

→ PSP toolkit for IFSM

CEPT
UNIVERSITY

With support from Dalberg

Objectives of the toolkit



This toolkit is designed to assist ULBs in **understanding the role of the contractor** in providing sanitation services in small towns/ cities, and how their participation can be managed effectively by the ULB



Tools are designed to **assist ULBs** in **assessing** the need for **contractor participation** in their towns/ cities, **identifying the right players** to engage with, **and planning and managing** their performance

Sections of the toolkit

The Toolkit is divided into four sections, each representing a step towards engaging the private sector for such a project.

Section		Objective
I	Understand IFSM	Understanding the sanitation value chain and recognizing the need for IFSM
II	Identify the need for PSP in IFSM	Assessing in-house ULB capacity and identifying whether a contractor is needed, and to deliver what services
III	Assess contractors for partnership	Evaluating contractors on the basis of their preferences, and expertise required
IV	Plan and manage contractor engagement	Designing contracts and monitoring systems to track contractor performance

Sections

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Introduction to the section

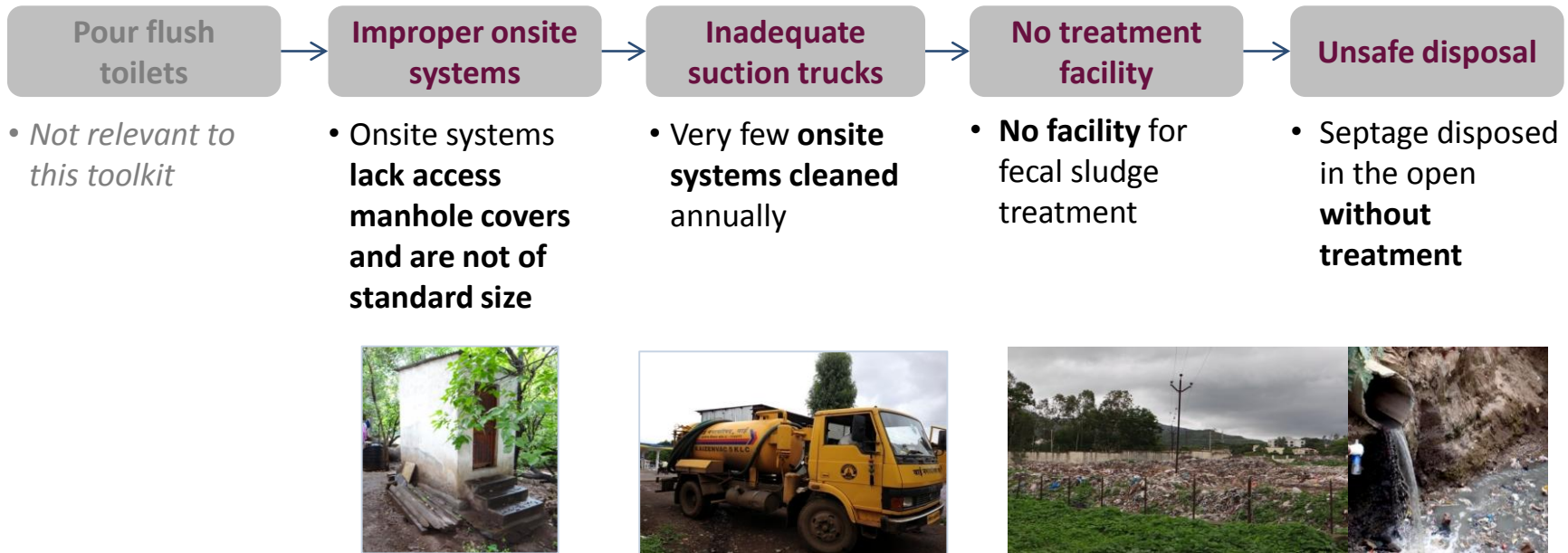
- Most small towns and cities in India use decentralized waste collection systems, and face issues in collection, treatment, and safe disposal of faecal waste. An Integrated Faecal Sludge Management (IFSM) approach offers a comprehensive solution to address these sanitation issues
- Urban Local Bodies (ULBs) typically face challenges in planning and executing projects based on the IFSM approach. Partnering with contractors could offer significant benefits to the ULB in terms of access to technical expertise, and financing support
- While there are existing resources to guide Private Sector Participation (PSP) in large scale sanitation projects, there is need for support and guidance on engaging contractors in commissioning small-scale sanitation projects based on the IFSM approach

