Hiring of an agency for the "Development of SEWA App and user training of SEWA teams in app management and usage"

Request for Expression of Interest

SEWA has received financing from the Japan Social Development Fund towards the World Bank-managed project **India Digital inclusion of Informal Sector (TF0A9908) Project** and intends to apply part of the proceeds for above consulting services.

In view of SEWA's growing membership and network, SEWA requires a digital platform that can facilitate two-way communication, training, data collection and other services for key SEWA stakeholders including SEWA members, district and local leaders, and SEWA management. Given the ubiquity of mobile devices, SEWA plans to achieve this through the SEWA App.

The **objectives of this assignment** are mentioned below:

1. Software development of SEWA App (web and mobile platforms) and upgradation / integration of MMS & mBachat

2. Hosting, support and ongoing maintenance of SEWA App, MMS, mBachat, and its data

3. User Training of SEWA managers, master trainers and grassroots leaders in using / managing SEWA App.

SEWA now invites eligible Software Development Firms/Agencies to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services.

The agency is required to submit the following:

- Agency's Profile with Details of the clients and key features of the technology solutions implemented by the agency should be provided

- Agency's Team Profile

- Technical Proposal for this assignment including the following:

    o Overall System and Data Architecture
    o Overall Project Management Process
    o Risks and Mitigation Factors
    o Responsibility Matrix
    o Escalation Process
    o Dependency and Assumption
    o Project Schedule and Timelines

- Broad wire frames / Sample Designs of the proposed solution

An agency will be selected as per the selection criteria in accordance with the **CQS method** set out in the "The World Bank Procurement Regulations for Borrowers under Investment Project Financing", dated July 1, 2016, revised in November 2017 and August 2018.

The detailed selection criteria are provided in the attached Terms of Reference (TOR).

The agency would be appointed for a period of 2 years and must complete the assignment and submit the deliverables within this time period.

Expression of Interest (along with information indicating qualification to perform the Services) super scribed *"Development of SEWA App and user training of SEWA Teams in app management and usage"* must be emailed on or before **8th September, 2020 (5.00 PM)**.

KINDLY NOTE THAT NO FINANCIAL BID SHALL BE SUBMITTED AT THIS STAGE.

For further information, please refer to the enclosed ToR and the same is available on the SEWA Manager Ni School website. (www.sewamanagernischool.org)

Mr. Rushi Laheri	Ms. Smita Bhatnagar
Head – IT	Senior Coordinator
SEWA	SEWA Manager Ni School

Contact:

Email: smita@sewamanagernischool.org, rushilaheri@sewa.org

Address: SEWA Manager Ni School

8, Navrang Colony, Besides Kashmira Chambers,

Near Navrangpura Railway Crossing and Mount Carmel School,

Navrangpura – 380015, Ahmedabad

JSDF TF 072608: India SEWA 2025 Digital Financial Inclusion of Informal Sector

Terms of Reference (ToR)

Development of SEWA App and user training of SEWA teams in app management and usage

Table of Contents

1. Background

JSDF TF 072608: "India SEWA 2025 Digital Financial Inclusion of Informal Sector" is a Japan Social Development Fund[1]-supported and World Bank Group[2]-managed project with the objective of fostering increased use of digital financial services (DFS) by women engaged in informal activities. The project works with women from low-income and marginalized households and excluded communities in 29 districts across six Indian states, namely, Gujarat, Rajasthan, Uttar Pradesh, Bihar, Assam and Meghalaya.

The project is implemented by the **Self Employed Women's Association (SEWA)**. SEWA is a trade union registered in 1972. It promotes the rights of low-income, self-employed women who earn a living by working in the informal sector. It currently has operations in 18 Indian states and has approximately 1.7 million members. SEWA's main goals are to organize women workers for full employment, which means workers obtain work security, income security, food security and social security (at least health care, child care and shelter). SEWA works through a network of grass root member lead organizations across diverse areas targeting member welfare - food and health security, income security, financial inclusion among others. SEWA has several sister organizations which are registered as Co-operatives or Section 25 companies or Non-governmental organizations which work closely with SEWA to provide basic livelihood facilities to SEWA members as well as provide income-generating opportunities to them. Some of these are RUDI and SEWA Trade Facilitation Center (STFC). For more information, visit www.sewa.org.

The project targets SEWA members who lack capacity to access digital / mobile technologies for financial transactions and need to be financially literate to keep pace with contemporary market requirements, improve their livelihoods and increase their incomes. The project also supports SEWA in digitizing its service delivery to serve its members better, and improve efficiency and productivity. An estimated 500,000 beneficiaries are expected to be impacted.

The project also collaborates with the Phase 1 (2019-2022) of the IFC[3]-supported 'SEWA Transformation Plan 2025', a 360-degree transformation plan for SEWA that takes a phased, systematic approach to

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[1] The **Japan Social Development Fund (JSDF)** is a partnership between the Government of Japan (GoJ) and the World Bank, conceived in the wake of the Asian financial crisis in the late 1990s. It was established in June 2000 as a grant mechanism to provide targeted assistance to groups made vulnerable by the financial crisis in low- and lower-middle-income countries around the world. The objectives of the JSDF program is to provide grants in support of community-driven development and poverty reduction projects that empower the poorest and most vulnerable groups not reached by other programs and improve their lives through direct benefits.

[2] The **World Bank Group (WBG)** is a family of five international organizations that make leveraged loans to developing countries. It is the largest and most well-known development bank in the world, and is an observer at the United Nations Development Group. The bank is based in Washington, D.C. and provides loans and assistance to developing and transition. The WBG's stated mission is to achieve the twin goals of ending extreme poverty and building shared prosperity. The **World Bank (WB)**, a component of the World Bank Group, is an international financial institution that provides loans to countries of the world for capital projects. It comprises two institutions: the International Bank for Reconstruction and Development (IBRD), and the International Development Association (IDA). The World Bank's most recent stated goal is the reduction of poverty. As of November 2018, the largest recipients of world bank loans were India ($859 million in 2018) and China ($370 million in 2018), through loans from IBRD. For more information, visit www.worldbank.org.

[3] **International Finance Corporation (IFC)**, a member of the World Bank Group, is the largest global development finance institution focused exclusively on the private sector. Working with private enterprises in about 100

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enable SEWA to expand its membership base across India, strengthen its operating model and significantly improve its service offerings and performance across multiple parameters.

SEWA's existing web- and mobile-based applications

SEWA has developed three web-cum-mobile applications, namely, the Membership Management System (MMS) for tracking and renewing membership, mBachat for tracking savings and loan repayments of members and the Rudi Sandesha Vyavhar (RSV) for its agribusiness members. All three systems have been developed on ASP.NET / SQL Server. A brief description of these applications along with the context is provided in Annexure 1.

SEWA App

As SEWA's membership grows, keeping members engaged and informed becomes increasingly important and challenging. Given the ubiquity of mobile devices (including smartphone devices), and good 3G/4G connectivity, SEWA believes that there is an opportunity to improve the reach, efficiency and management of its services as well as achieve substantial reduction in cost, time and effort expended by SEWA managers / leaders at all levels, by developing a mobile application (henceforth referred to as "SEWA App") that can be used by the entire SEWA community including members, grassroots leaders and managers. SEWA App will be developed over the existing SEWA member database underlying MMS.

The project seeks to hire a software firm (henceforth referred to as "the agency") to undertake the web- and mobile-based development, hosting, support and ongoing maintenance of SEWA App, as well activities related to SEWA's web-cum-mobile applications mentioned above.

2. Objectives

The objectives include the following:

1. Software development of SEWA App (web and mobile platforms) and upgradation / integration of MMS & mBachat
2. Hosting, support and ongoing maintenance of SEWA App, MMS, mBachat, and its data
3. User Training of SEWA managers, master trainers and grassroots leaders in using / managing SEWA App.

3. Scope of Work

The scope of work is divided into two parts.

Part A includes (a) Software development of the SEWA App (b) User training, and

Part B includes hosting, support and ongoing maintenance of the above mentioned applications.

The description is as follows:

PART A

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countries, IFC provides advisory services to a number of its clients to support them in meeting specific development goals. For more information, visit www.ifc.org.

Software Development:

The general aspects are:

a. Software development of SEWA App includes development of six categories of features, namely, (i) Basic SEWA App features (ii) Learning platform (iii) Digital survey (iv) Digital directory (v) Member evaluation (vi) Membership access card features

b. The App will be used by three categories of users (i) members (ii) aagewans / trainers (iii) coordinators / senior management. The features / components of the app that are visible and accessible to each category of users will accordingly be different

c. Capabilities to integrate WhatsApp APIs for messaging purpose

d. Strong documentation of entire development and deployment process with graphics and codes

e. The App should be developed in at least three languages: English, Hindi and Gujarati.

f. Platform for the App is Android.

The individual components of each of the six category of features can be divided into Phase I and II. Annexure 2, which gives a detailed list of functionalities for each of the six category of features, provides an indicative division between Phase I and II. This may, however, be subject to changes, based on mutual agreement between SEWA and the agency in course of development.

