



**Improving Sanitation  
Outcomes through Service  
Level Agreements:  
A Guidance Note**

**Report to the Bill and Melinda  
Gates Foundation**

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## Executive Summary

Castalia has prepared this Guidance Note to help city-level teams design and implement contractual solutions to improve the delivery of urban sanitation services. To ensure that the contracts provide lasting solutions that overcome the problems encountered in the past, we identify the economic characteristics that make sanitation service delivery particularly challenging. We also explain how contracts can be structured to reflect these characteristics, and how cities can manage the process of procuring and managing service providers.

### **Government coordination of sanitation contracts can overcome many of the challenges in delivering sanitation services**

The sanitation ‘value chain’ has four elements: waste containment/collection, evacuation/transportation, treatment, and disposal/re-use. Households often have some incentives to install and maintain a collection facility on their properties (such as a pit latrine). However, households’ concern for what happens to the waste after it is removed rapidly diminishes once it leaves their house and local area. This suggests a role for Government in overcoming the public good aspects of delivering a complete and effective value chain of sanitation services.

The best ways to improve sanitation outcomes often involve at least some fixed investments. These investments are unlikely unless investors have confidence that there will be sufficient demand for sanitation facilities at prices that recover all of their costs. Contracts can effectively coordinate investment in the sanitation sector by providing investors with greater levels of assurance about the revenues they will earn over the term of the contract.

### **Contracts need to translate desired public health outcomes into specific, achievable and measurable outputs...**

City-teams need to understand the problems they want to fix, what causes those problems, and what specific actions service providers can take that will contribute to fixing the problems. For example, the aim of ‘lowering the incidence of waterborne disease’ could be translated into a contract that provides for a “safe, convenient, hygienic public toilet that people who currently defecate in the open will use”. The contractual outputs will then need to specify the target coverage (at a minimum, those people who defecate in the open), and the achievable, measurable service standards that will be delivered (characteristics of the public toilet relating to safety, convenience, and hygiene).

The service levels are central to the success of the contract because they establish what the service provider must deliver in order to get paid. If the service levels have not been clearly specified, then the provider may be able to get away with levels of performance that fail to achieve the Government’s objectives. It is therefore absolutely critical that the service level standards capture what Government and the wider public really wants the service provider to deliver.

### **...and then hold the service provider accountable for delivery**

To make the service levels effective, contracts need to explain how the outputs will be monitored and clearly set out what will happen if the service provider is unable to fulfil its obligations. A key part of enforcing agreed service levels is to tie payment to delivery. The contract also needs to set out what will happen if the Government fails to make timely payment.

The contract should provide for penalties and incentives to encourage the service provider to perform its obligations. An incentive regime might give the service provider financial rewards for achieving defined goals. For example, a transportation contractor might be paid a ‘no spill bonus’ for securely transporting certain volumes of waste. Penalties will impose costs on the service provider when they fail to perform, setting out how the service provider will compensate the Government if it breaches the contract, for example, in the event of a spill.

### **The core elements of effective Service Level Agreements**

Table ES.1 presents a summary of three SLAs that would deliver distinct components of the sanitation value chain. The table summarises the party that might provide the service, the outcomes that the contract aims to achieve, how those outcomes can be translated into service levels, how the Government could monitor and enforce the contract, and how the service provider could be paid.

**Table ES.1: Core Design Elements for Sanitation Service Level Agreements**

Area of Sanitation Value Chain	Example Partner	Outcome	Output / Service Levels	Measurement Approach (Monitoring and Enforcement)	Payment Approach
Containment/ Collection (Section 5.2)	Developer of new communal toilet block in a rapidly-growing slum area	<ul style="list-style-type: none"> <li>▪ Prevent public health risks from open defecation</li> <li>▪ Improve living conditions</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Minimum hygiene standards.</b> The level of cleanliness expected at the facility</li> <li>▪ <b>Minimum safety levels.</b> The expected levels of security for users and in surrounding areas</li> <li>▪ <b>Provision of facilities.</b> Whether users will be provided with facilities such as hand washing facilities, running water, and essential toiletries</li> </ul>	<p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>▪ Self-reporting</li> <li>▪ Verification of reporting through random audits</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>▪ Withholding payment</li> <li>▪ Complaint forum to allow users to notify service issues, and their complaints investigated and resolved quickly</li> <li>▪ Termination for ‘material’ or ‘persistent’ breaches</li> </ul>	<ul style="list-style-type: none"> <li>▪ User pays per usage</li> <li>▪ User fees for additional services (such as showers)</li> <li>▪ Government pays regular instalments for facility being available</li> <li>▪ Service provider can earn other revenues (for example by leasing unused space on site)</li> </ul>
Evacuation/ Transportation (Section 5.1)	Truck owners and operators that empty household pit latrines and transport the waste to a treatment and disposal facility	<ul style="list-style-type: none"> <li>▪ Prevent public health risks from overflowing pit latrines</li> <li>▪ Reduce illegal dumping in the city by the trucks</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Frequency and responsiveness.</b> The frequency the service provider is expected to empty the pit latrines, or how quickly they will respond to requests to do so</li> <li>▪ <b>Secure transportation of waste to a designated site.</b> The obligations of the service provider to ensure that waste does not leak, either at household property or en route to a treatment facility</li> <li>▪ <b>Quality of the waste stream.</b> The service provider should not mix other substances into the waste that is collected</li> </ul>	<p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>▪ Self-reporting on the pits emptied and the quantity of sludge transported</li> <li>▪ Government audits to verify the self-reporting</li> <li>▪ Random truck inspections</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>▪ Withholding payment</li> <li>▪ Liquidated damages for failing to empty the pit latrines on time</li> <li>▪ Termination for ‘material’ or ‘persistent’ breaches</li> </ul>	<ul style="list-style-type: none"> <li>▪ Household payments (per month or per empty)</li> <li>▪ Monthly payments by the Government based on the number of pits emptied and truckloads of faecal sludge transported to treatment facilities <ul style="list-style-type: none"> <li>– Variable monthly payments by the Government for operation and maintenance costs</li> <li>– Separate monthly payments by the Government for recovery of capital costs</li> </ul> </li> </ul>

Area of Sanitation Value Chain	Example Partner	Outcome	Output / Service Levels	Measurement Approach (Monitoring and Enforcement)	Payment Approach
Treatment and Disposal/Reuse (Section 5.4)	Developer of central wastewater treatment and disposal facility (TDF)	<ul style="list-style-type: none"> <li>▪ Render waste harmless so that it can be disposed into the environment without creating harmful impacts</li> <li>▪ For all treated waste to be safely disposed or productively used</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Accepting waste.</b> Whether the service provider needs to accept all waste delivered to the facility, and what to do with waste that cannot be treated at the facility</li> <li>▪ <b>Processing waste to minimum quality levels.</b> Expectations on what harmful substances will be removed through the treatment process</li> <li>▪ <b>Disposing of the treated waste.</b> The contract must specify how the waste will be disposed of in a way that does not pose any unacceptable public health or environmental costs or risks</li> </ul>	<p><b>Monitoring:</b></p> <ul style="list-style-type: none"> <li>▪ Self-reporting</li> <li>▪ Spot checks and audits</li> <li>▪ Periodic testing of processed waste</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>▪ Withholding payment</li> <li>▪ Liquidated damages for breach of the contract</li> <li>▪ Termination for ‘material’ or ‘persistent’ breaches</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fixed monthly availability payment by Government for treatment facility to recover fixed costs</li> <li>▪ A variable operations payment by the Government to allow the facility to recover variable operating costs</li> <li>▪ Revenues from selling waste for reuse to third parties (reducing payments from Government)</li> </ul>

## **Following the right processes is important to achieve value for money**

Successful contracts require capable and qualified *project teams*. Project teams need to have the right expertise to ensure the Government gets good value and through the right kinds of contracts. This includes having the technical, economic, legal, and community liaison skills, public health expertise, and strong leadership skills to connect and partner with the stakeholders. The project team will be responsible for identifying the various technical options available to deliver the required sanitation services, drafting a contract that deliver the required outputs, and running a procurement process to recruit a service provider that can meet the Government's requirements.

Project teams should use competitive procurements to identify and evaluate contracting opportunities. Competitive procurements help to reveal the availability, competence, and costs and benefits of engaging different service providers. The project teams must also effectively negotiate the contracts that flow from procurement processes to ensure the outputs the team wants are translated into what the contract says. Doing these things will limit problems arising once the contract has been signed, including litigation and 'locked in' high tariffs.

The procurement process should be clear and transparent, with precise language explaining the specific outcomes that the Government wants to achieve. The project teams will need to decide on what information to provide in the bidding documents to enable the bidders to compete on equal terms. Project teams will also need to decide on the criteria used to evaluate proposals. Ability to meet the output specifications and the competitiveness of the price will be two of the main criteria. The project team will also need to develop a strategy to negotiate with the preferred bidder prior to signing the contract.

Successful contracts also require *contract management teams* with the skills to manage service providers' performance and ensure that service providers do what they say they will to the required standards. Effective monitoring and enforcement of the contract is crucial to ensure the delivery of outputs. The contract management team will need to rely on a range of methods to validate performance levels, including through audits, surveys, spot checks, and facility inspections.

Where performance has not met contractual requirements, the contract management team will need to enforce the terms of the contract. Enforcement requires special skills to assess the materiality of contract breaches, decide on the appropriate course of action, and calculate any payment reductions or liquidated damages. The contract management team will also have to deliver on the Government's obligations under the contract: which might include obtaining the required land and environmental permits, and securing any required changes to laws or regulations.



# 1 Introduction

This Guidance Note provides guidance on how municipalities and others can use service level agreements (SLAs) to engage private organisations to manage all aspects of the human waste sanitation chain (collection, transport, treatment, and, disposal).

This Guidance Note has been prepared for a workshop where ten teams from different cities across the globe will explore how contracts with the private sector might improve the quality and quantity of sanitation service delivery in their area. Its purpose is therefore to help the teams understand what steps need to be taken to get SLAs in place, and what an effective SLA for sanitation services would look like.

Many urban communities in developing countries lack sanitation services that hygienically remove, transport, and treat waste to make it harmless before the waste is disposed. Poorly implemented and managed sanitation services create public health problems, which predominantly affect poor households.

In other municipal services sectors (such as water supply and solid waste management), private firms have been engaged to provide services under SLAs. Where properly structured, SLAs and other output-based solutions have worked well to improve services because they tie payments to meet defined service outcomes.

Experience with SLAs in the sanitation sector tends to focus on the development of large wastewater treatment plants and city-wide sewer systems. One example where tying payments to specified outputs has worked well is the PRODES (*Programa Despoluição de Bacias Hidrográficas*) initiative in Brazil, introduced in 2001 and managed by the National Water Agency (ANA). Under PRODES, utilities (including private companies) receive a subsidy for the amount of wastewater they treat that meets specified treatment levels. During the first five years of PRODES (2001 to 2006), the coverage of sanitation services in Brazil increased by 3.2 percent.<sup>1</sup> PRODES contributed to 41 new wastewater treatment plants being built in 32 cities serving 2 million people.<sup>2</sup>

SLAs have not been widely used to provide sanitation services to poor households in areas not historically served by public utilities. Experience with SLAs in other sectors suggests a real potential for SLAs to harness private sector expertise, incentives and capital to improve sanitation services in ways that cannot be achieved using standard government procurement or provision.

Expanding the use of SLAs into these new areas will require new contractual approaches to address the unique challenges and complexities of bringing sanitation services to unserved urban areas. SLAs need to be designed in a way that firmly grounds the contracts within their local context and addresses the specific issues that arise in the areas to be served. Cultural norms and preferences, topography, urban layouts, and modes of social organisation all need to be taken into account.

## Structure of this Guidance Note

This Guidance Note distils lessons from performance-based contracting in sanitation and other sectors to guide municipalities and other players in designing and implementing SLAs to deliver sanitation services. This Guidance Note proceeds as follows:

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<sup>1</sup> Luis E. Garcia and Milena Gaviria et al. 'Practical Solutions to Water Challenges: Learning from the Spanish experience.' (Presented at the Expo Zaragoza 2008). Accessible online at: 14-S [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/12/14/000334955\\_20091214032855/Rendered/INDEX/521660WP0Tech01345553B01PUBLIC10Eng.txt](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2009/12/14/000334955_20091214032855/Rendered/INDEX/521660WP0Tech01345553B01PUBLIC10Eng.txt)

<sup>2</sup> Presentation by ANA at the Water Tribune Expo Zaragoza, July 2008

- **Section 2: Understanding the urban sanitation value chain.** This section describes the components of sanitation services to ensure that the SLAs cover the critical elements of the value chain
- **Section 3: Explaining the conceptual and economic framework that underpins the SLAs.** Sanitation needs to be understood within a conceptual and economic framework to understand why the private sector is not already effectively providing all elements of the sanitation value chain, and how SLAs can fix the problems that exist
- **Section 4: Practical guidance for contracting.** Implementing SLAs requires effective procurement processes and contract management to ensure that the right projects are procured, the right service providers get the contracts, and that the service providers deliver what they promise
- **Section 5: Key terms for four example SLAs.** The final section of this report presents key terms for four example SLAs to help the teams understand the most important provisions to ensure the contract provides the desired outcomes.

### **The Gates Foundation Assistance**

The Bill and Melinda Gates Foundation (BMGF) engaged Castalia to prepare this Guidance Note on contractual solutions to improve the delivery of sanitation services. This Guidance Note is an input into a broader BMGF program in partnership with the United Kingdom Department for International Development (DfID) to focus on solutions for the sustainable provision of sanitation to the urban poor.

