

WeSMS

Project abstract

WeSMS is a **low-tech** ICT solution that provides relevant **market information** to enhance sale opportunities. In our problem context, WeSMS is used as an on-demand **SMS** service for women entrepreneurs in order to provide them with **contact details** of **pre-vetted** shopkeepers from their nearby city center to increase access to potential buyers for their products and improve their livelihoods.

Context

1. Background

Women entrepreneurs in Punjab struggle with maintaining a profitable business. Beside social and monetary constraints, this is due to an obscure and saturated market.

These women face problems such as:

- Lack of information about market conditions: finding sustainable buyers for their product at a profitable rates is difficult.
- Low technology penetration: most households in rural Punjab own a single “dumb phone” that does not give them access to the Internet, nor can run mobile apps.
- Social boundaries: the number of hours they can work given is constrained due to household chores that need to be done alongside. They are also face permission issues in traveling in order to scour markets and find buyers. This effectively also means that these women lose a competitive edge over their male counterparts who can work longer hours and can travel at will.
- Economic constraints: In many cases, negotiations with shop owners and city centers requires multiple travels to scout, pitch and ship their products. These travels are costly, especially so if the return is comparatively low.

2. Community description

Kaarvan Crafts Foundation (established in 2004) is a nonprofit organization whose mission is to 'enable women in low-income communities across Pakistan to successfully pursue decent livelihoods.'

In framing the design challenge for our team, Kaarvan was most interested in ways of communicating market insights to their women entrepreneurs. They interpreted this as a way of connecting their artisans to the local urban market in Lahore to open up new streams of revenue for the women.

The Women Micro-entrepreneurs

The micro-entrepreneurs (MEs) are the women who are the human link between the women artisans working in their homes and the urban stores that stock their wares. Kaarvan estimates this is 454 of

their 6,000+ women they've trained in various clothing-related courses, but we estimate that the entire group is not currently active.

The Urban Market

Many shopkeepers at Liberty Market in Lahore use middlemen to procure their clothes. All these shopkeepers get their designs by copying well-known brands (such as Khaadi) and mass-producing these designs at lower costs in the factories where sewing and embroidery can be done.

Stakeholders

Stakeholder groups	Interests in Project	Effect of project on interests	Imp of stakeholder for success of project	Degree of influence over other stakeholders
Kaarvan	<ol style="list-style-type: none"> To improve existing business techniques of women MEs To empower MEs To showcase their success stories 	ICT solution	3	2
Microentrepreneurs	<ol style="list-style-type: none"> More demand for their wares Increase in revenue Sustain their business 	Connection and demand	4	2
Artisans	<ol style="list-style-type: none"> Acquire more skills Get more revenue 	Money and more work	4	2
Shopkeepers	<ol style="list-style-type: none"> Good quality products for a competitive rate The more middle men pitch to them, the better 	Good products at a low price	4	2

