



# **Project Sammaan**

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#### PROJECT OVERVIEW

Project Sammaan is an urban sanitation initiative dedicated to redesigning and improving facilities for slum communities across India. The initiative is being piloted in Bhubaneswar and Cuttack with the aim to replicate it in other cities, if successful.

The objective is to rethink the current models of sanitation facilities and design a new programmatic infrastructure and physical structure that instills a sense of dignity while addressing issues affecting sanitation practices in India and encouraging community members to stop defecating in the open.

Over 100 of the re imagined facilities will be built and a dedicated research team will analyze the qualitative and quantitative impact they have on the communities in which they're built. The results of this intensive research will be shared in an open-sourced toolkit that will allow for replication in cities across India and beyond.

Project Sammaan was born out of the research conducted for the Potty Project, an in-depth design research study focused on all aspects of the current sanitation models employed in urban slum communities throughout India.

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#### FEATURE: Research

If we are to identify effective, replicable solutions that address the design, management and operational challenges of communal sanitation facilities, it is imperative that we rigorously test out the impact of the various interventions and understand the causal mechanisms along the way. Thus, research is a crucial aspect of Project Sammaan, where a mix of software and hardware interventions will be evaluated using a randomised controlled trial (RCT) methodology.

There are two hardware interventions that will be studied: the provision of a basic package of design, infrastructure, and operational improvements, as well as additional infrastructure above the basic package, such as spaces for bathing and washing clothes. We will study if this provision of complementary services is cost-effective and whether this drives adoption. In terms of software at the facility-level, we will study the appropriate management system to ensure sustained maintenance. Facilities will be assigned to either community management or private contractor management, to study the effect of toilet management systems on usage rates.

There will be a range of pricing interventions at the household-level to increase household usage of sanitation services. For example, examining users' reactions to price variation by offering discount coupons to subsets of households. Effects of pricing structure (e.g., monthly passes versus pay-per-use) will also be studied across users of the same toilet facilities.

Additionally, there will be habit formation experiments, the idea being that we can design a set of interventions that "reward" community toilet usage, thereby forming a habit loop.

At the community level, we will introduce a set of community mobilization activities for demand generation for sanitation services, which is a variant of the popular Community-Led Total Sanitation (CLTS) concept. These demand generation activities will be

implemented amongst communities surrounding the new toilet facilities, as well as in other slums to look at the interactions between the demand for and supply of sanitation facilities.

Prior to the interventions, J-PAL will collect baseline data from households living in communities surrounding each toilet block. We will also conduct detailed audits of the baseline toilet facilities. After the hardware and software interventions are introduced, we will monitor toilet use at each facility at a high frequency, collect ongoing monitoring data on open defecation practices, and on the management challenges and financial health of the toilet operators. There will be two further rounds of intensive household survey work: a midline survey for a subset of sample households, and a detailed endline survey at all sample households at the end of the project period.

Throughout the intervention period of one year, facility audits and a process evaluation will be conducted. These audits will provide objective measurement on toilet hygiene (such as fecal coliform counts on water taps and door knobs, and field olfactometry to quantify odour intensity, amongst others). Monthly measurements at traditional open defecation sites will also be conducted.

The program implementation and data collection will be accompanied by rigorous process evaluation and monitoring. In particular, field staff will monitor the progress of any field activities: from the construction of toilets, to the proper implementation of software interventions, to the accurate collection of baseline and endline surveys. These monitors will act independently of J-PAL field staff engaged in data collection, as well as local partner staff involved in the interventions themselves.

The experiments will be designed to identify both "successes" (large reductions in open defecation) and "failures" (precisely estimated small or no reductions), and will, ultimately, inform future discussion of urban sanitation issues, regardless of the outcome.







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### BLOG HIGHLIGHT:

## "CENSUS COMPLETION!" BY SELVA SWETHA



The main field milestone has been the completion of the census data collection. As I write this update, the team is gearing up for what will be their last census field session. We follow a rule of a site-wide first-pass followed by two revisits for each unfinished household. Today the field team is preparing for a second revisit at the last remaining site.

With the completion of this last batch of 10 sites in Bhubaneswar, what has been nearly a 11-month long exercise draws to a close. In this time, we have, in total, surveyed 32 sites in Cuttack, and about a 100 sites in Bhubaneswar, covering over 20,000 households in Bhubaneswar and 7,000 households in Cuttack. The overall completion rates in Bhubaneswar and Cuttack stand at around 87% and 90%, respectively.

