



MDES Project-2

Service Design for Financial Literacy
among young male migrant workers of
Mumbai

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INTRODUCTION

Financial Literacy

Financial Literacy refers to the set of skills and knowledge that allows an individual to make informed and effective financial decisions which influences general well-being and overall quality of life. The fundamental skills involved are - preparing a budget, tracking cash flow, financial planning for shocks, risk diversification and managing debt; knowledge include - basic financial concepts like compound interest, debt spiral, tax and retirement planning, banking terminologies, awareness of various loan structures, interest rates etc. Financial literacy forms the basis of an individual's ability to ensure economic security for his/her family. In India, a common accepted myth is that one who is 'literate' or 'financially well to do' is also 'financially literate' [1], which is far from the truth. The Indian government has recognized financial literacy as an important adjunct to promote financial inclusion [3,6] and business experts have suggested roles technology can play in this regard [4]. A global survey indicated that only 24% of the Indian adults are acquainted with financial basics and can be considered as 'financially literate' [5]. Financial illiteracy exists in all age groups, income and social stratas. For a country like India, which has a vast population, roughly 17.74% of the total global population, financial illiteracy puts an enormous burden on the nation in the form of higher cost of financial security and lesser prosperity [1]. In order to achieve financial inclusion i.e. making financial services accessible to the poorest of the poorest communities and reduce the financial burden of the nation as previously mentioned, financial knowledge must be imparted to improve financial literacy of not only the poorest communities but also the entire population of the nation. This service design project, focuses on enabling young male salaried migrant workers to prepare daily budgets and track expenses; these are two of the many fundamental skills in financial literacy. In addition to this, the service also allows these young individuals to create personal / family saving goals and collaboratively save for the goals with other family members. The service also provides its users with financial tips,

advices and information in accordance to their saving goals. The higher objective of this service is to bring about financial consciousness among the individuals and their families so that they can initiate conversations among themselves regarding finances and also motivate each other to improve their financial condition.

Young Migrants Workers of Mumbai

Mumbai, the Finance Capital of India, is the most populous city in the country and the ninth most populous agglomeration in the world [7,8]. For centuries, Mumbai has attracted populations of traders and seafarers, from India and beyond. According to 2001 census report, 43.7% of Mumbai's population is migrant population and two-thirds to three-fourths of the migrant population came from rural origins from across the country [9]. The reasons for migration as highlighted by the Census of India, are - work/employment, business, education, marriage, migration after birth, migration with household etc. [10]. Our target users for this project are the young male individuals who have migrated to Mumbai from rural areas within Maharashtra and other states in search of greener pastures. These individuals were forced by the financial circumstances of their families to move out from their villages to different parts of the country and start their working lives at a very young age. They send a major chunk of their salaries back home, where it is utilized for various purposes like - daily household expenses, agriculture, sibling's education fees, monthly electricity bills, healthcare of family members etc. In addition, these young individuals have their own share of personal expenses like - food, rent, mobile bills, transportation etc. in the cities where they live. A common migration pattern observed among the families of these individuals is - when a male child moves out from his house to 'promising locations' in search of jobs, they strictly rely on, in order of preference, family members, relatives or inhabitants of the village, who are already working in the location of their choice. Through their reference, the migrant individual finds accommodation, searches for jobs and eventually gets employed. This social network work not only aids in finding accommodation and

employment but also acts a support system for the young individual in times of need.

Previous Work in Financial Literacy in India

An enormous amount of work has been done till now in the domain of financial literacy by NGOs, govt and private banks, government, individuals (finance gurus and scholars) and startups. The common modes of imparting financial education are websites, podcasts, videos, books, classroom education, mobile / board games for children etc. The Reserve bank of India, along with SEBI and IRDA have been developing training modules, guides (FAME) and educational programs aimed at rural population. The deficiency of this conventional mechanism of information delivery (classroom education) is lack of scalability and it needs to be re-invented in order to reach millions of households [11]. The National Centre for Financial Education has set up an initiative called National Financial Literacy Assessment Test (NFLAT), which is India's first national-level test designed to measure level of financial literacy among students of class VIII - X. It aims at encouraging students to obtain basic financial knowledge on topics such as money, budgeting, investment, banking, savings, insurance, retirement planning and financial planning at a very early age so that they can prosper once they begin their working lives [11]. Major banks have taken initiatives to initiate rural classrooms (with certification) to promote financial education, two of them are - Axis Bank Digi-Prayas and ICICI Foundation. Notable non-profit organisations that offer financial education and consultation include - Disha Trust, Parinaam Foundation (Diksha Financial Literacy Program) and National Centre for Financial Education. In September 2016, the Government of India, in collaboration with Google, announced "Bharat Saves", a digital platform that will provide financial literacy tools, information and 'certification of financial literacy' to homemakers, small business owners, newly employed, retired persons and farmers [12]. As of December 2017, Bharat Saves is yet to be launched to the world. Financial literacy has now become a prime focus of Government of India. It has been identified as the necessary element to achieve financial

inclusion. To emphasize the importance of financial literacy, starting from 2017, it has been decided to observe June 5-9 as Financial Literacy Week across the country [13]. During the week, banks are advised to conduct special camps at their financial literacy centres, display awareness messages on their websites, distribute posters/flyers at their bank locations and conduct an online quiz for the general public to generate interest/awareness about financial literacy [13].

Problems in current Financial Education

I have identified several problems with the current financial education programmes:

1. Classroom education is ineffective because it doesn't not consider real-life implementation of what has been learnt. Financial education needs to take into consideration a "hands-on approach".
2. As mentioned in the previous section, a major focus of financial education is young individuals who are in schools and colleges, it is based on the assumption that financial literacy should be built up at a young age. It doesn't not consider the fact that such programmes are inaccessible to millions of young individuals who are not formally enrolled into educational institutions.
3. The financial literacy initiatives taken up by the major banks is mostly centered around bringing the unbanked populations into the formal banking system by educating them about opening savings account, adoption of mobile banking and acquiring credit. Primarily focusing on the services these banks have to offer while turning a blind eye towards building developing fundamental habits such as budgeting, expense tracking and building financial consciousness in general.
4. The already existing digital content - videos, websites, blogs etc. although accessible, does not have multi-lingual support, which impedes

engagement with the content or discussions on the online forums or comment sections.

5. The young migrant workers have enormous time constraints due to their working hours, which leads to lack of motivation when it comes to enrolling in financial education classrooms. In addition to this, financial education through classroom teaching and certification have a scalability issue.

SECONDARY RESEARCH

Financial Literacy across the globe

In order to get an essence of the importance of financial literacy and also to learn about the causes of financial illiteracy's and its repercussions, I examined research findings from around the world and then research conducted in India. Some of the key findings were - less financially literate individuals will be found in countries with generous Social Security benefits [14], financial literacy lowest among women even if they managed their own finances [15, 16], financial literacy is better attained by interacting in workplace or community [17], rural resident score lower in financial literacy than their city counterparts [18], older populations have an false notion that they are more financially literate due to which they are easy targets of financial scams [19], financial literacy is lower in economies that has never experienced a financial catastrophe [20] and the three important areas that people fail to understand are - interests, inflation and risk diversification [21]

Financial Literacy In India

In India, only 27% of the adult population can be considered as “financially literate” as per a global financial literacy survey [5]. Financial illiteracy exists in all age groups, income and social stratas. For a country like India, which has a vast population, roughly 17.74% of the total global population, financial illiteracy puts an enormous burden on the nation in the form of

higher cost of financial security and lesser prosperity [1]. There seems to be a clear lack of initiatives by govt organisations when it comes to educating the rural, low-literate and illiterate populations regarding the benefits of the no-frills savings accounts and importance of savings in general [22]. Rural populations are unaware of financial policies that might benefit them, this is due to the fact that the grass root employees of banks and other financial organisations do not pass necessary information as that does not bring in commission for the employees [23]. In a certain research, interviewees wanted to learn about the fundamental skills related to financial literacy and for that they wanted government initiatives, they also preferred peer learning or learning in groups [23]. The target users for this project was inspired by a research that claimed that 164 million households of India earn roughly an average of Rs 13000 per month, they “earn enough to stay afloat but not enough to save” and only 7.7% of the total households are able to save [24]. However, a reputed financial expert suggested that the mantra that should be adopted by households of the concerned income strata in order to avoid debt due to financial shocks is “steadily saving” [25]. Conventional classroom financial education often fails due to the large gap that exists between knowing and doing [26]. In order to improve the habits of people and to give them a hands-on experience while learning about finances, certain recommendations were also given e.g. on-demand financial advisory, letting consumers practice with virtual products, timely reminders to initiate actions, mental shortcuts to turn learning into habit, games and humor to aid learning and retention and leveraging the influence of peers and culture [24].