Challenges faced across the sanitation value chain

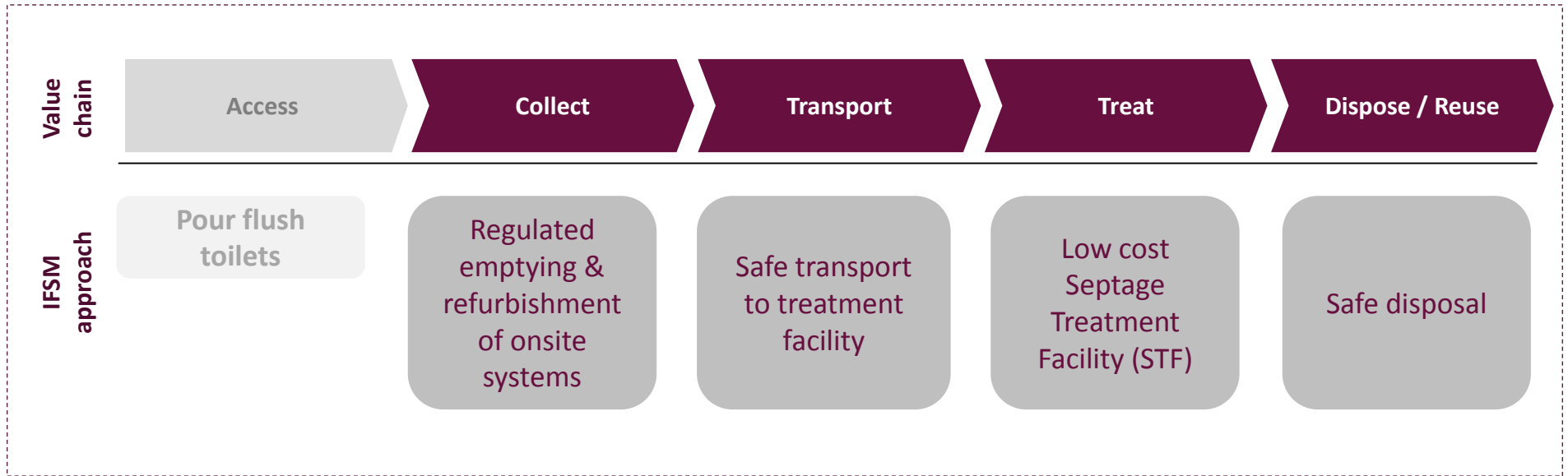
Sanitation value chain



Typical challenges faced



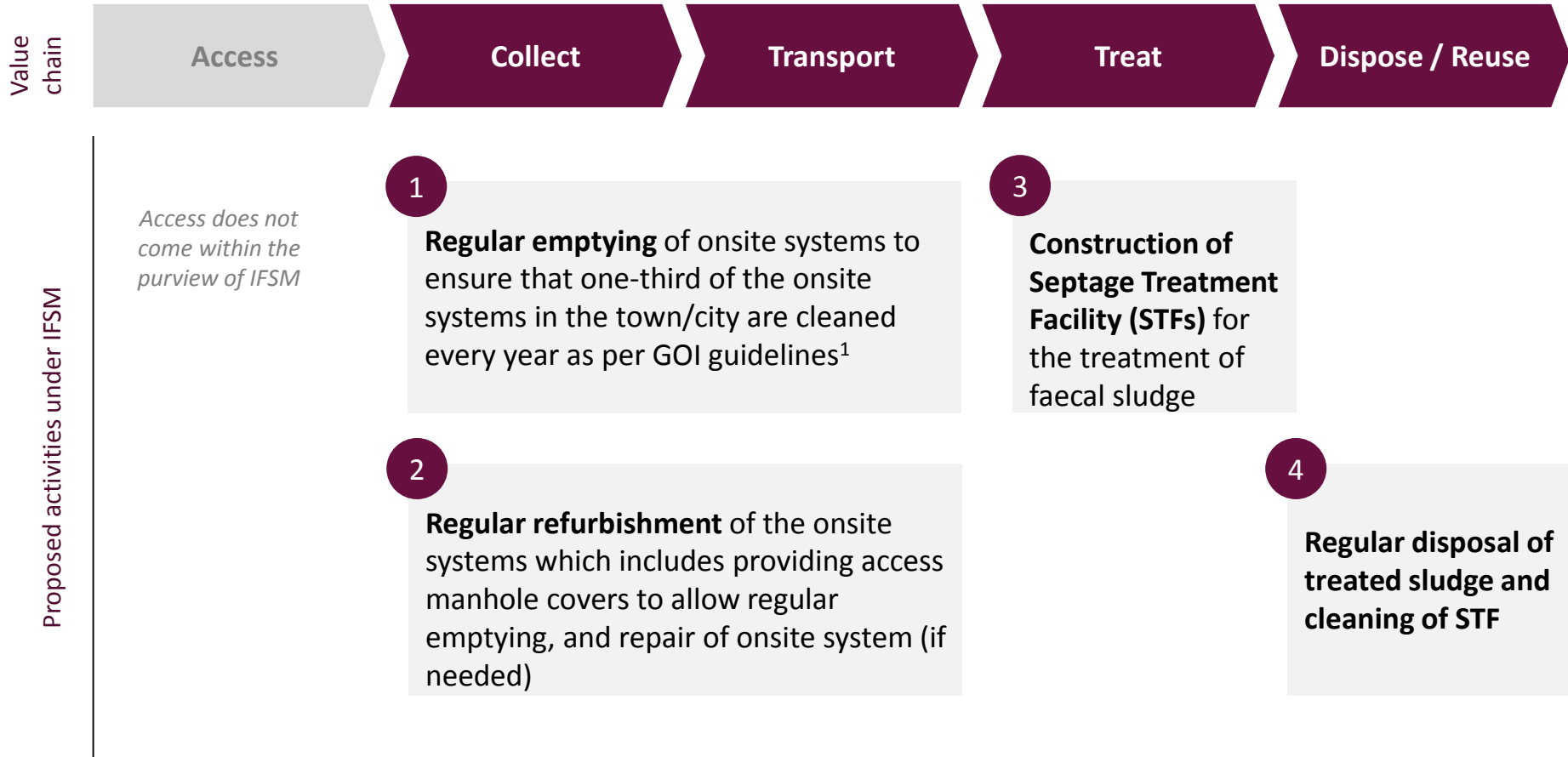
IFSM represents an integrated approach from collection of faecal waste to its safe disposal



- IFSM provides a simple and comprehensive approach to challenges related to decentralised systems in the collection, conveyance, treatment and reuse of faecal sludge
- IFSM is a relevant approach if:
 - ✓ The majority of the population depends on a onsite system based waste collection system
 - ✓ There is a gap in sanitation services across the value chain from collection to disposal of faecal sludge
 - ✓ Majority of waste collected from onsite systems is dumped without treatment, and if there is no central treatment facility

In this toolkit, 4 key activities under the scope of IFSM are considered

Scope of IFSM for this toolkit



Note: (i) As per MoUD guidelines, a household onsite system/onsite system must be emptied every 3 years hence 33% of all onsite systems/ onsite systems should be emptied annually

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Introduction to the section

- ULBs in **small and medium towns typically face challenges** such as low institutional capacity, limited technical know-how, and restricted access to financial resources **in planning and implementing the IFSM approach**
- **Partnering with contractors could offer significant benefits** in terms of access technical knowledge, as well financial support
- However, the potential to, and the benefits from engaging the contractors could vary based on a particular ULB's context. Before a decision is taken to engage a contractor, it is important to assess the **legal and political support for a PSP** in the town/city, as well as the **public sector capacity** to support a contractor engagement
- The objective of this section is to help the ULB:
 - **Assess current gaps** in the sanitation services related to faecal sludge management in their towns
 - **Understand if PSP is a potential solution** to address these gaps in their towns

Key questions to consider



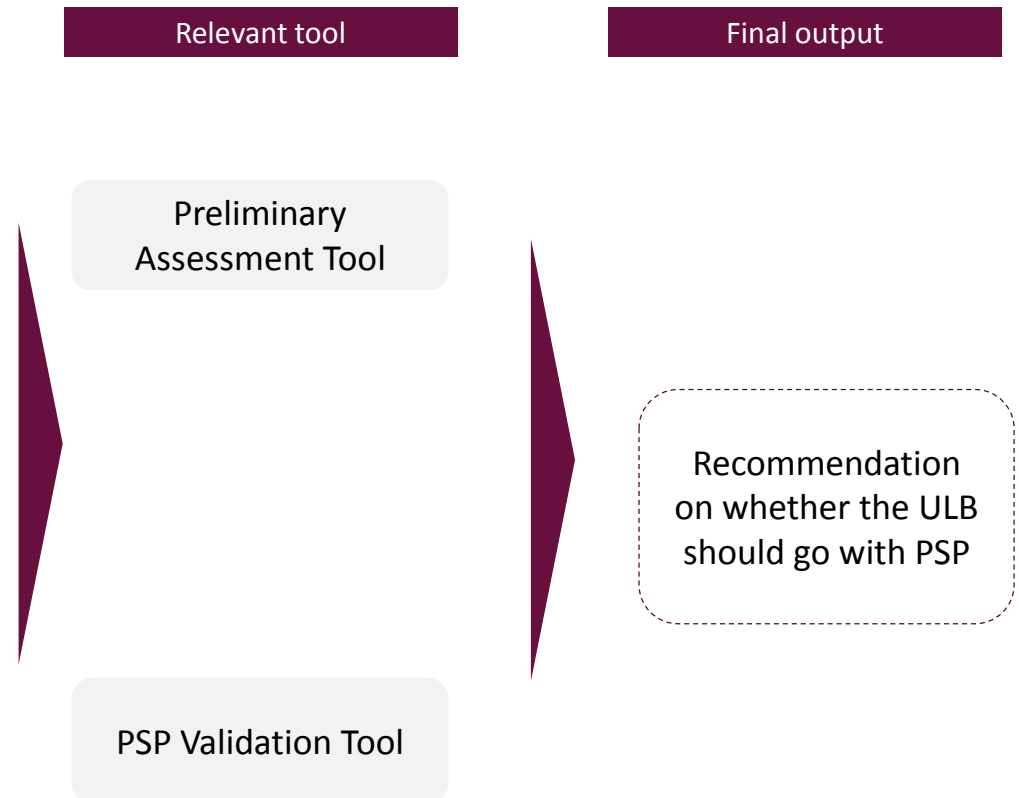
1. Does the ULB have the capacity to deliver the IFSM approach on its own?

- Understand **current service levels** of sanitation services in the town/ city
- **Assess ULB capacity** to deliver the required service levels



2. Is there a supporting environment for PSP?

- Understand **legal and political support** for PSP
- Assess **public sector capacity** to support a PSP



Preliminary Assessment Tool

Objective of the tool

The objective of this tool is to understand gaps in the current service levels and the ULB capacity to deliver on the required service levels

Key inputs

Current service levels

- Current statistics and data on the number of onsite systems
- Ongoing processes for waste management
- Observed issues/gaps and inefficiencies

Understanding ULB capacity

- Detailed information on staff capacity
- Availability of equipment and machinery
- Financial capacity

Outputs

Existing gaps in:

- Current service levels of sanitation services
- Current ULB capacity to provide the desired service levels



Microsoft Word
Document

PSP Validation Tool

Objective of the tool

The objective of this tool is to assess if there is an enabling environment to encourage contractor participation by understanding the legal and political support for the PSP and assessing the public sector capacity to support a PSP

Key inputs

Data to assess legal and political implications

- Information on **existing laws and policies** limiting or endorsing contractor participation
- Any **existing political connections** that can be leveraged
- Data around **land availability/ acquisition** that a potential PSP initiative may entail

Understanding ULB capacity to support a PSP

- Information on existing public sector expertise in PSP support
- Existing public sector funding assistance programs

