

➤ Supporting PPP in small and medium towns in India

Local toilet contractor assessment in Wai and Sinnar

CEPT University With support from Dalberg Global Development Advisors

2nd May 2016

Context and objectives of this study

The Performance Assessment System (PAS) project team under CEPT university is working with the municipal bodies in Wai and Sinnar to provide end-to-end support on sanitation services including access to toilets, collection & conveyance of waste, and its proper treatment and safe disposal. As part of increasing access to toilets to end open defecation, a subsidy of INR 5,000 – INR 10,000 per qualifying household has been announced in Wai and Sinnar in Maharashtra (*in addition to existing central (INR 4000) and state (INR 8000) subsidies under SBM*).

While the government subsidy addresses the *demand* side of the issue by incentivizing households to build toilets, the *supply* side of the issue, i.e. availability of contractors to build toilets, has not been assessed systematically. Hence, evaluating current capacities and awareness of the local toilet contractors in the two cities is a critical step towards the broader objective of the project.

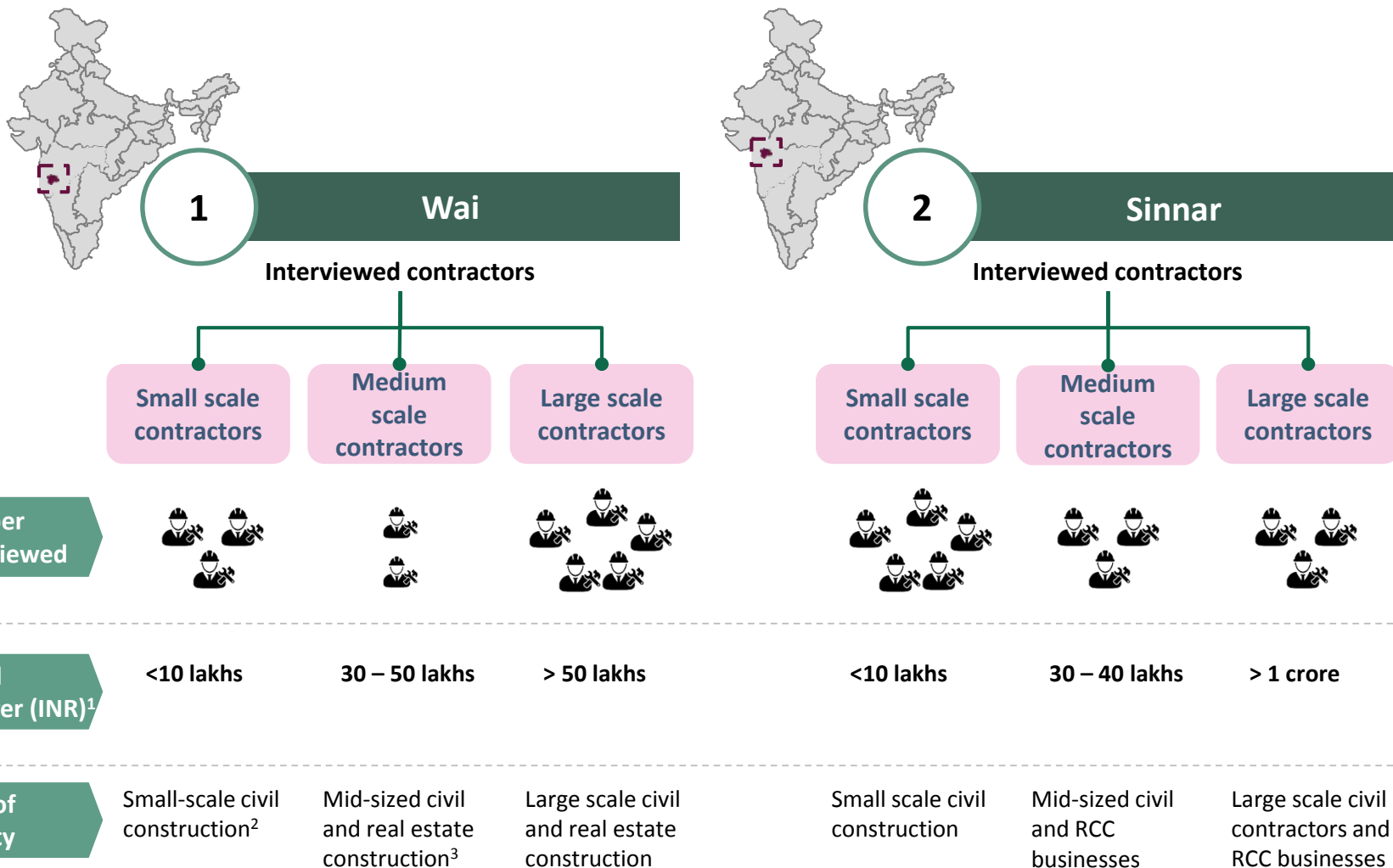
This study aims to provide an overview of different types of local toilet contractors active in Wai and Sinnar. In particular, the study aims to evaluate –

