Scaling up an innovative PPP model for citywide FSM services in Dhaka
From pilot project to emerging FSM service

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Background: Dhaka Emptying Market

15 million people
- 20% sewered
- 70% OSS connected to surface drains or water bodies

10% people with OSS requiring emptying

3 m³ of sludge accumulated per annum

1.5 mil
600,000
US$ 5 mil

market size per annum
Background: Service Providers

**MANUAL EMPTYING**
most common method: waste emptied unsafely and disposed into the neighbouring environment

**SANITATION AUTHORITIES**
local gov’t and utility avoided both direct service provision and market oversight

**SERVICE PROVIDERS**
2 NGO providers of vacuum tanker services with very limited growth in 15 years; no private investment
Catalysing Sustainable Services

LESSOR: ENGAGED UTILITY
Supported & influenced public utility to use asset ownership to catalyse private sector – vacuum tanker leased to business (thus minimising risk) and disposal facility provided

LEASE AGREEMENT

LESSEE: PRIVATE OPERATOR
Emptying services provided by private-sector lessee of vacuum tanker; safe services enforced through lease agreement

DISPOAL
Access provided by utility to sewers connected to treatment facility

SERVICE FEE
As business case strengthens with time, private-sector investment in tankers grows. Operators would require emptying license from utility.

Multiple SMEs sign up to lease vacuum tankers from utility.
Quick Snapshot of Business

23 months in operation

$46,500 turnover since launching business

5 months to break even covering fixed & variable OpEx

4,400 m³ sludge emptied

US$ / m³ vehicle capacity = 2 m³

$9.10 avg. non-LIC price

$7.20 avg. LIC price

$6.90 avg. cost of service

Apr 15 - Okt 16

REVENUE EXPENSES PROFIT (LOSS)
In-Depth Analysis: Performance

- **5%** market share (customers served)
- **19%** net profit
- **50%** utilisation rate
- **60%** of revenue from large septic tanks
In-Depth Analysis: *Focus on Low-Income Customers (LICs)*

- **16%** of customers served
- **13%** of volume emptied
- **9%** of revenue
- **20%** average discount for LICs

### Chart

- **Net Profit Level** vs. **Ratio of Higher to Lower-income Customers**
- Lines represent different discount levels:
  - 0% Discount
  - 10% Discount
  - 20% Discount
  - 30% Discount

### In-Depth Analysis:

Focus on Low-Income Customers (LICs) more LICs served
Challenges for SWEEP Moving Forward

- **SIGNIFICANTLY INCREASE DEMAND**
- **INCREASE RATIO OF LICs SERVED**
- **STRENGTHEN SANITATION AUTHORITY BUY-IN**
Using public assets to create a new market

Supporting public asset ownership and pro-poor PPPs to create a new market.

Shift public sector approach to FSM

Working with partners and responding to ‘pains and gains’ of public institutions helps in creating new paradigms.

Collaborative design of business case

design partnership based on a business case that addresses all parties’ motivations, concerns and desires.
Dhaka Water and Sewerage Authority (DWASA)