The list of features to be developed by the agency are summarized below. Refer to Annexure 2 for a more detailed list.

1. **Basic SEWA App features:**
   1.1. Welcome Screen with Splash Screen displaying Audio-Visual content of SEWA
       1.1.1. About SEWA, objectives, membership, geographic spread, initiatives, impact, success stories, proposed programs, other relevant information
       1.1.2. Link to become SEWA Member
       1.1.3. Register on SEWA App
       1.1.4. Login to SEWA App
   1.2. Member Home Screen
       1.2.1. Top Ribbon with Bell icon for Notification, SEWA App share icon, Language Switch and Logout
       1.2.2. 3 Tabs including SEWA Information, Members Information and Other Information
       1.2.3. The SEWA Information Tab will have a Splash Screen displaying Audio-Visual content of SEWA specific to registered members
       1.2.4. Below the Splash Screen, icons of all other SEWA App features will be displayed
       1.2.5. The Members Information Tab will show each member their demographic profile and a summary of the features they have used
       1.2.6. The Other Information Tab will show icons to get information on Govt schemes, news, games, events, SEWA Youtube, Education Aids etc
   1.3. Web Portal Pages for the Basic SEWA App for a central team to manage User Creation, User and Rights Management, Upload Content to push to SEWA App, Create and Send Notifications to SEWA App, Send Automated System Notifications to SEWA App from Multiple SEWA App Features etc.

2. **Learning Platform:** Member will be able to view training and answer quizzes and Trainers can conduct trainings for multiple members.
   2.1. Member Mode: Member will be able to access self-learning and assessment modules in both online and offline modes
      2.1.1. Home Page will have 3 Tabs, Completed, New and Ongoing
         2.1.1.1. Complete Tab will list completed subjects under a training program with earned credits
         2.1.1.2. New Tab will list all new training programs
         2.1.1.3. Ongoing Tab will list all downloaded training programs
   2.2. Trainer Mode: Trainer will be able to view and undergo training, answer quizzes and will also be able to conduct training for multiple members.
      2.2.1. A button "Conduct Training" will allow the Trainer to switch to the Trainer Mode.
      2.2.2. On clicking this, the trainer statistics will be shown in the top half of the screen and the bottom half will have 3 Tabs: New, Ongoing and Completed
         2.2.2.1. New: Will list all new trainings which are available to download and conduct
         2.2.2.2. Ongoing: Will list all trainings which have been conducted, along with the count of number of members who have completed the training
         2.2.2.3. Completed: Will list training batches which have been completed by the Trainer
   2.3. Web Portal Pages for the Learning Platform to define categories, upload and manage training programs, subjects and modules. Create and upload quizzes (assessment) for each module and subject. Assign training to members and trainers on multiple parameters like geography, trades, age range, income range etc. Statistics and Dashboard.

3. **Digital Survey:** Members will be able to answer surveys and Leaders can conduct surveys for multiple members
   3.1. Member Mode: Members will be able to take published / assigned surveys in both online and offline mode
      3.1.1. Survey home page will have 3 tabs: OnGoing, Completed and New
         3.1.1.1. Downloaded surveys will be shown under OnGoing Tab
         3.1.1.2. When a survey gets completed, it will be shown under Completed Tab
         3.1.1.3. Initiated surveys from the Portal will show under New Tab
   3.2. Leader Mode: Leader will be able to view and take a survey and will also be able to conduct surveys for multiple members.
      3.2.1. A button to switch to the Leader mode will be shown
      3.2.2. On clicking this, the leader statistics will be shown in the top half of the screen and the bottom half will have 2 tabs: New & Ongoing
         3.2.2.1. New: Will list all new surveys which are in "Initiated" or "Downloaded" status at server.
         3.2.2.2. Ongoing: Will list all surveys which have been conducted (downloaded) along with the count of the number of members who have completed the survey

3.3. Web Portal Pages for the Digital Survey to create Question-Answer Bank, create Surveys, assigning Surveys to members and leaders based on multiple parameters like geography, trades, age range, income range etc. Statistics and Dashboard.

4. **Digital Directory (DD):** Member should be able to 1) see products & services she has listed on DD, 2) add her products and services to the DD, 3) access the list of products and services offered by other members and share her interest / requirement for a particular product or service, 4) see responses received on products / services from other members

    4.1. Member Mode: The DD home screen will have a search box to allow search and listing of products with parameters like product / service category, geography, price range etc. on the screen

        4.1.1. Clicking on any product from the searched list will open product information with photos and an option to add it into cart

        4.1.2. Clicking on the Cart icon will list all products added to cart

        4.1.3. Bottom ribbon to show: My Listing, Add, Responses

            4.1.3.1. My Listing: clicking this option will open a screen where seller can see products / services listed by her on DD.

            4.1.3.2. Add: Will allow member to add a product / service under a particular trade category

            4.1.3.3. Responses: Clicking this option will open a screen displaying responses / notifications on the member's products added by buyers into their cart

        4.1.4. All products / services of the mapped members will be connected with her Membership profile

        4.1.5. Transactions / movements against each product will be stored, with details like sell date, buyer, buyer contact details, selling price etc.

    4.2. Leader Mode: The regular features of the DD will be available which Leader can use for herself as described in member mode

        4.2.1. Button "Mapping form" will be shown to switch to Leader Mode

        4.2.2. On clicking this button, Leader can access the entrepreneur mapping form, in which she can fill-up the profile details of a member as an entrepreneur by adding details of products / services offered by members such as member details, basic description, price, availability, contact details and one picture of the product.

    4.3. Web Portal Pages for the Digital Directory will allow generation of a list of interested Micro Entrepreneurs in Excel, Filling in a Mapping Form for a member from the Portal, Editing and uploading additional and final information in the form, Approval of the Mapping Form entered by Leaders using the SEWA App. The Portal will also generate reports and statistics based on requirements.

5. **Member Evaluation:** Collect information of members on six parameters - Food, Clothing, Shelter, Health, Education and Access to Finance

    5.1. Member Mode: Clicking the ME icon will show the 6 parameters (food, clothing, shelter, health, education, access to finance) and the selected option of the member for each parameter. One parameter per screen will be shown highlighting the member status under each parameter

5.2. Leader Mode: Leader will be able to select and mark a member's status on each of the above mentioned parameters. All parameters will be shown to the leader with 3 options; leader has to mark 1 appropriate option for a member and will choose a total 6 options for all 6 parameters.

5.3. Web Portal Pages for Member Evaluation will be able to generate reports on all 6 parameters with multiple options like geography wise, year wise, comparative years etc.

6. **Membership Access Card (MAC): A** printed Members' Access Card with Barcode can be generated based on the existing member's data in MMS and provided to members. The Access Card provided to members will only be used and valid for retrieving their digital data from SEWA's Digital Platform.

   6.1. MAC in SEWA App: A Bar code icon will be shown in the SEWA App home screen.
       6.1.1. On clicking this, the Bar Code of the member will be shown
       6.1.2. Leader / Trainer can scan this to autofill the Membership number

   6.2. MAC in Web Portal Page: Once this option is clicked, a new page will open which will describe the MAC generation process in brief
       6.2.1. 3 options will be provided to generate MAC: Village-wise, Leader-wise and For a Specific Member
       6.2.2. Generate button: On clicking this, MAC will be generated and will be allowed for download into user's computer.

User training:

The agency will develop and deliver a comprehensive training program for a team of SEWA participants towards familiarization with the various features of the application.

- Training programs may be conducted after each development milestone, once the features have been tested and rolled out
- Trainees may include SEWA members, grassroots leaders, district / state level managers and other users, as identified by SEWA
- Trainings will be conducted in Ahmedabad.

PART B

Annual Maintenance: Hosting and maintenance of application and data

The agency will be responsible for hosting and maintenance of the application and data, upon deployment of the first version of the app, until the end of the project period, i.e. two years after the date of signing of contract. This will include:

- Bug fixes
- Minor enhancements, especially in improving user friendliness
- Remedial trainings, if and when required
- Hosting the application, portal and data of SEWA App, MMS and mBachat
- Annual maintenance of the applications and their data
- Updated documentation after any change in the software
- Backup and data security of the hosted applications and its data.

This part of the contract is renewable based on terms mutually accepted by SEWA and the agency.

4. Deliverables, timelines and milestones

The overall duration of the project is 2 years.

