

iDE

FINAL REPORT

Sanitation in Complex Operational Environments

JULY 2019



This document compiles the insights and learnings through the HEAR, CREATE and DELIVER phases of research on sanitation systems in the Haor and Char regions of Bangladesh. The research has been done as a component of TOPS-WASH through the SHOUHARDO III project.

July 2019

DISCLAIMER

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CONTRACT MILESTONE 4

This report is the completion of Milestone 4 from the SCORE contract.

Installation of test ready prototypes in collaboration with PRO-WASH and SHOUHARDO III team, Conduct Wrap-up workshop; PRO-WASH Approved Implementation Strategy, Monitoring Framework, Installation Guidelines, Behavior Change and Promotional Strategy and Stakeholder Engagement Strategy documents.

Executive Summary

This report summarizes the findings of three phases of research over the last four months. iDE has conducted rigorous human centred formative research, rapid prototyping and participatory in-depth interviews with customers, potential service providers, local NGO staff and relevant stakeholders. This research has aimed to balance practical, operational, strategic and philosophical constraints with a pragmatic approach to designing grounded solutions. As with any strategy, the recommendations within this document will require further testing, refinement and adaptive management. Markets are dynamic and static implementation is seldom able to create sustainable and resilient change.

Implementation Strategy

iDE recommends promoting a new brand of latrines for the Haor and Char regions - the Nirapod latrine. Targeted implementation will follow three broad goals: **demand, supply** and **support**. Demand focuses on the marketing and behavior change for consumers, supply on the market infrastructure, and support on the mechanisms for subsidy and ensuring quality installations. iDE recommends multiple-sweep approach focusing first on households who have graduated into food security through the Shouhardo III- with special attention to households in the haor and those who already own uninstalled components. Second and third sweeps will focus on households who require subsidy, microfinance loans and special assistance. This approach helps to catalyze the functional, resilient and sustainable market infrastructure required to reach the marginalized.

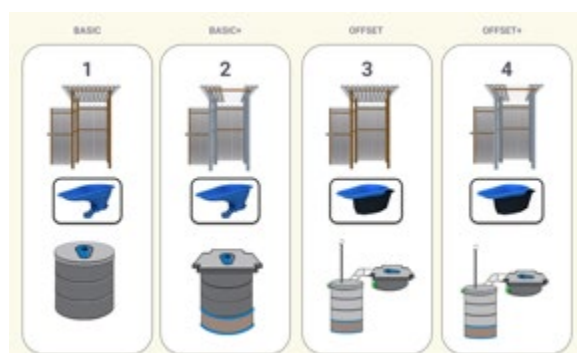
Products

iDE recommends a suite of four unique latrine designs that are drawn from HEAR and CREATE phases findings. These designs aim to balance affordability with quality. They also include key differences from iDE's conventional designs - for example the shelter design has been updated to be wider and taller with optional transparent roof panel and the slab design includes corner cutouts to ensure space for cement pillars. Additionally, we do not recommend any of the ceramic pan or SanBox latrine designs that come with full septic tanks or twin pit systems to keep prices down and to be functional in smaller footprints. The Nirapod latrines include the following four options:

Basic: This latrine is a simple low-cost design. It is a simple pit latrine, where the squatting slab sits directly on top of the pit. The pit is lined with three concrete rings. The squatting slab has a trap door latrine pan that keeps away flies and blocks smell. This latrine includes a corrugated iron (tin) shelter with bamboo pillars that is wider than traditional designs.

Basic+: The Basic+ design includes three upgrades on the Basic design. Firstly, concrete pillars are used in the shelter instead of bamboo with a transparent roof panel for more light. The squatting slab is square which allows for more space in the latrine. And the pit includes a low-cost onsite Fecal Sludge Management system called FilTo, which increases leaching, decreases the volume of sludge in the tank, conducts primary treatment of the sludge in the tank, and promotes safer emptying. FilTo has four concrete rings sealed as a tank.

Offset: The Offset design moves the pit from directly underneath the squatting slab, to 'offset' from the slab by 2-3 feet. The pit remains the same as the Basic+ latrine with a FilTo system. The shelter is the same as the Basic design with bamboo pillars and corrugated iron.



Offset+: The Offset+ design includes the same squatting slab and pit as the Offset design. However the shelter can also be attached to the home - which is especially helpful for individuals with disabilities. The shelter is the same as the Basic+ design, with four countrete pillars, corrugated iron walls and a transparent roof panel.

Behaviour Change Communication

We recommend a new brand of latrine - the Nirapod. The brand “Nirapod”, combines the Bangla word for safe which is Nirapad and the English word “Pod” which means a streamlined enclosure, housing, or detachable container. This tested brand resonates well with customers and service delivery actors.

Marketing and behavior change messages should focus on the *safety* of the latrines in comparison to other options and should highlight the full service delivery modality and not just components. Photographs/videos of trusted individuals such as NGO workers and doctors are recommended for billboards, tv and other above the line marketing. While line drawings of easily understandable concepts of safety showing individuals who live in similar circumstances are recommended for flipcharts and other below the line marketing.



Protect your health and safety with the Nirapod.



This new toilet is safe and healthy.

Business Model

The Nirapod brand can be sold through trained local service providers (LSPs) and supported by honest brokers (HBs). These individuals are linked through the program to latrine sweepers and local government for after sales service and subsidy provision. The LSPs and HBs will pay special attention to the proper **installation** and **maintenance** of latrines highlighting that improved latrines have four aspects: technology, components, installation and maintenance. Quality latrines require four levels of improvement: technology (how the latrine works to store and treat waste), components (such as pan and shelter types), installation (including how and where), and maintenance (daily upkeep and annual pit emptying). Based on field findings from the rapid prototyping phase, the biggest missing link in this chain in haor and char environments is **installation**. In char areas, the key is to install latrines **raised to the same level as the home**; in haor areas the key is to install latrines **away from the mound edge**. While this seems basic, it is the largest finding of our prototyping and is not something that iDE current engages with in other projects.

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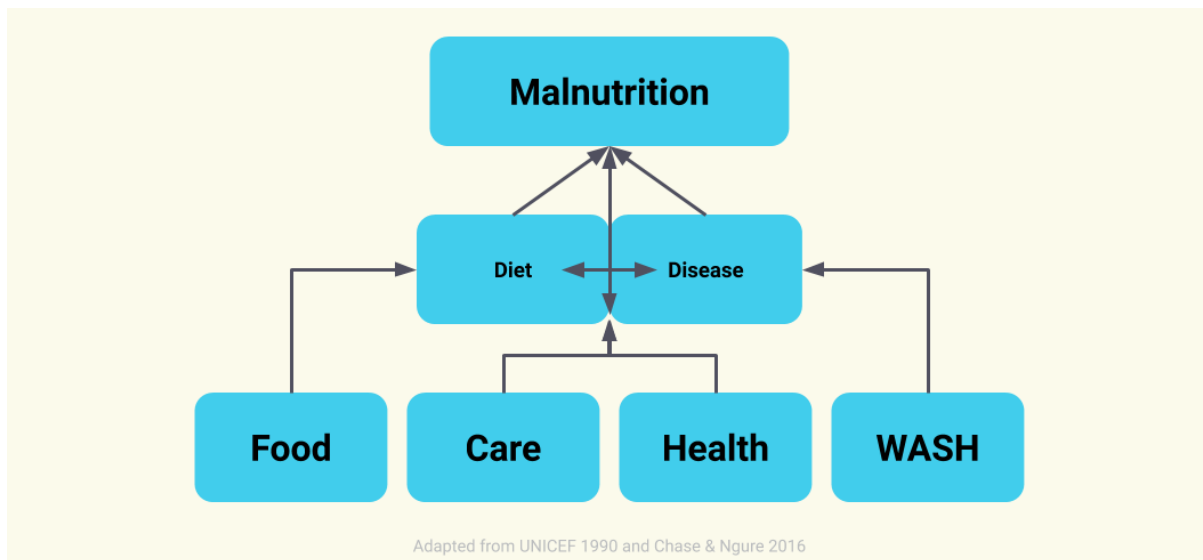
List of Acronyms

ATL	Above the Line
BCC	Behavior Change Communication
BTL	Below the Line
CSO	Civil Society Organizations
HB	Honest Broker
HCD	Human Centred Design
HH	Household
LP	Latrine Producer
LSP	Local Service Provider
LGI	Local Government Institution
FiTo	Filtering Toilet - Onsite Sludge Treatment
FSM	Fecal Sludge Management
NGO	Non-Governmental Organizations
WASH	Water, Sanitation and Hygiene

Introduction

Quality sanitation impacts not only health at the individual, household and community level, but also has impacts on food security, dignity and well-being. These outcomes are even stronger for women and girls who experience the breath of such challenges. However in order to ensure these impacts, improved sanitation must be **accessible** and remain **usable**, **resilient** and **sustainable**.