INSIGHTS FROM SECONDARY RESEARCH

1. Financial Literacy is better attained while interacting in the workplace or in the community, in groups or through peer learning.
2. The mantra that should be adopted by lower-income households to avoid debt due to financial shocks is “*steadily saving*”.
3. Conventional classroom financial education often fails due to the large gap that exists between knowing and doing. For example, even though there are camps that teach budgeting to rural individuals, the habit is not developed due to lack of motivation.

PRIMARY RESEARCH

About the Interviewees

For this project, I conducted primary research with 7 male individuals who work in Hostel-13 of IIT Bombay. The details of the interviewees are as follows:

- They earn Rs 7000 (min) - Rs 15000 (max) per month
- Their age ranges from 20 (min) - 31 (max) years
- They came to Mumbai 8 months (min) - 6 years (max) ago
- They are educated up to high school who later dropped out due to financial conditions. Only one had higher secondary level education.
- 5 work as hostel cleaning staff, 1 works in the hostel store and the last one works in the hostel canteen.
- 3 of them live in PhuleNagar with family and the rest of the 4 in rented homes in Thane.

Primary Research Activities

In the initial interviews, I realised it was difficult to understand the financial dynamics of people as they are very reluctant to speak about it. So, I decided to restructure my primary research into activity-driven interviews. The activities included:

- Card voting
- Closed question survey
- Preparing a cash flow map
- Preparing a budget

Purpose of Activities

Each activity was followed by an interview. Through a balance of observation (during the activities), post-activity interview and discussion, I was able to learn about their financial landscape, financial decision making patterns, past experiences of financial shocks, how they dealt with it, what mattered most to them and other aspects of their lives. These activities were chosen based on what I wanted to learn about my target audience. The details of the purpose of each activity is given below:

1) The Card voting activity shed light on the things that mattered most to the interviewees, exposed critical past experiences of financial shocks, anecdotes and how they coped during those situations. This activity also revealed some very unique insights on what leads to “financial shock”. More details about these in the next section.

2) The Closed Question Survey presented them with direct probing questions. This activity accomplished three things - i) Learn whether the interviewees already had habits that were considered important for financial well-being, as was found during secondary research e.g. a financial expert suggested that lower income groups should adopt the mantra of steadily saving in order to avoid debt incurred due miscellaneous

financial shocks requiring low monetary value [25]. This makes it important to know whether the interviewees already had a habit of saving. ii) Validate or invalidate claims that were found during secondary research e.g. individuals who earn an average annual salary of Rs 13000 / month earn enough to stay afloat but not enough to save [24]. iii) Learn facts about the interviewees like - if they had a bank account, if they had used digital finance apps (to learn about technological competence and trust on technological interventions involving money), if they had awareness of basic financial concepts like interests and if they had a planned approach towards their finances. Although this was a closed question survey, this activity was followed by a discussion, where they elaborated more about the survey questions.

3) By Preparing a Cash flow map, I intended to learn about where they currently spent their money and their awareness of how their money flowed. This activity captured a high-level overview of their cash flow. Finer details like how much did they spend and on what? When does the spending in a particular area goes up or goes down? Is there a pattern in their spending? were missed due to the interviewees' inability to recall these details.

4) Preparing a Savings Plan unraveled areas where the interviewees are most likely to save, how they would plan their savings in case of financial shocks, where would they cut down savings in case of sudden monetary requirements etc.

In the upcoming section, we will go through each activity in detail.

Primary Research Activities : Card voting & Interview

The cards used in this phase were borrowed from IDEO's Human Centered Design Toolkit. Each card had an image which depicted a particular theme e.g. healthcare, family, internet, agriculture, marriage, child's education, owning movable properties, starting a business, extra income etc. The deck

that I used had 26 cards in total depicting 26 themes. Card voting is a quick and easy way to spark conversation about what mattered most to the interviewees and why. This activity generated anecdotes and opinions about a theme.

Formal Job	Old family members working	Marriage
Electricity	Own Education	Changing Jobs
Education (in general)	Living with family	Children's Education
Owning a vehicle	Wives working	Mobile Phone & Internet
Good Health and Fitness	Owning a store (or any business)	Agriculture
Learning a new skill	New Home (Building or repairing)	Moving to a city
Entertainment	Community (friends, extended family & others)	Children working
Family	Trust (when money is involved)	Technology usage
Festivals	Government	

Table 1: The themes of the 26 cards



Figure 1: Cards used during the card voting activity. This figure shows six of twenty six cards that were used during this activity.

Cards shown in pic:
 (1st row left) Moving to a city,
 (1st row right) New Home,
 (2nd row left) Learning a new skill
 (2nd row right) Good health+fitness
 (3rd row left) Owning a store
 (3rd row right) Farming

Method in Action

This activity was conducted as a group activity. Each interviewee was given a zen dot sticker sheet. The cards were passed down from one interviewee to the other and they voted on the back of each card with a zen dot. After a card was handed over to each interviewee, an open discussion was initiated where they explained why they felt a particular theme is important or not important for them. The discussion for each card (theme) began with a broad context and was later narrowed down by focusing at that theme from a financial perspective. This enabled me to learn about their financial

habits and decisions from diverse angles. The interviewees' statements, stories and opinions were recorded on a notebook.



Figure 2 : Interviewee voting on a card.

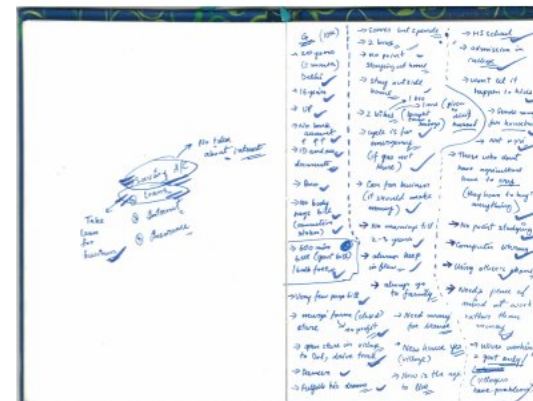


Figure 3 : Interviewees' statements, stories and opinions

Critical Interviewee Statements (translated to English)

1. General well-being of family members, their health, education and aspiration is more important than my personal desires. I would love to stay with my family in my village but circumstances doesn't allow me to do so. (6 out of 7 interviewees shared the same sentiment)
2. It is only because my family needed money that I dropped out of school. I would never let my children face the same situation as I did. (7 out of 7 interviewees shared the same sentiment)
3. In case of financial help involving large sum of money, I resort to family members first, then relatives and then community funds. I generally don't prefer borrowing large sums of money from friends as it might lead to complexities later. (7 out of 7 interviewees. By 'large sum of money', they meant a sum above the range of 20-30 thousand rupees)
4. I would love to learn skills and apply for better earning jobs or start a business but we also have to send money back home. Hence, it is difficult for me to think of making such a decision. (4 out of 7 interviewees. All 4 are young and unmarried individuals)
5. If I earned enough from our farms or had savings, I would have taken risk of starting a business. (7 out of 7 individuals)
6. We don't consider ourselves poor because we have farms back home. Poor are the labourer class who don't have any lands. (3 out of 7 interviewees)
7. Government loans for agriculture or education doesn't work for most of the people, as folks (other than us) don't have fixed incomes (referring to contract workers and farmers) hence the current fixed loan repayment scheme doesn't work. (2 out of 7 interviewees)
8. Electricity theft is rampant in the locality where I stay in Thane. Recently, my neighbour incurred a bill of 15000 rupees. Since he was unable to repay the bill, his connection was cutoff last week. (1 out of 7 interviewees)

