Balancing competing interests and harnessing opportunities for better wastewater governance

## New scalable business models for citywide sanitation

## Case of Sinnar City, India

2012-13

#### Sinnar city, India

Mumbai

#### Sanitation story

2014

vn Toilet

2014

2014

Now

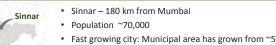
moving

from

ODF

towards ODF+

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- Sq. Km. in 2001 to ~51 Sq. Km. in 2011 Flourishing industrial zones in east and north-west
- City council supported by CEPT for sanitation planning and implementation



### Sanitation services in the city – before and after intervention

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	User interface	Collection	Conveyance	Treatment and disposal
Before	<ul> <li>Open defecation and high dependence on community toilets</li> </ul>	<ul> <li>Majority of toilets connected to septic tanks (74%)</li> <li>Tanks do not conform to design norms</li> </ul>	<ul> <li>Irregular emptying of septic tanks – "call when emptying needed" basis</li> </ul>	<ul> <li>No treatment facility for wastewater and septage</li> <li>Untreated Effluent disposed in river</li> <li>Untreated Septage dumped at solid waste dump site</li> </ul>
After	City launched own toilet scheme + Swachh bharat Mission → Recently declared Open Defecation Free , >80% households have toilets	<ul> <li>City level Regulations and training of masons for proper design</li> </ul>	<ul> <li>Plan for Scheduled cleaning of septic tanks – once every 3 years</li> <li>Private sector emptier involved - Levying a Sanitation tax to support operations</li> </ul>	<ul> <li>Fecal Sludge Treatment facility planned through PSP</li> <li>River and Groundwater quality testing</li> </ul>



# Govern

Responsible for sanitation services + adherence to laws

- Environmental protection laws and disposal quality standards
- Prohibition of Manual scavenging
- Public health safety
- Building bye-laws and technical considerations
- BUT Low technical capacity, manpower, funds
- Need to ensure adherence to norms and laws but no way to monitor operations !!

Need low-cost and no-hassle service

- No regulations on toilet/septic tank design
- Irregular emptying!!
- Need to pay higher for emergency cleaning
- Health concerns from environmental pollution and un-emptied septic tanks

Bus

FSM emerging sector for business. Want to scale up business and make maximum profits

- Emptying service as profitable business • New innovative technologies in treatment
- and resource recovery • Profit by selling of treated septage and
- water
- But they need to adhere to govt. norms -Safe disposal, No env. pollution, Safety gear and no manual scavenging

Using Wastewater is cheaper than buying water during shortage

- Water shortage during summer
- Ready to use even untreated wastewater available at low or no-cost
- But there is Groundwater pollution risk
- After treatment- have to pay higher for treated wastewater

Sanitized town

- Environment and public health protection?
- Large funds not required
- Sanitary toilets
- Regular Emptying?
- Lower/competitive emptying charges
- Business at large scale
- High quality vehicles
- Payment risk mitigated with escrow account
- Treated water and compost for farming?

CEPT C-WAS p a s perform system