Towards an Efficient Private Sector Led FSM Framework for Kampala City, Uganda

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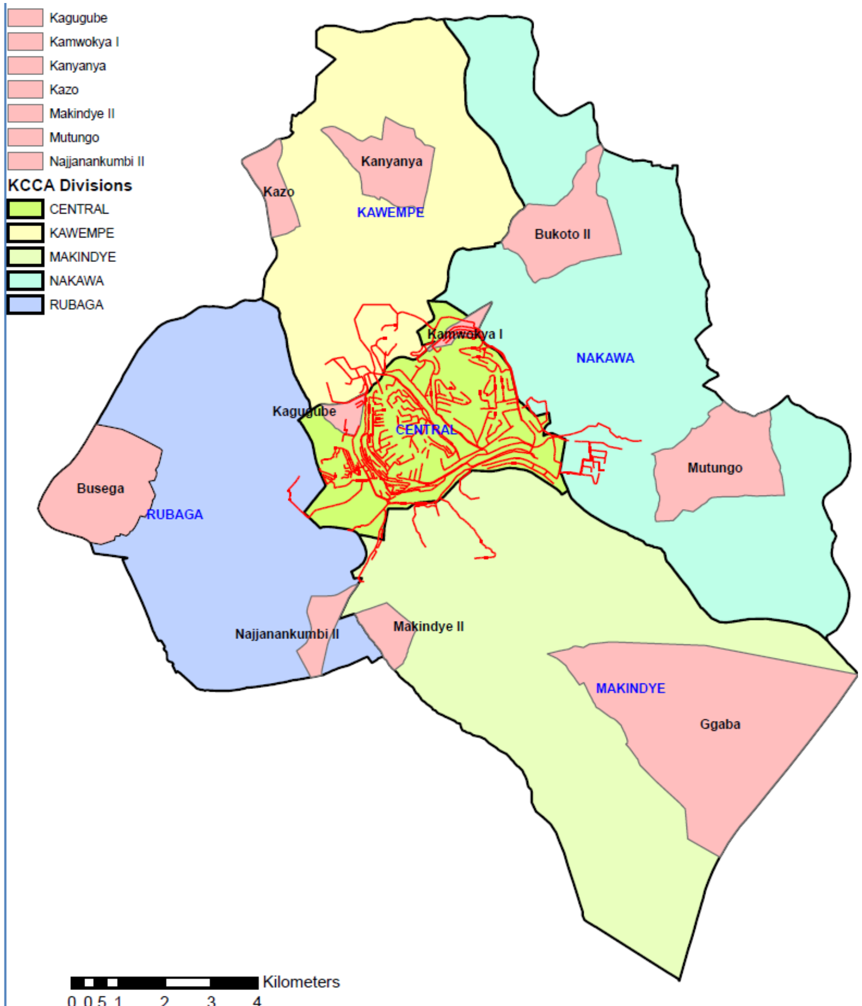
Overview of Sanitation in Kampala City



- Sewer coverage 6%
- 2 WWTPs serving the CBD and FS
- On-Site sanitation 94%
- Pit Latrines (low income), Septic tanks (High income)
- Multiple Stakeholders and Institutions

KCCA KAMPALA CAPITAL CITY AUTHORITY For a bet

FSM3

german cooperation DEUTSCHE ZUSAMMENARBEIT

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1. INTRODUCTION(1)

Project Background

- In July 2013, RFPs were issued by BMGF/UK-DFID to several Cities in Africa & Asia to participate in writing a Sanitation Concept.
- KCCA participated in the preparation of a Concept: "*Improving Faecal Sludge (FS) Management for On-Site Sanitation in Kampala City*"
- Phase 1:KCCA was among 10 cities selected and given a research grant of about USD 150,000 to engage in a study that will inform a full proposal to solicit for a bigger grant.
- Phase 2: 2 or 3 cities will be competitively selected from the 10 cities above for a larger grant