Outputs

Favourability toward PSP from a legal and political standpoint

Existing drivers that can propel a potential PSP



Feasibility and ease of engaging with contractors



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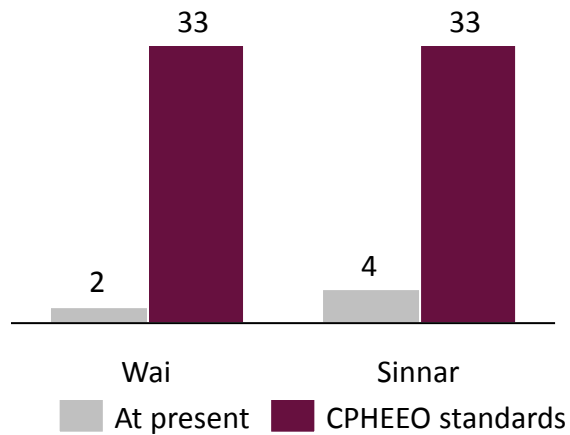
Summary: tools, key inputs & sources

	Tools	Components	Key inputs	Sources
1. Identify the need for PSP in IFSM	1A. Preliminary Assessment	Understanding current sanitation service levels in the town/ city	Current statistics and data on the number of onsite systems	NSSO data, city level sanitation assessment studies
			Required/ recommended service levels	City sanitation plans, gov't (e.g. MoUD) guidelines
			Observed issues/ service gaps	Internal analysis, city sanitation plan
		Understanding ULB capacity to deliver required/ recommended sanitation services	Available manpower capacity, equipment and machinery (e.g. safety gloves, suction trucks, etc.)	ULB internal records
	Budget availability to provide sanitation services		ULB budget allocation	
	1B. PSP Validation	Assess legal and political implications	Information on existing policies/ political support relevant for contractor participation in the delivery of sanitation services	Government circulars/ policy documents
			Understanding of unique challenges affecting the implementation of PSP in IFSM (e.g. land acquisition)	Internal expertise
		Understanding ULB capacity	Assessment of public sector support to PSPs (e.g. past experience, existence of active nodal agency)	Internal consultations, past project experience
Existing public sector funding assistance programs			<ul style="list-style-type: none"> Financial records Previous project documents Interviews with relevant stakeholders (e.g. local gov't) 	

Case Study: Understanding current service levels

Collection: Households get their onsite systems cleaned only once in 8-10 years, resulting in the release of effluent with solids into the drainage system

Percent of household onsite systems cleaned annually



- The CPHEEO¹ manual and the MoUD septage management advisory recommend that household onsite systems be cleaned **every ~2-3 years, i.e. ~33% of them should be cleaned each year**
- In addition to the fact that tanks are often over-sized, the driving factor behind **the infrequent cleaning is the lack of awareness among households** who do not bear the environmental impact of infrequent cleaning

Resulting issues



- onsite systems **often overflow** and fecal matter along with effluent is released into drains
- In addition, **septage hardens and cannot be easily suctioned off**, often requiring manual intervention or the application of a lot of water to break the solids

Note (1) The Central Public Health and Environmental Engineering Organization (CPHEEO) is the technical wing of the MoUD and deals with the matters related to urban water supply and sanitation

Source: PAS database, City Sanitation Plan, PAS Project – CEPT University

Sections

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Introduction to the session

- Once we have established the need for PSP in IFSM the town/ city, the next step is to understand the availability and capability of the contractors operating in the region
- A ULB may not have the knowledge or resources to assess whether there are contractors available with the required level of expertise, to provide the proposed services
- The objective of this section is to help the ULB **identify**, and **assess** the contractors to engage with

Key questions to consider



1. Are contractors available to provide the proposed services?

- Who are the relevant contractors for the proposed project?
- How can they be identified?



2. Do these players have expertise in delivering similar projects?

- Do the players possess relevant technical expertise and knowledge?
- Do they have prior experience in IFSM?
- Do they have prior experience of working with the public sector?



3. What are their key considerations or interests?

- What is their required return on investment?
- What is the key risks or challenges for them? (e.g. ownership of assets)

Relevant tool

Final output

Player Assessment Checklist

1. Detailed player profiles
2. Shortlist of contractors to engage

Player Assessment Checklist

Objective of the tool

This tool is designed to evaluate the (i) availability, (ii) expertise, and (iii) interest of contractors to engage in a PSP for IFSM services

Key inputs

Background of the contractor

Questions related to expertise and experience in IFSM

Contractor's interest and preference in engaging with public sector

Outputs

Engagement with which contractor will be the most fruitful and cost effective



Microsoft Word Document

This information should be provided by the contractors or drawn via detailed conversations with these parties

Summary: tools, key inputs & sources

	Tools	Key inputs	Sources
2. Assess contractors for partnership	Player Assessment Checklist	Background of the contractors who could partner with the ULB	<ul style="list-style-type: none"> • Survey as part of Expression of Interest (EOI) • Company website (if available) • Internal database of empaneled contractors • Past project experience
		Questions related to expertise and experience of available contractors in providing IFSM services	<ul style="list-style-type: none"> • Survey as part of Expression of Interest (EOI) • Company website (if available) • Internal database of empaneled contractors • Past project experience
		Contractor interest and preference in engaging with public sector	<ul style="list-style-type: none"> • Survey as part of Expression of Interest (EOI)

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Introduction to the session

- Typically, most public sector contracts with contractors are based on inputs rather than on outputs, which creates perverse incentives in terms of contractor performance
- A Performance Based Contract (PBC) can help plan contractor role, and create direct motivations for high quality project delivery
- A PBC also incorporates a robust monitoring framework to help track project progress, and create accountability for service delivery
- The objective of this section is to understand how to design a PBC by:
 - Understanding the basic elements of a PBC
 - Creating a performance based monitoring system
 - Incorporating relevant clauses in the PBC

Key questions to consider



1. What are the basic parameters of a contractor engagement?

- Introduction to a performance based contract (PBC)
- Understanding 5 key steps to create a PBC



2. How to create a performance based monitoring and payment system?

- Identifying metrics to assess service levels
- Developing monitoring mechanisms
- Linking monitoring to penalties and incentives



3. What are the key clauses for a contract?

- Identify key clauses for the contract, such as termination, risk mitigation etc.

Relevant tool

1. Checklist to
 - Create bundled contracts
 - Identify revenue sources
 - Decide ownership of assets
 - Define payment structure
2. Financial Assessment Tool

