



PROJECT BRIEF

UNDERSTANDING USER EXPERIENCE OF
SANITATION FOR THE URBAN POOR

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www.pottyproject.in

The Potty Project's central aim is to create relevant information on sanitation and hygiene to enable appropriate innovations for design, development and delivery of sanitation infrastructure and services targeted at urban slums.

This is a project brief discussing the objectives, activities, research findings, and field experiences of Quicksand's study on understanding sanitation for the urban poor in India.

Introduction to The Potty Project



A user defecates in the open, in the wee hours of the morning, Ram Tekdi, Pune.

Project Background

The Potty Project, commissioned by Bill and Melinda Gates Foundation, was conducted by Quicksand Design Studio over ten months - between May 2010-March 2011 in 5 cities in India.

THE OVERARCHING GOAL OF THIS PROJECT HAS been to conduct in-depth research into the behaviors, attitudes, and beliefs surrounding sanitation in low-income urban India in order to provide an illustrative, comprehensive account of user experiences relating to sanitation.

THE SPECIFIC GOALS FOR THIS STUDY INCLUDE:

1. *Mapping user experience around sanitation practices and utilities* by observing interactions users have with sanitation facilities or with open defecation, and

identify areas for opportunities

2. *Identify key triggers for positive and negative user sanitation practices* by interacting with users and to understand their behavior, attitudes and perceptions towards sanitation.
3. *Share research findings with stakeholders of sanitation* by present research data in a format that makes it accessible and actionable by diverse stakeholders, from policy makers to designers to program implementers who can facilitate innovation within their domains

The objectives of the EUT study were twofold: To capture and communicate the user experience of urban community sanitation services; and of examining provider experiences across the sanitation value chain.

Theoretical approach

The study relies on observational, user-centered research to gather empirical data on experiences around sanitation and various interconnected issues. Data collection is done using a mix of ethnographic methods—including extended observation, semi-structured interviews, participatory research and rich media documentation.

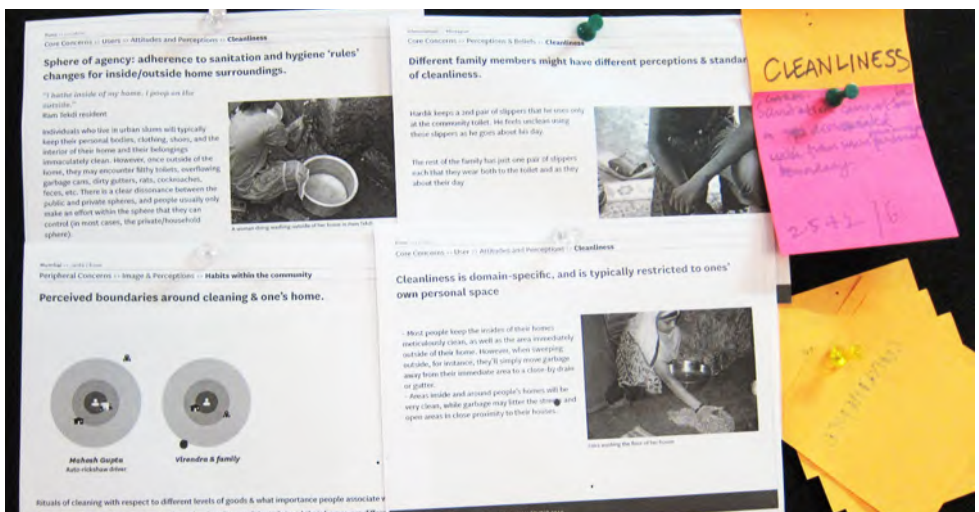
A set of activities are conducted in different phases to understand users and their context – experience of using a sanitation facility or open defecation, interaction with amenities and other users while conducting sanitation related activities, perceptions of health and hygiene for themselves and their family and dynamics of the community within which they reside.

