The Project
Our Schedule
Today
Background
The Research
Sacrificial Concepts
MoPHS/WSP/IFC have partnered under the **Selling Sanitation Program.** This Program aims to catalyze the consumer market for sanitation to **help millions of Kenyans get access to the sanitation products and services they want and can afford.**
Following initial Deep Dive Research into latrine usage, behaviours and preferences, government requested the inclusion of handwashing. **WSP has been supporting preliminary consumer research and product design work for new affordable hand washing stations.** The purpose of the Deep Dive research and User Testing is to gaining in-depth insights into consumer needs and preferences, which will inform the design of product and service models.
Our Schedule
Pre-planning & Desk Research
Manufacturer Meetings
HCD deep dive research & review
Prototyping
User Testing & Feedback
Design Finalization
Today
1. **Review our project background.**

2. **Share our insights from the field.**

3. **Review where we are and decide on our next steps.**

4. **Brainstorm ideas on product opportunities.**
Background
Existing HW solutions can be grouped as improvised, locally crafted and locally (or regionally) mass produced.

Marketing and distribution in African sanitation market relies on community recognition and word of mouth.

From a ID point of view, improvised and locally crafted goods offer attractive solutions however, transportation, controlled delivery and safe storage of water can be tough technical challenges to overcome continuously.
“Constant access to water and a cleaning agent are critical components to achieve sustainable hand sanitation.”
The Research
Areas were selected based on water access and availability; areas of good access, medium access, and poor access.

Deep Dive covered 5 provinces; Rift Valley, Central, Nyanza, Eastern, and Nairobi.
HIERARCHY OF AFYA

Chief Public Health Officer

Deputy Chief Public Health Officer

Provincial Public Health Officer

District Public Health Officer

Public Health Officer

Local Chief
KEY RESEARCH TOPICS

- Water availability and access
- Current handwashing practices
- Soap availability and use
- Household decision making process
- Current handwashing stations
- Associations on handwashing
- Feedback on sacrificial concepts
8 women / 6 children average / no formal training

6 men / mainly CHWs / English speaking / mixed marital status

Main economic activity is cattle breeding but farming and milk sales also give some income.

Women can buy small things (not exceeding Kshs 2,000/=) without consultation.
FIRST STOP

About 1.5 hours from Nairobi, Kajiado District in Rift Valley was the first stop for our group discussions. After a brief introduction by DMOH, we were introduced to the Chief, who was helping us to get in touch with our interviewees.

The communities are beginning to settle and are not as nomadic as before. Mostly now the men move with the animals and the women and children stay behind.
With the exception of Homa Bay, the group discussions were held in two sessions for each gender during the research. We started with a warm up session, introduced each other and discussed their sanitation habits, demographics and also our sacrificial concepts.
IMPRESSIONS

• The men were mainly CHWs. However, none of the women had any kind of formal training.

• Women were all traditionally dressed, whilst the men were in western attire.

• The women were more elderly, whilst the men were younger and could speak English.
Water in Kajiado is scarce. Bringing water from the source is women’s duty like most of rural Kenya. In Kajiado, women use donkeys to bring their water in 20 lt jerrycans from a borehole 10 km away (up to 20 km depending on the area).

The water is collected once a day (according to women) and every other day (according to men).

Water from the boreholes in Kajiado is salty. They disinfect their water but still drink it as it is. However, things change during rainy season, boreholes are closed and they should collect rain water for everything.
SOAP CHOICE

Different sources of water effect soap choice significantly of this community. When using salty water, they prefer OMO (powder soap) but during rainy season bar soap becomes the preferred choice. Each soap is used for everything from handwashing to washing clothes.

The women in the FGD seemed to wash hands with soap, and were specific that it is OMO. They like OMO because the water is hard and salty, and only OMO, according to them, gets soapy enough. For bathing, they like Geisha.
We visited two households following our group discussions. Unlike the optimistic view of our initial meeting in Ildamat central, handwashing condition on site was reasonably weak.
OLPIRA

There were installed “Tippy-Taps” but they were either not properly built or empty.

Local name of a tippy-tap is Olpira. According to our interviews, it is refilled 3 times a week, there is a soap located near the Olpira and they are aware of the advantages of handwashing with soap as the CHW has trained them.

Apart from empty jerrycans hanging on trees or lying on the ground, there were not any signs of active Olpira use during our house visits.
HANDWASHING

There was general knowledge of importance of HW at critical junctures, which were named as two during our interviews. These are after toilet, before eating, and for some, after coming from the fields.

From the home visits, it was apparent that children don’t wash their hands. There was no evidence of it or of any water for handwashing. With the elderly women, they knew that their children washed their hands at least whilst at home. They have been educated about handwashing by the CHWs.
“Lack of water is not an excuse. That is a lazy person. He should try harder in getting water.”
There was no shortage of jerrycans on the field.
"They are empty and they are things for children to play with."
Good behavior
Water source
Intelligent
Fresh smell
Dirty person is a mad/lazy person.
This is election period so even aspirants must be voted according to cleanliness.
No excuse not to be clean unless you don’t value yourself.
If you have a sick member of family it is the responsibility of family members to take care.
Smell of the earth.
How might we inspire people to adapt the HW behavior?
Central / Githunguri
9 women / 3 children average / primary level

8 men / secondary to university level

Animal husbandry main source of income. Tea and coffee farming also reasonably practiced.