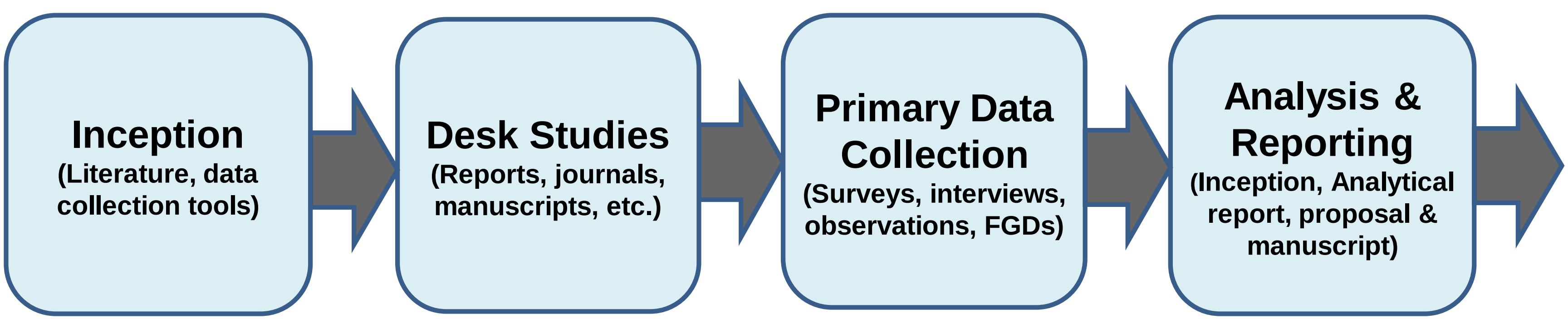
1. INTRODUCTION(2)

Objectives

Test the use of binding SLAs with private sector the delivery of FS C&T services.

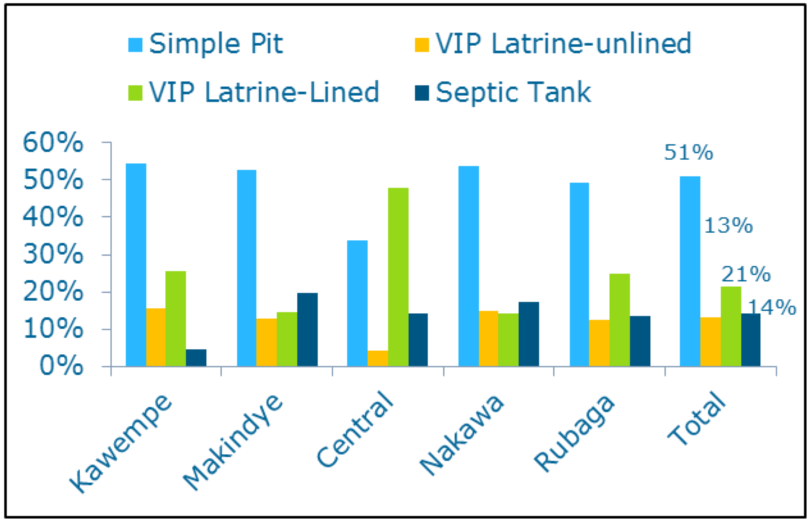
- FS market assessment
- Policy, legal and institutional assessment
- Investigate applicability of PPPs (SLAs)
- Develop feasible business/financial models