Food security and nutrition programs, such as SHOUHARDO III, have much to benefit from incorporating basic water, sanitation and hygiene (WASH), into the program. Evidence increasingly points to the central role that adequate access to sanitation services plays in bolstering nutrition outcomes. The diagram below conceptualizes the balance of care, health and food that in turn impact diet and disease leading to malnutrition.¹



This continues to underscore the importance of adequate WASH conditions in improving nutrition outcomes, advocating for incorporating WASH activities within nutrition programs, often referred to as one-way integration, as a means of maximizing impact. Poor WASH impacts nutrition through four primary channels: 1) environmental enteropathy, or suboptimal nutrient absorption due to repeated infections of the gut; 2) soil-transmitted helminths and nematodes, or parasitic worms; 3) diarrheal diseases, acute respiratory infections, and malaria; and 4) high cost of water, including transportation and time costs, and the costs of medical treatments. In turn, these conditions lead to inflammation and lack of nutrient absorption, as well as inadequate food intake for health and economic reasons. Young children exposed to these elements often suffer from stunting and anemia, which impact physical and cognitive development, ultimately affecting their future economic prospects.

In iDE's experience, successful latrine uptake and sustained usage results from a full understanding of drivers and barriers to behavior change, including social, economic, health, and convenience factors, as well as challenges and opportunities in the broader market. Therefore, the project uses market system development framework and approach rooted in the assumption that developing market systems is the best way to bring about sustainable and scalable change to benefit low income communities. The framework also seeks to make markets more inclusive of the poor, and to work sustainably to address weaknesses in the market system. By identifying the underlying causes of weak market performance and designing interventions to address them, the power of markets can be leveraged to bring about large scale and enduring change.

iDE has strong experience in catalyzing markets for sanitation in Bangladesh, Cambodia, Nepal, Vietnam, Ghana with over 1 million WASH sales to date. In Bangladesh the team has facilitated over 380,000 low-cost WASH

¹ Chase, C. and Ngunjiri, F. (2016) "[Multisectoral Approaches to Improving Nutrition: Water, Sanitation and Hygiene.](#)" WSP Learning Note, Feb 2016.

sales (safe water, sanitation, and FSM) reaching 1.7 million people in the last five years through a newly established association-based network of 1,150 WASH entrepreneurs and 500+ commission based sales agents (45% women). Our entrepreneurs have seen 4.2x growth in their businesses and 42% of latrine sales have been to the extreme poor households. 95% of households are satisfied with the latrines after six months of use.

The systemic approach in collaboration with the public and private sectors won the 2017 P3 Impact Award and the scaleable outreach model has been applied in six divisions across Bangladesh in hard to reach and disaster prone areas and with marginalized groups. The team has successfully piloted 20 WASH products and commercialized six products with the private sector since 2013. Several of these products and service delivery models have already been contextualized within both char and haor areas including low-cost resilient latrines, fecal sludge management solutions and local entrepreneur models.

iDE's has been utilizing flexible model of participatory action research that adapts and constantly responds to changing dynamics, along with hands-on coaching modality with private sector actors. iDE's nuance in human centred approaches and reflexive programming allows us to continue developing solutions in complex environments.

iDE's experience in sanitation in Bangladesh, has created a strong foundation for the research, but the team also learned a great deal through the process of the research. Market systems are dynamic, and therefore constantly changing, even from year to year. Insights from product, service delivery, behavior change and implementation have all been tailored to the haor and char environments and for SHOUHARDO beneficiaries. iDE's previous work provided the building blocks, but this research helped to assemble them together. The team anticipates that the findings of this research will not just enrich the SHOUHARDO programming, but sanitation marketing programming across Bangladesh and beyond.

This report has five sections. Firstly, we describe the contextual context of the complex areas and an overview of the project approach including the project boundaries. Next, we report on findings from the HEAR and CREATE phases of the research. We then identify the key recommendations for each: product, service model, behavior change communication, and implementation strategy in the DELIVER phase. Lastly, we offer some conclusions and possible next steps for the integration of WASH in SHOUHARDO III.

Contextual Background

In rural Bangladesh, access to sanitation has significantly improved over the last 20 years, and the practice of open defecation has drastically decreased. However, country-wide coverage with low-quality latrines has led to a situation where the achievement of the Sustainable Development Goal (SDG) 6, from a hygienic quality perspective, is unlikely. Thirty-one (31) percent of the population still do not have access to improved sanitation² costing the economy of Bangladesh BDT 295 billion (US\$4.2 billion) per year in losses.³

The sanitation market system is fragmented in *haor* and *char* areas with weak linkages between retailers and sanitation entrepreneurs. Innovative technologies and improved practices do not reach the last mile and are not shared between entrepreneurs. Additionally, entrepreneurs have limited incentives to produce quality products and deliver them to the last mile.

The WASH situation is further exacerbated in the hard to reach (HtR) areas such as *chars* (riverine islands) and *haors* (wetlands) due to the geophysical, socio-cultural and economic situation. Out of 1,144 unions identified as HtR based on physiographic conditions and spatial distribution, more than 45% (517 unions) have *haors* or *chars*⁴. With limited infrastructure development, especially road networks, water and sanitation coverage in these areas still remains well below the Joint Monitoring Programme (JMP) ‘basic’ standard.



In the last decade, the Government of Bangladesh has formulated a number of policies to improve the WASH condition in HtR areas (National Strategy on Water and Sanitation for Hard to Reach areas 2011, National Strategy for Water Supply and Sanitation 2014 and Seventh Five Year plan, 2015). Despite concerted efforts from government and the development sector, existing data suggests that quality is still an issue both for drinking water supply and improved sanitation in Bangladesh, especially for low-income poor communities in HtR areas. In addition, the geophysical context of *chars* and *haors* is diverse as each of these areas has distinct characteristics and livelihood patterns of the people requiring contextualized solutions.

Various water-borne diseases and other health problems are quite frequent among the *char* households, due to use of ditch and tidal water for drinking and lack of safe latrines.⁵ Similarly, in *haor* regions there is poor access to improved sanitation facilities as compared with other parts of Bangladesh. Due to geography, erosion, and increasing population density, it is difficult to maintain sanitation infrastructure.⁶ Flooding during the monsoon season can cause pit latrine to overflow.

A number of organizations have undertaken studies and pilot projects to develop latrines and sanitation systems appropriate for the flood prone areas of Bangladesh. Some of these solutions include raised latrines⁷, hanging latrines⁸, and floating latrines⁹. However, despite being technically feasible, these solutions have not yet reached scale due to a number of factors including lack of viable business models; engagement with supply chains and sanitation entrepreneurs; and mismatch between product features and consumer demand.

² JMP (2017). Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. Geneva: World Health Organization (WHO) and the United Nations Children’s Fund

³ WSP (2011). Inadequate sanitation costs Bangladesh BDT 295.5 Billion (US\$4.2 Billion)

⁴ GoB (2011). National Strategy on Water and Sanitation for Hard to Reach areas of Bangladesh. Ministry of LGRD&C, Government of Bangladesh, Dhaka

⁵ BRAC (2011). Impact of Char Development and Settlement Project on Improving the Livelihood of Char Dwellers

⁶ CARE (2016). CARE Bangladesh Program Strategy 2015-2020

⁷ Hanchett, S. (2016). Sanitation in Bangladesh: Revolution, Evolution, and New Challenges. CLTS Knowledge Hub Paper.

⁸ SSWM (no date). Overhung latrines.

⁹ CARE Bangladesh Program Strategy 2015-2020. Feb 2016. Care International

Limitations of this Study and Frequently Asked Questions

The goal of this research is to match **manifest needs** (what people say) with **latent needs** (what they don't say aloud plus evidence around sanitation best practices). This is not an easy feat and one that we have conducted with attention and care. We recognize that there are no perfect solutions, and caution against suggestions otherwise. We have sought solutions that work for the majority. This is not in neglect of the minorities (such as those with disabilities or those without any land/squatters), but a recognition that in order to effectively reach the minorities, the majority must have functioning infrastructure to then build on. We have seen overwhelming evidence in water access programs of limited access for the poor, while the ultra-poor are well taken care of. This model then is unsustainable for all market actors and quickly collapses.

As certain behaviors, customers, geographies and conditions require additional research, our goal in this research and design is to create services and concept for the majority as is fitting with the technology adoption curve. Following a technology adoption curve, those who will not be able to take up service in the first wave, will require future further research. iDE has employed this methodology for many years across many sectors and in many countries. Iterative rounds of participatory action research using human centred design principles allow for tailored approaches to narrow over time. **However in these initial days, a first wave must aim for the majority of households in order to create resilient and sustainable markets.**

The following answers frequently asked questions, are based on our field research. Further details can be found in the [Testing Assumptions](#) section.

Why start with the food secure? And what about the ultra-poor?

One of the most challenging aspects about a market based approach to sanitation is advising households with limited income how to spend. Ultimately, this is a philosophical discussion and one highlighted well in Amartya Sen's seminal text - Development as Freedom - as he discusses how one's world view ultimately influences what is the most important expenditure (pp. 54-55)¹⁰. In keeping with Sen's philosophical foundations, we recommend that households themselves are best able to make this decision, if given the opportunity, choice and agency.

The diagram to the left highlights the complexity of where to place sanitation in a hierarchy of needs. This hierarchy is compiled from household feedback, but is very flexible and based on individual agency.

However this is also why we recommend targeting key purchasing messages on households who have 'graduated' into food security. For food insecure households we recommend targeted subsidy through local government and microfinance loans. As many households already have basic components that are uninstalled, simple, low-cost upgrades (like a 650 BDT improved slab) can take these components and ensure a quality latrine.