3. Problem Framing Statement

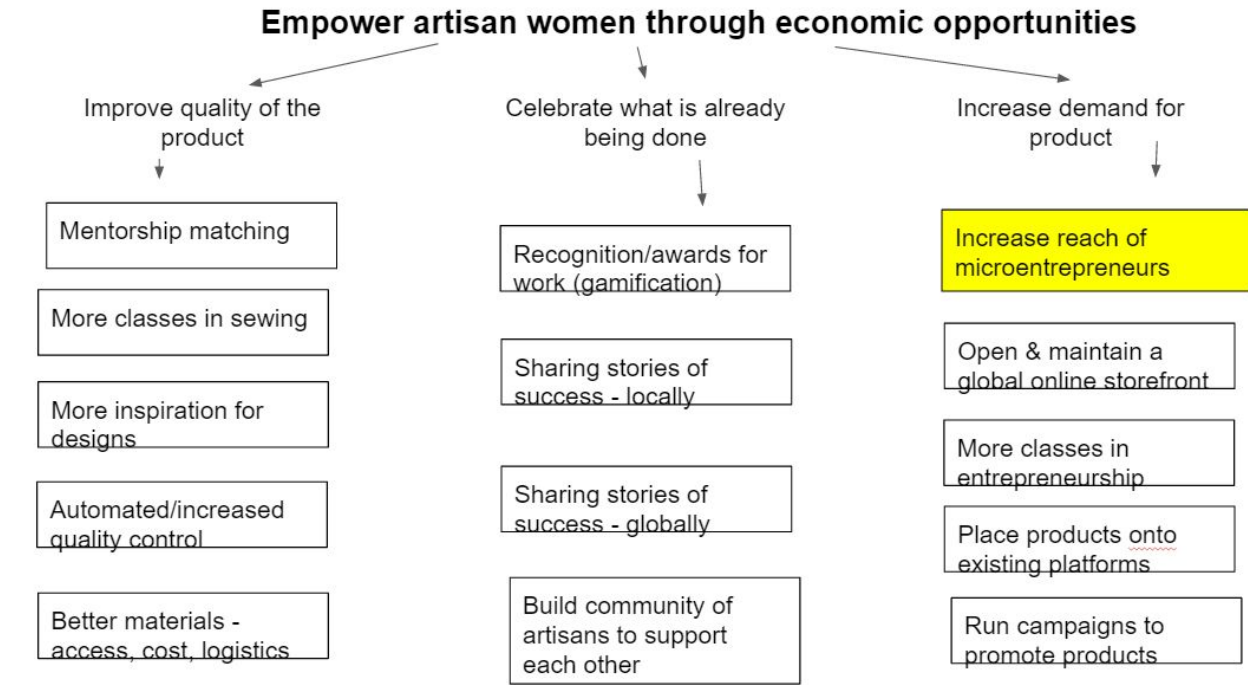
PATH Statement

Women Entrepreneurs selling clothing in low-income communities in Punjab find it **hard to meet sufficient demand at profitable rates**. They struggle due to social constraints and a saturated, as they can only realize small profit margins.

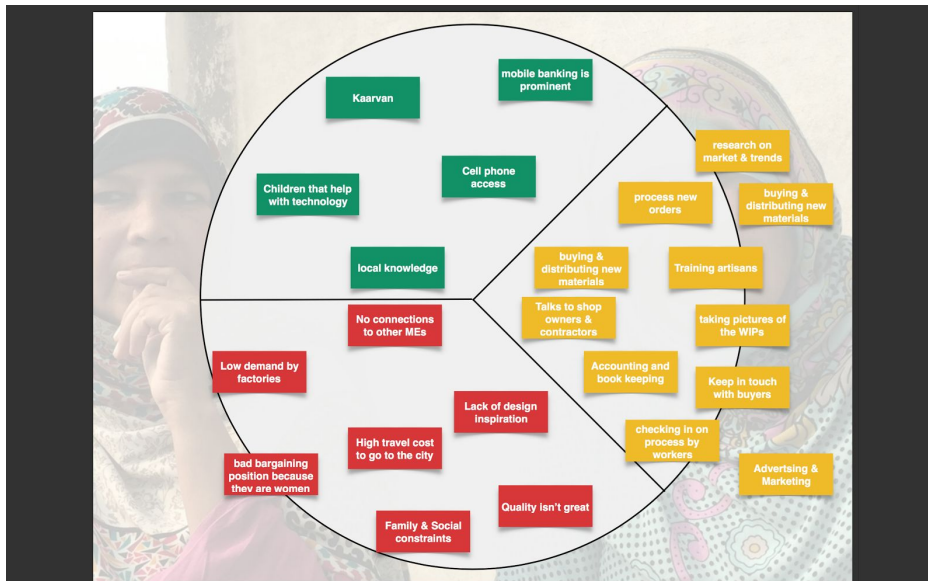
An **ICT-based system** is needed that will help them to update their existing business model: As a **marketing** focused approach, this should help them **showcase** their crafts, **connect** them to new customers, and get **better rates**. Thereby we hope to increase **sales and revenue** and their general **quality of life**.

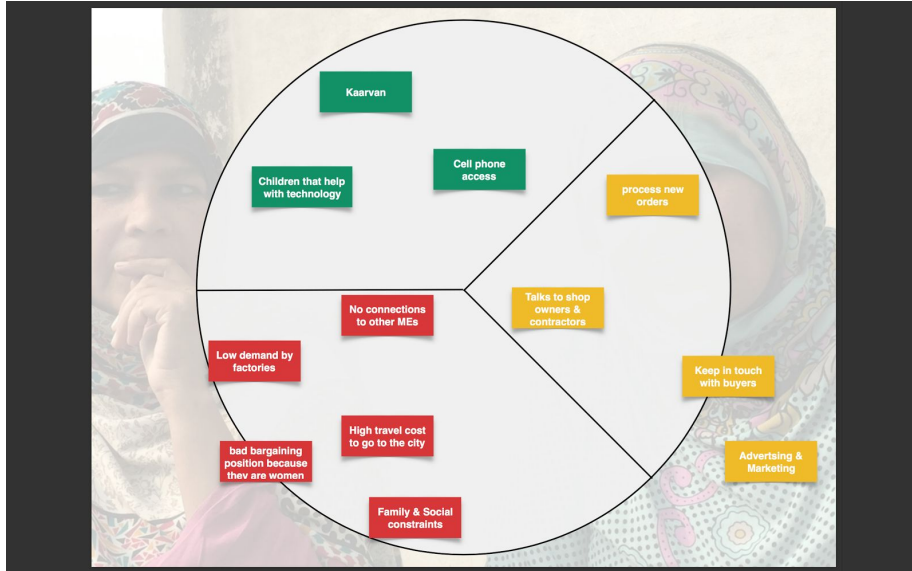
Design Process

4. Problem Framing Tree



5. Value proposition





Value Proposition:

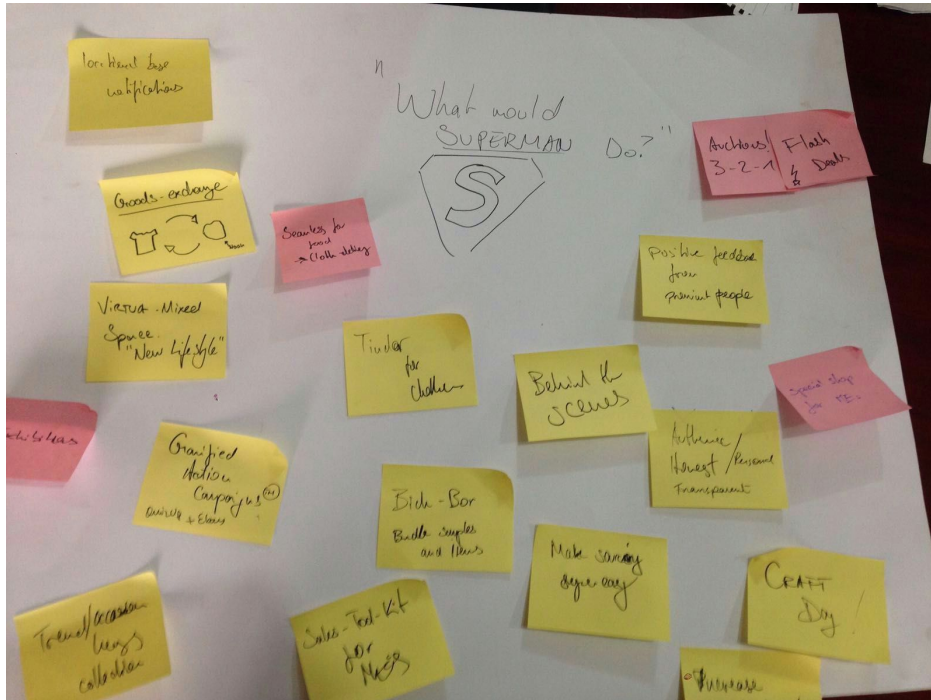
WeSMS is an SMS-based service that provides access to relevant market information by sending shop owner's contact details to female entrepreneurs in Punjab, Pakistan on-demand to spur new orders for their goods.

6. Summary of design process

Our understanding at this stage was to brainstorm ways of increasing demand for micro entrepreneurs. we divided our ideas into the following categories:

- Product design and quality
- Access to new markets via technology
- Improve trainings to create better products
- Market products





Field Visit to Gujranwala and Interviews

During the site visit, all women indicated their biggest challenge was to find more jobs to earn more revenue from their sewing/embroidery skills.



User Persona
Rabia Ahmed
The Emerging Businesswoman
Garment Entrepreneur
Lives in: Gujranwala

Rabia Ahmed has been living in Gujranwala for most of her life. She is 45 years old, married, and has 3 sons and a daughter. Her oldest son is 21 years old and studies at a university in Lahore; her youngest son is 10 years old and goes to the neighborhood school. Three years ago, her husband was injured on the job, and has required Rabia to enter the workforce. She attended a

training by a local NGO and became an garment artisan to supplement household income.

Rabia’s condition has slowly reduced his ability to work. One year ago, she took steps towards becoming an entrepreneur, and now manages five other garment artisans in Gujranwala. She struggles to consistently run a profit due to a variety of reasons including paying the costs of living, gaining regular orders, and family and social constraints.

Despite these factors, she has access to a smartphone and her son is studying computer science at university. With these resources she is able to simplify some processes in running her business and attending to household chores. She has a hard time finding continuing skill development opportunities, but is determined to made good for her family.

