



Key Performance Indicators (KPIs) to professionalise FSM services in Bangladesh

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Cite this document as: SNV Bangladesh, *Key Performance Indicators (KPIs) to professionalise FSM services in Bangladesh*, Dhaka, SNV Bangladesh, 2021.

Acknowledgements: This report was conducted by LightCastle Partners under the guidance of Constanze Windberg (Sanitation Business Advisor), Tanvir Chowdhury (Sanitation Business Advisor), Shahidul Islam (Governance Advisor SNV), Marc Pérez Casas (WASH Sector Leader SNV) and other contributions by SNV team.

Cover photo: FSM Services by Khulna City Corporation.

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Disclaimer: The views expressed in this *unedited* report are those of the authors and do not necessarily reflect the views of SNV Netherlands Development Organisation. This *unedited* report has been made available to contribute to efforts to professionalise faecal sludge management services.

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March 2021

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Abbreviations

FS	Faecal Sludge
FSM	Faecal Sludge Management
JHE	Jhenaidah Paurashava
JAS	Jashore Paurashava
KPI	Key Performance Indicator
KCC	Khulna City Corporation
KUS	Kushtia Paurashava
LGI	Local Government Institutions
MoLGRD&C	Ministry of Local Government, Rural Development and Cooperatives
PFM	Public Financial Management
USHHD	Urban Sanitation and Hygiene for Health and Development

Executive summary

The KPI development report is the second deliverable under the SNV commissioned study titled “Analysis of Municipal Financial System and Development of Key Performance Indicators (KPIs) for FSM service”. This report is a continuation of the previous deliverable titled the “Public financial management for FSM services: A gap analysis and some recommendations” which elaborates on the existing bottlenecks across budgeting, reporting, performance and auditing in regard to the public financial management practices in the study intervened LGIs: Khulna City Corporation, Kushtia Paurashava, Jhenaidah Paurashava and Jashore Paurashava.

The gap analysis report identified lack of performance reporting as a major challenge across all the intervened LGIs. In order to mitigate the obstacle, the study team developed long term strategic objectives for three thematic functions across the FSM value chain: Emptying & Transport, Treatment & Disposal/Reuse of sludge and the overall Financial Health of FSM service. Based on the strategic objectives, the successes were defined and consequently the key performance indicators that reflect on the success criteria were formulated.

Thematic Function	Strategic Objective	Definition of success	KPI
Emptying & Transport	Faecal sludge in the containments within the jurisdiction of the LGI is emptied and transported in a safe manner with regularity.	1.1. Increase of area coverage/physical access	A.1 Penetration of FSM Service
		1.2 Increase of efficiency and demand for emptying services	A.2 Faecal Sludge Collection Ratio A.3 Application Response Efficiency A.4 Response Time
		1.3. Increase in customer care/ satisfaction	A.5 Customer Satisfaction
		1.4. Increase of safely disposed FS for further treatment	A.6 Safe Disposal
		1.5. Increase of OHS compliance in E&T services	A.7 OHS E&T
		1.6. Increase of inclusion	A.8 Inclusion
Treatment & Disposal/ Reuse	All collected sludge is treated and disposed or reused in accordance to legal requirements.	2.1. Increase of efficiency	B.1 Optimum FSTP Operation Range
		2.2. Increase of legal environment compliance of end products	B.2 Water Effluent Quality B.3 Treated Sludge Quality
		2.3. Increase of OHS compliance	B.4 OHS Treatment
Financial Health of FSM Service	FSM services are financially viable.	3.1. Increase of Profitability	C.1 Operating Profit Margin C.2 Net Profit Margin
		3.2. Liquidity	C.3 Current Ratio

Upon formulation of the KPIs, the target setting framework was established in accordance to the current level of performance across each LGIs and the long-term vision of the respective institute. A monitoring and evaluation framework is also established that falls under the jurisdiction of the FSM focal person across each LGI i.e. the conservancy officer. The evaluation of KPIs can either be as pass/fail for the compliance-based indicators or as degree of targets met (significantly surpassed, surpassed, target met and target failed) for general indicators.

The report also elaborates on the data sources for tabulation, the reporting process, compliance setting and measures that need to be ensured in order to establish a robust KPI system across each LGI. In the short term, it is important for LGIs to strategize their long-term goals, test the KPIs and add/remove or modify any KPI from the existing list. In the mid-term, the LGIs need to develop a robust and dynamic KPI system and finally, extend the KPI system across other departments in the long term.

In conclusion, this document will help LGIs towards adoption and implementation of a robust performance management framework that would in turn help local governments to map the challenges across the FSM value chain further while also ensuring accountability among the service team through a structured reporting system.

1 Introduction

1.1 Background of the Study

The study "Analysis of Municipal Financial System and Development of Key Performance Indicators (KPIs) for FSM service", commissioned by SNV, aims at identifying gaps in Public Financial Management of Faecal Sludge Management (FSM) Services for six local government institutions (hereafter referred to as LGIs) in Bangladesh, namely Khulna, Kushtia, Jhenaidah, Jashore, Benapole & Gazipur. Of the six intervention areas, Benapole Municipality and Gazipur City Corporation do not currently offer FSM services to its citizens but have plans to do so in the future.

The study focuses on the following two broader objectives:

- 1) Review & analyse existing financial practices within the LGIs and identify gaps and barriers within the LGIs financial system and provide recommendation for improvement of their financial management capacity for FSM services.
- 2) Develop appropriate performance measures/indicators for FSM services in order to enable the LGIs to measure department achievement while having a robust and applicable result/outcome-based monitoring system.