1. Sample service levels & performance metrics
2. Reporting templates
3. Sample payment terms monitoring

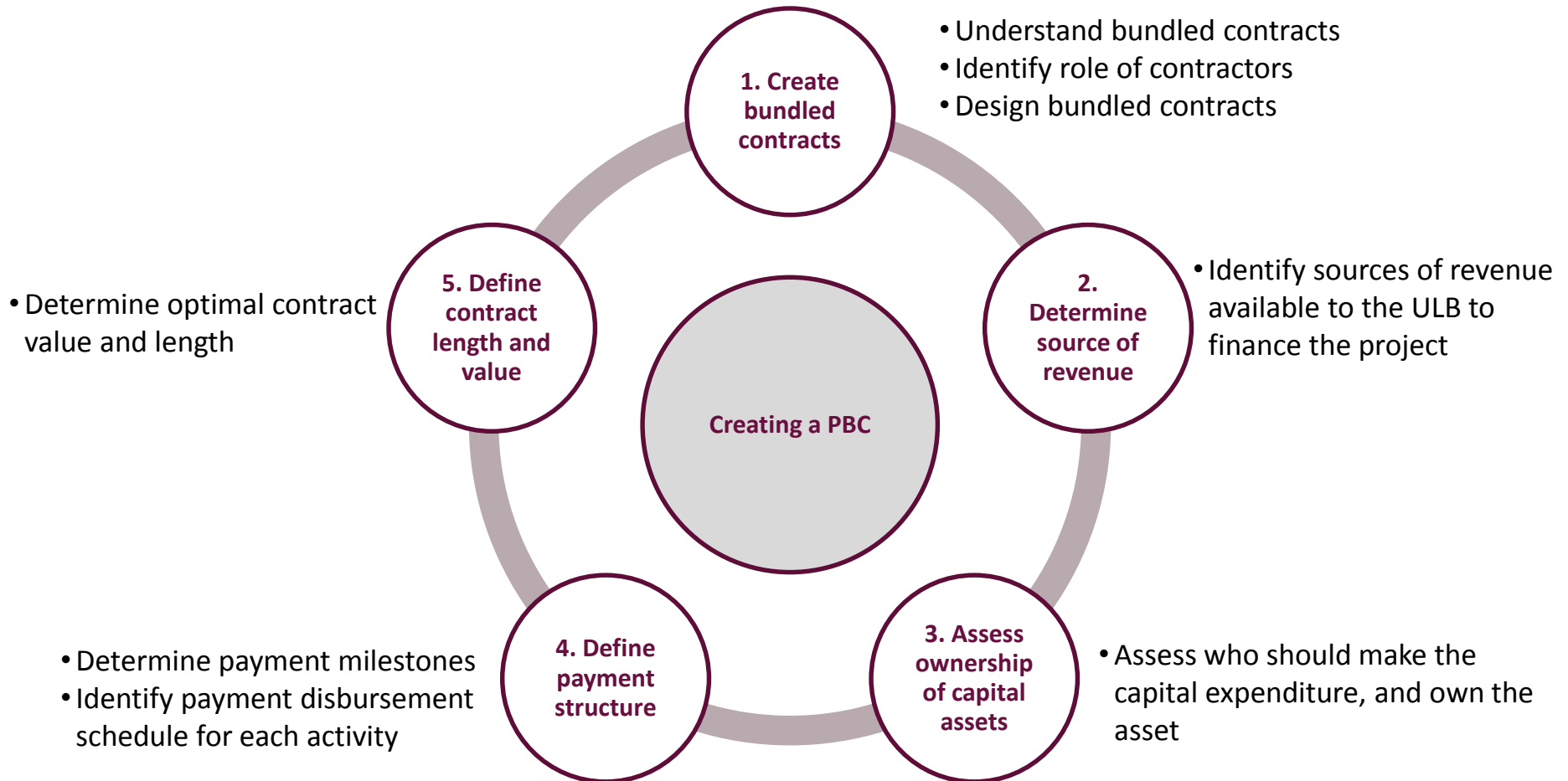
1. Sample key clauses

Final output

Sample contracts & bid documents

Basic parameters of a contractor engagement (PBC and its components)

STEPS TO CREATE A PERFORMANCE BASED CONTRACT



Step 1: Create bundled contracts

Identify the different activities under the sanitation value chain



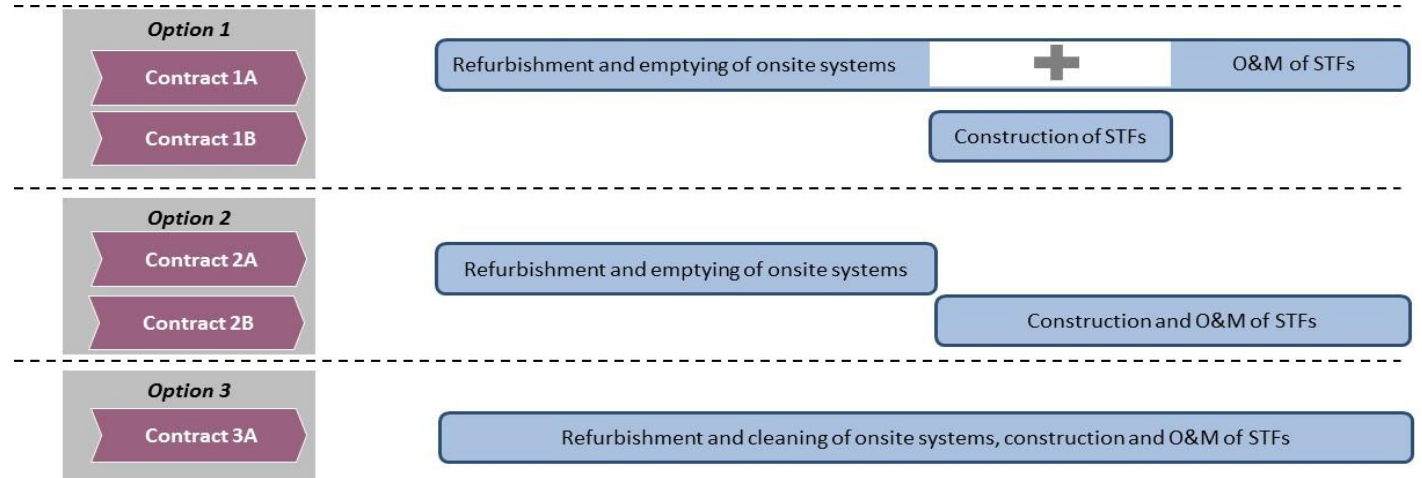
Consider the interest and capabilities of the different contractors



Create bundling options according to activities



- A** Periodic emptying of onsite systems as per a regulated schedule
- B** Refurbishment of onsite systems with access manhole covers
- C** Construction of STFs
- D** O&M of STFs



Checklist to create a bundled contract

Objective of the tool

The objective of this checklist is to assess whether a bundled or an unbundled contract is feasible for the proposed project

Key inputs

Experience details of contractors

Willingness of contractors to provide these services

Outputs

Evaluation of these contract options based on contractor experience and interest, and can then be evaluated for their financial viability

Overview

The objective of this tool is to assess whether a bundled or an unbundled contract is feasible for the proposed project. The tool is in the form of a checklist that draws upon 2 key aspects: (i) do available private players have experience in providing specific activities, and (ii) are these players willing to provide particular activities. Financial feasibility of various kinds of bundled contract is considered later in Section IV.

How to use this tool

- **Inputs:** ULBs must consider 2 sources of information to answer this
 - Interviews with private sector players: ULBs must conduct private sector players to better understand their interest in proposed project.
 - Section III of this toolkit: This tool builds on the information collected in Section III of the toolkit, where private players were assessed for PSP in I from Toolkit # XX (Private Player Assessment) will serve as key input.
- The tool will assess the experience and willingness of private sector players to provide the services included under the proposed contract. The tool will use the following contract options depending on how IFSM activities are broken down:

Contract option	Refurbishment of septic tanks	Periodic cleaning of septic tanks	Construction of STFs
Option 1			
Option 2			
Option 3			
Option 4			
Option 5			
Option 6			

Checklist

The table below needs to be filled out for each of the private players under consideration for the proposed project.

Private Player 1: XXXXXX

Activity	Previous experience (Yes/ No)	Interested (Yes/ No)
Refurbishment of septic tanks		
Periodic cleaning of septic tanks		
Construction of STFs		
O&M of STFs		

Sample output:

Feasibility of contract options:

Contract option	Feasibility based on private player availability (High/ Medium/ Low)
Option 1	High
Option 2	Medium
Option 3	Low
Option 4	Low
Option 5	Low
Option 6	High

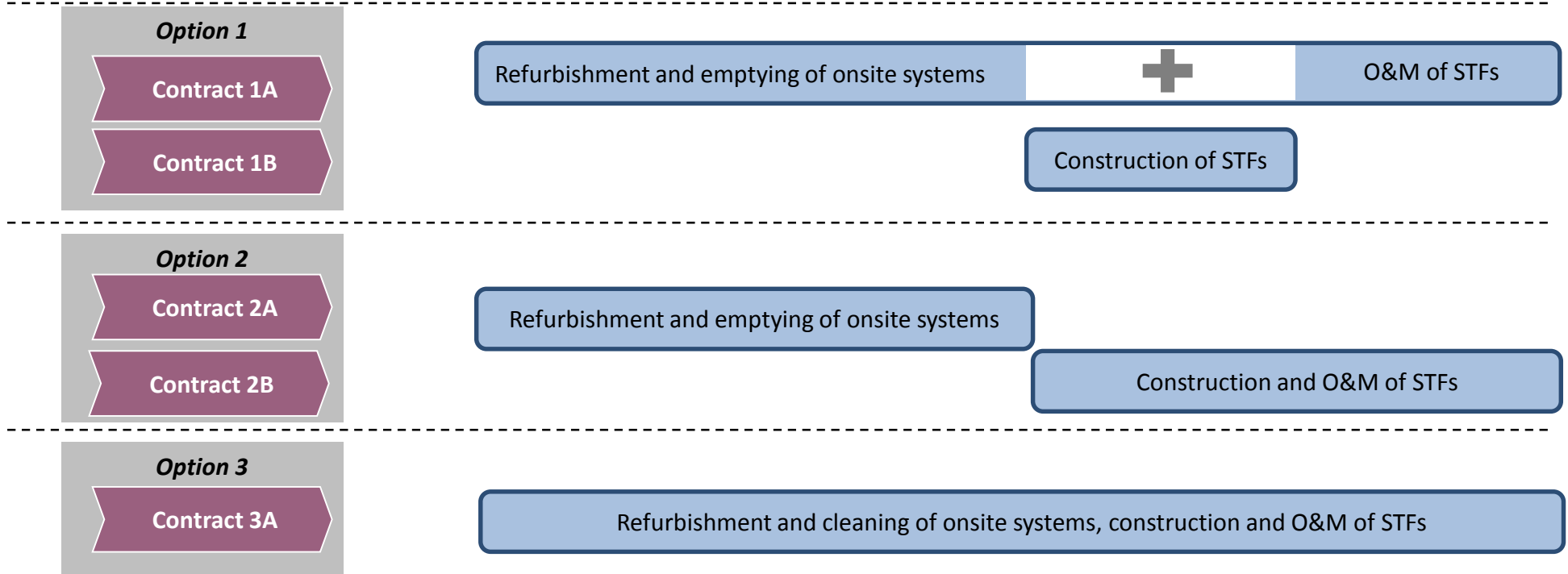
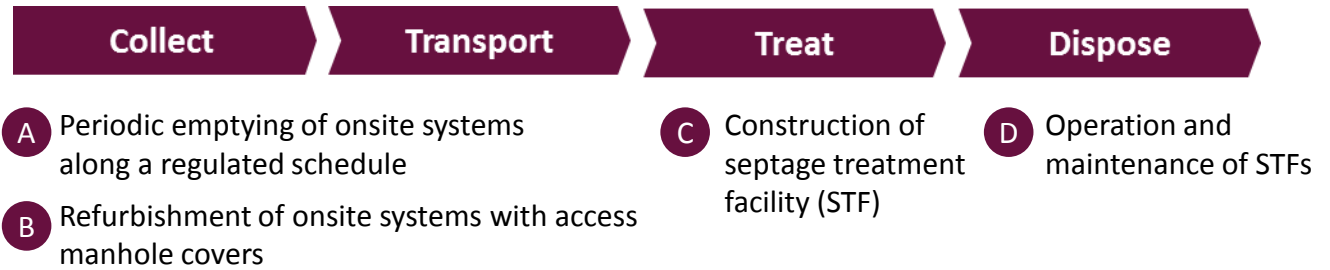
Rating scale:

Rating	Description
High	More than 1 private sector player offering each of the services under the contract
Medium	At least 1 private sector player offering each of the services under the contract
Low	Gaps in private player experience and interest in offering services as per the contract option



Microsoft Word Document

Case Study: Given the interest and capabilities of identified players around Wai and Sinnar, three possible options for contract bundles were identified



Step 2: Identify revenue sources

Identify the different sources of revenues



Assess the different options on the basis of sustainability and reliability

ULB sources

Government sources

Miscellaneous sources

Can be used individually or in combination

Is fund available through the duration of the contract?

Are the financing terms acceptable to ULB?

Is revenue source reliable in terms of guarantee?

Does the source of active political and community support?

Does the cash flow timing match the requirement?

Checklist for identifying relevant sources of revenue

Objective of the tool

The objective of this tool is to identify and assess the most appropriate sources of revenue to finance the PSP contract

Key inputs

Different revenue sources

Assessing the different sources

Outputs

Recommendation on which sources are most relevant for the ULB

Overview

The objective of this tool is to assess and identify the most appropriate sources of revenue to finance the PSP contract. This is done via two steps – first, identifying potential sources of revenue available to the ULB, and second, by checking which one of the identified sources are reliable, and sustainable given the nature of the proposed PSP contract.

This builds on the assessment of the ULB and external finances done in Section II of this toolkit.

How to use this tool

- The checklist is divided into 2 parts:
 - Section 1: Assessing potential revenue sources:** This section identifies potential revenue sources for the ULB, including – i) ULB budget, ii) government sources (loans and grants), and iii) other sources (loans or grants from corporates, or multilaterals). At the end of this section, all options available to the ULB are shortlisted.
 - Section 2: Evaluating sustainability and reliability of the sources shortlisted**
- Inputs:** ULBs must consider the following sources of information to answer this checklist:
 - Section II of this toolkit:** This tool builds on the information collected by the ULB in Section II of the toolkit, where sources of funding for the ULB are assessed through the following 2 tools (Tool # XX: Preliminary competency assessment tool, and Tool # XX: PSP Validation Tool).

Section 2: Checking for Sustainability and Reliability

For the sources shortlisted, consider the following questions:

Criteria	Shortlisted Source 1:	Shortlisted Source 2:	Shortlisted Source 3:
1. Are the financing terms acceptable to the ULB	Yes / No	Yes / No	Yes / No
2. Is the funding available for the duration of the contract?	Yes / No	Yes / No	Yes / No
3. Does that cash flow timing match the requirement (i.e. is the amount available lump sum, or in tranches)	Yes / No	Yes / No	Yes / No
4. Does the source have active political or community support	Yes / No	Yes / No	Yes / No
5. Is the revenue source reliable in terms of guarantee of disbursement	Yes/No	Yes/No	Yes/No



Microsoft Word Document

Case Study: A possibility of ULB compensating contractors using local taxes was recognised in Wai and Sinnar

- Currently, households clean their onsite systems once in 8-10 years and spend INR ~1000 in Wai and INR ~400 - 800 in Sinnar
- Property owners currently have to pay local taxes of about Rs 2200/annum in Wai and Rs.1600/annum in Sinnar
- To cover the costs of a cleaning cycle of ~3 years would require **an increase** in annual tax spend for a household of about **10% in Wai and 20% in Sinnar**.
- As these are reasonable increases for a regular service and related environmental as well as personal benefits, it is expected that with appropriate awareness there will be willingness to pay additional taxes.

Current taxes levied in Wai

वाई नगरपरिषद, वाई

नमुना ४८ (नियम नं. ७७ पहा) No. 6400

१-४-२० ते ३१-३-२० रोजी संपणाऱ्या कालावधीच्या करांचे वील

घर नंबर _____

नाव _____

पत्ता _____ भागणी नोंदवहीतील अनुक्रमांक _____

समासाच्या स्तंभ ३ मध्ये दर्शविण्यात आलेले _____ रुपये रकमेचे कर आपणाकडून संकलित कर वगैरे करांच्या संबंधात येणे असून आपण ते ठे बिल दिव्यापासून पंधरा दिवसांच्या आत नगरपरिषदेकडे भरावेत अशी आपणांस विनंती करण्यात येत आहे.