9. Farming is our lifeline. In addition to providing us with income, it also helps us minimize cost by providing basic grains (7 out of 7 interviewees)
10. Once a year, before harvest our family faces financial problems because of agricultural requirements e.g. hiring labourers, repairing pumps, renting tractors etc. (3 out of 7 interviewees)
11. Family events like weddings puts a lot of financial pressure (7 out of 7 interviewees)
12. Smartphone is my favourite mode of entertainment. (7 out of 7 interviewees. All of them owns a smartphone that runs on JIO)
13. I didn't buy a TV for our home because we have a smartphone. (2 out of 7 interviewees. Both of them married and have kids)
14. I would love to know how the money that I send home is being utilised. (7 out of 7 interviewees)
15. I have no idea where my salary goes. I send a considerable sum of money home but the rest of it seems to just disappear (7 out of 7 interviewees)
16. I would not prefer to own a car or a bike for myself or our family, as it would incur more costs. I will rather buy the vehicle to monetize it by renting it out. (4 out of 7 interviewees)

Primary Research Activities : Closed Question Survey

This phase involved asking the interviewers 7 direct closed questions related to their financial concepts, banking, financial habits and technology use. The prime motivation of this survey is to understand "why can't they save the money they have earned?". The questions that I asked were:

1. Do you have savings account?
2. Do you know what interest is?
3. Do you track your expenses?
4. Do you make spending budget?
5. Are you able to save from your income?
6. Do you know where you spend most of your salary?

7. Have you used apps like Paytm or Bhim?

The answers given by the 7 interviewees (M) are as follows:

	M1	M2	M3	M4	M5	M6	M7
Q1	Yes	No	Yes	No	No	No	No
Q2	Yes	No	Yes	Yes	No	No	No
Q3	No	No	No	No	No	No	No
Q4	No	No	No	No	No	No	No
Q5	No	No	No	No	No	No	No
Q6	Yes	No	No	Yes	No	No	No
Q7	Yes	No	No	No	No	Yes	Yes

Here, M1 and M3 have savings account but they do not have frequent engagement with the savings account. M3 can be considered as “de-banked” who choose not to deposit in the savings account due to fees and time involved as he doesn’t use the depositing machine in ATM centres. All of the 7 interviewees neither tracked their expenses nor they made daily/monthly budgets. On asking the reason for not tracking expenses or budgeting, their collective answer was - “*Socha hi nahi tha aisa kar sakte hain!* (It never occurred to me that I should do this)”. M6 who works in the hostel department store felt tracking expense is important from his experience of documenting sales at the store. M1, M6 and M7 have experience of digital payments and they know how it works. M6 and M7 rarely uses Paytm but is acquainted with the process because it is used at their stores. M1 is a “power user” of sorts, who has a savings account, knows about interests and is acquainted with the use of apps for various

purposes like - entertainment consumption, online recharge, social networking, reading news etc. During free hours, when M1, M2, M3, M4 and M5 are hanging out in the staff room of the hostels, M1 often informs his colleagues of the latest news, helps them recharge their phones, transfer songs, teaches them use of new apps etc. I have identified that individuals like M1 in a workplace act as a “guide and influencer”. Such individuals can be key elements of my service, teaching his colleagues how can they access the benefits of the service and can also act as conversation initiators to finances and build overall financial consciousness.

Primary Research Activities : Cashflow Map

The next activity was drawing a cashflow map of the interviewees. It was observed that a large chunk of their salaries was sent back home. Finer details like - patterns in expense hike and areas of high expenses were missed due to the lack of documenting expenses. Due to which, they are unable to identify areas where expenses are highest and hence make necessary plans to minimize that.

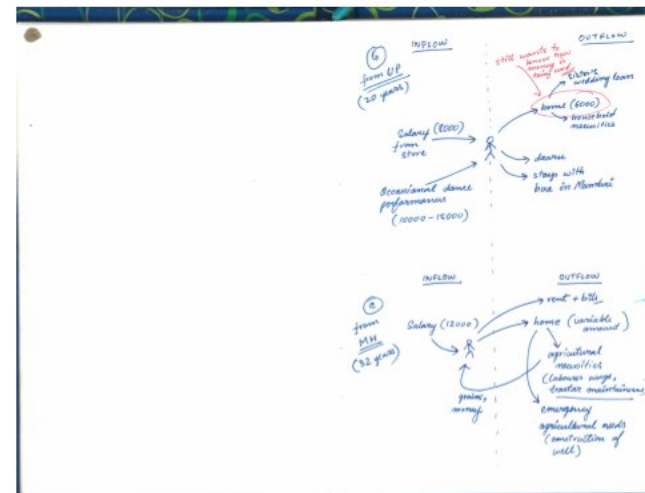


Figure 4 : Cashflow map of two interviewees depicting cash inflow and outflow

Primary Research Activities : Savings Planning

The last activity was a budgeting and savings exercise where I provided them a hypothetical sum of Rs 400 and asked them to distribute that sum as savings. It was observed that they preferred saving in categories such as - agriculture (because it brings in extra income), sister's marriage (social event), health of older family members, building / renovating village home and starting a business (extra revenue stream). This further revealed that their saving decisions are collective in nature rather than individualistic, they preferred saving for family goals or categories that would benefit all the members of the family.

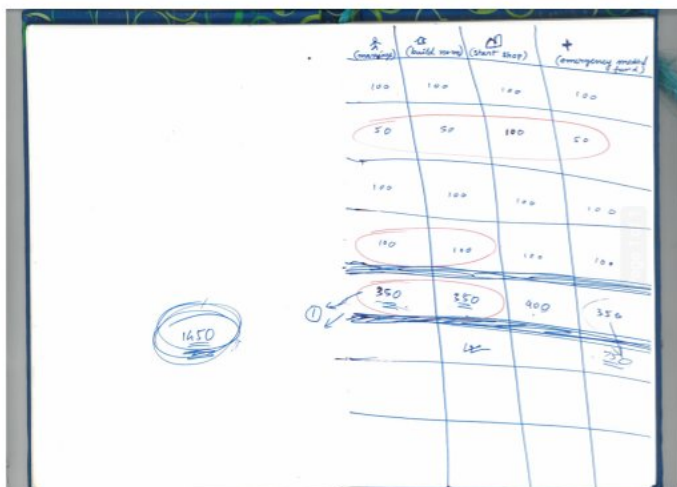


Figure 5 : Interviewee's savings plan. The categories depicted here are - marriage (social event), building / renovating village home (collective benefit), starting a business and family members health

PRIMARY RESEARCH FINDINGS

Insights

The insights below are derived from user statements and their personal stories of past experiences.

1. The interviewed individuals tend to operate in a very family-centric manner. They depend on family members for financial help, family property like agricultural lands and have common family objectives like - meeting agricultural requirements before harvest, marriage of a family member and education of siblings to name a few.
2. These individuals care about bringing in more income streams to their homes to improve their conditions and are motivated to learn a skill or start a business.
3. Financial shocks that the interviewees experienced in the past can be categorized into three broad categories -
 - i) Periodic: These are financial shocks that a family can plan for e.g. harvest requirements, pump suddenly breaks down etc.
 - ii) Foreseeable: These are also financial shocks that can be planned for e.g. marriage of a family member, deteriorating health of an old family member, birth of a child etc.
 - iii) Unanticipated: Absorbing these financial shocks can't be planned. These shocks emerges from the most unexpected areas e.g. electricity theft leading to high bills.
4. Smartphones are an integral part of their lives. Although it is mostly used for entertainment and social networking, its purpose of use could be extended.
5. Due to lack of savings, individuals avoid risks like starting a business and learning a skill, which could have increased income streams. They are inclined towards business because they believe

that due to lack of education, they cannot get formal jobs.

