

Financing non-network systems for small towns: An exploratory analysis

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Small Towns in India

- 30% of urban India households reside in towns with population < 50,000
- Account for 85% of the urban local bodies in the country
- Low population density and low levels of water supply
- Significant number of HH's dependent on on-site sanitation
- Centrally sponsored programs do not provide funding for sanitation

PPP an option?

Is private sector financing a viable option?

Collection

Collection + treatment (Septage)

Collection + treatment (septage & grey water)

Evaluate the user charge for an IRR of 16%

Assumptions

Population – 50000

No. of households – 12000

No. of households with emptiable septic tanks – 9600

Toilet connected to septic tank

Volume of septic tank – 3 – 4 m³

Assumptions

Grey water discharged to open

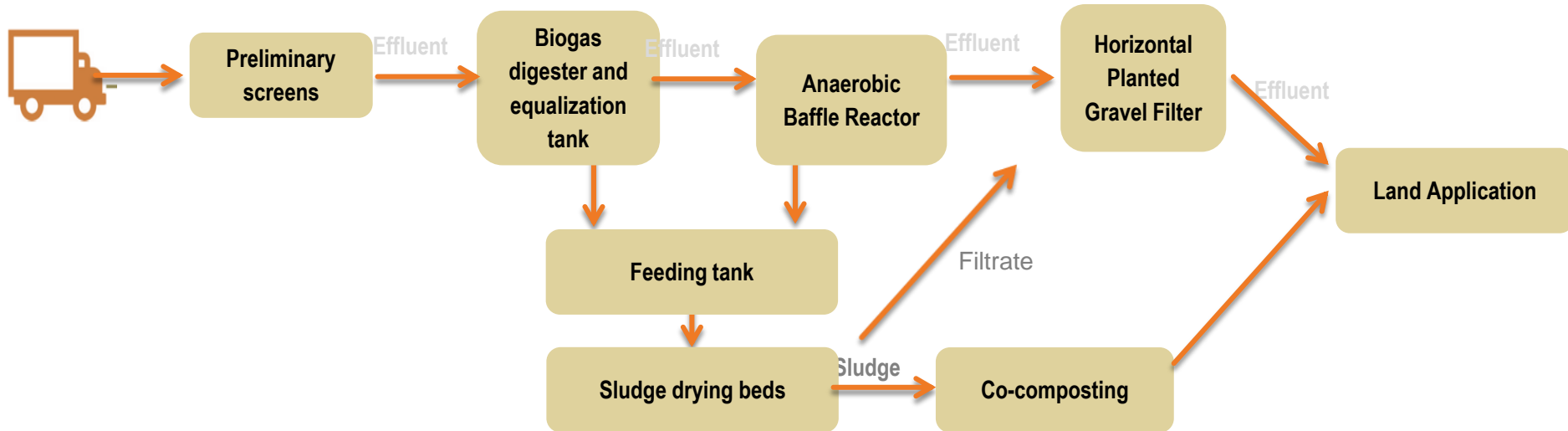
Emptying frequency – once in 2 years

Number of days of operation – 300 days in a year

Travel distance – 20 kms (round trip)

Septage and Grey water treatment

Septage treatment



User fee payable for different scenarios

Parameter	Collection only	Collection & treatment (Septage)	Collection + treatment (septage + grey water)
User fee per HH	725	2000 - 2400	2650 - 3500
Pay back	6.20 years	6 years	10
Return on Equity	12%	14%	8%

Low Risk Investment

“Shriram considers providing financing to vacuum truck operators a **safe investment**.”

“We have provided loans to six vacuum truck operators in Tumkur, and all have **successfully paid back by the end of the loan period**, which is about 2-3 years.”

“A few of our vacuum truck clients have been successful enough to take out second and third loans to increase their fleet.”