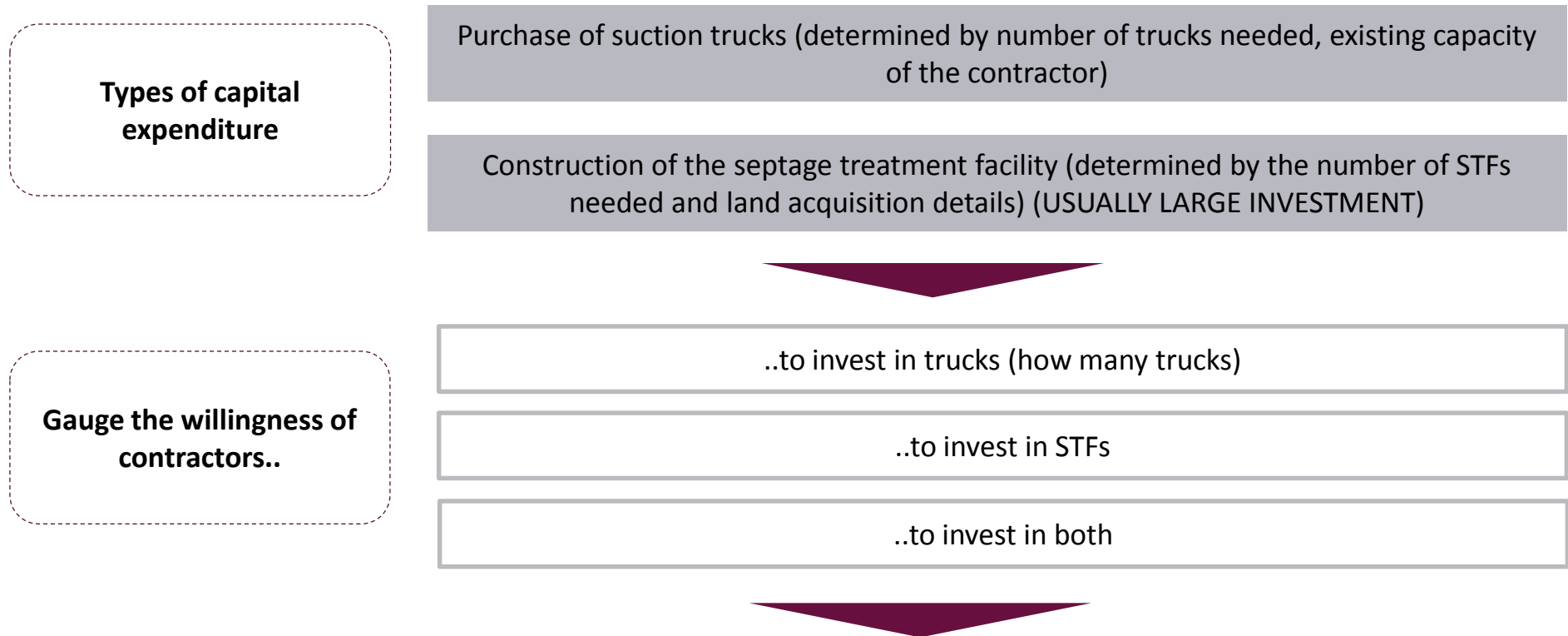
करांचे नाव	भागील धकदाफी	चालू भागणी	एकूण	पंधरा दिवसांच्या उक्त कालावधीत अ) या बिलात भागणी केलेली रक्कम देण्यात न आल्यास किंवा ब) ती का देण्यात येऊ नये याबद्दल मुख्य अधिकाऱ्याची खात्री पटेल असे कोणतेही कारण दर्शविण्यात यावे नाही तर किंवा क) महाराष्ट्र नगरपरिषद अधिनियम १९६५ च्या कलम नं. १६९ अन्वये कोणतेही अपील दाखल करण्यात आले नाही तर उक्त रक्कम देण्यासंबंधी आपल्यावर भागणी नोंदीस बजविण्यात येईल.
संकलित कर				
वृक्ष कर				
शिक्षण कर				
रोजगार हमी कर				
घाणी कर				
अग्नीशमन कर				
इतर कर				
एकूण				
१५ दिवसांतलं वयात				
एकूण				

कार्यालयीन वाई नगरपरिषद दिनांक - _____ मुख्याधिकारी

टीप - समासाच्या स्तंभ २ मध्ये दर्शविलेली रक्कम चालू भागणीच्या रकमेबरोबर घेण्यात येईल.

The ULB can consider using its local taxes to support the integrated fecal sludge management plan, and will need to compensate contractors directly through a management fee

Step 3: Assess ownership of capital assets



The **PSP contract must clearly define who will purchase or pay for the asset** and who will pay for maintenance, and if there is a transfer of asset after a specified period of time

Checklist to assess ownership of capital assets

Objective of the tool

The objective of this checklist is decide whether the contractor or the ULB should incur the capital expenditure as part of the proposed project

Key inputs

Is the contractor willing to make the capital investment

Can the ULB afford to make the capital investment

Outputs

Recommendation on who should own the capital assets

Overview

The objective of this tool is decide whether the private sector actor or the ULB should incur the capital expenditure as part of the proposed project. It considers two key types of capital investment:

- a. Purchase of honeysuckers
- b. Construction of Sludge Treatment Facility (STF)

How to use this tool

- This tool considers 2 key questions:
 1. Is the private sector willing to make the capital investment?
 - a. If **Yes**, is the capital investment financially viable for the private player?
 - b. If **No**, can ULB support them to make the investment through financial or support?
 2. Can the ULB afford to make the capital investment?
- For each of the decision questions above, the checklist provides a list of questions that must consider in order to make the decision.
- **Inputs:** To answer the questions described above, and detailed in this checklist, consider the following sources for inputs:
 1. **ULB / Town Sanitation Budget:** The City/ Town's budget and financial reports (present and past) will help identify sources such as surpluses, provisions or allocations used for purchase of assets for the proposed project.

Checklist for Assessing Ownership of Capital Assets

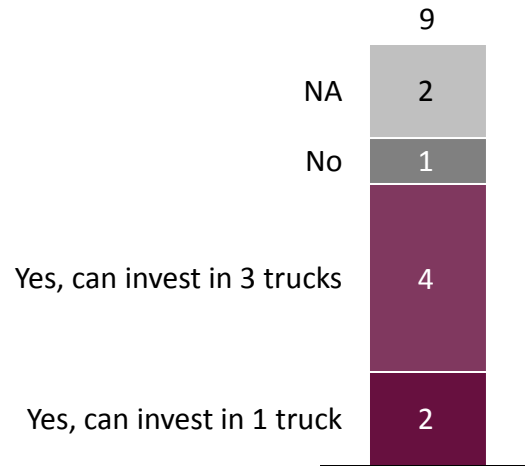
Checklist	Purchase of <u>honeysuckers</u>	Construction of STFs
1. Is the private sector operator willing to invest in the capital asset?	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Yes • No
2. If Yes,		
<ul style="list-style-type: none"> • Does the private sector operator have the capacity to make the upfront capex? 	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Yes • No
<ul style="list-style-type: none"> • Can the revenues or cash flows from the asset pay back for its cost during its lifetime? 	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Yes • No
<ul style="list-style-type: none"> • Can the asset be redeployed in case of premature termination? 	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Yes • No
<ul style="list-style-type: none"> • Can the private player easily sell the asset in case of premature termination 	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Yes • No
3. If No,		
<ul style="list-style-type: none"> • What is the key reason for their unwillingness? 	<ul style="list-style-type: none"> • Lack of financial resources • Inherent risks from ownership of asset (such lack of exit options) • Others • All of the above 	<ul style="list-style-type: none"> • Lack of financial resources • Inherent risks from ownership of asset (such lack of exit options) • Others • All of the above



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Case Study: Assessment of contractors revealed that contractors were willing to invest in suction trucks, but not want in the construction of STFs

Willingness to invest in a suction truck
(Number of players)



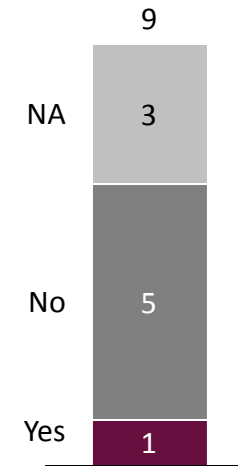
“Yes, I can procure a truck and operate it on the regulated schedule... I can use (the truck) for other business in case the contract does not work out.”

- Kadam Enterprises

“I cannot afford to buy more than one truck. I have just ordered a truck, and faced financial troubles there too.”

- Ugale onsite system Cleaning Services

Willingness to invest in construction of STFs
(Number of players)



“Payment needs to be mile-stone based, ~40% up-front, 50% when materials are delivered to the site and 10% post-completion.”

- Envicare

“It would be interesting to explore an integrated contract structured as a build-operate-transfer concession agreement.”

- 3S Shramik

Step 4: Define payment structure

Defining different activities

Considering various parameters w.r.t to these activities

Different payment structures

Refurbishment of onsite systems
Regular emptying of onsite systems
Emergency Cleaning of onsite systems
Construction of STFs
O&M of STFs

Frequency of the activity
Whether outputs are measurable
Whether total costs are known
Whether timelines are known

Contract Type	Source of revenue	Ownership of asset	Payment method
1A Refurbishment and cleaning of onsite systems + O&M of STFs	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment
1B Construction of STFs	ULB	ULB	Overall fixed fee on a pre-decided schedule
2A Refurbishment and cleaning of onsite systems	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment
2B Construction and O&M of STFs	ULB	ULB	Overall fixed fee on a pre-decided schedule + recurring fixed fee for O&M
3A Integrated contract involving refurbishment, cleaning of onsite systems, construction and O&M of STFs	ULB	<ul style="list-style-type: none"> Trucks – Private STFs – ULB 	Recurring fixed fee for cleaning and O&M with Fixed fee for Construction and Fixed fee per unit for refurbishment

Decision Criteria: Checklist For Defining Payment Structure

Frequency of activity	Estimate of costs involved	Timelines	Recommended payment structure
One-time	Known	Well-defined	Overall fixed fee
One-time	Unknown	Well-defined	Fixed per unit fee
One-time	Known	Unknown	Fixed per unit fee
One-time	Unknown	Unknown	Fixed per unit fee
Recurring	Known	Well-defined	Recurring fixed fee
Recurring	Unknown	Well-defined	Recurring fixed fee

Checklist to define payment structure

Objective of the tool

The objective of this tool is decide the payment structure for the contract, for each of the activities covered within the contract

Key inputs

Frequency, timelines, cost and output expected from each of the activities that is outsourced to the contractor

Outputs

Payment structure that the ULB should opt for

Overview

The objective of this tool is decide the payment structure for the contract, for each of the activities covered within the contract. The key determinants of the payment structure are the frequency, timelines, cost and output expected from each of the activities that is outsourced to the private sector operator.

How to use this tool

- The checklist considers the nature of the various activities within the activities, the checklist provides a list of questions that the ULB must consider to make the decision.
- **Inputs:** To answer the questions the ULBs must consider the preliminary report that defines the nature of each of the activities within the scope of the project.
- Based on the inputs selected by the ULB in the checklist, the recommendation will be displayed at the end of the checklist.

Checklist for identifying appropriate payment structure

Given the agreed upon contract with the private sector operator, consider the following set of questions to be completed as part of the project:

- a. Scheduled/ regulated O&M of septic tank
- b. Emergency O&M of septic tank
- c. Construction of STF
- d. O&M of STF
- e. Other

The following set of question must be answered for all activities selected above:

Select Activity: (Drop down menu to select from the above 5 options)

1. What is the frequency of the activity?
 - a. One time
 - b. Recurring or regular
 - c. Not sure
2. Are the outputs for the activity clearly defined? E.g., number of houses / septic tanks/SDBs to clean
 - a. Yes
 - b. No
 - c. Not sure / Not Applicable
3. Are the total costs for the activity known?
 - a. Yes
 - b. No
 - c. Not sure / Not Applicable
4. Are the timelines for the delivery for each outputs clearly defined?
 - a. Yes
 - b. No
 - c. Not sure / Not Applicable



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Case Study: Different combinations of payment methods were identified based on the revenue sources, and ownership structure

	Contract Type	Source of revenue	Ownership of asset	Payment method
1A	Refurbishment and cleaning of onsite systems + O&M of STFs	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment
1B	Construction of STFs	ULB	ULB	Overall fixed fee on a pre-decided schedule
2A	Refurbishment and cleaning of onsite systems	ULB	Private player	Recurring fixed fee with Fixed fee per unit for refurbishment
2B	Construction and O&M of STFs	ULB	ULB	Overall fixed fee on a pre-decided schedule + recurring fixed fee for O&M
3A	Integrated contract involving refurbishment, cleaning of onsite systems, construction and O&M of STFs	ULB	<ul style="list-style-type: none"> Trucks – Private STFs – ULB 	Recurring fixed fee for cleaning and O&M with Fixed fee for Construction and Fixed fee per unit for refurbishment

Step 5: Define contract length and value

The toolkit contains an excel model to help the ULB in defining contract length and value, and has the following structure:

Sheet name	Description	Type of Sheet
Assumptions	<ul style="list-style-type: none"> Key assumptions for model 	Input
Capital cost estimates	<ul style="list-style-type: none"> Estimates of capital expenditure required for cleaning and refurbishment of onsite systems and construction and O&M of STFs 	Input
Operating cost estimates	<ul style="list-style-type: none"> Estimates of operating expenditure required for cleaning and refurbishment of onsite systems and construction and O&M of STFs 	Input
Financial Analysis - Option 1	<ul style="list-style-type: none"> Contract value options for operation of suction trucks Tax to be collected from households 	Output
Financial Analysis - Option 2	<ul style="list-style-type: none"> Contract value options for operation of suction trucks and O&M of STFs Tax to be collected from households 	Output
Financial Analysis - Option 3,4	<ul style="list-style-type: none"> Contract value options for construction and O&M of STFs Tax to be collected from households 	Output

Estimating the contract length and value

Calculate the total taxes that need to be raised from the households to finance the increased expenditure

Financial Assessment Tool

Objective of the tool

The objective of this tool is to estimate the total length and value of the contract and determine the total taxes that would need to be raised from households

Key inputs

Key requirements (Trucks, workers, STFs)

Capital estimates (Unit costs)

Operating and other expenses

Key assumptions

Outputs

The key output generated from this model is contract values for various contract options

The screenshot displays the Microsoft Excel interface for the Financial Assessment Tool. It shows several worksheets:

- Option 1: Operation of suction emptying trucks:** Contains input data for financing (Equity downpayment on capital assets: 100%, Share of debt: 0%, Number of years: 5, Interest: 3%), depreciation assumptions (Value of capital assets (RPL/ha/ha): 9.3, Rate of depreciation: 30%, Depreciation: 1.5, 1.5, Book value of asset: 7.8, 6.3), and WACC assumptions (Expected rate of return: 10%, Cost of debt: 10%, Cost of equity: 10%).
- Capital costs:** Lists unit costs for trucks, land, uniforms, and other equipment.
- Capital cost:** Shows the total investment required for trucks, land, and uniforms.
- Refresh contract value:** A button to update the contract values.
- Contract length:** A table showing the length of contracts in years for different scenarios.



Case study: Based on the financial analysis, a fully integrated contract was found to be the most viable

Contract valuations for a city

S. No.	Types of contract	Contract length	City X		
			Annual contract value (INR, Lakhs)	Sanitation tax per residential property (INR)	Sanitation tax per non-residential property (INR)
1A	Refurbishment and regular cleaning of septic tanks with O&M of treatment facility	2 - 3 years	15-17	~190	~230
1B	Construction of treatment facility	Duration of construction	24-28	N.A.	N.A.
2A	Refurbishment and regular cleaning of septic tanks	2 - 3 years	11-13	~140	~170
2B	Construction and O&M of treatment facility	1 year	28-33	N.A.	N.A.
3A	Refurbishment and regular cleaning of septic tanks with construction and O&M of treatment facility	2 - 3 years	39-45	~190	~230

Property owners currently have to pay local taxes of about Rs _____/annum in City X

To cover the costs of a cleaning cycle of ~3 years would require an increase in annual tax spend for a household of about _____% in City X

Summary: tools, key inputs & sources (1/2)

3. Plan and manage contractor engagement	Tools	Key inputs	Sources
	3A. Checklist for creating bundled contract	Experience details of contractors	Expression of Interest (EOI) issues by the ULB; internal database of empaneled contractors
		Willingness of contractors to provide these services and priorities for engagement	Interviews with contractors; Expression of Interest from contractors
	3B. Checklist for determining source of revenue	Different revenue sources available to the ULB for funding the proposed IFSM project	ULB budget; city/ town budget; state/ union budget; internal discussions on alternative sources (e.g. household tax)
Assessing available revenue sources in terms of feasibility for the ULB (and the overall project)		Consultations with key stakeholders (e.g. financiers, local government, internal team)	

Summary: tools, key inputs & sources (2/2)

	Tools	Key inputs	Sources
3. Plan and manage contractor engagement	3C. Checklist to assess ownership of capital assets	Ability of ULB to invest in capital assets	<ul style="list-style-type: none"> • ULB budget • City/Town budget • State/Union budget • Internal consultations
		Interest among contractors in investing in capital assets	<ul style="list-style-type: none"> • Survey as part of Expression of Interest (EOI) • Interviews with contractors
	3D. Checklist to define payment structure	Frequency, timelines, cost and output expected from each of the activities that is outsourced to the contractor	Preliminary project assessment report
	3E. Financial assessment tool	Key requirements (Trucks, workers, STFs)	<ul style="list-style-type: none"> • Financial records e.g., balance sheet, to understand existing capacity
Capital estimates (Unit costs)		<ul style="list-style-type: none"> • Internal consultations • Interviews with experts 	
Operating and other expenses		<ul style="list-style-type: none"> • Internal consultations • Interviews with experts 	
Key assumptions		<ul style="list-style-type: none"> • Internal consultations • Interviews with experts 	