## 2 Contracts for the Urban Sanitation Value Chain

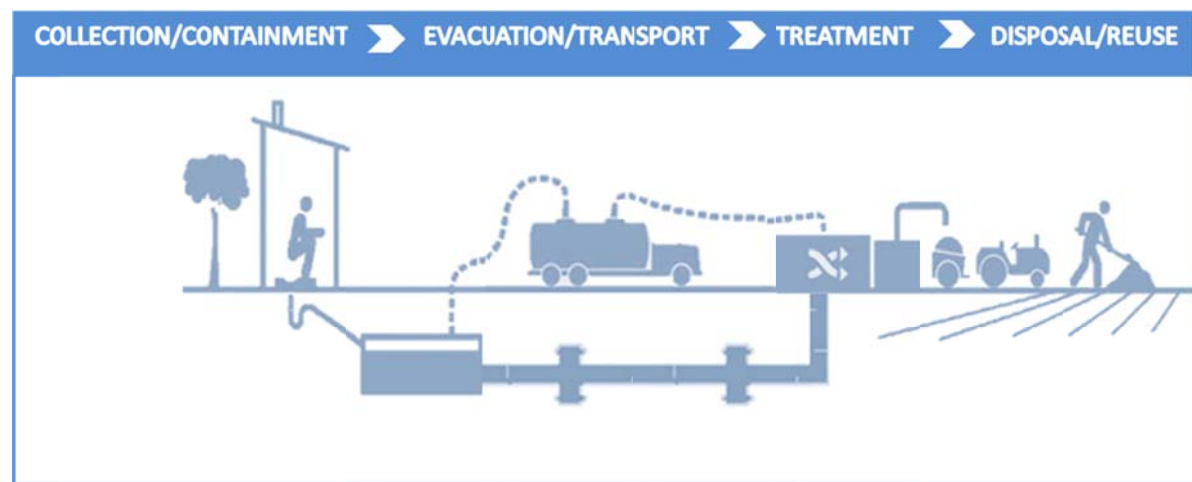
Complex sanitation value chains exist, even in ‘unserved’ urban areas. To work well, SLAs need to work with and build on the strengths of existing value chains, while addressing their shortcomings. For example, if households in an area already have latrines, the SLA should focus on ensuring that those latrines are properly emptied, and that the waste is safely recycled or disposed of. In these circumstances, the SLA would not need to have a contractor install latrines—because this part of the value chain is provided and managed by households.

This section identifies the four main elements of the urban sanitation value chain: containment/collection, evacuation/transportation, treatment and disposal/reuse of the waste. We then describe how each of these elements might be carried out using Service Level Agreements (SLAs).

### 2.1 The Four Stages of the Urban Sanitation Value Chain

Project teams need to understand existing value chains, and the alternative ways these value chains can be organised. Figure 2.1 provides a high-level illustration of the sanitation value chain. The elements of the sanitation value chain are containment/collection, evacuation/transportation, treatment, and disposal/re-use. Under the subheadings below we set out what each of these functions covers, and the main problems that arise at each step.

**Figure 2.1: Visualising the Sanitation Value Chain**



#### Containment/Collection

The first step in the sanitation chain is the collection of waste at sites where people use toilets – households, community blocks, public blocks, and institutions, etc. Waste can be contained “on site”, for example using pit latrines or septic tanks at a household or communal toilet facility. Or waste can be contained “off-site” from a toilet connected directly to a treatment facility via sewer pipe.

The majority of urban poor communities use on-site solutions. Many affluent and middle income communities are also outside areas served by a sewer network. On-site solutions ideally collect the waste, and also contain the waste, preventing contamination of the premises.

In reality, on-site containment facilities too often do not achieve hygienic collection and containment of waste on-site, because they are misused or overused and under-

maintained. These facilities fill quickly, contaminate groundwater and/or are directly connected to surface waters by pipes, discharging without intervening treatment.

### **Transportation/Evacuation**

Ideally, waste is emptied from a containment site and transported to a place where it can be safely treated and disposed of. Sewer pipes are used to move the waste in communities that have a piped sewerage network. In non-networked communities, vacuum trucks and manual emptiers empty waste from on-site facilities, often with inadequate tools to reach homes in dense communities and with little incentive to carry waste to an actual treatment facility. Markets are often too thin and/or informal for customers to demand quality or complete service provision. Governments tend to not regulate them effectively.

Some communities transport waste using a hybrid solution of on-site waste storage and a network of pipes—this is often known as a “settled sewer”. In a settled sewerage system, solids settle in a septic tank. The liquid effluent is then transported from the septic tank through a ‘simplified mini network’ or ‘decanted mini-network’ that collects only grey or black water that has been pre-treated in the septic tank. Removing the solids means that pipes can be a smaller diameter and can be buried at a lower depth than conventional sewers. Septic tanks still need to be desludged regularly to avoid the build-up of solid waste and overflow into the pipes.

### **Treatment**

Treatment facilities accept raw sewage or faecal sludge and treat it so that it is less harmful to the health and the environment when discharged. Treatment options differ between sewage and faecal sludge, because sludge contains less liquid, and is less likely to be contaminated with industrial chemicals than sewage is.

The main problems that arise at this stage of the value chain are in ensuring that the treatment facility treats the waste to consistently meet the required quality levels. If this does not happen, untreated or partially treated sewage or sludge ends up being disposed of directly into the environment. Encouraging treatment site operators to tap into resource recovery revenue streams (that is sales of methane, compost, treated water) could incentivise treatment and off-set its cost.

### **Disposal/Re-use**

Once waste is treated, it needs to be disposed of into the environment in a safe way. The most common method in utility scale sanitation systems is for liquid effluent to be treated and then disposed of by piping it into a natural body of water. Using this system, solids that settle out during the treatment process—known as sludge—also need to be taken out of the plant and disposed of. Sludge is often incinerated, or dumped onto landfills. In some cases, sludge is composted for use as an agricultural or garden fertilizer and soil conditioner. In municipal sewage treatment works, however, the risk that industrial effluents will carry poisons that remain in the compost can prevent such reuse. Even treated organic waste must be disposed of or re-used in specific ways to protect public health from viable pathogens.

The main problem in the disposal stage is that partially treated sludge is dumped into open areas that allow it to spread and contaminate land and water resources.

## **2.2 Effective Service Levels for the Sanitation Value Chain**

To prepare sanitation SLAs, the functional stages in the value chain described above need to be translated into contractual obligations. Contracts can be developed for individual parts of the value chain, or all of it depending on how the existing markets are

organised. This key contract design decision is described further in Section 4. Contracts and other government actions can also help the value chain work better by facilitating private coordination and contracting, as the next section describes.

### **How to define effective service levels in contracts**

Perhaps the most critical aspect of translating the functions in the value chain into contracts is to clearly specify the service levels that the contracted party is required to achieve. To be most effective, service levels should be:

- **Output oriented, not input oriented.** The SLA must specify what the service provider must deliver in order to get paid
- **Technology neutral.** The SLA should not specify the detail of how the services should be provided. The SLA should enable the service provider to identify the most efficient way to provide the services. For example, a sanitation SLA may require waste to be fully contained and safely removed from a non-networked community, but the provider may determine the optimal combination of removal by truck, settled sewers, or other means
- **Targeted.** The service level standards should capture what Government and the wider public really wants out of the service. This is really a matter of identifying the required outcomes and translating them into measurable outputs (as discussed in Section 4.2 below)
- **Clear and measurable.** Service standards must be well defined so that it is clear whether they are being met or not (for example ‘clean’ would be defined as ‘no faecal waste or litter on surfaces, bacteria count on surfaces below a specified level’).
- **Comprehensive.** The SLA will only require the service provider to do what it says– no more. If the team fails to specify an important service level, the SLA will not give the Government what it needs. For example, if the team wants security attendants or lighting at public toilet blocks, the contract needs to explicitly provide for this.

### **Defining service levels throughout the sanitation value chain**

These general characteristics of well-defined service levels need to be applied at each stage of the sanitation value chain. Some important service levels for each of the four elements in the sanitation chain are as follows:

- **Containment/Collection.** The contract needs to define the service area (households covered by the contract), and the frequency of collection (or how quickly the service provider responds to a collection request). If the waste is collected at a communal toilet facility then the contract needs to specify required hours of operation, essential facilities (like running water), and cleanliness and safety expectations. The contract also needs to manage the risk that collecting the waste in accordance with service levels is more costly than expected
- **Transportation.** The contract will need to ensure that waste is securely transported, and not spilled en route or dumped in an untreated form into the environment
- **Treatment.** The contract needs to specify a level of treatment that renders the waste harmless and manage the risk that the cost of achieving those safe levels is greater than expected. Service levels can also manage impacts of

treatment on other parties by defining requirements on truck waiting times, and odour levels around the treatment plant.

- **Disposal/Reuse.** The contract needs to require treated waste to be safely disposed at an appropriate location or sold to a third party that can extract value from the waste by its reuse.

### 3 A Framework for Improving Sanitation Outcomes

What part of the value chain should municipalities contract for? Public resources are limited, and it would not generally make sense for municipalities to procure and pay for those parts of the value chain that households themselves are willing and able to provide or pay for.

This section presents an economic framework to help municipalities focus their interventions on those things that most benefit from public procurement and funding. Households and markets can then take care of the parts of the value chain they are well suited to manage and pay for. The main areas for municipal intervention are those which involve **public goods**, **market coordination problems**, and **information problems**. We review sanitation challenges with these three “lenses” below.

#### 3.1 Public Goods

Some elements of the sanitation value are ‘public goods’, while others are ‘private goods’. The characteristics of public goods make the delivery of sanitation services particularly challenging. These terms refer to specific economic concepts, which are described in Box 3.1.

**Box 3.1: Economic definitions of private and public goods**

Public goods are ‘non-excludable’ and ‘non-rivalrous’ in nature. ‘Non excludable’ means that the enjoyment of the good cannot be limited to only those individuals who pay for the use of the good. ‘Non rivalrous’ means that the use of the good by an individual does not reduce the availability of the good for the others.

Private goods refer to goods that *are* excludable and rivalrous in nature. The individual who has paid can exclude others who have not paid from the use of the good. A private good is rivalrous in the sense that two individuals cannot use the same good at the same time.

The diagram below illustrates how these concepts relate to each other, and gives an example of aspects of the sanitation sector that might be considered as private and public goods—although as we conclude below, the line between private and public is far from clear cut.

	<b>EXCLUDABLE</b>	
<b>RIVALROUS</b>	<p><b>Private Good</b></p> <p>It is possible to exclude someone from consuming the good and one person’s consumption of the good means someone else cannot consume it</p> <p><b>Example:</b> Private toilet</p>	
		<p><b>Public Good</b></p> <p>It is not possible to exclude people from consuming the good and the good cannot be depleted</p> <p><b>Example:</b> Uncontaminated public spaces</p>

### **What aspects of the sanitation value chain are private goods?**

Within the sanitation value chain, collection and containment is largely a private good, as is some transport. People want privacy and convenience. Clearly, no one wants faeces building up on their premises. This is why people build pit latrines and other on-site sanitation facilities at their own cost. Households will also pay for limited evacuation and transportation services. For example, households will have a strong incentive to empty their latrine before it overflows. This level of transport is a private good because it mostly benefits the household whose latrine is being emptied.

When households pay for a facility (like a pit latrine) or a service (like desludging), other households are excluded from using that facility or using that service. This means that the facilities and services are excludable. In the same way, the facilities and services are rivalrous—when one household is using the pit latrine or having its waste removed, other households do not benefit.

### **What aspects of the sanitation value chain are public goods?**

Some transportation, and all treatment and disposal services are public goods. Prevention of open defecation is also a public good.

When faecal matter contaminates streets, land, water courses and groundwater, everyone in the community suffers. The entire community is likely to contract illnesses with faecal-oral transmission routes, including diarrhoea, typhoid, and cholera. Stopping this contamination is a public good. This is because stopping contamination by cleaning the waste benefits everyone in the area. The service provider cannot offer the benefit to one person (such as someone who pays for it) and at the same time stop others who do not pay from benefitting.

As is usually the case with public goods, individual households will not pay for them to be provided at the optimal level. There are two main reasons for the under-provision of sanitation public goods. The first is that to have the desired effect, it is necessary to clean up the whole area. The cost to clean typically exceeds the value to any one individual. Even where an individual would benefit more than the cost to clean, she will be tempted to free ride, rather than to pay. This means that everyone will hope that someone else pays, and as a result, no one will pay.

Therefore, households acting alone allow contamination to develop and continue. Public good provision requires collective action. This stands in contrast to the prevention of contamination of one's own premises, which is a private good that households can and will provide.

Treatment and the safe disposal or reuse of waste has the strongest public good components. Therefore, such services are least likely to be provided through purely voluntary market transactions. Households are very concerned to ensure that waste is removed from their premises, but are less worried if the waste is then dumped in a river or gully in a different part of the town.

Transportation of waste is partly a public good. Households will pay to have the waste removed from their premises. However, the households might not be willing to pay to have the waste taken all the way to a treatment and disposal site, since most of the benefits come from simply moving it out of their own neighbourhood. Also, households will pay to have the waste removed from their on-site facility when it is in danger of over-flowing. In many cases, more frequent removal would be better from a social point of view, since it would reduce the risk of groundwater pollution. Removing waste for this purpose is largely a public good.



## **No bright line exists between private and public goods in the sanitation value chain**

This discussion illustrates that there is not a bright line between the public good and the private good aspects of sanitation. While household collection facilities such as latrines are largely private goods, the lack of such a facility often leads to open defecation. In these cases, providing a community collection facilities, whether on site or communal, has a public good element, since it keeps the communal spaces free of open defecation.

### **3.2 Market Coordination Problems**

Sanitation markets suffer from several coordination problems.

#### **Aggregating demand to achieve economies of scale**

Households that contract individually for sanitation services may not sufficiently concentrate demand to lower the costs of serving them. As a result, the investments made by service providers are likely to cost more than if demand were more concentrated.

Transporting waste from on-site facilities using trucks provides a clear example of this problem. Even if most of the households in a community need their latrines emptied once a year, but each household has individual contracts, then the truck would likely make separate trips to collect the waste. This will result in high costs for the service provider. However, if the pits of all the households could be emptied according to some pre-agreed schedule, then the service provider's costs would be greatly reduced. This would lead more households to demand the service since it would be cheaper, creating a virtuous cycle of increasing demand and decreasing cost.

Aggregating demand for the service can also enable the supplier to invest in better equipment or smarter management systems, and therefore, provide a more efficient service. For example, if a truck owner knows that it has a contract to serve thousands of households, then he or she will be able to invest in better mechanised and high volume trucks. This type of investment can further cut down the costs of providing the service.

The Government can aggregate demand in an SLA by contracting on behalf of all the households in a particular area. For example, the Government can define a service area and require waste to be collected from all of the households in that area.

#### **'Chicken and egg' problem**

Service providers will not invest in the equipment needed to perform sanitation services without an expectation that they will be able to repay their costs through sufficient demand for the service. However, demand may not be apparent unless the facilities are in place to provide for the service (which in turn requires investment). This impasse between supply and demand can create a hurdle to any services being provided.

For example, treatment providers will not see a need to invest unless there is waste to treat and dispose. However, waste may not be collected until there is a treatment facility and disposal site to deal with that waste. Effectively demand for the treatment facility is not apparent because no facilities yet exist to process the waste.