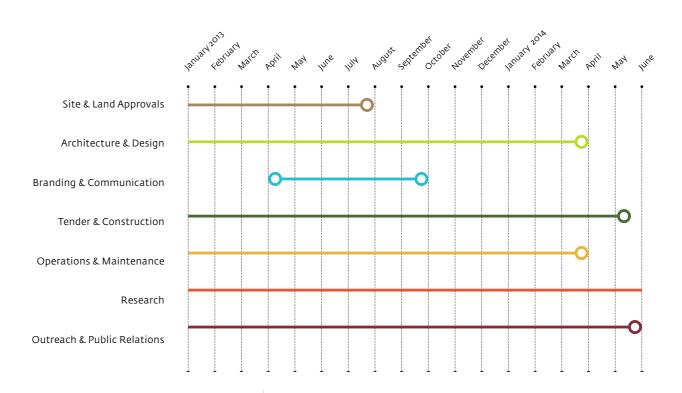
The challenges in implementing the census survey were many. For starters, the fact that land approvals came in batches, meaning that the core team wasn't able to be kept engaged in continuous work, presented a planning challenge. That the demographics of some sites varied considerably called for adaptation on the part of the surveyors, who would alter their work times, say, surveying early hours in the morning, and then late in the evening, in order to reach these households.

From a research perspective, we had defined a "catchment area" of 160 meters' walking distance from the proposed toilet facility, and we survey all the households within this area, and survey a 25% random sample of the community residing outside this area. The identification of the catchment area was sometimes tricky in proximate or overlapping sites, and in sites where the bulk of the target population happened to live outside the defined catchment. Such sites were decided upon on a case-bycase basis.

Further, the site selection process has been a long and challenging one, in terms of both identifying potential sites that satisfied our criteria, as well as getting their approval. In fact, some of the sites that were census surveyed, have had to be dropped, as over the course of time they were either evicted, or the approvals weren't granted.

The census data that has been collected will serve as the sampling frame for the baseline, which is the next activity lined up. Over the next few weeks our efforts will be focused on preparing for the launch of the baseline.

### TIME LINE



### MILESTONE OVERVIEW

#### To date

- Facility-level hardware randomisation completed across all sites
- J-PAL finished the remaining census data collection activities in Bhubaneswar
- Gained approval from the Standing Committee on Public Health for Public Toilets
- Public toilet O&M processes and guidelines completed by J-PAL
- Design team completed the tender documents for community toilets in Cuttack

#### Upcoming

- Submission of tender documents in Cuttack and Bhubaneswar
- Tendering of Public Toilets
- Pre-construction dialogues with communities in Cuttack to commence
- Submission and approval of Batch 2 and Batch 3 tender documents

### October calendar of events

- Finalizing the Bhubaneswar sites that are to receive DEWATS
- J-PAL will begin baseline data collection in the Cuttack sites
- Filming interviews with project partners and in-field activities for the Yale University School of Management case study

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WORKSTREAMS



#### A. Liaising & Capacity Building

September started with the code of conduct enforced in 91 urban local bodies across Odisha. This, in one way or the other, impacted the Bhubaneswar and Cuttack Municipal Corporations. The process of nomination, election, and the headcount lasted for about a month, ending on September 21, 2013.

In terms of liaising, it was a busy month. Constant follow up on the awaited decision of the government for the release of tender was the month's major activity, as was liaising with the land department regarding the approval process and the visit to the CT sites for inspection. Liaising with the Engineering section was more owing to the fact that new Assistant Engineer has been appointed for checking of all the technical documents by Bhubaneswar Municipal Corporation. Introducing Project Sammaan to him and updating him on the project was an activity of capacity building was taken up by CTRAN.

Apart from this, we also facilitated the file process for the checking the consolidated BoQ's which were submitted to the BMC. Discussions about the documents submitted and the process of checking were discussed.

Detailed discussions on the requirement of the documents and the necessity of the land approvals in documented format before floating the tender were done. It was accompanied by formulating strategies for the entire process before the code of conduct is enforced in the Bhubaneswar Municipal Corporation.

In the Cuttack Municipal Corporation, the month was very active in terms of checking the estimates and the BoQ's. Liaising with the nodal officer and the estimators was nearly constant, and discussions on the draft tender notice call and the clauses to be added were held. Also, strategies to float the tender before the tentative dates of enforcement of code of conduct were discussed.

October will be a month of holidays owing to the Durga Puja.