Methodology



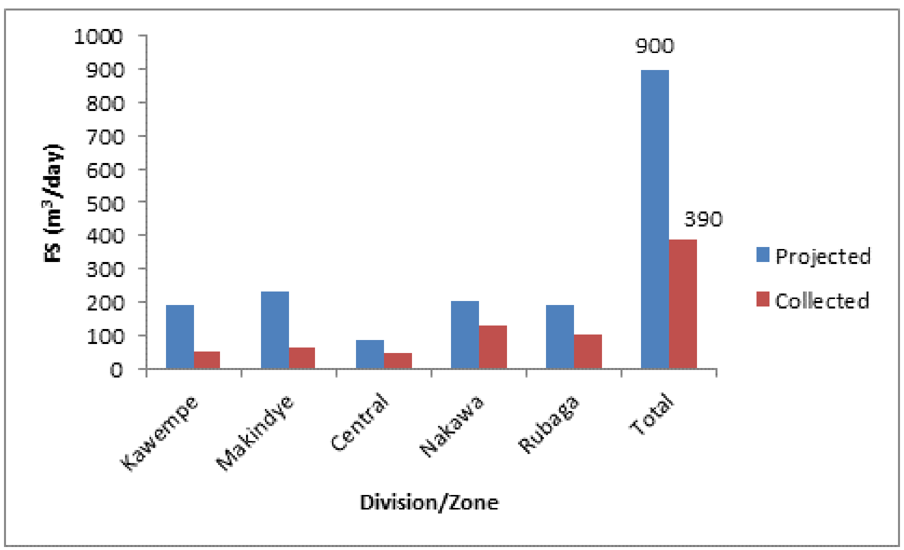
2. KEY FINDINGS (1)

2.1 FS Sanitation Market Assessment



a) Sanitation facilities

- 64% of HH use unlined facilities which are difficult to empty.