An SLA can overcome this problem by ensuring demand for the services under the contract for a set period of time. For example, an SLA for waste treatment could identify a certain volume of waste that will be transported to the facility (and require that the service provider is paid at least this minimum volume). This removes the service provider's exposure to demand risk to allow any investments to be repaid.

### **Risk of ‘hold up’**

Fixed assets that cannot be readily deployed in alternative uses (known as “specific assets”) create an opportunity for users to drive prices down to the marginal cost of providing the service. Such prices do not enable the service provider to recover its initial investment in the fixed assets. This problem typically occurs when excess capacity exists to provide the same service. When spare capacity exists, service providers will generally face pressure to agree to any price greater than the marginal cost of operating their assets in order to make some contribution towards their fixed costs.

In markets with a small number of providers and possible entrants, parties fear that if too many people enter the market and invest, then none of them will recover their sunk costs because capacity will exceed market demand. This risk can stop *anyone* from entering the market, leaving the market unserved.

For example, the fixed capital costs of building a treatment facility are high. If another provider enters the market and builds another treatment facility then all providers will have difficulty charging prices that recover their initial capital outlay. The risk of excessive capacity could prevent both providers from investing in building a treatment and disposal facility.

An SLA can address this problem by providing revenue security to the service provider. By ensuring demand for the services under the contract for a set period of time at a specified price, an SLA gives the service provider confidence to invest because it knows it will recover its fixed costs spread over a period of time.

### **Coordinating infrastructure investments to meet community needs**

Government plays an important role in investing in infrastructure. The decisions that the Government makes affects how private operators invest to serve household demands. Ideally, Government and private sector investments will be complementary. However, coordinating the decisions of public and private parties can be challenging.

For coordinated investment to occur, Government needs to make sure that it understands what infrastructure households actually need, and the quality of the service or infrastructure that is required. When the public sector does not have good information on user demands, then resources are likely to be misallocated.

#### **Box 3.2: Misallocation of infrastructure funding in Indonesia**

Governments may not be aware of the different cost profiles and benefits provided by different sanitation solutions, and which solutions are currently being used. This creates a risk that the Government invests in expensive solutions because it does not know about cheaper, high quality solutions. Many Government officials also have an engineering background, which can exacerbate any bias towards more capital intensive projects.

One example comes from Medan city in Indonesia. Medan invested in a sewerage network and accompanying treatment plant that would meet the needs of two percent of its total population. However, the Government failed to provide for a septage treatment facility plant for the majority of the population that primarily used pit latrines and septic tanks. This is an example of the challenges Governments face to understand different types of infrastructure solutions for sanitation, and prioritise resources in ways that best meet community needs.

Source: Sophie Tremolet, Sanitation Markets, Pathfinder, 2012

### 3.3 Information Problems

Sanitation markets suffer from information problems. These problems arise from three inherent characteristics of information. First, information can be shared easily once it is first produced. Second, people often cannot tell if information will be valuable to them until after they have the information. Third, it is often difficult or costly to check if any given item of information is actually true. Largely for these reasons, households may not be aware of the value of sanitation. Customers and providers may lack market knowledge, making it difficult to locate and contract with each other. Customers may also find it hard to discern which providers offer quality service.

#### Awareness

Households and city leaders may not be fully aware of the benefits of improved sanitation. In such cases, the demand for sanitation services will be lower than it should be.

Where there is a lack of awareness about the value of effective sanitation services, donors may need to invest in awareness campaigns among decision makers. Alternatively, municipalities could carry out an awareness-raising campaign or encourage private service providers to advertise the value of the services being provided. This can be achieved through an SLA that gives the service provider incentives to ensure that the benefits of good sanitation are effective and reach the target audience.

#### **Box 3.3: Raising awareness of the benefits of improving sanitation in Tanzania**

Although 80-90 percent of households in rural Tanzania have pit latrines, they are generally poor quality. This low quality has created public health problems. An awareness raising campaign was carried out to address the resistance of households to improving their sanitation facilities. The Community Led Total Sanitation (CLTS) program held road show events to display available sanitation products and provide information on the benefits of improved sanitation. After one such road show, the sales of upgraded latrines increased by 277 times.

Source: Kenya On site sanitation, Demand Generation Strategies, WSP, 2013

#### Market knowledge

In the sanitation sector, service providers may not know enough about the market demand for the service. Similarly, consumers (households or city officials) may not have enough knowledge about who service providers are, how to reach them, or how to evaluate their offerings. This creates an information gap on the terms of service delivery on both sides of the bargain in terms of prices and the quality of the services delivered. SLAs can address this problem by defining expected service levels and prices on behalf of consumers. The contract could also specify particular information provision measures that ensure widespread knowledge on the quality of service delivered. For example, providers who contract with the municipality can be required to publish a schedule of tariffs and service standards.

### **Box 3.4: Consumer understanding of sanitation options in Kenya**

The International Finance Corporation (in partnership with WSP and the Kenyan Ministry of Health) surveyed sanitation market participants and consumers in Kenya. The survey helped to better understand the needs of sanitation consumers, and the extent to which these needs were currently being met. Households wanted a latrine for improved health, hygiene, privacy and comfort purposes, but did not have information on the full range of options available and their cost. Manufacturers were not able to access consumers directly, and product retailers were simply providing the limited range of products that consumers requested. As a consequence, 120,000 households reported that they were not located within reach of latrine facilities that met their needs.

Source: Kenya On-site Sanitation, Demand Generation Strategies, IFC, October, 2013

### **‘Market for lemons’ problem**

There is often little information available to “buyers”— cities and households—on the quality of the sanitation services available. Service providers may have an incentive to overstate the quality of service they can offer. Unless households can independently verify the quality of the service provider, there is no way for consumers to distinguish “good” providers from “bad” providers.

This information asymmetry can mean that households are not willing to pay more than what they would pay for low quality service. High quality service providers that cannot credibly signal their quality will be unable to recover the costs. The high quality service providers therefore exit the market, leaving only low quality services available to serve demand.

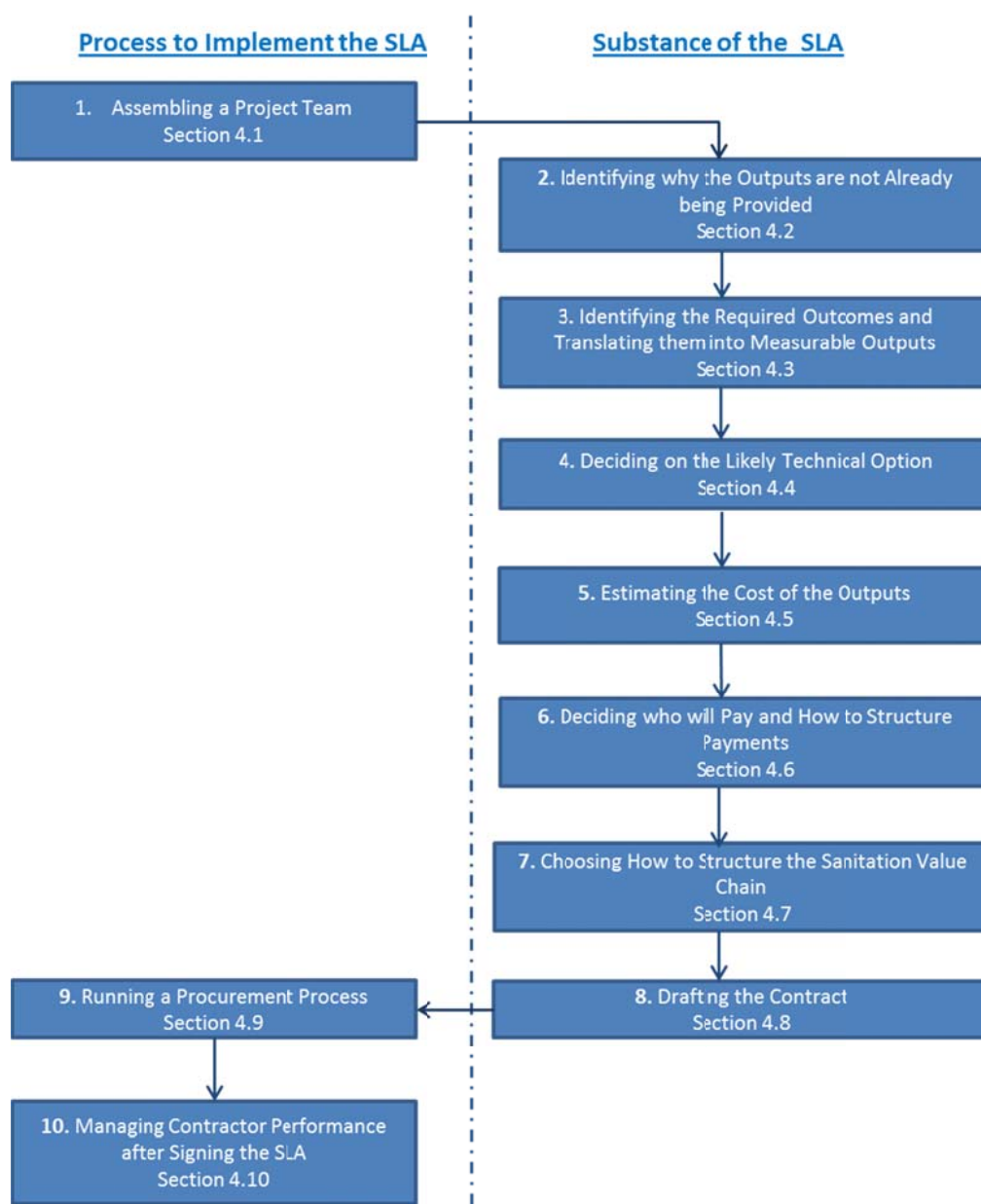
SLAs can solve this problem because the Government contracts with the service providers on behalf of the households. This means that the Government needs to invest in contracts with service providers that are capable of delivering services at an acceptable level of quality. The Government could invest in learning about contractor quality before entering into the contract, and could also gain comfort on the quality of particular firms through the process of selecting service providers. The Government could also set clear service level quality standards, and an enforcement mechanism in the SLA to enforce the standards against the service provider. Outside the SLA, the Government could set up certification systems, or consumer rating systems on bulletin boards or websites that households can access to get information on the service quality and providers.

## 4 Step-by-Step Guidance

Once a city-level team decides that SLAs could be useful to meet the area’s sanitation needs, the team needs to understand how to design and implement SLAs. A successful SLA requires an effective sanitation strategy, good contract design, effective procurement processes and strong contract management. This section explains each step in the implementation path to give the city teams a sense of ‘how everything fits together’.

Figure 4.1 provides an overview of each of the steps in getting to an effective SLA. We divide the steps into procedural steps (such as assembling a team and running a procurement process) and substance steps (such as understanding why the outputs are not currently being delivered and deciding on the technical option to meet demand). These steps are then described in the sub-sections below.

**Figure 4.1: SLA Procurement Steps**



## 4.1 Assembling a Project Team

Municipalities intending to implement a service level agreement-oriented contract should create a dedicated project team responsible for preparing the project and running the procurement process—this could be a utility or it could be an inter-agency team. The project team must have access to:

- **Technical skills.** The project team needs engineering and sanitation-relevant technical skills to be able to identify the best likely engineering and sanitation solutions for a given area. The project team also needs to be able to thoroughly evaluate technical proposals and compare their relative strengths and weaknesses
- **Economic skills.** Economic skills will help the project team apply the economic framework to a particular sanitation area and identify the best way to harness private sector involvement and focus government intervention. The project team also needs economic skills to efficiently allocate contractual risks and implement mechanisms to mitigate them, and ensure output-oriented contracts
- **Financial skills.** The project team needs financial skills to analyse whether a project or proposal is financially viable. It also needs these skills to evaluate the bidders' financial strength and fitness for being engaged on large-scale, high value projects
- **Legal skills.** The project team needs legal expertise to understand the particular legal framework within which the contract will operate. Legal skills would enable the project team to assist in project preparation such as obtaining environmental and property consents and permits
- **Community liaison skills.** The project team would require building partnerships with the community so that the households use and pay for the sanitation services. The project team would have to educate the households on the importance of use of sanitation facilities for improved public health outcomes, and raise awareness regarding the sanitation market, including service quality. They will also have to work along with the community to ensure physical barriers (such as bad roads) are removed for serving the households
- **Public health expertise.** As the objective of sanitation services is improved public health outcomes, the project team would require public health experts. Specific areas will have specific problems, and public health experts can apply their knowledge to identify the outputs that will best address these issues
- **Strong leadership.** The project team will have diverse and experienced skillsets, and will be trying to solve multi-faceted problems. The project team needs to be led by a senior person with management experience, strong connections to other city, state, community and private sector stakeholders, and decision making authority to focus the team and drive a coordinated approach.

In designing the project team's structure, the municipality should also clarify the scope of the team's authority to make decisions on the Government's behalf, and the approvals that will be needed at key milestones such as prior to signing an SLA.

## Building a contract management team

The contract management team will be different from the procurement team. Typically, the contract management team will be embedded in the agency responsible for sanitation. However, it is a good idea to identify early on the need for the contract management team, and to ensure some common membership for continuity. See Section 4.10 for guidance on the contract management team.

## 4.2 Identifying Why the Outputs are not Already Being Provided

Given the benefits of sanitation services, it will be wise to understand why they are not already being provided. Such understanding will allow the project team to develop interventions that tackle the real barriers. This will increase chances of success, and reduce the risk that SLAs will be signed, money paid, but results not achieved because other barriers were not overcome.

The project team should therefore analyse why the service is not being provided now. If the reason is that it is a public good that private individuals will not pay for, then the rationale for a municipally funded service contract is clear, and the chances that it will succeed are high. Similarly if the issue is one of demand aggregation, a publicly procured SLA may well be a good solution.

However, if the issue is inadequate information, then the municipality should consider whether awareness campaigns, certification, and provision of exchanges where customers and providers can find each other, would be needed as well or instead of an SLA. If the issue is that households cannot afford to pay for even the most basic services such as their own pit latrine, then a voucher program or income redistribution might be the answer. If providers cannot expand because they cannot get finance, an access to finance program might be in order.