Performance based monitoring and payment system

There are 3 steps to creating a monitoring and reporting framework for partnerships with contractors:

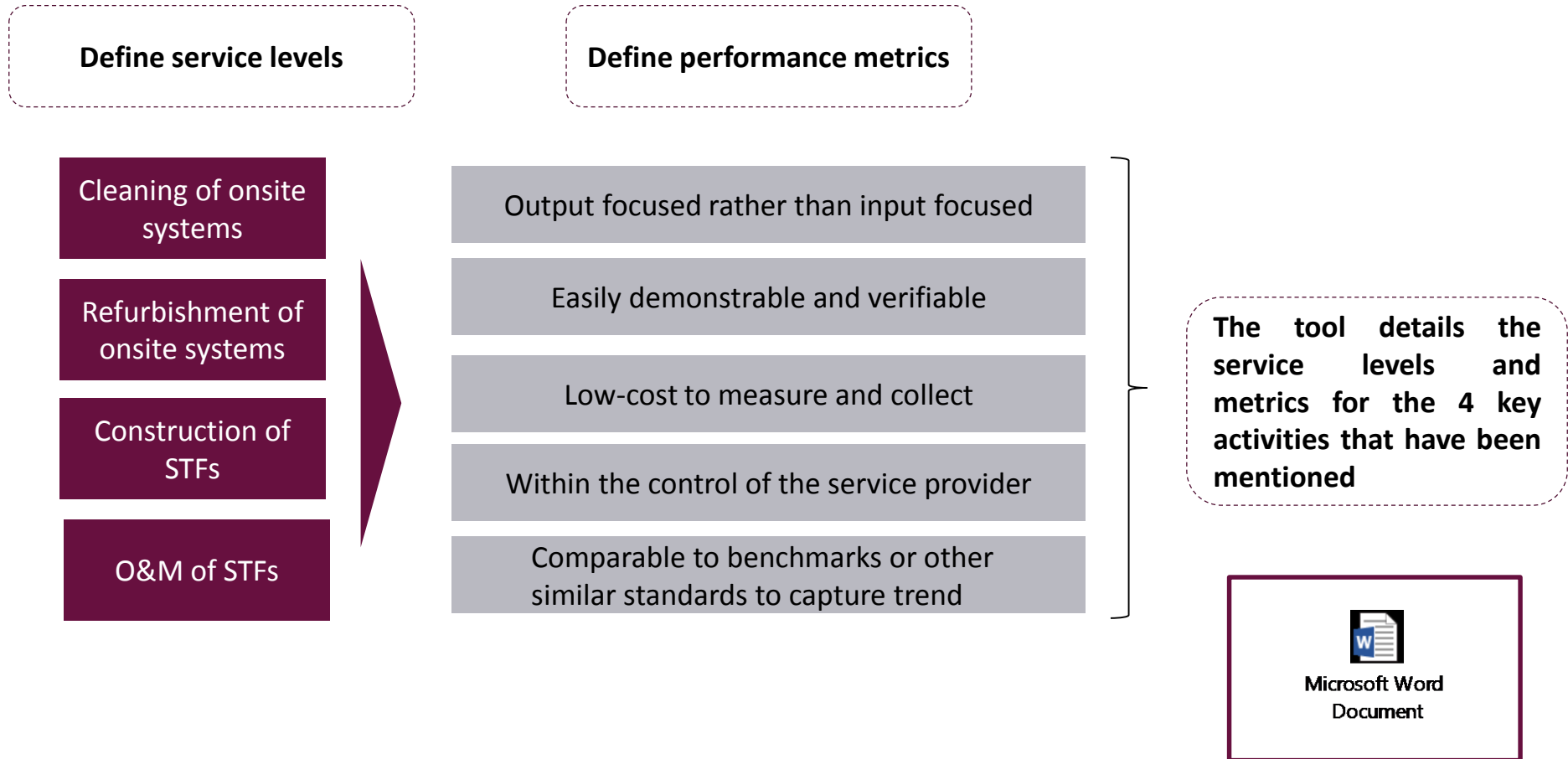


Key activities

- Define service levels for each of the activities covered by the contract
- Define output based and quantifiable performance metrics for each service level
- Identify important actors /sources that will provide inputs
- Create a clear and effective reporting mechanism for each source
- Tie performance metrics to penalties and incentives in the PBC to ensure compliance

Each of the three steps also help identify the key risks in PSP, and the steps to mitigate them in the form of clear service levels, penalties or termination clauses etc. A list of key risks, and mitigation strategies has been provided at the end of this section

Step 1: Identify metrics to assess service levels



Step 2: Develop monitoring mechanisms

Understand the key actors/sources that will provide input

- ULBs
- contractors
- Households
- Others

Define the monitoring mechanism applicable

Quarterly house holds surveys/ onsite inspections

Self reporting

Grievance redressal

Collect information on the predefined metrics

The tool contains the templates for the different reporting mechanisms

2. Self-Reporting by Private Player

Template 1: household approval receipt

1. Occupant name: _____

2. House Address: _____

3. Date of cleaning: _____

...the scheduled date? Yes No

Template 2: Monthly progress report

S. No.	Name of occupant	Address	Date	Time	Access cover placed (Yes or No)	Septic tank cleaned (Yes or No)	team arrive on time? /within 30 minutes?

...the scheduled date? Yes No

team arrive on time? Yes No

/within 30 minutes? Yes No



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Step 3: Link monitoring to penalties and incentives

- The third step in developing a performance based monitoring mechanism is to link the monitoring metrics and reporting systems to tangible payment clauses in the contract
- These clauses to ensure that performance is tied to tangible outputs, and payment terms and incentives / penalties are clearly demarcated for the contractor

The tool contains the sample payment terms for each monitoring process and activity

A. Cleaning and refurbishment of septic tanks

Metric 1: Percentage of HHs cleaned as per schedule

	Monitoring Process	Payment terms
Self-Reporting	<ul style="list-style-type: none"> • The private player collects HH signatures for every septic tank cleaned and informs ULB about HH who are 'unavailable' or 'unwilling' • The private player submits a monthly report 	<p><u>End of Quarter</u></p> <ul style="list-style-type: none"> • The private player gets paid the number of septic tanks cleaned • Proportional payment for per cleaned E.g. 70% of payment is cleaned (Unavailable and uncounted as a part of the target)

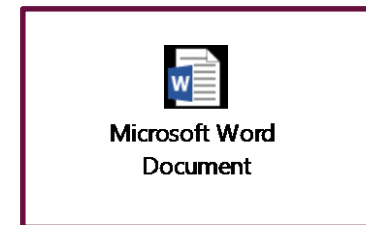
B. Construction and O&M of STFs

Metric 1: Instances of safety regulations not being adhered to, at treatment site

	Monitoring Process	Payment terms
ULB random site inspection	<ul style="list-style-type: none"> • ULB undertakes random monthly inspections of treatment site to ensure that safety regulations are being followed by operator while dealing with septage 	<ul style="list-style-type: none"> • In case of non-compliance with safety regulation is observed or verified based on ULB inspection, the contract will be terminated with immediate effect

Metric 2: Number of instances of contaminated waste dumping

Metric 3: BOD and COD level of effluent and septage coming out of STFs



Key clauses for the contract?

- There are 7 key types of other important aspects for the PSP contract that the ULBs must consider in their contract. These are related to:
 1. **Obligations before signing of a contract**
 2. **Obligations after signing**, but before work begins
 3. **Terms of work** during contract, related to expected standard of service
 4. **Payment**: Details of responsible party, amount due and mechanism of payment to the contractor for services provided
 5. **Penalties & Incentives**, for instances when service standards are not met by the contractor, as well as incentives to reward strong performance (some of these have been highlighted in the previous sub section (Question 2)
 6. **Termination** of contract
 7. **Others**, related to miscellaneous events
- These also helps **ensure that all risks related to the project are addressed appropriately** by the contract
- These must be **considered separately for each type of activity**, and thus each type of contract. Sample clauses for each type of activity are highlighted on the next few pages

Tool: Sample clauses for each these aspects can found at this link.



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Good risk mitigation and allocation can attract good contractors and help reduce contract price

UNDERSTANDING TYPES OF RISK IN PSP CONTRACTS

