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'Kabone Mandamina' RANO WASH Market-based Sanitation Phase 1 Final Report



27 August 2022



BushProof



“

This product is particularly made for us and it is heart-moving.”

Prospective Customer, Lokomby, Madagascar



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Acronyms

ACEP	A Micro-Finance Institution. More information can be found here: http://www.gem-madagascar.com/membre/acep-madagascar
CLTS	Community-Led Total Sanitation
GTM	Go-To-Market
HCD	Human-Centered Design
HCS	Human-Centered Sales
HH	Household
MEAL	Monitoring, Evaluation, Accountability, and Learning
MGA	Malagasy Ariary (official currency of Madagascar)
NGO	Non-Governmental Organization
OD	Open Defecation
RANO WASH	Rural Access to New Opportunities for Water, Sanitation, and Hygiene
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation, and Hygiene

Definitions

Ampanjaka - Loosely translated as 'Clan King' in English, they are community leaders who community members seek the guidance of, before making decisions. If they are involved in 'Kabone Mandamina', and buy a branded product, their decision will influence that of the community

Chef Fokontany - The chief or leader of the village.

Community-led total sanitation (CLTS) - A rural behaviour change approach for ending open defecation through community participation. It concentrates on the whole community and the collective benefit rather than on individual behaviors.

Diffusion of Innovations¹ - Theory that seeks to explain how, why, and at what rate new ideas and technology spread. Everett Rogers, a professor of communication studies, popularized the theory in his book 'Diffusion of Innovations'. The categories of adopters are innovators, early adopters, early majority, late majority, and laggards.

Early Adopter - Represent opinion leaders. Enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas.

Early Majority - Rarely leaders, but do adopt new ideas before the average person. Typically need to see evidence that the innovation works before they are willing to adopt it. Strategies to appeal to this population include success stories and evidence of the innovation's effectiveness.

Go-to-Market (GTM) - step-by-step plan created to successfully launch a product to market.

<https://youtu.be/8rspvoKPGhQ>

Hotely - small Malagasy restaurant located on the side of a street or market

Improved toilet - A toilet that is designed to hygienically separate excreta from human contact.²

Innovator - People who want to be the first to try an innovation. Interested in new ideas and more willing to take risks. Very little needs to be done to appeal to this population.

Late Majority - Skeptical of change, and will only adopt an innovation after it has been tried by the majority. Strategies to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully.

Laggard - Bound by tradition and very conservative. Very skeptical of change and hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.

Local promoters - community health mobilisers who chosen by the community to do health work, they are volunteers who are passionate about their job, and were happy to see the Kabone Mandamina initiative accelerate their work

Malagasy Ariary (MGA) - Currency conversion: 3800 ARI = 1 USD

MVola - mobile money platform offered by the Telma mobile service provider

¹ <https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/behavioralchangetheories4.html>

² WHO/UNICEF Joint Monitoring Programme (JMP) definition

Definitions

Sanitation Marketing (SanMark) - The application of the best social and commercial marketing practices to change behavior and scale up the demand and supply for improved sanitation. It draws on research and approaches used in social marketing.

Village savings and loan associations (VSLAs)- A form of saving and loan group, in which a group of people save together and take small loans from those savings. The activities of the group run in cycles of one year, after which the accumulated savings and the loan profits are distributed back to members. The purpose of a VSLA is to provide simple savings and loan facilities in a community that does not have easy access to formal financial services. More information can be found here: <https://www.vsla.net/>

Zanakampielezana - People from rural villages who have moved to urban centers, translates roughly as “children of xxxx town”. They can be sources of new ideas and funding for projects in their home villages. Very influential if they live in a big city and can share “modern” ideas and way of life.



Executive summary

Rural Access to New Opportunities for Water, Sanitation, and Hygiene (RANO WASH) is a five-year USAID-funded project to improve WASH services in rural Madagascar. In an effort to stimulate markets for sanitation products and services, the program has collaborated with iDE to understand the current sanitation situation and challenges, and develop a market-based strategy to address challenges in this space in a sustainable way.

Following the recommendations that iDE provided at the conclusion of the 2021 discovery research, the primary objectives of this project were:

1. to use rapid prototyping techniques to design and develop a flagship aspirational product for the coastal Aspirational Travelers, and
2. to test marketing triggers, messages, and channels for the aspirational traveler.

Secondarily, iDE tested the idea for strengthening and expanding existing sanitation entrepreneur networks and ways to incentivize hardware stores to partner more formally with masons, and also held exploratory conversations with mobile money providers. These secondary objectives were considered more 'light touch' than the primary objectives, and will be more of the focus of Testing Phases 2 and 3.

This phase of work was conducted over the course of two rounds of prototype testing across eight different RANO WASH project areas in Atsinanana, Vatovavy and Fitofinany. The second round of testing took place in a single commune (Lokomby) to allow the project team the ability to construct multiple full-scale latrine component prototypes to test in real-time with potential customers. Testing conclusions are as follows:

Product Conclusions

Shelter - Customers prefer a raised square cinder block shelter. At the conclusion of the second testing, and factoring in willingness to pay, customers and masons alike preferred the raised square cinder block shelter because of its spaciousness, ease of construction, aesthetic appeal, and durability.

Pit - Customers preferred a raised cinder block pit, regardless of shape, however it will likely be easier from a construction perspective to build a square pit so it lines up with the preferred square shelter.

Slab - Aspirational traveler customers prefer a tile slab because it demonstrates status and modernity in addition to having a, clean look, and its ease of cleaning.

Pan - When shown all of the options and their respective prices, customers were most interested in purchasing the ceramic seat, citing its aesthetic appeal, durability, clean appearance, and that it is well-known to be free of smells. Customers also stated that the clean appearance would in turn push them to want to keep it clean and presentable for others.

Tiered options and choices - One of the most significant insights to arise from testing the prototypes is that customers expressed how much they appreciate the transparency of seeing product options and prices both in a catalogue and in-person, and also how much they enjoy having the ability to choose a product or a combination of products that is the best fit for them. There is a significant benefit to promoting the 'flagship' product while simultaneously offering as many options as the masons are technically capable of constructing.

Note: The above preferences by customers as the 'flagship products' were the most expensive. However, the team, acting more as sales agents in a sales pilot for the second round of prototype testing, measured real-world affordability and willingness to pay using a sales sign-up sheet, with real world customers signing up for orders during the exhibition session. There was a total of 66 orders received at the exhibition session, validating willingness to pay in the Aspirational Traveller target segment.

Executive summary

Demand Conclusions

Value Proposition

Testing revealed that, more than just a physical product, Kabone Mandamina offers customers the dignity to improve their livelihoods across several areas of value addition that should form the bedrock of the marketing and promotion strategy: Choice and Transparency, Cleanliness and Ease of cleaning, Relaxation and Privacy, and Durability.

Brand Identity

Over the course of the exploratory research and prototype testing, the Home team received overwhelmingly positive feedback about the choice of 'Kabone Mandamina' as the brand. The final logo for the brand was developed and validated in a final round of testing. The design is based on the principles of using clean, simple forms, being easy to remember and identify, and using 1-2 colors at most.

Sanitation Entrepreneurs

This testing phase revealed that adjusting several parameters significantly altered customers' perception of masons, and masons' perception of themselves. The first of which was to rebrand the mason as a 'sanitation entrepreneur' (Mpandraharaha Kabone Mandamina in Malagasy). The team tested several ideas for rebranding the role with masons and customers, and ultimately the masons who were interviewed chose this as the option they felt afforded them the most dignity. With increased pride, masons already felt more confident going out and selling more latrines than before.

Marketing and Promotion Channels

- Begin by leveraging the influential Ampanjaka to encourage others to buy Kabone Mandamina products.
- Select local promoters and community health mobilizers to spread the word, and equip them with Kabone Mandamina promotional material.
- Holding an exhibition day
- Leveraging competitive spirit in the community to encourage additional purchases

Customer-brand Interaction

An important component of the business model is to maintain several points of customer-brand interaction so that customers associate Kabone Mandamina with the aspirational products and service offering that the brand represents. These include: (1) Sales Pitch Deck, (2) Mason Uniform, (3) Business Cards, (4) Product Information Sheets, (5) Proof of purchase or certificate.

Supply Conclusions

Human Resources

There are several personas that should be included in the Kabone Mandamina business model in order to effectively deliver the value proposition to customers, including Sanitation Entrepreneurs, Construction workers, Local promoters, Product construction trainer, and Sales Trainer and Manager.

Executive summary

Sales Channels

Testing revealed that Kabone Mandamina should be sold using three primary channels: Door-to-door sales, a permanent market display, and periodic exhibition promotion events.

Partnerships

Several partnerships are crucial for the success of the business model, particularly when customers ask for sanitation entrepreneurs to take care of the materials ordering and delivery in addition to construction: Hardware stores in Manakara, Transportation/logistics service between Manakara and Lokomby, Local government, Ampanjaka, and NGOs, particularly during startup and the early life of the business model.

Finance Conclusions

Business Costs

There are two business cost categories that the research team considered when developing the business model for sanitation entrepreneurs: Direct Costs - already built into the current product prices displayed, and Indirect Costs - currently *****not***** built into product price. Eventually, all indirect costs will need to be factored into the sanitation entrepreneur's operating costs and the price of their products to make the model more sustainable. That can be done in a phased approach as sanitation entrepreneurs build their order backlog and have higher sales volumes.

Loan and credit options for customers:

The team uncovered that the two primary opportunities for financing (either for a customer to purchase a latrine or for a mason to get support for their business) are through involvement in VSLA, or with an ACEP real estate loan.

Payment plan options:

A number of different payment plan options for customers were explored, with the most popular being an up-front payment of 30-50% of the total cost, and then paying the rest at the end of construction. Masons also commented that they can work with customers to set up a deferred payment plan after the latrine is built, but then as a result of the delay, they increase the price of their services by a certain percentage.

Exploring mobile money

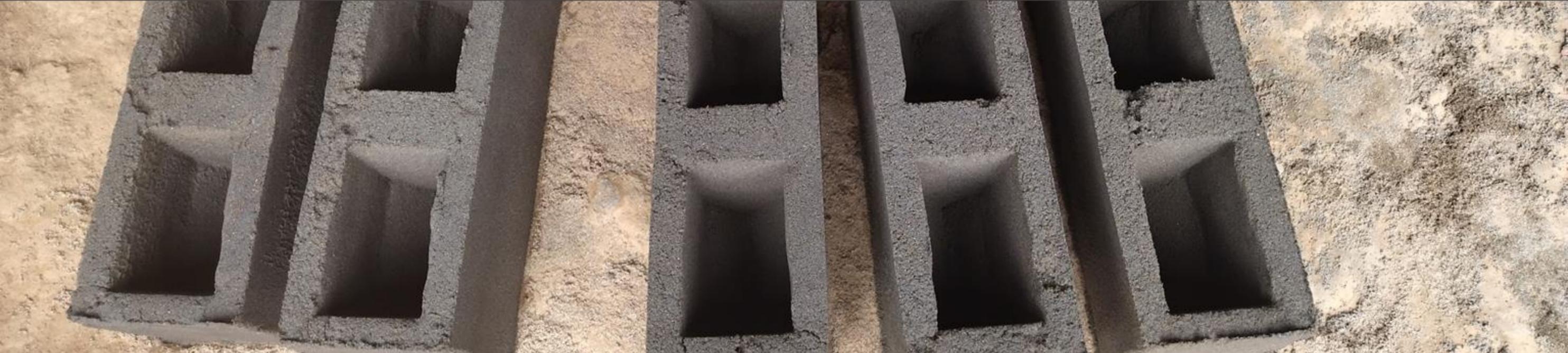
The home team explored mobile money as a way for customers to pay masons and for setting up affordable payment plans. The findings yielded that there is definitely strong potential, as having a mobile money account allows a user to deposit money, transfer to another account, buy credit, and lend money.

Pilot Rollout

The next phase of work will focus on building a sales team and targeting early adopters. Major activities should include: Roll out the flagship Kabone Mandamina and test tiered offerings, Recruit sales agents, train masons and sales agents, and start advertising, Pilot the entrepreneur network and hardware store collaboration, and Test financial mechanisms and flexible plans for early majority.



Project Background



Background on RANO WASH

Rural Access to New Opportunities for Water, Sanitation, and Hygiene (RANO WASH) is a \$30 million five-year USAID-funded project to improve WASH services in rural Madagascar.

RANO WASH is being implemented by a CARE-led consortium that includes Catholic Relief Services, WaterAid, BushProof and Sandandrano with activities planned through 2022. It will improve the health of people in 250 communes in the regions of Vatovavy Fitovinany*, Atsinanana, Alaotra Mangoro, Amoron'i Mania, Haute Matsiatra, and Vakinankaratra.

RANO WASH aims to increase access to safe drinking water for vulnerable populations, including girls, women and people with disabilities. 300,000 people will gain access to safe water through new or rehabilitated water systems. These systems will be managed by local "manager-investor-builder" companies that have contracted with the municipalities under the public-private partnership modality. Another 375,000 people will have improved sanitation options from the various behavior change approaches adopted by the project involving different stakeholders, the communities themselves, sanitation service providers, local/regional and national authorities.

**When the project was implemented, Vatovavy and Fitovinany were unified. They split on 16.06.2021 to become the regions Vatovavy and Fitovinany.*

190 public facilities, including health centers and schools, will have access to basic water and sanitation services. The project is developing systematic partnerships with national and regional governments, water and sanitation institutions, communities, private sector actors, civil society organizations and RANO WASH.

The program has three strategic objectives:

1. Strengthening the governance and monitoring of water and sanitation
2. Increasing the engagement of the private sector in the delivery of WASH services
3. Accelerating the adoption of healthy behaviors and the use of WASH services

Review of market-based sanitation discovery research (2021)

iDE was first contracted in late 2020 to study the current sanitation situation and challenges across several project areas in Madagascar and to provide recommendations for a strategy to develop sustainable markets for rural household sanitation in this context. The COVID-19 pandemic made the execution of this consultancy more complex, but iDE's design team was able to remotely hire, train, and collaborate with a Madagascar-based research team—including training on Human Centered Design (HCD) methodologies—to successfully achieve the assignment.

Through this assessment, iDE identified a number of barriers to purchasing toilets that exist in addition to several major opportunities that the RANO team can leverage to help increase the purchase of toilets. From these barriers and opportunities, iDE developed a strategy to increase the purchase of toilets using a market-based approach. A summary of this strategy is as follows:

The coast is a more accessible market to enter first.