Some of the problems which typically cannot be solved with SLAs, and therefore require complementary mechanisms, include the following:

- **Lack of consumer finance to pay for upfront costs.** In many cases, people are willing to pay for the service, but lack money for the upfront costs. In such a case, the Government should promote consumer financing
- **Lack of finance for suppliers.** People are willing to pay for the service. However, the providers are small enterprises which lack access to finance to expand their business. In such cases, a good approach may be to work with financial institutions to help them understand and serve this market
- **Lack of demand for service.** People do not demand sanitation services because they do not have information on the benefits that accrue from hygiene. In such a case, the Government can run public information sessions to educate the households on the environmental and health benefits that would accrue if they maintain their on-site sanitation facilities, or use the communal toilets.

### Box 4.1: Lack of access to finance for small scale service providers in Mali

A study on pit latrine emptiers in the Bamako district in Mali found a heavy reliance on the private sector for transporting human waste. However, the conditions for entering the market were very difficult, meaning that existing players were not subject to sufficiently strong competitive pressure. A major barrier to entry was the difficulty that small scale private enterprises had in accessing credit from banks to invest in trucks; the banks did not see the sanitation sector as offering commercial opportunities.

Source: Sophie Tremolet, Sanitation Markets, Pathfinder, 2012

Identifying the problems that prevent the service from being provided by the market now enables the municipality to draft a contract that addresses the problems. The municipality will be able to check that a contract approach is a good solution to remove the barrier, and the contract is well targeted to overcome the barriers in question.

### **4.3 Identifying the Required Outcomes and Translating Them into Measurable Outputs**

Municipalities need to define the objective they want to achieve in the contract. Objective means the goal or the outcome that the municipality intends to achieve by entering into the contract. In the sanitation sector, these outcomes are generally the environmental and the health benefits that are sought to be achieved by the municipality for the public at large.

However, the contract can only set out the outputs which the service provider would be responsible to deliver. This is because outcomes cannot be measured, and thus cannot be enforced against the service provider. For example, a contract to transport waste from households to the treatment facility may have the ultimate goal of reducing illegal dumping of waste within urban boundaries. However, payment to the service provider cannot be made conditional on the total amount of dumped waste reducing because that outcome falls (at least in part) outside the contractor's control. The contractor could do a good job of transporting waste, but illegal dumping could increase due to other factors (such as competitors under-cutting him to retain business, and dumping even more waste).

This suggests that the municipalities should express their objectives in 'output' terms. The 'output' is typically the pre-agreed, measurable service level that the service provider agrees to provide and that a municipality can monitor over time. In the example given above, the measurable output could be the number of truckloads of faecal sludge that are securely transported to the treatment facility.

The contract would also contain complementary measures that output service provider should expect from its city partner in order to ensure they can deliver as promised. These could include regulations that help create an adequately large market, like requiring households to have proper sanitation, or improving access to finance for sanitation service providers. It could be guaranteed payment timing or secured access to specific geographic areas of a market such as coupling mandates to serve poor communities with exclusive rights to serve wealthier communities.

### **4.4 Deciding on the Likely Technical Option**

The project team needs a concept-level idea of the facilities, transportation and treatment types that could be used to provide the desired output. This can be termed the 'technical option'. For example, if the Government wants to stop contamination caused by overfull latrines, the technical option could be having trucks collect the faecal sludge and transport it to a treatment facility. An alternate technical option could be installing sewers and associated toilets.

The Government needs to know which technical option is likely to be used so that costs, charges, risks and many other key inputs to contract design can be specified. Decision makers also need to understand and be able to compare the differences between different technical options in terms of their costs, coverage, and quality of service.

The technical option does not need to be developed to a level of highly detailed design. Nor will it generally be a good idea for the final SLA to specify the design, or even the



technology. As Section 4.8 explains, SLAs should generally be output-based to allow the private partner to innovate and find the best solution. However, the opportunity does need to be specific enough that costs can be estimated to with a reasonable margin of error, and for issues related to permitting and site acquisition to be identified.

To decide on a technical option, the project team needs to gather information and assess technologies that could achieve the desired outcome. Often the geographic and population characteristics of the area will clearly favour one option over another. Nevertheless, it is a good idea to consult with the community and with possible providers, and develop two or three possible technical options. For example, a particular community may want to consider whether a communal toilet would best meet local needs, or whether coordinating truck collection from pit latrines would provide a better solution. These options should be assessed against criteria such as likely costs and benefits, risk, ease of implementation, community acceptance, and likelihood of attracting private firms to provide the service.

Once a preferred option is chosen it should be documented in enough detail to allow costing, contract design, and consultation with stakeholders. The municipality should then make it clear that the technology used and physical layout of the project may change, based on bidders' ideas. For example, the municipality might consider that truck collection is the most viable way to evacuate waste from households in its urban area. However, a bidder could propose a settled sewer solution that actually improves the quality of service and involves lower costs. The procurement process should be flexible enough to allow for this type of innovation, without being held hostage to bidders that have not shown their ability to meet defined service levels.

## **4.5 Estimating the Cost of the Outputs**

The technical option that is selected for the contract will have a major bearing on the size and type of costs that will be incurred to provide the service. For example, some options (like building a centralised sewer network) will be highly capital-intensive, while others (like contracting with existing truck owners) will not involve much capital cost. Some options will involve the construction of new assets, while other options will take advantage of the assets that are already in place.

### **Characteristics that drive project costs**

Using the indicative technical option, the project team should develop estimates of:

- Total capital costs
- Total operating and maintenance costs
- Project lifetime—typically the design life of the longest lived of the substantial components of the facilities
- Likely financing arrangements—in particular, which assets will be privately financed, which will be publicly financed, and the likely terms of the finance. Key financial terms include the proportion of debt and equity, the required return on equity, interest rate on the debt, and the longest achievable repayment period for the debt.

### **Assets, financing and contract types**

Whether the service provider needs to build new assets and how it finances those new assets will impact the way the SLA is drafted.

**If new specific assets are needed and finance comes from a bank or other financier,** that lender's position will drive the service provider's negotiation points in the

SLA. Financiers will often be lending on the basis of the value of the particular SLA. This means the project's financing costs will be tied to the perceived value and risk of the SLA. This puts pressure on the tariffs the service provider will need to charge to make the project profitable. For project teams, this means that if it is likely the service provider will need new assets and will need to finance them— typically termed a Design Build, Finance, Operate and Manage (DBFOM), or concession. The Government will get better value through ensuring the contract is of a very high standard, and therefore certain. Termination payments and dispute resolution provisions will also need a lot of attention, as will provisions for lender protection, such as step-in rights.

**If new specific assets are needed but finance comes from Government**, then the contract will typically be termed a DBOM or Design Build Lease (DBL). The contract needs to focus on ensuring the Government gets the asset and service it wants, bearing in mind that because the service provider gets its funding from the person its providing the services to, the contractor does not have much to lose. This means if the contractor defaults, the Government may not be able to collect damages or force performance. With this in mind, terms to focus on include:

- Performance bonds to ensure there is an effective penalty for default and provide access to another party's asset base
- Asset condition indicators, to ensure that the assets are built to the right standard and maintained to that standard
- More government involvement in approving the proposed design, and actual construction, of any facilities, compared to cases where the facilities are privately financed.

If **existing assets** are being used it will typically be a lease or operating and maintenance contract. Term can be shorter than asset life. Government wants to be sure that asset is well maintained, so maintenance standards need to be established and enforced.

**If the assets are short lived or re-deployable**, the contract can be characterised as a service contract. These can be for a shorter term than for the other types, for example, three years. A suitable remedy for non-performance in these cases may simply be termination and rebidding. If so, there is less need to focus on things like termination payments, asset condition indicators, or performance bonds.

### **High-level conclusions on the viability of different options**

Using these financial inputs, the project team should develop a financial model to allow it to estimate relevant cost parameters of the project, including:

- Total cost of the project in Net Present Value terms
- Annualised cost of the service taking into account operating and maintenance costs, debt service, and return on and off equity
- Cost per customer per month
- Cost per item of service provided (for example, cost per pit emptying, or cost per cubic meter of faecal sludge treated).

This process will be relatively high level, and is used to give the project team a sense of the likely costs, risks and feasibility of the project. The cost information will be the key to addressing the following questions:

- Do the benefits of the service exceed the cost?

- Will households be willing and able to pay all or some of the costs, and how much will the municipality have to pay?
- What changes in project design could reduce costs?
- What are the most important risks from a financial perspective?
- Do the bids that have been received offer good value for money?

#### **4.6 Deciding Who will Pay and How to Structure Payments**

Project teams need to decide who will pay for the sanitation services, and how they will pay. The total costs of the projects need to be covered by funding from one or more sources. Available sources typically include:

- The households whose waste is collected, or users of a communal facility
- The municipality, through revenue raised from local taxes
- Higher levels of Government, through grants to the municipality.

The municipalities' funds are limited. While some municipal funding will typically be needed, it is wise to look for other revenue and funding sources. As a general rule, households can be expected to pay for the private good elements of the service. Municipalities will need to pay for the public good elements, taking advantage of grants and concessional finance schemes from state or national governments where these are available.

If the service provider will be paid solely from the government, the contract must set out these mechanisms (such as billing, invoicing and interest on overdue amounts) that will regulate how the service provider is paid. This should include timing, amounts, and what specific deliverables the payment will be tied to.

If costs will be recovered (in whole or in part) from users or other non-governmental entities, the project team will need to address this as well. A contract between the government and the service provider will not give rise to rights of the service provider to obtain payment from users. That will have to come from a contract between the provider and the user directly. However, the SLA may limit what can be charged to users, or put other controls on the service provision. This is commonly done in concession contracts.

Requiring households to pay can build a greater sense of ownership, which in turn enhances the value of the contract. This is because households will expect good levels of service, thereby increasing their motivation to monitor the performance of service providers, make complaints, and respond to performance surveys. This suggests that households should make some payment for the services provided, but that the price paid by households does not need to reflect the cost of providing the service. Household payments can be based on ability to pay (i.e. taking into account affordability to pay for collection and transportation services), and may only recover a small proportion of the total costs of providing the service.

**Box 4.2: Absence of user fees provides no incentive to maintain toilets**

Naivasha is a small town in Nairobi. It has a population of approximately 70,000 people. The town has five public toilets with flush toilets and sewer connections. They are managed by the municipal council. However, the water supply to the toilet is irregular, and they are neither cleaned nor maintained. The toilets are frequently blocked and overflow with human excreta. There is no user fee to use the toilet. As a result, the municipality has no incentive to keep the toilets clean, and the users misuse the toilet facilities.

Source: Susana, 'Case study of sustainable sanitation projects, Public Toilet with Biogas Plant and Water Kiosk, Naivasha, Kenya', 2009

To determine the amount each household pays, the project team can look at how much households are paying for services now. This level of contribution should typically be maintained. A difficulty arises when some households in a community are paying for a service, while others, perhaps the poorest, are not. For example, it is common to find communities in which most families have a latrine. However, the poorest 20 percent or so do not have a latrine, and so have to defecate in the open. In such cases, it will be a good idea to design targeting mechanisms in which those households who can fund a part of the service do so, while those who cannot receive a subsidy.

Whatever portion of the cost cannot be covered by the households served will need to be funded from public sources. The municipality will have to ascertain whether there are sufficient funds available to make the remaining payments. There are some options available. Payment could be made from the tax revenues. Alternatively, the payment could come from a higher level of government, for example, the state and federal programs. Donor programs are also a good source of funding.

**Box 4.3: Affordability constraints contracting for health care in South Africa**

The Inkosi Albert Luthuli Central Hospital is a central tertiary care located in Mayville, Durban that provides health care services to the populations of KwaZulu Natal and half of the Eastern Cape Province. Impilo Consortium, a private partner, provides all of the nonclinical services under a 15 year public private partnership agreement with the South African Department of Health.

Although the services provided are generally well-regarded, the high technical specification of the hospital has raised issues of affordability. As a result, occupancy rates are lower than expected. This highlights the need to think carefully about who pays for the services delivered by privately financed developments, and how those payments can be structured to ensure affordability.

Source: Edward Farquharson, Clemencia Torres de Mästle and E.R. Yescombe, 'How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets', World Bank, January 2011

## 4.7 Choosing How to Structure the Sanitation Value Chain

Section 2 described the elements that make up the sanitation value chain. Municipalities or utilities may be able to choose:

- Which elements of the value chain should be procured through SLAs (and which can be left to households and private market transactions)
- For those elements that will be procured through SLAs, whether they should all be procured in one contract or whether different elements should be procured through different contracts.

The first question—which services to procure through SLAs—can be best answered through application of the economic framework in Section 3.

The choice of whether to bundle all services into a single contract or not depends on the degree of specialisation in the market, and who is best placed to manage the interface between different services. For example, collecting waste from pit latrines requires a different set of capabilities from those needed for operating treatment and disposal sites. On the other hand, the interface between the collection and treatment might be best handled if a single firm did both tasks. If the interface is handled badly, trucks may be held up waiting to drop waste off, causing a nuisance to neighbours and increasing costs to the truckers.

Table 4.1 summarises some of the advantages of bundling and unbundling that need to be weighed in making this decision.

**Table 4.1: Advantages of Bundling and Unbundling Contracts for Sanitation**

Advantages of a bundled solution	Advantages of an unbundled solution
<ul style="list-style-type: none"> <li>▪ <b>Profitability of a single contractor is tied to the success of the whole value chain.</b> A single contractor therefore has a strong incentive to manage each element to ensure they do not disrupt each other and inter-element operations flow smoothly</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Ability of one element to interface with more than one provider at other steps in the value chain.</b> For example, a treatment plant could accept waste from multiple sources (whether multiple truckers or also sewers)</li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Potential cost synergies with a wholly or partly bundled solution.</b> If separate elements of the value chain can use the same assets, a bundled solution can drive down costs. For example, if trucks are being used to transport waste both from collection facilities to a treatment facility and then to a disposal site</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Taking advantage of particular expertise.</b> Some bidders might be good at parts of the sanitation chain but not good at all of them. It may be best value to hire specialists for each area, depending on the expertise of interested parties</li> </ul>
<ul style="list-style-type: none"> <li>▪ <b>Simplicity of a bundled solution.</b> A bundled solution involves fewer transactions, one communication line, and fault will be allocated on one of only two parties. By contrast, an unbundled solution can involve lots of transactions, four communication lines, and service providers will have a tendency to blame each other where it is not obvious who is at fault</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Diversifying the risk on selecting the right service providers.</b> Every contract has ‘delivery risk’: the risk that the contractor cannot perform its obligations as promised. This risk gets concentrated when one service provider is providing all of the services. Contracting out elements of the value chain separately allows the municipality to diversify its risk</li> </ul>

## 4.8 Drafting the Contract

Once the project team has decided on the value chain structure, outputs and cost recovery mechanisms, the team should prepare draft SLAs. The number, form and content of the SLAs will flow from the decisions made in the preceding sections. Each SLA will be a specification of the relationship between the service provider and the Government, including what each party will provide, and how risks will be dealt with. Accordingly, to draft the SLAs, the project team needs to think through what they need to get out of that relationship and how they are prepared to pay for it.