- 1) The profiles and current businesses of select toilet contractors in Wai and Sinnar;
- 2) Current costs of toilets built by the local contractors in these two cities;
- 3) Awareness among contractors of design norms of toilets under SBM, and its cost implications;
- 4) Preferences in working models of toilet contractors, i.e. HH based vs. ULB tender based; and
- 5) Key barriers for low adoption of toilets by HHs (from the perspective of the local contractors)

With an aim to achieve the aforementioned objectives, Dalberg and PAS team members conducted field visits in Sinnar and Wai in 3rd and 4th week of April. Overall, the teams interviewed 21 contractors – 10 in Wai and 11 in Sinnar.

The detailed findings from the study are included in the following pages.

We interviewed 10 contractors in Wai and 11 in Sinnar; we further classified them based on their annual turnovers and current activities



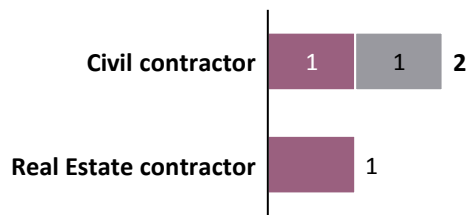
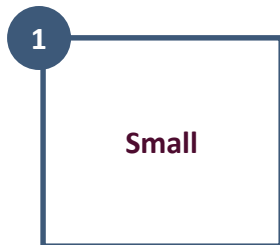
Note: (1) Range of turnover is based on actual contractors interviewed; discontinuity in ranges exists because we did not have contractors in that range e.g. between INR 20 – 30 lakhs; (2) Civil contractor refers to those who primarily work on civil projects such as bridges, roads, gutters etc.; (3) Real estate contractors refers to those who primarily work on houses, buildings, bungalows etc.

Wai had civil and real estate contractors with varied experience in constructing toilets at different scales

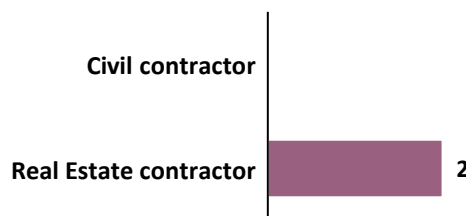
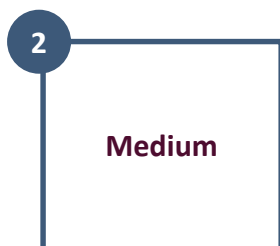
Type of contractors

Experience¹

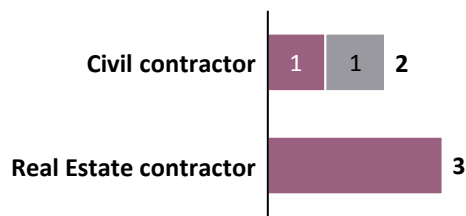
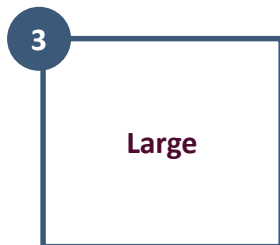
■ Experience in private toilets ■ No experience in private toilets



- Working in construction for ~2-8 years in and around Wai
- Typically, include unregistered firms, no previous experience of working with the Nagar Palika
- Little experience in constructing toilets; contractor with most experience has built less than 15 toilets



- Working in construction for ~25 years, focusing on real estate projects (i.e. buildings and bungalow construction)
- 1 contractor has built public and private toilets, while the other has only made toilets as a part of bungalows
- Only 1 (of the two) contractor is registered with the PWD department



- Working in construction for ~15-20 years; major works include large scale civil and real estate projects
- 3 out of 5 contractors have made private toilets; 1 has constructed toilets only as a part of bungalows while the other has experience only in building public toilets
- 2 out of 5 contractors are registered with PWD; rest undertake private contracts

Note: (1) Civil contractor refers to those who primarily work on civil projects such as bridges, roads, gutters etc. Real estate contractors refers to those who primarily work on houses, buildings, bungalows etc.