The duration of Part A of the assignment (development + trainings) is one year. Deliverables and timelines are as follows:

Deliverable		Timeline
Submission of detailed designs and wireframes of various screens, forms and interfaces		Date of signing contract (D) + 15 days
Finalization of designs and wireframes based on feedback from SEWA team		D + 25 days
Development milestone #1	Version 1 Development, including: • Basic SEWA App features (Phase I) • Membership Access Card (Phase I)	D + 75 days
	Version 1 Rollout after testing, and feedback from SEWA	D + 90 days
Development milestone #2	Version 2 Development, including: • Learning Platform (Phase I) • Digital Survey (Phase I) • Basic SEWA App features (Phase II) • Membership Access Card (Phase II)	D + 165 days
	Version 2 Rollout after testing, and feedback from SEWA	D + 180 days
Development milestone #3	Version 3 Development, including: • Digital Directory (Phase I) • Member Evaluation (Phase I) • Learning Platform (Phase II) • Digital Survey (Phase II)	D + 255 days
	Version 3 Rollout after testing, and feedback from SEWA	D + 270 days
Development milestone #4	Version 4 Development, including: • Digital Directory (Phase II) • Member Evaluation (Phase II)	D + 345 days
	Version 4 Rollout after testing, and feedback from SEWA	D + 360 days
User training of SEWA team – needs to be done for each Version rollout		D + 365 days

The duration of Part B (annual maintenance) extends from the point when the first version of the app goes live to the end of contract, i.e. two years after date of signing contract.

Deliverable	Timeline
Part B: Annual maintenance (hosting and maintenance of application and data)	D + 90 days (after Version 1 goes live) to D + 730 days (end of contract period)

5. Requirements and Team composition

The agency must demonstrate capacity and capabilities in the following:

- Must have been in operation for at least 10 years as of January 31, 2020
- An average annual turnover of Rs 4.50 crore or above for the last 3 years, from delivering ICT-based solutions including mobile- and web-based MIS, ERP and similar data management systems
- Proven experience of implementing and maintaining functional web-cum-mobile MIS solutions in at least 3 organizations in the past 5 years
- Proven experience of developing and maintaining MIS solutions for large member-based non-profit institutions such as SEWA will be given additional weightage
- Track record of timely execution of activities, with willingness and ability to start immediately after signing of contract.

The agency is expected to put in a place a competent, dedicated team to ensure that the deliverables are of the highest quality. Applying agencies are encouraged to familiarize themselves with the project and specific tasks at their own cost, before submitting the proposal; and propose an adequate number and skill-set for the senior specialists and technical support staff required for this assignment. However, basic minimum requirements are specified in the team composition in the following table. The agency is free to employ additional resources as it sees fit.

Team Member	No. of Members	Qualification, Experience, Responsibilities
Project Lead / Lead Programmer	1	Post-Graduation, Software / Computer Engineering / Application Minimum 5 years of experience in development and maintenance of mobile and web-based MIS applications and similar software applications. Responsible for overall delivery of the assignment including development, maintenance and training
Programmers (including Tester and Database Specialist)	4	Graduation (BSc, MSc), Software / Computer Engineering / Application Minimum 3 years of experience in development and maintenance of mobile and web-based MIS applications and similar software applications. Responsible for development of various features of the mobile application and the web application,
Graphic / User Interface Designer	1	Graduation in Graphic Design / New media design / Animation Design At least 5 years of experience in designing web sites, mobile applications and new media. Responsible for overall look-and-feel of the screens, forms and

		interfaces.
Trainer	1	Graduation (BSc, MSc), Software / Computer Engineering Minimum 5 years of experience in conducting user trainings in mobile- / web-based software applications. Responsible for providing refresher trainings to SEWA members/managers/leaders.

6. Selection criteria, sub-criteria, and point system for the evaluation of the proposals

Criteria	Points
Relevant experience of the Agency for this assignment The points will be given as mentioned below: 	Sr No.	Number of Years of Experience	Points to be given
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1	1 to 5 years	10
2	6 to 9 years	20
3	> 10 years	30		30
Number of Assignments/Organizations worked with for implementing and maintaining functional web-cum-mobile MIS solutions in the past 5 years The points will be given as mentioned below: 	Sr No.	Number of assignments	Points to be given
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1	1 to 4	15
2	>4	30		30
Key expert's qualifications and competence for the assignment* • Project Lead/Lead Programmer (20 points)	20
Experience of developing and maintaining MIS solutions for large member-based non-profit institutions	20
Total	**100**

*The number of points to be assigned to the position of key expert position shall be determined considering the following sub-criteria and relevant percentage weights:

- General qualifications (general education,): 25%

- Adequacy for the assignment (experience in the sector/similar assignments): 75%

Kindly provide substantial details substantiated by adequate documents to prove the above criteria

7. Payment Schedule

Payment will be made as per the following milestones:

Billing milestone	% of contract value
Finalization of designs and wireframes	10%
Completion of development milestone #1 and associated user training	15%
Completion of development milestone #2 and associated user training	15%
Completion of development milestone #3 and associated user training	20%
Completion of development milestone #4 and associated user training	20%
3 months after completion of development milestone #4	5%
6 months after completion of development milestone #4	5%
9 months after completion of development milestone #4	5%
12 months after completion of development milestone #4	5%
Total	**100%**

8. Reporting

The agency will report directly to Chief Technology Coordinator, SEWA.

9. Selection Process

All Selections will be in accordance with the "The World Bank Procurement Regulations for Borrowers under Investment Project Financing", dated July 1, 2016, revised in November 2017 and August 2018.
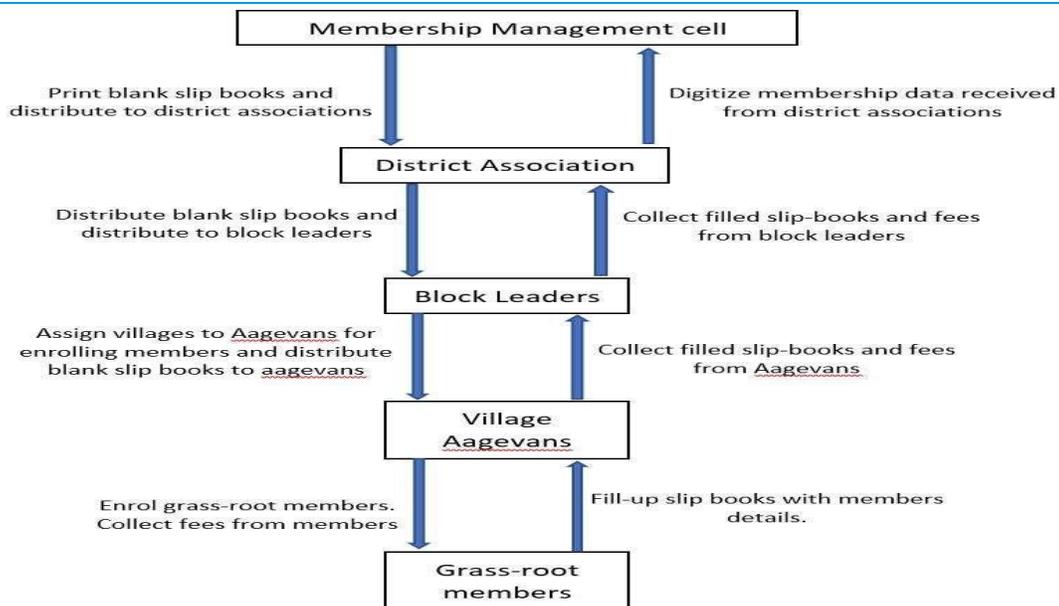
Annexure 1: Description of existing SEWA MIS systems

A. **Membership Management System (MMS)**

As per legal requirements of a trade union, the membership and the profile of each member needs to be renewed every year. The tenure of this membership is from January to December in any particular year. With introduction of ICT activities in SEWA, digitization of membership data was initiated in 2015. This digitization of data was done in the web-based application at Membership management cell at Ahmedabad, Gujarat. The process of enrolling and renewing membership data is carried out by a fleet of village leaders called *"aagewans"*. These *aagewans* report to block-leaders who in turn report to the district associations.

As per the original membership management system, every year the district associations would give an estimate of the number of members they would enroll to the membership management cell. Based on these numbers, blank slip books were printed and distributed to the district associations (district level institutions that manage SEWA interventions at the district level), who would hand over these slip books to the block leaders who in turn would hand them down to the *aagewans*. Each *aagewan* was assigned a few villages and she went door-to-door in each of these villages, manually enrolling members and renewing their membership. For each grass-root member, the *aagewan* had to fill an entire slip consisting of 15 entries in duplicate. This would take about 15 minutes per member. The *aagewans* submit the filled slip books to block leaders who in turn submit them to the district association. The district associations submit these slip books to membership management cell in Ahmedabad where these slip books are digitized. Some of the drawbacks of this process are:

- Duplication of effort: *Aagewans* have to fill the details of each members manually. The same process of manually entering data has to be repeated each year even for members renewing their membership. Since it takes about 15 minutes to renew one member, the *aagewans* hardly have enough time to enroll new members.
- Each slip book consists of 40 pages. The *aagewans* submit the filled slip book to block leaders only when it is completely filled which might take many days in some cases. This delays the information transfer process.
- The filled slip books travel through the hands of *aagewans*, block leaders and district coordinators before it reaches the membership cell. This leads to a time lag of 3 – 4 months between collection of fees and access to data for digitization.
- With increase in membership base, the amount of data needing digitization at central membership cell started growing leading to a time lag of 6 – 8 months. Thus, the digital membership data for any particular year became available only in February or March of the consecutive year.
- Due to this time lag, the usability of this data for policy decisions, organizational decisions etc. reduced.
- Unavailability of real-time monitoring of membership data led to reduced ability to verify bogus entries at grassroot level.