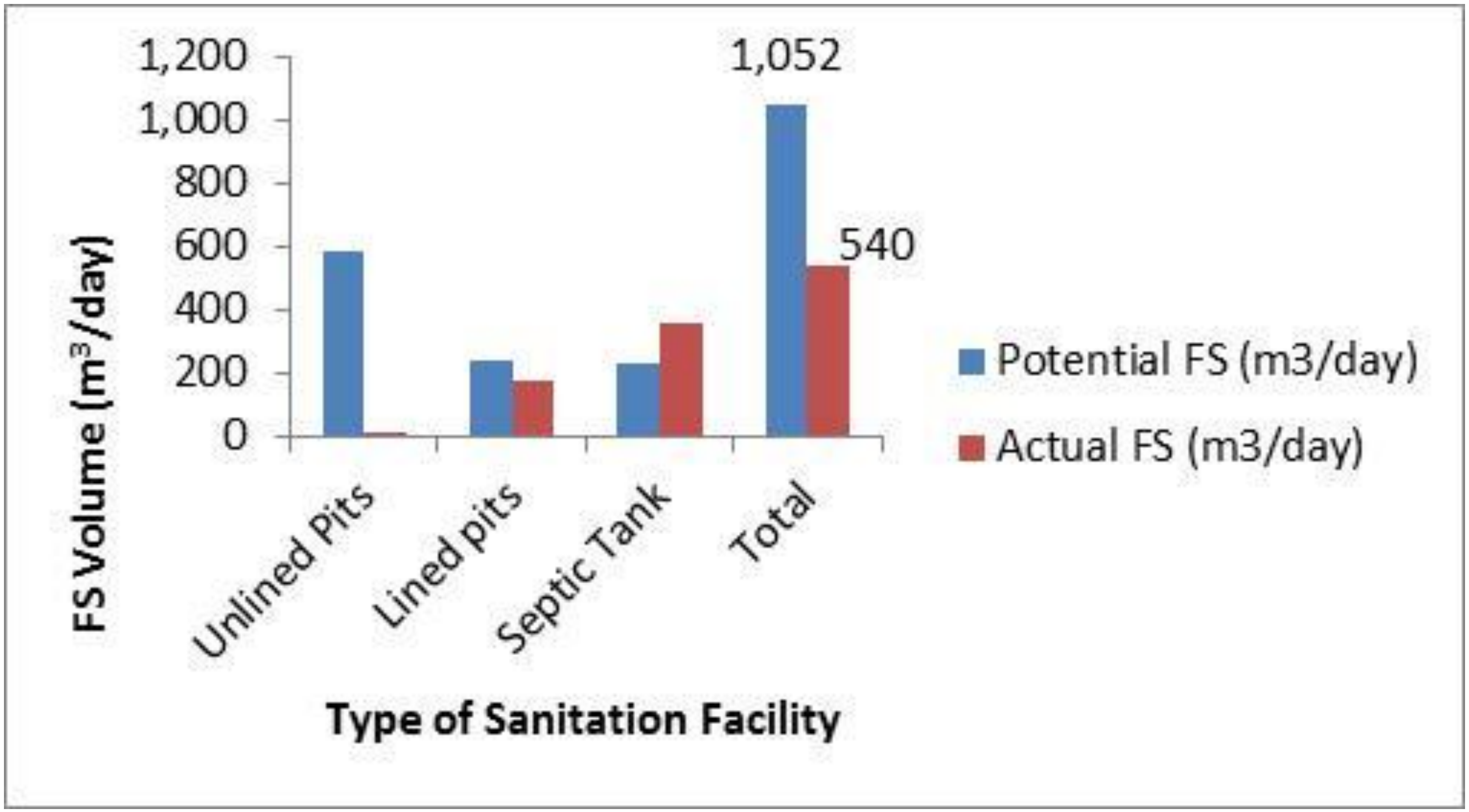


b) Projected Vs Collected FS (m^3/day)

- 390 (43%) out of 900m^3 is collected
- 99% of FS is collected from lined facilities
- 83 cesspool trucks + 10 Gulpers serve Kampala & surrounding areas

