

Strengthening Utility Services and Investment Planning:

Using the **EquiServe** Tool in Lusaka, Zambia

About the Tool:

The EquiServe tool is a web-based tool that helps decision-makers prioritize limited resources for sanitation interventions or investments that deliver safe sanitation services more equitably to all in a city, in a financially sustainable way. To learn more about the tool and to use it,

Please visit <https://www.equiserve.io>

User Category



Utility/ City
Government



Regulator/
Ministry



Development Finance
Institution



NGO
Private Player/
NGO



Use Case



Assess business
models



Plan and track
investments



Utility diagnosis
and support



Set and reform
tariffs



Manage and
benchmark sector
performance

Quick Read

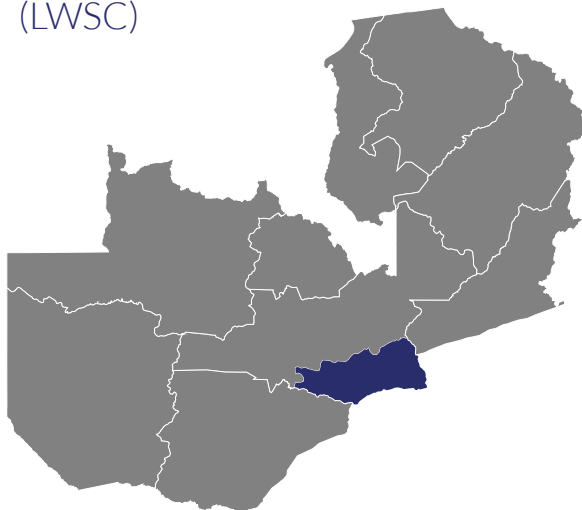
The table below summarizes LWSC's key needs and how those needs were addressed by using the EquiServe tool. In addition to these perceived needs, the tool also helped LWSC discover data gaps across the service chain for non-sewered sanitation, of which it had not been aware.

Perceived Needs	Evaluation of Needs	Outcomes
Ways to fulfill sanitation mandate and provide equitable services to the households that are not covered by sewers.	Evaluate different investment options for sewered and non-sewered sanitation	The EquiServe analysis showed that an investment plan focused on onsite sanitation interventions could help LWSC achieve more equitable outcomes for the poor and be more financially sustainable, compared to a sewer-only investment. LWSC is currently updating its strategic service plan.
Identify revenue generation mechanisms to sustain existing operations and new investments	Identify what tariff level is affordable for households while being financially viable for the utility	LWSC used the EquiServe analysis to help set and justify its tariff level to the regulator in 2021, for it's the 2022-2025 tariff cycle.
Organize the market for non-sewered sanitation beyond containment, and identify entry points for the utility	Evaluate if sanitation service delivery could be a viable business model for the utility, and what this means for engaging the private sector	The EquiServe analysis helped LWSC identify opportunities for entering into the pit emptying market that was almost entirely private-led, and business models to enter the emptying market with minimum investment.

User Profile



Lusaka Water Supply and Sanitation Company (LWSC)



Service Area:
**Lusaka Province,
Zambia**



Target Population:
**2.6 million
(Lusaka City)**



Mandate:
**water supply, sewered
sanitation, non-sewered
sanitation**



Reports to:
**National Water Supply and Sanitation Council (NWASCO,
national regulator)**

User Needs

The Lusaka Water Supply and Sanitation Company (LWSC) is the water and sanitation service authority in Lusaka Province, which comprises the capital city of Lusaka, surrounding towns, and rural areas. LWSC is one of the eleven Commercial Utilities (CUs) in Zambia, regulated by the National Water Supply and Sanitation Council (NWASCO), an independent regulatory body.

The introduction of the EquiServe tool coincided with a national reform movement to expand the mandate of all CUs beyond sewers. LWSC’s newly extended mandate into non-sewered sanitation services (NSS) meant that it had several critical questions, including:

- What are the different intervention and **investment options across the NSS service chain** beyond toilet access and containment? How could LWSC address fecal sludge emptying, transport, and treatment, and which new technologies could be used at each stage?
- How could LWSC **determine tariff levels** at which some of its expenditure on sanitation could be recovered, without overburdening customers?
- **Could sanitation become a viable, revenue-generating business for the utility?** What business models should they consider?

Key Constraints

When attempting to answer these questions, LWSC faced two additional constraints:

- **Availability of data on NSS:** While all CUs in Zambia are required to report on a set of performance indicators to NWASCO, these