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                    ┌─────────────────────────────────┐
                    │   Membership Management cell    │
                    └─────────────────────────────────┘
    Print blank slip books and              Digitize membership data received
    distribute to district associations          from district associations
                    │                                 ↑
                    ↓                                 │
                    ┌─────────────────────────────────┐
                    │       District Association       │
                    └─────────────────────────────────┘
    Distribute blank slip books and            Collect filled slip-books and fees
    distribute to block leaders                    from block leaders
                    │                                 ↑
                    ↓                                 │
                    ┌─────────────────────────────────┐
                    │          Block Leaders           │
                    └─────────────────────────────────┘
    Assign villages to Aagevans for
    enrolling members and distribute          Collect filled slip-books and fees
    blank slip books to aagevans                   from Aagevans
                    │                                 ↑
                    ↓                                 │
                    ┌─────────────────────────────────┐
                    │     Village Aagevans             │
                    └─────────────────────────────────┘
    Enrol grass-root members.                  Fill-up slip books with members
    Collect fees from members                      details.
                    │                                 ↑
                    ↓                                 │
                    ┌─────────────────────────────────┐
                    │       Grass-root members         │
                    └─────────────────────────────────┘
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SEWA's manual membership management system

To tackle these problems, SEWA's ICT team stepped in to develop and implement a real-time Membership Management System.

In order to address the issues of duplication of effort and unavailability of real-time data, SEWA commissioned the development of a mobile based application in 2016 – MMS, to enable digitization of data at source.

In this mobile app, each *aagewan* is given a separate MMS login. When an *aagewan* logs in to her app, she can see the list of villages assigned to her. Each village has a list of grassroot-members of these villages. The membership data of all the members was uploaded in this app. Similarly, the *aagewans* are assigned to block leaders who in turn are assigned to the district coordinator.

When an *aagewan* logs into her account, she can see the list of villages assigned to her. When she selects a particular village, the name of all the members in that village is displayed. She can select any particular member by scrolling or typing the name in search bar. The user interface is also designed in the local language.

An additional feature of clicking the member's photo and Aadhar number is also included in the app. Thus, when the *aagewan* goes to a member place to renew her membership, she has to open the app, select village, and members name, take the members picture, enter her Aadhar number and make changes to existing data if any. As soon as she presses the accept button, the membership is renewed and the data directly gets transmitted to the district coordinators dash board.

The mobile app is tied to a desktop dash board which can be accessed by the district coordinators. The district coordinators can get a real-time feed of the renewal process. They can also track which *aagewan* is working in which area.

The app has several benefits like:

- Availability of real-time membership data that makes decision making and program implementations more fast and efficient.
- The duplication of data entry is completely eliminated as the *aagewan* directly enters the data into the system.
- Taking members photo and Aadhaar number validates a member and thus chances of bogus entries are eliminated
- Accuracy in accounting as the district coordinator has live data on the total membership fees collected.

The pilot for the app was launched in January 2017 and completed on 31st March 2107. Based on the results of the pilot in areas like ease of operation, challenges and solutions, an enhanced version of the app was launched in May 2017.

B. m-Bachat

One of SEWA's main activities is to create awareness amongst its members about the importance of saving and help them to save by forming Self Help Groups (SHGs) which are called Bachat Mandal in the local language.

Each SHG consist of 15 – 20 members. A Group Leader (GL) is selected from these 20 members who collects savings from these SHG members every month. The SHGs also give loans to its members. The EMIs for repayment of these loans are also collected by the GLs along with monthly savings. The villages are grouped in blocks based on their geography and each block is assigned to an *aagewan* by the District Association (DA). This *aagewan* travels to the DA office every day and check the days on which she has to collect the savings and EMIs from the GLs as well as the villages she has to travel to, and accordingly makes her rounds to those villages. The *aagewan*s intimate the GLs of all the SHGs in any particular village to gather with their savings at a pre-determined place in the village so that she doesn't have travel to each GLs house individually.

When the GLs hand over the collection for their SHG to the *aagewan*, for each SHG, the *aagewan* notes down the name of all the members who have deposited their savings and EMIs for the month. This generally takes about 20 – 25 minutes. She does the similar exercise for all the SHGs in that village. Once she collects savings and EMIs from all SHGs, she makes a comprehensive report of all the saving collected from the village and another report of all EMIs collected from the village.

On many days, the *aagewan*s travel to more than one village and repeats the entire process of savings and EMI collection in each village. On such days, she not only has to make a comprehensive report for all villages individually but also for the entire block thus spending lot of time in paper-work and accounting.

Since the *aagewan*s thus end up spending most of their time in paper-work for existing SHGs, they are hardly left with any time to create awareness about savings and credit activities amongst other rural members and form new SHGs.

The rural members give their monthly savings as well as EMIs in cash hence the *aagewan*s have to carry all these collections in cash and travel from the villages to the district association office usually in public transport. Often this amount is more than 1,00,000 INR and hence very risky for the *aagewan*s.

When the *aagewan*s deposit the money in DA office, they also submit their consolidated collection report. The district association then digitizes this data. Thus, the entire process of savings and loan collection involves repeated manual data recording and data digitization every month leading to lot of wastage of time and effort. Manual data digitization also leaves room for errors in data entry.

To solve the issues related to manual data entry, SEWA's ICT team decided to take the top down approach; instead of manually recording all the details and then digitizing it, it was decided to use pre-digitized data to record the savings. Additionally, to bring in transparency in these financial transactions and to reduce the room for error in data entry, the data entry needs to be done at field level and real-time data transmission is necessary. Keeping all these requirements in mind, ICT team designed a mobile-based application with a supporting web interface called m-Bachat.

Since all the records of all SHGs was digitized at the DA offices every month, SEWA already had a database of all members enrolled in the SHG's along with their association with various SHG's, their savings, credit and loan details. This database was used as master-data for m-Bachat.

Many *aagewan*s had their own tablets (due to experience with other ICT initiatives) and were comfortable using the tablets. Thus, introducing a new application was not a very difficult task. The m-Bachat app was loaded on the *aagewan*s tablets. When the *aagewan* logs into her mBachat account, she can see all the villages assigned to her with their dates of collection. Thus, the *aagewan* doesn't need to visit the DA office to determine which villages she has to visit to collect savings and EMI.

When the *aagewan* visits a particular village, she has to login to her account in the app and she'll be able to see the list of villages assigned to her. Under each village, there'll be a list of SHG's in that village and under each SHG, is a list of all the members in that particular SHG. If any member of SHG has availed a loan, under the name of that particular member there are 2 option - savings and loan.

Upon selecting any particular SHG in a village, the application will by default enter the amount of savings / EMI to be deposited by each member of that SHG in front of their name and shows the total amount to be collected from by *aagewan* from the GL, thus eliminating calculation time and errors. If the GL has the exact amount indicated by the app, the *aagewan* collects the money and presses "OK" button in the app, thus completing the collection process in less than 5 minutes.

As soon as the *aagewan* completes the collection process using the app, the entire data gets automatically updated in real time in the DA's records as well as in the main server – with accounts of each member individually as well as the whole SHG getting updated.

In cases where the GL doesn't have the exact amount indicated by the app, she informs the *aagewan* the names of the SHG members who haven't made the payments that month and the *aagewan* can change the amount deposited by those particular SHG-members as zero. In the consecutive month, the amount to be paid by those particular SHG members shall be automatically updated by the application taking into account the previous dues. Similar features are available in the savings section as well as the loan section of the app.

In the loan section of the app, all the details of the loan are already entered in the app like – name of SHG, Reason for loan, amount of loan taken, EMI, amount repaid, amount pending, duration of loan and interest rate.

The *aagewan*s were also given a blue-tooth thermal printer which is used to print a receipt upon completion of collection process. This receipt contains details like:
* Name of SHG
* Name of village, district
* Date and time
* Name of *Aagewan*
* Name of GL
* Total balance of SHG
* Balance of each individual member

The mobile app is backed by a web interface which has been installed in all the DA offices. This web interface can be accessed by DA coordinators to monitor the savings and credit activities of the *aagewan*s in their district. It gives them a clear idea about the number of active / passive SHGs, increase / decrease in number of SHGs, real-time information about the balance in each of SHGs etc. Any changes in SHG data as in addition / deletion of members can be done through this web interface. The collection details can also be updated from back-end using this interface in case the *aagewan*'s tablet breaks down.

The m-Bachat app was launched in 2016 and as of now is being used successfully and efficiently in all the districts of Gujarat by over 150 *aagewan*s of SEWA.