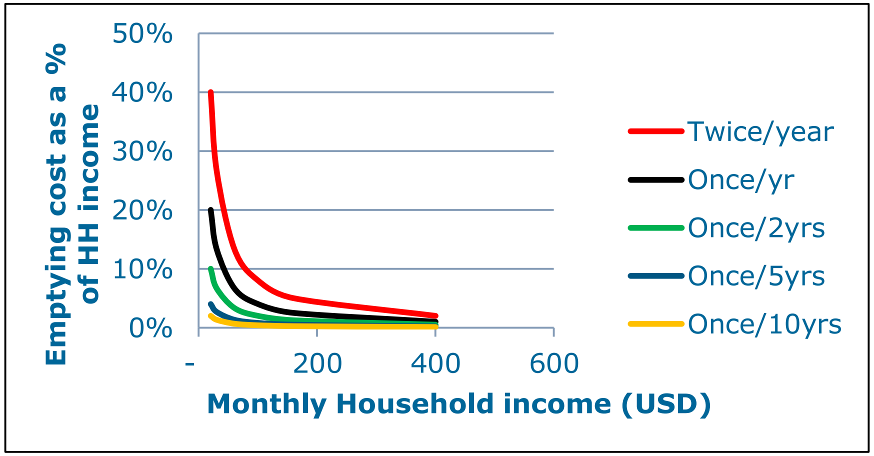
2. KEY FINDINGS (2)

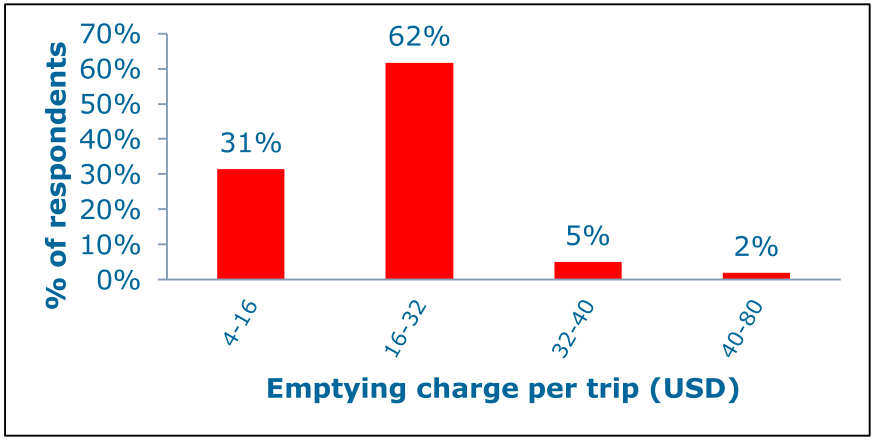
2.2 Potential Vs Actual FS collected



2. KEY FINDINGS (2)

Affordability & Willingness to pay





From HH survey:

- Monthly emptying cost is 1% of mean HH income- rendering the services affordable on average.
- Emptying once every two years or more on average is unaffordable for HHs whose average monthly income is USD 80 or less

Generally:

- More than 90% of HH are willing to pay less than the current average emptying cost of USD 48
- This justifies need for sensitization and awareness creation

2. KEY FINDINGS (3)

2.2 FS emptying & Treatment technologies

Pure Manual

Semi-Mechanized (Sludge Gulper)

Vacuum Tanker

Dewatering
- Settling/thickening tanks
- Sludge Drying beds

Stabilization and treatment
- Sludge incineration for fuel
- Anaerobic Digestion
- Solar drying
- Co-treatment with wastewater

Reuse of End product
- Soil Conditioner
- Biogas, Energy (heat) etc.
- Proteins

Key:
- Emerging technologies
- Existing technologies

Key issues:
- Inadequate emptying capacity
- Current FS treatment capacity exceeded by 50%

2. KEY FINDINGS (4)

2.3 The relevant Policies/Regulations

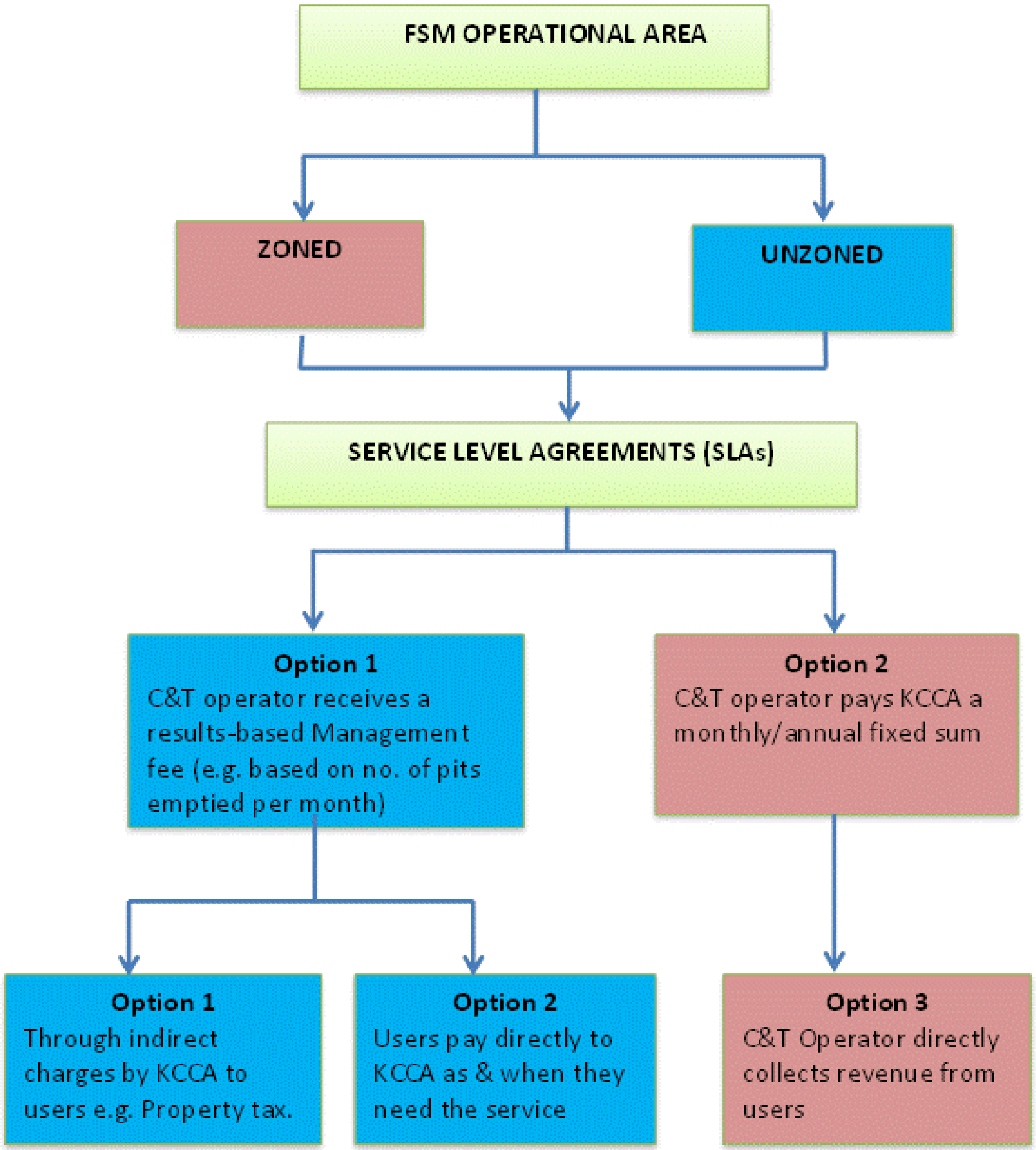
E.g. Public Health Act 1935, LG Act 1997 (Cap.243), KCCA Act, etc. have some enabling & hindering aspects. The hindering aspects include: Weak enforcement, lack of standards and obsolete/low fines

