Digital Innovation for SHGs:
An RBIH Initiative for the Last Mile

March 2024
Addressing the challenges of delivery of credit in India, particularly to women, is more imperative now than ever. Accessibility, high costs and the scale of the delivering credit in India create complex challenges.

One important construct which has stood the test of time in this ecosystem are the Self - Help Groups (SHG). Institutions including the Reserve Bank of India (RBI), NABARD and National Livelihood Mission (NRLM) have recognized the pivotal role played by these SHGs and through their initiatives reached over 9 crore women across the length and breadth of the nation. As a result of these collaborative efforts, SHGs have evolved from being grassroots movements that foster financial inclusion, into powerful engines of economic resilience and self-reliance.

At the Reserve Bank Innovation Hub (RBIH), we recognize the transformative power of these groups and remain deeply committed to supporting their ongoing success. To do this, we embarked on a mission to make SHG banking processes seamless while also bringing to light individual woman members transactional histories, which remain invisible to the mainstream banking system until now. The ambition of the RBIH-Swanari program is to provide frictionless finance to all women in India. Our approach is centered around three pillars: Data, Design, and Demonstrate, driven by on-ground insights via frequent convenings with industry leaders and innovators to inform cutting-edge solutions.

In collaboration with our first implementation partner, Canara Bank, we conceptualized and designed a groundbreaking pilot project: “Digital Innovation for SHGs: An RBIH Initiative for the Last Mile”. Launched in December 2023, the pilot as of March 2024, operates across 150 branches in 9 states and 72 districts, disbursing Rs. 12.04 crore through its completely digital and automated process.

The journey has only just begun. This whitepaper delves deeper into our research, solution design, and the specifics of this pilot. I invite more banks, technology service providers, and ecosystem stakeholders to help us improve upon, and amplify this solution. Together, we must build upon this endeavor, leveraging the power of digital solutions to unlock the full potential of every one of the 9 crore SHG members across India.

Rajesh Bansal
Chief Executive Officer
Reserve Bank Innovation Hub
The challenge of providing credit and banking facilities to the resource poor and underprivileged rural India is successfully addressed through Self-Help Group Bank credit linkage programme which is instrumental in advancing women’s economic empowerment. However, in the present-day manual environment, it poses huge challenges before the administration as well as the Banks for formation, nurturing and credit linkage of Self - Help Groups as majority of the group members depend on daily wages for their livelihood.

We saw the potential here to extend frictionless financing to Self - Help Groups. We worked in collaboration with Reserve Bank Innovation Hub (RBiH) and leveraging new age technology, we designed a Digital Platform enabling door-step frictionless financing to SHGs through Straight Through Processing (STP). Bank officials visiting the SHG during monthly meeting will capture details in digital mode and on maturity, loan will be sanctioned and disbursed to individual member accounts instantly.

In addition to the satisfaction of our customers to get instant digital credit in their accounts through its completely digital and automated process, the Platform will also improve the efficiency for all the stakeholders by eliminating branch visits for the SHG members thereby minimizing their wage loss, promoting Aadhaar based Digital authentication of SHG members promoting transparency in maintaining disaggregated data, reducing the TAT significantly (3-4 hours) and digital documentation saves significant time and cost in SHG Bank Credit Linkage process. Further, monitoring of the SHGs will be easy and effective through this digital environment as it maintains individual credit histories apart from others.

In an industry-first move, we have successfully implemented the pilot phase of End-to-End Digitization of SHGs which will be extended to all our branches shortly.

Shri K Satyanarayana Raju
MD & CEO
Canara Bank
For over three decades, the Self-Help-Group (SHG) movement in India has been a bottom up community led, women-centric means of economic empowerment for the last mile. Through the commendable efforts of the RBI and NABARD, the model of the ‘SHG-Bank Linkage Program’ has evolved as a cost-effective mechanism for providing financial services to households. Building on this, the Deendayal Antyodaya Yojana – National Livelihoods Mission (DAY – NRLM), has mobilized over 9.89 Cr. women in 89.82 lakh SHGs1, facilitating the disbursement of over 7.68 lakh crore in bank loans to these SHGs.2 The Reserve Bank Innovation Hub (RBIH), a wholly owned subsidiary of the Reserve Bank of India (RBI), recognises the crucial importance of these initiatives in empowering women across the country to become “aatmanirbhar” or self-reliant, and is committed to supporting the success of all these ongoing initiatives at the national and state level.

RBIH was set up in 2021 with the vision of facilitating “Frictionless Finance for a Billion Indians”, leveraging technology to enable finance when they want it, where they want it and how they want it. RBIH’s motto revolves around three pillars: Innovation, Inclusion, and Impact (नवोमेष | समावेश | भाव), lying at the heart of the organization’s vision, guiding its projects and objectives.