The findings led the research team to recommend that RANO WASH focus its initial effort on the coast because there is easier access to water, higher economic ability to buy toilets due to more high cash crops. There are also fewer barriers to purchasing new things due to cultural factors that lead people to spend money, an environmental stimulus to invest in durability, and more growing seasons/regular income generation that avoids some of the hunger season experienced in the highlands. Once efforts have gained traction in the coast, RANO can then start to layer in early testing and rollout in the highlands.

Start by focusing sales to the early adopters.

The team segmented the target market based on the research from early adopters to laggards, and created a sequential targeting strategy following the 'Diffusion of Innovations' curve. RANO WASH should begin by targeting sales to the early adopters (first buyers) who can afford toilets and will help set the trend early in the program. It also allows time for options to be designed for those who have less financial means, and creates social proof along the way for others to follow.

RANO WASH should prioritize the target markets in the Coast through staggered implementation, first targeting the 'Aspirational Traveler' (early adopter), who can then inspire the early majority for next adoption ('Competitive Copycat'), and later a secondary early majority segment 'Champion Mother' who need more convincing. Once solutions have been rolled out to these three profiles in the coast, testing options for the Highlands can begin, targeting early adopters in this region: 'Family of Zanakampielezana', and 'Entrepreneurs and Salaried Workers'.

This staggered focus aims to create an aspirational product to the trend-setting Aspiration Travellers, who are more readily able to purchase such products. Their purchases will serve as social proof to unlock demand for other market segments, who are expected to have more demand, and perceive purchases as less risky, once the brand recognition of Kabone Manadamina has been established. Tiered approaches will also reduce barriers to entry for subsequent segments of the market.

Review of market-based sanitation discovery research (2021)

Strategic recommendations were divided into four high-level areas/components that will help accelerate the development of a sanitation market in Madagascar:

- 1. Creating an aspirational toilet product:** Includes establishing desirable features for a toilet product, rebranding and standardizing the toilet, building credibility around brand and quality, and creating a tiered offering for the early majority.
- 2. Demand activation:** Involves creating targeted marketing content for each segment, recruiting sales agents to work with masons and training them with a human centered sales approach, and marketing through door-to-door sales, events, and social media.
- 3. Strengthening supply chain:** Includes identifying and training select 'passionate masons' who are motivated in their business, and developing and disseminating a 'business-in-a-box' sales and marketing toolkit for them. In addition, partnering with hardware stores, and strengthening and expanding existing sanitation entrepreneur networks, including adding other key business actors that can catalyze connections and building strong relationships among actors to sustain the toilet supply chain in the future.
- 4. Improving financial access:** Involves introducing flexible payment plan options for both customers and masons. Leveraging VSLAs to become a key mechanism for financial access, building on popularity of mobile money for payments and savings, and repurposing subsidies as discount vouchers that can ease barriers to toilet purchase.

Lastly, in order to roll out the recommendations, a project roadmap was developed which breaks down implementation into 3 key phases:

Preparation: Before Phase 1, RANO WASH must establish a dedicated marketing team with expertise in market research and human-centered design, select accessible geographies in the coast for the pilot, and choose 2-3 masons in those geographies to partner with for activities.

Phase 1: This phase should be all about testing, learning and iterating the activities in the 4 categories. Through a consistent feedback loop, the project will be able to understand what works and what does not work. Focus on (1) using rapid prototyping techniques to design and develop a flagship aspirational product for the coastal Aspirational Travelers, (2) testing marketing triggers, messages, and channels for the aspirational traveler, (3) testing the idea for strengthening and expanding existing sanitation entrepreneur networks and establishing ways to incentivize hardware stores to partner more formally with masons, and (4) holding exploratory conversations with mobile money providers.

Phase 2: Focus on (1) training masons to build the aspirational toilet consistently and at the same level of quality while testing tiered offerings, (2) recruiting and train sales agents, and start advertising to the Aspirational Traveler, (3) piloting the entrepreneur network and solidifying the business relationship between hardware stores and masons, and (4) testing payment plans and financial mechanisms including mobile money and VSLAs.

Phase 3: Focus on (1) launching the tiered product offering, (2) marketing to early majority in the Coast while testing marketing strategy in the Highlands, (3) scaling and monitoring the entrepreneurship network and hardware store collaboration, and (4) piloting the financial mechanisms and flexible plans.

Strategy review - Market Based Sanitation

Based on both RANO WASH's interest and findings from the 2021 research, recommendations point to a market-based approach on how to implement a sanitation program and follow key market-based principles such as:

- Focus on catalyzing the **purchase** of toilets (as opposed to focusing on use and/or the building of toilets).
- Engage people as **customers** and setting up a potential market base and supply chain where customers can buy long lasting durable sanitation solutions.
- Build on behavioral economics evidence that when people **invest** in something they are more likely to place higher **value** on it and therefore take care of it.
- Help businesses find profitable ways to sell toilets that are not readily available.

The team has aimed to look at business models, engage people as customers, and supply them with products and services they can afford. In parallel improve the supply side: entrepreneurs, suppliers, distributors, masons to provide them with increased incomes.



Strategy review - focusing sales on the early adopters first

By focusing sales on those who can afford toilets early in the program (i.e. early adopters/first buyers), it sets the trend, allows time to design options for those who have less financial means, and creates social proof along the way.

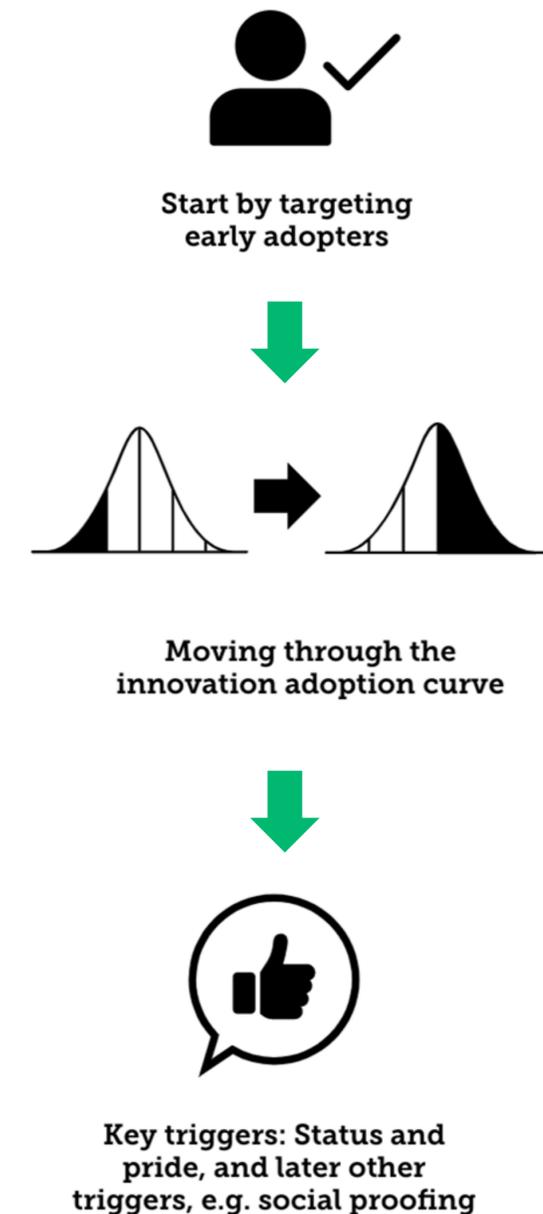
Leverage a target segment to accelerate the adoption of toilets and set the example for others. They may not normally be considered traditional beneficiaries because they may already have a basic, self-built toilet and do not practice open defecation. However, among rural Malagasis, these early adopters have higher economic capacity and therefore the ability to catalyze the purchasing decisions of more pragmatic buyers. **They can build credibility of an idea through social proofing and increasing desirability.**

By refining how early adopters are targeted, opportunities can be unlocked for other segments, essentially leveraging the capabilities of early adopters to inspire the early majority (who need more proof) to increase demand.

In the longer term, **a push from early adopters can spread out to other groups**, with non-toilet users being the last likely to adopt*.

Key triggers identified in the research such as status and pride, will be used to accelerate the uptake of toilets by early adopters. After that different triggers, such as social proof, copying and competition, can be used to target the early majority who have different motivations.

**Solutions ideally consider everyone, but strategically it will be more effective to select a few to create more impact within the timeframe. It is recommended that RANO does not target non-users until later in the project design, outside the scope of this strategy. (Existing CLTS sensitization program activities are already targeting non-toilet users in parallel).*



Strategy review - Using market segmentation

Target markets were previously developed in the discovery research in 2021 and profiles developed across the adoption curve, from early adopters to laggards. Below is a summary of the key target market segments identified during the research.

COAST

EARLY ADOPTERS



Aspirational Traveler

Has traveled domestically in Madagascar, sees new things they want to bring back to their hometowns, usually trendsetters. Few barriers if any regarding ability and willingness to pay. **Target this group first.**

EARLY MAJORITY



Competitive Copycat

Follow trendsetters, copy their behaviors to be like them and/or compete with them. Seek to climb social ladders and build status. Few-to-no barriers regarding ability and willingness to pay.



Champion Mother

Has influence in household decision-making and wants to secure a better future for her family. Needs more convincing before making purchases. More conservative and risk-averse regarding ability and willingness to pay.

HIGHLANDS

EARLY ADOPTERS



Family of Zanakampielezana

Have family members who live in cities and inspire new ideas.



Entrepreneurs and Salaried Workers

Connected to urban centers through good roads, have the means to save, and open to trying something new.

Strategy review - Targeting different groups sequentially

The 'Aspirational Traveler' is the likeliest target segment to be an early adopter for purchasing a toilet.

During the current RANO WASH project lifecycle, the *early adopters in the coast* should be targeted first. Once the Aspirational Traveler has adopted the product, they will provide the necessary social proofing for the early majority in these areas, i.e. Competitive Copycats, who follow and compete with others.

A secondary early majority group, the Champion Mothers can be targeted later, since they have different motives to the Competitive Copycats and need more time and financial options to make the decision to purchase a toilet.

When Champion Mothers in the coast are being targeted and products are being rolled out in the coast, this is when testing of early marketing can happen in parallel for highlands early adopters (Family of Zanakampielezana, and Entrepreneurs and Salaried Workers) for future implementation.

Later groups will eventually be targeted over the long term, but have not been included in the roll-out phase for this project. It will take time to develop the market sufficiently to a point where late adopters will also join.

Target first



Aspirational Traveler

Target second



Competitive Copycat

Target third



Champion Mother

Start testing at the same time for Highlands early adopters



Family of Zanakampielezana

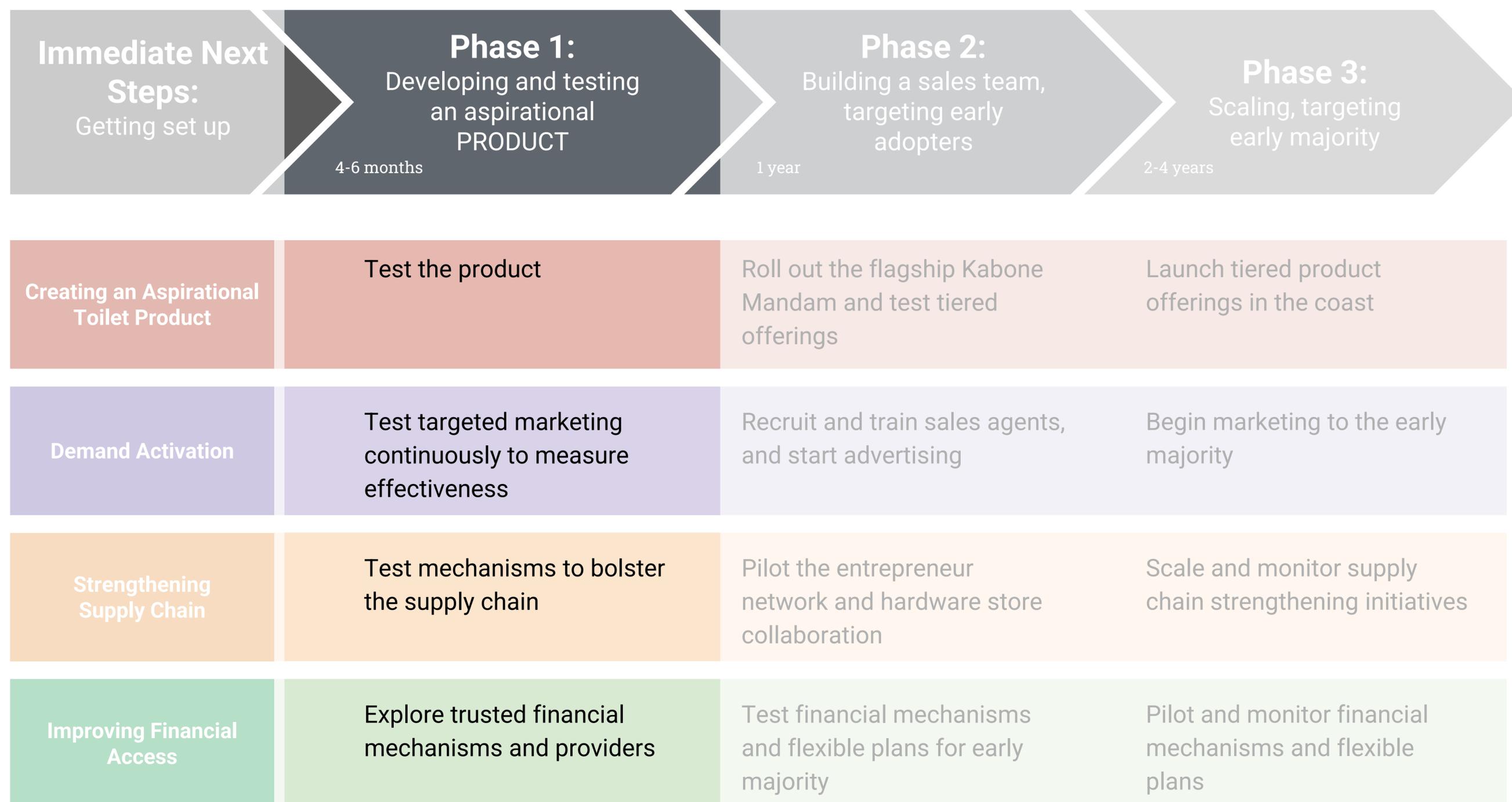
Entrepreneurs and Salaried Workers

Strategy review - MBS Phased Recommendations



Creating an Aspirational Toilet Product	Test the product	Roll out the flagship Kabone Mandam and test tiered offerings	Launch tiered product offerings in the coast
Demand Activation	Test targeted marketing continuously to measure effectiveness	Recruit and train sales agents, and start advertising	Begin marketing to the early majority
Strengthening Supply Chain	Test mechanisms to bolster the supply chain	Pilot the entrepreneur network and hardware store collaboration	Scale and monitor supply chain strengthening initiatives
Improving Financial Access	Explore trusted financial mechanisms and providers	Test financial mechanisms and flexible plans for early majority	Pilot and monitor financial mechanisms and flexible plans

Goals for this project - Phase 1



Goals of this project - Phase 1

Following the recommendations that iDE provided for Phase 1, the primary objectives of this project are:

1. to use rapid prototyping techniques to design and develop a flagship aspirational product for the coastal Aspirational Travelers, and
2. to test marketing triggers, messages, and channels for the aspirational traveler.