2.4 Institutional/operational framework

- **Key Stakeholders**- KCCA, NWSC, NEMA, C&T Operators & Users
- **Currently**- C&T Operators are not regulated and their interaction with KCCA is weak; licensing by NEMA is non-existent and NWSC only treats FS
- **Ideal**- KCCA should regulate C&T operators thru SLAs; Users should pay for FS services; NEMA should license transportation and NWSC can continue to treat FS.
- **KCCA** -should stop service provision and concentrate on regulation

2. KEY FINDINGS (5)

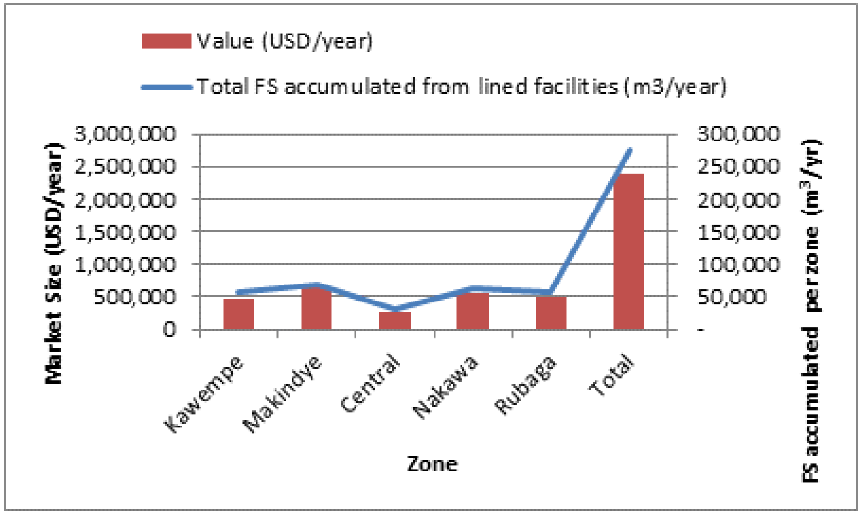
2.5 Business Models for FSM

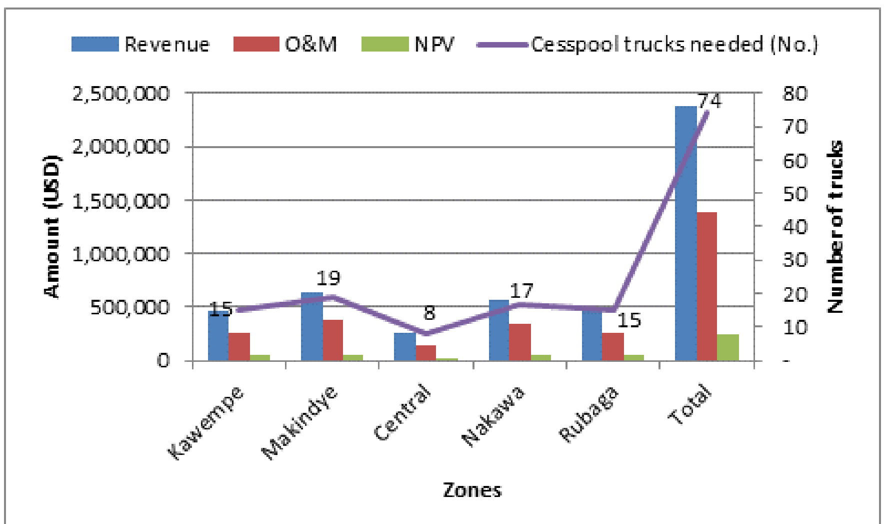


- C&T operators to be assigned a particular zone based on an evaluated unit FS emptying charge (USD/m^3).
- Maximum charge will be set by KCCA
- SLA will highlight performance standards/indicators:
    a) Response time
    b) Adherence to set emptying charges
    c) Following emptying procedures
    d) Ensuring filled up facilities in an operational area are emptied
    e) Disposal of FS at designated plants
    f) Monthly Reporting

2. KEY FINDINGS (6)

2.6 Financial Analysis for Proposed Model





FS Market Size & Financial Analysis

- Estimated unit C&T charge is between USD 8.4-9.0/m^3
- Average market size per zone ranges between USD 250,000 and 632,000 per annum
- combined market size for Kampala is about USD 2.4 Million per annum.
- Total NPV for FS C&T over 5 years = USD 235,000
- NPV for zones ranges between USD 25,000 and 60,000
- Average cash flow per truck per month after taxes= USD 270
- FS C&T business is reasonably viable with good returns on investment per operational zone considered.

3. CONCLUSIONS & RECOMMENDATIONS

Particular	Conclusions	Recommendations
Sanitation Market Assessment	• 64% of the HH use unlined facilities that are difficult to empty • FS collection efficiency is low (43%) • Services are affordable based on mean HH exp. • Low willingness to pay avg. market price	• Promotion of lined toilets • Increase collection capacity (cesspool trucks) • Sensitization & awareness raising
FS Management Technologies	• FS treatment capacity is inadequate to handle the FS from Kampala and its surroundings	• Need for investment in additional (decentralized) faecal sludge treatment facilities.
Policy, Regulatory and Institutional Analysis	Enabling aspects of existing laws/regulations include: • Licensing/regulation of C&T services, enforcement of standards, PSP (SLAs) & byelaws leading to demand creation • However, there is weak enforcement, lack of standards, obsolete fines, informal setup for C&T operators	• Development of byelaw for standards/penalties for FSM • FS C&T operators must constitute themselves into legal entities to facilitate SLAs

3. CONCLUSIONS & RECOMMENDATIONS

Particular	Conclusions	Recommendations
Business & Financial Models	• There is value in FSM as demonstrated by the market size • It is possible to engage the private sector through binding SLAs after fulfilling certain steps • KCCA can gazette operational territories that can be awarded based on the criteria specified • **Financial analyses have shown that the FS C&T business is viable**	REFER TO NEXT STEPS

Conclusions and Next steps

Conclusions

- High demand for FS emptying in Kampala
- The Institutional and Operational Framework can leverage the private sector growth

Next Steps

- Zoning
- SLAs
- Sanitation Marketing
- Enforcement

Thank you for your attention!

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