

# 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

Desk Research and Inception

Recce within city to identify operational areas and presence

Met FSM service providers

Identified elements of business operations

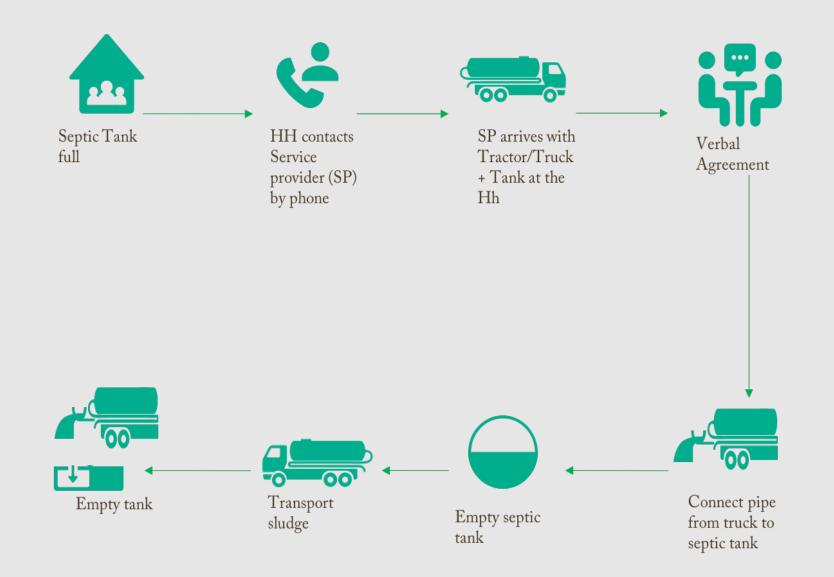
Consolidated findings

#### Business Model

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

	Βι	ulding Blocks	Des
1	$\mathbf{A}$	Activities	Activities required to n business work
2		Customer Segment	The various customer s serviced by the FSM C
3		Value Proposition	The service provided b operators against the sp problem faced by the c
4		Channels	How the operators con with and reach custom deliver their value prop
5	- Jilli	Customer Relationship	Types of relationship c service provider with th
6	<b>\$</b>	Cost	Costs and expenditure run the business
7	S S	Revenue	Revenue generated thr providing service to cu
8		Resources	Resources required to 1 business work
9		Partnerships	Network and partnersh undertaking FSM wor

#### FSM Service Delivery Cycle



		Βι	iilding Blocks	Description	
	1		Activities	Activities required to make the business work	Emptying, Transporting
	2		Customer Segment	The various customer segments serviced by the FSM Operators	Households, Businesses, Hotels, other institutions
	3		Value Proposition	The service provided by the operators against the specific rated problem faced by the chiromend (	
	4	**	Channels	How the operators communicate with and reach customers to deliver their value proposition	Phone number on Tanker Word of Mouth From site of operations
	5	- Jack -	Customer Relationship	• Only captures Types of relationship developed by service provider with the customers	Werbal Agreements
	6	\$	Cost	Costs and expendicuse Gneurred to	Fixed costs (salaries, equipment, vehicle), Variable Cost (fuel, icensing icensing icensing version icensing icensing icensing
_	7		Revenue	Revenue generated physigns of sl providing service to customers • Potential for b	URI BOUND Fees
	8		Resources	Resources required to make the business work	Physical (Tractor, Taith, Pump) Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand purchase)
	9		Partnerships	Network and partnerships for undertaking FSM work	Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

	Building Blocks		Description	
1	$\mathbf{\Lambda}$	Activities	Activities required to make the business work Two broad ca	Emptying, Transporting tegories
2		Customer Segment	The various customer segments olds serviced by the FSM Opsinter hou	• Households, customer segments lds Businesses, he FSM Operatorie house other institutions
3		Value Proposition	The service provided by the ousing conservations against the specific formal here in the problem faced by the customer. How the operators communicate with and reach customer for the service is deliver their value proposition.	Tusing,
4	**	Channels		Phone number on Tanker Word of Mouth From site of operations
5	- Times	Customer Relationship	Types of relationship developed by service provider with the customers	Direct, tone-time and repeat, Verbal Agreements Halls, Gardens Initial Investment Cost
6	<b>\$</b>	Cost	Costs and expenditusion	Fixed costs (salaries, CUSTOMET equipment, vehicle), Variable Cost (fuel incensing
7		Revenue	Revenue generated through providing servise icitite providing servise icitite provide the servise icitite provide the service of the service	aching or
8		Resources	maintaining r Resources required to make the business work	Physical (Tractor, Tank, Pump) Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand purchase)
9		Partnerships	Network and partnerships for undertaking FSM work	Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