6. Individuals have personal and collective worries and aspirations.
For e.g. how do I start a business (personal aspiration), how do I pay my high electricity bill (personal worry), how do I repair the pump before next harvest (collective family worry) and I wish we could treat mother at a good hospital (collective family aspiration).



Figure 8: Personal and Collective aspirations and worries

7. These individuals are unaware of how their money's flowing, where are expenses are highest. The habit of not tracking expenses has short-term and long-term effects.

Short-term effects: Not able to view cashflow, not able to identify where expenditure is highest, not able to plan how to avoid / minimize that expenditure and unable to save or exhaust existing savings.

Long-term effects: Borrow or take loans during financial shocks

due to lack of savings and incur debt / interests and hence unable to fulfill dreams and aspirations.

Assumptions

The assumptions are were derived from the insights.

1. Since these individuals are concerned about knowing how their money is being utilised and also the fact that they have common family goals, they might also be interested in knowing the financial habits of other family members so that they can communicate, plan and achieve the goal sooner by reducing expenses and increasing the habit of steadily saving.
2. Since these individuals are very family-centric, care about the well-being of their family members and also that they are looking for ways to maximize income streams, they might be willing to help family members who are planning to start a business, learn a new skill or pursue any personal goal that might improve the financial condition of the family. The help mentioned above could be monetary, sharing financial responsibilities or in the form of motivation and encouragement.
3. Since the lack of expense tracking leads to severe short-term and long-term consequences without the awareness of individuals, this needs to be a core focus of the service. If individuals are pointed out that creating daily budget and sticking to it while at the same time tracking expense will expose areas of high expenditure. They will be able to cut down costs, which will enable them to save steadily for their personal and collective goal. Their dreams and aspiration acts as a motivator for them to save, budget and track expenses.

How Might We (HMW) Questions and Quick Design Ideas

The HMW questions are derived from insights and user statements, while the design ideas are derived from assumptions

1. How might we enable these individuals to know how their money is utilised at home?

Idea 1:

Maintain an expense recording book at home and create a family Whatsapp group. Upload pictures of the pages (documenting latest expenses) of that book every week.

Limitations of Idea 1:

Whatsapp is not meant for accounting and very soon the photos of records might soon get buried in the chat or in the image gallery. In addition to that, whatsapp cannot provide categorisation of expenses and show insights about expenditure.

Idea 2:

A standalone app that allows family members at home to enter expenses based on categories like bills, groceries, agricultural requirements etc. and also provide insights on expense patterns and expose areas of high expenditure

Limitations of Idea 2:

Although Idea 2 is better than Idea 1. A standalone expense tracking app would require certain degree of user competence to learn, operate the app, make sense and make decisions based on the insights the app provides.

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2. How might we enable these individuals to plan for financial shocks?

Idea 1:

Since periodic and foreseeable financial shocks can be planned, create a bank account for the family and encourage family members to deposit (save steadily) as per their capability into that account. Each broad financial shock category can have sub-categories as well e.g. foreseeable shock category can have wedding of sister, wedding of brother or operation of an elderly after few months, as sub-categories. For each category, set a goal to save a certain amount of money. Set a goal to raise certain buffer amount for unforeseeable shocks. Maintain a book to track the deposits and progress towards a goal.

Limitations of Idea 1:

This idea doesn't provide a visual logical division of the central fund in the family's bank account. This idea also doesn't provide an easy way to track progress of achieving a goal. Maintaining a physical record of these transactions is not shareable among the family members who are depositing into these funds hence creates issues in scalability.

Idea 2:

An app that allows family members to create saving goals for financial shocks, view progress visually and this information is shareable among the family members.

Limitations of Idea 2:

Using this app would require certain degree of user competence. This idea just provides a logical visual division of the central fund, Nothing more than that.

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3. How might we improve financial habits of family members so that they can achieve their goals?

Idea:

Keep financial habits like expenses and savings shareable among the family. Provide a privacy layer that will allow an individual to share their expense habits with only certain family members e.g. father, mother, elder brother etc. This would trigger conversations about improving habits and might lead to better financial planning.

Limitations: Not everyone might be willing to share their information.

4. How might we accelerate achievement of saving goals and keep them motivated?

Idea:

Leverage on the larger ecosystem of available financial literacy programs like videos, classroom education, financial education camps and provide the individuals with these information aligned with their savings goal. Not only will they learn important financial tips but visiting these classrooms and camps will enable them to network with people with similar goals which will build necessary financial consciousness. Since, financial literacy is better attained while interacting in the workplace or in the community [17], in groups or through peer learning [23].

SERVICE CONCEPT

The service suggested in this project enables people to create savings goals based on their personal and collective aspiration so that they are motivated to save, in order to help them save the service provides them with a overview of where they spend their money so that they can cut down costs and create enough money to steadily save. The service also takes into consideration the existing services in the domain of financial literacy in order to impart goal-oriented financial tips and information.

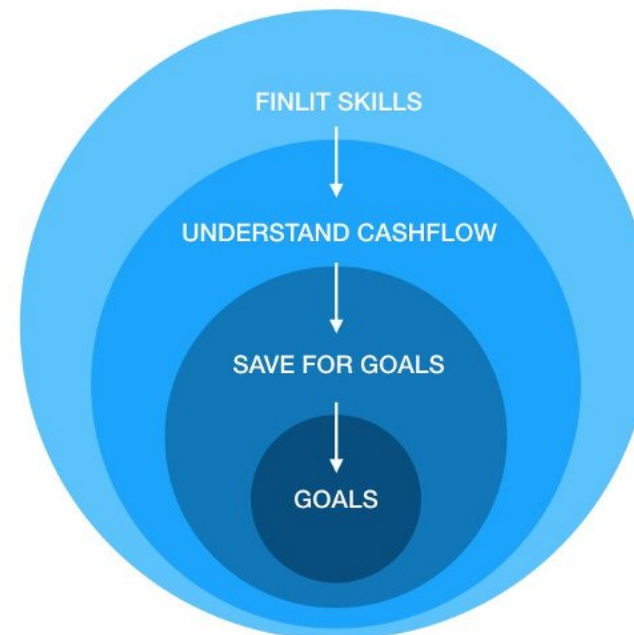


Figure 9 : Service layers depicting how setting personal / collective goals can motivate individuals to save for their goals, which will inturn motivate them to cut expenses by tracking cash flow. Finally financial tips to help achieve their goals is presented to them from the wider financial literacy ecosystem.

Service Positioning

1. The service only focuses on two fundamental skills in the broad domain of financial literacy i.e. creating daily budget and expense tracking.
2. The service is target at young salaried migrant workers who are motivated to change their financial condition.
3. The service is aimed at individuals who use smartphones.
4. The service considers that an individual's family is not plagued by feuds and each member share a healthy relationship, which is the core of this service.
5. The service is aimed at individuals who don't yet have a bank account.

Service Objectives

The broad objectives of the service is to:

1. Enable individuals to track their expenses & create daily budget
2. Learn financial (spending / saving) habits of family members
3. Create personal and family saving goals
4. Shared saving among family members
5. Impart saving goal oriented financial tips and information
6. Help individuals connect with financial advisors & NGO classrooms
7. Share success stories to inspire individuals using the service

Service Stakeholders

1. Young male salaried migrant individuals
2. His immediate family members, relatives and close friends.
3. Service content curators and service helpline
4. Service partners like - NGOs, finance experts, banks, third party content creators etc.

Service Layers

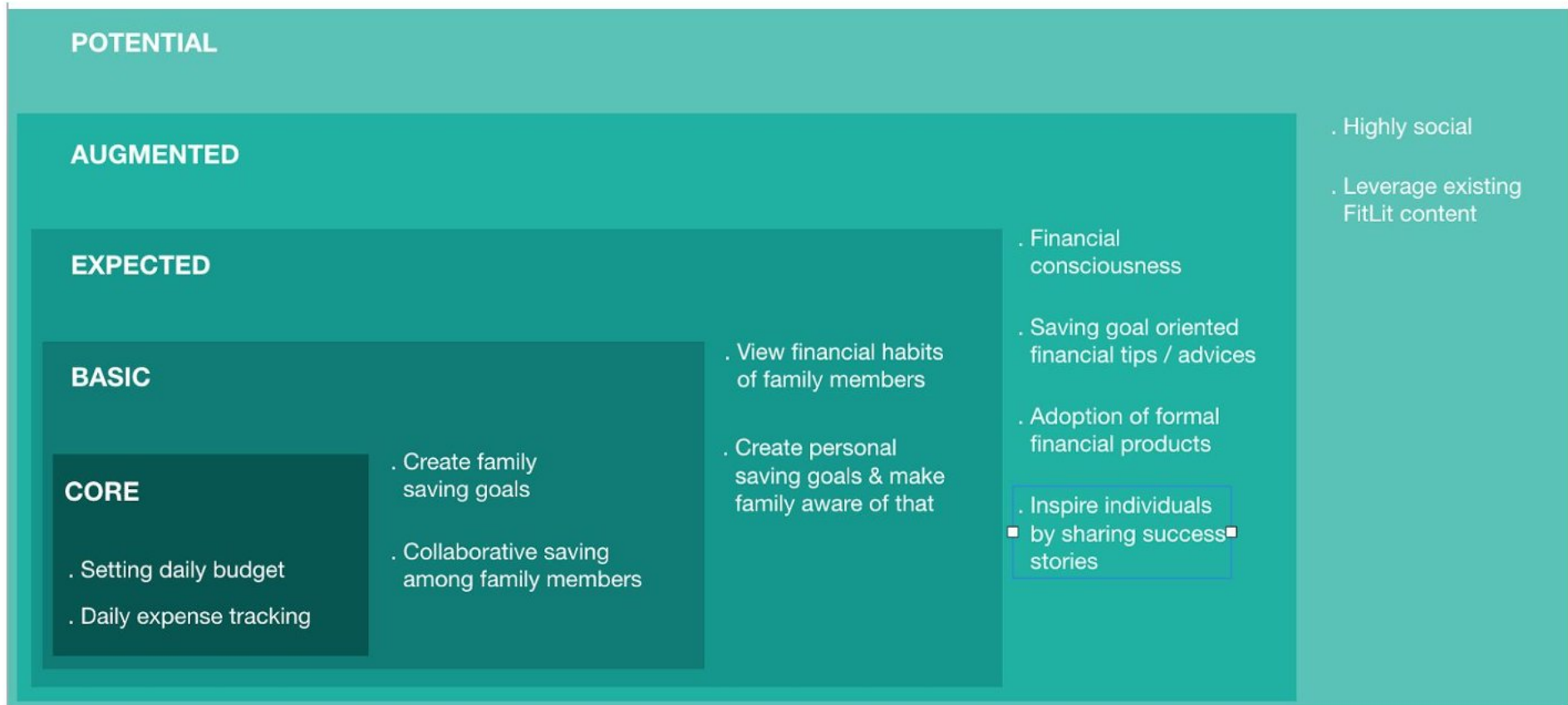


Figure 10 : The Layers of the Service

SERVICE TOUCHPOINTS

Service Touchpoint - Mobile app & widget

At the heart of the service lies a mobile app and a supporting app widget.

Features of the mobile app:

1. Create personal / saving goals
2. Create family and add members to it
3. Invite family members to collaboratively save for a family goal
4. Appreciate with a message or a call when a family member creates a personal saving goal to encourage him or her
5. Create daily budget goals
6. View if other members are meeting their daily budget goals
7. View every family member's participation in the savings goal
8. Get goal-oriented information, tips, success stories, learning materia, nearby financial literacy camps or talks organised by the service partners.

Features of the mobile widget:

1. Quickly create daily budget goals without opening the main app.
2. Quickly enter expenses for the day without opening the app.

Why smartphone app?

During primary research it was observed that most of the young migrant workers own a mobile phone and engage with it in various ways. The common use of mobile are for - entertainment consumption, social networking and news. Here are additional reasons to use a mobile app:

1. Mobile apps are highly accessible and scalable in nature
2. Siblings of these migrants who are also young males also own a smartphone
3. Keeping expense or savings records in digital format can be easily shared and viewed compared to recording in paper books

4. Individuals can be easily targeted with goal-oriented educational materials by the content curators, if they are using an app.
5. Content can be delivered in multi-lingual and visual format. Watching videos on Youtube and Hotstar is very popular among this group.
6. If they see that a family member have created a personal saving goal, they can quickly drop a message or a call to appreciate their efforts. Similarly, if they see that a family member has deviated from his / her saving goal or is failing to meet the daily budget goals, they can again initiate a conversation or ask someone to have a talk with the concerned person.

Service Touchpoint - Helpline

The service helpline is a quick way for individuals to get in touch with existing financial advisory services for an on-demand advice session based on their needs. In this case, after a request has been placed for an advisory session, a financial adviser will get in touch with the individual with 24 hours. If an individual wants to get in touch or enroll in financial literacy camps organised by Banks or NGOs classroom, he/she may do so through the helpline. Talking to a real human provides a much better experience than interacting with an interface in certain scenarios that involve decision making, as explored in research [27].

Service Touchpoint - Service Partners

Service partners like financial advisors, NGO/Bank classroom representatives who get in touch with the users are also important touch points of the service. In addition, the activities of the users e.g. what are the top saving goals, what is most important to people etc. can be fed back to the partner network so that partners can create more focused content, organise camps in areas of high activity etc.

Service Ecosystem

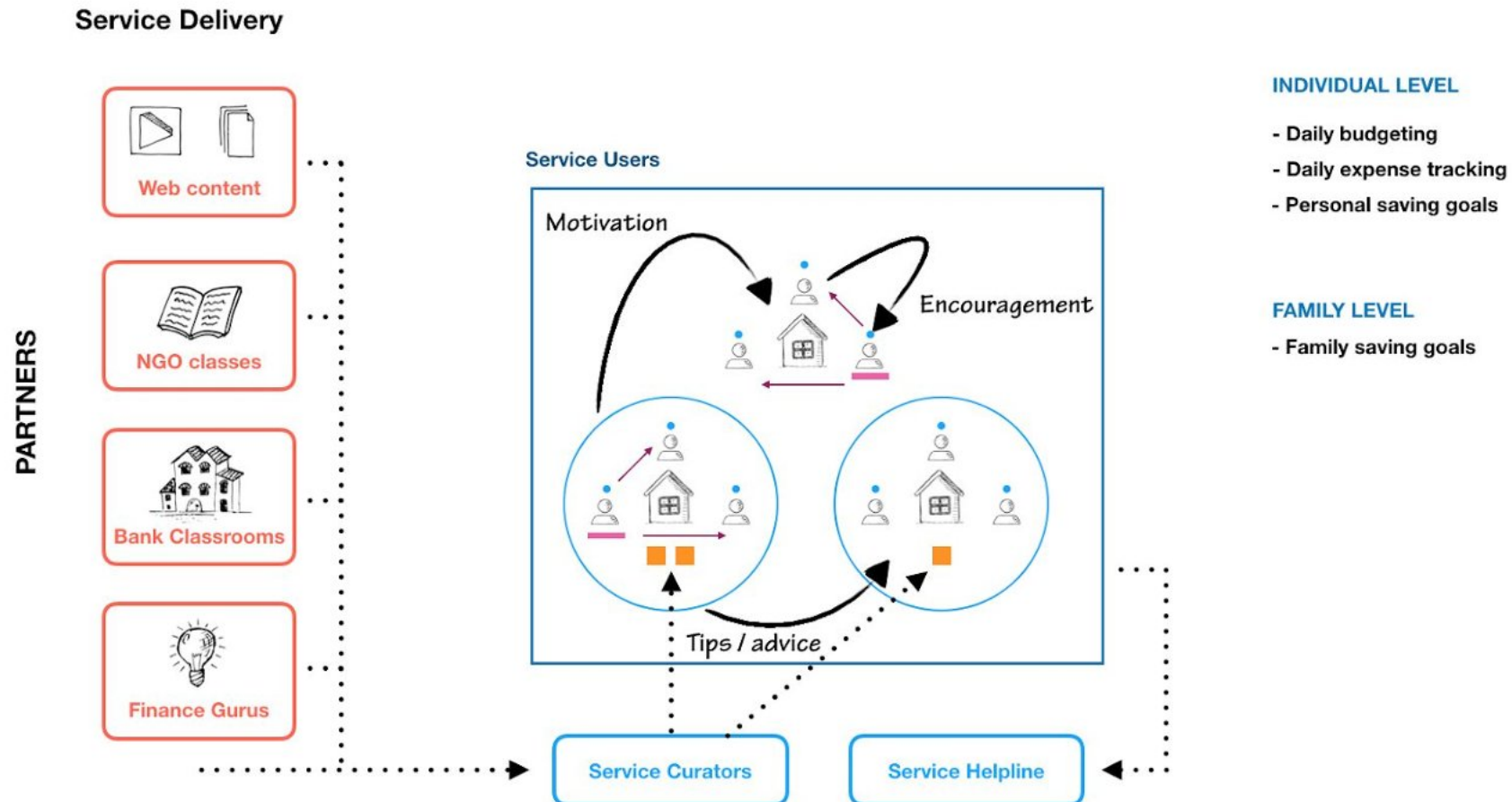


Figure 11: The service ecosystem comprises of curators to deliver goal oriented information and helpline to connect individuals with classrooms and advisors.

Service Partner Opportunities

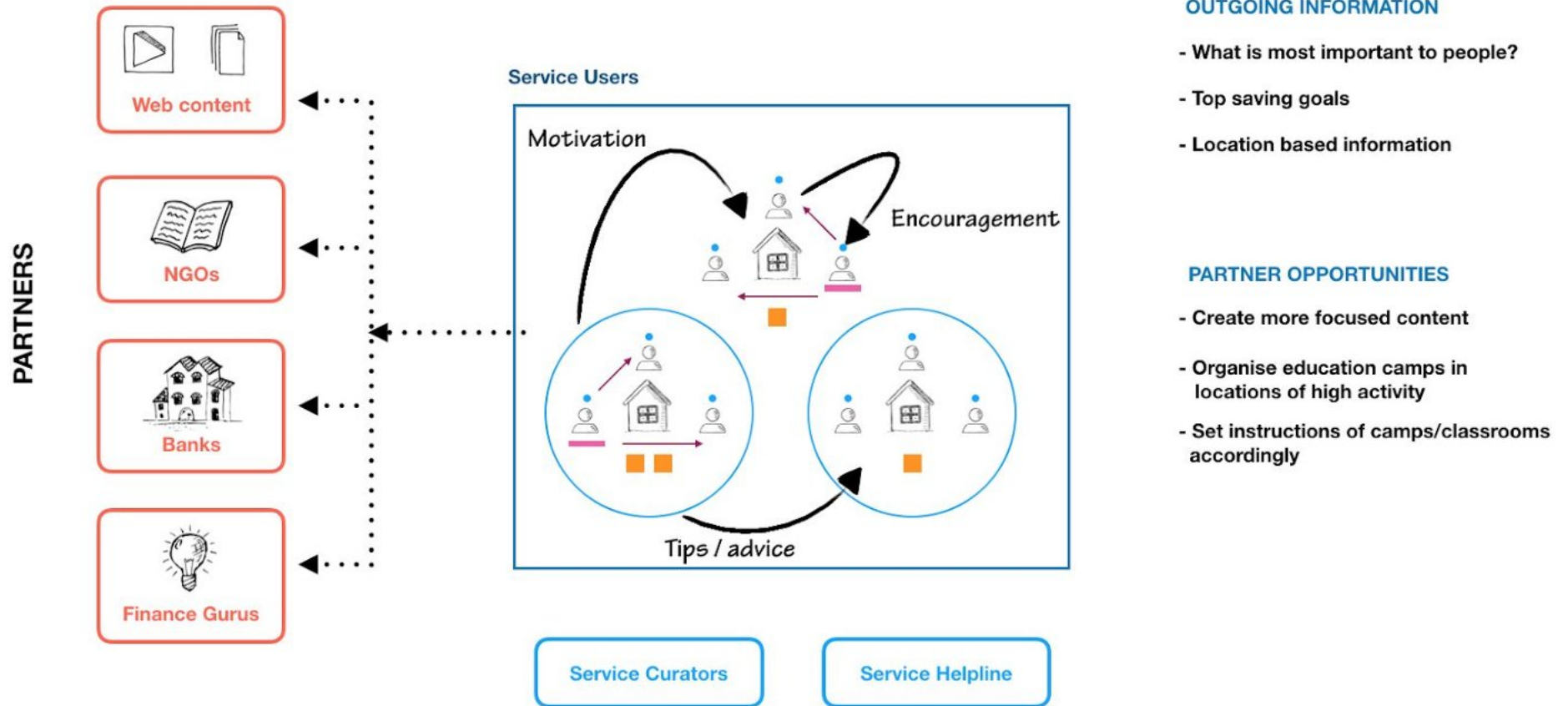
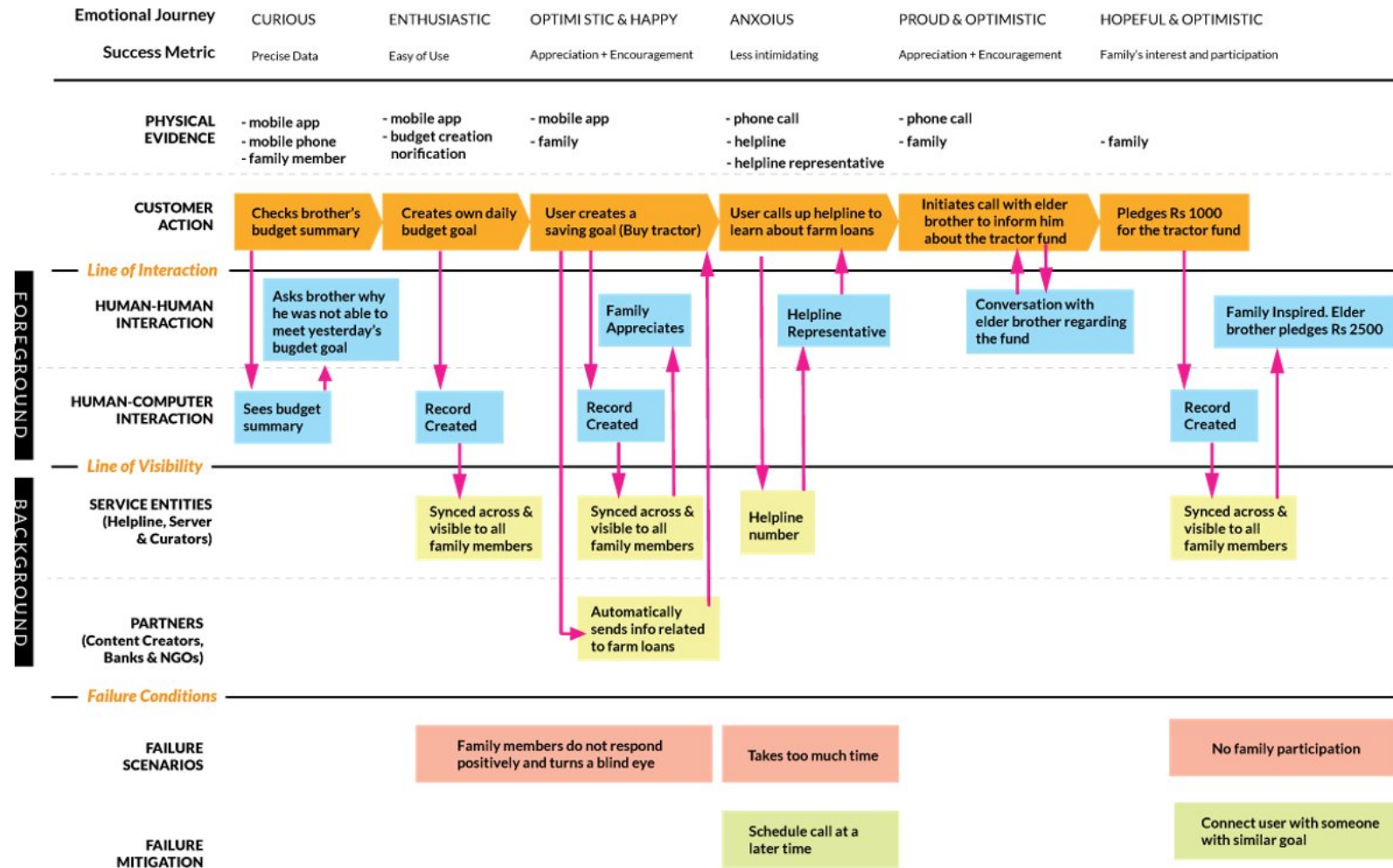