In the course of the first phase of the study addressing objective 1 (gap analysis), the current financial management processes and procedures followed by the selected LGIs were analyzed via secondary research and field data collection through in-depth interviews and focus group discussions with all the relevant departments and personnel of the LGIs in the respective intervention areas.

This report addresses the second objective of the project, i.e. to develop Key Performance Indicators (hereafter referred to as KPIs) to be applied/tested in the six intervention areas. The developed KPIs focus on achieving strategic goals in the following thematic functions: Emptying & Transport, Treatment & Disposal/Reuse and Financial Health of FSM services. The strategic goals developed for each function are provided below in Figure 1.



Figure 1: Strategic Goals for selected thematic functions of FSM service across a LGI.

1.2 Summary of Gap Analysis

The strategic goals for KPIs were developed based on the findings from the first deliverable of the study: The gap analysis report on Public Financial Management processes of the intervened local governments. This section summarizes the findings from the first deliverable and lays the foundation for the finalization of the KPI list in order to improve the performance of FSM service by a LGI.

The national policies and guidelines issued by Ministry of Local Government, Rural Development and Co-operatives (MoLGRD&C) provides a general guideline of financial management processes which allows LGIs, across all intervened areas, to tailor and customize the management process in accordance to their local needs. Based on the field data and international best practices, the following broader PFM gaps were identified in the intervened LGIs.

Structural Gaps: At a structural level, LGIs were found to have limited revenues from local resource mobilization (local government taxes and income), which led to a dependence on loans/grants from the central government or development partners, limiting their decision-making capacity.

Budget Formulation: Actual budget formulation did not utilize any projection models, but rather used incremental budgeting, where an arbitrary increase was estimated based on historical trends. Such activities have an adverse impact on the financial discipline of the LGIs.

Accounting and Financial Reporting: All the studied LGIs were found to practice single-entry bookkeeping, which is an outdated form of accounting that is prone to errors when compared to a double-entry system. Furthermore, none of the LGIs applied any cost accounting or management accounting methods, focusing instead on financial accounting, which is solely concerned with the reporting of financial transactions and the financial position of the LGI to its stakeholders.

Performance Reporting: The concepts of cost accounting and management accounting are integral to the concept of internally allocating costs to a particular service (in this case, FSM) and seeks to empower management personnel with performance measurement data, that would help improve the operational efficiency of FSM services. However, the concept of internal performance management and reporting (through Key Performance Indicators, KPIs) is presently neglected across the LGIs.

In fact, the Government of Bangladesh initiated introduction of 'Government Performance Management System' (GPMS) in 2014, to enhance the effectiveness of public policies and service delivery. In 2015, Cabinet Division started signing the Annual Performance Agreement (APA) with the ministries/divisions under the GPMS. The APA provides a summary of the most important results that a ministry/division expects to achieve during the financial year. This document contains not only the agreed objectives, but also performance indicators and targets to measure progress in implementing them. The APA plays a vital role in ensuring transparency, accountability and dynamism in the organizations. By now, the APA has been expanded to all ministries/ division, national agencies, City Corporations and WASAs. Yet to be introduced for the Paurashavas. Respective Secretaries of the ministry/ divisions sign the APA with the line agencies and organisations they are responsible for. Therefore, the integration of internal performance-based indicators (KPIs) with the APA would certainly increase the accountability between line Ministry and LGIs.

Auditing: City Corporation usually undergo internal auditing in order to evaluate their financial management practices while Paurashavas, in contrary, do not audit internally. However, all LGIs underwent external auditing on an annual basis performed by the Comptroller and Auditor General's office (the Supreme Audit Institution of Bangladesh under the government). This was achieved thanks to mandating of external audits and linking successful external audit completion to Annual Development Program (ADP) pay-outs from the central government for the following year. However, the Audit Reports and findings were not publicly disseminated by the LGIs, limiting accountability to the public.

LGI specific gaps regarding PFM are provided in below Table 1, which maps the major processes that need overhaul in the public financial management practices regarding FSM services. Lack of performance reporting has been identified as a major bottleneck in the existing management of FSM service across all LGIs. As per the gap analysis report, the primary reason behind weak performance reporting is the absence of a robust performance evaluation framework and also the lack of dedicated personnel to oversee the operations of the FSM service.

Based on the findings from the gap analysis report, the study team developed strategic objectives for the three thematic functions of the FSM service: Emptying & Transport, Treatment & Disposal/Reuse and Financial Health of the FSM service, to ensure an operationally efficient and financially sustainable FSM model. Once the strategies were finalized, the definitions of successes for each strategy were developed and the finalized list of KPIs was prepared, which enabled the formulation of a robust performance monitoring framework that was non-existent in all the LGIs previously. The following chapter elaborates on the KPI finalization process for the intervened LGIs.