To this end, the RBIH-Swanari (Swa-Nirbhar-Nari) program was set up in 2022 with a mission of enabling “Frictionless Finance for all Women in India”, to close the gender gap in the access, usage and quality of financial services. The program endeavors to build a segmented, gender intentional approach in its work focussing on three pillars namely: Data, Design, and Demonstrate.

The RBIH-Swanari program recognizes the pivotal role that SHGs play in the financial inclusion and economic empowerment for over 9 Crore women across the length and breadth of the country. To this end, the RBIH-Swanari program is committed to facilitating frictionless access to credit for this cohort of women, while creating an ecosystem that builds a footprint of transactional data and credit histories for every individual SHG member.

RBIH began with conducting extensive desk and field research across 7 states, including interactions with 30+ SHGs consisting of 250+ members. This led to the identification of specific pain points across both product and process, experienced by SHG members, and was followed by the launch of a Techsprint which identified relevant Technology Service Providers (TSPs) in the market working towards solving these pain points. RBIH has since conceptualized and designed a new end-to-end product and process innovation, in collaboration with the first implementation partner Canara Bank, to deploy a unique pilot project: “Digital Innovation for SHGs: An RBIH Initiative for the Last Mile” with a vision of digitalizing the SHG journey to enable fully digital straight through process lending. This solution re-envisions the SHG process as:

---


The SHG member pain-points, solution innovations to address them and consequent outcomes of this pilot are articulated below:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto 5 Bank Branch visits leading to wage losses</td>
<td>Zero branch visits and no wage loss</td>
</tr>
<tr>
<td>100% reliance on physical documents</td>
<td>100% digital capture of every individual member's transactions</td>
</tr>
<tr>
<td>100% reliance on cash and cheques</td>
<td>Cash lite operations</td>
</tr>
<tr>
<td>TAT of upto 3-4 weeks to avail a bank loan</td>
<td>Maximum TAT of 24 hours to avail a bank loan</td>
</tr>
</tbody>
</table>

One Platform for seamless SHG Banking Activities

Authenticated Digital Fund Transfers

Doorstep Services

Automated Grading and Lending with a Straight-Through-Process
The creation of a digital trail of transactions and behaviors of all members is poised not only to broaden SHG inclusion in credit linkage programs, but also empower every individual member with a documented credit history. This pilot was launched in December 2023 and as of March 2024, it is running across 150 branches in 9 states and 72 districts. So far Rs. 12.04 crore have been disbursed to 177 SHGs through this new fully digital straight through process. RBIH will continue to closely monitor the pilot to distill learnings and iterate the solution over time. This whitepaper details the specifics of our research and solution design, including phase wise technical process flows.

RBIH welcomes more banks, TSPs and other stakeholders to join them to build on this pilot program in order to truly unlock the potential of digital and financial inclusion of each and every one of these ~9 crore women belonging to SHGs across India!

Impact on the SHG and Banking Ecosystem:

- Enable creation of individual SHG members’ credit histories
- Unlock credit linkage for >50% of existing SHGs*  
- Enhance productivity and operational efficiencies for banks
- Enable more detailed PSL reporting to RBI

*As per NRLM SHG Count (2023), NRLM SHG Bank Linkage (2023)
Self-Help Groups (SHGs) are small informal groups of 10-20 individuals, from similar socio-economic backgrounds who come together voluntarily to promote a regular savings habit among members and to raise and manage resources for the benefit of the group members and their enterprises. The group members make small regular savings into a common fund, which is then utilized to provide 'internal' loans to group members. After a period of six months, the SHGs are eligible to be 'linked' to banks for the delivery of micro-credit on the basis of their transaction histories.

The origin of SHGs can be traced back to the establishment of the Self-Employed Women's Association in 1972, which sought to organize self-employed women in the informal sector, to enhance their incomes. In 1992, NABARD started the SHG Bank-Linkage Project, to open a group savings bank account and facilitate bank credit for SHG members. An additional boost was provided to this project in 1996, when the RBI declared all SHG lending to be treated as Priority Sector Lending. Further impetus to the SHG movement came with the launch of the Swarna Jayanti Grama Swarozgar Yojana in 1999 by the Ministry of Development, which ultimately evolved into the flagship DAY-NRLM program in 2011. Additionally, NABARD launched the eShakti project in 2015 to improve the quality of data collection and exchange within SHGs through digital book-keeping. All these efforts towards the promotion and strengthening of SHGs has culminated to 9.89Cr women from households being linked to 89.82L SHGs benefitting from the disbursement of over 7.68L crore bank loans.