Figure 12 : The service also feeds information back to the partner network

Service Blueprint



Comparison with other Services

	Expense Tracking	Budgeting	Bank Account	Saving	Social Saving	Financial Advisory	Ecosystem Support	Financial Habits
Walnut	Yes	Yes	No	No	No	No	No	No
Wally	Yes	Yes	No	Yes	No	No	No	No
Mint	Yes	Yes	No	Yes	No	No	No	No
PocketGuard	Yes	Yes	No	No	No	No	No	No
Albert	No	No	No	Yes	No	Yes	No	No
SmartyPigs	No	No	No	No	Yes	No	No	No
Acorns	Yes	No	Yes	Yes	Yes	No	No	No
HomeBudget	Yes	Yes	No	No	No	No	No	No
Folio	No	No	Yes	Yes	No	No	No	No
Thriv	No	No	No	Yes	No	No	No	No
Proposed Service	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

Figure 13 : The proposed service has expense tracking, daily budgeting, works without a bank account, allows social saving for personal and collective goals, have support of the wider financial literacy ecosystem e.g. financial advisory, providing financial habits and goal-oriented tips, content and workshop invites.

PERSONA

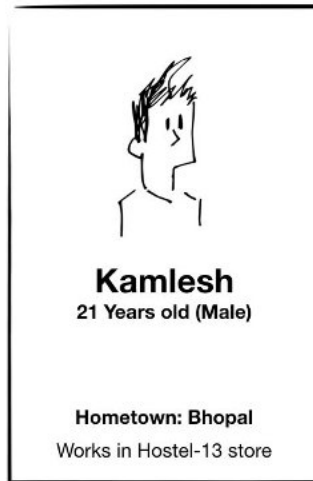


Figure 14 : Persona of Kamlesh
who works in Hostel-13 store

Persona Description

1. Kamlesh works in Hostel 13 store and is also a professional dancer.
2. He left home when he was 16 years old due to financial crisis.
3. He moved to Delhi with his uncle and worked in a sweet shop as a cleaner.
4. He came to Mumbai 1 year ago, got job through family networks.
5. He lives in Mumbai with his "Bua" in Phulenagar.
6. He earns 8000 / month. Sends 6000 home and lives on 2000/month.
7. He tries to save money but considers drinking alcohol necessary
8. He pays 500/month to his village community fund as loan repayment for sister's wedding
9. Uses Facebook, Youtube and WhatsApp (for business) mostly.
10. Has two brothers who work in Ahmedabad
11. He dreams of starting his own business one day

Persona : Motivators

The following can motivate Kamlesh to adopt the service::

1. Kamlesh is interest in saving and sees its importance in times of financial shocks.
2. He wants to improve the condition of his village home before he gets married.
3. He values education and work not want this children to leave school and start working like he did due to family's financial condition.
4. He is interested in increasing revenues by opening a new business or improving the agricultural lands in his village.
5. He is highly motivated to change his financial condition.

Persona : Disruptors

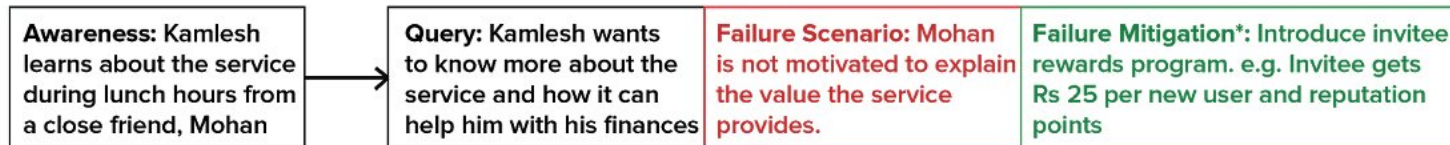
The following can disrupt Kamlesh's adoption or proper use of the service:

1. Kamlesh might not be able to convince his family members to use the service. Since the service leverages on the family, such an incident might render the service valueless for Kamlesh. In such a case, Kamlesh will be only able to perform expense tracking and daily budgeting only.
2. Since Kamlesh doesn't have a savings account and keeps money in cash, he might find it difficult to logically divide his cash into different savings goals.
3. Kamlesh might feed false expense data so that he doesn't have to face cross-questioning by his family members for bad financial habits.
4. Since the savings exists in cash, Kamlesh might spend it in full or part and not update the savings records in the service. This will lead to false data, which will be viewed by his family members.

Critical Service Encounter Examples: Awareness and Onboarding

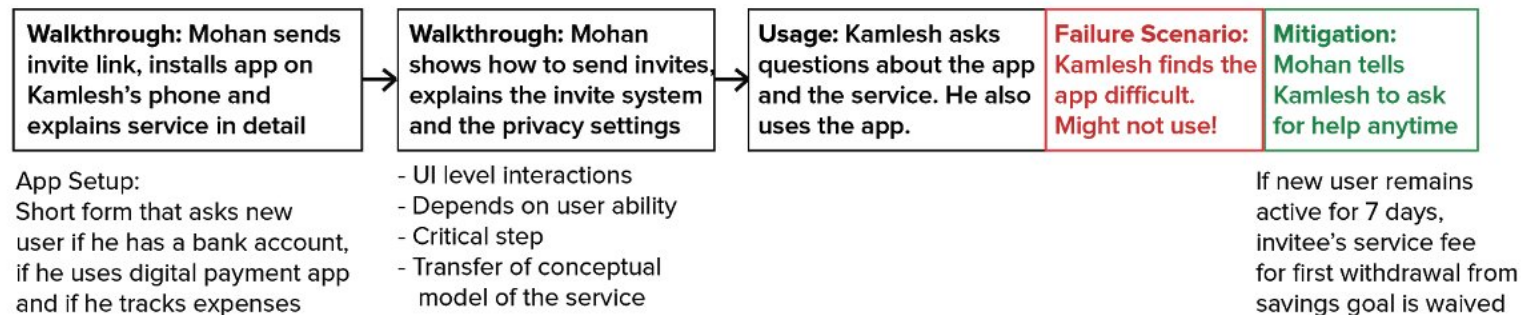
Environment: Workplace

PRE-ENCOUNTER



* More the reputation points, less is the service fee during withdrawal from savings fund

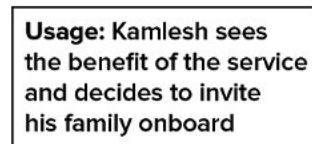
SERVICE ENCOUNTER



POST-ENCOUNTER



Case 1 : Potentially Unsuccessful onboarding



Case 2 : Successful Onboarding

Critical Service Encounter Examples: Creating Budget (Till 1 week of onboarding)

PRE-ENCOUNTER

Kamlesh is not very excited about this new app. He is skeptical if the app will be helpful

SERVICE ENCOUNTER

Kamlesh gets a notification that he needs to create a daily budget

Failure Scenario:
Kamlesh ignores the notification

Case 1

Kamlesh creates a daily budget goal out of curiosity

Appreciate. Notify Mohan to appreciate

Case 2

POST-ENCOUNTER

Failure Scenario:
Kamlesh doesn't create a daily budget at all

Case 1 : Budget goal creation failed. Kamlesh is very likely to never engage with the service

(end of day) Appreciate Kamlesh if he achieves his daily budget, encourage if he fails

Mohan drops a message of appreciation or motivation on Whatsapp.