The nexus approach is powerful and iDE has seen the largest uptake of latrines in any program in partnership with food security and income generation programming. The goal then becomes opening opportunities and choice that can be partnered with increased income.

Why change current installation practices? Why not change the technology?

In order to ensure the safety and resilience of the latrines recommended, the team identified two possible pathways: 1) change the technologies, or 2) change the installation practices. Mound edge installation practices are unsafe and not resilient due to unstable slabs; soil erosion; and unsafe leaching into water bodies and environment. We sought to select the pathway with the fewest barriers to systemic adoption. This is not just

¹⁰ Sen, A. (1999) Development as Freedom. New York: Alfred Knopf

adoption by households, but adoption by service delivery mechanisms. By keeping the technical components as close as possible to existing components, we reduce possible complexity and future risks. While floating latrines and other more complex technologies have the possibility to be resilient, the risks of incorrect manufacturing and installation are high, capital and operational costs are limiting, and any production of new components takes years to establish. Our recommended solutions move the quality control of the 'most important components' (i.e. waterseal) higher up the manufacturing supply chain. This reduces quality risks of the technical components. By focusing on installation, we only have one barrier to cross, which is achievable through the proposed honest broker mechanism.

Although, one barrier is much easier to cross than several, the barrier we must overcome is a social one. We spent significant time in this study investigating the possible threat and opportunities in helping people move away from mound edge installation. We discovered that the main reasons people put their latrines on the mound edge are 1) **smell**, 2) **ease of sweeping**, 3) **lack of land**. However, when we asked 'where you would put a nice, smell free toilet?' -- the aspiration is in or attached to the house. This solidifies that if we can design a low-smell, easy to sweep and small footprint latrine this barrier will be overcome.

When we are able to drastically reduce the **smell** by the use of an improved latrine pan, and after seeing demonstration latrines, interviewed households were in agreement that having a latrine closer to home is not only more resilient, but also better for women and girls. On the **sweeping** side, we believe that by changing the method of sweeping to be productive (bury waste to then plant on) is a strong pull towards better practices. Lastly, by reducing the footprints of latrines through innovative design features such as cut-outs for pillars and direct pit options, this supports closer latrines.

Project Approach

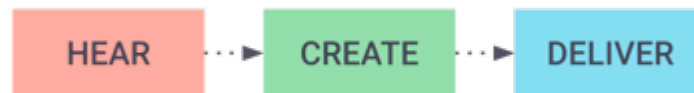
In iDE's experience, successful latrine uptake and sustained usage results from a full understanding of drivers and barriers to behavior change, including social, economic, health, and convenience factors, as well as challenges and opportunities in the broader market. Therefore, the project has used a market system development framework and approach rooted in the assumption that developing market systems is the best way to bring about sustainable and scalable change to benefit low income communities. The framework also seeks to make markets more inclusive of the poor, and to work sustainably to address weaknesses in the market system. By identifying the underlying causes of weak market performance and designing interventions to address them, the power of markets can be leveraged to bring about large scale and enduring change.

Human Centered Design (HCD)

iDE has utilized Human Centred Design (HCD) as the grounding for this project. HCD¹¹ is a systematic method for acquiring a deep understanding of customers, their environments, and their routines in order to create innovative solutions to the problems that they face. We have considered the entire user experience from how a solution is built to how it is promoted, financed, delivered, serviced, and more. HCD seeks to find solutions that are desirable, feasible and viable as defined below.

- **Desirability (Social)**—What do users need and want? What are the drivers and barriers to adoption? What incentives drive their decisions? What is the entire user experience, from the moment they are exposed to the solution to their ongoing use and maintenance?
- **Feasibility (Technical)**—What can be done technically? Will this technology work locally and in the environmental constraints?
- **Viability (Economic)**—What is financially and economically viable? Is there a financing model and incentive structure that allows this solution to be sustained for as long as it is needed?

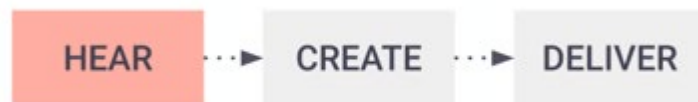
This project has followed three phases: Hear (March - April), Create (May - June), Deliver (July).



Central to the HCD process are research “Deep Dives”, which employ real life observations through ethnographic consumer research methodologies to systematically analyze the marketplace, consumers and additional relevant actors. From these Deep Dives, observations are distilled and synthesized into categories of desirability, feasibility and viability that illustrate the potential opportunities, market development and marketing strategies for solutions. The research approach was designed to blend Human-Centered Design and Design Thinking methodologies in order to capture various perspectives from multiple user and actor groups across genders.

¹¹ IDEO (2011). Human Centered Design Toolkit: An Open Source Toolkit To Inspire New Solutions in the Developing World.

HEAR PHASE



The HEAR phase of this research was conducted in April 2019, with both desk research, deep dive research and stakeholder interviews. We had four research objectives: 1) uncover insights related to the perceptions, motivations, and barriers for users to purchase, adopt, and maintain latrine; 2) uncover insights related to the perceptions, motivations, and barriers to producers/suppliers to create, sell, and maintain latrines; 3) understand the financial and social costs and challenges faced by households with latrine adoption/lack of adoption; 4) understand consumer and actor insights related to a desirable, viable and feasible business model: 5 P's (Product, Price, Promotion, People, Place).

The team conducted one week of research in the Sunamganj (Haor) and Kurigram (Char) districts and engaged with the Shouhardo III field team and public sector key informants; as well as direct field research with beneficiaries. The research used interviews, focus groups, active observation and co-creation to gather data. Activities such as testing assumptions, the 'ideal toilet', and journey mapping supported the collection of data. We spoke to 45 consumers, 3 service providers, 2 Government officials, and 10 CARE project staff. We also conducted observations in 6 unions and co-creation workshops in Sunamganj, Kurigram and Dhaka.

[HEAR Phase Key Findings](#)

The team uncovered significant insights around the assumptions, consumers and service model, and products during the research phase. Each of these will be described separately, then summarized in six key HEAR insights and design principles.

HEAR Phase Deep Dive Deck	
	<p>In this visual report we detail the research methodology, test assumptions, report key grounded theory findings and being laying recommendations.</p> <p>For consolidated outcomes of the HEAR phase see <i>Annex A</i>. For full report see <i>Annex B</i>.</p>

HEAR Insights

You can't sell a toilet to someone who is hungry. There is a great opportunity to build off of existing Shouhardo III programming and impact data as a sequential intervention. With current data, WASH implementation and field operations can accurately target communities that may now be food secure, or have seen a positive difference in income, built up their mounds/homes.

Seasonality is everything. And so is sensitivity. Some communities may be better off than others. Focus first on those which are better off for latrine intervention as some communities, depending on the time of year are merely trying to survive.

Awareness and messaging: Open Defecation is year-round. Non-users must be made aware that their current wet season practices of defecating in water are unacceptable and still considered to be open defecation.

It can't be business as usual in these areas. Bad behaviors and practices have gone on way too long in these areas and if we want to be successful in getting people toilets in the char and haors, we must be there. Often. We must operate differently than the mainland because these geographies and users/actors face different and extreme challenges. The implementing partner must be directly involved at a field-level and provide consistent and accurate qualitative and quantitative data to all stakeholders so that representation has a clear understanding of what is happening. Pivot, iterate, if needed.

Focus on what is possible to improve, build on what is working well. People just want toilets they can use year-round. There is no user need or desire for a magical product innovation in these areas. Nor can it be sustained.

A single, agreed upon definition of what an improved latrine is for the haor and char areas. Include behaviors so that it can be communicated to households.

HEAR Design Principles

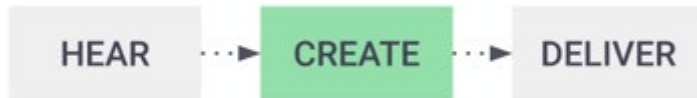
The following table summarizes design principles based on the findings from the HEAR phase. The principles are disaggregated by people, product and service.

HAOR	CHAR
People	
<ul style="list-style-type: none"> Ensure that households in the haor are aware that the current latrine practices are incorrect and must be addressed. 	<ul style="list-style-type: none"> Reinforce good latrine practice as being a year-round activity.
Product	
<ul style="list-style-type: none"> Design a product solution that can be used in the wet and dry season. Design a product that does not add additional cost. Design a product that will stand the test of time throughout the seasons/years. 	<ul style="list-style-type: none"> Design a product solution that can be used in the wet/flood and dry season Design a product that is a natural upgrade. Design a product that will stand the test of time throughout the seasons/years.
Service	
<ul style="list-style-type: none"> Educate and guide households on the proper placement of a latrine. Encourage and incentivize Latrine Producers to produce high quality parts and to grow their business.. Relieve the pain of cleaning. Work with what is already there. Leave nothing to chance. 	<ul style="list-style-type: none"> Target the right customers, at the right time. Provide latrines and customers with easier access/transport. Bridge the gap between the customers and the implementing partner to ensure full transparency.

Reinvent the model with installation services of improved latrines at the centre of the strategy.

Strengthen the market ecosystem with an honest broker.

CREATE PHASE



The CREATE phase of this research was conducted in May and June 2019, with both field and office-based prototyping around the design of products, service delivery models, behavior change communication and implementation strategy. The CREATE phase consisted of two sub-phases: rapid prototyping and in-depth interviews. The prototyping focused on products, while the interviews focused on behavior change communication and implementation strategy.