Research tools

As part of the study, the team selected 10 slums spread over 5 urban cities in North, South and West India to illustrate diverse sanitation experiences in India. The study team selected these locations on the basis of factors such as varied population demographics, regional cultural differences, diverse local community dynamics and different types of sanitation facilities. Further in-depth study was conducted with users in the selected locations.

The study progressed through the following stages:

1. *Briefing and liaison with project stakeholders (June 2010)* to iterate and finalize research goals, methodologies and schedule.
2. *Preliminary research (July-August 2010)* to understand the context and identify suitable locations for the research. The study team visited multiple low-income slum sites in each city documenting informative examples and identifying unique instances of sanitation behavior amongst users and communities.
3. *Deep site-specific research (August-September 2010)* with respect to understanding for users in greater detail, observing interactions and documenting other interconnected issues. During this phase the study team conducted in-depth observations and interactive data collection at sanitation facilities, individual families and community gatherings.
4. *Research synthesis (September-October 2010)* on the data collected was done through a variety of qualitative research methodologies that focus on identifying key themes and concepts concepts that emerge directly from research data.
5. *Validation with macro stakeholders (October 2010)* by way of sharing the synthesis and findings from the study with the community of stakeholders, in periodic project updates



Aggregating observations from the field to arrive at insights.



Affinity Diagramming to arrive at interesting information patterns and themes.

as well as rich media outputs at the end of each phase of research. The study team also presented the key takeaways and findings to stakeholders in a 2-day workshop held in New Delhi.

6. *Final findings and testable hypothesis (December-February 2011)* were evolved based on the synthesis and findings from the research which were identified by the group as being relevant to interested stakeholders of urban sanitation.
7. *Liaison with subject matter experts (through the course of the project)* to explore potential avenues for collaboration. Alongside field research, the study team identifies and engaged with subject matter experts (SMEs), institutions, grass root organizations and technologists as potential collaborators.
8. *Disseminating the research on social media (through the course of the project)* to make the study progress accessible to a worldwide audience. We started blogging about our experiences in the field and sharing our thoughts on-the-go. The research can be followed on our project blog: pottypointindia.tumblr.com and our Twitter profile: twitter.com/thepottypoint

The Quicksand study team employed a wide variety of qualitative research methods through the

various stages of the research, including:

1. Video ethnography & shadowing sessions
2. Research Guides: The research team developed detailed research guides & toolkits for use in the field
3. Cultural guiding (by community members who acted as cultural guides)
4. In-depth and in-context interviews and discussions
5. Participatory sessions (privacy scenario cards and sanitation ecosystem mapping)
6. Product preference exercises (shadow shopping to elicit users' preferences, comparative evaluations & imagined responses)

The analysis and synthesis of the above mentioned phases is rolled into this executive summary report. An online publications in the form of an interactive research knowledge product has been created, for the purpose of making the findings from the study accessible and easy to disseminate within a larger community. This online publication has been designed as a ready-reckoner for interested stake-holders of urban sanitation. It breaks down the user experience around urban sanitation into its various components and highlights likely but untested opportunities to improve the same. The publication can be viewed at pottypoint.in



Semi-private toilet in a small slum comprising of 30 households in Mathikere, Bangalore.

Location selection

The team identified 5 urban cities – Ahmedabad, Bangalore, Delhi, Mumbai and Pune – to illustrate the diverse sanitation experiences in India. Taking account of factors such as regional cultural differences, varied population demographics, diverse local community dynamics, and different types of sanitation facilities, the study investigates how a large number of variables influence user experiences of sanitation.

Within each location cluster, we located and selected a few subset communities which have varying sanitation-related experiences. This includes (but is not limited to) communities which have access to community toilets, semi-private toilets; communities which have engaged in sanitation-related interventions led by the local government or civil NGOs; communities with no sanitation facilities or interventions; and so on. Within these communities, we engaged with individuals and institutions through a variety of different interactions and activities.