Most of the substantive issues in drafting SLAs are discussed in other sections of this report (see in particular, Sections 4.3-4.6 and Section 5). Additional issues that arise and which have been discussed in this section are how long the contract should remain in force and how risks should be allocated between the parties to the SLA.

## Setting the length of the contract

The duration of the contract depends on the level and type of capital investment involved. If assets are not re-deployable, the contract term should correspond to the life of the specific assets being financed. This is because once the assets (for example, a sewer) are built, there is a high risk that they will only be usable for the contracted purpose and will not be re-deployable. Shorter contracts will increase the price that the private party charges due to the risk that the assets financed to carry out the service are left idle after the contract term expires. The situation is different where the assets are re-deployable (for example trucks for which there is a ready market for second hand sales). In this situation, the contract can be for a shorter time.

However, the contract length should also be no longer than necessary. The process of retendering the contract can allow the Government to get the benefit from any efficiency gains—for example, through any new technologies or cost reductions in providing the service.

## Identifying and allocating the risks under the SLA

The project team needs to identify all the major risks and problems that might eventuate that are associated with the services the service provider is being engaged to provide. For example, when drafting a contract to collect waste from pit latrines and transport it to a central treatment facility, the team would need to consider who bears the risk that pit latrines require more frequent emptying than is expected.

Once the project team has identified all the major risks, it must consider who is best placed to handle each risk and allocate them accordingly. A helpful way to go about this is to think about the scenarios which would disrupt the services (for example collecting waste before latrines overflow), and then work through who is best placed to manage the risks of these scenarios occurring. For example, the contractor is unlikely to be best placed to manage the risk of increasing collection needs because households control the amount of waste that is being produced.

See the contracts in Section 5 of this note for a full discussion of the kinds of key terms the contracts need to address.

## 4.9 Running a Procurement Process

Once the project team has a good sense of the outcomes it wants and the contract that will provide those outcomes, the project team must create and run a process to get the Government what it wants. Ideally the project team should run a competitive procurement process. A competitive process puts bidders in competition against each other to submit proposals. Competitive processes help to reveal the availability, competence, and the costs and benefits of engaging private service providers through competition between bidders.

There are many ways to run competitive processes. However, the main themes to consider when constructing a procurement process are that it should be:<sup>3</sup>

- **Clear and transparent.** The transaction objectives should be explicit, and selection criteria well defined. All parties, including external stakeholders, should understand the tender process and basis for decision making

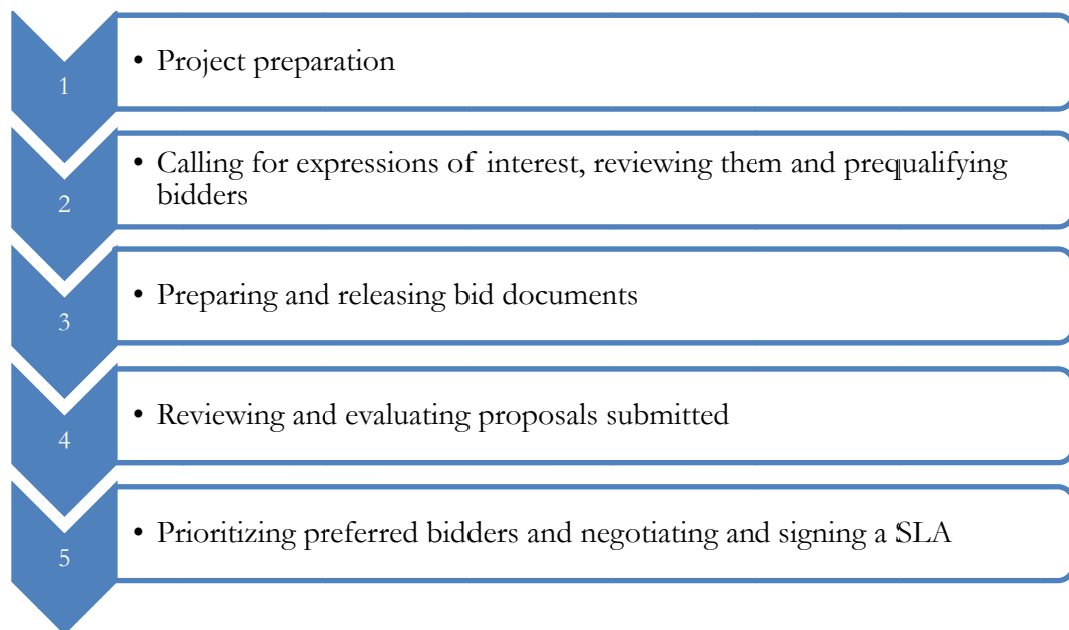
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<sup>3</sup> For an in-depth discussion of procurement, including the options available and their relative costs and benefits, see 'Approaches to Private Participation in Water Services: A Toolkit. The international Bank for Reconstruction and Development/The World Bank (2006)

- **Effective at producing readily comparable bids.** Proposals will be comparable when the procurement documentation requesting them provides bidders with specific outcomes they must meet. For example, the proposal must be for a pipe network to serve the houses in a defined area. If the procurement documentation is too vague, bidders will produce such different proposals that they cannot be compared. This must be balanced with the need to keep the outputs broad enough to leave room for innovation. For example, do not specify how and where the pipe network should be built
- **Robust.** The process should be resilient to problems encountered during procurement and not open to challenge by losing bidders
- **Fair.** Procurement should be undertaken on a level playing field, with all bidders competing on equal terms
- **Cost-effective and timely.** The cost and duration of bidding and complexity of the procurement process should be commensurate with the potential rewards of winning.

To give an indication of how a competitive procurement process might be run, we set out below a high-level example of the process for a competitive procurement. See Figure 4.2 for an overview diagram of this procurement process.

**Figure 4.2: Overview of an Example Competitive Procurement Process**



### **Project preparation**

Project preparation involves identifying the required operating outputs of the project, and collecting information that will be relevant to parties interested in providing those outputs. The project team’s work in preparing the draft contract will flow into this process. At this point the Government should consider procuring any relevant property and environmental consents and permits required for the project (see Section 5 for a discussion of the government’s role in procuring required approvals).

### **Calling for expressions of interest, reviewing them and prequalifying bidders**

Once the project team has prepared the project and knows what it wants to procure, it should call for expressions of interest from the private sector and prequalify bidders with the necessary technical and financial expertise to conduct the project. Pre-qualifying bidders who all have the right capabilities makes it easier to compare proposals (which are provided in the next stage) on a 'like for like' basis, and resolves any concerns about capability before requesting proposals.

### **Preparing and releasing bid documents**

The bid documents should include the output specifications in full detail, all the information the project team collected as part of project preparation, the draft contract and the evaluation criteria for proposals.

### **Reviewing and evaluating proposals submitted**

Evaluating proposals must be seen in the context that:

- Bidders have been prequalified so that all are technically and financially capable of doing the job, and
- The output specifications were specific and clear so that all proposals which conform to the requirements of the bid documents will meet the identified need.

Each proposal should then be evaluated based on two things: whether it would meet the required outputs, and the price. Price is made up of the tariff or other payments specified, and the value of the mark-ups to the contract. As the contract allocates risk and cost, mark-ups will shift risk and cost back to the Government.

### **Prioritising preferred bidders and negotiating and signing an SLA**

The project team will need to determine how it is going to prioritise preferred bidders and negotiate the contract. The project team will need to do this in a way that ranks bidders but also keeps all but the preferred bidder open in case negotiations fail. This keeps competitive pressure on the preferred bidder during negotiations.

## **4.10 Managing Contractor Performance After Signing the SLA**

To make the service levels effective, contracts need to explain how the outputs will be monitored and set out the enforcement provisions if the service provider is unable to fulfil its obligations. The contract also needs to set out the enforcement provisions against the government if it fails to make timely payment to the service provider.

Government needs organisational capacity and clearly delineated processes for the effective management of the contract.

### **Organisational requirements—building government capacity**

The public body that signs the contract will need the 'capacity' to manage the contract. This will be the contract management team. Capacity means being able to perform the following functions under the contract:

- **Monitor the achievement of the obligations of the service provider.** Self-reporting by service provider will not be sufficient to ensure that it meets its contractual obligations. In addition, the contract will contain provisions on audits, surveys, and inspections of the facility to monitor whether the service provider has delivered on its obligations. This would mean building the technical capacity (examples include—health experts, environment experts,



auditors, accountants) of the contract management team to perform these functions

- **Enforcement of the obligations.** The contract will contain provisions for the enforcement of the obligations against the service provider in the event of any breach. Enforcement mechanism will require special skills on the side of the team to assess a material breach, payment of liquidated damages, or repair the property for the damage done
- **Payment.** The contract management team will need to have the skills to ascertain the willingness of the households to pay for the services, and also find other public sources of funding. It will also need to help the service provider with pre-financing
- **Deliver on other government obligations.** The contract management team will have skills to deliver on other government obligations in the contract. This would include specification of the service area (coverage), obtaining the required permits, and, identification of the disposal sites
- **To manage and adjust as new events unfold.** The contract management team would also need the capacity to manage any unpredicted events that result from the enforcement of the contract. An example would be to provide the service in the event that there is a termination of the contract.

Certain functions are best left to an independent contractor. It is not expected that the Government will have to build its capacity to perform functions that it is not suited for. In such a case, it would be most efficient to contract out the functions. For example, to monitor a piped network is a challenge since the physical inspection is costly. Similarly, dispute resolution functions that require a mediator or an independent expert can also be contracted out. Tariff adjustments can be handled by independent contractors.

#### **Have established processes to guide contract management**

The Government will require a set of guidelines to enable the team to carry out its functions. For example, the Government could publish a contract management manual that sets out the process to be followed by the team. The manual will contain guidelines on how to conduct inspections, perform surveys, and, respond to complaints. A process to guide the project team on how to identify risks and problems that would occur will also be needed. This would include guidance on the process to refer the problem to higher level decision makers in the Government.

## 5 Key Terms for Four Service Level Agreements

The city-teams still need to get a sense of how the theory of drafting contracts gets translated into a working SLA. This section, then, presents the ‘key terms’ of four SLAs to give the teams an example of how to draft an SLA.

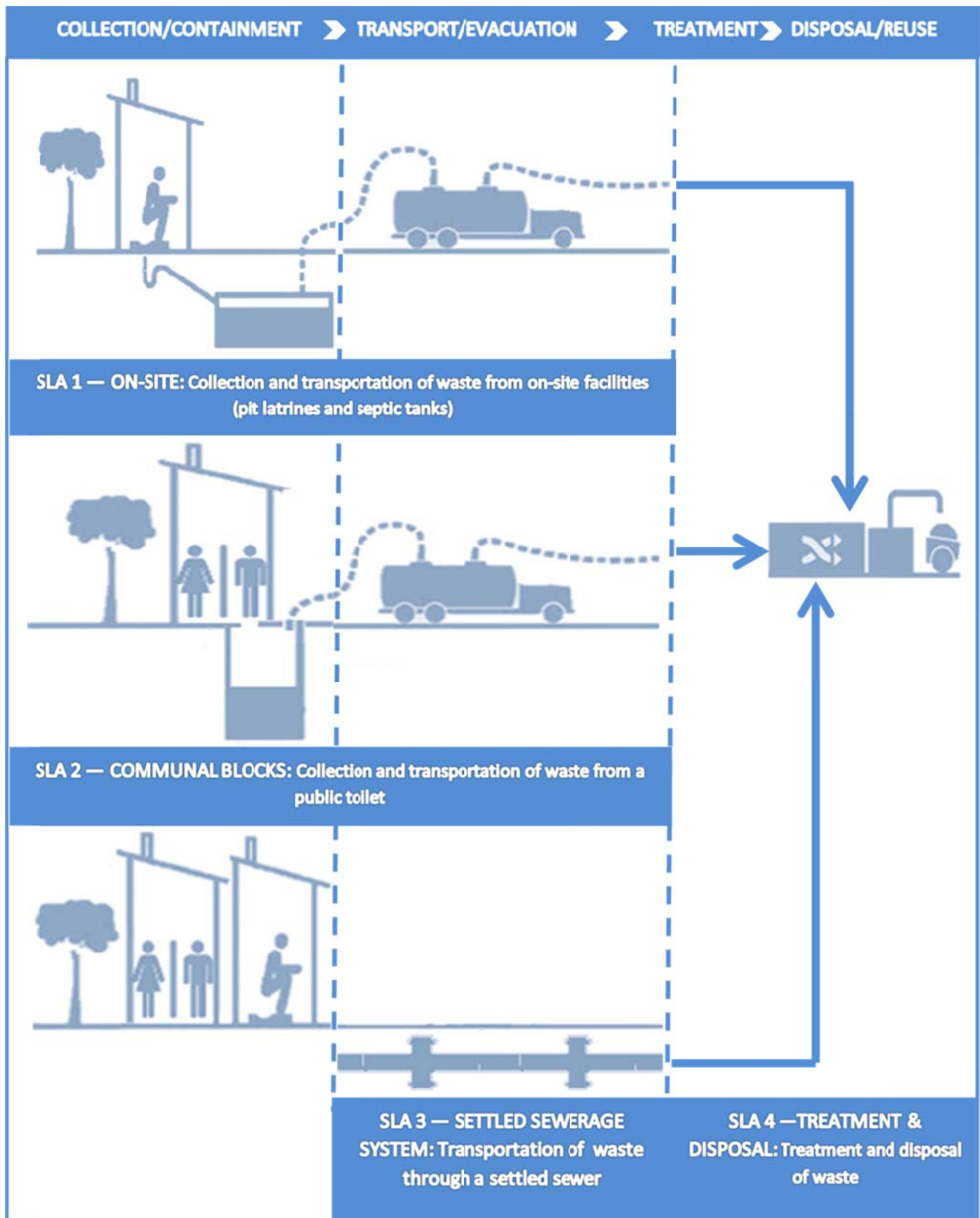
The SLAs presented in this section show how to contract for different elements of the value chain, as well as how the identified technical options (for example pipe or truck transportation) will change the way the project teams will need to draft the SLA. These SLAs present three ‘technical option’ bundles for collection and transportation, and one technical option bundle for treatment and disposal. The four SLAs are as follows:

- SLA 1: **Containment** of waste at on-site sanitation facilities (pit latrines and septic tanks) and **transportation** of waste to treatment and disposal facilities
- SLA 2: **Containment** of waste at a **communal toilet block** and **transportation** of waste to treatment and disposal facilities
- SLA 3: **Evacuation** of waste from household facilities or communal facilities and **transportation** of effluent (either directly to a disposal site or to treatment and disposal facilities)
- SLA 4: **Treatment and disposal** of waste by a licenced treatment and disposal facilities.