---

RBIH’s Background Research

In 2023, the RBIH-Swanari team conducted extensive desk and field based research which uncovered several potential areas for innovation in the SHG journey particularly with respect to banking processes. The outreach extended to over 30+ SHGs, across 7 states enabling them to unearth valuable qualitative insights from 250+ SHG members. Additionally, the RBIH studied best practices in digital SHG lending, conducted expert conversations, and undertook data analysis of NRLM SHGs.

Through this research, RBIH identified several multifaceted challenges faced by SHGs:

- **Up to 5 bank branch visits leading to wage losses:** This challenging process not only consumes time but also impacts the financial stability of SHG members, and could lead to potential disengagement and frustration amongst the SHG members.

- **100% reliance on physical documents:** The absence of a digital trail removes any scope for data driven rule based lending mechanisms resulting in lower process efficiencies and delays. In addition, individual member transaction histories remain unseen, in spite of disciplined financial behaviors.

- **TAT of up to 3-4 weeks to avail a bank loan:** Prolonged processing time to avail a bank loan, usually up to 28 to 30 days for, particularly for the credit linkage process hampers the pace of financial activities, increases operating costs and could once again lead to potential disengagement of SHG members.

- **100% reliance on cash and cheques:** This results in potential security risks, likelihood of theft and errors, operational inefficiencies, and delays in transactions.
Frictionless Finance for Women in India

Keeping SHGs and their members at the center and to address their pain points outlined above, the RBIH has designed and conceptualized a digital solution in collaboration with Canara Bank, which re-imagines an SHG’s financial journey across three broad phases:

**PHASE 1**

SHG Onboarding and Group Savings Account Opening

**PHASE 2**

Internal Savings and Loan Disbursements

**PHASE 3**

Bank Loan Disbursement

As part of this solution, services across these three phases would be delivered in a seamless digital manner at the SHG’s doorstep by bank officials or Business Correspondents (BCs) during SHG group meetings. It is to be noted that the proposed solution described in this document captures the broad flow in an ideal scenario, and could vary depending on a particular bank’s risk appetite, varying SHG profiles, and other contextual nuances. This is one of many potential solutions, and needless to say can be customized based on the context, the banking partner, and the TSP involved.

Bank Officials Onboarding the SHG Members
PHASE 1: SHG Onboarding and Group Savings Account Opening

In this phase, the SHG first gets formally onboarded onto a bank’s system and then its group savings account is opened.

1. Creation of a Digital Profile - All details of the SHG and its members are digitally recorded

2. Verification of Group and Members - Details of the group and each member are verified, including identity through Aadhaar eKYC, and bank account status through a penny drop

3. Deduplication of SHG Member (within the Bank) - Each member is verified against the bank’s internal database to ensure they are not part of any other SHG

4. Onboarding onto Bank in Real-time - The SHG is then onboarded to the bank’s system in real-time

5. eSigning of Application Documents - An account opening resolution and pre-filled application form are auto-generated, followed by e-signing by relevant members of the SHG

6. Instant Opening of Account - A group savings account in the SHG’s name is opened instantly at the SHG members’ doorstep

To visually experience the proposed solution for Phase 1: CLICK HERE

---

8An account opening SHG resolution is a written statement created by, and signed by all SHG members indicating their intent to have a savings bank account. (Source: NRLM Handbook on SHG - bank linkage)
PHASE 2:
Internal Savings and Loan Disbursements

In this phase, the SHG begins to hold regular meetings and its members start saving into a collective corpus, which can then be used by the group to take loans (often referred to as internal loan or intra-group lending), whenever needed.

1. Capturing Meeting Details - Member attendance, meeting minutes and transactions (including deposits) are digitally recorded

2. Filling of Internal Loan Application - Based on the group’s decision on eligible members, member-wise loan amount requests are recorded

3. Dual Authentication of Authorized Signatories - Aadhaar based authentication of the signatories (dual) are conducted to prevent unauthorized transactions

4. Instant AePS Fund Transfer - Upon successful completion of the dual authentication, the approved loan amount is digitally transferred from the group savings account to the member’s individual account, enabled through AePS (both ONUS and OFFUS transactions) fund transfers as per NPCI’s recently issued guidelines in June 2023.

To visually experience the proposed solution for Phase 2: CLICK HERE
PHASE 3:
Bank Loan Disbursement

After 6 months from the date of formation and of regular SHG operations, as per NRLM’s extant guidelines\(^1\), an SHG becomes eligible for a bank loan, which they may access when needed.

1. Calculation of SHG Grading and Credit Limit - