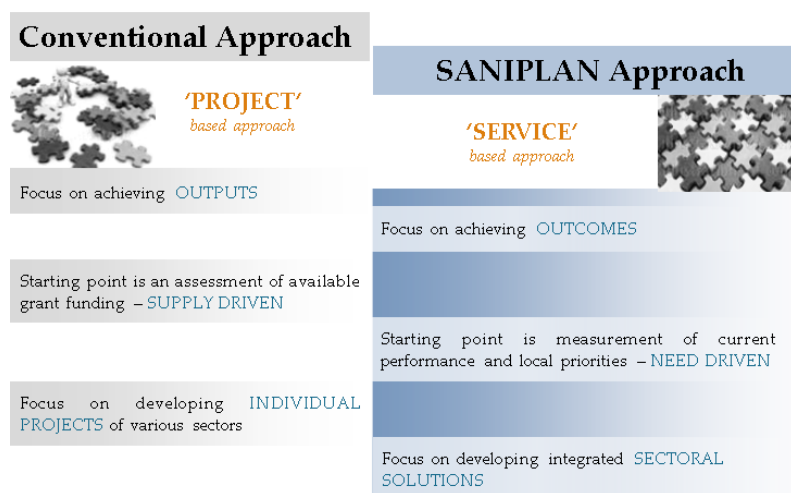


# SANIPLAN

## A City Sanitation Planning Model

**SANIPLAN** is a decision support tool that provides a structured approach in planning for urban sanitation. It focuses on integrated service performance with a detailed assessment of finances. It is a planning tool which can support more informed stakeholder participation. Based on local priorities users can identify key actions for service improvement, and prepare a Financing Plan that ensures funding for both capital and operating expenditure.

Conventionally, city engineers identify projects for infrastructure provision; consultants prepare a detailed project report and it is implemented with grant funding from donors or central/provincial governments. In other cases, donors and governments identify infrastructure projects as per their priorities, select cities and fund capital costs for their implementation. In both cases, outputs are discussed in physical terms – e.g. length of sewerage network or capacity of treatment plant - and seldom in terms of service outcomes or improvement in service levels. The focus is on projects rather than service improvements. In addition, while costs are assessed, not much attention is paid to financing either capital or O&M expenditure, or tariffs that will need to be levied.



SANIPLAN provides a different and structured approach to citywide sanitation planning by incorporating service performance assessments and finance planning, with a tool to interactively select improvement actions and projects. SANIPLAN was developed at the CEPT University under the Performance Assessment System (PAS) Project, an action research programme funded by the Bill and Melinda Gates Foundation. It has been used for preparation of several City Sanitation Plans in Maharashtra, India by the CEPT team as well as other consultants.

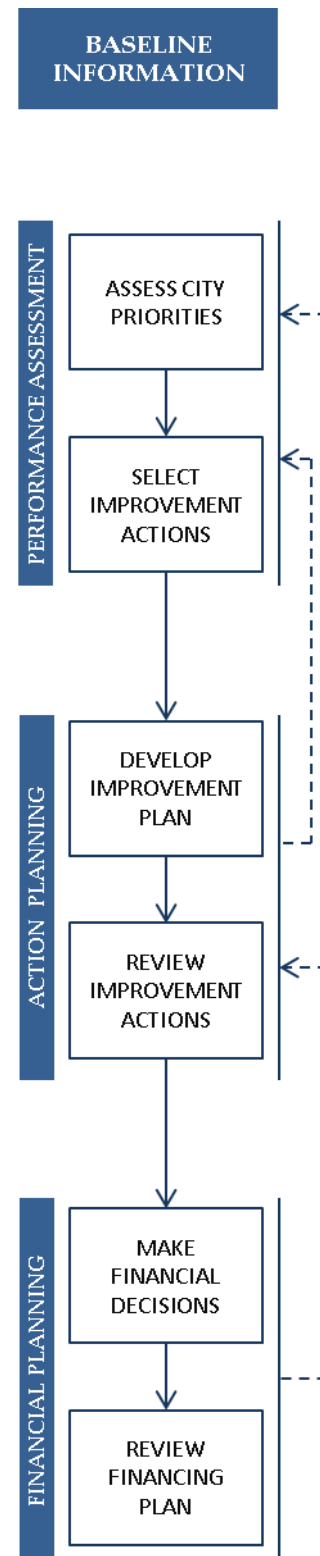
**SANIPLAN** provides a multi-year planning framework with a focus on improving performance across five service themes: access, equity, service levels and quality, efficiency and financial sustainability. In a city, delivery of sanitation services is closely linked to service levels of water supply and solid waste management. The tool incorporates these three sectors with Inter-sectoral links, to capture the cascading impacts improvement in one sector has on the other. A key feature of SANIPLAN, of assessing local finances, helps develop a feasible financing plan for both capital and operating expenditures of service improvement proposals. The tool requires standardized baseline information for each sub-sector, and inputs on local finances.

SANIPLAN is built around three functional modules:

**Performance Assessment** module assesses the entire sanitation service chain: user interface -collection - conveyance - treatment - safe disposal. Service levels are measured through performance indicators developed under the PAS Programme, which align with the Service Level Benchmarks (SLB) used by the Government of India. Sanitation indicators capture both onsite sanitation and sewerage systems.

**Action Planning** module helps identify actions needed to improve services. Specific actions for data improvement measures, improvement in existing system, building new infrastructure and policy interventions have been built-in. The user can tailor each selected action for phasing, quantities, and capital and operational costs. Impact of selected actions on service levels and municipal finance are shown interactively, enabling users to identify a mix of actions to meet local targets. It becomes a basis for stakeholder review to assess targets and related requirements for implementation capacity and capital/operational financial feasibility. Different scenarios can be developed to target local priorities, e.g. comparing technical options such as onsite versus sewerage systems.

Financing Plan module helps to develop a feasible Financing Plan for capital and operating expenditure. Users can choose from different options including grants, private sector or (PPP), household contributions, local government contributions, and borrowings from banks. The Financing Plan is developed through an iterative process with key decisions related to transfers from non-WSS account surplus, level of external loans, and tariff revisions including introduction of new taxes (e.g. a local sanitation tax).



## SANIPLAN Compare Options

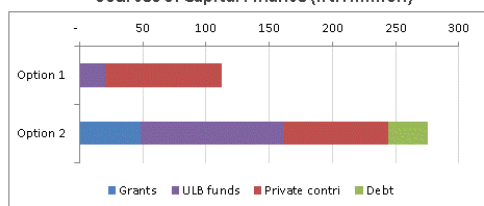
Make your options by selecting appropriate alternative to achieve 100% coverage of toilets, waste water management and financing mechanism

Option 1			Option 2		
Toilets Coverage	WW management	Financing	Toilets Coverage	WW management	Financing
100% IHT	<b>On Site System</b>	Grants	100% IHT	On Site System	Grants
<b>IHT+ Group</b>	non-conventional Sewer	Local Government finance	<b>IHT + Group</b>	non-conventional Sewer	Local Government finance
IHT + Group + community	Conventional Sewer	<b>Creative finance</b>	IHT + Group + community	<b>Conventional Sewer</b>	<b>Creative finance</b>

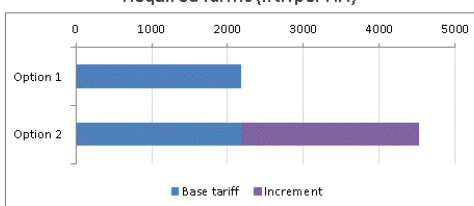
### Expenditure Requirements and Implications

	Option 1	Option 2
Capital Expenditure (INR million)	112.7	275.6
Operating Expenses (INR million/annum)	0.3	4.3
Revenue Generated (INR million/annum)	0.8	3.1

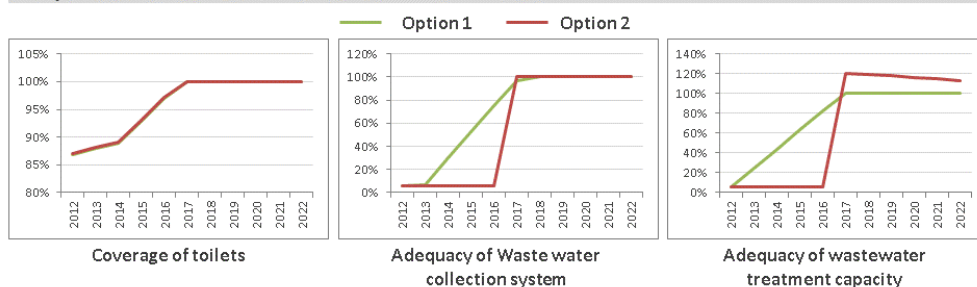
Sources of Capital Finance (INR million)



Required Tariffs (INR per HH)



### Impact on Service Levels



### Phasing and Annual Capital Requirements

Improvement Actions	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Improve condition of existing individual toilets by providing safe sanitation disposal system		2	1	1	1					
Refurbishment of existing septic tanks in city		1	1							
Construct new individual toilets		14	15	16	17	18				
Construct new group toilets		3	3	3	4	4				
Construct new public toilet blocks		0	0							
Provide soak pits for wastewater disposal		1	1	1	1	1				
Procure new suction emptier trucks				1						
Construct/augment fecal sludge treatment plant		1	1							
Expand or lay new sewerage network for wastewater conveyance										
Construct/augment sewage treatment plant										

## SANIPLAN

**Dashboards** enable easy selection and comparison of a set of options during a stakeholder consultation. Users can choose across: a) toilet coverage, b) waste water management and c) financing. The dashboards compare their impacts on a) expenditure requirements, b) service performance, and c) financial implications.

The graphic illustrates such a comparison - between onsite sanitation system and conventional sewer - for a small town; though similar levels of service can be achieved in both options, the sewerage option comes out as expensive, with high life cycle costs, and needing high tariffs.

IHT stands for Individual Household level Toilet

A group toilet is shared by upto 5 households or 30 persons, which ever is less and maintained by users

Creative finance includes a mix of PPP, Grants as viability Gap Funding (VGF), borrowings and Local Government funds