

# Step 7

## Improve institutions

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*Scheduled desludging requires an institution with technical and managerial capacity to deliver the service. An existing institution should be considered to be appointed as the main service provider besides the existing water utility. The organizational structure should match the needs of the scheduled desludging operation, as well as the amount and competence of the personnel. There needs to be an institution with the role to regulate the scheduled desludging operation.*

### 7.1 ASSIGNING EXISTING INSTITUTION

Since scheduled desludging is to be required by law, it is likely there will be a large number of septic tanks to be served in the city. Medium to large cities in Indonesia, such as Solo, Balikpapan, Medan, Bandung, Surabaya, and Makassar, require their scheduled desludging service to cover hundreds of thousands or even millions of septic tanks. Correspondingly, a scheduled desludging service must be managed by an institution that has the capacity and experience to serve a large number of customers. Not only to do the desludging operation in thousands of buildings, but just as important is to manage the service billing.

Most cities have an institution that provides on-demand desludging service or operation of the septage treatment plant. There are also cities with an institution to provide wastewater service using a sewerage system. As long as the institution has the capacity and experience to serve thousands of buildings, it can be considered for appointment as the main service provider for the scheduled desludging scheme. The main service provider is the one with authority to coordinate other services providers, particularly those from private sectors (see **Step 9: Involve partners**). By appointing an existing institution, the operation of scheduled desludging can share the available resources and facilities. Municipalities no longer need to provide additional resources and facilities as much as those for new institutions. However, the capacity of the existing wastewater institution can be the limiting factor to the level of service. This may cause the scheduled desludging operation to be implemented gradually. In the first years, scheduled desludging will only target a few buildings while the capacity of the service provider is strengthened.

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## 7.2 CONSIDER WATER UTILITY

The only municipal institution with capacity to serve tens of thousands of buildings may be the water utility. As an institution that has been around for years or even decades, the water utility may have offices, administration, financial systems, staff and facilities to support a scheduled desludging operation (see [Figure 7.1](#)). By appointing the water utility, the scheduled desludging scheme can piggyback on the existing billing system; it can be combined or merged with the water bill. In this case, a building would only receive one monthly bill to cover tariffs or fees for water and scheduled desludging services. Building owners will inevitably pay for scheduled desludging service if they want to maintain their subscription to water service.

### Assigning the scheduled desludging to a wastewater utility in the city of Makassar (Indonesia)

The City of Makassar (South Sulawesi, Indonesia) launched a scheduled desludging scheme in August 2013. The scheduled desludging operation is assigned by the city government to an existing institution, the Technical Implementation Unit of the Wastewater Management Office (UPTD PAL, or *Unit Pelaksana Teknis Dinas – Pengelolaan Air Limbah*). UPTD PAL, with a total of 22 personnel, is led by a head who oversees four divisions which are responsible respectively for sewerage system, septage treatment, community-based system, and monitoring. The scheduled desludging operation is put under the septage treatment section.



The UPTD PAL was involved in the planning and preparation of the scheduled desludging scheme since it was introduced in Makassar in 2012 by IUWASH program. Their role included preparing a scheduled desludging concept and advocating it to the city government and other city leaders. In August 2013, UPTD PAL conducted a survey to 300 selected households. Almost all UPTD PAL staff were involved in the preparation processes to inform households, define service areas, conduct the surveys, designing operations, develop database with Geographic Information System (GIS) data. On the other hand, IUWASH program provided technical assistance to prepare SOPs, tariff modeling, improve customer database, and prepare the business plan.

Considering its capacity, UPTD PAL proposed to initiate the scheduled desludging operation only targeting 300 households in a housing estate. Besides conducting the desludging operation, UPTD PAL is responsible for collecting scheduled desludging service fees. They plan to add additional fleets, facilities and staff to support their future operation.

Not all water utilities can effectively manage a scheduled desludging operation. If the utility has less than 50% water service coverage, it is likely to be limited in access and capacity to incorporate the scheduled desludging scheme. Likewise, if the utility has more than 60% water service coverage, it should be considered.