This approach removes the need to describe a large number of contracts that share a number of common features, while ensuring that we canvass the major issues that arise regardless of the contracting approach the team selects. Figure 5.1 illustrates the four contracts in a diagram to show how they split up the value chain.

We expect many of the city teams will choose to structure value chains differently to the SLAs described in this section. However, even if the city teams pursue different contracting arrangements, the issues described in this section (and the guidance in Section 4) will still be relevant.

Figure 5.1: Overview of how the SLAs Deliver the Sanitation Value Chain



## 5.1 Transportation of Waste from On-site Sanitation Facilities

This section describes the key terms of a performance-based contract for collecting waste from on-site facilities (such as pit latrines and septic tanks) and transporting the waste to treatment and disposal facilities.

Many of the sections described below (particularly monitoring, termination and dispute resolution) will also be relevant to the contracts described in Sections 0 to 5.4. Where the sections in this contract are relevant to the contracts in Sections 0 to 5.4, we refer the reader to this contract.

Set out below is the kind of language the project team should put in the contract. Where relevant, we have included drafting notes below which explain how the clauses work.

<b>Service definition</b>	The service provider must provide two services: <ul style="list-style-type: none"><li>▪ Evacuation of waste from on-site facilities</li><li>▪ Transportation of waste from on-site facilities to a treatment and disposal facility.</li></ul>
<b>Specifying service area</b>	The service provider must provide the services to all households/facilities within [define geographic area].  <b>Box 5.1: Targeting Poor Households</b> The area will include a mix of different socio-economic groups with differing means to pay for sanitation services. All households should be required to pay part of the cost of the services, tested based on an assessment of their ability to pay. See ‘Payment by Households’ for an explanation of how this will work.
<b>Obligation to service subject to pit accessibility</b>	The service provider must serve all the households in the area, provided the pit is within [X] meters of the road and there is an access path available between the pit and the road.  <b>Box 5.2: Providing Reasonable Access to Pits</b> In many urban areas, collection services are either unable or unwilling to service households that lack proper access routes to reach pits. This may be because there are no roads leading to the household. The municipality will likely be best placed to explore ways to improve access by engaging with communities where households that are difficult to access. However, the SLA could specify that all latrines must be emptied, including those that are difficult to reach. This would clearly increase the cost of providing the service—and the Government will need to be confident that the costs are justified by the benefits that come from 100 percent coverage. Allocating this responsibility to the service provider could lead to innovative solutions in accessing households that are hard to reach, such as by using smaller vehicles. For example, the UN-Habitat “Vacutug” vehicle has unique features that make it well-suited to particular tasks. However, the vehicle requires two operators and also has high capital costs.
<b>Obligations towards households while emptying the on-site sanitation facility</b>	The service provider shall give [X] (hours’ or days’) notice in advance of entering the household premises to empty the pit latrines.  If the service provider causes, directly or indirectly, any spill of waste onto the household’s property (other than the pit latrine), or any unexpected damage to the household’s property, the service provider must clean up that spill within a reasonable time (within [X] hours) and pay the cost of doing so. Where pit latrines are sealed

under the floors of the bathroom or the kitchen of the house, the cost to break and repair the floor will be borne by the household.

The service provider's agents or employees emptying the latrines and transporting the waste shall be courteous to the people present at households at all times. To enable easy identification, the service provider's agents or employees shall wear badges printed with the service provider's name, along with their name.

**Obligation to frequently collect waste and desludge on-site facilities**

The service provider must provide the services (i.e. empty the on-site facilities of the households covered by the contract) at least every [X] months.

**Box 5.3: Ensuring Pits are Emptied When Full**

Each pit must be emptied when it is full to avoid it overflowing. The obligation to empty a pit should be set below completely full, so as to build in time for the contractor to service the pit, and to allow some 'buffer' time.

However, it is difficult for the service provider to know when pits and septic tanks will be completely full. Sludge accumulation depends on several factors, including the number of users, the degree to which the pit or tank is drained, and whether the pit is used for disposing household rubbish.<sup>4</sup> Because these factors are outside the control of the service provider, the Government could provide a minimum frequency for evacuating waste based on an estimate of the time for sludge to accumulate in the pits.

Specifying a particular frequency for emptying pits creates a risk that the on-site facilities fill up more rapidly than expected under the contract. To prevent public health risks from overflowing household storage facilities, the contract needs to have some way of requiring or encouraging the private party to empty storage tanks as required. However, this gives rise to the issue of who bears the risk of increased costs of servicing pit latrines which fill up quicker than expected.

There are broadly two approaches to managing this risk. The first option is to require the private party to empty storage tanks whenever they are reasonably requested by households to do so. In this situation, costs can be recovered through the standard prices agreed in the contract to the Government or the relevant households. The second option is to require the private party to empty tanks at the specified frequency. In this case 'on call' emptying could perhaps be offered at an additional charge to households that need it.

**Obligation to securely transport waste to a designated site**

The service provider must deliver waste to designated treatment sites without any leakage.

The contractor should have qualified and licensed operators to drive the vehicle and pump the waste.

**Box 5.4: Specifying Transportation Standard**

The project team might also want to set further obligations around the way the service provider transports waste. For example, the contractor could be required to transport the waste using vehicles that have been certified to be roadworthy under the relevant local laws.

**Obligations on the quality of the waste stream**

The service provider must not collect and mix any other waste with the waste it collects from septic tanks and latrines.

<sup>4</sup> DA Still, 'After the Pit Latrine is Full ...What Then? Effective Options for Pit Latrine Management', available at [http://www.susana.org/docs\\_ccbk/susana\\_download/2-891-207-paper2.pdf](http://www.susana.org/docs_ccbk/susana_download/2-891-207-paper2.pdf)

**Box 5.5: Avoiding the Mixing of Sewage with Hazardous and Industrial Waste**

The obligation to monitor and dispose of hazardous and industrial waste which finds its way into these collection facilities is placed on the treatment and disposal facility. However, the collection and transportation service provider should not carry other waste besides the household waste. It will be challenging to prove that a truck picked up hazardous waste along with septic tank waste, but there should at least be an obligation not to do so, so that where it is clear the service provider has done so, they pay compensation.

**Payment by households**

The contract shall require households within the service area to pay \$[X] per month or \$[Y] per emptying. These payments could be bundled with the provision of other municipal utility services. For example, households could pay for the service as part of their water bill, and receive a voucher for the emptying service, which is then handed to the transporter that redeems the voucher when the waste is dumped at an approved facility.

The contract shall contain a provision relating to means testing assistance by the municipality for households who state their inability to pay or unwillingness to pay.

In the event of a refusal to pay, the contract could contain a provision to fine the households.

**Payments by government**

The contract shall contain a provision relating to payment to be made by the Government for those households that have been mean tested, and are unable to pay.

Payment to the contractor could be:

- Specific payments tied to the delivery of services, either based on the number of households served, or the number of pits emptied each month
- In the alternative, the contractor could also get paid for bringing waste for transportation from customers on other areas who have already paid privately for the waste removal

The contract should also contain an indexation provision that indexes household payments (user charges) and government payments to price increase. This could either be inflation or a tailored cost index, for example a weighted average of Consumer Price Index and fuel costs for truck-based collection.

**Box 5.6: Assumptions in Designing this Payment Mechanism**

The underlying assumptions that have been made while designing this payment mechanism for households (both those who are able to pay, and those who are not able to pay) and the Government are two-fold. First, Households who need help from the Government to make the payments live together in defined geographic areas. Second, public health benefits depend on collecting substantially all the waste from an area.

**Length of contract**

The term of the contract will be [7] years.

**Box 5.7: Setting the Length of the Contract**

Consider a period that would allow the service provider to recover a large proportion of the fixed costs of purchasing the trucks, while still giving the Government flexibility to retender the contract reasonably frequently.

See Section 4.8 for an explanation of how to set the length of the contract.

**Monitoring and enforcement**

The service provider must self-report the households served within a [specified time period].

The Government will verify self-reports through random audits conducted by itself or by [specify independent contractor] engaged on its behalf.

#### **Box 5.8: Monitoring Service Provider Performance**

The contract will set out how the Government will ensure the obligations described above are achieved. In addition to the above, the contract might provide for:

- The contract report to be posted on a public website to give households the opportunity to comment on its accuracy
- There could be a mobile texting service, where households could be texted to ask if they got the service. The households could then reply to the text message if they did not receive the service
- The Government could conduct regular surveys or community meetings of households to check service performance.

Both parties to the contract will want to ensure that monitoring agencies have the technical capacity and resources to properly monitor performance. This may require the Government to engage specialists with, for example, health, environmental and financial skillsets.

The contract shall contain separate provisions for enforcement. Examples include—

- Penalties for breach of contract. The contract could provide for the amount of payment that could be withheld in the event that there is a breach because the service was not rendered on time. This amount could be pre-agreed by both the parties, and provided in the contract. In the alternative, there could be a provision for liquidated damages in the event of a breach of the contract
- The contract could also provide a clause fixing the responsibility on the contractor to make good any damage done to the property of the households, or to go back and collect waste that has not been completely emptied from the on-site sanitation facilities
- The contract could also provide a clause for termination of the contract for a ‘material’ or ‘persistent’ breach.

In the event that the contractor disputes that a breach has actually occurred, and is unwilling to rectify the breach, the contract could provide for the invocation of the dispute resolution provision.

#### **Dispute resolution**

Parties must notify each other of any dispute which arises under or in connection with the agreement as soon as reasonably possible. The parties must attempt to resolve disputes in good faith.

If not resolved within [X] days, the dispute must be escalated to [nominated senior representatives].

If a dispute is not resolved within [X] days of being escalated to the nominated senior representatives, either party may initiate arbitration proceedings or refer the matter to [specified expert] where applicable.

Arbitration must be conducted in accordance with the (for example UNCITRAL Rules) in effect at the time or as otherwise agreed by the parties.

There will be [three] arbitrators. (Each party has the right to appoint one arbitrator, with the third being appointed by agreement between the parties. The third arbitrator shall chair the arbitration panel and shall have a casting vote on any determination.)

If any party fails to nominate an arbitrator or the parties are unable to agree on the third arbitrator, those arbitrators will be appointed by (insert, for example, the General Secretary of ICSID in accordance with the UNCITRAL Rules).

Any decision or award of an arbitral tribunal appointed under this section is final and binding on the parties and is the party’s sole remedy for breach of the agreement. Costs of the arbitration proceedings will be determined by the arbitral tribunal.

**Box 5.9: Use Dispute Resolution Mechanisms to Maintain the Relationship**

The contract should provide mechanisms for how to resolve disputes. These should start with the most informal (escalating the dispute to nominated senior representatives) and then move toward more formal dispute resolution methods. The key goal of dispute resolution is to allow the contract to remain in place and the parties to resolve issues and move forward with performing their obligations. It is often cheaper to resolve differences and continue with performance than cancel the contract and pursue another procurement process.

**Termination**

The contract can be terminated by either party if the other party fails to fulfil its obligations (“termination for cause”), or if the party elects to no longer be subject to the contract (“termination at will”). The contract will also need to deal with the prospect that the contract cannot be fulfilled due to factors outside the control of either party (known as force majeure events, including “acts of God”).

**Table 5.1: Drafting Termination Provisions**

	<b>Termination initiated by service provider</b>	<b>Termination initiated by Government</b>
Termination for cause	Service provider is compensated for its investments, the cost of winding down and any foregone profits	Service provider paid a proportion (such as 90 percent) of its investment and loses its performance bond
Termination at will	Service provider paid a proportion (such as 90 percent) of its investment and loses its performance bond	Service provider is compensated for its investments, the cost of winding down and any foregone profits
Force Majeure	Service provider is compensated for its investments, but not for any foregone profits	



### **Box 5.10: Drafting Termination Provisions**

Table 5.1 summarises the termination provisions the contract should address. We distinguish between three types of termination. Termination for cause can be for either service provider or government default. We distinguish this from at will termination, which could be initiated by either party. Also included is termination for Force Majeure events (act beyond the parties' reasonable control).

**Termination for cause.** If the Government defaults, the service provider should be fully compensated. If the service provider defaults, it must leave with the Government the assets it has invested in, but is compensated for some fraction of their value (for example 90 percent). Without this compensation, the contract would be too risky for a service provider to enter. The compensation needs to be set below the assets' full value to ensure the service provider has financial incentives to perform.

**Termination at will.** We recommend specifically including in the contract the ability of the Government to terminate at will, subject to payment of full compensation. The reason for this is that a concession contract only works if both parties are willing to make it work. If the Government wishes to terminate the contract, it can make life impossible for the service provider. It is better to allow the Government to end the contract cleanly than to cause it to undermine the operation of the contract trying to cause a breach by the service provider. The financial compensation the Government must pay gives the service provider comfort that the Government will only terminate as a last resort. Allowing the operator to terminate at will is a more radical suggestion. However, the same logic applies. If a service provider finds that a contract has become so difficult or disadvantageous that it does not wish to continue, forcing it to continue is likely to be counterproductive. However, to ensure that the service provider has an incentive to stay and make the contract work, and to compensate the Government for the costs of finding a new service provider, the service provider should not be fully compensated if it decides to terminate at will.

**Termination for Force Majeure.** A Force Majeure event is an event (such as an earthquake) which is beyond the parties' reasonable control and which makes performing the contract physically impossible. Because these events are beyond both parties' control, the service provider should be compensated for its investment costs but not any loss of profits.

## 5.2 Provision of a Communal Toilet Block

This section describes the terms of a performance-based contract for providing a communal toilet block facility.