Contractors in Wai generally had good access to credit; but operate at a limited scale

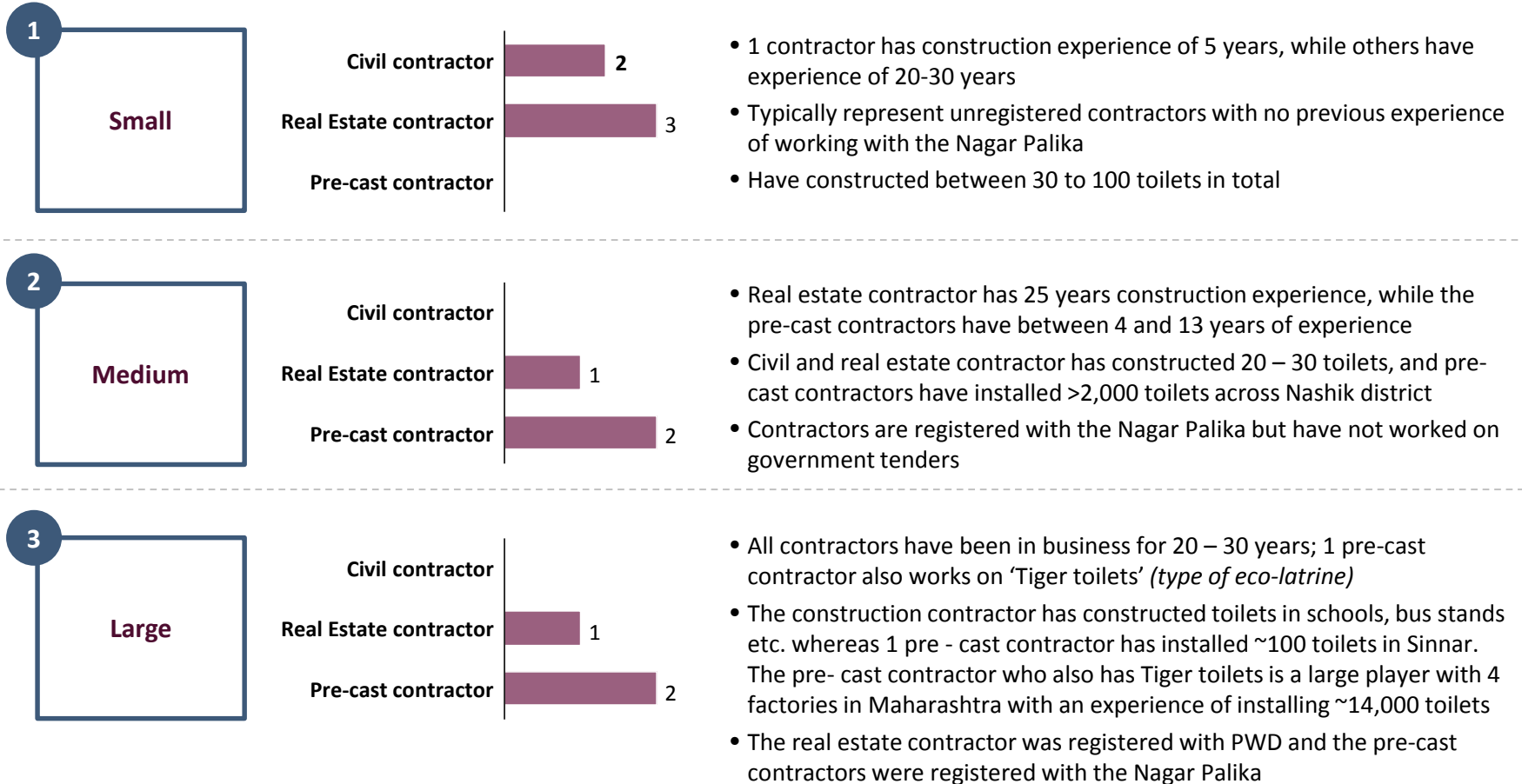
Type of contractors	Inputs			Outputs
	<u>Credit period for construction materials</u>	<u>Working capital</u>	<u>Employed Labor</u>	<u>Maximum toilet construction capacity</u>
<p>1</p> <p>Small</p>	<ul style="list-style-type: none"> Material available on credit for 5-10 days (occasionally) 	<ul style="list-style-type: none"> 2 out of 3 do not have a formal financing source 1 has a cash credit account up to a limit of 5 lakhs at an interest rate of 13-16% at a national bank 	<ul style="list-style-type: none"> 1 – 2 supervisors Can get 5 -7 contract labourers, if required 	<ul style="list-style-type: none"> 2 – 5 toilets in a month
<p>2</p> <p>Medium</p>	<ul style="list-style-type: none"> Material available on credit for 10-30 days, depending on size of the activity 	<ul style="list-style-type: none"> 1 has taken loans from a cooperative bank at an interest rate of 13% - 16% The other contractor does not utilize external sources for working capital finance 	<ul style="list-style-type: none"> 3 -4 full time employees Can get 15 – 35 contract laborers as required 	<ul style="list-style-type: none"> 6 – 10 toilets a month based on availability of guaranteed payment
<p>3</p> <p>Large</p>	<ul style="list-style-type: none"> Material available on credit for 20-30 days 	<ul style="list-style-type: none"> All use cash credit from banks (national and cooperative) up to a limit of 10 lakhs at an interest rate of 14-16% 2 have taken loans for working capital at an interest rate of 18% from a cooperative bank 	<ul style="list-style-type: none"> 2 – 10 full time employees Can get 50-150 contract laborers as required 	<ul style="list-style-type: none"> 20 - 50 toilets a month based on availability of guaranteed payment