Literacy levels are generally basic primary education.
There is lots of water in Githunguri, according to the DMOH.

Lots of natural water sources in addition to piped water and shallow well. *Taps have water most of the time.*

Water is mainly used for bathing, drinking, cooking and washing clothes. Drinking water is boiled before consumption. Those who do not have taps in the house fetch in jerrycans and take to the house.

IFAD funded tippy tap can be found in the district. CHWs all seen and trained on use of demonstration tippy tap.
BEING PRACTICAL

Local women have a lot of chores in Githunguri. They are responsible from building latrines to fetching water.

There is an existing alcoholism problem in male population so women of Githunguri developed a strong voice in the family and finance matters.

During our interviews, they focused on practicality as expected. They were also aware of HW practices since they were trained for the last 2 months.
“Women here are self-reliant. You learn to do things yourself. We have no qualms taking a hammer and pounding away.”
People in Githunguri groups were doing well. They all own their land, their own latrine, metered water and women require consultation with husband for expenses over 5000 BOB, much more than other locations.

They also clearly indicated that they never heard or practiced OD (Open Defecation).
LIQUID VS BAR

Water is softer in Githunguri. Soap choice is also effected from the water quality.

In Githinguri, liquid soap is common for HWWS. It is prepared by pounding leftovers of bar soaps into a bottle and mixing it with water. Real liquid soap is also used but not very common because of its price.
"The truth is, we do not use soap very often."
CHWs

In Githunguri, both groups were CHW’s even though we requested non-triggered groups.

They were aware of the practices and answered accordingly. They had a very clear view on the importance of foot operation.

Leaky tins also exist but they are not long lasting. This community also indicated that they become rusty and become dysfunctional quickly.
Person of authority

Respectable
Responsible

I cannot leave my money with a dirty banker.

It is especially important for women and children.

Not knowledgeable

Mogoroki

Clean

Dirty family/children reflects on parents.

Hygiene is very important even in elective roles.

Priest

Elective posts can only be given to a clean person.

Primitive

Role model

As a woman if you don’t observe hygiene then you’ll infect others.

Women are generally cleaner than men.

Teacher

White color

Needs to be educated

People will first judge how you look before they even speak with you.
How might we provide a solution which will appeal to different economic classes?
Nyanza / Homa Bay
23 women / primary level

28 men / primary to secondary level

4 children average

New settlements in between ancestral lands

Primary source of income is farming followed by animal husbandry
MODIFYING METHODS

In Homa Bay, discussions were managed in mixed gender groups.

A fundi group was also formed to understand their practical point of view and willingness to accept a new product.

The order of our sacrificial concepts were also changed during introduction to overcome bias in decision making.
It is common practice to fetch water either from the lake or rivers close by. This water is used for cooking, drinking and washing. Especially lake water must be boiled before use because it is contaminated with sewage.

Even though there is an existing pipeline, it is expensive and also it can’t reach to higher areas because of low pressure.

Water vendors are the most expensive option. They charge 20 BOB for a 20 lt jerrycan.
“Depending on family size, the average water consumption is 6x20 litre jerrycans per day.”
REALITY CHECK

During our discussions, participants mentioned that, as food handlers, they must always wash their hands even after the slightest of contact.

They also mentioned that they use soap even though they are using karais.

We had a chance to meet with one of our participants afterwards. She was preparing food and her only HW option was a karai filled with cloudy water without any soap to be seen.

We also have seen children coming from a toilet and not being bothered by HW at all.
BUSHES & OD

Open defecation is still practiced in the area as one of our participants explained. We also witnessed an elderly lady and children coming out of the bushes after OD.

One of the mentioned reasons of OD was the problem of maintaining a pit latrine in this geography. Particularly at the coast of lake Victoria, water table is high and the soil is loose so even when you build a toilet it doesn’t last long.
LOCAL WISDOM

If there is no soap, locals don’t mind using “onyalo biro”. It is a local shrub, which is believed to have sanitizing capabilities.
“Supermarkets are for the rich. If you use supermarkets as outlets, the costs will go higher.”
TRIGGERING

HWWS is a very recent phenomenon for the locals.

Before HWWS training, they didn’t wash their hands at all. There was no awareness of the critical junctures or the importance of hand sanitation.

Now they are being triggered by government through CHW, however it is clear that practical application of this training will take time.
In Homa Bay, we had a group discussion with local fundis (artisans) followed by a short brainstorming session.

Not surprisingly, they would like to take active part in the setup of any new HW product and they favored a DIY approach.

“Cheap is expensive.”

One of the interesting insights was the fact that you may refuse to wash hands citing lack of water but then you end up with infections/illnesses that you have to treat at a higher cost.
Associations

Hygiene is a family responsibility.

A woman must cover her husband's weaknesses.