Secondarily, iDE will test the idea for strengthening and expanding existing sanitation entrepreneur networks and ways to incentivize hardware stores to partner more formally with masons, and will also hold exploratory conversations with mobile money providers. These secondary objectives will be considered more 'light touch' than the primary objectives, and will be more of the focus of Testing Phases 2 and 3.

Through a consistent feedback loop, we will use Phase 1 testing to understand what works, what does not work, and refine the recommendations for a better outcome. Using Human-Centered Design and a lean approach, RANO WASH can go forward with an evidence base for solutions, and embracing a 'fail fast, learn fast' mindset. Specific objectives include:

Testing an aspirational toilet product

- This includes testing toilet product, features, potential tiered options, proving demand and will involve talking to Aspirational Travelers, Passionate Masons, Competitive Copycats

Testing targeted marketing

- Creative concepts, marketing approaches/channels, key messages, and brand ideas that create attention and trigger action from the target audience
- Iterating the 'Kabone Mandam' concept, brand, and product features
- Prototyping sales training kit materials and the best way to deliver information to masons/sales teams

Early conceptual testing of mechanisms to bolster the supply chain

- In recognition of the complexity of sanitation value chains, especially where they are still emerging, and the many functions required which cannot simply be played by one pioneering market actor, iDE placed high emphasis on the testing the idea of strengthening and expanding the existing sanitation entrepreneur network concept according to its feasibility, desirability, and how it could work. This group of various entrepreneurs, and public sector actors would support the emerging sanitation value chain.
- Gauging hardware store interest and partnerships

Hold early-stage conversations with finance stakeholders to explore opportunities and partnerships

- Financing opportunities and partnerships
- Mechanisms - VSLAs, mobile money, savings wallets
- Payment plans/preferences
- Smart subsidies, discounts, vouchers

About the iDE Innovation Lab

The iDE Innovation Lab (“The Lab”) is iDE’s in-house design, research and strategy consultancy that focuses on social innovation through bringing new lenses, approaches and ideas to understand and address complex challenges in the development sector.

Established as an iDE program in 2010 to fill the need for more innovative ideas and designs in the iDE programs, The Lab has since grown to a multi-disciplinary global team of ten designers, researchers and engineers. The team works to tackle the complex challenges faced by iDE’s offices around the world whilst also delivering extensive consulting work for other clients such as The World Bank Group, CARE, Save The Children, Royal Government of Cambodia, etc.

The lab designs around people’s needs and aims to develop simple solutions to complex challenges through using a human-centric approach to social innovation that includes applied ethnography, behavioral research, rapid testing and prototyping in order to improve the livelihoods of rural communities. The foundation is always based on in-depth qualitative research, and we use the behavioral insights uncovered in the research to design new services, products, and communication materials depending on the needs of the people for whom we are designing.



Project team

The RANO WASH 'Home' team (Madagascar)



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**Rabenaivo Mihone
Radosoa**
Engineer

The iDE 'Away' team (USA + London + Cambodia)



Max Churchfield
Project Manager



Fatima Shehata
Design Researcher



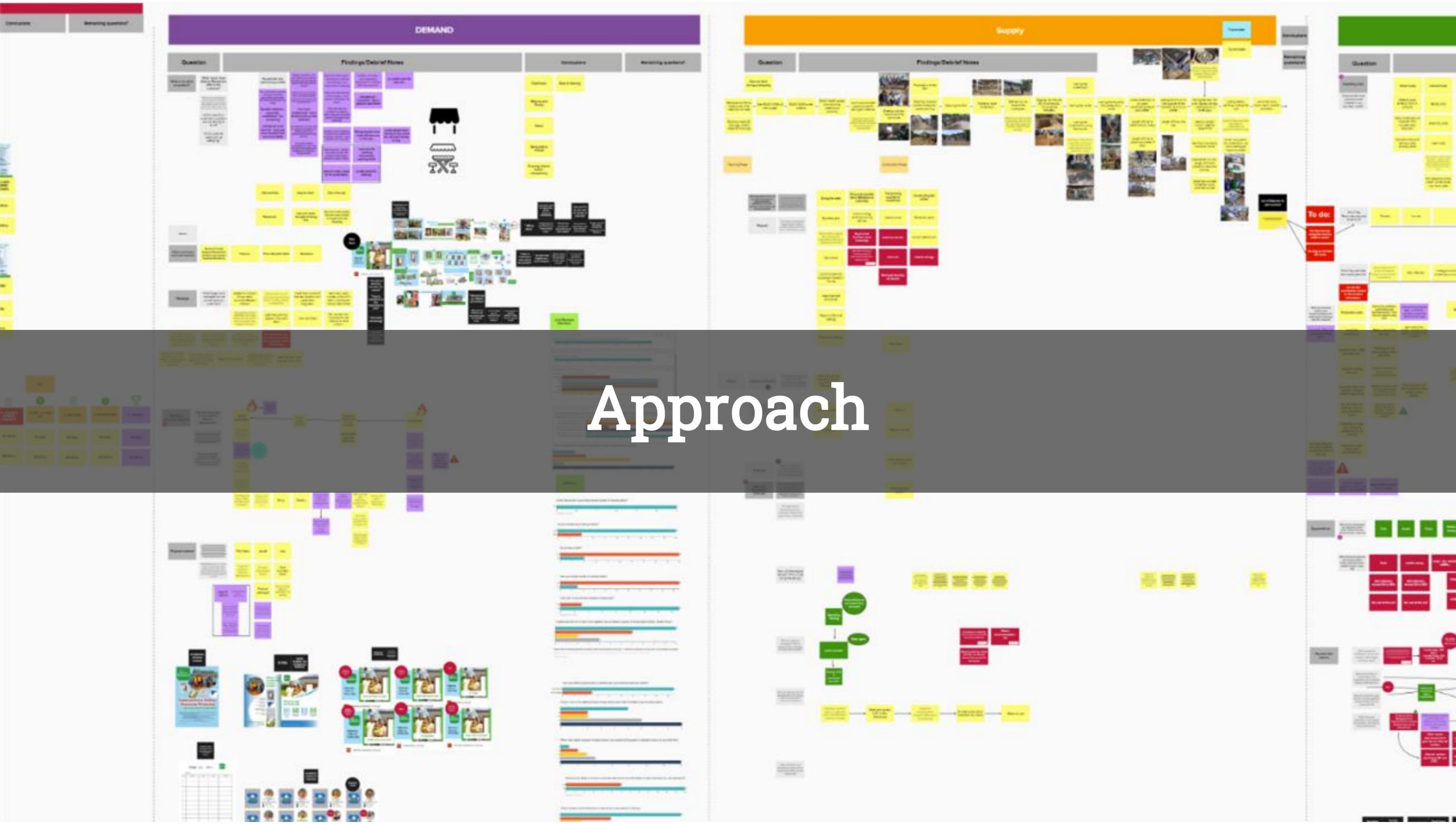
Melisa Leñero
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Manager & Strategist



Sage Sherman
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Aerospace Engineering



Nadia Campos
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Director



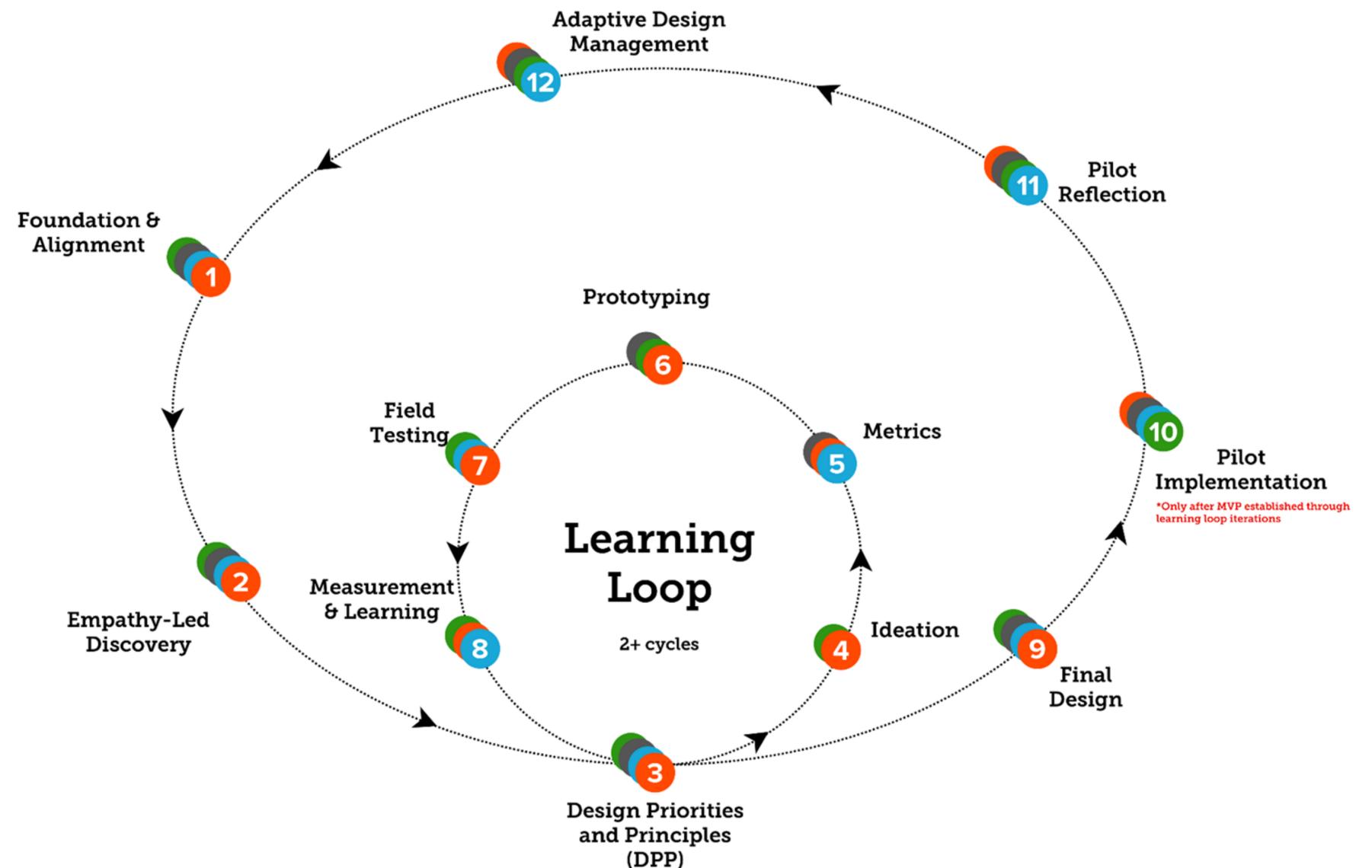
Approach

iDE's Innovation Process

iDE's Innovation Lab designs around people's needs and aims to develop simple solutions to complex challenges through a human-centric approach to social innovation. Our process draws from best practices in applied ethnography, behavioral research, rapid testing, and prototyping in order to improve the livelihoods of the people we work with.

Our innovation process includes 12 steps that are conducted iteratively, beginning with foundation and discovery, followed by our 'Learning Loop' to test and refine ideas, and concluding with pilot implementation and adaptive management. Throughout our process, we emphasize the importance of iterating, understanding that even a successful pilot offers room for further growth and innovation.

The foundation of our work is always based on in-depth qualitative research, and using behavioral insights uncovered in the research to design new services, products, and communication materials depending on the needs of the people. It has in-depth experience in tackling sensitive and taboo topics while ensuring that people are safeguarded and treated with respect and dignity.

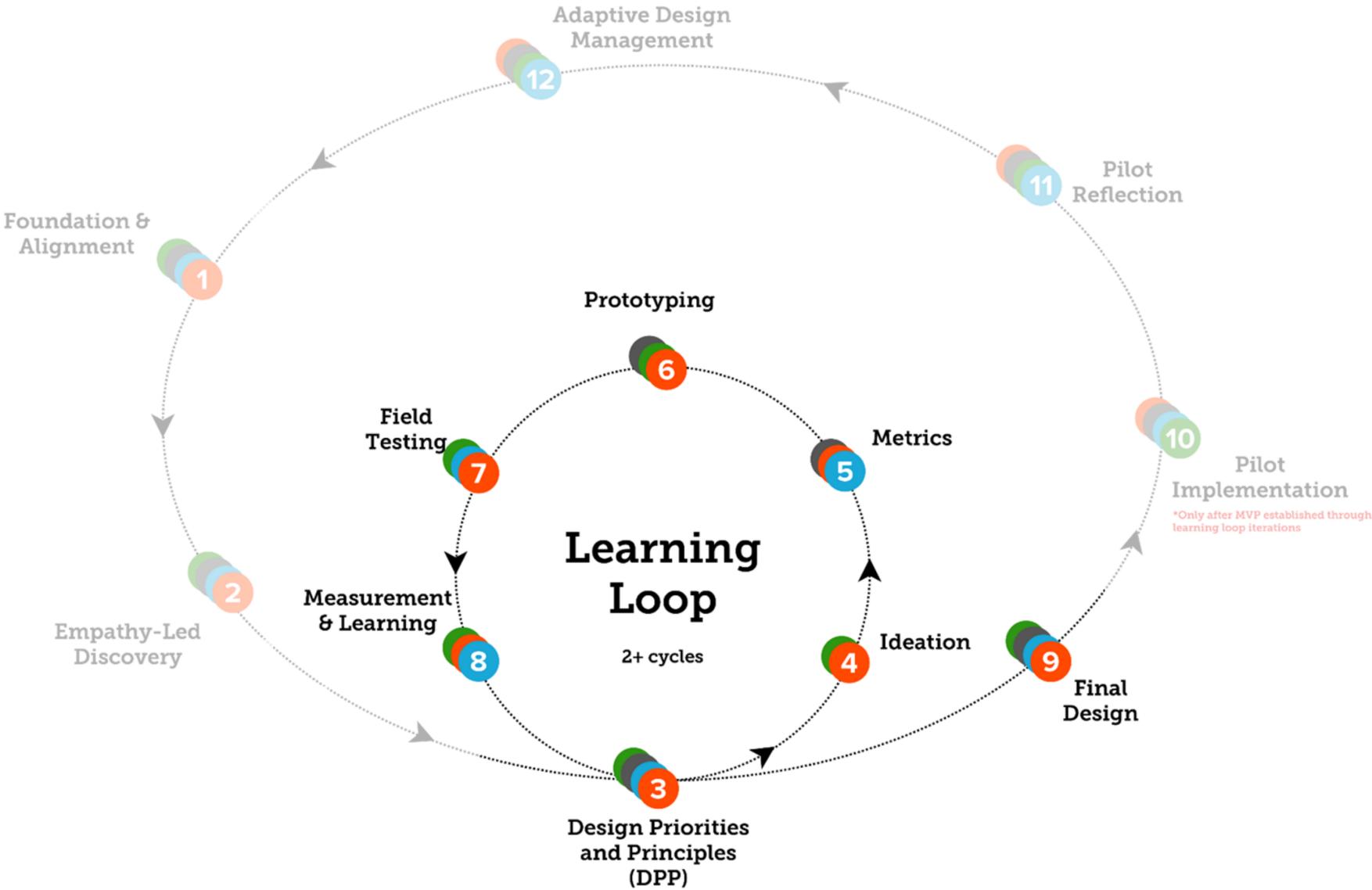


In depth: prototyping and testing

With a set of prioritized recommendations in place after the Discovery research in 2021, this phase of work (Phase 1) involved establishing metrics to test the recommended ideas in a location that matches the criteria previously mentioned, and then creating and testing a series of prototypes from low-resolution to high-resolution.