Table 1: Summary of Key Gaps across LGIs

PFM Area	Khulna	Kushtia	Jhenaidah	Jashore
Budgeting	<ul style="list-style-type: none"> ■ Although citizens cannot participate directly in the budget formulation process, there is the legal provision for their ward representatives to highlight demands of the local citizens in the budget formulation process. However, in practice, the Mayor wields significant legislative and executive power and to provide him/her the authority to take all major financial decisions. As a consequence, it cannot be guaranteed the existing setup prevents from politicized budgeting. This means that the stages of stakeholder input (Step 1) and needs assessment (Step 4) from the Budget Cycle are only partially covered in KCC's processes. ■ Budget formulation at the LGI is still performed at a rudimentary manner, with incremental budgeting (application of a set arbitrary proportional increase based on historical trends to the projected incomes and expenditures in the following year) being the standard practice as opposed to the use of a robust income and expenditure projection model. The customer database is not being considered for FSM service projections. This means that the stages "Review Development" (Steps 5 and 6) and "Monitor Results" (Step 7) from the Budget Cycle are mostly overlooked at KCC. ■ Unrealistic budget formulation often leads to revision of the budget towards the end of the Fiscal Year, which adversely impacts financial discipline. Hence, the final step ("Adjust as necessary") of the Budget Cycle is performed in an arbitrary manner. 	<ul style="list-style-type: none"> ■ Budget formulation does not adequately take into account citizen demands/needs and there is no central strategy in regard to planned service provision, meaning that the stages of stakeholder input (Step 1) and needs assessment (Step 4) from the Budget Cycle are only nominally covered. ■ Budget formulation at the LGI is still performed on the historical budget basis with an arbitrary increment based on personal evaluation. This means that the stages "Review Development" (Steps 5 and 6) and "Monitor Results" (Step 7) from the Budget Cycle are mostly overlooked and the final step ("Adjust as necessary") of the Budget Cycle is performed in an unstructured manner. ■ Since the budget does not foresight any unique cost heads for the upcoming fiscal year, deficits may lead to operational bottlenecks that may hinder the service quality. 	<ul style="list-style-type: none"> ■ Budget formulation does not adequately take into account citizen demands/needs and there is no central strategy in regard to planned service provision, meaning that the stages of stakeholder input (Step 1) and needs assessment (Step 4) from the Budget Cycle are only nominally covered. ■ Budget formulation at the LGI is still performed on the historical budget basis with an arbitrary increment based on personal evaluation. This means that the stages "Review Development" (Steps 5 and 6) and "Monitor Results" (Step 7) from the Budget Cycle are mostly overlooked and the final step ("Adjust as necessary") of the Budget Cycle is performed in an unstructured manner. ■ Since the budget does not foresight any unique cost heads for the upcoming fiscal year, deficits may lead to operational bottlenecks that may hinder the service quality. 	<ul style="list-style-type: none"> ■ Despite provisions for wider stakeholder participation, the Mayor wields significant legislative and executive power and to provide him/her the authority to take all major budgetary decisions. At the same time, there is no central strategy in regard to planned service provision, meaning that the stages of stakeholder input (Step 1) and needs assessment (Step 4) from the Budget Cycle are only mostly missing. ■ Budget formulation at the LGI is still performed on the historical budget basis with an arbitrary increment based on personal evaluation. This means that the stages "Review Development" (Steps 5 and 6) and "Monitor Results" (Step 7) from the Budget Cycle are mostly overlooked and the final step ("Adjust as necessary") of the Budget Cycle is performed in an unstructured manner. ■ Unrealistic budget formulation often leads to revision of the budget towards the end of the Fiscal Year, which adversely impacts financial discipline.

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Accounting and Financial Reporting	<ul style="list-style-type: none"> ■ Single entry bookkeeping is practiced in KCC, which is an outdated form of accounting that is prone to errors and limits the generation of useful financial statements such as the Trial Balance and the Statement of Financial Position (balance sheet). ■ Cash-based accounting is practiced in KCC as opposed to the accrual-based accounting. Accrual-based accounting is deemed the better choice as it regards transactions as independent of the movement of cash, in line with accepted accounting conventions. ■ FSM services fall under the jurisdiction of multiple LGI departments including most prominently the Conservancy department and the Engineering department. However, due to the largely siloed functioning of the departments, the introduction of management accounting cannot be achieved without harmonizing the financial practices of both these departments within KCC. 	<ul style="list-style-type: none"> ■ KUS disburses FSM payments through its general account and does not maintain separate expense headers. This results in lack of clarity regarding the overall financial performance. ■ Trial Balance and the Statement of Financial Position (balance sheet) cannot be prepared for the FSM service due to single entry bookkeeping practices. ■ Cash-based accounting is practiced in KUS as opposed to the accrual-based accounting. Accrual-based accounting is deemed the better choice as it regards transactions as independent of the movement of cash, in line with accepted accounting conventions. ■ During the course of the study, there was no conservancy officer appointed. This means major responsibilities of accounting and reporting were not met at the time of the field visit. ■ Unlike KCC, KUS does not utilize multiple checks and balances during the FSM service requisition and service provision to ensure additional integrity. 	<ul style="list-style-type: none"> ■ JHP disburses FSM payments through its general account and does not maintain separate expense headers. This results in lack of clarity regarding the overall financial performance. ■ Trial Balance and the Statement of Financial Position (balance sheet) cannot be prepared for the FSM service due to single entry bookkeeping practices. ■ Cash-based accounting is practiced in JHP as opposed to the accrual-based accounting. Accrual-based accounting is deemed the better choice as it regards transactions as independent of the movement of cash, in line with accepted accounting conventions. ■ Unlike KCC, JHP does not utilize multiple checks and balances during the FSM service requisition and service provision to ensure additional integrity. 	<ul style="list-style-type: none"> ■ JAS does not maintain individual bank account for receipts of tariffs from FSM services, and instead performs expense operations through the Paurashava's General Bank account. ■ Single entry bookkeeping is practiced in JAS, which limits the generation of useful financial statements such as the Trial Balance and the Statement of Financial Position (balance sheet) ■ Cash-based accounting is practiced in JHP as opposed to the accrual-based accounting. Accrual-based accounting is deemed the better choice as it regards transactions as independent of the movement of cash, in line with accepted accounting conventions. ■ Unlike KCC, JAS does not utilize multiple checks and balances during the FSM service requisition and service provision to ensure additional integrity.
Performance Reporting	<ul style="list-style-type: none"> ■ KCC has introduced APA since FY2015-16, and progress report is submitted quarterly and yearly to the LGD and upload in its website. Since FY2017-18, KCC included Faecal Sludge Collection Ration (FSCR) as one of the Performance Indicator. However, there is no Performance Indicator for access to safe toilet or disposal/ treatment of faecal sludge included in the APA. ■ However, there is no internal mechanisms to measure operational efficiency (financial or non-financial performance indicators) of the services. 	<ul style="list-style-type: none"> ■ Although APA is about to be introduced in KUS, there is no internal mechanisms to measure operational efficiency (financial or non-financial performance indicators) of the services. In fact, ERAS submits quarterly narrative report to Paurashava on treatment and re-use of faecal sludge, but no measurement of performance is practiced, and lease fee is an annual fix amount without any variation based on performance. 	<ul style="list-style-type: none"> ■ Although APA is about to be introduced in KUS, there is no internal mechanisms to measure operational efficiency (financial or non-financial performance indicators) of the services. In fact, AID Foundation submits a monthly financial statement to Paurashava. This statement is mainly used by the accounts section to calculate the amount Paurashava is supposed to receive. This is not a being used as a management tool to measure performance, and there are no contractual binding performance indicators set in the service lease agreement. 	<ul style="list-style-type: none"> ■ Although APA is about to be introduced in JAS, there is no internal mechanisms to measure operational efficiency (financial or non-financial performance indicators) of the services. In fact, the Conservancy Section, who is operating the emptying service, is not producing any periodic report.