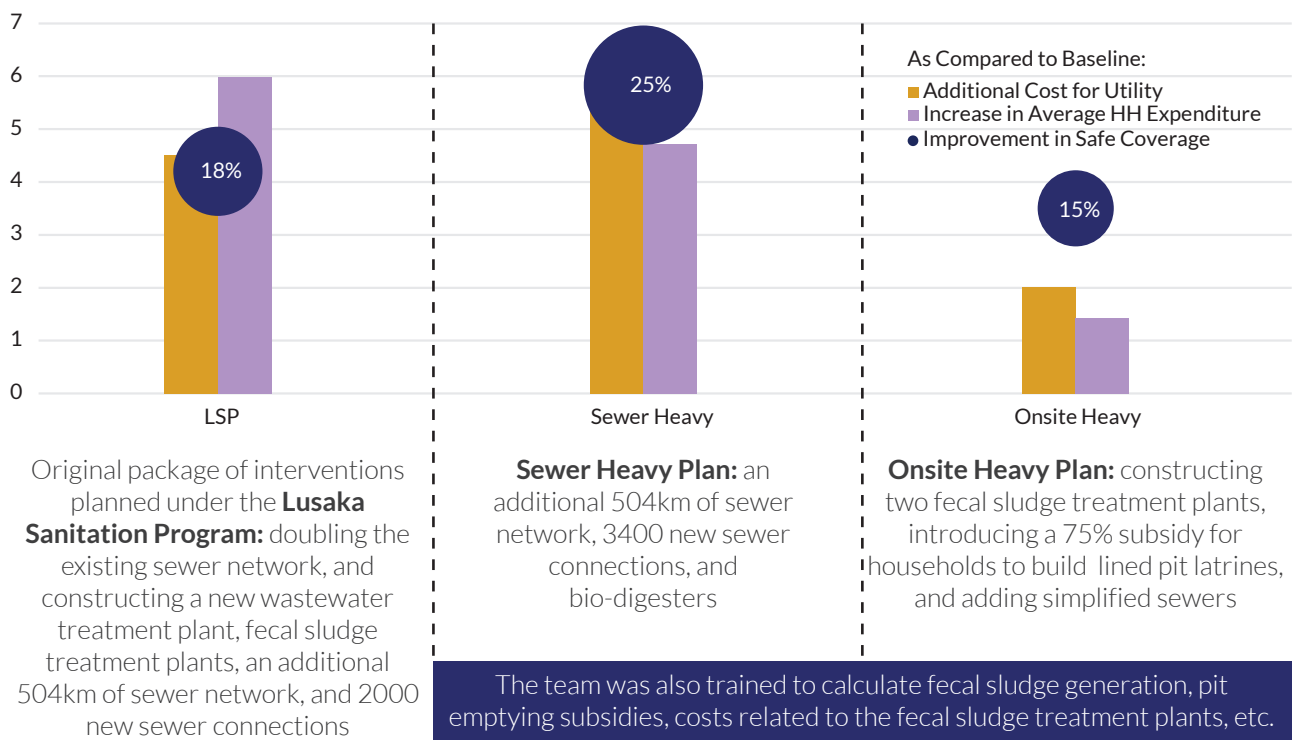
indicators focused on water supply and sewer sanitation, with very little NSS data required. NSS-related planning therefore relied on limited data.

- **Limited ability to raise tariffs for financing investments:** As all tariffs need to be approved by NWASCO to protect consumer interests, LWSC works within a limited range of possible tariff increases and relies instead on cost-effective business models for cost recovery.

How was EquiServe Applied?

Applying the EquiServe tool required the involvement of multiple stakeholders at the national and local levels, including LWSC and NWASCO. NWASCO was in the process of developing regulatory guidelines and tools for NSS, and changing the tariff structure to better reflect the costs of sanitation. NWASCO wanted to use the EquiServe tool to understand how best to use their regulatory tools to advance sanitation service levels in Zambia, and Lusaka was selected as the first city to adopt and test the tool.

Within LWSC, various departments were involved in the EquiServe tool application process, including the FSM unit and the finance department. Twelve staff from different departments were trained in the EquiServe tool, and this group selected the three scenarios below to model using EquiServe. LWSC’s key considerations in evaluating these options included citywide safe sanitation coverage, equitable service outcomes for the low income households, and financial sustainability.





Plan and track investments

LWSC was able to perceive the full implications of committed investments on the utility's financial health, especially the effect of indirect costs such as depreciation of existing and new assets. The utility is now adopting a new lens to evaluate future investments. Comparisons of the different investment scenarios have also encouraged the utility to undertake more NSS interventions, which would better benefit the poor. In addition, LWSC has two master plans on water supply and sanitation that need to be updated periodically. The data from the EquiServe tool meant that the most recent update for LWSC's sanitation master plan was much smoother.



Set and reform tariffs

Following NWASCO guidelines, LWSC is splitting its water and sanitation tariff to better reflect the true cost of each service. LWSC has also started tracking detailed cost breakdowns in its accounting system through splitting cost heads. LWSC is using the EquiServe analysis to 1) ringfence the budget for operations and maintenance and 2) to justify tariff petitions to NWASCO by demonstrating the tariff required for LWSC to recover costs and make critical NSS interventions. LWSC's tariff petition to NWASCO for the 2022-2025 tariff cycle included EquiServe-derived analysis.



Assess business models

A key opportunity that EquiServe highlighted was for LWSC to enter the pit emptying market, which was previously dominated by private players. The EquiServe analysis showed gaps in regulating containment and pit emptying, and raised the possibility of generating revenue for LWSC. In the second phase of deploying EquiServe starting 2022, LWSC will be modeling emptying interventions, including issuing licenses to private emptiers, performance-based emptying contracts with subsidies, and introducing scheduled desludging, etc.



Utility diagnosis and support

While LWSC did not originally perceive a need for diagnostics, the process of applying the tool revealed that they did not have data for the entire service chain, e.g., vacuum truck/ manual emptier cost data, emptying and transport data, etc. This process helped LWSC understand its data gaps and what data was required for which type of planning. LWSC has since conducted mappings to bridge those gaps.

Next Steps

LWSC is extending EquiServe to plan investments, design subsidies, and evaluate treatment options in these towns, as the EquiServe tool can be used at the sub-city level and in smaller areas.

LWSC is also helping NWASCO to train three other utilities in Zambia to use the tool to plan investments, set tariffs, assess business models, and to obtain financial support to continue bridging data gaps



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EquiServe tool, previously known as CWIS Service Assessment and Planning tool

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