Sinnar had a number of pre-cast contractors who had relatively greater experience in installing toilets than civil and real estate contractors

Type of contractors

Experience¹

■ Experience in private toilets



Note: (1) Civil contractor refers to those who primarily work on civil projects such as bridges, roads, gutters etc. Real estate contractors refers to those who primarily work on houses, buildings, bungalows etc. Precast contractor produce toilets by casting concrete in a reusable mold or "form" which is then transported to the construction site and lifted into place. They use pre-cast cylindrical septic tanks

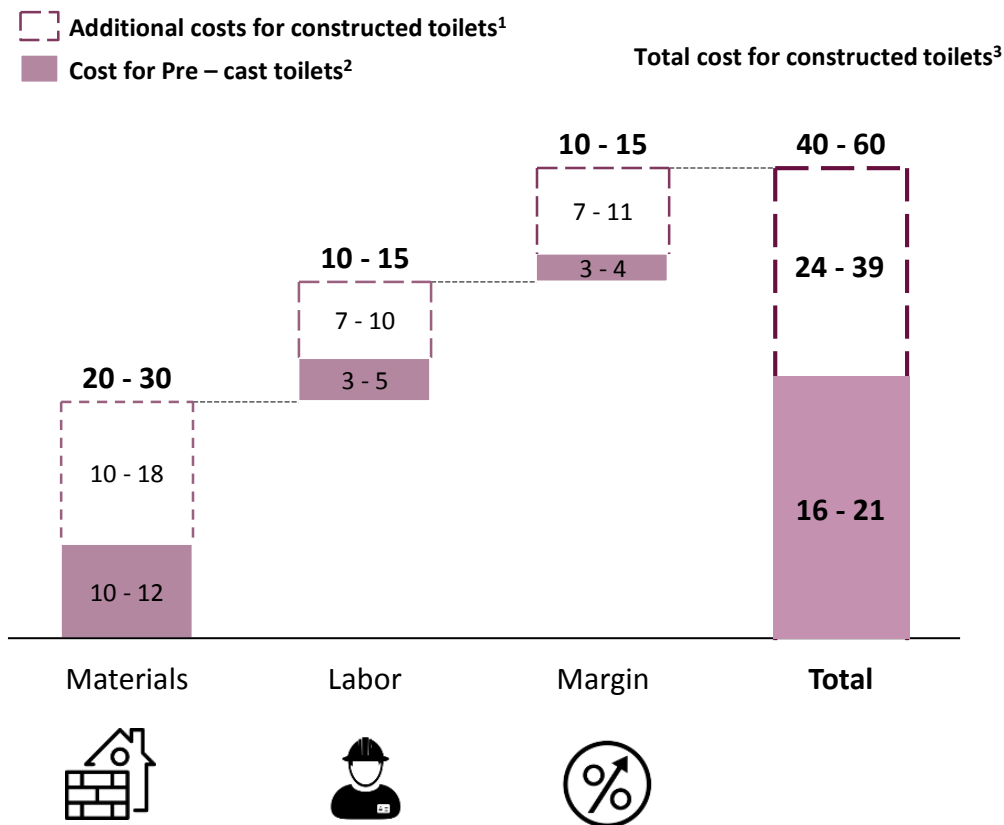
Contractors in Sinnar did not have good access to credit, however, operated at a larger scale due to the ease of installing pre-cast toilets

Type of contractors	Inputs			Outputs
	<u>Credit period for construction materials</u>	<u>Working capital</u>	<u>Employed Labor</u>	<u>Maximum toilet construction capacity</u>
<p>1</p> <p>Small</p>	<ul style="list-style-type: none"> Material available on credit for 5 – 10 days on a negotiable basis 	<ul style="list-style-type: none"> Most contractors arrange for working capital through internal sources 1 contractor has access to a cash credit account from a cooperative bank 	<ul style="list-style-type: none"> 1 full time employee Can get 5 – 15 laborers on contract as per requirements 	<ul style="list-style-type: none"> 4 – 8 toilets in a month
<p>2</p> <p>Medium</p>	<ul style="list-style-type: none"> Material available on credit period of 1 month to pre-cast contractors Construction contractor able to avail of credit for 10 – 15 days 	<ul style="list-style-type: none"> All contractors arranged working capital from internal sources and did not utilize any formal financing sources 	<ul style="list-style-type: none"> 6 – 10 full time employees hired for pre-cast contractors 1 supervisor and 9 – 10 contract laborers hired by construction contractor 	<ul style="list-style-type: none"> 15 – 150 toilets a month based on availability of guaranteed payment
<p>3</p> <p>Large</p>	<ul style="list-style-type: none"> Material available on credit on a negotiable basis 1 contractor did not prefer taking materials on credit 	<ul style="list-style-type: none"> 2 out of 3 contractors arranged working capital on their own The third contractor utilized a cash credit account up to a limit of 10 lakhs at an interest rate of 15% from a national bank 	<ul style="list-style-type: none"> ~30 laborers hired by 1 pre-cast and construction contractor 200 laborers across 4 factories in Maharashtra by the tiger toilet pre-cast contractor 	<ul style="list-style-type: none"> 250 – 3,000 toilets in a month

Pre-cast toilets cost INR ~15-20k and constructed toilets cost INR ~40-60k; with materials accounting for ~50% of the costs

Break up cost of toilets by components as per contractors

Figures in INR thousands



Pre-cast toilets with cylindrical septic tanks are better since they can be made faster and are cheaper than normally constructed toilets – Pre-cast contractor in Sinnar

Cost of toilet depends on household preferences. Sometimes they want slabs and tiles which all add to costs – Constructed toilet contractor in Wai

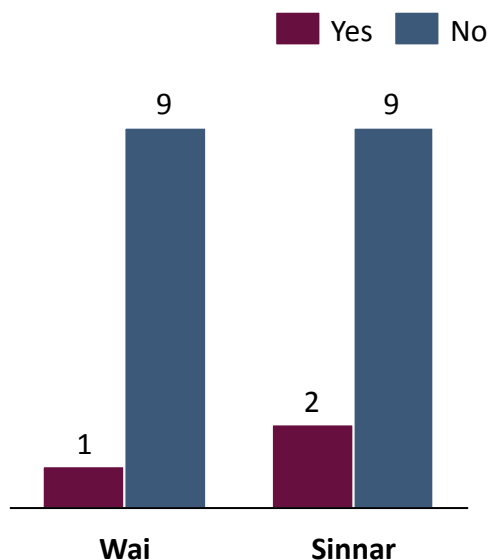
I can construct toilets with pre-cast cylindrical septic tanks as well but it is not very useful since they are very small and have quality issues – Contractor in Sinnar

Note: (1) **Constructed toilets** are made using bricks and cement on the site itself. The septic tanks are made of bricks and cement and are cuboidal in shape; (2) **Precast toilets** are produced by casting concrete in a reusable mold or "form" which is then transported to the construction site and lifted into place. They use pre-cast cylindrical septic tanks; (3) Summation of cost of pre – cast toilets and additional cost for constructed toilets will give the total costs for constructed toilets

18 out of 21 contractors were unaware of SBM design norms; on being shown the design, that believed that these would cost 20% less

Awareness about SBM norms

Number of contractors by cities

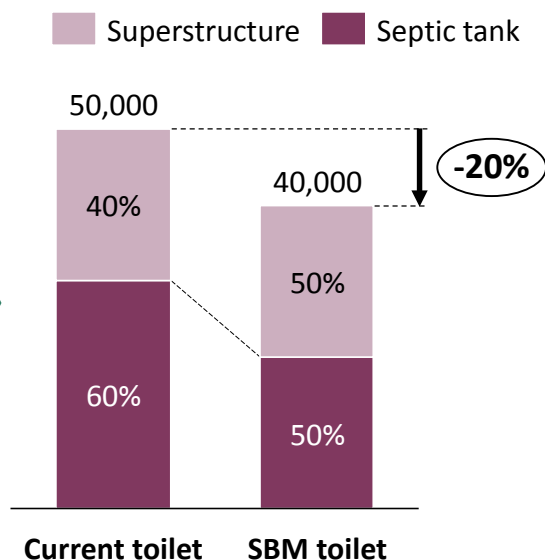


Findings

- Low overall awareness of SBM guidelines among contractors; however, they believe that they were easy to follow
- Most contractors currently use their own design developed through experience
- Even contractors who had constructed toilets for H receiving SBM subsidies, used their own designs

Cost difference between current and SBM designed toilet¹

In INR and %



Findings

- Cost difference driven by lower size of septic tanks under SBM guidelines
- Key driver for success is to educate, and get HHs to accept smaller sized tanks and contractors believed that they could spread this message of SBM

I am an engineer and I know how to construct a toilet. I use my knowledge to construct toilets – Medium scale contractor in Wai