Thirty slums were identified as potential sites for the study. These were down-selected for further research based on a set of conditions which were perceived as significant factors affecting sanitation contexts across locations emerged from our initial observations. Some of the factors forming selection criteria were: Role of women: What is the voice of women in creation, administration and management of sanitation infrastructure for the community? ; Triggers for collective action: What are the obvious and non obvious triggers for people to come together? ; Accountability and ownership of shared sanitation facility: Is there evidence of the community taking charge of their sanitation infrastructure? ; Access to services related to sanitation: What is the community's ability to access services on demand (such as cleaning, water, repair etc)? ; Awareness: What is the community's awareness of sanitation schemes, organizations or interventions?

The number of individuals with whom we engaged in interviews, discussions, workshops and so forth is vast, and their backgrounds and opinions very diverse. All, however, provided valuable insights



on the topic of urban sanitation in India, and the range of perspectives and approaches the team was exposed to help form a solid foundation upon which to conduct the study.

As part of the study of the sanitation facility, the team conducted interviews and documented caretakers as well as cleaners to understand their experience of running and managing the operations of the facility.

While engaging with individuals in the target

communities, some of the aspects considered included: Gender (experiences of men vs. women), Age (varying experiences of children, adolescents, adults, and elderly people), Size/type of households (Family dynamics, Toilet usage within family & Income brackets), Education, Livelihoods, Time spent living in present location, Access to media, Exposure to sanitation campaigns, Health (incidence of/exposure to disease) and Location in relation to community toilets/fields (distance, quality of access)

| | City | Location |
|---|--|---|
| 1 | Delhi (pilot sites for testing research protocols) | Zamrudhpur GP Block, Pitampura |
| 2 | Bangalore | Ashwathapura Slum, Peenya Mathikere Flyover Slum |
| 3 | Ahmedabad | Mirzapur Khodiyar Nagar |
| 4 | Pune | Happy Colony Slum Ram Tekdi, Pune |
| 5 | Mumbai | Janta Chawl, Bandra Gautam Nagar, Govandi |



Key areas on enquiry

One of the objectives of the study is to create a rich and accessible information base that aids a clearer understanding of the user experience of sanitation. For the purpose of this, the findings from the research are synthesized into areas of enquiry, which are relevant to interested stakeholders of urban sanitation. These 17 areas of enquiry have been synthesized into four broad areas of engagement of a user with urban sanitation. These are:



| | Areas of engagement | Key areas of enquiry |
|---|-----------------------|----------------------------|
| 1 | Defecation Behavior | Open defecation |
| | | Privacy |
| | | Routines and schedules |
| | | Behavior of children |
| 2 | Toilet Infrastructure | Rules of use |
| | | Location |
| | | Care-taking |
| | | Social and cultural taboos |
| | | Spending behavior |
| 3 | Health and Hygiene | Cleanliness |
| | | Disease |
| | | Hygiene practices |
| 4 | Property Rights | Shared ownership |
| | | Private sanitation |
| | | Community cohesion |
| | | Transience |
| | | Social benefits |

Key insights

The study aims to create and disseminate user centered insights on urban community sanitation as starting points for innovation. The key insights from the study have been framed as testable hypotheses – predictions that can be tested by others – researchers, implementers, or designers. The following driver for innovation have been identified, which are explained more fully below:

1. *Facility Design (space, products, sanitation technology)*
2. *Operations and Management (O&M) Models (systems, processes, human resources)*
3. *Communication (identity, behavior change)*
4. *Business Models (payment, product)*

Facility Design

Design and development efforts need to focus on toilet features and attributes that improve the user's experience throughout the journey of the space, while recognizing that users may include women, children and the aged. Architects must also keep in mind a user's perception of barriers of use of a toilet.

Choosing a sanitation option

Many of the people make an effort to travel far and defecate in the open, even where toilet facilities are available. If toilet facilities could be designed keeping in mind people's need for cleanliness and less crowded spaces, more people would be encouraged to use a toilet facility.

People have set routines of when they use the sanitation facility in a day. For example, some of the people we met were using the toilet during the early morning hours or in the afternoons during non-rush hours. If incentivized with less crowded toilets, they would be willing to change their sanitation schedule.

Containing Zones of Filth

When toilets are dirty within their four walls, the aura of that filth seeps outside the facility as well. People come to see the toilet and its vicinity as a dirty space; it becomes socially acceptable to defecate or even dispose of garbage outside the facility.

Similarly, we observed that garbage containers near the toilet compound and attendant spillovers of trash could also create a zone of filth, exacerbating problems with garbage and fecal accumulation. This zone of filth can be contained by designing clear, symbolic or physical boundaries both around the toilet itself and also around the toilet facility. These boundaries can create clean spaces that have distinct identities, separated from toilet and toilet activities.

Provide for spaces to store cleaning implements and other paraphernalia

Most toilet facilities lack designated spaces for the storage of cleaning tools, implements and

collected trash and waste. As a result, we observed toilet facilities rendered partially unusable because spaces had been co-opted for storage. If storage spaces are provided within the toilet facility to keep cleaning supplies and implements then the caretaker will not re-appropriate toilet infrastructure for his needs.

Avoid hidden spaces and corners

Most toilet spaces have parts and corners that are misused by the people using it as they are hidden from public view. This enables users to carry out unwarranted activities as they can't be held accountable for them.

Designing the space of the community toilet so that the care-taker always has a clear view of the facility can discourage people from conducting unwarranted activities.

Make the sanitation journey safer for women

Safety is a prime concern for women, while choosing or using a sanitation facility. Many women we met found it safer to access toilets in the most familiar surroundings which happen to be closest to their homes, where the chances of any discrepancy occurring or going unnoticed is lesser. There is a need to design safety mechanisms for women, so that they feel comfortable and unthreatened while going to a sanitation facility and while using them.

Design for how daily sanitation practices vary by gender

Designing for gender has typically meant designing separated, symmetrical sanitation facilities for men and women, both to curb any indecency and to grant women a sense of safety and privacy. Men and women, however, have different sanitation practices needs that

can be better accommodated through innovative facilities design. Men tend to club defecation and bathing activities at a community facility, not only when they have private bathing facilities but also when there is an open wash-area courtyard. By contrast, most women use community toilets only for defecation (even when they are provided with bathing stalls) as they tend to club bathing with washing clothes around the open community water taps. Current toilet facilities designs do not account for the diverse ways men and women group sanitation activities together. Alternate space designs tailored to gendered sanitation practices would make toilets more useful.

Design accessories for safe disposal of menstrual waste

Most toilets also do not provide awareness or mechanisms for safe disposal of menstrual waste. As a result of which choked toilet bowls and littered sanitary towels are a common sight in the women's toilet. If sanitation facilities offer appropriate amenities for the safe disposal of menstrual waste, it will both raise awareness of proper waste disposal and trigger women to discard their sanitary napkins more prudently.



Photo Credit: Enrico Fabiani

A user at the mobile toilet in Sanjay Camp, Delhi

Accommodate children-specific facilities

Sanitation facilities rarely have special amenities designed with the sanitation needs of children in mind. (SPARC-run toilets in Pune and Mumbai were the sole exception we encountered.) As children grow older, their only option is to use the gender-specific toilets which are also being used by the adults. There, children face a number of challenges. First, parents expressed that they feel the toilets are dangerous for children as the floors are slippery wet-zones and the bowls are large proportional to children's body. Second, children in the adult toilet may also face bullying by others jockeying for scarce toilet spots. Third, waiting in line to access a toilet is difficult for young children because they have poor sphincter control. This combination of factors results in large numbers of children defecating outside the toilet or in drains close to their homes. This behavior is not only practical, but socially accepted.

If toilet facilities account for child safety, bullying, and a child's ability to wait in line, they will provide children and their parents a viable alternative to defecating outside. The facilities should not only account for these factors, but also communicate that to parents who often make decisions for the child.

