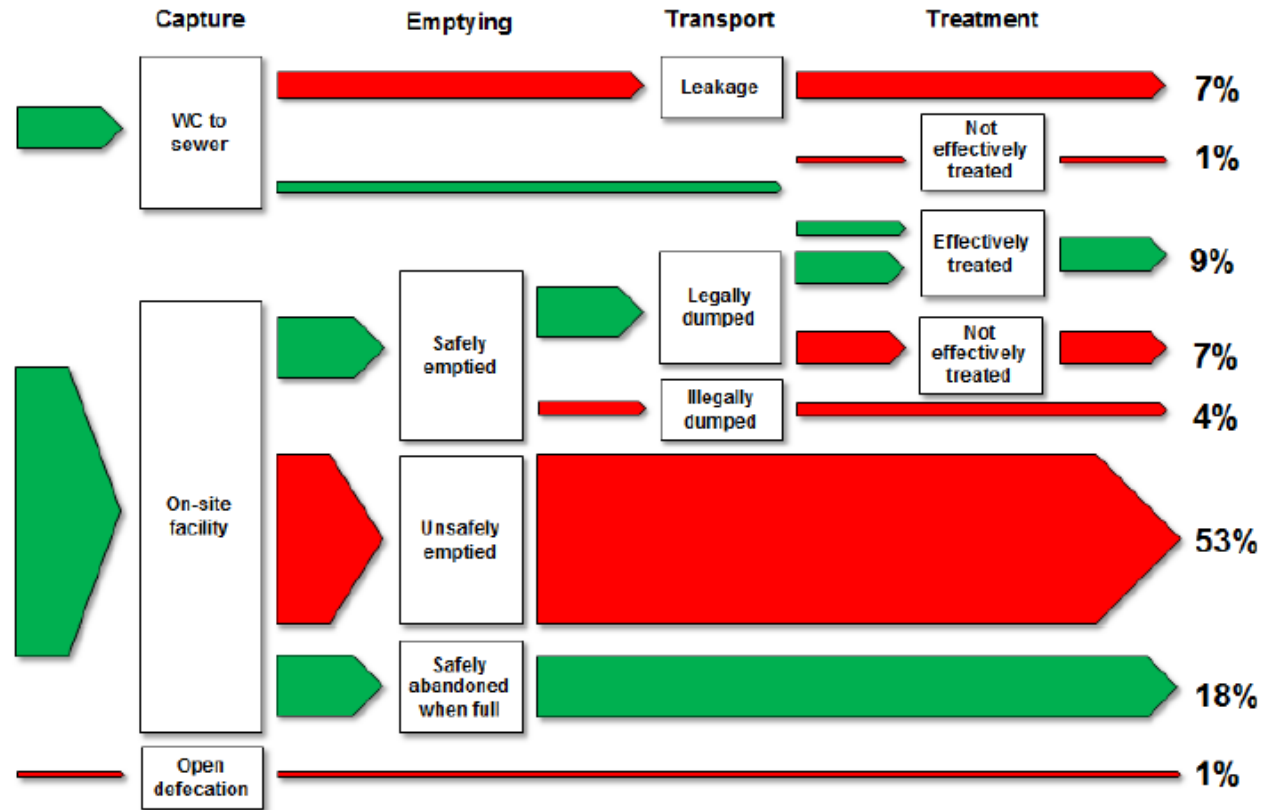
Stage 2: Understand the existing context

1. Collate and review existing information

2. Assess the capacity of existing systems and identify areas of high risk

3. Identify constraints to service provision

Excreta flow in Maputo, Mozambique

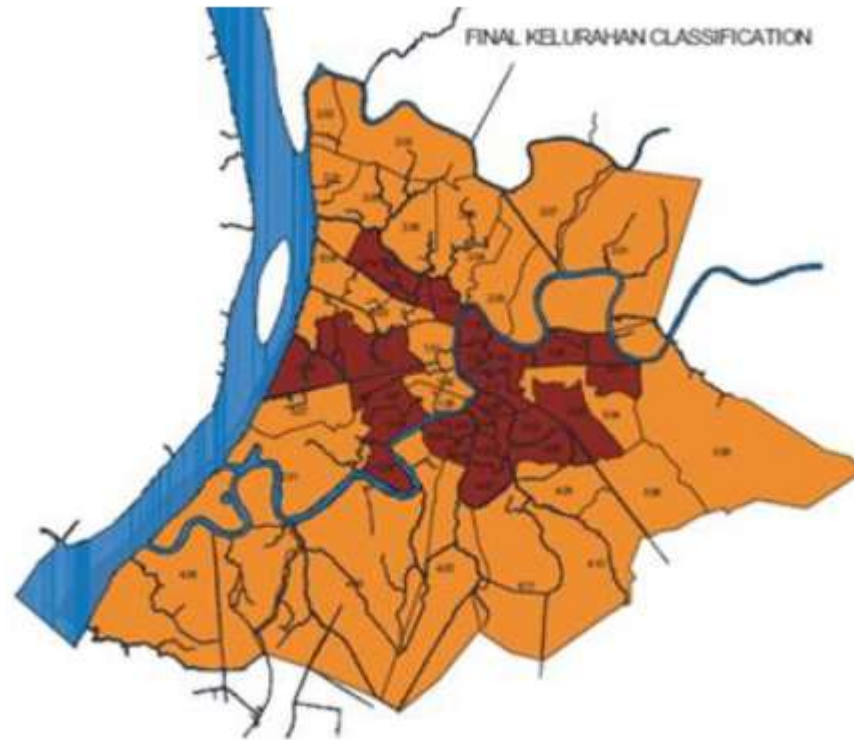


Source : WSP, 2013

Stage 2: Understand the existing context

Mapped sanitation risk areas in Indonesia

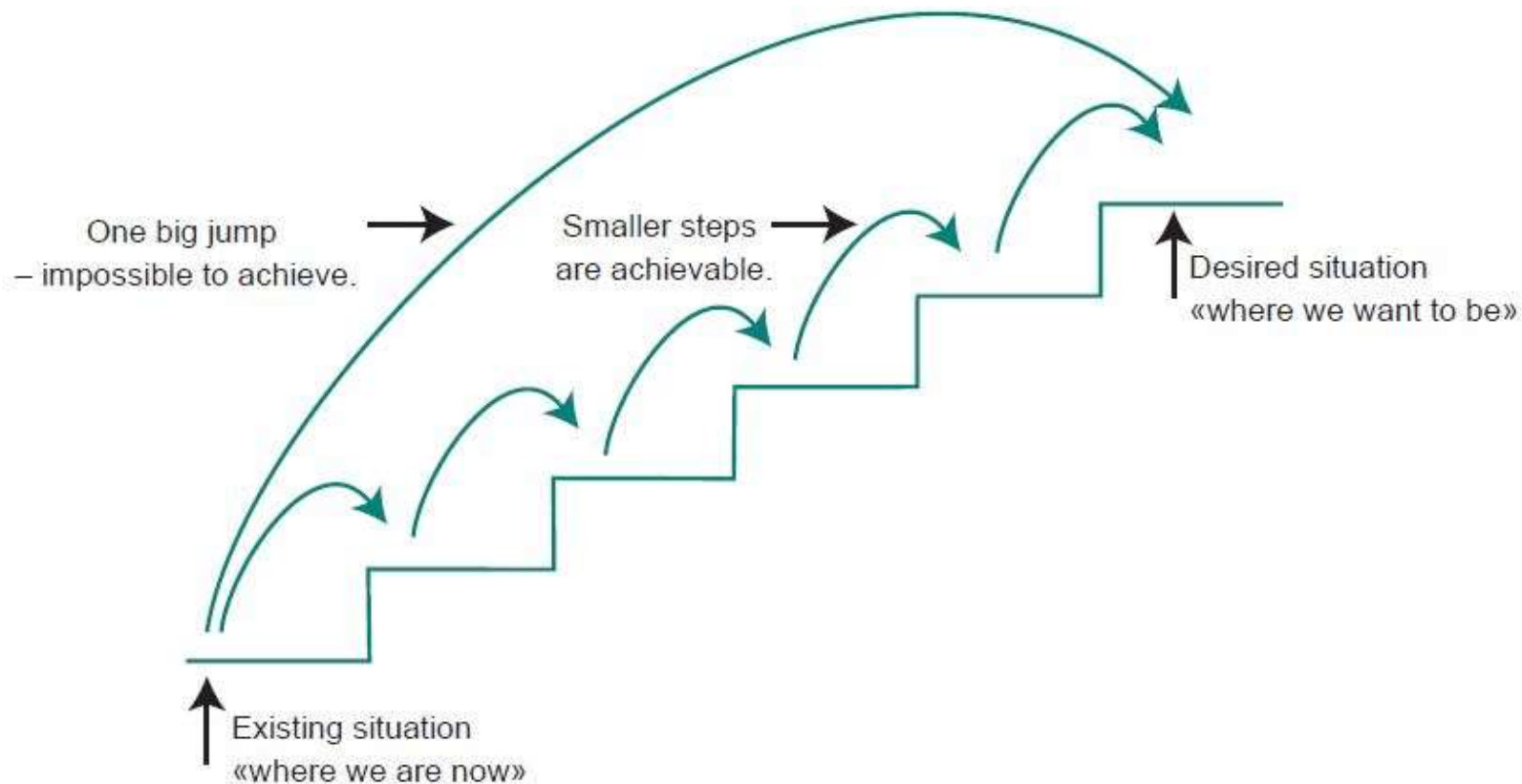
1. Collate and review existing information
- 2. Assess the capacity of existing systems and identify areas of high risk**
3. Identify constraints to service provision



Source : WSP, 2010

Stage 3: Derive strategies for sanitation system improvement

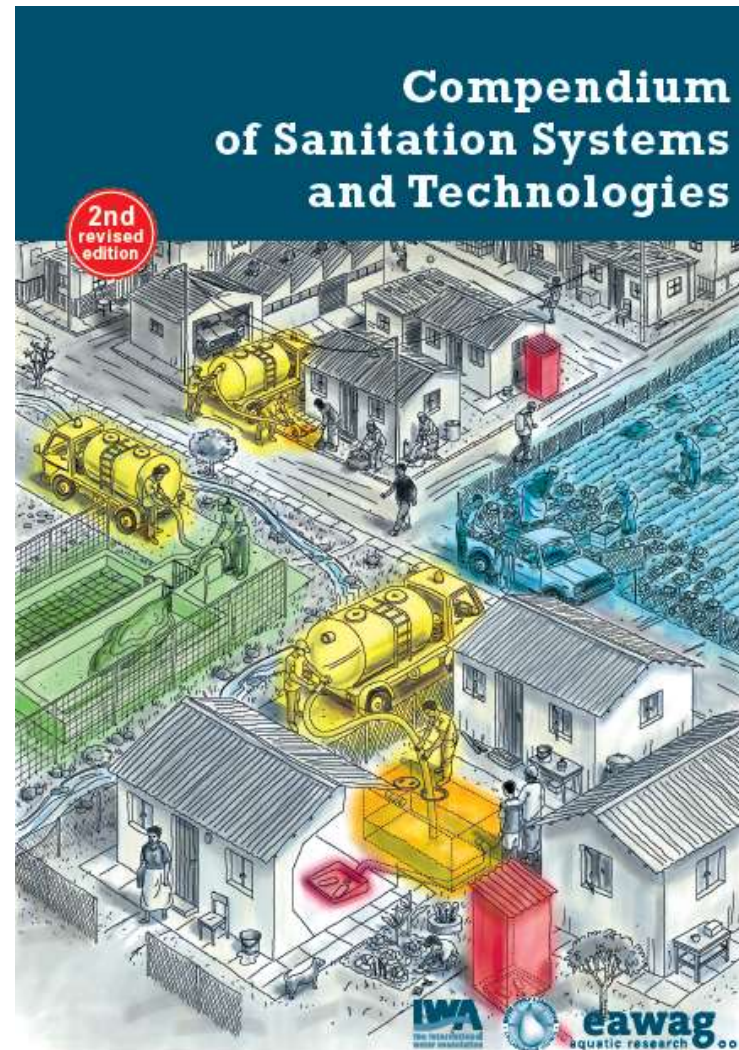
incremental approach towards service delivery improvements



the planning process

Stage 3: Derive strategies for sanitation system improvement

Consider a range of technological sanitation options



Stage 3: Derive strategies for sanitation system improvement

Process of technology selection

Technically viable

Consideration of physical parameters

Cost-effective

Consideration of investment and operational costs

Socially appropriate

Consideration of factors relating to affordability and acceptability

Stage 3: Derive strategies for sanitation system improvement

Assess costs of different types of intervention

	Household or institutional cost?	Capital costs	Operational and maintenance
Latrine	Latrine costs are household costs unless subsidized	Construction of latrines (including equipment costs)	Desludging costs (including cleaning materials) and cost of water for flushing (if used)
Off-site waste management facilities	Capital investment costs are institutional costs but tariffs for O+M are household costs	Construction of sewerage and treatment facilities, desludging trucks and other equipment	Operational costs of sewerage and treatment facilities, desludging trucks and other equipment
Management	Institutional costs	Project management, supervision and salaries of engineers	Labour and materials for operation, maintenance costs for desludging
Promotion and capacity building	Institutional costs	Sanitation promotion and training	Ongoing promotion

the planning process

Stage 4: Formulate appropriate management arrangements

WSUP
Water & Sanitation
for the Urban Poor

Type of Sanitation System

On-site sanitation
(household or
communal)