Technology/Final Prototype

7. Design requirements

Design requirements for ICT system of heightened job security,

User Need	What are you going to measure	How to measure it (units)	Good Value	Better Value
User Friendly	Learning curve time	Days	<3 day	<1 day
More business	More orders	Number of orders	TBD	TBD
More bargaining power	Profit per unit garment	Rupees	>10% value on each order	>50% value on each order
Competition differentiation	Sales of new items	Number of orders		
Gender Equality				
Easy Transportation	Trips	Number of trip	50% reduction of trips year on year	100% reduction of trips year on year

8. How it works (back end and UX)

System Workflow

This system is divided into several categories. The *front end* which the interface that users interact with (SMS platform), the *gateway* which receives requests and handles communication to and from the server and lastly the *back end* which comprises of the database and hosting server.

Input:

The main users of this system are women micro entrepreneurs. They interact with it by sending SMS request to a specific mobile number or shortcode being used by the system. The SMS request is just a normal message and does not follow any unique format.

Processing:

The gateway is an android Application Programming Interface (API) It uses mobile service providers number or shortcode to receive requests. It temporarily stores the sender's mobile number. The requests trigger communication to the server. The android API uses server-side scripts to handle that communication. The scripts queries the database for shop owners contact information and responds back to the API with this data.

Output:

The API uses the sender's (women micro entrepreneur) mobile number to send back the response which is just an SMS consisting of a list of shop owners contact details.

Storage:

The database comprises of two tables. It's prone to expand as the system scales up. The first table comprises of system users details, mainly the administrators of the system. The second table holds records for all shop owners.

System Flowchart (backend)

Still in progress

How to Use:

wesms ka tareeka

Apnay shehr kay **shop keepers ki maloomat**
janay kay liyay WeSMS ka istamaal karain



Marketing (Micro entrepreneurs)

Karvaan training workshops and community ambassadors



Stickers for recall

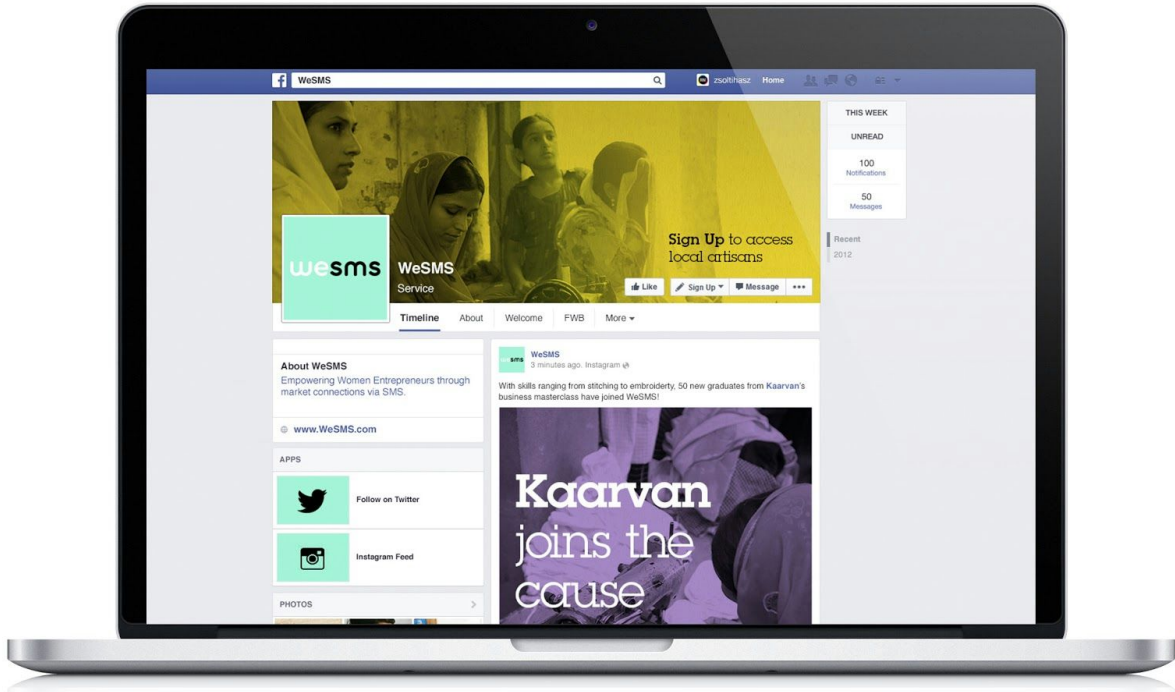


Marketing: Shopkeepers

On-ground posters to lead to Facebook sign up page



Facebook strategy



Partnerships Non-profits

Raise **awareness** and interest by sharing **success stories** of women entrepreneurs via partner organizations.

