



FSM Operations Case Studies from 3 Cities: Findings and Insights Dehradun, Jaipur, Bhubaneswar

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Outline

- Context of the study
- Approach
- Business Model
- FSM Process
- Learnings from FSM business model
- Way Forward

Context

- **Objective:** Draw out lessons from the provision of Fecal Sludge Management (FSM) services in specified cities
- **Scope:** 3 diverse cities










| | Dehradun | Jaipur | Bhubaneswar |
|-------------------------------------|------------------------------------|---------------------|--|
| Population (in Lakhs) | 5.74 | 30.46 | 8.4 |
| # Households (in Lakhs) | 1.25 | 5.99 | 2.10 |
| % of Septic Tanks | 80% | 10% | 47% |
| # Septic tank households (in Lakhs) | 1.00 | 0.60 | 0.98 |
| Policy | No policy yet. Under discussion | Recently formulated | Guidelines and policies have been formulated |

Approach

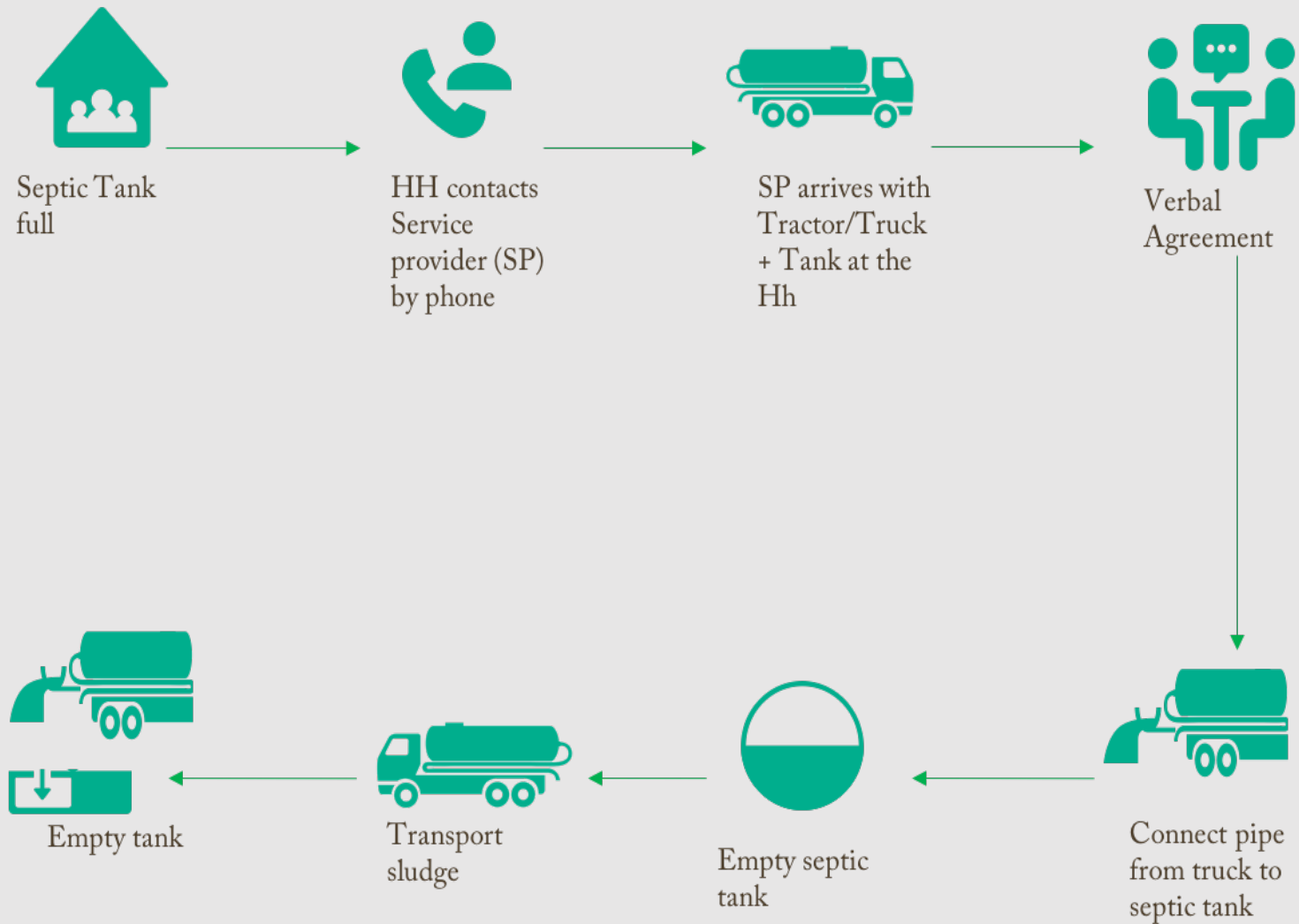











Business Model

- Profitable
- Private sector operations in all three cities
- Completely operating in the informal sector










| Building Blocks | | |
|-----------------|---|-----------------------|
| 1 |  | Activities |
| 2 |  | Customer Segment |
| 3 |  | Value Proposition |
| 4 |  | Channels |
| 5 |  | Customer Relationship |
| 6 |  | Cost |
| 7 |  | Revenue |
| 8 |  | Resources |
| 9 |  | Partnerships |

FSM Service Delivery Cycle



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- Not integrated to the beginning or at the end of the full FSM value chain.
- Only captures emptying and disposal. Not involved in building toilets or recycling or reuse of sludge
- Technology is used mainly for emptying of sludge
- Potential for better technology

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- Two broad categories










- Households

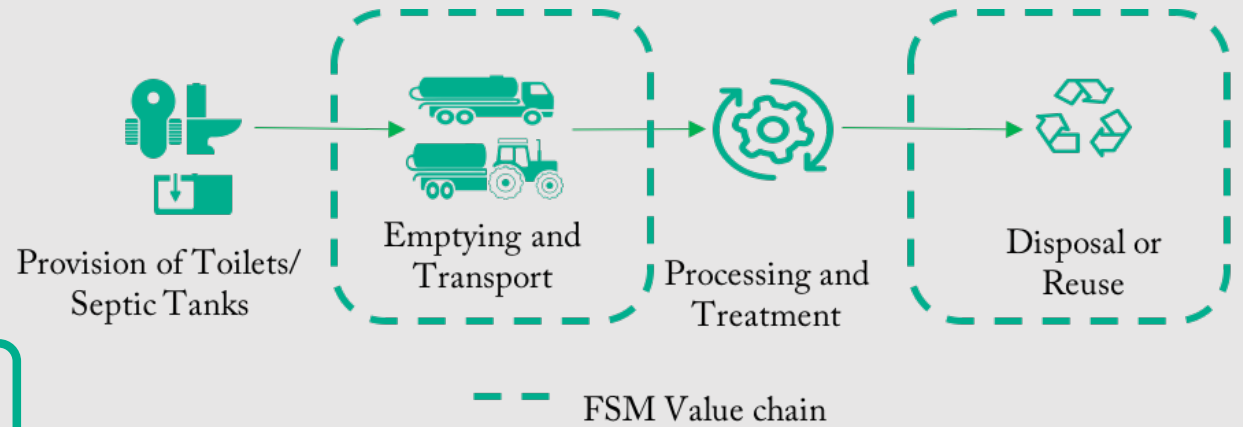
- Single houses
 - Housing colonies
 - Informal housing

- Institutions










- Hotels
 - Malls
 - Restaurants
 - Wedding Halls/Gardens

- No significant customer differentiation between high or low income clients in terms of pricing, approaching or maintaining relationship










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- Potential for extending the value chain
- SPs are aware of the benefits of recycling but not aware of the technologies or processes that can enable extending the value chain