<b>Service definition</b>	The service provider must: <ul style="list-style-type: none"><li>▪ Provide a communal toilet facility</li><li>▪ Transport the waste that is collected at the communal toilet facility to a designated site.</li></ul>
<b>Specifying service area</b>	The service provider must serve [defined area]. Within that area, the service provider must establish toilet blocks so that the maximum distance of any household from a facility will not be more than [X] kilometres or [X] minutes walking distance. The toilet must not be located within [X] meters of any residential or occupied building.
<b>Capacity contracted for</b>	Each facility must provide: <ul style="list-style-type: none"><li>▪ [X] toilets for men</li><li>▪ [X] toilets for women</li><li>▪ Other facilities such as showers and hand basins</li><li>▪ Separate toilet entrances for men and women</li><li>▪ Special facilities for children, elderly, and disabled groups such as special seats, and employment of a caretaker.</li></ul> <div data-bbox="395 1106 1485 1413" style="background-color: #e6f2ff; padding: 10px;"><p><b>Box 5.11: Making it the Municipality’s Responsibility to Estimate Demand</b></p><p>It shall be the responsibility of the municipality to estimate the demand for the communal toilet service to provide for the capacity of the toilet and the facilities required. This is based on the assumption that the service provider will offer an agreed level of capacity. The municipality will consult with the households before specifying the capacity and facilities in the contract, to ensure the proposed facility will meet their needs. This consultation should identify the demographic profile of the community that the facility will serve, and any special needs of the users.</p></div>
<b>Changes in demand from expectations</b>	The contract should define an expected level of the use of the facility. The contract should also specify what action the parties will be obliged to take when the usage falls well below or above that level. <p>If demand is higher than the expectations, then the options include:</p> <ul style="list-style-type: none"><li>▪ The contract could provide that the ‘operator can add more capacity, and may charge for use of the toilets added, provided they are of the same standard as the others’</li><li>▪ Alternatively, the operator could report on crowding and wait times, and if they exceed a certain level, the obligation will be on the municipality to commission and pay for the additional capacity required.</li></ul> <p>If demand is lower than expected, the service provider may need to creatively engage the community to attract and retain new customers. If the customer payment comprises a significant portion of operator revenues, the operator will be motivated to find effective marketing campaigns.</p>

### Box 5.12: Mitigating the Risk of Low Usage

Low usage of the facility creates a risk for the operator if it is paid on a per use basis, as is typically the case by the customers. This risk is mitigated by the ‘availability payment from Government’ as suggested below. That payment level must be set low enough to avoid undermining the operators’ incentives to recruit and retain a customer base.

#### Obligation to maintain minimum hygiene standards

Each facility must meet [define minimum hygiene standards that the facility will need to achieve].

(Examples include—maintaining clean seats by ensuring there is no human waste on any surface outside the toilet bowl, having no litter on the toilet surface, and, ensuring that the bacteriological levels on the surfaces are below a certain level to prevent spread of any diseases.)

#### Obligation to maintain a safe environment

The service provider must take all reasonable steps to ensure that the toilet facility and surrounding area is kept safe for all users (particularly to ensure safety for women and children at all hours of the day). “Reasonable steps” will include providing at least [1] security guard per facility at all times (who must report all incidents to the police). The contract should also describe the lightning facilities, both at the toilet and the access roads leading to the toilet.

#### Obligation to provide hand washing facilities, running water, and essential toiletries

The service provider must ensure the facility has [X] hand washing facilities per toilet, and must provide [specify levels] of hygiene items such as toilet paper, soap, and hand towels. The service provider must also ensure the facility has running water at all times.

#### Obtaining required land rights and permits

The contract shall contain a provision for land acquisition to construct the communal toilet. There are two options:

- Government will provide leasehold on the site for the duration of the contract. Lease on the site may be a peppercorn rental (that is, a nominal amount)
- Alternatively, the operator must secure a site that is within the specified distance from the households to be served.

**Permitting**—The contract should specify all the permits needed for construction and operation of the facility. The contract should also specify whose responsibility it will be to get the permit—that is, whether the municipality will secure them, or will it provide any assistance to the contractor in securing them, or would securing the permit be the operator’s responsibility.

### Box 5.13: Required Land and Other Permits

Providing a communal toilet facility would require land and associated permits. Usually a communal toilet would need to be provided in a high density area like slums with unauthorised households. A contractor may find it difficult to acquire the land, or get the permission to construct a toilet on a suitable site.

#### Payment by users

The contract shall contain a provision on payment by users of the facility. Under this provision, the operator will be allowed to charge up to a contract-established ceiling price:

- \$[X] per use of the toilet and for the associated hand-washing and other

<b>Payment by government</b>	<p>facilities</p> <ul style="list-style-type: none"> <li>▪ \$[Y] per additional regulated facility, for example, a shower</li> </ul> <p>The Government will pay \$[X] per month for the provision of the contracted capacity to the contracted standard.</p>
<b>Ability to earn other revenue</b>	<div style="background-color: #e6f2ff; padding: 10px; margin-bottom: 10px;"> <p><b>Box 5.14: Availability Payments to Improve Cost Recovery</b></p> <p>The contract may require the Government to pay certain base costs of providing the communal toilet facility.</p> <p>If a payment is designed into the contract, then an “<b>availability payment</b>” that enables the contractor to recover its fixed and variable costs is likely to be the best way to structure payment (rather than having payment tied to the # of users or volume of waste collected). Under an availability payment approach, the contractor will receive a fixed regular payment for having the toilet facility available for use (in accordance with the service level obligations described above). Without some payment that can be cut back for poor performance, the Government is left only with relatively blunt and difficult to execute fines or severed contract as tools of enforcement in the event of non-compliance.</p> </div> <p>The contractor should be entitled let out some of the surrounding space for recreational activity, or allow advertisements within the premises, to generate additional revenue for cost recovery. However, any other activity should not create a nuisance or be a threat to users of the toilet facility.</p>
<b>Length of contract</b>	<p>The term of the contract will be for 10 years.</p>
<b>Monitoring and enforcement</b>	<p>The monitoring mechanism should be able to verify that the contractor has delivered on its obligations as provided in the contract. Monitoring approaches could include:</p> <ul style="list-style-type: none"> <li>▪ Regular user surveys or customer-feedback telephone options</li> <li>▪ Random inspections to ensure the availability of the required facilities (such as toilets and hand-washing facilities)</li> <li>▪ Regular inspection by the health department to verify that the toilets are being maintained in the hygienic condition, and the risk of water borne diseases has reduced</li> <li>▪ To ensure that no users of the toilets are harassed by any person, and, the people who wish to use the toilet are able to do so without any physical obstruction, it shall be the duty of the contractor to provide for the deployment of a security guard. The security guard(s) shall report any such incident to the local police station.</li> </ul> <p>The contract shall contain an enforcement section. In addition to the enforcement provisions of the collection and transportation contract, the key enforcement mechanism for this contract is that the availability payment will be reduced by specified amounts for each deviation from the contracted standard. For example, the contract will specify:</p> <ul style="list-style-type: none"> <li>▪ Audits of the facility will be conducted randomly with at least two visits per week</li> <li>▪ The auditor will record any violations of the contracted standards. Examples include: <ul style="list-style-type: none"> <li>– Human waste on the surfaces of the toilets or floors</li> </ul> </li> </ul>

- Litter on premises
- Inoperable/congested toilets
- In the event that there is a violation of the aforementioned standards, then, the following payment reduction could apply:
  - For human waste on surface found less than two percent of the times when the facility was audited, there shall be no reduction in the payment made to the contractor
  - For human waste on surfaces greater than two percent of the audits over a previous six month period, there could be a reduction in monthly payment of five percent for each one percent of the times that the waste is found
  - Similar provisions could be drafted for payment reduction for litter and broken facilities during the audits.

Likewise, a pre-defined level of exemplary performance over a set duration may result in annual or biannual bonus or incentive payments.

There should also be a complaint forum to allow users to register their complaints without delay, and have their complaints investigated and resolved expeditiously.

**Dispute resolution**

See ‘Dispute Resolution’ under Section 5.1

**Termination**

See ‘Termination’ under Section 5.1.

In addition, the contract shall contain a provision for termination payments upon early termination. An example of such a termination payment would be:

- The value of facilities multiplied by the time portion of the contract still remaining (months before end of term–months in contract)/months in contract)
- This formula would represent the *undepreciated* portion of the facility value. In the event of government default, the termination payment might be this plus an amount (for example 20%) as an allowance for the lost profit. In the event of a service provider default, it might be this minus an amount (for example 20%) to compensate the Government for having to retender the contract.

**Obligation to restore site condition following termination**

The location will need to be restored to its original condition following termination of the contract. This will ensure that any environmental costs of remediating the land or dealing with any waste streams are factored in as a cost of the contract.

### 5.3 Transportation of Waste Through a Settled Sewer

This section describes the terms of a performance-based contract for providing a network of pipes to transport waste from households or decentralised waste collection facilities to treatment and disposal facilities. Note there is some overlap between the terms of this contract and the contract for the collection and transportation of waste from on-site facilities (Section 5). This is because the outputs are similar.

#### Service definition

This contract consists of two distinct services:

- To provide pipes that remove effluent from collection points (such as households and septic tanks) and transports the effluent to a delivery point (either a disposal site or a treatment and disposal facility)
- To empty the sludge from septic tanks as required and transport the sludge to a treatment and disposal facility

#### Specifying the service area (collection points)

The contract will define the points where waste is to be transported from (“collection points”). In many cities, piped networks are connected to individual households or apartment blocks. However, the contract could specify other alternative collection points, such as communal toilets or some other community facility that has a system for settling the sludge from the effluent.

#### **Box 5.15: Dense settlements may offer Economies of Scale**

Dense settlements that already have high coverage of septic tanks may demonstrate economies of scale and merit piped investments for effluent rather than trucks transporting the mixed wastewater from the septic tanks. Often these communities already run pipes from their households to large open drains for disposal of the wastewater from the tanks. This means that the option of a settled sewer takes advantage of the significant local investment in infrastructure that already exists and supplements to protect public health and to coordinate the households.

#### Specifying the delivery point

The contract will also need to define where the pipe network is expected to transport that waste to (“the delivery point”). The delivery point will either be the entry point to a treatment and disposal facility or the point of interconnection to another (larger) pipe network.

#### **Box 5.16: The Service Provider’s Obligations Cease at the Delivery Point**

The obligations of the service provider will cease at the delivery point. This means that the service provider will not be responsible for any issues arising after the waste has been transported to the delivery point, as long as the terms of this contract have been met. The service provider may also be entitled to claim damages from the party that receives the waste at the delivery point if those parties’ acts or omissions prevent the service provider from fulfilling its obligations under this contract.

#### Obligation to maintain reliability of the network

The contract will define a minimum level of reliability for the service provided.

### Box 5.17: Defining Reliability Under the Contract

In practice, lack of reliability will result in waste backing up into customer premises, or escaping from the pipe into the surrounding environment. Therefore the contract may specify:

- Maximum percentage of premises to be affected by sewage overflow on the property [typically should be very low, for example, 1%]
- Maximum number of break/days per month. A break/day can be defined as a single location at which sewage escapes the pipe for a period of up to 24 hours.
- Clean up responsibilities and response times. In the event of sewage being backed up into premises, the service provider must respond within [X] hours of being notified, and must ensure no sewage is on the premises within y hours of obtaining access to the premises, and all damage is repaired with z hours of obtaining access. (similar provisions for breaks and back-ups involving more than one property, only possibly shorter periods allowed, given that more people will be affected)

The contract will also need to clearly allocate responsibility for maintaining the connection points between various connected systems (for example, between the pipe network and the treatment and disposal facilities). This will prevent parties from shifting responsibility onto each other.

**Obligation to securely transport waste to a designated site**

The contract will require waste to be delivered to designated delivery points.

**Payment by households (where pipes are connected to households)**

The service provider will be allowed to charge up to [X] \$/month to each household connected to the service.

### Box 5.18: Ways to Obtain Payment Without Disconnection

As mentioned above, requiring some payment creates a stronger direct relationship between the service provider and households and means that households will be more vested in seeing good service provider performance. The household payment does not need to reflect the full cost of providing the piped solution, and can be based on ability to pay.

Because the public health consequences of blocking of a household's sewer service after it is being relied on are severe, this is not generally a good option for enforcing payment. Therefore if user charges are imposed, other options may be sought. These include:

- Community responsibility, in which all neighbours agree to pay the cost if one of them does not pay
- Cutting off another utility, such as power or water
- Registering a charge against the property title, allowing the bill to be collected if the house is sold (obviously only possible where there is a formal title)
- A civil debt action to distrain (seize) household assets

**Payment by Government**

The Government will pay the service provider [X]\$/month per household connected.

**Obtaining**

Providing a network of pipes and decentralised treatment works

**required land rights** (whether over ground or underground) requires access to land. This land can either be owned outright, or access to the land can be granted under easements or rights of way.

**Box 5.19: Allocating the Burden of Obtaining Land Rights**

The contract should allocate the burden of obtaining land rights in a way that minimises cost and increases certainty in project delivery. There are broadly two approaches to explore:

- Government can identify/obtain land rights. Under this approach, the Government will conduct the preliminary site work itself to ensure that the land identified for the pipe network is suitable. This option has the advantage that the land rights needed will mostly be easements, and the Government generally has the right to obtain easements under public acquisition laws (whereas private service providers do not). Additionally, any site risks are then identified before tendering out the contract. This may result in better pricing, and can also improve the comparability of tenders because the site/pipe route has been identified in the tender documents.
- Interested parties can make their own land enquiries, with the preferred bidder obtaining the necessary land rights. Allocating this responsibility to the private sector means that each bidder (or the eventual service provider, depending on the procurement process) needs to identify and obtain the required land rights. While this duplicates effort, there may be some benefits in having bidders compete to identify the best route for the pipes. This option does create some uncertainty about the ability of the successful tenderer to carry out the contract because performance will be conditional on obtaining the required land rights.

**Obtaining required permits** Depending on the planning laws of each country, the operator may also need permits in order to build and operate the pipeline or effluent treatment site. These include:

- Construction permits
- Permits to break streets
- Environmental or resource management permits

Similar to the section above on obtaining land rights, the contract should allocate the burden of obtaining planning consents in a way that minimises cost and increases certainty in project delivery. The two broad approaches above in ‘Obtaining required land rights’ are similarly relevant to obtaining required permits. In a similar way, the Government may find it easier to obtain the necessary permits than a private service provider, and this would also avoid duplicating site preparation costs.