The poor sometimes are more hygienic than the rich.

A dirty child reflects badly on the mother more than the father.
How might we increase soap use for HW?
Nairobi / Dagoretti
11 women

8 men / Farming and other service jobs in Nairobi

Literacy levels are generally basic primary education.
TOUGH NEIGHBORHOOD

There is a visible lack of sanitation facilities and running water in Dagoretti.

They don’t have tippy taps or leaky tins. Some don’t even wash hands due to fear of wasting water.
"The whole of Dagoretti does not have water, the taps are like flowers"
Dagoretti community mentioned having sanitation facilities. Some have lasted more than 10 years. However, most of them share toilets, as they live in plots.

This lack of ownership raises a few questions in terms of maintenance.

• Who is going to clean up the HWS?

• Who is going to fill up the HWS when it is empty?

• Who is going to spend time cleaning the toilet?
BACKYARD OF NAIROBI

Even though it is so close to a big city, good water coverage in Dagoretti is still a dream and tap water from NCWSC is just a theory since taps are dry.

Boreholes are the best affordable option in the area (2-3 Ksh per 20lt jerrycan).
On our way back to Nairobi, we stopped at a hardware store to ask about prices and check supplies for potential spare parts.
Associations

Ignorant

Reflects badly on women if household is dirty

Informed

Fears getting infections

Proud

Lazy
How might we make sure the HWS is well maintained?
11 women

12 men

6 children average

Literacy levels are generally basic primary education; mostly class 8 drop-outs
GETTING WATER

This region has the most serious water issues of all the sites visited.

On average it takes a minimum of 2 hours to get water, some even take the whole morning.

To be first to get water, local women have to leave at 04:00 AM under the protection of escorting men.
“The night has many issues you need to wash hands immediately you wake up”
SANITATION HABITS

HW is practiced in the morning, before food and after toilet but soap use is rare.

The locals can’t believe that OD still exists in the country.

They are also not keen to share their toilets and even though their latrines collapse, they dig a shallow pit for short-term use.
Like other communities, people of Machakos were also eager to learn how to make liquid soap both for domestic use and for sale.

Right now the most common is bar soap followed by occasional use of powder soap for hard water.
Associations
Mentally retarded
Drunkard
Lazy
Badly brought up
Reflects badly on the family, especially the mother
Uneducated
How might we encourage people for HW in areas with low water access?
Any Questions ?
Sacrificial Concepts
DIRECTIONS

Three directions were visualized for feedback. They were developed by insights from desk research, feedback from manufacturers and our internal discussions.

As being sacrificial, we asked communities to be open and direct about their feedback.
Wall mounts

Tank lid

10 lt capacity

Mirror

Bar soap

Flip to start water flow
“Keep the mirror! That’s why it’s called Mrembo!”
### PROS

- Winner of the three. Communities found it beautiful and new.
- They liked fixing it because of security.
- Many consider it having in their house.
- Easy to clean.
- They didn’t relate it with a HWWS. It was more like a status symbol for the household.
- Both men and women like the mirror, it is a certain success.
- Mirror can make people more conscious about cleaning.
- 10 lt capacity is good even for water conscious communities.
- **Price range is 300-800 Ksh**

### CONS

- A soap dish is needed.
- Soap type flexibility.
- Githunguri community was indifferent to the mirror idea.
- Mirror should be easier to see.
- Hanging references are necessary. Some consider hanging Mrembo on a tree.
- Controlling the water flow is a problem. Some type of valve is needed.
- It should be child proof.
- **Price range is 300-500 Ksh**
Bar soap

Existing 20 lt jerrycan

Allowance

DIY stand

Off the shelf tap

Bar soap
“This looks like more African.”
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<th><strong>PROS</strong></th>
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| - *It is the second most favorite of the three.*
| - Easy to use.
| - *It is an affordable option.*
| - More African.
| - Easy to modify
| - **Price range is 150-550 Ksh** |
| - Legs need to be cured.
| - Some communities don’t have the right tree or craftsmanship to be able to build the stand. They don’t want to pay too much to a fundi.
| - A soap dish is needed.
| - Touching is a problem in all designs. Especially the triggered communities asked for a foot pedal in every proposal.
| - A basin can be useful to capture gray water. |
Karai
“I will use it for many things but not HW.”
### PROS

- It is new.
- People liked the experience of mist water.
- Water economy.
- **Price range is 300-500 Ksh**

### CONS

- Children can easily brake the pump.
- Unhygienic.
- Takes too much time.
- There is no space for soap.
- No one will replace a broken pump.
- It looks delicate.
Things to Consider
- User aspirations
- Sales channels
- DIY vs. Finished
- Security
- Operation (Foot vs. Hand)
- Product Segmentation
- Soap making kit
Next Steps
1 Protoyping:
   • Mrembo with an added sink,
   • A wall mounted & 10lt version of Twiga,
   • And a jerrycan retrofitted with an existing tap, for user testing.

2 Refining design/s following user feedback.

3 Finalization of the design/s.

4 Preparation of production database and technical guidance.

5 High resolution prototypes for marketing and long term user testing.