Children toilets need to accommodate for gender privacy too

Designers of toilets for children may assume that children relate to one another openly regardless of gender. SPARC's community facilities in Pune, thus, use an open and unisex model where children both boys and girls defecate in the visible presence of each other. In these facilities, most of the young girls switch to the women's toilet at a much younger age as it doesn't require them the privacy that comes as a necessity when they come of a certain age.

It shows that that gender sensitivity issues are pertinent even when it comes to design for children and that it needs to be approached with consideration. If toilets for children are designed keeping age and gender sensitivities around girl children in mind, then they will use the toilet for a longer period of time.

Operations & Maintenance

Community sanitation facilities are in an ever deteriorating physical state with derelict toilet hardware, broken doors or tiles and accumulating layers of filth seeming an inevitable end for most. Alternate self sustaining models of operation and maintenance , fueled by facility users or local capacity building organizations, can drastically improved the quality and longevity of community sanitation facilities. Overcoming people’s perceptions around participation in cleaning and maintaining these toilets will be a key challenge.

Have water, will clean

When sufficient water is available, many people superficial clean the latrine prior to personal use when sufficient water is accessible. Sufficient means the average amount that a user needs for anal cleansing, rinsing and washing or flushing his surroundings. This behavior may be a leverage point for encouraging toilet users to maintain basic cleanliness inside a booth at the community toilet facility.

Make cleanliness contributory

Users of community sanitation facilities expend very little effort in contributing to the cleanliness of community toilet facilities. Fecal matter around the toilet, chewed betel nut remnants on walls, and coal tooth powder on the floor are commonly left behind. The causes are multiple. People may regard sweepers and caretakers as responsible for cleaning up after them, and, as a result, leave the toilet messier than when they entered. Moreover, there are no succinct rules or norms of cleanliness in these spaces. Because caretakers only clean the toilet once a day, each user adds cumulative layers of filth that makes the toilet increasingly unsanitary throughout the day.

Users may frame maintaining cleanliness as an issue of effort or time, but the issue can be reframed as one of personal or familial well-being and health. This reframing will encourage participation in cleanliness as personally relevant.

Stanch vandalism and disruptive behavior

In many community toilet facilities, people deface

spaces and amenities and steal fittings on a regular basis. Sinks without taps and doors without latches are common sights. It is unreasonable to



A derelict toilet facility at Ghazipur, Delhi

expect caretakers to prevent such losses as they cannot be everywhere at once. The caretaker's dilemma is that replacing these stolen implements can seem as an invitation to more theft. Male drunkenness and harassment of others can also be a commonplace form of disruption that deters others from using facilities.

Such vandalism and disruption prevents community members from using toilets. By designing systems that discourage vandalism and theft, the toilet facility can be made both sustainable and attractive to users.

Make care-taking a lucrative proposition

Most caretakers constantly struggle to make ends meet as the entire onus of managing funds, operating the facility, and maintaining the toilet rests on them. Operators often burden caretakers with financial risk and insecurity, leaving caretakers looking to make ends meet. These financial burdens can eat away at the time caretakers can devote to maintaining toilet facilities.

An additional challenge is that the caretaker has little negotiation powers with the community, as they disregard him and associate him with the lower caste as he carries out menial tasks like cleaning toilets; this in-turn acts as a hindrance for the caretaker when it comes to collecting funds for the toilet and enforcing proper behavior and use of toilet amenities.

Several measures can improve the caretaker's lot and enable better managed toilet facilities as a result. Financial operating models should be designed to reduce burden on already vulnerable caretakers, enabling them to focus on toilet operations while still incentivizing efficiently run toilets.

Associations of low-caste positions with sanitation caretaking work can be mitigated by formalizing the job of a caretaker and symbolizing that formality with a uniform and well-designed cleaning implements. This can reframe their role from one of lower caste/ stature to that of an appointed public servant.

Involve communities to propagate peer control

Many residents observe misuse of sanitation facilities but often do not confront the culprit, either directly or indirectly. Without an immediate personal stake, individuals are reluctant to stand out, whether to take ownership for initiatives that benefit the community at large or to improve health, cleanliness, and hygiene in the community. Incentivizing users and designing mechanisms to voice their opinions will lead to an increase in people's tendency to proactively prevent actions detrimental to the community sanitation facilities indirectly yet considerably affecting maintenance.

In slums, most people feel and are ill-equipped to independently negotiate better service delivery by the organization managing the community sanitation facilities (and other civic services). The time and cost it requires to bargain for better service delivery becomes an insurmountable barrier for most individuals who don't have the resources to do this. Their ability to demand and get better services increases dramatically if there is a community based organization (CBO) within the slum that provides a platform for them to negotiate through and where individual contributions add up to a larger whole.

Limit access and control by keeping it small

Smaller, limited access sanitation facilities tend to be cleaner and used more responsibly than large scale community toilets. Individuals are only willing and able to maintain toilet facilities that are below a certain threshold of filth and a low user-toilet ratio works in their favor. In more intimate settings of these micro-communities, people can be directly held liable and reprimanded for misuse, thus making the system more reliable and self sustaining.

Hence installing smaller sized facilities within micro-communities in a slum might be a more worthwhile model rather than having one large sized facility for an entire slum.

Business Models

Despite a lot of emphasis on creating thriving self-sustaining community sanitation models, most of the toilet facilities are currently unprofitable, in financial and structural disarray. Many of these toilet facilities have failed to create enough value to convince regular toilet users to pay consistently and, in turn, have failed to convince open defecators to toilets. In other cases, lackadaisical management structures are partly responsible in different variations for this. There is a dire need to establish systems that provide users with a positive experiential service coupled with creative revenue generation mechanisms.



Photo Credit: Enrico Fabian

Caretaker's collection box at a toilet facility in Sanjay Camp, Delhi.

Marketing the need for uptake of sanitation and hygiene practices

A majority of the residents in slums practice open defecation or unsafe sanitation practices. Young men don't bother about paid sanitation services, nor do they demand toilets where there are none; young children defecate right outside their homes or open gutters falling prey to a gamut of pathogens. Even 'safe practices' such as hand-washing and safe disposal of infant fecal matter are unheard of and can be leveraged to create interesting revenue generation systems if users are convinced of their long term value and worth to their well-being.

Create user-friendly payment models

Community sanitation facilities that are run by private institutions have a pay-per-use fee, more rarely, a monthly fixed amount fee. Both models have merits and demerits; a majority of the users are daily wage laborers and might find paying an aggregate sum for monthly usage a bit taxing on their finances. At the same time users might end up paying almost 300-400% of a monthly cost pass if they pay-per-use for all the members of the family. Still many of the households prefer to pay on a per-use basis even though it is more effective to pay a monthly charge for the entire family. Sanitation service providers need to strike a balance between covering their overheads but at the same time being extremely sensitive about hardships users of the service face in making consistent or augmented payments. Having a weekly pass that breaks up the monthly cost into four easy-to-pay installments or having users pay-per-use till they meet the monthly pass cost may reduce their burden.

Keep formal book-keeping systems

Most community sanitation facilities have very informal bookkeeping methods, or lack them entirely. In these cases, the caretaker who is informally in charge of collecting funds keeps no systemic account of payments received and arrears to be collected. Often, the caretaker and the user have very inaccurate mental accounts of money owed between them, forcing the facility to run into losses or inaccurate funds. People are also



Photo Credit: Enrico Fabian

People gather together to discuss community issues

generally suspicious of paying the care-taker as they are under the impression that the money goes into his pocket and keep making excuses for their inability to pay.

Formal accounting systems, where a user gets a formal receipt for his payments, may be one way of assuring users of the legitimacy of the system. Another approach may be to make the system costs more transparent by breaking down electricity, water and consumables costs for system users.