	Building Blocks		Description FSM
1	-	Activities	Activities $\mathbf{P}$ u red to make the Emptying, business we k
2		Customer Segment	The various customer segments ptying Budinesses, Disposal or serviced by the Fricks Operator Transport otels, Processing and Reuse Septic Tanks other institutions ment
		Value Proposition	The service provided by the operators against the specific problem faced by the customer Emptying, Transporting FSM Value chain
2	•	Channels	How the operators communicatePhone number on Tankerwith and reach customers toWord of Mouthdeliver their value propositionFrom site of operations
	· JEL	Customer Relationship	Types of relationship developed by service provider with the customers Direct, One-time and repeat, Verbal Agreements
(	5	Cost	Costs and expenditure in purred to run the business Costs and expenditure in purred to the purper extension of the purper chain Variable Cost (fuel, licensing fees etc)
7		Revenue	Revenue generated through are are aware of the benefits of
5	3	Resources	Resources required to matechnologies or processes that business work can enable reixt (eprosing the value purchase)
Ģ		Partnerships	chainGovernment agencies,Network and partnerships for undertaking FSM workLocal Bodies, Equipment providers, Banks, FSM Union

	Βι	uilding Blocks		
1		Activities	Activities required to make the business work	Emptying, Transporting
2	Ììi	Customer Segment	• Human The various customer segments serviced by the FSAS Rifered France	Households, Businesses, UHD12100UT other institutions
3		Value Proposition	The service provided by the echno operators against the specific problem faced by the operatom and T	Transporting Transporting
4	*	Channels	How the operators communicate with and reach customers to 3000- deliver their value proposition Pipe, Vacuum p	Phone number on Tanker 5000 JF, Mouth
5	- The state	Customer Relationship	service provider with the customers	Verbal Agreements
6	\$	Cost	• No protective g Costs and expenditule seconds GPS run the business • Financial	<b>Cal</b> fial Investment Cost Fixed costs (salaries, equipment, vehicle), Variable Cost (fuel, licensing fees etc)
7	(S) (S) (S) (S) (S) (S) (S) (S) (S) (S)	Revenue	Revenue generated whrough ital providing service to customers • Farm loans (on	Emptying Fees
8		Resources	Resources required to make the business work	Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand
9		Partnerships	Network and partnerships for undertaking FSM work	purchase) Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

	Building Blocks			
1	-	Activities	Activities required to make the business workMain channe	Emptying, 1 Transporting 1 Of advertising or
2		Customer Segment	The various customer segments serviced by th <b>MIOp</b> erators	Households, Businesses, Hotels, other institutions
3		Value Proposition	The service provided by the adver operators against the specific problem faced by the austornen 10	tEsing like print and Transporting cal channels not
4		Channels	How the operators communicate with and reach customers to major deliver their volue signestion expa	Phone number on Tanker Word of Month
5	J'ELL'	Customer Relationship	Types of relationship developed by service provider with the customers	Direct, 10ne-time and repeats cards Verbal Agreements
6	<b>\$</b>	Cost	• All tanks have Initial Investment Costs Costs and expenditure incurred to run the businessainted on the equipment celuidain Variable Cost (fuel, lic form of customesses) reaching	
7	S S	Revenue	Revenue genested shigughroug providing service to customers	· · · · · · · · · · · · · · · · · · ·
8		Resources	Resources requide ortising m business work market presen	Einangiel Leansy <sup>2nd</sup> hand
9		Partnerships	<b>awareness of</b> Network and partnerships for undertaking FSM work	Local Bodies, Equipment providers, Banks, FSM Union

	Βι	iilding Blocks	Description FSM	
1	-	Activities	Activities required to make the business work Direct one-t	Emptying, Transporting O-ONC relationship
2		Customer Segment	The various customer segments serviced by the FSM Operators • For househo	omer and client
3		Value Proposition	The service provided by then sact operators against the specific problem faced by most tomer eff	fort to build a
 4	**	Channels	How the operators communicate P with and reach customers of relative deliver their value proposition F For institutions	
5	J'EL	Customer Relationship	service provid <b>en with Chocus Borne 14</b>	Ne-time and repeat, to
6	\$	Cost	Costs and expending in the business often requiring	Olutedationships Fixed costs (salaries, e repeated clients
7		Revenue	Revenue generated through providing service to customers • Some SPs m	Emptying Fees
8		Resources	Resources required to make the air business work(AMCs)	<b>TEMPRICE Contracts</b> Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand purchase)
9		Partnerships	Network and partnerships for undertaking FSM work	Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