The response received by the m-Bachat app is extremely positive and has seen many positive impacts making the savings and EMI collection activity of *aagewan*s very quick and easy. Some of the noteworthy impacts of the app are:

* Increase in no of Bachat Mandals: Since the time required for collecting savings and EMI has reduced by more than 75%, *aagewan*s are left with upto 2 hours during their visit to any village. They use this spare time to create awareness about the importance and benefits of savings in rural communities and form new Bachat Mandals. DAs have recorded a marked increase in number of Bachat mandals since the launch of m-Bachat app with an average of 1 – 2 new Bachat mandals per month.
* Reduction in effort: Since the data of all members is pre-fed in the app, *aagewan*s do not have to write anything. Additionally, receipt is printed using thermal printer and hence there is complete elimination of manual writing work. Addition / modification of member data is also done through web interface from DA office.
* Reduction in errors: Pre-fed data eliminates need for manual data entry, thus eliminating chances of error in data-entry. Printed receipt with all the details regarding the Bachat Mandal eliminates the chances of errors occurring in manually recording details. It also imbibes a sense of authenticity and thus builds stronger trust among members.

- Transparency in accounts: Records are directly transmitted from field to server thus increasing transparency in financial transactions. Up-to-date records are available to accounts department in DAs, thus making internal book-keeping and audits smoother.
- Easy access to information: Previously, if an SHG wanted to know their current balance or any individual member wants to know her personal balance / loan details, the *aagewan* would note down these requirements and enquire in the DA office to get the details. She would bring these details during her subsequent visit to the village, thus delaying information access by as much as 1 month. The m-bachat app has a feature to print individual balance of each member. Thus, members can get up-to-date info of their balance/statement on the spot.
- Comprehensive information access: If members of SEWA have invested in fixed deposits or recurring deposits with DA's or SEWA Bank, the statement / balance information about these investments can also be accessed and printed using the app.

Annexure 2: Detailed requirements specifications of SEWA App features

A. Basic SEWA App features – Registration, Login, SEWA, Member, Other information
SEWA App:
1. App should be downloadable from Playstore
2. When the App is invoked, the welcome screen will have the following:
   2.1. Title: SEWA
   2.2. Splash screen below that
      2.2.1. Splash screen to have max 10 items
      2.2.2. At the last content in the splash screen – 'view more' will be shown
      2.2.3. Any image or video clicked in the splash screen will be enlarged in pop-up.
   2.3. On click of 'view more', a list of older content will be shown and user can download any selected content from server; It will not be shown in offline mode
   2.4. Content uploader to take care to remove older content from server
   2.5. Content will be separated as "General", "ForMember", "Intro" so that only content marked as General will be sent to App from server in the welcome screen
   2.6. Below the welcome screen, show buttons:
      2.6.1. **About SEWA** button: Content on SEWA to educate and attract members and non-members. Content types can be SEWA objectives, membership, geography spread, initiatives, impacts, success stories, proposed programs, Other. This will in text. Under each of these types, text will be allowed to be entered from portal. Content marked as "Intro" will be sent from server when this button is clicked
      2.6.2. **Link to become SEWA Member**, where a person can enter basic details like Name, Geography, contact details (Mobile # and/or Mail ID) etc. to express his/her interest to become SEWA member
         2.6.2.1. Upon click, new screen with following dropdowns: SDTV, mobile number, MIC to capture Name, email ID.
         2.6.2.2. Email id is optional, rest are mandatory
         2.6.2.3. If she tries to enrol again, server should send message to App that mobile number is already registered;
      2.6.3. **Link to subscribe** receiving updates and news on SEWA by entering above mentioned details – **Phase 2**.
      2.6.4. Register

2.6.4.1. For first time users; Applicable only for members & SEWA people

2.6.4.2. Basic requirements to register on SEWA App:

 2.6.4.2.1. SEWA Membership ID OR

 2.6.4.2.2. Registered Mobile # in Membership Database

2.6.4.3. On click of Register button, open Registration screen:

 2.6.4.3.1. Registration with Membership ID or Mobile number or MAC with leader support:

 2.6.4.3.2. Member has to enter her membership ID **or** registered mobile # **or** icon to Scan Bar Code printed on MAC

  • In case Member's mobile # is not registered or differs from that in Membership Database, Leader needs to support and update working mobile # in MMS. (MMS App needs to be updated in MMS App for Leaders to Add or Edit Member's mobile #)

 2.6.4.3.3. SEWA App will validate Member in MMS

 2.6.4.3.4. OTP will be sent to registered mobile #

 2.6.4.3.5. User has to enter OTP and Registration will be completed

2.6.4.4. User will be taken to Set PIN screen

 2.6.4.4.1. User id will be auto populated with Phone nbr

 2.6.4.4.2. User will be asked to enter 4 digit PIN

 2.6.4.4.3. And re-enter PIN

 2.6.4.4.4. Then click on SET PIN

2.6.4.5. User is then taken to Login Screen

2.6.5. Login

2.6.5.1. On click of Login button, open Login screen:

 2.6.5.1.1. User id and PIN needs to be entered to login

 2.6.5.1.2. User id will be auto populated with reg mobile nbr

2.6.5.2. Show button for forgot PIN/Change PIN

 2.6.5.2.1. Forgot PIN: Will be handled via OTP

 2.6.5.2.2. Change PIN: User needs to enter old PIN and new PIN twice

 2.6.5.2.3. These can be done only in online mode

2.6.5.3. After Login welcome audio to be played in the language of the member's state

2.6.5.4. SEWA people can log in to SEWA App with their registered mobile nbr

2.6.6. Buttons to change language to Guj, Hin, Bangla, Eng

3. Member Home Screen

 3.1. Top ribbon – Bell icon, share icon, Language switch, Logout

  3.1.1. Bell icon: Will list all notifications; Notifications will be coloured as per DS/LP/DD/External Info/Org categories; Clicking on this will show the details of the notification & give button to open the main screen of that feature; Notifications to be sent for a particular set of criteria

  3.1.2. Share icon: Member can share SEWA App link on social media, SMS

  3.1.3. Language switch: Will allow to switch between Eng & LL; This will be available only in Home screen. **In all screens – Phase 2**

  3.1.4. Logout: Will log out user and take to welcome screen

 3.2. Tabs: SEWA, Member Photo, Other & Bell Icon

  3.2.1. SEWA Tab: Default tab

   3.2.1.1. Splash screen with member content will be shown

  3.2.2. Member:

3.2.2.1. Splash screen will be replaced with summary of survey, trainings, DD, MMS profile; MMS profile will be shown by default

3.2.2.2. Profile photo: Member can change locally – will be saved in App; Not sent to server; Editable

3.2.3. Other: Icons for Govt schemes, News, games, events, SEWA Youtube, Education Aid

3.2.3.1. When any of these icons are clicked, a list of links of diff schemes / games / events / youtube videos / education aids will be opened in a new screen

3.2.3.2. When any of these links is clicked, static info regarding them is shown and a button to take the user to the link

3.2.3.3. Clicking the button will open the specified file

3.3. Below the splash screen

3.3.1. All features (DS/DD/LP/ME) will be shown as icons

3.3.1.1. On click of any icon from home screen, will open the main screen of that feature

3.3.1.2. Each feature main screen design is as discussed in those feature discussions

3.3.1.3. Each of such screens will have an App drawer to show all feature icons

SEWA App Portal:

1. Admin box will be shown in SEWA portal home page
2. On click, options on left shown:
3. State Level Information

   3.1. Add/Remove State/ District/ Taluk/ Village
4. Web User Management

   4.1. Add New Web User with privileges:

   4.1.1. Allow Book Generation

   4.1.2. Allow Member Access Card Generation

   4.1.3. Allow Survey privileges

   4.1.4. Allow Learning Platform privileges

   4.1.5. Allow Adding Products & Services, Approve Mapping form

   4.1.6. Allow push notification

   4.1.7. Upload content for SEWA/Others

   4.1.8. Renew membership

   4.1.9. Approve membership

   4.1.10. Collect monthly savings/Loan installment

   4.1.11. Savings Admin/Loan Admin/State Admin/DA Admin
5. Push Notification

   5.1. Allow user to enter notification content, classify it as category DS / LP / DD / ME / Org / External Info / System and SAVE and SEND buttons

   5.2. Will list all notifications with status – whether saved or sent

   5.3. Allow deletion – no validation for delete; give filters for deletion – saved/sent/all/category

   5.4. Edit allowed until it is sent

   5.5. Can be sent in any LL

   5.6. No search option

   5.7. System notification:

   5.7.1. These will be sent on initiation of survey, training

   5.7.2. User will be shown system generated content for notification & user can edit it and click send

   5.7.3. On clicking send, portal to create list of all member token ids satisfying the initiation criteria & send this list along with the language to the GCM API

     5.7.4. Notification criteria to include: SDTV, Trade, Education, Age range, Income range, Membership status of last year
6. Upload Content: 2 categories: About SEWA & Other
    6.1. Allow to upload generic content on SEWA
    6.2. Categorize as General or For members
    6.3. Allow to select which ones have to be sent to the App and in which order