The households receiving subsidies under SBM gave us a design to follow. But we made bigger tanks than specified in the design since HHs preferred it – Small scale contractor in Sinnar

The households get the subsidy directly from the ULB. We do not deal with the ULB – Small scale contractor in Sinnar

The toilets in the guidelines are simple. If households are made aware then they would follow these and get smaller tanks made. They will agree because the costs for them would reduce – Largescale contractor in Sinnar

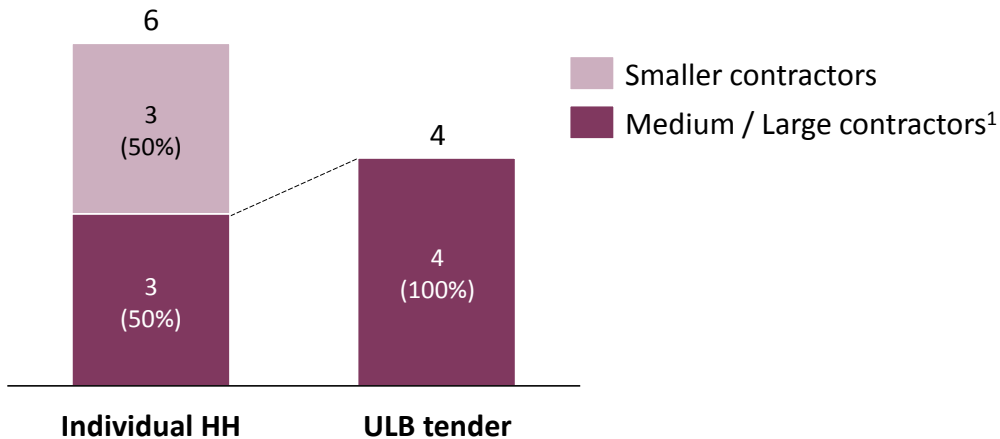
13 contractors preferred to deal directly with households instead of ULBs, the larger contractors preferred to work on ULB tenders

1

Wai

Preferred working model by contractors

Preference of number of contractors by type



Findings

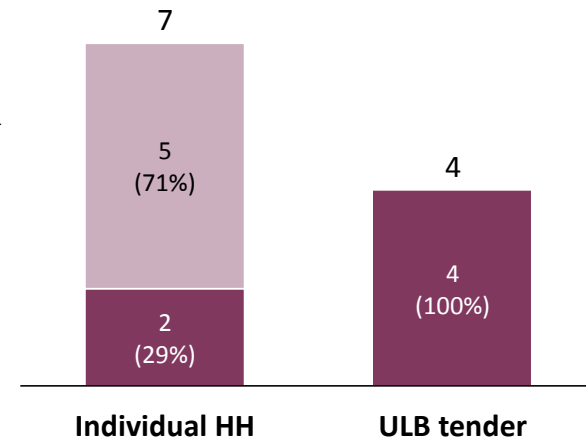
- All small contractors preferred to work directly with HHs and avoid ULB tender due to payment delays
- The large contractors who preferred to work with HHs cited the flexibility of building a higher cost toilet as the major reason for their preference
- Other large contractors wanted to work directly with ULB due to the promise of guaranteed bulk payment