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- Human
 - Unskilled manual labour
- Physical/Technological
 - Second hand Tractor/truck,
 - Tank of 3000-5000 lt,
 - Pipe, vacuum pump
 - Locally fabricated/assembled
 - No protective gear
 - No use of GPS
- Financial
 - Own capital
 - Farm loans (only for vehicle)

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- Main channel of advertising or spread of service is Word of mouth
- Formal advertising like print and TV ads on local channels not seen as major contributors to business expansion
- All providers have business cards
- All tanks have phone numbers painted on them. The main form of customers reaching the SPs is through cell phones.
- Expanding formal channels of advertising may improve the market presence and may raise awareness of their activities

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- Direct one-to-one relationship between customer and client
- For households, mostly a one time transaction. The SPs spend almost no effort to build a customer relationship.
- For institutional clients: make more of an informal effort to maintain good relationships since they are repeated clients often requiring services multiple times.
- Some SPs mentioned informal Annual Maintenance Contracts (AMCs)










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- Fixed cost heads
 - Tractor/Truck
 - Tank and suction motor
 - Pipe
 - Tyres
- Operational cost heads
 - Salaries
 - Maintenance
 - Fuel
- Mostly used second hand trucks or tractors
- Financed mainly through friends and family savings. Sometimes through bank loans only for tractors

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| | Dehradun | Jaipur | Bhubaneswar |
|----------------|--------------|-------------|--------------|
| Tractor/Truck | 6,25,000 | 6,10,000 | 7,00,000 |
| Tank and motor | 2,47,000 | 2,48,000 | NA |
| Driver Wages | 400/day | 12000/month | 12,000/month |
| Helper wages | 350/day | 9000/month | 10,000/month |
| Fuel | 500-1000/day | 1200/day | 1100/month |










*All costs are averages based on conversations with approximately 4-5 providers in each city.

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- Fees charged for emptying is the only revenue
- Charges on per trip basis; multiple trips may lead to a lower charge
- Charges affected by season, distance and accessibility to tank
- All payments in cash
- No written accounts
- No controlled or designated price across cities
- The laying of sewer lines may impact the revenues in the long run.

| | Dehradun | Jaipur | Bhubaneswar |
|--------------------------------------|----------|--------|-------------|
| Avg. trips reported/day | 4 | 7 | 7.25 |
| Avg. price charged (in Rs.) per trip | 1,500 | 675 | 950 |

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- No formal interaction or interlinkage between SPs and state/ULB
- No formal unions/associations between SPs*
- Share socio-cultural networks
- Technology partnerships are ad-hoc and not long term.
- Informal partnerships
 - Repairs
 - Equipment purchase
 - 2nd hand vehicles
 - Brokers-plumbers, sweepers

Way Forward

- Streamlining of business operations can improve efficiency, profitability and service provision
- Improving working conditions
 - Professionalise
 - Training:
 - Orientation to formal guidelines,
 - Rules and regulations,
 - Better administrations and operations of business
 - Safety training
 - Operating machinery and technology
 - Protective gear
- Outreach: There are segments of population which are unserved either due to affordability, terrain or locational issues. The overall service delivery model should ensure that these unserved segments get covered as well
- Awareness of builders, masons as well as households/institutions needs to be raised.
- Technology vs. Cost

Way Forward

- Key areas where government can add value in the private sector provision
 - Creating standards of emptying and disposal,
 - Providing appropriate infrastructure for disposal and treatment,
 - Providing cheaper access to finance
 - Raising awareness about services and standards
 - Government may also create a robust database of toilet coverage or on-site systems
- City level strategy needs to be formulated
 - Assessment of existing stakeholders before initiating any policy change
 - Analysis of the competition and profit levels such that new market players or the policy regulations don't impinge upon the existing market players
- Partnerships: Need to build on relationship between local bodies, state governments and private sector.

Questions