[CREATE Findings](#)

CREATE Phase Report	
	<p>This text reports holds findings from the product investigation component of the CREATE phase..</p> <p>For slide deck of the CREATE phase see <i>Annex C</i>, for full report on products investigation please see <i>Annex D</i>.</p>

In this findings section we introduce key findings from the CREATE Phase and then highlight how we translate these insights into the final recommendations. The insight is found in **bold text**. Insights are for both Haor and Char unless stated otherwise.

Location of the Latrine

Smell is the key barrier to closer latrines (not installed on the mound edge). After we determined that mound edge latrines are not safe option for the *Haor* area, we tested the main barriers to mound installation. One is the availability of space - however we did not come across **any** households that would not have enough space on their mounds for a direct pit basic latrine. The second is the smell. By drastically reducing the smell through the use of and improved latrine pan - the SaTo pan - households were open to moving the latrine and after the installations **all** households installed were happy with the decision to have the latrine closer to the home - stating that it was much easier for women and girls.

Raised latrines are more work than expected. While raising latrines to the same height as the home is required in *Char*, it takes a lot of effort on behalf of the home to collect the required mud and to create a mound. This is in-kind work was done by households in preparation for the latrine installation and when outsourced would increase the cost of a latrine by a third. We recommend supporting households to build their own mound and not to outsource this cost.

Superstructure (Shelters)

Height matters. Although we originally designed a shorter (five foot tall) shelter that would use less corrugated iron, after user feedback and a costing exercise we determined that the costs are similar for a taller (six foot tall) shelter. Additionally, all the consumers preferred to have a taller shelter and were less satisfied with the shelter versions.

Concrete pillars offer higher resilience. While costing three times as much (400 BDT to 1200 BDT) concrete pillars are more able to withstand higher winds and flooding than bamboo. Households will need to balance these costs and determine their preferences and priorities. Bamboo poles can also be upgraded later on to concrete pillars.

Transparent roof panel supports women and girls. We also recommend a transparent roof panel that costs approximately 150 BDT that can let in light during the day into the latrine, which allows for better cleaning and use practices. Most individuals use a cellphone light during the night and a basic mesh bag can be used to hang phones on the door and cast light throughout the latrine. This is specifically important for menstrual hygiene management.

Midstructure (Slabs)

Make space for the pillars. After rapid prototyping in both the Haor and Char, we determined that shelter could be made to take up less space, if the slab design included cut aways in the corners for pillars. This reduces the footprint of the design as well as helping to reduce gaps around the bottom of the latrine shelter which make women uncomfortable. Three out of our four recommended latrines have square slabs with cut-out corner designs.

Don't overcomplicate things. We had lots of ideas about how to make latrines more nuanced. We wanted to pilot a square latrine slab that has handles for easy movement during flooding or for sweeping. This idea was deemed not necessary by both households and latrine producers in the rapid prototyping. We also tested three different pan varieties: SaTo, SaTo with Collection Box, and SanBox. Our final recommendation has eliminated the SanBox as it is thrice the price of the SaTo with Collection box with similar functionality. Lastly, we also looked into mound edge septic tanks and biofil onsite fecal sludge management systems. However, while complexity can offer higher functionality, it gets expensive very quickly. Even the very simple designs we recommend can get too expensive depending on transportation and installation costs.

Protect mounds from erosion. Very simple steps can help reduce erosion of the mound in *Char* installations. After conversations with latrine producers and households, we recommend covering the mound in rice bags and grass (or grass seeds). This helps to keep soil from washing away in flooding and monsoon rains.

Substructure (Pits)

Going shallow is a tougher sell. The value of having a shallower, but wider latrine pit is more difficult than we expected to understand. There is a strong perception that deeper pits are better - a 'get it and forget it' model - however best practice says that pits should remain above the ground water level (almost impossible to do in SCORE areas, but still important as much as possible), and remain shallow to make sweeping safer and easier. Keeping prices low can be the main trigger for reducing the number of rings. We recommend shallower, wider pits that are designed for safer leaching, promote sludge decomposition and treatment, and reduce safety hazards for sweepers - hence the recommendation of the FilTo system. Rings are significantly more expensive in Haor (180 BDT/ring in Char, 300 BDT/ring in Haor). We need to identify the reason for this price, but it could be **possible to reduce costs in the Haor by 20-30%.**

FilTo resonates. Households, latrine producers and local NGO team members all were interested in the FilTo system. Interest was focused on reduction in sweeping frequency and ability to increase safer leaching of the pit. The FilTo system is not perfect, but it does offer a stepwise improvement against traditional systems

Creative layouts reduce footprints. As the mound edge installation in *Haor* is the norm, households are not used to designing layouts for offset pits and slabs within the mound. Support of an honest broker can help mitigate these challenges by brainstorming creative way to layout latrines. While pipes must stay on an angle, there are many ways to bend and adjust layouts through 60 and 90 degree elbow bends. The only rule of thumb is 6” of offset to ensure a stable slab placement. Muslim customers will also be limited in layouts as not to face Mecca while defecating. Pipe bends from the pit to the slab can also support more creative layouts to ensure proper pan directions.

Behavior Change Communication

In-depth Interviews - BCC and Implementation Strategy

We conducted interviews with 10 households (with toilet and without toilets), 5 latrine producers (with previous iDE training and without), and 5 iDE/CARE team actors in each Sunamganj (Haor) and Kurigram (Char). These interviews helped to understand the messages and mediums that will best resonate with customers. Similarly the team kept in daily communication over whatsapp (text, video, photo and calls). We tested three main aspects of behavior change communication: **messages** (what we communicate), **mediums** (where we communicate), and **visual language** (how we communicate) and our interviews had three main objectives as follows.







1. **Target Audience Identification:** The first, and arguably the most important step in any behavior change marketing campaign is identifying and understanding the target audience. Different types of people behave in different ways, are influenced in different ways, and they can be reached in different ways as well. Understanding who your target audience is, both from a demographic (age, gender, location) and psychographic (attitudes and interests) perspective is critically important in developing a successful campaign.
2. **Message Development:** Crafting the right message for the target audience. Most people cannot be “convinced” to change their behavior – rather, they need to be motivated to change on their own. The key to motivating a target audience is understanding what’s in it for them – what matters to them enough to make a change? The next step is figuring out how to make the desired behavior appear fun, easy, and popular.
3. **Testing Outreach and Placement:** Coming up with the right message is a big part of behavior change marketing – but it’s not the only part. Creating meaningful behavior change requires developing messaging and interventions that offer the target audience the exchange needed to assist with adopting the desired behavior.

Char Behavior Change Testing

Based on evidence from the HEAR Phase, the team determined that two messages should be tested in the Char: health and wealth (practical or aspirational respectively). Such sample messages are summarized below.

Practical - Health	Aspirational - Wealth
<p>Sweep your latrine before the rainy season! Feces in water can be unhealthy.</p> <p>Happy and Healthy Families have latrines.</p>	<p>Wealthy people know about good, clean toilets.</p> <p>Good life. Good latrine.</p>

We also tested different visual approaches photographs of people, photographs of water and line drawings and simple graphic elements

Aspirational		Similar/Like	
Large cities/different social and economic class		Similar/like users to the subject groups	
Aspirational water for livelihood/environment		Similar/like users with clean water	
Aspirational line drawings/simple illustrations featuring family and clean latrines		Focus on water as necessary for food security/income and understanding of simple graphic elements	



Haor Behavior Change Testing

From the HEAR Phase, the team determined that two messages should be tested in the Char: encouraging and cautionary (practical or aspirational respectively). Such sample messages are summarized below.

Encouraging	Cautionary
<p>Poop in water is bad for your health and family. Hire a sweeper only.</p> <p>Have these? You can use them now.</p>	<p>This is bad practice. This is good practice.</p> <p>You cannot empty your pits in water. This makes you and your neighbors sick.</p>

We also tested different visual approaches photographs of people, photographs of water and line drawings and simple graphic elements

Aspirational		Similar/Like	
Large cities/different social and economic class		Good/bad practice	
Real-life images featuring existing products at household level/community level		Aspirational photos featuring the water environment and health relationship	

Line drawings/simple illustrations featuring good/bad practice and existing parts		Focus on water as necessary for food security/income and understanding of simple graphic elements	
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Safety is most salient message for behavior change related purchasing and correctly installing improved latrines. Although we tested messages of health, hygiene, sickness, seeing feces, and water quality, interviewed participants overwhelmingly responded to messages of safety or the lack thereof when using unimproved toilets (mound edge erosion latrine, open defecation, hanging latrine, boat defecation). Safety in this instance can be defined as using a latrine without fear, fear from falling either in water or in the dry season, into feces. Furthermore, this concept of safety is not ONLY about being injured and having consistent experiences without fear. It is also about the consistent use of a resilient latrine.

Different visual methods align with different mediums. We tested how both photographs and line drawings are understood by potential customers. Our investigation shows that photographs/video of aspirational figures are best suited for above the line marketing (such as billboards and tv advertisement). Simple line drawings depicting common scenes are best suited for below the line marketing (such as courtyard session flip charts and flyers).