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Auditing</p>	<ul style="list-style-type: none"> ■ While auditing is performed both internally by KCC and externally through the Comptroller and Auditor General’s office, external audits through a separate third-party audit firm is not performed. This leaves the room open for tacit collusion between LGI staff and internal auditors or appointed external auditors. ■ In the case of external audits from the LRAD or third-party auditors, there was no practice of audit conferences with public participation. This is considered best practice and allows for greater scrutiny and transparency by citizens into local government affairs. 	<ul style="list-style-type: none"> ■ The LGI needs to hire independent audit firms to perform the internal audits per year. This will omit any biases that may occur. ■ Due to a lack of KPIs, the audits usually present the landscape of the financial performance but do not provide insights on the quality of financial management. ■ In the case of external audits from the LRAD or third-party auditors, there was no practice of audit conferences with public participation. This is considered best practice and allows for greater scrutiny and transparency by citizens into local government affairs. 	<ul style="list-style-type: none"> ■ JHP needs to introduce annual auditing of JHP for better monitoring and management. ■ Due to a lack of KPIs, the audits usually present the landscape of the financial performance but does not provide insights on the quality of financial management ■ In the case of external audits from the LRAD or third-party auditors, there was no practice of audit conferences with public participation. This is considered best practice and allows for greater scrutiny and transparency by citizens into local government affairs. 	<ul style="list-style-type: none"> ■ While auditing is performed externally through the Comptroller and Auditor General’s office, external audits through a separate third-party audit firm is not performed across the LGI. This leaves the room open for tacit collusion between LGI staff and internal auditors or appointed external auditors.
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2 KPI Selection

2.1 KPI Definitions and Rationale

Key performance indicators are financial and non-financial indicators that organizations use in order to estimate and fortify how successful they are, aiming at previously established long-term goals.¹ A dynamic KPI system relies on an evaluation cycle (see Figure 2) in order to ensure effective and efficient management of a service.

The first component of the KPI evaluation cycle is the **Governance** of the organizational objective. The authorities require to develop a strategy and map the measurement tools through which success of the objective(s) may be determined. The governance component of the cycle is dependent upon the formulation of **strategic KPIs**, the second component, through which the success of the objective may be determined based on the set targets by the authorities and actual performance by the implementation unit. Using the strategic KPIs, the authorities will be able to make **effective decisions**, the third component of the cycle, on the overall process management, which in turn would lead to better governance and monitoring for the authorities.

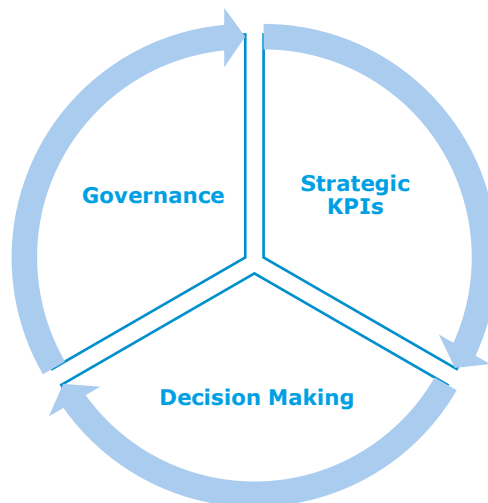


Figure 2: KPI Evaluation Cycle

2.2 The need for FSM Service KPIs in LGIs

Based on the gap analysis of the study (Part 1), the intervened LGIs seemed to lack an effective governance and decision-making process which in turn affects the overall quality of FSM services provided. In order to ensure a proper evaluation mechanism, the LGIs need to adopt a dynamic KPI evaluation cycle with periodic evaluation of the outcome against set targets in order to help the service sustain. An introduction of strategic KPIs would ensure proper flow of information to make effective management decisions while also providing insights on the quality of service provided by the implementation unit, i.e. the conservancy department in this regard.

In order to introduce a KPI evaluation cycle, it is important to first map strategic objectives for different areas and assign measurable success definitions to each objective. The success definitions will be measured against one or several KPIs which in turn reflect the performance of the FSM service of respective LGIs. The KPI selection process is highlighted in the following section.