Phase 2:
1. **SEWA People ID:**
    1.1. Will be generated similar to Membership number
    1.2. IDs have to be given to:
        1.2.1. Superadmins
        1.2.2. Admins of MMS – DC, Leaders
        1.2.3. Admins of m-Bachat – SKK, Savings Admin, Loan Admin/State Admin/DA Admin
        1.2.4. Trainers
        1.2.5. Content uploaders
        1.2.6. Product Approvers
2. Access card for SEWA people
3. Welcome Screen: Link to subscribe receiving updates and news on SEWA by entering above mentioned details
4. Home Screen: Language switch: Will allow to switch between Eng & LL in all screens
5. Push Notification: Automatic push notification when App is not opened

Note:
1. If Mobile / Tab doesn't have SIM or User don't have enough balance, users will not receive OTP

Offline mode:
1. User can login when offline but can't register
2. SEWA content – splash screen content will be available to the user to view offline; 'View More' will not be shown
3. Summaries of DS, LP, DD & Basic member profile – name, address, Contact nbr will be available offline

Dependencies:
1. Create Playstore account and share credentials
2. SEWA App icon
3. Login welcome audio in all LL
4. Icons for SEWA Portal for DS, LP, DD & Background image

B. Learning Platform

Requirement: Member should be able to view training & answer quiz in offline mode & Trainers can conduct trainings for multiple members.

Note:
1. Only members and SEWA people can take training. General public cannot take the training.
2. What will be the max size of training videos – (Maximum 25MB Proposed)

3. Training modules will be a combination of online (link stream) & offline (downloadable) modules
4. Once the member downloads the training in one device, she will not be allowed to download the training again in any other device.
    4.1. App will not allow re-download of ongoing subjects except from the same device in which she first downloaded it. This is to not allow her to re-take the same subject from another device while she has already downloaded it in her device
    4.2. Whenever server sends list of completed subjects, it will not send the quiz but will send only quiz score
    4.3. Completed & New trainings can be downloaded any number of times from any device
5. But trainer can conduct the training any number of times; At a time only one member can take the quiz in trainer device and it needs to be completed before the next member takes the quiz
6. End Date of training – will be the date of push
7. Trainings to be initiated at District level. If member outside the District takes the training, then App will not be allowed to push the quiz (server needs to authenticate member validity at this point)

Member Mode:
1. Training home page will have 3 tabs: "Completed", "New" & "OnGoing". Downloaded trainings will be shown under OnGoing.
    1.1. New: Will list all new programs; In offline mode, 'New' tab will show the list last updated in online mode.
    1.2. Completed: Will list completed subjects under a program; On click, subject description, date of completion & credits earned will be shown. Only subjects in that year will be listed.
    1.3. OnGoing: Will list all downloaded subjects
2. When Member clicks on a New program, all subjects under that will be listed. Upon clicking a subject, all modules under that get downloaded. This can happen only when she is online.
3. Next subject will be unlocked only if the prev subject has been ended.
4. In offline mode, we cannot show New programs. We can show only OnGoing ones. When these get completed, they will be shown under "Completed"
5. Server maintains the following statuses: Created, Initiated, Downloaded (if even 1 member has downloaded the training), Expired, Deleted
    5.1. Expired: Such training programs will no longer be sent to the members but can be seen in the portal page
    5.2. Deleted: Such training programs will no longer be visible in the portal page but can be listed through reports
6. If training date is extended after expiry date, then status goes back to "Initiated" or "Downloaded" if not initiated. Training date can be extended any time before expiry as well. No change to training status.
7. App shows accordingly: Only initiated & downloaded trainings will be sent to App. App will show these as "New".
    7.1. Once member downloads any subject of that training, training program status changes to: Downloaded, App shows this under OnGoing.
    7.2. Once downloaded, it will be locked and will be no longer be allowed for editing from portal.
8. She clicks on "start quiz". This will have 2 options – self or conducted. If she is taking quiz on her own, she needs to choose "self". If she is being helped by a trainer, she needs to choose 'conducted' and the trainer has to authenticate with her PIN. This is explained further below in the "Trainer mode" section.
9. There may be one quiz for each module or one quiz for multiple modules. There may be 0 or multiple quizzes for 1 subject

10. "END QUIZ" will be shown after she has attempted all questions in the quiz.
11. "END SUBJECT TRAINING" button will be showed against OnGoing subjects once all quizzes have been attempted. Once clicked, the training will be locked and the user cannot take quiz. Subject training is considered Completed. When the user goes online, the quiz answers & scores will be pushed to the server. After push, local DB in App will be cleared.
12. Credits will be given only for completed trainings and not for incomplete trainings. 1 coin for each module completion; 1 medal per subject completion; 1 cup per program completion – will be editable from the portal; We cannot detect the module completion. It will be considered done when the subject is ended.
13. If the training has expired and the user never came online before that despite answering training, then the saved training will be cleared from App DB when the user goes online

Trainer Mode:
1. When trainer has logged in, her training home screen will first show the same details as that of a member (which is as above).
2. A button "Conduct Training" will allow to switch to trainer mode.
3. On clicking this, the trainer statistics will be shown in the top half of the screen and the bottom half will have 3 tabs: "New", "Ongoing" & "Completed".
4. New: Will list all new trainings which are in "Initiated" or "Downloaded" status at server.
   4.1. If trainer clicks on a New training, it gets downloaded. This can happen only in online mode. In offline mode, 'New' tab will show the list last updated in online mode.
5. Ongoing: Will list all trainings which have been conducted (downloaded) along with the count of nbr of members who have completed the training
   5.1. Training is assumed to be conducted in batches
   5.2. Ongoing trainings which have saved quizzes will be shown in RED colour. Discard option needs to be given for RED trainings.
   5.3. Ongoing trainings which have no saved data will be shown in BLUE
6. Completed: Will list training batches which have been completed
7. When trainer clicks the training, and training description will be shown with a start training button at bottom
8. After she clicks on start training, she needs to enter the location details SDTV, nbr of trainees with their mem nbr by text entry or by MAC scan
9. Trainer should be able to add trainees before ending the training (+ button)
10. On click of Quiz module, the mem nbr needs to be selected and the start quiz button needs to be clicked to start the quiz for that member
11. "END QUIZ" button will be shown against Quiz. This can be clicked anytime. Once clicked, the quiz will be locked for the member and the member cannot take the same quiz again.
12. "END TRAINING" button will be shown against the Subject in OnGoing list. Will behave same as described for member mode.
   12.1. Trainer needs to ensure that the members who are taking the training have not taken the training before.
   12.2. Nothing can be done if the members take the same training again with a different trainer
   12.3. Such trainings will be rejected when the App tries to push it to server in online mode.
   12.4. On every push, send notification with count of success & failures with rejection reason if any.
13. Suppose few members have brought their devices to the training. Then few can take from trainer device & the rest can do from their device but choose if the training is done by self or conducted. In case of conducted, trainer has to authenticate with her userid & PIN. This option is allowed only in

online mode. In offline mode, there is only "self" mode. Those who take from their device will not be allowed to take training from trainer device again if the status of the training is completed.

Portal Flow:
1. Add Training Program
    1.1. Capture: Prg name, Description
    1.2. Select S/D
    1.3. Add Subject
        1.3.1 With Name, Description
        1.3.2 Add Module
            1.3.2.1. With Name, Description
            1.3.2.2. Upload module as attachment for modules other than Quiz
                1.3.2.2.1. Select Category: Downloadable/Link
                1.3.2.2.2. Note: Admin has to take care to upload only generally supported formats; App will show error "Unsupported Format" If it is not able to play/show the module.
        1.3.3 Edit & Delete Module
        1.3.4 Create Quiz: Allowed within a prg,sub
            1.3.4.1 Capture: Quiz name, Nbr of Question
            1.3.4.2 Create Question & Answers in Eng & state LL not in any other LL
            1.3.4.3 Edit/Delete Question/Answer
            1.3.4.4 Save Quiz, Delete Quiz
2. View Training: On S/D
3. Search Training: On Prg Name, Subject Name, Module Name
4. Edit Training: Will allow Add/Delete of subject & Module
5. Initiate Training: On S/D, trade, age range, education, income range, Audience Type (Trainer/Leader/Member);
    5.1. If Audience type is Member: Members can take the training and Leaders/Trainers can conduct it as well
    5.2. If Audience type is Trainer/Leader: Only Trainers/Leaders can conduct the training or take training for self
    5.3. If Audience type is Public: Members, General Public can take the training & Leaders/Trainers can conduct it as well
6. Statistics & Dashboard: Need to know what kind of stats & reports have to be generated

Generic:
1. Add/Delete: Audience Type
2. Edit: Min & Max of options
3. Edit: Max of modules per subject

Phase 2: Requirements which are not clear enough to estimate or are not necessary in Phase 1
- New language support in keyboard
- General public as an audience

C. Digital Survey

Requirement: Member should be able to answer survey in offline mode & Leaders can conduct surveys for multiple members as long as the survey is not expired.