Implementation Strategy

Environmental complexity requires a special agent. While the market infrastructure for sanitation does functional well in plain-land areas with iDE's traditional sanitation marketing strategy, we have approached the complexities in the *Haor* and *Char* carefully. Based on our analysis, we believe that having an actor directly working with households, local service providers and local government, is the best way to catalyze a systematic focus on installation over technologies. iDE has utilized sales agent actors in Cambodia and Ghana in a similar capacity. These individuals are NGO contracted staff and earn commission for correctly installed latrines. In Bangladesh and Nepal, iDE has relied on one degree of separation allowing local service providers to hire their own sales agents. These two models have different strengths and weaknesses, however in complex environments (such as high rates of open defecation in Cambodia and Nepal), the first model has proved more effective. The complexity in installation recommends this first model.

Latrine producers can become service providers. Our interviews with latrine producers have identified that some (not all) are very interested in expanding their businesses into installation, sweeper referrals and repairs. This then leads to required careful selection of one expansion-minded service provider in each union. Other service providers can be included in a second wave of training later in the program.

Connections are critical. While service providers can be carefully selected and trained, they do not inherently come with the required connections to sweepers, carpenters, local government and microfinance required for expanding business. While simple, these connections are important for the strength of the strategy.

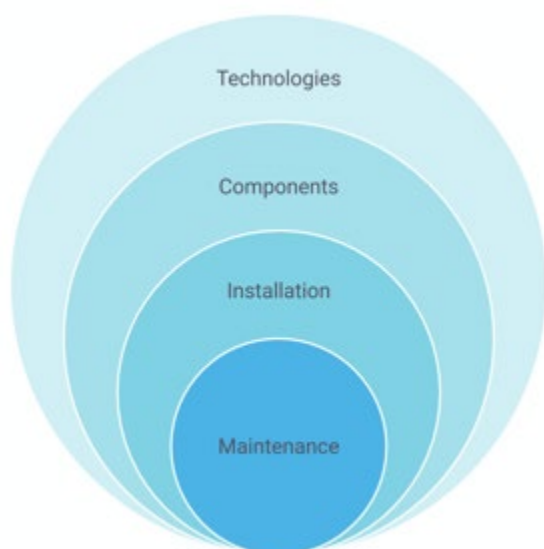
Leverage existing components. As initially identified in the HEAR phase, we further explored the extent of households with uninstalled components. Many households have these components from previous subsidy programs. With rings as expensive as they are (especially in Haor), these uninstalled components are very value and should not be overlooked. By utilizing these components, the price of a latrine can be reduced by one third.



DELIVER PHASE - RECOMMENDATIONS

Product: Sanitation Solutions

Improved latrines require four levels of improvement: technology, components, installation and maintenance. iDE's deep dive research found that the weakest links in the Haor and Char areas are **installation and latrine siting**. This is surprising to many who expect that technology and components are the problem. Floating latrines, wetlands, septic systems, and fecal matter drying systems are technically feasible in the Haor areas, but the risks to sustainable desirability and commercial viability are very high. These options are shiny to start, but often fall into disrepair quickly - therefore our recommended solutions are simple - because simple works.



- **Technology:** Basic latrine or higher
- **Components:** Functional quality waterseal + Inclusive Shelter
- **Installation:** Latrine siting plan
- **Maintenance:** Handwashing + Easy/Safe Sweeping

Selected Options for Improved Latrines for Haor and Char

After rapid prototyping in Sunamganj and Kurigram, the team designed four latrines to be branded as **Nirapod**.

These designs aim to balance affordability with quality. They also include key differences from iDE's conventional designs - for example the shelter design has been updated to be wider and taller with optional transparent roof panel and the slab design includes corner cutouts to ensure space for cement pillars. Additionally, we do not recommend any of the ceramic pan or SanBox latrine designs that come with full septic tanks or twin pit systems to keep prices down and to be functional in smaller footprints.

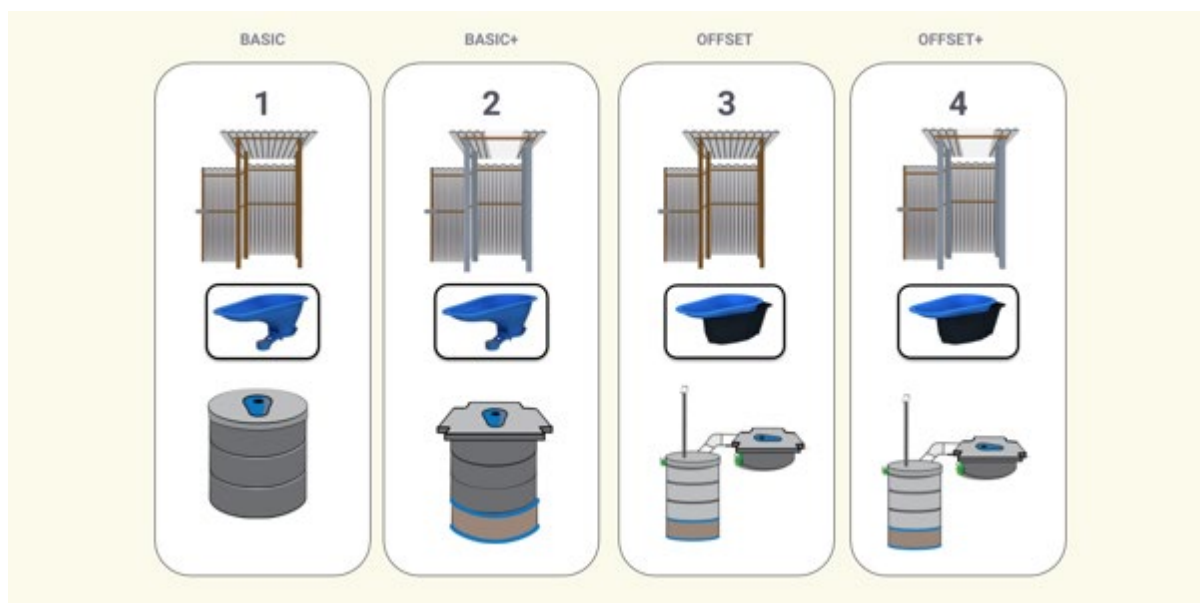
Basic: This latrine is a simple low-cost design. It is a simple pit latrine, where the squatting slab sits directly on top of the pit. The pit is lined with three concrete rings. The squatting slab has a trap door latrine pan that keeps away flies and blocks smell. This latrine includes a corrugated iron (tin) shelter with bamboo pillars that is wider than traditional designs.

Basic+: The Basic+ design includes three upgrades on the Basic design. Firstly, concrete pillars are used in the shelter instead of bamboo with a transparent roof panel for more light. The squatting slab is square which allows for more space in the latrine. And the pit includes a low-cost onsite Fecal Sludge Management system called FilTo, which increases leaching, decreases the volume of sludge in the tank, conducts primary treatment of the sludge in the tank, and promotes safer emptying. FilTo has four concrete rings sealed as a tank.

Offset: The Offset design moves the pit from directly underneath the squatting slab, to 'offset' from the slab by 2-3 feet. The pit remains the same as the Basic+ latrine with a FilTo system. The shelter is the same as the Basic design with bamboo pillars and corrugated iron.

Offset+: The Offset+ design includes the same squatting slab and pit as the Offset design. However the shelter can also be attached to the home - which is especially helpful for individuals with disabilities. The shelter is the same as the Basic+ design, with four concrete pillars, corrugated iron walls and a transparent roof panel.

See **Annex E** for product installation guidelines.



Sweeping Services: Sweeping is well known term for the emptying of latrines and septic systems in Bangladesh. iDE is recommending the FilTo FSM solution which aids in keeping sludge in shallower pits and helping it to drain of liquid. This makes the sludge significantly safer to move as it is not liquid. The pits should be swept **before the monsoon each year**. Some sweepers don't know what to do this more solid sludge and therefore end up reliquifying the sludge with kerosene (which also helps cover smell). Ash or sawdust is a much safer option to also reduce smell and soak up remaining liquid in the pit prior to sweeping. The sludge is then shoveled into a nearby pit, that will become the foundation for a [tree planting](#) or bed for homestead food production. This is a more difficult behavior change in haor where the preference is for monsoon-pit-sweeping and letting the pit drain into the water. However, by opening opportunities to increase the fertility of poor quality soil, we believe this can become are more viable option.

Ensuring an Affordable Product Suite - Pricing Breakdown

iDE proposes a three-pronged approach to ensuring the affordability and cost effectiveness of the proposed latrine solutions. Consistent with an HCD approach, these proposed solutions meet required affordability criteria, as well as being commercially viable for the private sector to sustainably and autonomously deliver. Firstly, products and services are inherently low cost. This will require a strong focus on **food secure and Shouhardo III graduated HHs¹²** with a priority on those who **already have** some (uninstalled) **components**. Additionally, **microfinance** options help to spread costs over a longer period of time and raise the value of a latrine in the HH. Ultimately our goal is to get HHs latrines that are properly sited and installed and ideally with components that they already have.

Pricing for the latrines is composed of seven cost clusters as follows. In the deep dive research, it was found that many HHs already have latrine components such as rings, shelter tin, shelter bamboo, and maintenance add-ons. HHs also are willing to land preparation, pit digging, installation and transport on their own to reduce costs. The pilot installations were therefore not a true representation of what households will need to pay. If HHs have rings and loose building materials from government programs and general repairs, the minimum cost will be that of a base slab of approximately 650 BDT.

Average in Bangladeshi Taka (approximately 80 BDT/USD)

CHAR	Land Preparation	Slab	Pit	Shelter	Installation and Transport	Total	Total USD

¹² iDE's deep dive in the HEAR phase identified targeting food secure households who have more secure sources of income to spend on latrines. For food insecure households the first Shouhardo goal is food security and then WASH.

1	Basic	HH Labor (not included in costing)	650 - 1000	500 - 600	2700 - 3200	1400 - 2500	5250 - 7300	66 - 91
2	Basic+		1200 - 1400	1200 - 1300	3700 - 4700	Often HH labor to decrease costs	7500 - 9900	94 - 124
3	Offset		2300 - 2600	1500 - 1600	2700 - 3200		7900 - 9900	98 - 124
4	Offset+		2300 - 2600	1500 - 1600	3700 - 4700		8900 - 11400	111 - 140

HAOR		Slab	Pit ¹³	Shelter	Installation and Transport	Total	Total USD
1	Basic	900 - 1000	800 - 900	2700 - 3200	1800 - 3000	6200 - 8100	76 - 101
2	Basic+	1000 - 1200	2000 - 2200	3700 - 4700		8500 - 11100	106 - 139
3	Offset	2200 - 2500	2200 - 2500	2700 - 3200		8900 - 11200	111 - 140
4	Offset+	2200 - 2500	2200 - 2500	3700 - 4700		9900 - 12700	124 - 159

Business Model (Sustainability Plan)

A fully functioning sanitation market is marked by five criteria: sustainability, autonomy, scale, resilience and inclusion. It is where supply and demand are balanced with the support of the public sector and civil society. The model supports the last mile delivery of improved products and services that are desirable, feasible and viable.

- **Sustainability** - The extent to which the business model promoted by the program is sustainable and/or profitable.
- **Autonomy** - Independent action by businesses or other market players to adopt and/or improve a model promoted by the program.
- **Scale** - The proportion of the potential target group that gets the goods, services and/or jobs promoted by the program.
- **Resilience** - The extent to which the market system supporting the business model can adapt to stay competitive, take advantage of new opportunities, and recover from adverse shocks.
- **Inclusion** - The extent to which the market system is able to support women’s economic empowerment and inclusion of women.

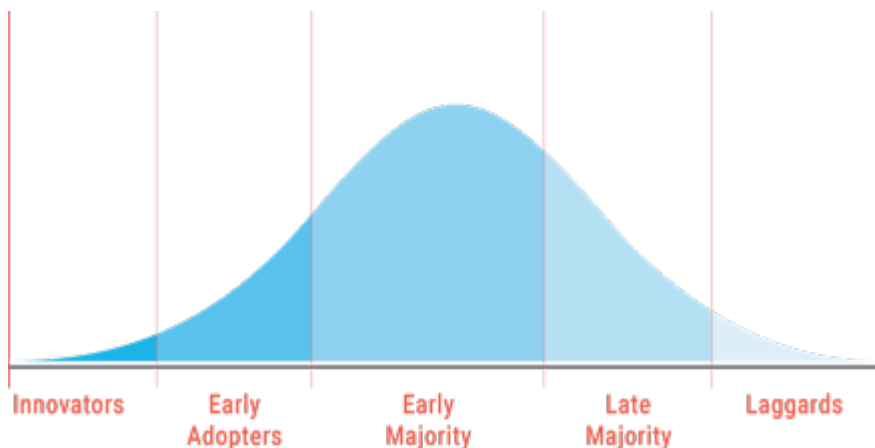
Markets are dynamic systems. This means they do not remain the same from today to tomorrow. Our deep dive uncovered the ways that the system is not functioning - *acceptable* installations and consistently *available* service delivery. When markets are not functioning they require adaptive interventions tailored to meet changing dynamics. The interventions included in this strategy have been designed based on the uncovered insights to meet these market failures. However they will need to be frequently checked and adapted. Quarterly market system monitoring is recommended through a methodology such as Most Significant Change (MSC).

[Jumpstarting the Business Model](#)

We recommend three waves of implementation - firstly, those with special attention to households in the haor and those who already own uninstalled components. Second and third sweeps will focus on households who require subsidy, microfinance loans and special assistance. This approach helps to catalyze the functional,

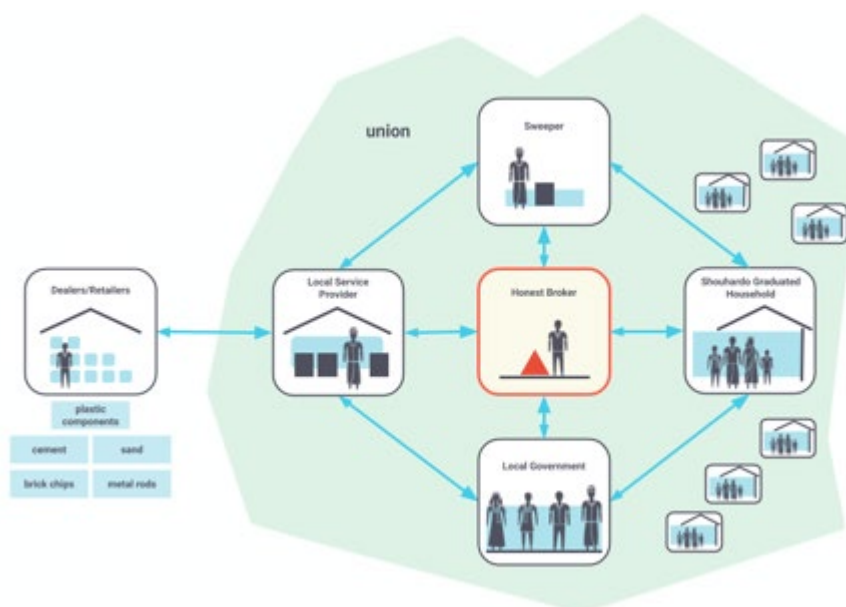
¹³ Rings are significantly more expensive in Haor (180 BDT/ring in Char, 300 BDT/ring in Haor).

resilient and sustainable market infrastructure required to reach the marginalized. This first sweep targets the innovator and early adopter categories through significant collaboration with local government, project staff and Honest Brokers. A target of 40% of Shouhardo households has been developed based on the technology adoption curve which estimates a tipping point of approximately 35% of households. This theory posits that if 35% of the population adopt a practice or system it can ‘tip’ to a majority.



Engaging the Business Model

The proposed model below shows the interconnections between the key actors within the sustainable model. To ensure sustainability in this model, we recommend engaging with two major actor groups. The first group is a project staff member specially brought on to help ease grassroots market failures - the Honest Broker. The second group are existing markets actor: the latrine producer, who we recommend rebranding as a local service provider, and latrine sweepers.



Honest Brokers

The Honest Broker is an actor **only for the project duration** with the hope that his/her engagement will help to create a more fair environment and to help support latrine consumers during the process. While the name will need to be adapted if utilized, these project staff will have five main roles: 1) identify and prioritize households who have graduated into food security in each union; 2) educate and support households through the process of

purchase and installing an improved latrine; 3) connect deserving households with local government smart subsidy support; 4) connect sweepers with households and support on safe sweeping techniques and timing; and 5) connect and support local service providers to provide quality services to consumers. The main activity of the HBs - household counselling sessions - will bring clarity to the competing narratives that can confuse households and incentives poor choices (Box 2).

We believe that HBs are required in this context because the areas are complex. While iDE has never recommend such a system in Bangladesh before, based on our research, the evidence shows that such a role has the potential to reduce risk of improper installation and backsliding

Box 2. Objectives of the HB Counselling Sessions

- Assessment of existing resourcing (land, existing latrine materials, future home plan)
- Co-development of LAND ASSESSMENT PLAN
- Link to trusted Local Service Provider + Local Government Institution
- Follow up to check installation and nominate LSP for award if deserving

Local Service Providers

The key boundary actor in the sanitation market system is the Local Service Provider (LSP). The LSP has a host of negative incentives for quality, service and guarantees. However, iDE has significant experience in helping LSPs to see the positives incentives for quality, service and guarantee and changing business practices. While it is true that LSPs have to maintain improved profits, by expanding their service delivery and their customer base, profits can be made while keeping prices for consumers balanced. See **Annex F** for sample Business Model Canvas (BMC) for the average LSP.

iDE recommends a four part training program which starts with intensive workshop sessions and a cross learning visit and continues with a mentorship networking program. These network meetings continue for the life of the project and are a useful way to introduce new concepts, technologies or marketing strategies, as well as supporting and encouraging quality service provision. The training program includes modules on technical, business, marketing and linkage skills.

Sweeper Services

Sweeping is well known term for the emptying of latrines and septic systems in Bangladesh. The word can have negative connotations, and the work is often relegated to minorities and disadvantaged populations. However organizations such as WSUP and Wateraid have pioneered sweeper training programs which aim to bring dignity to the jobs through the use of technology (low suction pumps) and protective gear. There are two approaches to the management of waste: onsite and offsite. Offsite treatment requires transport and land for treatment and relies on economies of scale to treat the waste. Offsite systems are effective in densely populated areas and where public land is available for treatment; however, these systems are expensive and requires a high level of ongoing training to operate and maintain. The systems struggle to function in main cities with the right conditions and therefore we cannot recommend such systems for the Haor and Char. This leaves us with onsite FSM and therefore the FilTo. Alongside the FilTo we recommend training sweepers in dignity support approaches to sweeping and sludge burying. We also recommend linking sweepers and LSPs so that LSPs can coordinate mass sweepings before the monsoon for the Haor and Char areas. Sweepers can be migratory (not always though) and therefore this coordination role is very useful in supporting the health of the entire community.