2.3 Selection of FSM Service KPIs

The formulation of strategic objectives across each thematic function sets the long-term goals for the sustenance of FSM service across each LGI. Once the definition of successes is

¹ Velimirovic, Dragana & Milan, Velimirović & Rade, Stanković. (2011). Role and importance of key performance indicators measurement. Serbian Journal of Management. 6. 10.5937/sjm1101063V.

identified, the key indicators to reflect on the outcomes are formulated in order to create a direct relationship between end goal and present tasks.

The strategic objectives, definitions of successes for each objective and the corresponding KPIs produced for each thematic function are provided in the Table 2 below:

Table 2: Strategic objectives, success definitions and KPIs per thematic function

Thematic Function	Strategic Objective	Definition of success	KPI
Emptying & Transport	Faecal sludge in the containments within the jurisdiction of the LGI is emptied and transported in a safe manner with regularity.	1.1. Increase of area coverage/physical access	A.1 Penetration of FSM Service
		1.2 Increase of efficiency and demand for emptying services	A.2 Faecal Sludge Collection Ratio A.3 Application Response Efficiency A.4 Response Time
		1.3. Increase in customer care/satisfaction	A.5 Customer Satisfaction
		1.4. Increase of safely disposed FS for further treatment	A.6 Safe Disposal
		1.5. Increase of OHS compliance in E&T services	A.7 OHS E&T
		1.6. Increase of inclusion	A.8 Inclusion
Treatment & Disposal/ Reuse	All collected sludge is treated and disposed or reused in accordance to legal requirements.	2.1. Increase of efficiency	B.1 Optimum FSTP Operation Range
		2.2. Increase of legal environment compliance of end products	B.2 Water Effluent Quality B.3 Treated Sludge Quality
		2.3. Increase of OHS compliance	B.4 OHS Treatment
Financial Health of FSM Service	FSM services are financially viable.	3.1. Increase of Profitability	C.1 Operating Profit Margin C.2 Net Profit Margin
		3.2. Liquidity	C.3 Current Ratio

3 Monitoring and Evaluation of KPIs

3.1 Targeting Setting Process

Once the KPI list has been finalized, it is important to set targets based on the current capacity and performance of LGIs and the desired future performance. Each LGI will develop their scoring and target model according to their local situation and expectations for FSM services. The primary supervision role of the KPIs falls under the jurisdiction of the conservancy department with the **conservancy officer** being the focal personnel. Thus, the target setting for each city will be based on the discussion with the conservancy officer and the historical performance of the FSM service. Once the historical performance and the present context is analysed together by the LGI and study team, the following framework will be used to set targets for each indicator.

Table 3: Target Setting of KPIs

Group	Indicators	KPI	Target Setting Criteria
Emptying & Transport	1.1. Increase of area coverage/physical access	A.1 Penetration of FSM Service	The ideal target will be 100%, however, based on an LGI's current penetration ratio and growth rate, the new target will be finalized with a goal of reaching 100% in short-mid term.
	1.2 Increase of efficiency and demand for emptying services	A.2 Faecal Sludge Collection Ratio	Based on the historic accumulated collection rate, the target will be set with an expectation of meeting 100% of the target in the mid term.
		A.3 Application Response Efficiency	The target should be set at 100% in order to ensure all the application requests are converted to services. In case of failure to provide a service, the reasons should also be noted in order to take these into considerations for future target setting.
		A.4 Response Time	Upon calculating the historic response time, a maximum lead time will be set for the service providers. Exceeding that lead time would result in failure at meeting the target
	1.3. Increase in customer care/satisfaction	A.5 Customer Satisfaction	Upon evaluating the average customer satisfaction, a minimum of 10% improvement should be assigned as target for each LGI.
	1.4. Increase of safely disposed FS for further treatment	A.6 Safe Disposal	Target should be 100% and the outcome will be considered as a failure if lower number is achieved.
	1.5. Increase of OHS compliance in E&T services	A.7 OHS E&T	100% of delivered services should comply to OHS standards.

	1.6. Increase of inclusion	A.8 Inclusion	Analyse the historical proportion of LIC customers. Calculate the organic growth rate and set an inorganic rate in addition to the organic growth rate.
Treatment & Disposal/ Reuse	2.1. Increase of efficiency	B.1 Optimum FSTP Operation Range	Target will be set based on the technological capacity of the FSTPs in each LGI.
	2.2. Increase of legal environment compliance of end products	B.2 Water Effluent Quality	Comply 100%
		B.3 Treated Sludge Quality	Comply 100%
	2.3. Increase of OHS compliance	B.4 OHS Treatment	Comply 100%
Financial Health of FSM Service	3.1. Increase of Profitability	C.1 Operating Profit Margin	Looking at the existing and historic status of operating margin, the study team will calculate the annual organic growth rate and add an inorganic goal (additional 5-10% at least) as a new target based on the discussion with LGIs.
		C.2 Net Profit Margin	Looking at the existing and historic status of net profit margin and taking into account the CAPEX recovery amount/future investment needs, the target will once again be set based on the organic growth plus inorganic goal.
	3.2. Status of Liquidity	C.3 Current Ratio	The current ration needs to be above 1. A good current ratio is between 1.2 to 2, which means the LGI has 2 times more current assets than liabilities to covers its debts. The current ratio target will be finalized for each city.

3.2 Monitoring and Evaluation of KPIs

3.2.1 Monitoring of KPIs

The frequency of monitoring each indicator varies from monthly to annual basis depending on the availability of the documents, and the need for evaluation. The conservancy department, as the main responsible party for FSM services and KPI reporting, will require constant support from accounts and engineering department (mechanical) in order to collect data and monitor the KPIs.

An important amount of data which feeds the KPIs is derived from the digitalized information management systems for FSM, developed by SNV and used by the cities. Particularly the customer database and the Integrated Municipal Information System (IMIS) can be used for regular capturing and monitoring of the KPIs.

KPIs that need to be measured on a monthly basis should be shared with the secretary or Mayor for performance evaluation. Quarterly KPIs should be prepared and shared in the General Council Meetings (GCM) in order to update the stakeholders on the financial health and quality of FSM service. The annually evaluated indicators should be submitted alongside the annual report on the status of FSM service by the LGI. A comprehensive strategic

discussion should follow upon submission of the annual report in order to re-strategize on the goals and targets.

3.2.2 Evaluation of KPIs

The LGIs need to form an evaluation board or assign authoritative personnel to evaluate the quality of FSM service against the specified indicators. Upon completion of a certain timeframe, the evaluation will come down to either of four following outcomes and associated actions that need to be taken (see Table 4).

Table 4: Evaluation outcomes and associated course of actions.

Evaluation Outcome	Follow up course of action
Target Surpassed Significantly	If an indicator shows that the target has been surpassed significantly, it means the original target was under evaluated. Major components that have been overlooked need to be identified and readjusted for the future time frame.
Target Surpassed	Surpassed targets would usually mean that the service team has excelled beyond expectations or could also refer to the targets being a little undervalued.
Target Met	It means the target set has been realistic and achievable. Similar practices need to be ensured for future time frame.
Target Failed	Failure of meeting a target could either indicate over valuing from the evaluators end, or under performance from the implementer. In such a case, it is important for the LGI to map the reason via reconsidering the set indicator while also taking the implementer’s historical quality of performance into account.

3.3 Data Sources, Reporting and Compliances

For the monitoring and evaluation of KPIs, it is important to collect data from proper sources and also ensure the legitimacy of the provided documents. The conservancy officer may retrieve information from the accounts department for financial KPIs, engineering department (mechanical) for emptying & transport KPIs and from FSTP operator for treatment KPIs. Where applicable, data could also be retrieved from the digitized customer database or IMIS for analysis.

As mentioned in the previous section, the reporting needs to be done by the FSM focal person i.e. the conservancy officer. It is important for the LGI and its departments to cooperate with the personnel for a transparent and comprehensive reporting system.

Additionally, the OHS compliances needs to be finalized and the sub-subsequent indicators should only be defined as pass/fail for standardization and best practice. Certain measures also need to be taken in order to evaluate respective indicators and the LGIs need to adopt these measures before the implementation of the KPI framework.

Upon finalizing the target setting, monitoring & evaluation processes, data sourcing avenues, reporting protocols and compliance measures, the comprehensive list of KPIs is prepared (see tables below).

Table 5: Complete KPIs list for performance monitoring of FSM Services

#	ID	KPI Name	Indicator/ Measurements	Unit	Target (per city)	Frequency	Reporting responsibility & source	Comments
A Emptying & Transportation Indicators								
Strategic Objective: faecal sludge in existing containments is emptied and transported safe and regular.								
Increase of area coverage/physical access								
1	A.1	Penetration Ratio of FSM Service	Total number of containments reached in last 5 years/ Total number of containments which can be accessed by formal emptying service.	%	The ultimate target should be 100% across all cities, meaning the service has reached all the accessible containments. However, the short terms targets will be revised city by city.	Annually	FSM Focal Person Source: Customer Database/IMIS, GIS mapping.	The penetration ratio would calculate the reach of FSM service against the potentially reachable. This will help identify the efficiency and conversion rate from manual to mechanical emptying service.
Increase of efficiency of and demand for emptying services								
2	A.2	Faecal Sludge Collection Ratio (FSCR)	Total amount of faecal sludge emptied from containments/ Total estimated sludge to be emptied in accessible areas.	%	TBD% (depending of E&T and treatment capacity)	Annually	FSM Focal Person Source: Customer Database/IMIS, FS accumulation figures.	The formulas will reflect on the total sludge collected vs the total sludge that could have been collected across the city and is therefore a measure for demand and efficiency. FS to be emptied is calculated from FS accumulation rates.
3	A.3	Application Response Efficiency	Total services delivered / Total Applications.	%	Target 100% (Depending on ratio of accessibility)	Monthly	FSM Focal Person Source: Customer Database/IMIS, Sales receipts.	In order to know the number of customers that the service provider/LGI is losing due to unattendance, lack of capacity, inadequate access to containment, etc.
4	A.4	Response time	Average time between application and delivered service.	Hours	24 hours (depending on service delivery type, as on-demand, scheduled, emergency, etc.)	Monthly	FSM Focal Person Source: Customer Database/IMIS, Service receipts.	To allow cross Comparison between manual emptiers vs mechanical emptying.
Increase in customer care/ satisfaction								
5	A.5	Customer satisfaction	Average Customer Service Quality Rating.	Numerical	Highest rating	Annually	FSM Focal Person Source: Customer Database/IMIS, customer feedback.	Includes complaints and pricing satisfaction to provide a comprehensive idea on the service quality.
Increase of safely disposed FS for further treatment								
6	A.6	Safe Disposal	Total amount of FS (m ³) arrived at FSTP/ Total amount of collected FS (m ³).	%	100%	Monthly	FSM Focal Person Source: Customer Database/IMIS,	To triangulate the sludge collection process and ensure safe disposal of all sludge.