2

Sinnar

Preferred working model by contractors

Preference of number of contractors by type



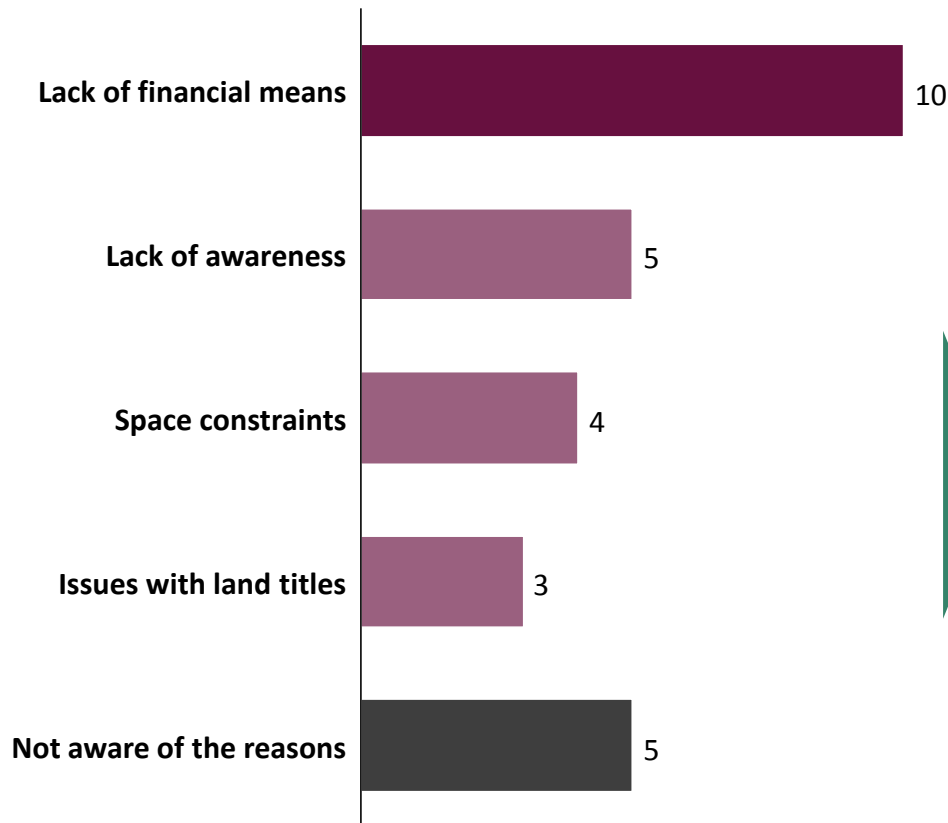
Findings

- 2 small toilet contractors stated indifference, however, requested for advance payments, which are not a possible in ULB construction contracts
- The larger contractors who wanted to work with HHs stated the delay in ULB payment as a driver of choice
- Other large contractors wanted to work directly with ULB due to the promise of guaranteed bulk payment

Lack of access to finance was the key barrier cited by contractors for low adoption of toilets which could be a potential source of risk

Key reasons for low adoption of toilets by HH

Number of contractors by type, n=21¹



Takeaways

- Most contractors felt that financial constraints (poverty and insufficient subsidies) were the major reason why households did not get a toilet
- In Wai, where open defecation has almost been solved, contractors gave other reasons such as space constraints and issues with land titles as reasons for lack of adoption of toilets by some households
- In Sinnar, where open defecation was prevalent, low awareness and lack of financial means were the only reasons mentioned
- 2 contractors in Wai believed that HHs were increasingly getting toilets built and no major barriers existed

*People do not want 50% subsidy, they want 100%.
There is a mindset problem - Large scale contractor in Wai*

In my experience, people are poor and they can not afford toilets. This makes them defecate in the open. - Medium scale contractor in Wai

A few key interventions can be undertaken to catalyse demand and supply to spur construction of toilets

Demand interventions

- **Reduce financial barriers.** Lack of financial means was cited as the biggest barrier for household adoptions of toilets. Deepening access to subsidies and reducing friction of applications to ULB could potentially spur greater demand for toilets
- **Raise awareness.** While importance of IEC in spurring adoption of toilets is well established, contractors indicated that such efforts could be further intensified. *'Watch squads'* keeping vigil over common spots of OD were cited as being effective and could be further deployed
- **Promote joint toilets.** In towns such as Wai, where OD has almost been eliminated, space constraints and lack of property toilets are the reasons why some HH still practice OD. Joint toilets are an ideal solution to this and could be aggressively promoted to tackle the *'last mile of OD'*

Supply interventions

- **Guaranteeing payments.** Uncertainty over payment was the biggest constraint cited by contractors in undertaking toilet construction work at scale. Guaranteed payments through creation of an escrow account or pooling resources from HH to create a fund could potentially address these concerns.
- **Roster of contractors.** Creation of a roster of contractors either empanelled with or approved by the ULB could spur demand for toilets by giving HH easy access to vetted contractors. A similar roster of HHs in *'need'* of toilets could play a matchmaking function by allowing contractors to target HHs
- **On-boarding contractors on SBM.** Contractors were open to undergo training on SBM design. On-boarding contractors could potentially convert them into agents to raise awareness among communities and HHs on toilets and their right design, including those for septic tanks.

Annex

List of interviewed contractors - Sinnar

Contractor name	Name of the firms
Somnath Kokate	Self registered
Shailesh	Self registered
Hanumant Bawde	Self registered
Ramesh Shinde	Self registered
Raees Nazir Khatim	Self registered
Vijay Gowsari	Self registered
Bharat Bikaji	Self registered
Tukaram Lakshman Bhosle	Shri Kulswamini Enterprises
Nivruti Ouchar	Self registered
Kiran Bhonsle	Self registered
Tushar	Shree Sai Cement Pipe Industries

Annex

List of interviewed contractors - Wai

Contractor name	Name of the firms
Shivaji	Self registered
Kohinoor	Self registered
Shashikant Korade	Self registered
BR Gandhi	Self registered
Avinash	Self registered
Samit Inamdar	Self registered
Tushar Chakke	Self registered
Kaushik	Self registered
Shyam	Self registered
Rakesh	Anirudh Developers

Annex

Questionnaire (1/5)

Background

We would love to learn about an overview understanding of your business model and operations. Could you provide us with the following information?