Supporting the Business Model: Stakeholder Engagement Strategy

Shouhardo III Program

While it is anticipated that the Sanitation Marketing component of the program will be subcontracted, close engagement with Shouhardo III is required. The support of main project staff is expected in three ways: 1) passive promotion of improved products and services; 2) identification, prioritization and connection with graduated food secure households; and 3) connection with the wider strategy of Shouhardo and office co-location.

Civil Society Organizations

Harmonization with other Civil Society Organizations (CSOs) operating in the same geographic area of Shouhardo III is anticipated through the networking meetings of Output 3.3. Collaboration is expected in two areas. Firstly, a harmonization of definitions of improved and co-recognition that the main challenge is **installation and quality** rather than annual provision of poor-quality latrine components. Secondly, many CSOs provide subsidy for their program beneficiaries. iDE estimates that over 1 million latrines are given away in Bangladesh each year through CSOs and Government programs. However the majority of the latrines are unimproved and incorrectly installed. Networking can help to leverage existing subsidy and create **smart subsidy** programs.

Box 3. Smart Subsidies

Both Civil Society Organizations and Local Government Institutions are potential conduits for smart subsidy. iDE defines smart subsidies as those meeting four major criteria: 1) engages the value chain, 2) uses objective criteria to target the poor, 3) requires some cost-sharing of the household for stronger ownership; and 3) ensures subsidized latrines meet or exceed the JMP 'improved' standard and are designed to last at least five years. By promoting smart subsidies, the proposed solutions will be able to reach poor households sustainably and at scale. To date 20% of total latrine sales supported by iDE in Bangladesh have been through smart subsidies.

We would connect CSOs with LGIs to map and identify households for subsidy. This can be done through community maps at the ward level. We would also require follow up to ensure that the subsidy has been used to support safely **installed** latrines.

Local Government Institutions

Local Government Institutions (LGIs) at the Union Parishad (UP) level have a mandate to support water and sanitation throughout the union. UPs include a WATSAN committee (many are dormant) whose role is to help support the allocation of subsidy funds for the poor. After a basic training on the importance of installation for complex environments. We would then connect WATSAN committees with CSOs to coordinate and support the mapping of households for subsidy provision. iDE has significant experience in confirming this allocation and ensuring that the ultra-poor and most in need receive these subsidies.

Private Sector

In order to secure the timely and fair delivery of input components from regional retailers it is important to have a basic training on the fundamentals of latrine best practices. Many of these retailers do not understand components like waterseals and pits and therefore offer incorrect advice to their consumers. This also allows the program to have a wider reach within the community. We recommend having a single day of basic training and quarterly networking workshops with awards for positive practice for retailers selling plastic pans and piping, tin, wood and cement. These networking opportunities help to smooth out supply chain challenges, reduce incorrect advice and support local LSPs to better expand their businesses into services.

Financial Service Providers

While not required in the proposed model, the use of Financial Service Providers (FSPs) could be relevant for the program. iDE's experience shows that while FSPs can help to solidify the value of a latrine to household - as often credit is used to purchase things of value - it is often not properly utilized. iDE has often seen households paying off broken and poorly installed latrines which do not match their requirements. We therefore would recommend a **savings model** over a credit model which can summon the same perception of value without credit risks. Programs such as the World Bank's partnership with Asa could be utilized due their vast scale, however there is a risk of poorly installed latrines. Most FSP models (similar to subsidy models) rely on the household for installation and construction of a latrine shelter. iDE has previously tried to incentivize FSPs to leverage an **installation credit model**; unfortunately with little success. This could be re-tried under the proposed program, however we have not included it as the target population are food secure, with existing uninstalled components and new components are affordable.

Behavior Change and Promotional Materials

Branding

Although the recommended solutions rely on common technologies, we still feel it valuable to uniquely brand this product and service offering as it unique and different to these areas.. This brand is designed be aspirational for the Haor and Char areas in order for households to perceive and aspire to new and improved latrines.

From all households where the team installed new toilets, when asked about their new toilet, the resonating sentiment was that is it **SAFE**. This sentiment paired with non-users understanding/ perception that current unimproved toilets are UNSAFE, we recommend the following: Using the Bangla word for SAFE which is Nirapad we have created the *NiraPod, the Safe Toilet* which plays off Bangla word and the English word "Pod" which means a streamlined enclosure, housing, or detachable container of some kind. We recommend that all above the line and below the line marketing and service elements include this identity and branding. This branding has been tested and validated by users and NGO actors.



Above the Line Marketing (ATL)

Above the line marketing refers to the billboards, tv, radio and melas (county fairs). Our investigation has shown that for aspirational, above the line marketing consumers preferred **hearing** new information about good toilet practices from NGO workers because they trust them to provide accurate information and can always be found in and around their areas. Television was the most trusted of all media forms, however the costs are high. Billboards and melas were also trusted and have been used successfully in other sanitation programs. Preferred **visual** language included aspirational images from urban dwellers, doctors, and NGO workers; urban dwellers because they know about good toilets and doctors users equate toilets with health and doctors are the preferred actor when dealing with health elements. Images such as those below tested well.



Sample Above the Line Marketing

The following two visuals represent possible billboard and festoon designs that can be used in promotions. These are rough drafts and iDE recommends hiring a firm to complete final versions that can be disseminated through large scale media.



Protect your health and safety with the Nirapod.



This new toilet is safe and healthy.

Below the Line Marketing (BTL)

Below the line marketing includes aspects such as flipcharts, demonstrations and connections with local elite, government and civil society. Our study has shown that consumers trust and have confidence in information given to them by NGO actors, the below the line marketing scheme should be done at household and community level with mixed male/female groups of all ages. The visual language of this scheme should be cartoon/simple graphic illustrations as this is what resonates deeply/understood by users. Images such as those below tested well.



Sample Below the Line Marketing Components

[Union Level Technology Introduction Session](#)

These launching sessions target influential stakeholders (e.g. local government representatives, NGOs, teachers (especially female), Village doctors, social elites and journalists.) and educate them on the Nirapod. Latrine producers lead these sessions with support from the project team, sharing information on the Nirapod features, costs, and value. These sessions aim to encourage these actors to contribute to awareness raising and ensure that any latrines provided through subsidy are of high quality.

[Group Sales Meeting](#)

The most common demand creation event, courtyard sessions are where the Honest Broker meet directly with potential customers to assess needs and introduce the Nirapod and the Land Assessment Plan. These events include basic sanitation education, sharing about improved technologies, and opportunities for households to ask questions and interact with latrine components. Each session concludes with the Honest Broker working through a Land Assessment Plan with interested households. During invitation, male and female will be invited to participate in this event. After session, each Honest Broken will link HH with approved LP in the area.

Implementation Strategy

The implementation strategy to increase the use of improved sanitation the Haor and Chars of the Shouhardo III project are outlined in this section. The strategy follows three main outcomes: **demand**, **supply** and **support**. Demand focuses on Shouhardo beneficiaries as consumers, supply on the market infrastructure such as local service providers, and support on subsidy and ensuring that installation and maintenance are priorities for households.

[Implementation Staffing](#)

Three field staff types are recommended for this project *beyond* project management, relevant technical and design consulting and relevant organizational supporting functions.

1. **Technical Specialist.** Sits at the District or National level and supports with 1) developing and refining materials, 2) troubleshooting and refining activities, 3) monitoring and evaluation.
2. **Field Facilitators.** Existing project staff who sit at the Upazila level. Supporting with 1) training of public and private sector stakeholders, 2) managing networking and award events, and 3) overseeing demand creation.
3. **Honest Brokers.** Sits at the field offices and rotates from union to union, focusing on a new union each quarter with a few activities at the upazila level. Supports 1) wider behavior change communication, 2) behavioral messages to the public and private sectors, and 3) household latrine counselling.

Implementation Strategy

The implementation strategy presented here relies on a series of critical principles that have been derived from the research phase of this project. They help to focus and align the implementation and to counter several of the debunked assumptions. Project staff should be very familiar with these principles to ensure strong project delivery.

Principle 1. Start in Haor - As identified in the research phase, the Char areas are in much better shape with regards to improved sanitation than the Haor. The Haor is a very difficult area for project staff to work and this exacerbates the challenges of implementation.

Principle 2. Focus on food secure households. As evidenced in previous iDE programming, when a food security program is successful households are freed up able to think about sanitation. Therefore these homes should be the focus of sales and counselling. There is no point in focusing on areas who are still food insecure.

Principle 3. Focus on component owners. As many HHs already have the rings and possibly a ring/slab an entry point is HHs who require installation and moving beyond the perception that five rings are required. The FilTo can help to increase the longevity of a pit without increasing the number of rings.