							FSTP logbook, Sales receipts.	
Increase of OHS compliance in E&T services								
7	A.7	OHS E&T	Amount of services delivered following OHS guideline/Total of services delivered.	%	Highest rating	Monthly	Conservancy Supervisor/ Officer. Source: random checks on OHS.	According to OHS guideline and transport protocol.
Increase of inclusion								
8	A.8	Inclusion	% delivered services in LICs and Slums / total delivered services.	%	TBD by city (city specific)	Annually	FSM Focal Person Source: Customer Database/IMIS.	Subsidized tariff and inclusiveness targets needs to be finalized by local government. This KPI is extracted/ calculated from FSCR.

B Treatment and Disposal or Reuse Indicators

Strategic Objective: All collected FS is treated and disposed, or re-used, according to legal requirements.

Increase of efficiency								
9	B.1	Optimum FSTP Operation Range	Annual Disposed FS/ Design Capacity of FSTP.	%	TBD per FSTP (depending on technology)	Quarterly	FSTP Operator. Source: Customer Database/IMIS, FSTP logbook, design parameters.	To understand the service capacity and scope for service expansion: if close to 100%, extension is needed; if under minimum, demand (disposal) needs to be increased.
Increase of legal environmental compliance of end products								
10	B.2	Water Effluent Quality	20% points for each of 5 parameters that comply ECR 1997.	%	100%	Quarterly	FSTP Operator. Source: WQ tests from Lab.	To ensure the FSTP is following environmental regulations (ECR 1997, Schedule 9 - Standards for Sewage Discharge). Regular monitoring, reporting quarterly linked with 4 seasonal variation. Testing frequency included in EMP (monitoring plan) approved by DoE.
			Parameter	Unit	ECR target	Weight		
			1) BOD ₅	mg/l	40	20%		
			2) Nitrate	mg/l	250	20%		
			3) Phosphate	mg/l	35	20%		
			4) TSS	mg/l	100	20%		
			5) Total coliform	number per 100ml	1000	20%		
			Temperature	°C	30	-		
11	B.3	Treated Sludge Quality	Solid KPIs (to be defined which parameters).	%	100%	Quarterly, or according to wetland unloading.	FSTP Operator. Source: SQ tests from Lab.	To ensure the FSTP is following environmental regulations. The solid KPIs apply for land filling. In case of reuse, the FS resource has to meet contractual agreed minimum qualities and responsibility is transferred to the Reuse production operator.

Increase of OHS compliance*								
12	B.4	OHS treatment	Average OHS compliance rating (to be defined by O&M manual of FSTP).	Numerical (or %)	Highest rating	Annually (monthly visits)	Conservancy Supervisor/ Officer. Source: random checks on OHS.	According to OHS guideline (OHS guideline does currently not include FSTP) or FSTP's O&M guideline.

C Financial Health Indicators
Strategic Objective: FSM services are financially viable.

Increase of profitability

13	C.1	Operating Profit Margin	Revenue - Operating Expenses (not including depreciation nor amortization) / Total Revenue.	%	>= 0 TBD based on the last four quarters monthly operating profit margins of each city. The organic growth rate will be calculated and a new target will be set based on the organic growth and annual service request growth.	Monthly (to measure internal health) and Annually (for annual budget)	Accounts Officer. Source: P/L Statement; Cumulative Sales; Receipt in a month; Salary Receipts; Repairs and Maintenance Logbook; Fuel Logbook; Treatment Plant; O&M logbook.	To understand profitability: percentage of revenue remaining after operating expenses that have been deducted from total revenue. For this KPI, operating expenses only include selling, general and administrative expense (SG&A), and other operating expenses. Definitions: <i>Organic Growth Rate</i> : The natural growth increase that takes place annually without external interventions. <i>Annual Service Growth Rate</i> : The natural annual increase in service requests.
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14	C.2	Net Profit Margin	Operating Income - (Interest + TAX) / Total Revenue.	%	TBD based on the monthly margins generated in last four quarters by each city, the organic growth rate and the annual service growth rate.	Monthly (for internal assessment)	Accounts Officer. Source: P/L Statement; Tax Payable (if any); Interest Payable; Depreciation Schedule.	To understand profitability and financial health of the FSM service.
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Liquidity

15	C.3	Current Ratio	Current Assets/ Current Liabilities.	Numerical	>= 1 TBD based on the average short-term assets and liabilities that a city had in its last four quarters.	Monthly (for internal assessment)	Accounts Officer. Source: Balance Sheet.	To understand liquidity: weights assets, such as cash, accounts receivables, inventory against current liabilities, including accounts payable.
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4 Recommendations and Way Forward

4.1 Recommendations

In order to successfully develop a comprehensive KPI based evaluation model, LGIs need to set strategic objectives in different timelines in accordance to the long-term goal. The figure below illustrates the course of actions that a LGI needs to adopt in order to successfully incorporate a robust KPI based evaluation system for its FSM service:

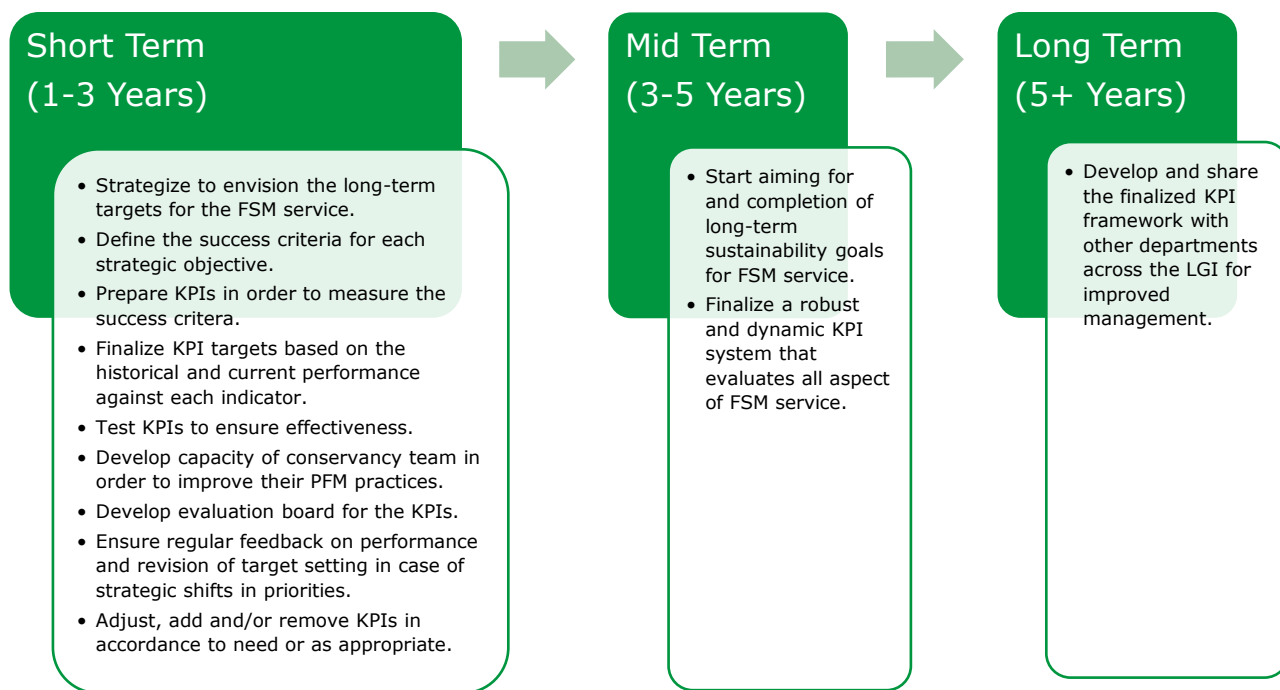


Figure 3: Recommendations for a robust KPI system in LGI.

4.3 Way Forward

For completion of this study, it would be required to share the list of KPIs with respective LGIs, finalize the targets for each city and test the KPIs for at least a quarter of a year in order to prepare a list of KPIs that will be ready to be implemented across the intervened LGIs.

The way forward for KPI finalization is provided in the figure below.

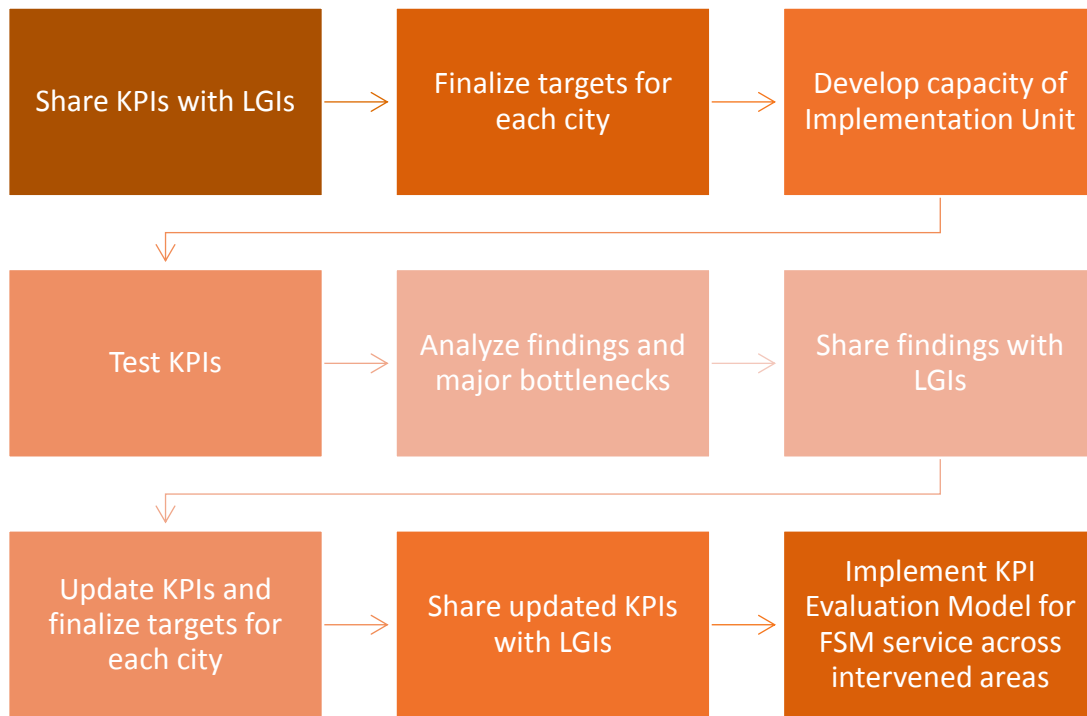


Figure 4: KPIs implementation way forward

5 Conclusion

While KPI-based evaluation framework is still a particularly new concept among LGIs across Bangladesh, the practice is absent not due to the lack of technical expertise but rather due to the lack of adoption and implementation interests among LGIs. In theory, this deliverable elaborates on a robust KPI-based framework. However, the success of its implementation is dependent upon the local government officials and their proactive endorsement and acceptance of this KPI-based evaluation model. Hence, it is equally important for local government officials to willingly partake in changing the existing practice and adopt a comprehensive performance-based management system.

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