- What are your major lines of business (Specific /Major Construction activities)?
- How long have you been undertaking these activities for?
- What is your previous experience in working with city governments? If none, would you be open to working with them? Why?
- Are you registered firm / individual with any government organization? If yes, Provide details, class of registration

Business details

- We would now like to understand your business in detail. We would be grateful if you could provide us with the following information.
- *Firm details*
- What is the size of the firm – number of employees, annual turnover?
- *Details of construction activities*
- What is the maximum capacity of work that you have undertaken by ticket size and output achieved?
- *Inputs into construction*
- How do you arrange for a machinery and labor for the construction activities? If machine is owned, what kind of machines do you own?

Annex

Questionnaire (2/5)

- *Financing details*
- How do you arrange working capital for any new project? Do you get supplier credits for material of construction?
- What are the payment conditions?
- Did you take a loan for any project? If yes details
- Range of construction project in terms of cost (Maximum – Minimum) and sector
- *Value and payment details*
- What is the average value of each of the construction activities that you undertake?
- How are you paid for these construction activities?

Awareness of design norms under SBM

- Ideally toilets and septic tanks are to be constructed as per specified norms. We would like to know how they are constructed at present and if those norms are adhered to.
- Are you aware of SBM and its components? If yes, can you describe what they are?
- Did you construct toilets under SBM ? If yes. Provide details. How many toilets constructed? What are the key challenges?
- Are you aware about subsidy disbursement procedure under SBM?
- Are you aware of the design norms of construction of toilets and septic tanks as given by the government under SBM?
- If aware about norms, could you tell us, what these norms are?
- Do you follow these norms during construction of toilets and septic tanks? If no what are the reasons for not following?

Annex

Questionnaire (3/5)

- If not aware of norms, could you tell us, how are toilets and septic tanks constructed by you designed? What are their specifications and how are they decided?
- Would you benefit from a clear understanding of the design norms for toilets and septic tanks? If yes, how? If no, why not?
- Would you be interested in going for a training organized by ULB for standard toilet and septic tank design? Why?

Awareness about Swachh Bharat Mission and Swachh Maharashtra Mission

As you know, the government has given a lot of thrust to these programs and we would like to understand if you see your role in helping achieve some of the program goals at the local level and if there are cost differentials in adhering to program guidelines.

- *Guidelines on toilet and septic tank construction and cost details*
- Could you tell us how would the costs differ if toilets and septic tanks were to follow the SMB guidelines? What materials/design requirements would add to costs ? How much would each of these add to costs on average?
- What would be the approximate cost of a single unit of toilet? What would be division of cost between labor and materials?
- *Awareness generation*
- Have you received any communication from the government or are you aware of any communication/notification from the government around SBM and SMM and its goals?
- As a contractor in toilet construction, do you see a role for yourself in spreading the message of SBM? Why?
- What are the constraints in spreading the message of SBM at an a) overall level and, b) at your level?

Questionnaire (4/5)

Exploring contractor based model for construction of toilets under SBM

Now, based on the focus on sanitation, there is a business opportunity to construct toilets which meet the norms that we have spoken about. In this last part of the interview, we would like to understand your a) preferences b) capacities and c) support needed.

- Based on our assessments, we see a potential to construct toilets across Maharashtra which meet the SMB norms. Does the scope of the work seem of interest to you? Why?
- If yes, what are the areas that you would prefer working in – statewide, district or town. Why?
- If no, what would it take for you to get interested in this potential work?
- How many toilets can you construct annually given your technical and financial capacity? Please give details
- What additional support mechanisms / sources / terms would you need to increase your capacity to construct toilets? Please give details on – machinery, labor, financing.
- There are broadly two modes of operation to utilize this opportunity – executing work order given by ULB or empaneling with the ULB but be called by the HH directly. What do you think will be the key challenges in both the options?
- Do you have a preferred work option? Why?
- If it is the 2nd one, what do you think will motivate the HH to get the toilets constructed using these updated norms? If you think they will not be motivated, what can the ULB / government do to motivate them?
- Coming to payments, how would you like to be paid for work in case of both these options – By HH or ULBs? Why?
- (If the contractor does not like the ULB option) In case the only mode of payment is through the ULB, what guarantees / securities would you want before undertaking this work?

Annex

Questionnaire (5/5)

Business expansion plans

- Do you have plans to expand your business? If yes, what are your targets and their timelines?
- What additional inputs would you require for that expansion in terms of a) machinery and, b) labor? How would you arrange for them?
- Would you need additional financing for it? If yes, where would you raise it from and what terms would you raise it on?