Note:
1. There will be no autologin. User id (ph nbr) will be auto filled, will be editable. User has to login by entering PIN every time. Hence PIN auth will not be done while taking survey or training
2. Only members and SEWA people can take survey. General public cannot take the survey.
3. Once the member downloads the survey in one device, she will not be allowed to download the survey again in any other device.
4. But leader can conduct the survey any number of times; At a time only one member can take the survey and it needs to be completed for the user before the next user takes the survey
5. Capture geo-location of leader – only the lat & long will be stored.
6. Date of survey issue – Survey date will be the date of push; Add a field in DB to capture the date of survey conducted by leader – date to be editable when offline & non editable when online
7. All notifications to be displayed in home screen under Bell icon. They should be coloured differently for different categories such as trainings, surveys, etc
8. Trainings to be initiated at District level. If member outside the District takes the training, then App will not be allowed to push the quiz (server needs to authenticate member validity at this point)
9. No switch user option to be provided when a member has logged in. If another user has to log in, then the first user has to log out and the next user has to log in. App will store the phone nbr & PIN of only one user – the one who has logged in last.
10. ID for SEWA people to be generated – involves cleanup of existing MMS DB as well

Member mode:
1. Survey home page will have 3 tabs: "Completed", "New" & "OnGoing". Downloaded surveys will be shown under OnGoing. Only the name of the completed survey will be listed. On click, survey description, date of completion & credits earned will be shown. Completed surveys in that year will only be listed.
2. Member downloads survey in online mode.
3. In offline mode, we cannot show New surveys. We can show only OnGoing surveys. When these get completed, they will be shown under Completed surveys
4. Server maintains the following statuses: Created, Initiated, Downloaded (if even 1 member has downloaded the survey), Expired, Deleted
5. If survey date is extended after expiry date, then status goes back to "Initiated". Survey date can be extended any time before expiry as well. No change to survey status.
6. App shows accordingly: Only initiated surveys will be sent to App. App will show these as "New". Once member downloads the survey, server status: Downloaded, App shows this under OnGoing. Once member saves the survey in between, app shows this under OnGoing. Once member submits it, server status: Downloaded, App shows this under Completed.
7. Once survey is downloaded, survey status changes to "OnGoing". Once completed, it will be locked and will be no longer be allowed for editing.
8. She clicks on "start survey". This will have 2 options – self or conducted. If she is taking survey on her own, she needs to choose "self". If she is being helped by a leader, she needs to choose conducted and the leader has to authenticate with her PIN. This is explained further below in the "Leader mode" section.
9. While taking the survey, a button "SUBMIT" will be provided:
    9.1. Once she clicks this, a message will be shown to the user asking if she would like to save the survey and continue later or end the survey.

9.2. If she chooses "end", then that survey will be locked and not allowed for editing.
    9.2.1. If all mandatory questions are not answered, App will not allow the survey to be ended. It will show a message to user and save it locally;
    9.2.2. If all mandatory qns are answered but some optional ones are remaining, user is asked if she would still like to end the survey.
    9.2.3. Whenever the user logs into the app when she is online, all submitted surveys will be pushed to server. After push, App deletes the record from local DB.
    9.2.4. After push in online mode, server changes the survey status to "Completed" for member; main survey status remains as "Downloaded"
    9.2.5. When submit is done in offline mode, before push, App shows the survey under "Completed"
9.3. If the user chooses to just save, then the survey will be saved locally in the DB. It will not be submitted to the server.
    9.3.1. App shows the survey under "OnGoing"
10. Credits will be given only for completed surveys and not for incomplete surveys.
11. If the survey has expired and the user never came online before the expiry date, despite answering survey, then the saved survey will be cleared from App DB when the user goes online

Leader Mode:
1. When leader has logged in, then her survey home screen will first show the same details as that of a member (which is as above).
2. A button to switch to leader mode will be shown.
3. On clicking this, the leader statistics will be shown in the top half of the screen and the bottom half will have 2 tabs: "New" & "Ongoing".
4. New: Will list all new surveys which are in "Initiated" or "Downloaded" status at server.
5. Ongoing: Will list all surveys which have been conducted (downloaded) along with the count of nbr of members who have completed the survey
    5.1. Will also list all saved surveys. Each survey can have a maximum of 1 member who has saved her survey.
    5.2. Ongoing surveys which have been saved will be shown in RED colour. Discard option will be given for RED surveys. When user clicks discard, then the saved survey will be removed. User can retake the survey again.
    5.3. Ongoing surveys which have no saved data will be shown in GREEN
6. If leader clicks on a New survey, it gets downloaded. This can happen only in online mode. 'New' tab will not be shown in Offline mode.
7. Once downloaded, in App leader survey screen, it will be listed under Ongoing with count 0 and in BLUE colour.
8. When leader clicks the survey, survey details will be shown with a start survey button at bottom.
9. Once Start survey is clicked, she will be asked to enter or scan Membershipno (Mno) of the member taking the survey. Ph nbr of the member can be entered as well.
10. Once entered, the survey questions are shown. Note: Validation of Mno or Ph nbr will be done only at the time of push. Invalid entries will be rejected. However, when online, it will be checked at the time of entry.
11. SUBMIT button will be shown at the bottom. Will behave same as described for member mode.
    11.1. Leader needs to ensure that the members who are giving the survey have not answered the survey before.
    11.2. Nothing can be done if the members take the same survey again with a different leader
    11.3. Such surveys will be rejected when the App tries to push it to server in online mode.

12. Suppose few members have brought their devices to the survey. Then few can take from leader device & the rest can do from their device but choose if the survey is done by self or conducted. In case of conducted, leader has to authenticate with her userid & PIN. This option is allowed only in online mode. In offline mode, there is only "self" mode. Those who take from their device will not be allowed to take survey from leader device again if the status of the survey is completed.

Portal flow:
1. Add/Delete Category – Delete will not be allowed if the category has been used for any question
2. Question/Answer bank:
3. Create question & its answers:
    3.1. Select S/D, supported languages and category from a list such as "Education", "Trade" etc
    3.2. Under the selected category, Create question & its answers – in English and the LL; Onus is on user to enter the correct LL text using Google keyboard
    3.3. For each question once created, edit & delete options are shown. If a question is used in any survey, then it will not be allowed to be edited or deleted
4. Search question: On question nbr or text
5. View Question: On S/D/category
6. Add/Delete Survey Category
7. Create Survey:
    7.1. Capture Category, Survey name, Objective, Guidelines to fill survey & credit rules to be displayed to the user
    7.2. Dropdowns for survey criteria:
        7.2.1. SDTV, Age range, Income range, Trade category, Trade, Audience, Expiry Date, No Of Questions
    7.3. Add Question to Survey:
        7.3.1. Display questions per category and allow to Add
        7.3.2. 3 buttons: SAVE, CANCEL, END SURVEY
            7.3.2.1. There can be multiple saved surveys
8. View Survey: On S/D/Category
    8.1. All saved and created surveys will be listed
    8.2. Only created surveys can be initiated and not saved ones
9. Search Survey: On survey name/Category
10. Edit & Delete
    10.1. Edit will not be allowed once a survey is Downloaded; Will be allowed only till Expiry Date and not beyond
    10.2. After Expiry Date, delete button will be enabled
11. Survey Statistics: Need criteria for showing statistics; What kind of charts are to be shown – For now, 2 weeks for 3 basic reports is planned; For any additional reports, we need clear reqts and on basis of that, will need re-estimation

Phase 2:
- Allow public to take surveys from Leader device.
- Plot the Lat & Long of surveyor (leader) location on map
- Allow the leader to search the member with name similar to MMS App

D. Digital Directory (SEWA Bazaar)

Requirement: Member should be able 1) to see products & services she has listed on DD, 2) to add her products and services, 3) to access the list of products and services offered by other members and share her interest/requirement for a particular product or service, 4) to see responses received on products/services from other members

Changes in MMS for DD:
- MMS App & Portal needs to be updated to capture few questions during Membership renewal, Member Add: Example (Are you selling any product/services? Option Y/N, If yes leader needs to verify the contact details. If No, then whether they are interested do so in future. Do you know anyone who is interested to sell any product/services?
- Member details page in MMS portal to show her DD details
- Show training history/surveys history in member details in MMS portal –show cumulative numbers. Details to be made available via reports in LP & DS portal views

Member Mode:
1. DD home screen to show dropdowns for state selection, product/service selection followed by search box to allow search in the state; followed by category selection – Default ALL. By default all items under ALL categories under default type – product - will be shown
2. Search will be on product name within the selected state – name to be entered via text from keyboard.
3. Beside the search box, to the right there will be cart symbol, which shows number of products added in to cart.
4. Clicking any product/service will open the screen which consists of Name, 4 pictures, detailed description, price, seller name, units sold. Below this there will be a button to add product in the cart. Clicking button will add that product/service to cart
5. Clicking on cart will open a window listing all products added to cart and allow removal of items
6. No details other than product availability (as available or OutOfStock) should be editable by member when product is pending for approval
7. Bottom ribbon to show: My Listing, Add, Responses
   7.1. My Listing: clicking this option will open a screen where seller can see products/services listed by her on DD. Further clicking on product will open a screen of particular product. There will be 2 options in this screen to update availability of the products and to delete the product from DD. Any of the response by seller will be validated and approved by portal.
   7.2. Add: Will allow member to add a product/service under a particular trade category
      7.2.1 Clicking the option will open a screen where seller can add name, basic description, price, availability, contact details and 1 photo of the product. She also needs to select whether she is adding her own products or other seller's product. Submitted basic product details will be shown in the portal under "Interested ME" list. And product status will be shown as "Under Process" in My Listings
   7.3. Responses: clicking this option will open a screen displaying responses/notifications on the products added by buyers into their cart. There will be product picture, name & price. Clicking on notification will open product page with basic product details and list of buyers with their name & contact details who have added the product into their cart. There will be 3 buttons for each buyer will be available. **Connect** button allow seller to dial a call to buyers and sell their product independently. If the product sale transaction is successful seller can click on **Sold** button. If the product sale is cancelled, seller can click on **Reject** button. This will allow

portal to monitor sales inquiries received, converted into sales or rejected for each product and seller

    7.3.1. Buyers will not be shown contact details of seller.

    7.3.2. Only seller can contact buyer

    7.3.3. After contacting buyer, she can click on SOLD or REJECT

    7.3.4. On clicking SOLD/REJECT, remove item from buyer's cart and from seller's responses

    7.3.5. If seller wants to mention a product as unavailable (or out of stock) she needs to edit the product availability. Then buyer's cart will show this item as "Out of Stock". It will continue to show the item in seller's responses. Once the availability status is changed by seller, the out of stock status will be removed in the buyer's cart & product will be available

8. All products / services of the mapped members will be connected with her profile – will be shown in MMS member details

9. Transactions/movements against each product will be stored with details like sell date, buyer, buyer contact details, selling price etc.

Leader Mode:

1. Regular features of DD will be available which Leader can use for herself as described in member mode

2. Button "Mapping form" will be shown to switch to leader mode

3. On clicking this button, Leader can access the entrepreneur mapping form, in which she can fill-up profile of member as an entrepreneur by adding: details of products / services offered by members such as member details, basic description, price, availability, contact details and 1 picture of the product. This picture will overwrite the picture added by member. Product status changes to "Pending Approval" under My listings

    3.1. Once this is submitted from App, it will be shown for approval in portal

    3.2. On viewing this list, cataloguing team will be sent to meet seller

    3.3. Team will meet seller, take photos & other details - For product/service, minimum one photo is mandatory. Max of 4 photos

    3.4. Finally, Approver will upload photos and then approve the product

DD Portal:

On clicking the DD icon from portal, leader will be able to see the following options:

1. Interested Micro-entrepreneur list – view list, filter on S, D, T, V, Category. ALL option to be provided to all D, T, V & C filters

    1.1. This list should be downloadable as a excel sheet.

        1.1.1. Such products will be shown as "Under Process" under member's 'My Listings' in the SEWA App.

        1.1.2. This list will then be used to send leader to meet seller to fill up the Entrepreneurship mapping form & submit for approval. Cataloguing team will then be sent to contact seller for photography and other details. Once this data is shared with the portal approver, she updates the form in the portal & approves it.

    1.2. Create New Mapping Form; If possible in phase 1

    1.3. Mapping form approval

        1.3.1. Forms submitted by members public to be shown for approval; Public form approvals can be done only after they are converted to members and their membership number is already found in the system.

<blockquote>

1.3.2. Such products will be shown as "Pending Approval" under member's 'My Listings' in the SEWA App.

1.3.3. Single button at bottom – SAVE will be shown for non-members till they are added as members; APPROVE will be shown for members; This means there is no edit (intermediate save) in the APPROVE option.

1.3.4. Once approved, products will be shown in MMS portal (Member Details page) and will be allowed for edit from MMS portal

1.4. Products/services deleted by the members will be shown for approval by admin;

1.4.1. App to give option to Undo Delete for cases where member has deleted by accident or changes her mind

1.4.2. Portal to give 2 options: Approve deletion, Reject Deletion. Reject will have the same effect as a "Undo Delete" From App

1.4.3. If Approve Deletion is clicked: Item will be marked as unavailable in buyer's cart

1.4.4. For Products "Pending Approval" under My Listing in App, no Delete button will be shown. For "Under Process" products, which were added by member herself before Mapping form submission, Delete button will be shown.
</blockquote>

4. Generate reports: 2 weeks for 3 basic reports; Type of reports is not yet decided.
5. View Statistics: 2 weeks for basic stats; Type of stats is not yet decided.

Phase2:
- Allow member to search product name within the selected state using mic
- To filter the products in DD, show filter icon – to sort on Price, Discount
- Create New Mapping Form in Portal

E. Member Evaluation

Requirement: Collect information of members on six parameters such as Food, Clothing, Shelter, Health, Education & Access to Finance.

Member Mode in SEWA App:
1. Will be shown only in online mode
2. In the App drawer, add an icon for ME profile
3. On click, show the 6 parameters (food, clothing, shelter, health access to finance, education) and the selected option of the member for each parameter
   3.1. One parameter per screen will be shown highlighting the member status under each parameter
   3.2. Right & Left arrows will be shown to move between the parameters
4. No edit of these parameters is allowed

Leader Mode in MMS App:
1. MMS screens for Add, Renew & Edit will be modified to show ME parameters one parameter per screen and allow leader to choose the relevant option.
   1.1. At the end of the renewal screen, question will be shown: Would you like to do Member Evaluation? Y/N
   1.2. On clicking YES, the ME parameters will be shown one per screen for editing
2. Member details screen will also show ME profile

MMS Portal:

1. MMS pages for Add, Renew & Edit will be modified to show ME parameters in 6*3 matrix and allow user to choose the relevant option.
2. Member details page will also show ME profile
3. Reports: 6 Basic reports – one on each parameter
    3.1. Dropdown filter for S, D, T, V, Year-wise, Year range. ALL option will be given for SDTV
    3.2. Bar charts for: Year-wise & Year range
    3.3. Year range: Show the status report for ME profile for only those members within selected years whose status was approved throughout all years.

Phase 2:
- Member to be able to edit her ME profile in SEWA App

F. Membership Access Card

Requirement: Members' Access Card with Barcode can be generated based on the existing members' data in MMS and provided to members. Provided Access Card to members will only be used and valid for retrieving their digital data into SEWA's Digital Platform.

Note: MAC is only for SEWA members and not for SEWA employees.

MAC MMS Portal:
1. New Tab "MAC" in MMS portal
2. Once this tab is clicked, new page will open which will describe the MAC generation in brief followed by the below
3. Select State dropdown
4. Then 3 options will be provided:
    4.1. Village-wise:
        4.1.1. User needs to select D, T, V, All/Pending members
        4.1.2. If 'All members' option is chosen after selecting village, then MAC will be generated for all members in the village whose membership was "Approved" in the previous Renewal Year.
        4.1.3. If 'Pending members' option is chosen after selecting village, then MAC will be generated for only those members in the village whose membership was "Approved" in the previous Renewal Year and card has not been generated. This would include New members (Renewal Approved) as well as existing ones whose card has not been generated.
    4.2. Leader-wise:
        4.2.1. User needs to select D/T/V/Leader, All/Pending members
        4.2.2. MAC will be generated for all members renewed by the Leader whose membership status is "Approved" in the previous Renewal Year
    4.3. For Specific member
        4.3.1. Search box will be shown where membership number or mobile number will have to be entered in full
        4.3.2. Only Approved member with that membership nbr will be shown in the search result
5. Generate button
    5.1. On clicking this, MAC will be generated and will be allowed for download into user's m/c
    5.2. MAC format front side: Refer attachment MAC Front.jpg
        5.2.1. Barcode scan will show Membership number

5.2.2. QR code is not needed
- 5.3. MAC format Back side: Refer attachment MAC Back.jpg
    - 5.3.1. QR code scan will open SEWA App in playstore
- 5.4. MAC card generated files:
    - 5.4.1. Front side and back side will be printed beside each other
    - 5.4.2. 5 of such cards will be printed per page in 1 pdf file (to be confirmed)
    - 5.4.3. 500 members or 1000 members per file will be printed
    - 5.4.4. Pages will be numbered
    - 5.4.5. If more than 1 file is generated, it will be zipped

MAC – SEWA App:
1. A Bar code icon will be shown in the SEWA App home screen.
2. On clicking this, the Bar Code of the member will be shown
3. Leader/Trainer can scan this to autofill the Membership number

Dependencies:
- Static content in MAC to be sent in all LL
- Confirmation of nbr of cards that need to be printed in 1 page
- The word "MAC" in all LL to be shown as the tab name in MMS portal