For iDE, a prototype is a simple, scaled down, and cheap early version of the solution, or an element of the solution, that the user can experience in real-time. It can be anything from a storyboard, paper cutout, sales pitch, or even a short skit in which an experience is acted out.

Testing allows people to interact with prototypes as realistically as possible, and gives our team the opportunity to document their experience and evaluate prototype performance in real-time. During testing, we constantly evaluate how the prototypes perform according to the experimental metrics, and establish which elements need to be changed for subsequent testing and how they need to be changed. The final output of testing is intended to be a 'ready-to-go' design and recommendations for a full pilot in the target geography.



Framework for building a sanitation marketing strategy

Following the same framework laid out in the discovery research findings, the prototypes, testing, and recommendations in this report are categorized into four components: product, demand creation, supply chain, and finance.*

(Product) Creating an Aspirational Toilet Product

Build an aspirational product that early adopters want to buy and developing tiered offerings to launch for other target segments later.

(Demand) Demand Activation

Attract and engage potential early adopter buyers through targeted marketing and sales.

(Supply) Strengthening the Supply Chain

Develop partnerships with other supply chain actors, strengthen relationships between business actors, and reinforce mason capacity to facilitate linkages in the supply chain

(Finance) Improving Financial Access

Create alternative payment options for those who cannot afford upfront lump sum cash payments to overcome purchasing barriers, and find financial partners to help facilitate flexible, reliable payments.

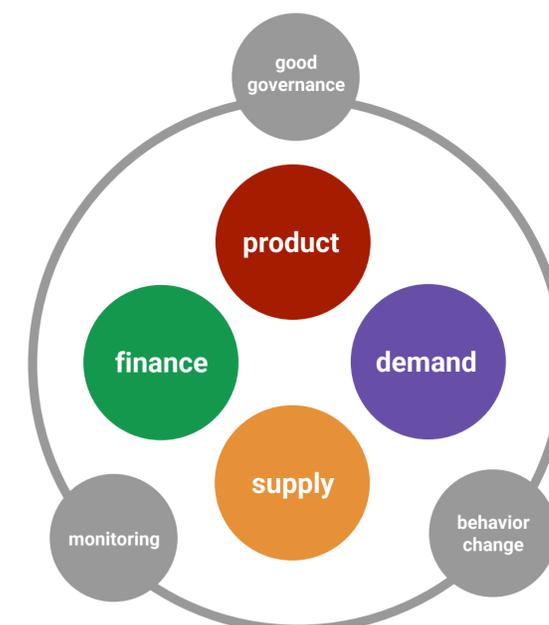
**Note: these categories are high-level and serve as a simple way to envision a sanitation marketing strategy. Several other business model and marketing strategy frameworks have been used to support the specific research and prototyping questions explored in each category, such as the popular [Business Model Canvas](#) and the ['7Ps of Marketing'](#)*

Other components outside of this strategy that should continue *in parallel*:

Good governance: Maintaining overall transparency and accountability, establishing appropriate regulations for growth, creating stability of the regulatory environment for private sector activities, public sector management and collaboration with policy-makers and government actors to build a strong platform for the program to thrive.

Behavior change: Education and awareness-raising around good sanitation practices is already happening in the RANO WASH program and is complementary to the proposed market-based strategy, reinforcing the importance of using toilets.

Monitoring: Robust monitoring and testing should be integrated throughout the whole process to measure the impact of different activities and adapted accordingly.





Summary of Prototyping and Testing



Field research locations

Testing Geography Selection Criteria

These criteria were developed to assist the RANO WASH team to select testing locations with a strong potential for adopting and growing a sanitation market. Criteria include:

- Areas with sanitation knowledge and/or have been through sensitizing activities.
- Easy access to road.
- Areas that have had success with the adoption of toilets (low practice of open defecation). The aspirational toilet is an improved toilet and will be designed for the already toilet-user, build on existing success to start with.
- Areas that are close to a source of water.
- Have 2-3 passionate masons within accessible proximity to customers.
- Close proximity to hardware store.
- Cell phone reception/good connectivity.
- Signs of development (e.g. satellite dishes, solar panels).
- Areas where there are cloves and vanilla growing (seasonal high cash flow).

Location Selections

Locations for each testing were selected through a collaborative effort between the RANO WASH project team and the Home Team using the criteria set out here, in addition to past experience working in each of the RANO WASH project areas.

Note that testing 2 only took place in a single commune (Lokomby) to allow the project team the ability to construct multiple full-scale latrine component prototypes to test in real-time with potential customers.

Testing 1:

- **Atsinanana**
 - Ilaka Est
 - Andovoranto
 - Mahatsara
 - Niherenana
- **Vatovavy & Fitofinany**
 - Andemaka
 - Vohitrindy
 - Lokomby
 - Ampasimanieva

Testing 2:

- **Vatovavy & Fitofinany**
 - Lokomby

Who the team spoke to

Testing 1

- 75 households
- 8 masons
- 10 VSLAs

Testing 2

- 34 households
- 24 exhibition day rapid interviews
- 1 religious leader
- 4 local businesses
- 11 masons
- 1 VSLA
- 3 mobile money providers
- 3 local promoters



Methods used for prototyping, testing, and additional research

DESK RESEARCH & EXPERT INTERVIEWS

Gathering information from secondary sources, literature reviews, and experts to generate “big picture” learnings and facilitate the planning of appropriate research strategy.

FOCUS GROUP DISCUSSIONS

Interviews conducted as a group. Understand how respondents interact and talk to each other about their experiences. Gathering group consensus on key research topics.

IN-DEPTH INTERVIEWS

Longer conversations with toilet users, non-users and relevant stakeholders to learn, in their own words, their needs, challenges, desires and aspirations in regards to research goals.

EXHIBITION DAY INTERVIEWS

+ OBSERVATIONS

Exhibition days conducting rapid interviews to explore market actors and solicit comments and feedback from shoppers. Supporting this with observing behaviors at the market and homes to capture what people do not explicitly say and do.

PITCH DECK

This is a simple tool used to visually present an idea to potential customers to get feedback.

DRAWINGS & VISUAL PRODUCT REPRESENTATIONS

Before resources are invested in high-fidelity prototypes, visual product representations and drawings are a more affordable way to test overall appearance, aesthetics, color preferences, material preferences, and more.

PHOTOS

Photos of people in a particular setting, or experiencing a specific situation or emotion can help a research team test emotional triggers and messages that can be used in marketing and promotional material.

‘EXHIBITION DAY’ SALES DEMONSTRATION

A high-fidelity prototype testing including physical prototypes on display, animation activities to attract potential customers, and researchers serving as ‘sales agents’ to get customer feedback and test real-world customer willingness to buy, and affordability, using a sales sign up sheet. 66 real world orders from customers from the Aspirational Traveller customer segment were received, validating willingness to pay and affordability in this segment. The sign up sheet has been included as an Appendix in the final deliverable.

Conclusions and Recommendations



The Kabone Mandamina Product Offering

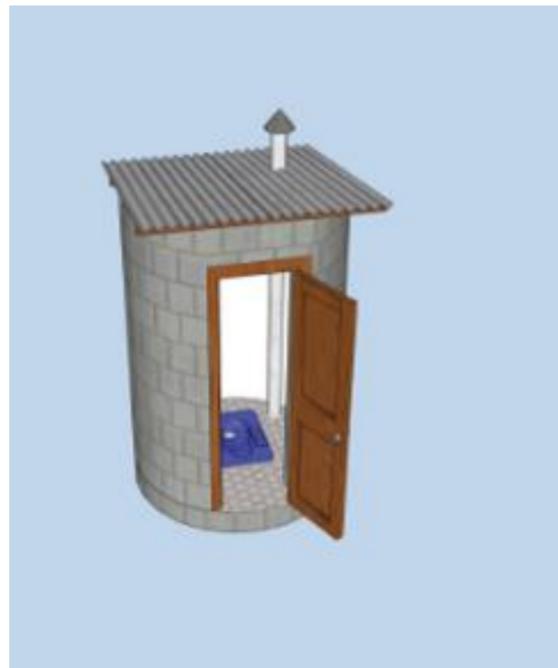
1. Shelter
2. Pit
3. Slab
4. Pan
5. Choices and tiered options
6. Pricing



The product offering in depth - Shelter

The first shelter prototype testing was conducted using paper-based prototypes (3D drawings) and included a multitude of shelter designs, shapes, building materials, and colors. Results from this testing led the team to focus on developing high-resolution full-scale prototypes for four primary shelter designs:

1. Round cinder block
2. Square cinder block
3. Round aluminum
4. Square aluminum



The product offering in depth - Shelter

High-resolution shelter prototypes after completion

1. Round cinder block
2. Square cinder block
3. Round aluminum
4. Square aluminum



The product offering in depth - Shelter

Customers prefer the square cinder block shelter

At the conclusion of the second testing, *and factoring in willingness to pay*, customers and masons alike preferred the **square cinder block shelter** over the others for the following reasons:

- It is much more spacious compared to circular cinder block
- It is easier from a construction standpoint to make a square than a circular shelter
- Aesthetically, it is prettier than the other choices
- Critically, it is more durable than aluminium, which was an important design consideration given that the area is extremely prone to cyclones.






TRANO PARPAING EFA-JORO



Ny habeny : Sakany 1 metatra ; Halavany 1 metatra ; Hahavony 2 metatra
Ireo singa ilaina :

- Parpaing : 91 isa
- Simenitra : 2 lasaka sy 10 kilao
- Fasika : 19 sio lehibe (20L)
- Vatokely : tapa-tsio lehibe (20L)
- Taroby
- Vy (fer10) : 4,8 metatra
- Vy (fer 6) : 4 metatra sy sasany
- Fantsika (50 mm) : ampahefan'ny kilao
- Fantsika (100 mm) : ampahefan'ny kilao
- Fantsika fanitso : atsasaky ny fahefan'ny kilao
- Hazo fisaka amin'ny sisin'ny tafo : 6,2 metatra
- Hazo fisaka : 2 metatra
- Hazo efa-joro (8x8sm) : 4,5 metatra
- Hazo efa-joro (5x5sm) : 1 metatra sy sasany
- Fanitso (0,90x2m) : 2 isa
- Loko : 1 kilao
- Sokay : 1 kilao
- Varavarana miaraka amin'ny hidiny, savily, karetsaka ary tolana
- Fantson'ny fampidiran-drivotra

Faharetan'ny asa : 4 andro

Vidiny raha miantoka entana ianao : **200 000Ar**

Vidiny raha mandray vita ianao : **728 000Ar**

Labor only:
\$48.60 USD

Labor and materials:
\$177 USD







The product offering in depth - Pit

Elevated pits are preferred, regardless of shape

Across both rounds of testing, customers preferred an elevated pit over a buried pit—regardless of price—because it reduces the likelihood of leakage and pit collapse as a result of seasonal flooding. Some customers commented that the idea of having an elevated pit is a novel concept, and felt that it would be well-suited for the sandy soil in the East Coast region of Madagascar. - regardless of price.

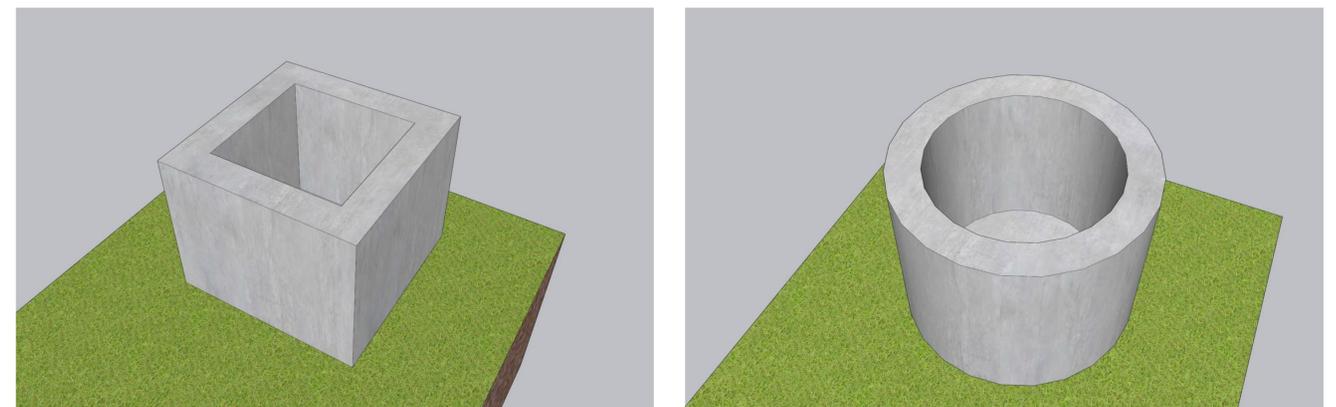
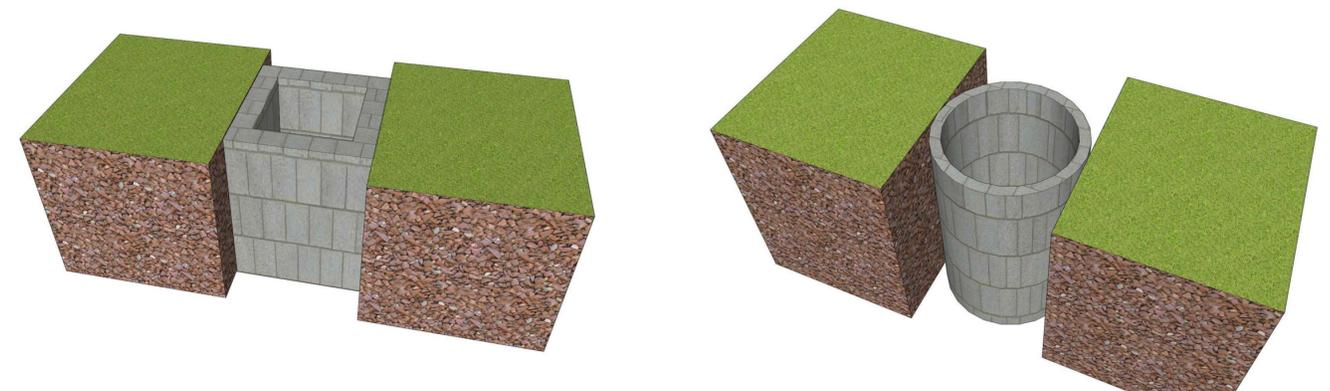
Factoring in the labor cost of digging compared to constructing a raised pit with stairs, the price difference ended up being small, and did not weigh much into customer preferences.

Square and round both acceptable, but square may be easier

While initial prototype tests revealed that there might be a strong preference for square pits, high-resolution prototype testing in Lokomby yielded that there is no tabou or significant preference around shape. That said, customers did prefer a stacked shelter-pit design over an offset pit due to the constricted available space for many households to construct a latrine (exterior pit access still available for emptying). As such, pairing a square pit design with a square shelter design would likely help with ease of stacked construction.

Testing limitation - cinder block construction only

In the final round of testing, cinder block was the only material used in the high-resolution prototypes because it is more readily accessible and familiar to customers and masons in Lokomby. Researchers did *not* test the desirability of a circular concrete ring-lined pit for two reasons: (1) preference for a raise pit with a square stacked shelter design would potentially compromise the structure, and (2) concrete ring molds are currently unavailable to masons in Lokomby.



The product offering in depth - Pit

High-resolution prototypes



The product offering in depth - Pit

The Pit - Final Customer Preferences






LAVAKA PARPAING EFA-JORO IVELAN'NY TANY



Ny habeny : 1 metatra x 1 metatra x 1,40 metatra
Ireo singa ilaina : - Parpaing 60 isa
 - Simenitra 1 lasaka
 - Fasika 9 sio lehibe (20L) sy tapany
 - Vatokely 2 sio lehibe (20L)
 - Sikalita 1 fonosana

Faharetan'ny asa : 3 andro

Vidiny raha miantoka entana ianao : 60 000Ar
Vidiny raha mandray vita ianao : 220 000Ar

Labor only: \$14.60 USD
Labor and materials: \$53.50 USD







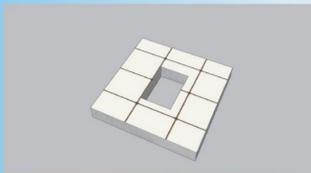
The product offering in depth - Slab

The Slab

Analysis of results from the first round of low-res testing led the team to develop four high-resolution slab prototypes—along with their prices—to present to aspirational traveler customers to gather feedback and willingness to buy: (1) tile, (2) circular concrete, (3) uncolored stamped concrete, and (4) colored stamped concrete.

USAID AVY AMINTNY VAHOAKA AMERIKANA **RANO WASH**

GORODONA BETON MISOY CARREAU



Ny habeny : 1,20 metatra x 1,20 metatra

Ireo singa ilaina :

- Simenitra 1 lasaka
- Fasika 4 sio lehibe (20 L)
- Vatokely 4 sio lehibe (20L)
- Vy (fer10) : 13 metatra sy sasany
- Taroby
- Pilansa : 8 metatra
- Fantsika (70mm) : Atsasaky ny fahefan'ny kilao
- Kapila karo (0,20m x 0,20m) : 27 isa

Faharetan'ny asa : 4 andro

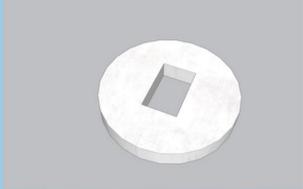
Vidiny raha miantoka entana ianao : **80 000Ar**

Vidiny raha mandray vita ianao : **261 000Ar**

care **CRS** **WaterAid** **BushProof** **SANDRANO**

USAID AVY AMINTNY VAHOAKA AMERIKANA **RANO WASH**

GORODONA BORIBORY TSOTRA MILOKO



Ny habeny : Savaivony : 1,20 metatra

Ireo singa ilaina :

- Simenitra 35 kilao
- Fasika 2 sio lehibe (20 L) sy tapany
- Vatokely 3 sio lehibe (20L)
- Vy (fer10) : 13 metatra sy sasany
- Taroby
- Pilansa : 8 metatra
- Fantsika (70mm) : Atsasaky ny fahefan'ny kilao
- Loko : Atsasaky ny fahefan'ny kilao

Faharetan'ny asa : 4 andro

Vidiny raha miantoka entana ianao : **60 000Ar**

Vidiny raha mandray vita ianao : **173 000Ar**

care **CRS** **WaterAid** **BushProof** **SANDRANO**

USAID AVY AMINTNY VAHOAKA AMERIKANA **RANO WASH**

GORODONA BETON MISOY KISARISARY TSY MILOKO



Ny habeny : 1,20 metatra x 1,20 metatra

Ireo singa ilaina :

- Simenitra 1 lasaka
- Fasika 4 sio lehibe (20 L)
- Vatokely 4 sio lehibe (20L)
- Vy (fer10) : 13 metatra sy sasany
- Taroby
- Pilansa : 8 metatra
- Fantsika (70mm) : Atsasaky ny fahefan'ny kilao

Faharetan'ny asa : 3 andro

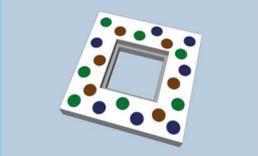
Vidiny raha miantoka entana ianao : **50 000Ar**

Vidiny raha mandray vita ianao : **177 000Ar**

care **CRS** **WaterAid** **BushProof** **SANDRANO**

USAID AVY AMINTNY VAHOAKA AMERIKANA **RANO WASH**

GORODONA BETON MISOY KISARISARY MILOKO



Ny habeny : 1,20 metatra x 1,20 metatra

Ireo singa ilaina :

- Simenitra 1 lasaka
- Fasika 4 sio lehibe (20 L)
- Vatokely 4 sio lehibe (20L)
- Vy (fer10) : 13 metatra sy sasany
- Taroby
- Pilansa : 8 metatra
- Fantsika (70mm) : Atsasaky ny fahefan'ny kilao
- Loko : atsasaky ny fahefan'ny kilao

Faharetan'ny asa : 3 andro

Vidiny raha miantoka entana ianao : **50 000Ar**

Vidiny raha mandray vita ianao : **180 000Ar**

care **CRS** **WaterAid** **BushProof** **SANDRANO**

The product offering in depth - Slab

High Resolution Prototypes

Tile



Uncolored stamped concrete



Circular Concrete



Colored stamped concrete



The product offering in depth - Slab

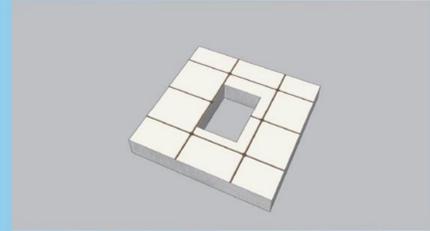
Final Customer Preference: Aspirational traveler customers are willing to purchase a tile slab because it demonstrates status and modernity in addition to having a clean look, and its ease of cleaning.

Having tile is associated with progress and being from a larger city, so for people to have a tile latrine slab denotes that they are modern and trendy in the eyes of their peers. From a practicality perspective, it is also easy to clean and appear clean as well.






GORODONA BETON MISY CARREAU



Ny habeny : 1,20 metatra x 1,20 metatra

Ireo singa ilaina :

- Simenitra 1 lasaka
- Fasika 4 sio lehibe (20 L)
- Vatokely 4 sio lehibe (20L)
- Vy (fer10) : 13 metatra sy sasany
- Taroby
- Pilansa : 8 metatra
- Fantsika (70mm) : Atsaky ny fahefan'ny kilao
- Kapila karo (0,20m x 0,20m) : 27 isa

Faharetan'ny asa : 4 andro

Vidiny raha miantoka entana ianao : 80 000Ar

Vidiny raha mandray vita ianao : 261 000Ar

**Labor only:
\$19.40 USD**

**Labor and materials:
\$63.40 USD**







The product offering in depth - Pan

The Pan

Analysis of results from the first round of low-res testing led the team to develop four high-resolution pan prototypes—along with their prices—to present to aspirational traveler customers to gather feedback and willingness to buy: (1) dalle san plat (DSP), (2) sitting SatoPan, (3) SatoPan, and (4) ceramic seat.

DSP



FANGERENA DSP

Ny habeny : 0,60 metatra x 0,60 metatra
Ireo singa ilaina : - Sato pan 1

- Simenitra : 6 kilao
- Fasika : tapa-tsoio lehibe (20L)
- Vatokely : 1 sio lehibe (20L)
- Vy (fer 6) : 4 metatra
- Taroby

Faharetan'ny asa : 1 andro

Vidiny raha miantoka entana ianao : **15 000 Ar**

Vidiny raha tsy miantoka entana ianao : **29 000 Ar**

care, CRS, WaterAid, BushProof, SANDRANO

Sitting SatoPan



FANGERENA SATO PAN MIPETRAKA

Ny habeny : 0,60 metatra x 0,60 metatra
Ireo singa ilaina : - Sato pan 1

- Simenitra : 15 kilao
- Fasika : iray latsaky ny fahefan'ny sio lehibe (20L)
- Vatokely : 1 sio lehibe (20L) sy tapany
- Vy (fer 6) : 8 metatra
- Taroby
- Hazo fisaka : 6 metatra
- Fantsika : (70 mm) : atsasaky ny fahefany

Faharetan'ny asa : 2 andro

Vidiny raha miantoka entana ianao : **30 000 Ar**

Vidiny raha tsy miantoka entana ianao : **124 000 Ar**

care, CRS, WaterAid, BushProof, SANDRANO

SatoPan



FANGERENA SATO PAN

Ny habeny : 0,60 metatra x 0,60 metatra
Ireo singa ilaina : - Sato pan 1

- Simenitra : 6 kilao
- Fasika : tapa-tsoio lehibe (20L)
- Vatokely : tapa-tsoio lehibe (20L)
- Vy (fer 6) : 4 metatra
- Taroby

Faharetan'ny asa : 1 andro

Vidiny raha miantoka entana ianao : **20 000 Ar**

Vidiny raha tsy miantoka entana ianao : **84 000 Ar**

care, CRS, WaterAid, BushProof, SANDRANO

Ceramic Seat



FANGERENA BAKOLY MIPETRAKA

Ny habeny : 0,60 metatra x 0,60 metatra
Ireo singa ilaina : - Seza bakoly 1 (brokatera)

- Simenitra : 10 kilao
- Fasika : tapa-tsoio (20L)
- Vatokely : 1 sio lehibe (20L)
- Vy (fer 6) : 4 metatra sy sasany
- Taroby
- Hazo fisaka : 2,4 metatra
- Fantsika : (70 mm) : atsasaky ny fahefany

Faharetan'ny asa : 1 andro

Vidiny raha miantoka entana ianao : **30 000 Ar**

Vidiny raha tsy miantoka entana ianao : **135 300 Ar**

care, CRS, WaterAid, BushProof, SANDRANO

The product offering in depth - Pan

High Resolution Prototypes

DSP



Sitting SatoPan



SatoPan



Ceramic Seat



The product offering in depth - Pan

Final Customer Preference: Ceramic Seat

When shown all of the options and their respective prices, customers were most interested in purchasing the ceramic seat, citing its aesthetic appeal, durability, clean appearance, and that it is well-known to be free of smells. Customers also stated that the clean appearance would in turn push them to want to keep it clean and presentable for others.

One notable piece of feedback that more than one customer provided is that the ceramic seat evokes a sense of status and beauty, and that having this kind of product in Lokomby would be a positive contribution to the development of the commune.






FANGERENA BAKOLY MIPETRAKA



Ny habeny : 0,60 metatra x 0,60 metatra
Ireo singa ilaina :

- Seza bakoly 1 (brokatera)
- Simenitra : 10 kilao
- Fasika : tapa-tsio (20L)
- Vatokely : 1 sio lehibe (20L)
- Vy (fer 6) : 4 metatra sy sasany
- Taroby
- Hazo fisaka: 2,4 metatra
- Fantsika : (70 mm) : atsasaky ny fahefany

Faharetan'ny asa : 1 andro

Vidiny raha miantoka entana ianao : 30 000 Ar

Vidiny raha tsy miantoka entana ianao : 135 300 Ar

Labor only: \$7.30 USD

Labor and materials: \$32.90 USD







A note on flushing mechanisms

Each of the pan options tested presents separate opportunities and challenges regarding the need for a flushing mechanism

For a classic DSP pan: no need flushing

Sit sato : around 200 mL of water for flushing

Sato pan : around 200 mL of water for flushing

Ceramic seat : we have 3 options:

1. Break the siphon so it doesn't need water (but here we have smells issues and insects issues so it's a bad idea. Regardless, many people do that)
2. Break the siphon and put smaller PCV siphon instead, which reduces the quantity of water for flushing, around 1.5 to 2 L. The leader of the local mason network, 'Rasta', has the skillset to be able to do this, but additional training would be needed for the masons in Lokombo.
3. Keep the normal use, which is around 4 to 6 L per use. It's important to notice that we have to remove the tank of the ceramic seat (like during the exhibition session). The tank volume is around 16L. People will use a bucket for flushing instead



Forgoing tiered options and embracing the power of choice

Customers value transparency and the ability to choose what they want.

One of the most significant insights to arise from testing the prototypes is that customers expressed how much they appreciate the transparency of **seeing** product options and prices both in a catalogue and in-person, and also how much they enjoy having the **ability to choose** a product or a combination of products that is the best fit for them.