Create autonomous systems

Shared community ownership and maintenance offers an alternative to structured, hierarchical sanitation systems implemented by an agency (e.g. NGO, CBO). An example of such a model is allocating one toilet booth to neighboring families who know each other and reprimand others on misconduct, or getting familiar families to share the cost of a private toilet and use it among themselves. Such models rely on existing networks of familiarity and accountability already in communities and create self sustaining infrastructure by supporting people with very basic information on organization and management protocols. In this model, service users become co-producers of infrastructure.

Communication & Messaging

Recent times have seen a spurt in construction of community sanitation infrastructure for slums with government agencies, but these efforts have largely failed to advocate proper use and hygiene practices, rendering current solutions ineffective. Users of these facilities do not seem to understand the link between proper sanitation habits and disease transmission, making achieving behavior change a difficult task.



Handwashing solution found at a toilet in Janta Chawl, Mumbai.

Create awareness about the invisible link between diseases and improper sanitation

A majority of people do not seem to attribute transmission of diseases to poor sanitation and waste management. Many attribute illness to poor water quality even if it is caused by other environmental factors. For instance gastrointestinal ailments are always attributed to contaminated water rather than vectors such as flies, or water contaminated by poor waste management. These occurrences point to a larger lack of understanding of the repercussions of poor sanitation & waste management habits & practices. Open defecation in nearby fields is also a prevalent practice with unsafe consequences. Though these habits are difficult to change, there is a dire necessity to come up with alternatives to make it safer and raise awareness about the benefits of those alternatives (and, conversely, the hazards of open defecation).

Having an orientation with slum residents when new toilet facilities are inaugurated to set an example right before adoption or to create practical demonstrations on how unhealthy hygiene practices can lead to diseases to begin sensitizing users to the issue can be one of the starting points to creating awareness.

Seed behavior change through emulation

Diffusion of new habits and behavior is driven mostly by emulating others rather than mass media or interventions external to the community. People in the slum learn about new practices, sanitation related or otherwise, by emulating either their peers or people they interact with at work. This is in part due to lack of formal channels for spreading knowledge, ideas, and hacks in smaller communities. This is also in part because people adopt a certain behavior only when they've seen the benefits for someone else in their social network. This underscores the need to show demonstrated benefit in fostering any behavior change.

Key influencers in a community might offer a channel to seed new behaviors that they can be passively transmitted through lesser influential

people. Simultaneously, active campaigns through formal communication channels can reinforce seeded, networked behavior change.

Build an aspirational image around sanitation

While most personal hygiene products are connected to driving personal beauty, there is an absence of any connection between better sanitation and an aspirational self image. Almost all personal hygiene products bought project a self-image with which consumers identify. On the other, users are unable to identify with mostly generic and unbranded sanitation products. While most personal hygiene products are connected to enhancing personal beauty, there is an absence of any connection between better sanitation and an aspirational self image.

If sanitation and related FMCG products were branded in a way that not only raises issues about health and safety but also builds a desirable image, then users' conscious uptake of new practices around sanitation (such as hand-washing / de-odorizing etc) might increase.

Engage people in the planning phase

Agencies that work towards providing sanitation facilities in slums rarely consult residents during the planning and design phase of the community blocks. The supply side dynamics in a city (municipal corporation and planners) often do not emphasize deep community dialog and collaborative design in sanitation rollout plans. It is considered more efficient to install standardized sanitation facilities.

To formulate correct programs and remedies for slum-dwellers it is necessary to communicate with them to gather a deep understanding of their grievances and context, which helps in setting up appropriate infrastructure and systems.



Conclusion

In summary, the study on sanitation enabled Quicksand to document key insights on the daily lives, routines, and preferences of users interacting with sanitation in urban slums in India. The findings provide valuable insights and directions for future innovations to improve sanitation for the urban poor. The user-centered insights on urban community sanitation have been positioned as starting points for innovation as well as dissemination in the sanitation ecosystem.

Quicksand encourages other organizations and businesses to expand on this approach. Applying this method within different contexts and geographic areas and sharing the results broadly will contribute to sustainable innovations in sanitation to improve health among low-income consumers in India and elsewhere around the globe.



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