Decentralised
sewerage

Centralised
sewerage

Desludging

Small-scale
wastewater treatment

Large-scale
wastewater treatment

Cost data

CAPEX

OPEX

CapManEX

Financial analysis
& life cycle
assessment

Scenario
analysis

CAPEX / OPEX
total and per
household

**NET PRESENT
VALUE**

**INFORMATION FOR TARIFF
SETTING AND SUBSIDY**



Assess management options

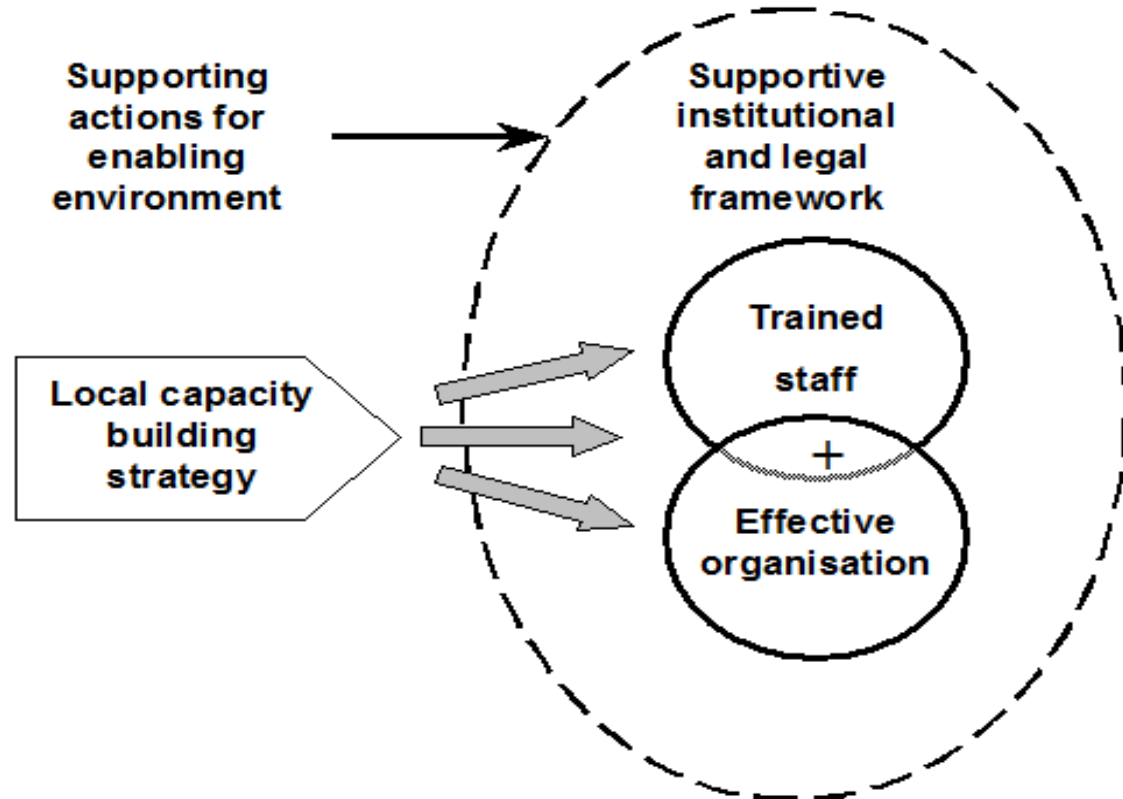
Level of infrastructure/service	Tasks	Management option
Household level	Cleaning of pits and septic tanks, and unblocking of household connections	Small-scale service providers (operated either by a small-scale private operator or an NGO)
Lane and neighbourhood level services	Communal septic tanks, toilet blocks, lane sewers.	Small or medium scale enterprise, non-profit company, or non-governmental organization
City level - Primary infrastructure and services	Operation of trunk sewerage Sewage / faecal sludge treatment plants, pumping stations	Utility (public or private), concession to private company

Stage 5: Prepare for implementation

- **Definition of short, medium and long term priorities for implementation**
- **Consider funding mechanisms**
- **Preparation and dissemination of the draft city sanitation action plan**
- **Formalise institutional agreements for implementation and agree on monitoring plan**

Supporting the planning process

- Creation of an enabling environment
- Human resources development and institutional strengthening
- Sanitation promotion and awareness-raising
- Disseminating and communicating the plan
- Consultation and facilitation of the process



Send us your comments

Soon to be available for
download from IWA website,
Waterwiki and SuSanA

Please send your comments
and suggestions to either

Jonathan Parkinson (email:
Jonathan.Parkinson@iwahq.org)

or Christoph Luethi (email :
Christoph.Luethi@eawag.ch)

before **November 30 2013**