Previously, iDE's research suggested that a follow-on step after promoting a 'flagship' Kabone Mandamina product for aspirational travelers would be to identify and test a number of tiered options for more risk-averse customer segments such as the 'champion mother.'

The latest testing results would suggest, however, that there is a significant benefit to promoting the 'flagship' product while simultaneously offering as many options as the masons are technically capable of constructing.

With a 'menu' in hand, customers felt like they were in more control of their purchase decision, and could customize what they wanted given their interest and budget. Doing so also opens up the door for further modification and upgrades in the future.

In terms of branding and promotion, the issue of course arises as to *what exactly defines* the Kabone Mandamina brand if there are such a wide variety of choices? While the research previously suggested that the brand would be defined by a single product, these recent findings suggest that perhaps the brand could instead be known by the very sense transparency and choice that the test customers in Lokomby value.



Product Pricing Considerations

The majority of aspirational travelers prefer to pay for a ‘turnkey’ option that includes the cost of materials and mason’s labor because it is more convenient compared to sourcing the materials themselves.

As can be seen on the pricing sheets displayed in the previous pages of this report, each high-resolution prototype is accompanied by two prices calculated at the time of the prototype exhibition session that took place at the end of June 2022. The lower of the two prices is for mason’s construction labor services only, while the higher price is for the ‘turnkey’ option of masons facilitating the materials purchase, delivery, and then construction of the final product so it is ready-to-use by customers.

In Madagascar, it is common for customers of contracting jobs such as home construction or latrine construction to request a materials list from a mason and source the materials themselves. For many customers, they feel like they are getting a better deal if they purchase the materials themselves instead of trusting masons to find affordable options.

In the case of our testing results, however, the research team was surprised to learn that the majority of the aspirational traveler target market—identified through survey questions as those who have traveled outside of Lokomby and claim to be among the first to purchase popular or trendy products when they become available—prefer to pay for the turnkey option because it is more convenient. Masons should leverage this preference as an opportunity to build trust with customers and with suppliers, which may reduce the materials and transportation costs in the long-term.

Materials Pricing Calculations

- If the material is in Manakara: Total price = base price + transport to Lokomby (5% of the price) + local transport
- If it's in Lokomby: Price = Base price + store margin + local transport
- Whether to purchase in Manakara or Lokomby depends on the road conditions - if the road is good (no rain = May to October) it is cheaper to buy in Manakara

Transportation Costs

- Transportation costs between Manakara and Lokomby depend primarily on the price of fuel, which has been fluctuating significantly in recent months due to geopolitical events
- Local transportation - generally masons transport it by feet or bicycle

Mason’s Labor Costs

- Mason's labour is more stable than materials price in term of changing
- Traditionally depends on cost of living expenses, the difficulty of the project, and the prior relationship with customers. As evidenced during this testing phase, however, customers also appreciate a visible and transparent labor cost that is displayed on a product, rather than informally negotiated.

Product Pricing Considerations - Materials Needed by Masons

During our interviews, we asked Masons about the required materials to successfully build the product. They mentioned the following:

- Cinderblock Mould (10cm*20cm*40cm)
- DSP mould
- Circular Ring mould
- Griffe (haven't found the name in English)



- Shovel 70cm metal



- Metal snips



- Pincers



- Hacksaw



- Bucket



- Construction gloves



- Construction mask

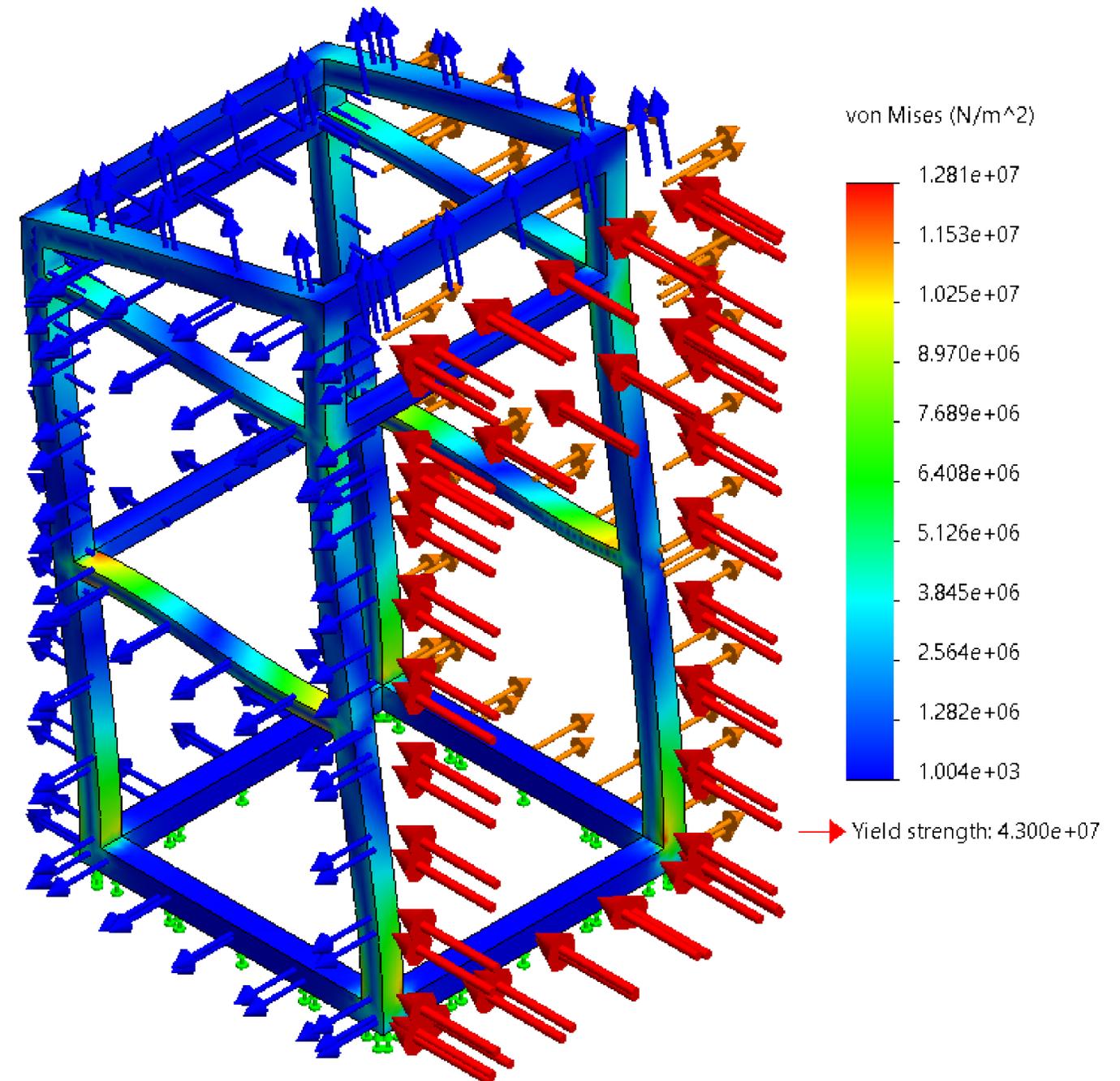


A special note about cyclones

Cyclones are a major consideration for any construction project on the East Coast of Madagascar, and latrine construction is no exception.

During this testing and prototyping phase, iDE was fortunate enough to have the support of Sage Sherman, a Ph.D. aerospace engineering student at the University of Colorado at Boulder to help conduct a theoretical wind force loading simulation under various cyclone conditions historically experienced in the East Coast of Madagascar. The full report and recommendations are included in the annexes of this document, and are intended to stimulate further discussion and considerations for structures built in the East Coast.

***Please note that the recommendations in that report should **not** be considered as ready-to-use engineering specifications that will guarantee structural integrity during a cyclone. The theoretical modeling is indeed thorough, but nonetheless, additional corroboration from other engineers and realistic in-field testing would be needed before specific technical recommendations could be disseminated.



Marketing and Promotion Strategy

- 1. Value Proposition*
- 2. Brand Identity*
- 3. Rebranding Masons*
- 4. Marketing and Promotion Channels*
- 5. Messages and Triggers*
- 6. Customer-Brand Interaction*



Value Proposition

Testing revealed that, more than just a physical product, Kabone Mandamina offers customers the dignity to improve their livelihoods across several areas of value addition that should form the bedrock of the marketing and promotion strategy:

Choice and Transparency

Kabone Mandamina does not represent a single product. It represents the power to choose the products that are best for you. Customers were outspoken about this aspect during testing, citing their appreciation for the number of options along with the price and list of materials displayed on each.

Cleanliness and Ease of cleaning

Throughout the discovery research and prototype testing phases, the importance of evoking cleanliness and being free from bad smells arose as one of the most important elements in the product design and also the marketing.

Relaxation and Privacy

Spaciousness matters. And a Kabone Mandamina shelter offers that space. It allows customers to bring in a bucket for washing and to have a space to relax and be comfortable, rather than being confined to a small space just to defecate.

Durability

The use of durable materials such as cinder block, aluminum, and wood—rather than local materials—is a key part of the innovation that Kabone Mandamina brings. These options are much better suited to withstand heavy rain and wind during seasonal cyclones, which have recently devastated livelihoods in the region.



**Maharitry
sady azo
lovain-jafy**

Brand Identity

Kabone (n): a toilet

Mandamina (adj, colloquial): cool, good, relaxing, easy

Over the course of the exploratory research and prototype testing, the Home team received overwhelmingly positive feedback about the choice of 'Kabone Mandamina' as the brand. While the word 'kabone' is straightforward, the word 'mandamina' is harder to define and gives the brand its 'hip' edge. In the Malagasy dictionary, it is a verb meaning to 'arrange', however the Malagasy singer Samoela later popularized the use of Mandamina as an adjective with the phrase 'Mandamina ny fiainana' ('Life is good / life is cool'). Ever since then, the word has been widely used in colloquial language across Madagascar as an adjective that denotes being 'cool, easy, or good'. It is worth noting that there is no trademark or intellectual property on the word 'mandamina' or the phrase 'Kabone Mandamina'.

The Logo

After receiving feedback on multiple early prototype ideas from potential customers, the final logo for the brand was developed and validated in a final round of testing. The design is based on the principles of using clean, simple forms, being easy to remember and identify, and using 1-2 colors at most. The external 'droplet square' border in addition to the shelter-shape of the 'Kab' are particularly memorable and easily recognizable.

Of note is the decision to use green to distinguish the brand from other colors that are already widely associated with sanitation infrastructure (blue), telecommunications (yellow), and beer (red).



Masons no more! Introducing Mpandraharaha Kabone Mandamina!

...which approximately translates to 'Sanitation Entrepreneur'.

Being a mason has traditionally carried a sense of shame and even stigma within the communities where the team conducted research and testing. Masons reported that they did not necessarily aspire to have the occupation that they do. Rather, they are often forced to take up their line of work because they have little to no other options for income. As such, they apprentice with friends or other colleagues to learn the craft, and then over time, build the skillset and customer relationships to at least partially support their livelihood. Community members are well aware that most masons are either self-taught or have received informal training, and it is perceived by many that being a mason is not a desirable job.

This testing phase revealed that adjusting several parameters significantly altered customers' perception of masons, and masons' perception of themselves.

From mason to Mpandraharaha Kabone Mandamina

The first of which was to rebrand the mason as a 'sanitation entrepreneur' (Mpandraharaha Kabone Mandamina in Malagasy). The team tested several ideas for rebranding the role with masons and customers, and ultimately the masons who were interviewed chose this as the option they felt afforded them the most dignity. With increased pride, masons already felt more confident going out and selling more latrines than before.



Masons no more! Introducing Mpandraharaha Kabone Mandamina!

Wearing a uniform changes people's perception

In addition to changing their name, introducing a standardized uniform for sanitation entrepreneurs resulted in customers perceiving them as more professional, while also increasing the entrepreneurs' confidence and sense of dignity.

For prototype testing purposes, an easily-recognizable white t-shirt and cap with the Kabone Mandamina and other required organizational logos was chosen for the entrepreneurs' uniforms, however the research team received feedback from the sanitation entrepreneurs that the color white gets dirty extremely quickly and that a t-shirt may not be as durable as their work often demands.

The sanitation entrepreneurs and research team recommended that in the future, a more appropriate uniform would consist of a more durable and water-resistant vest jacket made from thicker material, and in a darker color such as dark blue or brown to mask the natural discoloration and 'wear and tear' of their work. Ideally, the color of the cap should match whatever jacket color is chosen.

Having a business card improves entrepreneurs' perception by local customers

Similar to a uniform, having an easy-to-read business card with the entrepreneur's photo and contact information on it was well-received by customers during product exhibition testing.



Marketing and Promotion Channels

A number of different marketing and promotion channel options were tested throughout this phase of the project, yielding the following recommendations:

Begin by leveraging the influential Ampanjaka to encourage others to buy Kabone Mandamina products

As traditional spiritual leaders in Lokomby and in other communes in the East Coast of Madagascar, Ampanjaka are well-respected and often highly influential in their communities. As such, they should be considered priority first customers for the sanitation entrepreneurs. Given their status and influence, if the ampanjaka purchase a Kabone Mandamina product, then their followers will feel compelled to order also.

Select local promoters to spread the word, and equip them with Kabone Mandamina promotional material

Furthermore, the ampanjaka serve an integral role in choosing local promoters in each commune, who serve as volunteers to encourage positive sanitation and hygiene behavior within the community.

While currently focused on education and changing habits, local promoters who the research team interviewed expressed that they would be excited to help promote the Kabone Mandamina brand without the need for compensation or commission because doing so contributes to their mandate of improving public health.

Providing promoters with Kabone Mandamina promotional material for them to use during their activities is both an opportunity for them to have tangible visuals to show community members while discussing the benefits of better sanitation and hygiene behavior, and simultaneously promotes the Kabone Mandamina brand.

Holding an exhibition day

The exhibition day during this testing phase was the single most successful promotional channel used for generating brand awareness and enthusiasm, gathering customer feedback, and making real sales orders for masons. Critical success factors for the exhibition day:

- NGO and government stakeholders stayed on the sidelines and played an observational role only to avoid any community perception that what was being promoted would be given away for free or at a subsidized cost
- All products were **displayed in a public location** with their prices for customers to browse, offer feedback on, and inquire about ordering for themselves. Prior to this event, many customers who are able to afford the products being displayed, but who had not spent much time in larger cities, were amazed and excited just to see the possibilities for constructing a high-quality latrine for the first time, and were eager to place orders.
- Sanitation entrepreneurs (masons) were equipped with uniforms, business cards, pitch decks, product catalogues, and order sheets, and were ready to engage with potential customers as they browsed through the product options on display. This type of *tangible* and *visible* professional presence contributed significantly to the positive customer reception.