- *Branch Manager, Shri Ram Commercial Vehicle Finance Pvt. Ltd, Tumkur*



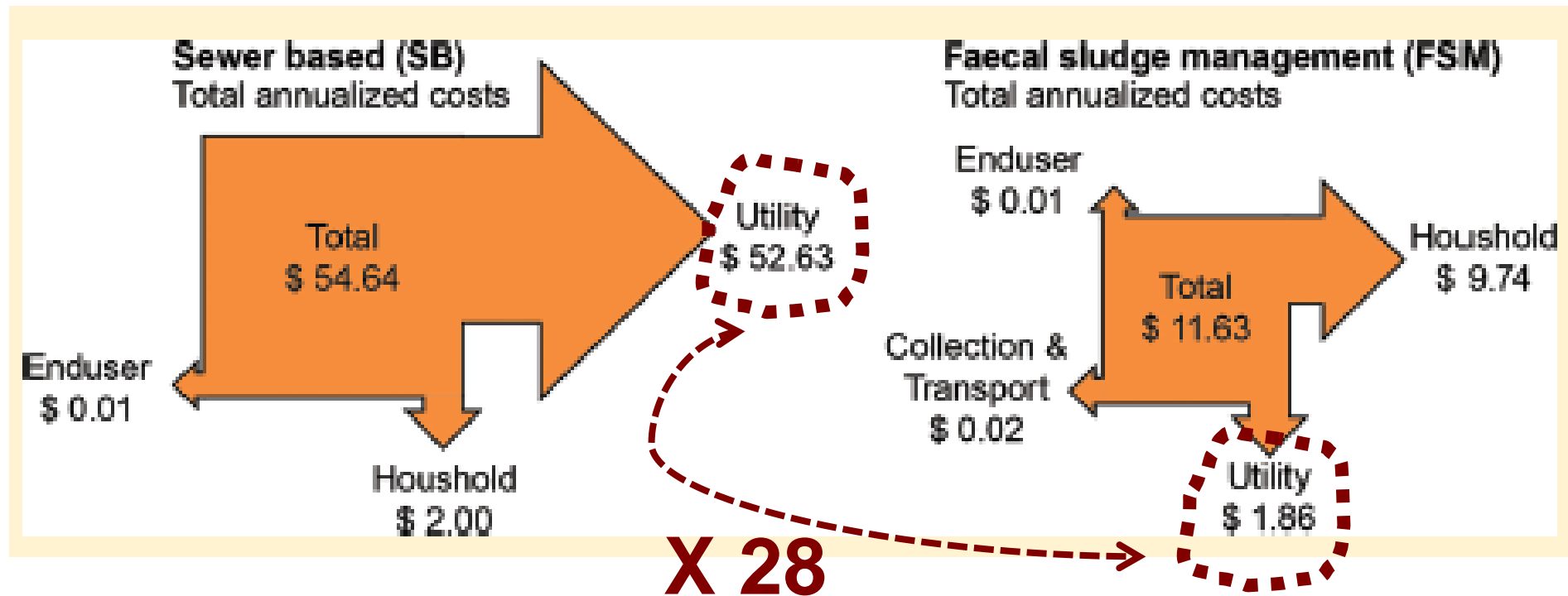
- A leading finance provider for the commercial vehicle industry in India
- Provides various credit facilities for financing pre-owned trucks and to Small Truck Owners (STOs)
- Also extend finance for tires, engine replacement, and working capital

Vacuum truck financing terms: lending rates of 12-14% for the truck and 16-18% for the tanker

Local banks responded favorably to lending to vacuum truck operators, given the relatively short breakeven timeline, and classify vacuum truck loans as “low-risk” investment

Source: Results for Development 2013

Comparison sewer-based sanitation and faecal sludge management in Dakar, Senegal



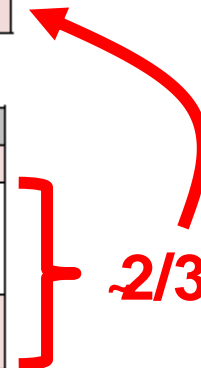
Kushtia plant operational costs and revenue breakdown

Operational Cost of the Project Per Month

Description	Cost (USD)
Salary of Supervisor of Compost Plant	260
Salary of 2 Drivers of Vacuum Tug	467
Salary of 6 labors for faecal sludge collection	467
Salary of 6 labors for compost plant	467
Fuel cost for tractors	256
Fuel cost for vacuum tugs	807
Maintenance cost for vacuum tugs	80
Saw dust for composting	80
Personal Protection Equipment	30
Total Monthly Operational Cost	2914

Income from Co-Compost Plant Per Month

Description	Cost (USD)
of compost 20 tons per month at a price of USD 130/ton	2600
Income from collection of faecal sludge and treatment of waste form 90 holdings (180 households) @ USD 12.5 per holding	1125
House to house waste collection fee from 1556 households @ USD 0.5 per month per household	778
Total Income	4503



Conclusion

Collection

extremely attractive returns

low risk

Collection + treatment (septage / septage + grey water)

User charge may not be affordable

Subsidize treatment /revenue from end products

Thank you



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