Case 2

Critical Service Encounter Examples: Creating Budget (After 3 weeks)

Situation: Kamlesh now a regular on the app. Creates daily budget and tracks expenses

PRE-ENCOUNTER

Kamlesh is planning to invite his family members to save for the upcoming wedding of his brother

SERVICE ENCOUNTER

Kamlesh gets a notification that Mohan missed his daily for three consecutive days

Failure Scenario:
Kamlesh ignores the notification

Mitigation:
Increase reputation points as a function of how many days Mohan missed the budget. If Mohan becomes active, Kamlesh gets all the points in one shot.

Case 1

POST-ENCOUNTER

Failure Scenario:
Kamlesh doesn't care at all and ignores the plight of Mohan because of a quarrel they had a few days back

Case 1

Kamlesh decides to act and asks Mohan if everything is alright

Case 2

Critical Service Encounter Examples: Inviting family members

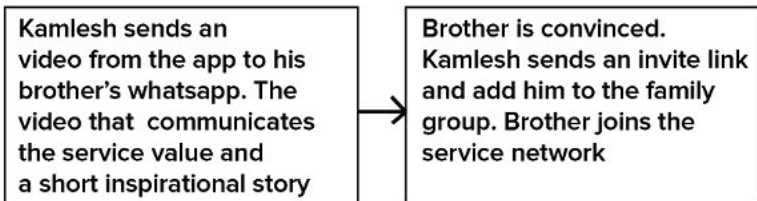
PRE-ENCOUNTER

Kamlesh talks to his father and brother and tell about this new service. Asks them to install the app	Failure Scenario: Family members un-enthusiastic	Mitigation: Kamlesh knows his elder brother can convince his father to join in
---	--	--

SERVICE ENCOUNTER

Kamlesh sends an video from the app to his brother's whatsapp. The video that communicates the service value and a short inspirational story	Failure Scenario: Brother is not on whatsapp or is still not motivated to join
--	--

Case 1



Case 2

POST-ENCOUNTER

Failure Scenario: None of Kamlesh's family members joined the service

Case 1

Kamlesh tells them about the features and how they should use the service to steadily save for their eldest son's wedding the next year

Case 2

Critical Service Encounter Examples: Creating a personal saving goal for a food cart

Situation: Kamlesh and his brother are saving for the marriage goal on a weekly basis

PRE-ENCOUNTER

Kamlesh tells his brother that he wants to create his personal saving goal to buy a food cart	Failure Scenario: Brother doesn't approve. Tells him they should focus on one goal at a time	Mitigation: Kamlesh tells his brother that he would reduce Rs X from the wedding goal and devote it to his new personal goal. He convinces his brother to tell their father to join the network
---	--	---

SERVICE ENCOUNTER

Kamlesh opens a new personal saving goal and pledges to save Rs 1000 per month.	Failure Scenario: Kamlesh is disheartened as his brother didn't appreciate his saving goal	Mitigation: Notify Kamlesh about the people nearby him, who have a similar goal. Encourage Kamlesh to open a "local interest group" and invite them or join an existing "local interest group. Inform him about the value of being a part of such an interest group i.e. meeting up like-minded people, the exchange of knowledge and support
---	--	---

Case 1

POST-ENCOUNTER

Failure Scenario:
Kamlesh is still disheartened and decides to focus more on his personal goal rather than the family goal.

Case 1

Kamlesh realises although family is important but being in a local group of like-minded people is more beneficial to achieve his goals.

Case 2

SERVICE EVALUATION

Survey

A survey of 4 evaluators (T) were conducted. These were the sample people who were present in the primary research. The questions that were asked were:

1. Do you feel it is necessary to know your family member's financial habits?
2. Do you feel goal-based savings is better than generic saving?
3. Do you feel family members will collaboratively save for common goal?
4. Do you feel that your family members will save in your personal goals?
5. Do you feel the need to talk to experts for financial advice?
6. Do you feel knowing where your money is going will help your cut Expenses?

The questions were derived from to validate the core ideas that were used to design the service concept. The responses are as follows:

	T1	T2	T3	T4
Q1	Yes	No	No	No
Q2	Yes	Yes	Yes	Yes
Q3	Yes	Yes	Yes	Yes
Q4	No	Yes	No	Yes
Q5	No	No	Yes	No
Q6	Yes	Yes	Yes	Yes

Assumption Validation

Assumption 1:

Users will take action when they see that family members are not budgeting daily or missed daily budgeting goals.

	Intended Emotion	Observed Emotion	Intended Action	Observed Action
T1	Worry, Concern	-	Inquire (Call, Text)	Do Nothing
T2	Worry, Concern	Curious	Inquire (Call, Text)	Call
T3	Worry, Concern	Concern	Inquire (Call, Text)	Call
T4	Worry, Concern	Concern	Inquire (Call, Text)	Call

Here, T1 said he would not inquire because if his family member is not budgeting, it's probably because he forgot or is busy hence it is not a major concern. If the family member had any problems, he/she would get in touch with him.

Assumption 2:

Users will take action when they see that family member missed monthly saving goal.

	Intended Emotion	Observed Emotion	Intended Action	Observed Action
T1	Worry, Concern	-	Inquire (Call, Text)	-
T2	Worry, Concern	-	Inquire (Call, Text)	-
T3	Worry, Concern	-	Inquire (Call, Text)	Call
T4	Worry, Concern	-	Inquire (Call, Text)	-

All the evaluators felt this is not a major concern. There could be many reasons why someone might not save for a monthly goal. They believed it is most likely due to some financial problems and also that particular family member should not be forced to save as it might be embarrassing for him/her.

Assumption 3:

Users will motivate and appreciate when a family member creates a new personal / family saving goal.

	Intended Emotion	Observed Emotion	Intended Action	Observed Action
T1	Happy, Inspired	Happy	Appreciate (call / text)	Call
T2	Happy, Inspired	Happy, Inspired	Appreciate (call / text)	Whatsapp

T3	Happy, Inspired	Happy	Appreciate (call / text)	Call
T4	Happy, Inspired	Happy	Appreciate (call / text)	Call

EVALUATION RESULTS

The service fared well overall. Most of the assumptions that were used to design the concept receive positive response expect the assumptions used for monthly savings goal.

FUTURE WORK

This service can be extended to a digital savings system where each saving goal would be similar to a digital wallet. Integration with bank account or cards can be incorporated for easy deposits.

CONCLUSION

In this service design project, I identified that lack of expense tracking habits (a fundamental financial literacy skill) has several short-term and long-term effects that eventually leads to young migrant workers being unable to save or exhaust their existing savings during financial shocks. Due to this, their future plans and aspirations get affected. In addition to this, financial literacy classroom programs have proved to be ineffective due to the long gap between knowing and doing. Keeping these issues in mind, I have suggested a service concept that enables individuals to create daily budget and track their expenses. In addition to that, the service allows those young individuals to create personal and collective family saving

goals for the entire family to collaboratively save. Goal-oriented saving emerges out the the things that the individual values the most or wants to achieve. Hence, it works as a motivating factor to engage in savings. Based on the goals of the individuals, necessary financial tips, information and concepts are provided to the user.

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