**Length of contract** [10] years due to moderate fixed costs, asset lives, and low value from retendering

**Monitoring and enforcement** Monitoring and enforcement will be challenging because many of the problems that occur in an underground network of pipes are difficult to observe without physical inspection (which is costly). The service provider should be required to report any leaks and faults in the pipe network, and the remedial action taken. The service provider should also be required to report on the reliability levels achieved.



To effectively monitor contract performance, the Government will also need to obtain information from points of supply into the network (such as households), and the delivery point (treatment and disposal facility). This information could be provided through regular surveys, and well as providing a facility for other parties to lodge complaints.

Regarding enforcement, see 'Monitoring and Enforcement' under Section 0 for an explanation of how payments can be reduced by specified amounts where specified breaches occur.

**Dispute  
resolution**

See 'Dispute Resolution' under Section 5.1.

**Termination**

See 'Termination' under Section 5.1.

## 5.4 Treatment and Disposal of Waste

This section describes the terms of a performance-based contract for providing a waste treatment and disposal facility for facilities (TDF).

Note that the terms relating to the interface between the TDF and the collection and transportation service providers will depend on the type of transportation method used (for example trucks or pipes).

### Service definition

The service provider must provide three services:

- Receiving waste from collection and transportation service provider
- Processing the waste to meet or exceed required standards prior to disposal
- Disposing of processed waste in a safe manner.

### Specifying the required processing capacity

The TDF must provide a specified processing capacity: this could be expressed in a range of ways depending on the type of contract:

- For disposal from trucks: Ability to receive and process all waste from up to [X] haulage trucks per hour, [Y] hours of the day, [Z] days of the week.
  - Truck defined as having a capacity of no more than [standard volume]
  - Waste defined as waste of composition typical of faecal sludge/septages haulage. This could be specified in terms of BOD concentration and concentration of other pollutants
- For disposal from pipes: ability to receive and treat:
  - [X] cubic meters of inflow in any one hour period
  - Biological Oxygen Demand of up to [X] per cubic meter
  - Total Oxygen Demand of up to [X] per cubic meter
  - [specify other input concentration parameters as needed]

#### **Box 5.20: Allocating the Risk of Forecasting Service Demand**

The contract will need to allocate the burden of determining the required processing capacity and service area of the facility on either the Government or the service provider. This will allocate the risk of forecasting the current and future demand for the TDF services. Deciding who is best placed to bear this risk involves understanding which party is in the best position to forecast current and future sanitation system needs, and the other implications of that party bearing the risk. This would likely be the Government for three reasons:

- First, many of the factors affecting sanitation demand are relevant to the Government's other town planning functions, so the Government will have more knowledge in this area.
- Second, if the contract defined a catchment area it would also need to

**Obligation to accept all waste and dispose of waste the TDF cannot process**

guarantee the TDF exclusivity in servicing that area. This would restrict the Government's flexibility in town planning.

- Third, the benefit 'on paper' of transferring demand risk to the TDF is unlikely to be effective in substance. Once the TDF is built, it may not be able to readily expand its processing capacity. . This could cause disputes, or result in non-performance.

Alternatively, the contract could allocate demand risk on the TDF by requiring the TDF to provide the services to a defined catchment area, and guaranteeing the TDF exclusivity in providing the services in that area.

The contract will require the TDF to accept all waste validly delivered. The contract will then require the TDF to test the waste to identify and separate the waste it can process from the waste it cannot (for example industrial or hazardous waste). To do this, the contract will specify input parameters for waste it can process, set based on the technical capability of the facility.

See 'Monitoring the quality of input waste' below for a discussion on testing.

The contract will then require the TDF to process waste (see 'Obligation to process waste to minimum quality levels' section below) and to dispose of the waste it cannot process in a specified way.

#### **Box 5.21: Allocating the Responsibility to Remove Industrial and Hazardous Waste from the Sanitation Chain**

Industrial or hazardous wastes often mix with sewage in the sewage system, which TDFs will not be able to process. Because it is difficult to stop users dumping non-septage waste into the sanitation system, at some point in the sanitation chain, either a service provider or the Government will need to be responsible for removing non-sewage waste from the system and disposing of it in a responsible way. TDFs are best placed to do this as it they are the central point through which all waste will go. The contract should make the TDF responsible for analysing the waste stream and removing material that cannot be processed. Where the TDF identifies material that is unable to be processed, the TDF should be required to isolate and dispose of that waste in a responsible way specified under the contract.

**Obligation to process waste to minimum quality levels**

The contract should require all waste to meet [*Insert standards*].

#### **Box 5.22: Setting Processed Waste Quality Standards**

The contract must set out the quality levels that processed waste must meet before it can be safely disposed of. These quality levels should be set at a level where treated waste is rendered materially harmless and safe for disposal into the environment. The specifications should include concentrations of the following:

- For effluents discharged to bodies of water:
  - Total Oxygen Demand
  - Biochemical Oxygen Demand
  - Chemical Oxygen Demand
  - Nitrates
  - Phosphorous
  - Suspended solids
  - Coliforms

- Other
- For sludge: [if applicable]
  - Heavy metal pollutants: for example, Arsenic, Cadmium, Copper, Lead, Mercury, Nickel, Selenium, Zinc
  - Pathogens: for example. faecal coliform density, Salmonella
  - Other
- For compost: [if applicable]
  - Heavy metal pollutants (see above)
  - Pathogens (see above)
  - Other

**Specifying how waste must be disposed of**

The contract must specify that all processed waste must be disposed of at a certain site and that except as provided under the contract, the TDF cannot dispose of waste in any other way. The contract should also set out any procedural requirements for how and when that waste can be safely disposed of.

**Box 5.23: Allocating the Burden of Choosing the Disposal Site**

Disposal is typically through piping processed waste to a specified disposal site, or, if the area is landlocked, it might be transported by truck to the disposal site. In doing so, the contract must allocate the burden of deciding on the best disposal site on either the Government or the TDF. See the section below on “Identifying sites and obtaining required land rights and permits” for further discussion of this.

**Payment structure**

The contract will require the Government to pay the TDF through two payment mechanisms. First, there will be a fixed monthly availability payment which allows the TDF to recover its fixed costs of building the facility and its return on investment. Second, a variable operations payment which allows the TDF to recover its variable operating costs.

**Box 5.24: De-Linking the TDF’s Profitability from the Quantity of Waste it Processes**

By separating the TDF’s fixed costs and returns from its operating costs, this de-links the TDF’s returns from how much waste it processes. This puts the TDF’s focus on the waste quality outcomes it achieves, as opposed to incentivising the TDF to process as much waste as possible.

**Ability to earn other revenue through reuse**

The contract could allow the TDF to sell waste (either processed or untreated) to third parties who can extract value from it, as an exception to requiring the disposal of all waste in the specified way.

**Box 5.25: Obtaining Better Pricing by Allowing Third-Party Sales**

Other parties might be able to extract value from waste, such as through biofuels or agricultural products. Permitting the TDF to sell waste to these parties could therefore improve contract pricing. However, the Government needs to ensure that the health and environmental outcomes from the sale of sewage to third parties are no worse than through the treatment and disposal of waste pursuant to the contract. This could be done through requiring government consent before waste can be on-sold and requiring inspection and testing to monitor health and environment outcomes.

**Identifying facility and**

The contract will identify specific facility and disposal sites where the TDF must be built and operated.

disposal sites

**Box 5.26: Allocating the Responsibility to Identify the Facility Site**

The issues around identifying the right site for the facility are similar to those above under Section 4—Collection and Transportation of Waste through a Piped Network. However, the procurement process that feeds into this contract will also have to allocate the burden of deciding on the disposal site. The disposal site must be safe, and must be chosen in light of the specific geographical and population-relevant features of the coverage area. As explained under Section 4, there are trade-offs between the Government identifying the right site, and the TDF identifying the right site. In the context of a disposal site, one of the key reasons to allocate this burden on the Government is that the uncertainty around bidders being able to procure the necessary consents is especially high for a waste disposal site. On the other hand, depending on the coverage area, there may be several appropriate disposal sites. In this case, encouraging private sector innovation to determine the best one may lead to a better, lower cost disposal site. Deciding which approach to go with will need to be assessed on the basis of the specific coverage area.

**Obtaining required land rights**

See ‘Obtaining required land rights’ under Section 5.3 ‘Transportation of Waste through a Settled Sewer’.

**Obtaining required permits**

See ‘Obtaining required permits’ under Section 5.3 ‘Transportation of Waste through a Settled Sewer’.

**Length of contract**

20 – 30 years due to higher fixed costs and expected useful life of facility.

**Monitoring the quality of input waste**

The contract should require the TDF to test waste received to identify whether it meets [specify parameters for input waste].

**Box 5.27: Identifying Waste that Cannot be Processed**

The contract should require the TDF to test waste received to identify whether it can be processed. The input testing parameters will be set based on the technical processing capability of the facility.

**Monitoring and enforcement regarding processed waste**

The contract should require the TDF to periodically test processed waste for compliance every [X] (hours/days) with the specified minimum quality levels discussed above. The contract should also provide that the Government (or its contractor) is permitted to conduct spot checks and audits every [X] months to ensure compliance with the contract.

See also ‘Monitoring and enforcement’ under Section 1 ‘Collection and Transportation of Waste from On-site Sanitation Facilities’ for a discussion of enforcement mechanisms.

**Box 5.28: Ensuring the TDF Meets Waste Quality Outcomes**

The contract needs to provide for frequent testing, monitoring and reporting by the service provider of the quality of processed waste. Additionally, to ensure reliability, the contract should require independent or government-led inspection and auditing on both a ‘spot check’ and periodic basis to ensure accuracy in the service provider’s reporting of processed waste outcomes. Robust monitoring of the quality of processed waste is essential to the TDF delivering the services under the contract, and to the Government obtaining value through a contracting approach to sanitation services.

**Dispute resolution**

See ‘Dispute Resolution’ under Section 1 ‘Collection and Transportation of Waste from On-site Sanitation Facilities’.

**Termination**

See ‘Termination’ under Section 1 ‘Collection and Transportation of Waste from On-site Sanitation Facilities’.

**Government option or obligation to purchase the facility**

The contract could provide the Government with either an option or an obligation to purchase the facility.

**Box 5.29: Obtaining Value from the Facility Beyond the Term of the Contract**

The contract could specify either of these where the Government believes it can extract further value from the facility beyond the term of the contract, bearing in mind that the term is for the facility’s expected useful life. Either should also lead to better pricing, the extent of which will depend on the service provider’s assessment of the facility’s anticipated market value at the end of the contract.

Between the two choices, an option to purchase increases the Government’s flexibility around how it manages sanitation in the future. Flexibility might be important as the Government may want to take advantage of technological advances which render the contracted TDF inefficient. An obligation to purchase locks the Government in to purchasing the facility (and the contract will need to provide for how to determine the facility’s market value). This decreases the Government’s flexibility, but would lead to better pricing than an option to purchase.

## 5.5 Complementary Measures

Complementary provisions relate to important but non-contractual elements of the scheme. These are the measures that Government should take to achieve the outputs of the contract. The complementary measures should not alter the ability of the service provider to carry out the contract, and should therefore not prevent the Government from holding the service provider accountable for results. Instead, complementary measures are things that would help make the contract run more smoothly—so can be thought of as optional, rather than essential elements of the scheme.

Complementary provisions include ‘access to finance’, ‘householder education’, and ‘institutional arrangements for contract management’.

### **Access to finance**

The Government shall enable the service provider to get access to finance for the capital costs that would be incurred by the service provider. Typically, such service providers are the Small and Medium Sized Enterprises (SMEs), who are unable to secure finance to provide the sanitation services. However, SMEs currently fill the service gap in the sanitation sector. As a result, lack of access to finance may limit the number of parties that would compete in a tender. In particular, it would rule out the SMEs, and other smaller providers.

There are several options to help potential service providers invest in the required capital equipment. Examples of such options include—working with banks to provide loans at low interest rates, promotion of microfinance, and have bankable contracts that are for the life of the asset.

### **Household education**

Households lack information on the benefits of good hygiene. As a result, they do not demand or use the sanitation services. The households would need to be educated on how to manage their facility in a way that is compatible with the collection of waste by the service provider, to ensure good hygiene, and prevent health and environmental hazards. Households would be educated on the need to use communal toilets instead of open defecation.

The education can be imparted by the service provider, or by the Government. It can also be a partnership to educate the households jointly.

### **Institutional arrangements for contract management**

Contract management requires building organisational capacity and establishing processes to guide the project team. Legal, financial, and transaction management skills are often lacking in the municipality organisations. The Government shall select a team of such experts (project team), who will be responsible to manage the contract. To guide the team to effectively manage the contract, the Government could issue guidelines (for example, contract management manual) that set out the process to be followed to perform their functions under the contract.

## Appendix A: Checklist

### Checklist for Procuring SLAs for Urban Sanitation

#### Designing the contract

- Project governance structure created. Key agencies involved.
- Project team created with relevant skills (economic, technical, legal, financial, public health, community liaison)
- Outcome identified (the public policy goal)
- Output identified (the service we are buying, expressed as a *service* not a facility)
- Likely technical option identified
- Stakeholders consulted about desired outcome, output and service levels
- Service levels defined (quality and quantity)
- System to measure actual performance against each service level defined
- Monitoring arrangement is credible to both parties
- Penalties or performance incentives linked to each service level
- Cost of output estimated
- Payment structure identified (who will pay and how they will pay)
- Key risks identified and allocated (including demand, payment, asset condition)
- Dispute resolution mechanism identified (with escalation through levels)
- Termination provisions agreed
- Contract drafted

#### Procuring the service provider

- Experienced external transaction adviser engaged (if needed)
- Market soundings indicate bidder interest
- Government has obtained site, permits etc. (if applicable)
- Qualification criteria (technical and financial) defined
- Expressions of interest reviewed and bidders meeting the qualification criteria pre-qualified
- Bid documents prepared:
  - Information memorandum
  - Output specifications



## Checklist for Procuring SLAs for Urban Sanitation

- Instructions to bidders
- Evaluation criteria
- Draft contract

Proposals evaluated and ranked based on evaluation criteria, with preferred bidder identified

Contract signed with preferred bidder (or next-ranked bidder if negotiations with preferred bidder fail)

## Managing and enforcing the contract

Contract management team created with relevant skills (emphasis on technical and legal), with some continuity in membership from the project team

Processes established to monitor service provider performance using the monitoring mechanisms under the contract and against the service levels set out in the contract

Contract management team follows contract management process

Enforcement tools utilised as necessary with emphasis on maintaining the government-service provider relationship



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