Principle 4. Improved = Waterseal + Installed + Shelter. Lastly and probably most importantly, it is critical to re-visit the definition of improved for Haor/Char areas. Government definitions are effective for plain land areas, but not for flood prone areas. We recommend adjusting the definition of improved to include 1) a quality waterseal (in the existing definition, but often not practiced); 2) full installation within the household mound and balanced distance from the kitchen and waterpoint; and 3) a quality shelter that ensures that girls, women, seniors and individuals with disabilities are able to use the latrine. Attachment to the home is also an option, but not a requirement.

Draft Interventions

The draft implementation interventions for this project fall into one of three pathways: demand, supply and support. While we recognize that there is overlap and muddiness in some of these areas, the clarity of three pathways and supporting interventions is a useful practice in ensuring strategies are harmonized from paper documentation to field implementation.

Intervention	Explanation
<u>Outcome 1: Demand</u>	Through Pathway/Outcome 1, HHs recognize and understand the importance of properly installed latrine that is accessed by all members of the house. We expect that latrines should be useable for 90% of the year in alignment to house usage.
1.1 Behavior Messaging	In Output 1.1 HHs are reached with BCC messaging about the importance of installed and improved latrines. This messaging is primarily through courtyard sessions and demonstrations where there is always an option to purchase an improved latrine. Improved products are also introduced to local elites as well to remove barriers on demand.
1.2 Demand Creation	Closely linked to 1.1, Output 1.2 focuses on converting interest into demand for latrines and linking to sales spaces at the latrine shop, mela or above the line media such and tv and billboards.
<u>Outcome 2: Supply</u>	Through Pathway/Outcome 2, HHs gain access to improved services through trained and quality service providers. We expect that each HH will know exactly where to go to get an improved and installed latrine.
2.1 Local Service Providers	Output 2.1 focuses on training local service providers on the business, marketing, linkage and technical skills required to becoming a stronger entrepreneur. Cross-learning visits through the training program will seek to break negative incentives for selling poor quality latrines without installation. Sales awards linked to installation will help to change incentive structures.
2.2 Regional Service Providers	Output 2.2 focuses on the wider private sector enabling environment, the dealers, retailers, cement sellers, tin shelter sellers and anyone else that HHs could ask for advice on purchasing or installing a latrine.
2.3 Sweepers	Output 2.3 follows with the maintenance and annual sweeping of latrines. We will train and support often marginalized sweepers helping them to get the knowledge and tools to sell their services in areas

	where monsoon water sweeping is common.
Outcome 3: Support	Through Pathway/Outcome 2, HHs receive honest and truthful advice about when, where and how to install an improved latrine. This pathway seeks to reduce the noise and harmonize messaging.
3.1 Honest Brokers (HBs)	In Output 3.1, HHs receive one-on-one counselling from a specially trained project staff helping to navigate the competing narratives about what is 'best' for them. They will work on timing, placement and components to ensure a long-lasting latrine for HHs.
3.2 Subsidy Alignment	Closely linked to 3.1, Output 3.2 seeks to link existing subsidy funding with a small proportion of HHs who are not able able to afford latrines even after food security interventions. The HBs will work with LGI to identify and link budget and HHs.
3.3 Broad Alignment	Output 3.3 is focused on creating alignment across the public and development sector partners with an initial training and quarterly meetings. This will help to break the assumptions beyond just the project team and in the wider development community.

Logical Framework

The following logical framework is a draft of the indicators that can be used to monitor progress within the WASH component of Shouhardo III. It should be noted that this is not a traditional WASH logical framework and does not include any installations or direct implementation. These indicators and targets will need to be reviewed with the help of project management to ensure that a target of 40% of the Shouhardo III households represents the current level of households graduating into food security. This logframe creates targets that set each ward, union and upazila for long-term sustainable access.

Intervention	Indicator	Means of Verification	Target
Goal	All members of Shouhardo HHs use and maintain a properly installed improved latrine <i>at least 90% of the time</i>	Annual survey <ul style="list-style-type: none"> Household use index Installation index Improved index 	TBD
Outcome 1: Demand	Household in Shouhardo HHs are aware of the importance of proper installation and maintenance of latrines	Annual survey <ul style="list-style-type: none"> Installation knowledge measure Maintenance knowledge measure 	TBD
1.1: Behavior Messaging	% of Shouhardo HHs hearing messages at the community and courtyard level	Annual survey <ul style="list-style-type: none"> Message check 	TBD
1.2: Demand Creation	# of Shouhardo wards have at least three touch points with behavioral messaging	Project Documents <ul style="list-style-type: none"> Message access check 	TBD
Outcome 2: Supply	Shouhardo unions have a capable local service provider and sweeper offering improved services	Annual service provider review <ul style="list-style-type: none"> Capability check 	TBD
2.1 Local Service Providers (LSP)	At least one LSP completes training in each Shouhardo union	Project Documents <ul style="list-style-type: none"> Training completion check 	TBD
2.2 Regional Service Providers (RSP)	At least three RSPs complete trainings completes training in each Shouhardo upazila	Project Documents <ul style="list-style-type: none"> Training completion check 	TBD
2.3 Sweepers	At least one Sweeper completes training in each Shouhardo union	Project Documents <ul style="list-style-type: none"> Training completion check 	TBD
Outcome 3: Support	Stakeholders align to support Shouhardo HHs through harmonized definitions and advocacy	Annual supporter review <ul style="list-style-type: none"> Capability check 	TBD
3.1 Honest Brokers (HBs)	Shouhardo HHs receive one-on-one counselling for latrine placement and completion	Project Documents <ul style="list-style-type: none"> Counselling completion check 	TBD

3.2 Subsidy Alignment	Shouhardo HHs receive subsidy provision from LGIs or NGOs	Project Documents <ul style="list-style-type: none"> • Counselling completion check 	TBD
3.3 Broad Alignment	Relevant stakeholders are trained and agree to follow a standard definition of improved latrines in each Shuhardo upazila	Project Documents <ul style="list-style-type: none"> • Training completion check 	TBD

Activity Overview

The following table outlines the proposed activities and relevant frequencies. This outline is illustrative and will need iteration.

Interventions	Activities	Frequency
Pathway 1: Demand		
1.1 Behavior Messaging (BTL)	1.1.1 Draft Messages and Materials 1.1.2 Test and Revise Messages and Materials 1.1.3 Print Materials 1.1.4 Training of Trainers (FFs and HBs) 1.1.5 Courtyard Sessions 1.1.6 Introduction Sessions with Local Elite 1.1.7 Demonstration Installations (Market + HH)	Once Twice Twice Twice Ongoing
1.2 Demand Creation (ATL)	1.2.1 Draft Messages and Materials 1.2.2 Test and Revise Messages and Materials 1.2.3 Print/Produce Materials (Billboards, flyers tv) 1.2.4 Publish/Distribute 1.2.5 Mela Demonstrations	Ongoing Quarterly Bi-annually
Pathway 2: Supply		
2.1 Local Service Providers	2.1.1 Update Training Materials 2.1.2 Print Materials 2.1.3 Training of Trainers 2.1.4 Basic Training (Business, Sales, Technical, Linkages!) 2.1.5 Hands-on Installation Training 2.1.6 Networking Events + Installation Awards	Once Once Once Once Twice Quarterly
2.2 Regional Service Providers	2.2.1 Update Training Materials 2.2.2 Training of Trainers 2.2.3 Importance of Installation Training 2.2.4 Networking Events + Awards	Once Once Once Quarterly
2.3 Sweepers	2.3.1 Update Training Materials 2.3.2 Print Materials 2.3.3 Training of Trainers 2.3.4 Basic Training 2.3.5 Hands-on Installation Training 2.3.6 Networking Events + Awards	Once Once Once Once Twice Quarterly
Pathway 3: Support		
3.1 Honest Brokers (HBs)	3.1.1 Basic Training of HBs 3.1.2 Ward-wise prioritization 3.1.3 Household consultations	Bi-annually Ongoing Ongoing
3.2 Subsidy Alignment	3.2.1 Subsidy Alignment Training 3.2.2 Engagement with LGIs + CSOs 3.3.3 Allocation alignment 3.2.4 Household consultations	Twice Ongoing Ongoing Ongoing
3.3 Broad Alignment	3.3.1 Training and alignment of definitions	Once

3.1.1 Basic Training of HBs	4	TS, HBs	x		x		x		x	
3.1.2 Ward-wise prioritization	7	HBs		x	x	x	x	x	x	x
3.1.3 Household consultations	100/union	HBs		x	x	x	x	x	x	x
3.2 Subsidy Alignment										
3.2.1 Subsidy Alignment Training	2/upazila	TS, HBs	x				x			
3.2.2 Engagement with LGIs and CSOs	1/union	HBs, FFs		x	x	x	x	x	x	x
3.3.3 Allocation alignment	50/union	HBs		x	x	x	x	x	x	x
3.2.4 Household consultations	50/union	HBs		x	x	x	x	x	x	x
3.3 Broad Alignment										
3.3.1 Training and alignment of definitions	1/upazila	TS, FFs		x						
3.3.2 Quarterly network meetings	6/upazila	FFs			x	x	x	x	x	x
Totals										

Annexes

A	HEAR Phase Slideck
B	HEAR Summary Report
C	CREATE Phase Slidedeck
D	CREATE Phase Report
E	Product Installation Guidelines
F	Latrine Service Provider Business Model Canvases
G	Interview Guidelines (HEAR and CREATE)