Leveraging competitive spirit

The last promotional element worth mentioning is that competition and social proofing are strong forces in the East Coast, which held true in Lokomby as well. Leveraging this force by focusing on selling to the ampanjaka, aspirational travelers, and other influencers will have a catalytic effect on getting other people to buy as well.

Marketing and Promotion Channels



Behavioral Triggers and Messages

After both rounds of testing during this project, several key behavioral triggers and messages resonated the most with local community members, and should be considered for future marketing material:

Local identity affiliation

As previously mentioned, all visual promotional material was created using photos of families in Lokomby (who provided consent and were compensated), and all text was written using the local Malagasy dialect. This did not go unnoticed by local customers, who immediately commented on how the promotional material made them feel seen, and that the products are designed specifically for them.

Children's wellbeing

Photos and language related to children's health and long-term well-being resonated strongly with mothers more than another other customer segment because they want to provide the best life for their children and are willing to invest in ways to help foster that.

Dirtiness and/or using an unimproved latrine

Displaying images of toilets which are not clean/unimproved left customers feeling disgusted. They reported that these images made them aware of the 'real situation' even if they were and were encouraged to have a clean toilet.

Cleanliness and status

This point was previously touched upon in the description of the ceramic tile slab and ceramic seat toilet, but it is worth noting that these tangible representations of the livelihood typically associated with larger towns evokes a strong sense of status and cleanliness, which are highly coveted values.

Quality and Durability

Conveying the high quality and durability of the products was critical for retaining the interest of many of the male heads-of-household, who are frequently the ultimate purchase decision makers in their families. These behavioral triggers were achieved less through written language and photos, but more so through the physical display of the products on offer, so customers could evaluate the level of quality of the products for themselves, and offer their own assessment of the durability.

Behavioral Triggers and Messages

-  Ny kabonena no lasa tsara indrindra eto an-tanana!
-  Afaka tanteraka ny loto sy ny lalitra
-  Manara-pivoarana sady maharitra!
-  Lasa toerana mahafinaritra ny kabonena!





- tsy manara-penitra
- Maloto
- Mora simba
- Maimbo





- Tsy mahamenatra
- Manodidina madio
- Faly ny mpiara-monina





Ny tsara indrindra no vidio ho an'ny zanakao !

-  The best toilet in town!
-  No more flies and dirt!
-  Modern and durable!
-  Toilet becomes a nice place!





- Unimproved
- Dirty
- Not durable
- Smells bad





- No shame
- Clean surroundings
- Happy neighbors





Buy the best for your children

Customer-Brand Interaction (Tangible Promotion Materials)

An important component of the business model is to maintain several points of customer-brand interaction so that customers associate Kabone Mandamina with the aspirational products and service offering that the brand represents.

Through this phase of testing, the team has validated multiple physical points of brand interaction, which should continue to be used in future iterations of the business model:

Sales Pitch Deck

This highly-visual piece is designed to assist masons and other sales people to conduct sales with potential customers. The deck is mostly photos and drawings to make it accessible and understandable for as many people as possible.

Mason Uniform

As mentioned previously, providing masons with branded uniforms helps to convey professionalism and quality to customers while also promoting the brand.

Business Cards

Providing masons with branded business cards is an easy opportunity to promote the Kabone Mandamina brand while also giving masons the chance to share their contact information with customers. Each business card contains the Kabone Mandamina logo along with the mason's photo and contact information.

Product Information Sheets

Each physical prototype should be accompanied by an information sheet that contains a photo or image of the product along with the list of materials, quantities, and price. This transparency provides a significant value-add for the business model.

Proof of purchase or certificate

While the team did not test a proof of purchase document, we received feedback from customers that they would like some form of certification when they buy a Kabone Mandamina product so they have proof that their product is 'authentic'.

Improving Supply

- 1. Physical Resources*
- 2. Human Resources/Personnel*
- 3. Sales Channels*
- 4. Distribution Channels*
- 5. Partnerships/Suppliers*
- 6. After-sales support*



Physical Resources Needed for Masons to be Successful

Testing revealed that there are a number of physical resources that are critical for the success of masons' business activities and which assist in the positive perception by potential customers:

Conducting promotion and sales

- Business cards
- Promotional flyers
- Cell phone
- Contact list of households
- Motorbike
- Uniform
- Product Catalog
- Pitch deck

Procuring supplies (from Manakara to Lokomby)

- Truck or using existing trucking service
- Buy to local hardware store (Lokomby)
- Materials missing in hardware store in lokomby

Transporting supplies to household

- Mason's truck (or rental)
- Local bus service
- Rent local bus (buy all places)

Constructing the toilets

- Rollers for paint
- moulds for cinderblock
- material storage

Human Resources

There are several personas that should be included in the Kabone Mandamina business in order to effectively deliver the value proposition to customers.

Sanitation Entrepreneurs

Formerly masons, the sanitation entrepreneurs serve in the most critical role to delivering the business model. Their role includes promotion, sales, and the construction of latrines.

Construction workers

Sanitation entrepreneurs typically employ workers on a job-by-job basis to help them with the actual construction of latrine products. Workers are not full-time employees of the sanitation entrepreneurs, but are frequently personal contacts who the sanitation entrepreneurs trust.

Local promoters

Local promoters are already well-connected in the community as they have been conducting education and awareness programming related to positive hygiene and sanitation practices. Their role within the Kabone Mandamina business model is to support the sanitation entrepreneurs by promoting the products and service offering to the households they visit while also sharing the sanitation entrepreneurs' contact information for when familiar are ready to make an order.

Product construction trainer

The RANO WASH regional team served as product construction coach and trainer for the purposes of the prototype testing phase, but long-term, masons expressed that they would like continued mentoring regarding the skills and techniques for building Kabone Mandamina products. For now, they are comfortable building everything that was put on display for the exhibition, but their business would benefit from working with an engineer or another technically-trained person to iterate on the products. This role could be filled by an existing 'lead mason' with advanced technical skills, such as the current president of the mason network, who participated in the exhibition session.

Sales Trainer and Manager

Sanitation entrepreneurs in Lokomby started to feel more confident having sales conversations with customers over the course of the exhibition event, but still expressed that they would like more training and support with sales and marketing to help them with their business. This role could be filled by an NGO actor and/or private sector consultant specializing in human-centered sales.

******A note about sales agents******

Masons were divided whether they would like to work with sales agents to do all of the sales and marketing for them—and ideally help increase their order volume—or if they'd prefer to do the sales themselves. It is worth continuing to test options with masons in this respect and allow each mason the freedom to pursue the business model they prefer. iDE's own experience is that training and managing a team of sales agents separate from masons is an effective approach, but there are also successful examples from other NGOs promoting and training masons to run the full business themselves.

Sales Channel Considerations

Testing revealed three promising sales channels for Kabone Mandamina:

Door-to-door sales

Some people prefer door-to-door sales because it saves them time from walking to the market. Additionally, sanitation entrepreneurs are able to share the pitch deck and product catalogues with potential customers to show them available options, convey the value proposition, etc. As such, sanitation entrepreneurs and promoters helping to conduct sales should include in-person door-to-door sales as part of the overall sales model, and should be sure to have business cards or at least share their contact information with anyone they speak with.

Permanent market display

Some people prefer purchasing products in the market because they perceive that salespeople who go door-to-door are selling products that have defects. Additionally, conducting sales and promotion from a single location in the market gives sanitation entrepreneurs the opportunity to physically display all of the products on offer. This is a significant value-add as it allows customers to evaluate the products' quality, construction, and aesthetic first-hand, rather than waiting for the product to be built. It may be impractical for one or more of the masons to constantly be present in the market, but as long as the Lokomby government continues to keep the latrine products on display in a public location, then masons are able to refer customers to the market display to view product options, or can arrange to meet with a customer there instead of at their home to conduct an order.

Exhibition/promotion events

As was observed during testing, conducting specific exhibition/promotional events on a periodic basis helps maintain brand awareness and enthusiasm, while also providing another channel for sanitation entrepreneurs to conduct sales. These events should be a combination of fun activities for attendees and also presentations and conversations about the value-add of the Kabone Mandamina products. Similar to the permanent market display, promotional events give customers the chance to see and experience the physical products before purchasing, discuss with each other about their preferences, and evaluate which ones they are most interested in buying.

Distribution Channel

The distribution channel for Kabone Mandamina products is relatively straightforward, but in the long-term, there is room to simplify and streamline it to make the final products more affordable and to speed up order times.

If a customer chooses to pay for the sanitation entrepreneur to order materials and construct the latrine, then the process is as follows:

- First the sanitation entrepreneur calls or visits the local hardware store in Lokomby to verify which materials and what quantities are locally available, and at what price.
- Then the sanitation entrepreneur calls their hardware store and/or other supplier contacts in Manakara and to put in an order for the materials and products that are either not available in Lokomby, or can be purchased cheaper from Manakara.
- The sanitation entrepreneur pays for the materials and delivery using mobile money so they do not have to travel to Manakara and pay in person.
- The hardware store or contact in Manakara facilitates loading the materials onto a local passenger bus that is headed to Lokomby.
- Then the sanitation entrepreneur and their workers pick up the materials when they arrive in Lokomby and either transport them by bicycle, on foot, or via a local mini-bus to the site where the product will be constructed.
- The sanitation entrepreneur and workers then construct the product
- A single order should take between five days to a week to fulfill, but will eventually be determined by order volume and material availability.



Key Partnerships (& Suppliers)

Several partnerships are crucial for the success of the business model, particularly when customers ask for sanitation entrepreneurs to take care of the materials ordering and delivery in addition to construction. As such, the following actors should also be included in the Sanitation Entrepreneur Network:

Hardware stores in Manakara

These hardware stores are the only place to source some of the materials needed to build latrines. Currently, sanitation entrepreneurs have their own contacts and preferred hardware stores they work with based on longstanding relationships and trust. Hardstores in Manakara would not have a problem with an immediate increase in demand, they always have stock. Hardstores in Lokomby also have the ability to carry the materials, but masons or customers have to pre-order the material and wait about 2 or 3 days for the local hardstore to complete the order. More research is needed to determine more precise stock limits and re-ordering thresholds for hardstore owners.

Transportation/logistics service between Manakara and Lokomby

For normal orders, sanitation entrepreneurs rely on the local bus service to transport materials from Manakara to Lokomby because it is more efficient than renting or owning a truck, given the current order volume. If orders increase substantially, then it may be more cost-effective to purchase materials in bulk, and hire a private truck to transport everything to Lokomby.

Local government

The government of Lokomby has been kind enough to donate space for the prototypes to be built and displayed, which has been a key component of the success of the marketing and sales efforts so far. As such, maintaining a strong relationship with local government to continue keeping this display available for the public to experience will be important.

Ampanjaka

It is critical that the sanitation entrepreneurs maintain strong relationships with the local Ampanjaka given their respected and influential role in the community. Sanitation entrepreneurs should consider the ampanjaka as priority customers and potential champions for the Kabone Mandamina brand, which will in turn help influence their community members to buy Kabone Mandamina products as well.

NGOs

At this stage, the business model is only partially self-sufficient, but for sanitation entrepreneurs to have a greater chance of success, they will still need external technical and sales training support in the short term, in addition to resources and tools that they cannot afford to buy upfront. Several tools that sanitation entrepreneurs mentioned include: Individual cinder block mold (10x20x40cm), Collective circular ring mold (one shared by 3 or 4 masons), Metal sheet cutter, Claw wrench and DSP mold (to install sato pan and concrete pan). This type of support would likely come from an NGO or project program funding until the business model can recover all of its operating costs and operate completely independently.

Exploring Financial Access

1. *Key Business Cost Considerations*
2. *Forms of Payment*
3. *Payment Plan and Credit Options*
4. *Mobile Money*



Key Business Cost Considerations for Sanitation Entrepreneurs

There are two business cost categories that the research team considered when developing the business model for sanitation entrepreneurs:

Direct Costs - already built into the current product prices displayed

- Material costs
- Construction labour costs - this includes daily labourers
- Transportation/fuel costs and delivery costs

Indirect Costs - currently **not**** built into product price**

- Equipment and tool rental
- Electricity - as needed during construction
- Water - as needed during construction
- Sales costs (including compensation for mason's time selling, or salesperson's time selling)
- Promotional materials printing (uniform, business cards, pitch decks, catalogs)

Eventually, these costs will need to be factored into the sanitation entrepreneur's operating costs and the price of their products to make the model more sustainable. That can be done in a phased approach as sanitation entrepreneurs build their order backlog and have higher sales volumes.



Forms of payment

Initial research in 2021 led the team to determine that payment form might be a barrier to customers ordering latrines from masons because people do not want to handle large sums of cash, and mobile money may not be accessible for either masons or customers. During this phase of testing, however, the team concluded that there are no real barriers when it comes to form of payment, as both customer and masons have several options:

Forms of payment that customers are comfortable with include:

- Cash
- Assets
- Crops
- Mobile money

Forms of payment that masons can offer include:

Cash

- Advance payment, around 30 to 50%
- the rest at the end

Mobile money

- Advance payment, around 30 to 50%
- the rest at the end

Assets (crops, animals, products)

- Only acceptable for mason's labour if negotiated and agreed upon between mason and customer in advance.
- Provided at the end of the work

Vidio malaky tsy ho tara ary!



Payment Plan and Credit Options for Further Testing

Installment payment plans that masons can offer include:

Households first buy material to start the work, the mason completes the job, and then the mason get paid afterwards when HH has the money for mason's labour. In this system, however, masons charge higher than normal price depending on the delay that HH asks:

- 1 month delay - 10% higher
- 2 months delay -25%
- 3 months - 35 %
- etc.

HH can also wait for the harvest period to pay, but experience an increase in price similar to the above.

Managing risk for masons offering installment plans

For any order, the Mason has the option to be protected by a formal contract signed by the mason, the customer, and the commune (to formally 'legalize' the contract). The mason can also ask for a material or crops guarantee.

Loan and credit options for customers:

The research team uncovered that the two primary opportunities for financing (either for a customer to purchase a latrine or for a mason to get support for their business) are through involvement in VSLA, or with an ACEP real estate loan. VSLAs can facilitate small loans for customers to purchase latrines or for masons to buy tools or other equipment that they cannot afford to pay out of pocket. ACEP is a local financial institution and is one of the only options accessible to informal workers such as masons.

Requirements for customers and masons to have access to loan options:

For a VSLA loan, customers have to be VSLA member and follow all VSLA membership requirements.

For an ACEP loan, masons can apply for an entrepreneur loan, and customers can apply for a real estate loan - both in the amount of 200k to 300k ar. They must have an acceptable form of guarantee to be eligible, but they do NOT need to have NIF and STAT numbers.

Other options?

Aside from ACEP, other banks interviewed don't give loan to informal workers (such as masons). To have access to many loans, masons and customers have to become formal workers, which means having a NIF and STAT number.

Exploring mobile money

The home team explored mobile money as a way for customers to pay masons and for setting up affordable payment plans. The findings yielded that there is definitely strong potential, as having a mobile money account allows a user to deposit money, transfer to another account, buy credit, and lend money.

Mobile money account setup

- Users have to go to a telma shop to get a telma sim card
- Register the sim card
- Mobile account opening (Users have to wait for activation)
 - REQUIREMENT: SIM card, Identity photo, CIN
- Mobile money account is eligible after registration

Average of money in users account

- 1000Ar to 100 000Ar
- *Note: some people live far from Lokomby and just need money on their phone to buy credit*

Lending Services

- A lending service is eligible after 6 months use of the SIM card and mobile money operation
- The possible money that users can lend depends on the mobile money operation during certain months
- Possible money lending 1000Ar to 1000 000Ar
- Paying back: 30 days, Interest: 9%

Using mobile money for a payment plan

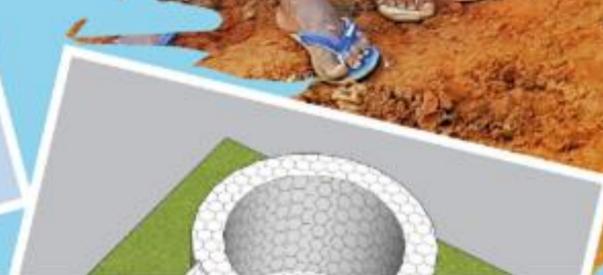
- Advantage: the users get a receipt from the operation
- Customer pay the toilet cost to the mason via Mobile money
- The customer needs a registered mason's number and name for the money transfer
- The money transfer requires a small fee, which will be included in the cost of the latrine product
- The mobile money service keep the transfer cost

Troubleshooting potential issues

- *Is the mason using the same operator?*
 - The mason should be encouraged to use Telma since it is the most widely used operator by customers
- *Who pays the cost of the transfer?*
 - The cost of the transfer could be included with the toilet/component price
 - Additionally, there is a possibility that the customer could pay the cost of the transfer with harvest or another asset (rice,)

Done Mandamina

What next? Recommendations for Pilot Rollout



Recommended Pilot Location: Lokomby

Lokomby is the most logical choice for rolling out a pilot for Kabone Mandamina because of the existing familiarity with the brand as a result of the prototype testing. Specific reasons include:

- RANO WASH already has relationships with the masons working in Lokomby, and they participated in the product prototype testing
- Masons are already familiar with product offerings and existing technical skills
- Aspirational traveler customers have already expressed a willingness to buy Kabone Mandamina products, and some have already put in orders with the masons in Lokomby
- There is a general level of enthusiasm for the brand shared by many community members as a result of the exhibition event
- Price/cost structure for product and service offering has been calculated using Lokomby as the point of sale/construction, and Manakara as the supply source for many materials
- The sales and promotion materials are localized to the Lokomby dialect and culture
- Now that we have achieved proof of concept for the most aspirational products to sell, there is a strong continued opportunity to test tiered offerings with other market segments (competitive copycats and champion mothers).

A note about piloting outside of Lokomby:

- The marketing materials, product recommendations, and pricing presented in this report are in direct response to local customer preferences and habits in Lokomby.
- As such, if a pilot project is planned outside of where these business model components have been tested, then an implementing stakeholder should factor in extra time to test and potentially modify the product and marketing offering to be locally-relevant.

Pilot Rollout Activities



Creating an Aspirational Toilet Product	Test the product	Roll out the flagship Kabone Mandam and test tiered offerings	Launch tiered product offerings in the coast
Demand Activation	Test targeted marketing continuously to measure effectiveness	Recruit sales agents, train masons and sales agents, and start advertising	Begin marketing to the early majority
Strengthening Supply Chain	Test mechanisms to bolster the supply chain	Pilot the entrepreneur network and hardware store collaboration	Scale and monitor supply chain strengthening initiatives
Improving Financial Access	Explore trusted financial mechanisms and providers	Test financial mechanisms and flexible plans for early majority	Pilot and monitor financial mechanisms and flexible plans

Roll out the Kabone Mandam brand while testing tiered offerings

Focus on training the 3 masons in Lokomby to build the Kabone Mandam product offering consistently and at the same level of quality.

Use the final product preferences from Phase 1 testing to train masons to build the products consistently. This could be conducted as a group workshop hosted by RANO, in which masons could see an example fully built toilet, and then as a group, construct one themselves. Masons should be provided with pictures and a specs sheet to ensure consistency and quality. These are already on hand from the prototype testing.

Meanwhile, test tiered offerings with early majority.

With the most desirable options ready to go, now it's time to test potential tiered options with the early majority (competitive copycats and champion mothers) to see if any priority offerings emerge:

- Shelter - yes/no, materials
- Pan style - ceramic, SatoPan, other
- Slab - tile flooring, stamped concrete, etc.

As was mentioned earlier, the full range of product options only needs to be limited to what masons can build, but this next phase should focus on identifying patterns in customer preferences, which may help to streamline and predict materials orders and cut costs.

Offerings should be tested not just in terms of features, but also in terms of pricing, just as was done with the most aspirational options during this round of testing



Reduce cost-to-mason of expensive Materials, Resources, and Activities

The following costs are currently the most prohibitive for masons to afford without external up-front investment. For the purposes of testing prototypes, these costs were covered by the RANO WASH project, but in the long-term, external up-front investment from either an NGO, donor, investor, or financial institution will be necessary..

Item	Value addition for business	Cost (ar)
Materials (unit price)		
Cinder block	Most desirable shelter and pit construction material because of its durability. Masons only need to pay this if customers buy a turnkey product (material + labour). Otherwise this is a cost to customer.	1,575
Cement	Necessary for the mortar for cinder block shelters and pits, and for constructing all types of slabs	882
Iron bar (fer10)	Essential for the reinforcement of all types of slabs	4,148
Resources		
Jacket uniform printed with logo	Conveys professionalism, dignity, and brand identity for sanitation entrepreneurs	100,000
Promotional and sales materials printing and plasticization	Key contributor to mason's sales success - documentation of professional branding. localized promotion, and product options were a customer favorite during testing.	265,500
Cinder block moulds	Essential for the creation of cinder blocks to build the most desirable types of shelter and pit	3,000/day
Activities		
Labor for square cinder block shelter construction	On average, four days of mason's and workers' time to complete a cinder block shelter	200,000

Opportunities to Reduce Costs

Production

Moulds to streamline construction:

- Individual cinder block mold (10x20x40cm),
- Mould for Pan - DSP and sato pan
- Mould for sitting sato pan*
- Mould for slab - it is wooden- need to make it every time
- Collective circular ring mold (one shared by 3 or 4 masons)

Tools

- Masons should receive support to purchase tools - they are currently renting them, so there is an opportunity to cut ongoing costs
- Share tools - invest in a code of conduct/SOPs for multiple masons to work together and share costs of purchasing tools and moulds

Materials

- explore methods to dry concrete/cinder block quicker
- Experiment using rice husk or other alternative materials in the concrete mixture to reduce the cost of concrete - this would require a specialized mould

**The seated SatoPan ranked 3rd out of the four pan options in the exhibition day testing. The research team is aware that RANO WASH has partnered with Lixil and UNICEF to develop a supply chain for the seated SatoPan in Madagascar. According to the current prices, however, it is nearly the same price as the ceramic seat, which gives it less value-add. If the seated SatoPan decreases in price (likely with better supply chains in future years), then it may be a more desirable option*

Transportation costs from Manakara to Lokomby

- For 'turnkey' orders, masons should communicate with other masons and buy materials in bulk to reduce transportation and logistics overhead costs.

Promotion and Sales

Branding

- During the exhibition, used stickers got destroyed easily - from the rain, doesn't really stick
- logo needs to be visible - consider using plastic or wood as like a plaque
- Make a stencil for the logo
- Quality of the paint was not very good during the exhibition, paint comes off very easily

Up-front investment from NGO/other external source

- To allow masons to make more profit, external resources could support them with an up-front fund to make cinder block - they can then sell cinder block to people who want to build a house
- External resources could support masons in the short-term by purchasing plasticized product catalogs, product labels, and pitch decks so masons do not have to re-print any time they are damaged by rain. This cost is currently prohibitive to masons in the near term, but has lasting impact in the sustainability of their business. Long-term, masons should eventually be responsible for these costs and should build them into the price of their products and services.

Recruit sales agents, conduct sales training, and start advertising!

Recruit and train local promoters to work with masons.

Part of the focus of Phase 2 should be to work with the local ampanjaka in Lokomby to identify and recruit local promoters interested in partnering with masons and receiving training to become sales agents. It's more practical to train local promoters because they already have a lot of knowledge in sanitation in the commune, so they know who is more interested to buy the product. Local promoters are also very respected in the commune..

Once a small team has been recruited, RANO should employ a sales training organization competent in Human-Centered Sales to conduct their first training.

Upon completion of training, RANO should provide sales agents with branded uniforms and their own copy of 'site sellers/pitch decks' and other tools to use during the training, so they are equipped to work with masons.

Begin marketing to the Aspirational Travelers

Based on the results of testing messages in Phase 1, the newly recruited sales team should prioritize the previously-discussed channels and methods for advertising and marketing messaging to aspirational travelers, including the following:

Market Days (weekly)

Methods used:

- Demonstrations/kiosk
- Group sales

Door-to-door sales (daily/regular basis)

Methods used:

- Sales pitch deck with product catalogue
- Individual sales

Promotional/exhibition event

Methods used:

- Group sales
- Discounted/promotional offers (possible with NGO 'behind the scenes' support)
- Demonstration/kiosk

Test sales and marketing content for the Early Majority.

While the marketing campaign for the aspirational traveler commences, begin to test the messaging and channels for the competitive copycat and champion mother.

Pilot the entrepreneur network and hardware store collaboration

Begin prototyping the idea of strengthening and expanding existing sanitation entrepreneur networks with interested actors based on the results of testing in Phase 1.

Testing results indicated that there are several private sector actors and businesses willing to partner with sanitation entrepreneurs to promote Kabone Mandamina in their stores in return for having their business promoted by the brand and possibly capturing a small percentage of sales. RANO should focus on cultivating the relationship and network among interested actors on a small scale in Lokomby. RANO should work with these interested actors to formalize ways of communication, types of business relationships, and support. Additionally, the RANO-funded private water operator in Lokomby could be a key actor, who expressed interest in being involved, and having marketing target his existing customers. This is an important linkage, as existing customers show willingness to invest in improved WASH, and would also have sufficient access to domestic water, in vast quantities to operate and maintain a latrine, a significant success factor.

After testing ways that masons and hardware stores could engage with each other, begin to pilot the most promising ideas.

RANO should facilitate conversations with the same group of masons and hardware stores from Phase 1 in which they select and pilot their most preferred ideas for collaborating more formally. Favorite ideas to pilot could be expressed in a written informal MoU or agreement between masons and hardware store owners (prepared by the RANO WASH focal point) so each party is clear on terms and expectations of one another.



Test financial mechanisms and flexible plans for early majority

Test payment plan options

Based on the payment plan options, RANO WASH should hold meetings with customers and masons to test willingness to adopt installment plans, layaways, and/or promotional vouchers. These meetings could be held jointly or separately, and will be to confirm initial findings from this research for preferred layaway installment amounts, period of payment, preferred season/time of year, etc.

Test financial mechanisms

Mobile money/mobile wallet

RANO WASH should plan to work with Telma and its mobile money platform because it is the most popular option for customers. In Phase 2, RANO WASH should test the mobile lending and payment plan mechanisms with 2-3 select masons and a hardware store not already using mobile money to identify any challenges that need to be addressed before more widespread promotion.

VSLAs

VSLA representatives interviewed during this phase of testing expressed interest in promoting Kabone Mandamina and offering loans to members for latrines. RANO WASH should pursue testing specific ways in which VSLAs can be a strong channel for promotion and financing.



Recommended NGO support roles to facilitate pilot

Retain research & design team for testing tiered options, financing/payment plan packages, and testing model in new markets

While initial product and marketing prototype testing is now complete and ready to pilot, there is still a need to test options for reducing supply chain barriers, cutting operating costs, and making the products more affordable for other target markets. As such, a strong research and design team with human-centered design and prototype development and testing skills will be critical to the success of future work.

Engineering & technical coaching (ToT)

Sanitation entrepreneurs in Lokomby are comfortable constructing the existing latrine products that were tested in this phase. As the brand is rolled out however, it will be important to offer them technical skills training around reducing material use to cut costs, and coaching them to build products consistently. They expressed a desire for more masonry training and learning new techniques.

Sales recruitment and training

One of the most important next steps in this initiative is to recruit and train a sales team, whether that be the sanitation entrepreneurs themselves, a separate sales force, or a combination of both. Regardless, effective sales skills will be essential to the success of the business model, so RANO WASH should prioritize recruitment and sales training in future work.

Sales management

Similar to the previous point, once sanitation entrepreneurs, local promoters, and others are trained in sales, there will need to be a clear management structure in place so that salespeople can receive ongoing support and coaching. Additionally, if sanitation entrepreneurs choose to work with sales agents instead of conducting sales themselves, then it will be important for a third party to broker that relationship and manage the sales agents' compensation, at least at first, to ensure that the relationship is trusting and transparent.

Business Model Refinement

Refining the business model for Sanitation Entrepreneurs, including a more detailed plan for meeting customer demand, identifying sales trends and customer preferences for Aspirational Travellers, and exploring adjacent markets which could enable them to become financially sustainable and profitable.

Industry partnerships management

As future work and eventual scaling will involve more conversations and testing of ideas with other industry actors such as Telma, hardware stores, and other suppliers, having a representative or focused role dedicated to negotiating these relationships and ideas would be beneficial.

List of Annexes - attached separately

1. Product

- a. Latrine engineering drawings
- b. Cyclone wind-loading report

2. Demand

- a. Pitch deck
- b. Exhibition day flyers
- c. Exhibition day orders
- d. Mason business cards
- e. Product catalogs
- f. Logo image files
- g. 3D drawings
- h. Technical sheets

3. Supply

- a. Materials pricing and quantity table

4. Finance

- a. ACEP loan process diagram





Thank you.