**Figure 7.1** Many water utilities already use a management information system (MIS) where data of the subscribers are stored. Some MIS are integrated with geographic information systems (GIS) that show the spatial locations of the buildings. The scheduled desludging operation can benefit from the existing MIS and GIS.

The weaknesses of a water utility in managing scheduled desludging are:

- A water utility may prioritize their resources for their main and original assignment – the water supply service.
- A water utility may not have the capacity to conduct scheduled desludging operations.
- A water utility by regulation may be prevented from managing and delivering other services.

If a water utility and other existing institutions are considered not ready to manage the scheduled desludging operation, a new institution can be formed. More energy and time are needed, but there are several advantages to establishing a new institution. With new institutions, the organization can be designed in a way that is suitable to a scheduled desludging operation; The organization is not limited to methods that are already owned or standardized in an existing institution. The formation of a new institution will also create momentum for improving sanitation services more thoroughly. In addition to desludging services, a new institution should also be assigned to operate septicage treatment and a sewerage system, if applicable. Such a multi-service institution offers more effective coordination between onsite and offsite systems. Utilization of resources will be more efficient and effective.

Assigning a scheduled desludging operation to either a water utility or wastewater utility will have advantages and disadvantages. Unlike a water utility that can combine scheduled desludging bill with water service bill, a wastewater utility does not have enough power to force building owners to pay a scheduled desludging bill on time. On the other hand, the water utility does not necessarily have sufficient technical capacity to carry out the desludging operation. Therefore, collaboration of these utilities may offer a more effective and efficient scheduled desludging operation. For instance, the wastewater utility may conduct the technical operation while the water utility provides supports for customer and billing management.

### 7.3 SEPARATE FUNCTION TO REGULATE

The achievement of goals and sustainability of scheduled desludging scheme is not only determined by the service provider. It is important in a good scheduled desludging or any wastewater institutional setup that the service provider is supported by other institutions with roles to:

- determine implementation policies,
- control the use of septic tanks,
- set target of scheduled desludging service coverage,
- enforce the obligation to desludge septic tanks and
- supervise the operational performance.

It is possible that one institution will carry out more than one task. For example, the agency of public works is given the roles to control the use of septic tanks and to supervise the performance of scheduled desludging operation.

The service provider must not carry out any of the roles above. A separate institution must be appointed to determine the policies or supervise scheduled desludging operational performance. By separating roles of regulator and service provider, conflicts of interest will be prevented. This principle must be maintained in the proposed scheduled desludging institutional framework.

Tasks within a service provider of scheduled desludging.

Tasks General	Tasks Finance
1. General administrative	1. Budget and expenditure planning
2. Secretarial duties	2. Bookkeeping
3. Procuring equipment and materials	3. Billing management
4. Office management	4. Receiving payments
5. Controlling assets	5. Cost verification
6. Managing work partners	6. Payment or gratuity assignment
7. Public relations	7. Financial supervision and audit
8. Legal affairs	8. Evaluating financial performance
9. Staffing	
Customer	Technical
1. Marketing & promotions	1. Scheduling operation
2. Customer acceptance	2. MIS operationalization
3. Customer verification & mapping	3. Carrying out operations
4. Managing customer data	4. Monitoring operations
5. Customer relations	5. Fleet maintenance
6. Handling complaints	6. Controlling environmental impacts
7. Enforcement	7. Occupational health and safety

## 7.4 THE TASKS DEFINE THE STRUCTURE

The organizational structure of a scheduled desludging service provider must be arranged to fit the tasks. Not only technical tasks, but also administrative, customer and financial management tasks (see the following table). A wastewater utility that offers a scheduled desludging service will have a different organizational structure from a utility that offers several wastewater services. The organizational structure also differs between utilities with large and small operations, or between utilities with authority to manage finances and not. In the end, all the necessary tasks should be included in the organizational departments or units of a service provider.

The number of staff in a scheduled desludging service provider will be adjusted according to the scale of the operation. Not always directly proportional, but generally the more the number of targeted buildings and the wider the service area, the greater the number of staff is required.