Activities in October include:

- Following up and facilitating floating of PT tender, as well as the CT sites in Bhubaneswar
- Facilitating the technical sanction and the process of floating the tender in Cuttack

#### B. Research/Operations & Maintenance

The last month at J-PAL has been focused on baseline preparation activities.

The facility-level hardware randomisation exercise is now complete across all batches of sites. With the completion of the census last month, the demand estimates have been generated for all the sites, serving as inputs to the architectural design. Upon receiving the design inputs from Anagram, the sites which were suited for Enhanced Layer (EL) infrastructure were allocated to receive EL services, and the remaining sites have been randomized, with half of them receiving Base Layer amenities.

J-PAL has been working on the finalizing the rule for generating a representative sample for the baseline survey and determining the optimal sample size that would enable them to arrive at the results with sufficient statistical power.

Activities in October include:

• J-PAL will begin baseline data collection in the Cuttack sites. This will be done in a staggered manner across site clusters and will precede construction activity.

#### C. Tender & Construction

Arkitechno submitted all the requisite Bill of Quantities (BoQs) for 32 community toilets in Cuttack (Batch 2) and 40 in Bhubaneswar (from Batch 3) separated into tenderready packages, to both municipal corporations.

The CDD team visited all community toilet sites in both Bhubaneswar and Cuttack, along with an engineer and surveyor from Arkitechno. The intent was to provide further detailing to the sewage treatment systems for Batch 2 & 3 community toilets. The 17 sites in Batch 4 in Bhubaneswar were also surveyed to decide on appropriate sewage treatment systems.

Activities in October include:

- Finalizing the sewage treatment systems for 17 community toilets in Bhubaneswar and providing designs to Anagram for preparation of tender documents.
- Liaising with the CMC & BMC to finalise the tender for Batch 2 & 3 community toilets respectively.

### Workstreams



#### D. Architecture & Design

September, what a month!! Anagram is glad it's over, as is its work of making good for construction drawings (GFCs) for Cuttack toilet. It was such an amazing month filled with loads of detailing, discussions, management within the in-house design team and the consultants' decision-making, and refining, refining, refining the designs.

Taking into consideration the lifestyle of an entirely different strata of society in the detailing meant trying to view things from the user's perspective while keeping foresightedness in mind. This led to the Anagram team working tirelessly and, ultimately, adding more members to the team. This meant that half of the office was working on the project! The doubling of the team was done not only to meet the deadline but also to provide further assistance in refining the designs.

It was an Herculean task of setting a perfect coordination of: structure with architecture, electrical with form and function, signage with electrical, and plumbing with architecture and function. Key areas that needed to be resolved included how the doors were fitting in, how the cuddhapah wall partition is working with the plumbing, taking care that all the areas that will receive natural light and ventilation, leaving no scope for vandalism, assuring the layout of plumbing is as optimized as it should be, and more. The team didn't compromise on any part and the consultants brought on were also asked to refine drawings in order to provide the best option.

Refining the designs was such a back and forth process, at times it felt never-ending, but the unwavering enthusiasm of whole Anagram team made it happen. When the team finally saw the prints, everyone was so happy!

Activities in October include:

• Anagram will give GFCs for Bhubaneshwar + Batch 4, tender documents of Batch 4.

 Micro-level detailing and deliver working drawing for community toilets in Cuttack.

#### E. Outreach & Public Relations

The bulk of the outreach and public relations activities in September centered around preparing for the upcoming visit by the Yale University School of Management case study team. To recap, the Yale team will be traveling to India in order to interview project partners, as well as to film in-field activities, to create a case study that will highlight the innovative nature of Project Sammaan. Shivangi Varma of CTRAN is working with Siva Cottipalli to schedule times for representatives from each of the project teams during the week that the Yale team is in India. Everyone is encouraged to make themselves as available as possible during this time, and to share as much detail regarding the project with case study interviewers.

Kevin Shane of Quicksand met with both the project coordination team and faculty that will use the case study in upcoming classes to brief them on the project. Additionally, the Yale team was provided with video footage and still images that have been recorded since the project's inception. This footage will be used in the case study documentary film that their team is putting together.

The project coordinator from Yale, Ms. Jean Rosenthal, will be in Delhi October 28th & 29th, and in Bhubaneswar and Cuttack from October 30th through November 2nd. During this time, interviews will be conducted and filmed. She will also spend time filming in various slum communities to provide additional context for the case study. Partners are encouraged to contact Kevin (kevin@ quicksand.co.in) with any questions.

Activities in October include:

- •Filming interviews with project partners and in-field activities for the Yale University School of Management case study
- •Updating the project blog and social media channels

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QUICKSAND

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a network of 70 affiliated professors around the world who are united by their use of Randomized Evaluations (REs) to answer questions critical to poverty alleviation. J-PAL's mission is to reduce poverty by ensuring that policy is based on scientific evidence.

J-PAL is the primary grantee and the project's principal investigators and are designing and conducting the monitoring and evaluation for the facilities:

- » Business model development
- » Operations and Maintenance modelling
- » Project evaluation

A multi-disciplinary innovation consultancy that places user-centered design principles at the core of every innovation effort. The studio has successfully delivered on several new services, products, brands and developmental strategies, creating both measurable social and business impact.

Quicksand is responsible for project management as well as anchoring the hardware design process for the project:

- » User-experience research and corresponding hardware design
- » Design, branding and communication project management
- » Project toolkit and website development





The municipal corporations of the pilot cities Bhubaneswar and Cuttack. These entities are tasked with providing services in sectors such as Health & Sanitation, Slum Development, Urban Planning, and Waste Management to improve the quality of life of their respective citizenries.

The local municipal corporations are key partners in the project and aid in the facilitation of its various components:

- » Provide funding for construction and infrastructure
- » Site selection assistance
- » Identify contractors for construction
- » Ensure regular water, electricity, and sewerage facilities for the toilets
- » Manage sewerage and waste treatment systems
- » Oversee functioning of facilities through a PMO until capacity-building with the BMC is complete
- » Provision of temporary sanitation facilities
- » Ensuring long-term sustainability of the project



The Centre for Advocacy and Research (CFAR) is an Indian organization committed to working and partnering with marginal communities. It has expertise in conducting research, process documentation, capacity building and strengthening advocacy by leveraging media and networking to shape and impact policy issues related to urban poor.

CFAR is actively involved in facilitating community interactions in the field:

- » Social mapping of each slum
- » Community engagement and dialogue during design and construction phases
- » Facility management training for community members





CTRAN Consulting Manages large, complex development projects, providing the right mix of program management and technical assistance.

They are the one-point contact for interfacing with various government agencies:

- » Establish a Project Management Office within the two municipal corporations to ensure continued, and future, use and grievance redressal of the facilities
- » Facilitate meetings with government representatives
- » Assist in land approval process
- » Set up and operate the help line that ensures proper functioning of the facilities

Arkitechno Consultants (India) Pvt. Ltd is a multidisciplinary firm of consultant engineers offering a full array of consultancy services ranging from concept to implementation. This includes: environmental & social planning, feasibility studies, design review & construction supervision, operations & maintenance and project management consultancy for infrastructure projects, and many others.

They are the main project managers for on-field activities:

- » Tendering
- » Facility construction management



A brand and communication design studio whose expertise lies in bridging the gap between product and service offerings and what end-users really care about, with communication that is meaningful and relevant.

Codesign is the communication and brand consultant for Project Sammaan.

- »Ensure facility related branding and communication is contextually relevant and encourages behaviour change and adoption
- » Develop the facility identity and corresponding collateral that promotes larger goals of sanitation and health for better life
- » Creating facility signage that is functional and facilitates access and experience



An award-winning consultancy internationally recognized as amongst the top emerging practices in the world with a commitment towards delivering innovative, context specific designs that encourage sustainable lifestyles. Anagram Architects is a full spectrum spatial design consultancy firm that offers expertise in urbanism, architecture, interior design, and research.

They are leading the architectural design of the 119 facilities:

- » Provide site-specific architectural designs
- » Consult on waste management issues
- » Oversee facility construction

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# Conclusion



October has the potential to be a challenging month across all workstreams due to the holidays in Odisha. While significant progress has been made, the temporary, and much-deserved, break in the action owing to the festival season will require diligence on the part of all partners to ensure as much work continues unimpeded as possible. The major hurdles have seemingly been overcome and many key decisions that will drive the project going forward have already been made. As the adage goes, though, the "devil is in the details" and efforts must be redoubled to keep Sammaan on course.

This is an exciting month not just due to the progress that has been made and the activities that will take place in October, but also because of the impending visit by the Yale University School of Management. It is easy for the project partners to lose sight of the significance of Project Sammaan in a larger context given how involved everyone is with it on a daily basis. Being featured by one of the world's foremost educational institutions due to the innovative and collaborative nature of the project serves as a sense of validation for the long, sometimes stressful, hours that the team has put in over the past year-and-a-half.

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