	Building Blocks		Description	
1		Activities	Activities required and the head business work • Tractor/Tru	Emptying, Transporting
2		Customer Segment	The various customer sign and su serviced by the ESM Operators	Households.
3		Value Proposition	The service provided by the operators against the specific problem faced by Pheroattion al C	Emptying, Transporting Ost heads
4	1	Channels	How the operators communicate with and reach customers to deliver their value propositionance	Phone number on Tanker Word of Mouth From site of operations
5	LE	Customer Relationship	Types of relationshiputeveloped by service provider with the customers • Mostly used s	Direct, One-time and repeat, Verbal Agreements COLL Frances Initial Investment Cost
6	\$	Cost	Or tractors Costs and expenditure incurred to run the busines inanced main	Fixed costs (salaries, equipment, vehicle), Ny fiable real graf, fictoring S
7		Revenue	Revenue generated through bank providing service to customers tractors	
8		Resources	Resources required to make the business work	Physical (Tractor, Tank, Pump) Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand purchase)
9		Partnerships	Network and partnerships for undertaking FSM work	Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

[		Bu	ilding Blocks		
	1	-	Activities	Activities required to make the business work	Emptying, Transporting
	2	Ììi	Customer Segment	The various customer segments serviced by the FSM Operators	Households, Businesses, in <sub>Hotels</sub> , aipur other institutions Bhubaneswar
	3		Value Proposition	The service provided by the 25,000 operators against the specific problem faced by the customer	Emptying, 000 Transporting 7,00,000
	4	**	Channels	How the operators communicate 00 with and reach customers to deliver their value proposition	Phone number on Tank A Word of Mouth From site of operations
	5	- Tille	Customer Relationship	Typeroverlationship developed by service provider with the customers	Direct, 2000/ One-time and repeat, 12,000/month VerbalmAgnetments
	6	\$	Cost	Helper wages Costs and expenditure incurred to run the business	Initial Investment CostFixed 2000 (salaroa, equipment, vehicle),10,000/monthVariable Cost (fuel, licensing
	7	©©©	Revenue	Fuel 500- Revenue generated through00/day providing service to customers	fees et@200/day Emptying Fees
	8		Resources	Resources required to make the business work *All costs are averages bas approximately 4-5 provide	Physical (Tractor, Tank, Pump) Human (Driver, Helper) effinancial (Loans 2 <sup>nd</sup> handwith purchase)
	9		Partnerships	Network and partnerships for undertaking FSM work	El Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

	Building Blocks		uilding Blocks	Description FSM		
	1	-	Activities	• Fees charged for emptying is the only revenue Activities required to make the business work harges on per trTpubastiss multiple trips may		
	2	Ììi	Customer Segment	lead to a lower cherescholds, The various customer segments serviced by the PSNG operators ted by tese, ason, distance and accessibility to tare ther institutions		
_	3		Value Proposition	accessibility to tanker institutions The service provided by the Emptying, operators against propertients in cashsporting problem faced by the customer		
_	4	Ť	Channels	How the operators communicate Phone number on Tanker with and reach customers tolled or Word of Mouth price across cities deliver their value proposition From site of operations		
	5	- Times	Customer Relationship	• The laying of seworelines may impact the Types of relationship developed by One-time and repeat, service provider on the instances long, run Verbal Agreements		
	6	\$	Cost	Costs and expenditure incurred to run the business DehradVariable Cost (salaries, equipment, vehicle), DehradVariable Cost (fuel, licensinghubaneswar fees etc)		
	7		Revenue	Revenue generated through 4 Avg. trips providing service to customers reported day		
	8		Resources	Avg. price Resources required to make business work d (in Rs.) per trip1,500 Pump)Pump) 675950Human (Driver, Helper) Financial (Loans, 2nd hand purchase)Financial (Loans, 2nd hand		
	9		Partnerships	*All revenues are averages based on georiversations Network and partnerships for undertaking FSM work Banks, FSM Union		

	В	uilding Blocks		
1		Activities	Activities Norformal tinter business workerlinkage bet	actions Transporting ween SPs and
2		Customer Segment	The various customer segments serviced by the FSM Operators • No formal unio	Businesses,
3		Value Proposition	The service provided by the <b>P</b> s* operators against the specific problem faced by the customer	Emptying, Transporting
	· **	Channels	How the operators communicate with and reach customers to deliver their couppoonsy par	Word of Mouth
5	- JEST	Customer Relationship	Types of <b>HOGONADORALOPERIO</b> service provider with the customers	Varbal Agranmanta
6	•	Cost	• Informal partne Costs and experiments run the business • Equipment pu	Fixed costs (salaries, equipment, vehicle), <b>r Mariable</b> Cost (fuel, licensing fees etc)
		Revenue	• 2 <sup>nd</sup> hand vehic Revenue generated through providing service rocketpsicplum	lesmptying Fees
5		Resources	Resources required to make the business work	Physical (Tractor, Tank, Pump) Human (Driver, Helper) Financial (Loans, 2 <sup>nd</sup> hand purchase)
ç		Partnerships	Network and partnerships for undertaking FSM work	Government agencies, Local Bodies, Equipment providers, Banks, FSM Union

# 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