Organizations provide content which is then shared on **WeSMS social platforms** (Facebook and Instagram)



Partnerships Shop keepers

Once a shop keeper is accepted as a partner, we **leverage their shop** and contact details on **Facebook**.

The shop keeper is thus **incentivized** to join the platform and work with our women entrepreneurs.



Mentorship Micro Entrepreneurs

Through their **partnered organizations**, we stay in touch with the women entrepreneurs and **facilitate local events**.

Successful entrepreneurs are identified and asked to share their **knowledge and market insights** with budding entrepreneurs in their community.



WeSMS microsite to allow sign-ups, and show how to install the tech. The site is under construction but the github link is:

https://github.com/crakama/IDDS_WomenArtisans_WeSMS



Lessons learned

9. User feedback

Testing



Salma is ME and she successfully used the WeSMS service. She was able to read and understand the content of the the message which she got through our service. Her response towards the message was to contact with the shopkeeper whose number was sent to her through service. She said she will be calling to person to discuss about the products and meeting time. Also she will be asking about his requirement about the products so that she can go and talk to him in an effective manner before going to see him at shop.

Farkhanda also used our service, in the same manner she also got the message consisting of address and phone number of shopkeeper. She was unable to fully read the text but she got most of it may be 80%. At the same time she also said she usually does not read the messages, but call. However she has children who are quite educated they can use this service for her. She said that she has done matriculation, so she can also use all alone if they are not present there.

10. Troubleshooting

- changing the phrasing of messages
- making a note of vr versus text messages
- simplifying the process

Next Steps/Project Future

11. Reflection on project viability and other design opportunities

We see very strong potential in WeSMS for Kaarvan, especially when seizing the following opportunities: by building on existing efforts and resources, Kaarvan can leverage their great network

of microentrepreneurs, and well as their demographic and social insights. Very promising seems to be a close collaboration / co-execution with the efforts of the communication department, especially in regard of a joint communications strategy on Facebook / Instagram, etc, including a promotion of success stories coming from the MEs across different channels.

12. Continuity/dissemination model

As a next step at this point, we would see the launch of a first pilot of WeSMS, targeting a focus group of 50 MEs and about 20-30 shops in Lahore. This would include all related efforts, such as sourcing relevant data, brief shop owners on the concept of the system, identify and train MEs to take part in the program, and monitor and document acceptance rate.

13. 6-month plan and team engagement (roles and responsibilities)

In order to take these steps, strong ownership and dedication by Kaarvan would be required, as most of the IDDS team will now longer be on the ground. While we are very happy to support with specific tasks and joint strategic advancements, on-the ground and day-by-day work unfortunately cannot be covered by the team in the future. We are open to discuss a feasible way on how to proceed from here on.

14. Anticipated risks and challenges

We see, however, certain challenges with implementing WeSMS in Punjab, namely (i) the (technical) training and approaching MEs to learn about the system and use it: dedicated efforts to on-board new MEs into the system, explain thoroughly on how to use it themselves - and be available for support, will most likely be needed. Supporting information materials (infographics, stickers, etc). have already been mocked up, and can be further developed with the IDDS team.

In addition (ii) the sourcing and documentation of points-of-sale in Lahore (and potentially other cities), will require time and resources. Also a wide validation of the proposed marketing approach (posters + Facebook), is yet to be conducted.

Furthermore, the on—going maintenance of the system and the data base (data hygiene), as well as providing on-demand tech support to MEs and shopkeepers will be necessary for running WeSMS properly (iii)

Alternatives

While we decided, that an SMS-based approach was the most promising, given the constraints in time and resources for our project - we discussed alternative and additional approaches, such as:

- An initiative, focused on storytelling and mutual coaching by MEs on the ground: Identifying successful Micro-Entrepreneurs and connecting them with the ones struggling. In addition to the exchange of learnings and common challenges, this might also have a positive effect on self-perception, motivation, and overall connectivity of MEs.
- An e-commerce based solution, catering directly to customers (either shopkeepers or customers), via an online platform. Access would be ensured via feature phone / smartphone on the end of the MEs, and via web on the customer's end. Related challenges are

transportation (bulk orders and car pooling might be an option to tackle that), (digital) literacy to access and operate the system (additional trying by Kaarvan might help overcome this), and quality assessment via web (photos and sample might help here).

14. The Team

- Ali Hassan (Pakistan)
- Catherine Rakama (Kenya)
- Hermes Huang (Thailand/USA)
- Shehzil Malik (Pakistan)
- Simon Höher (Germany)
- Design Facilitator - Debbie Tien (Tanzania/USA)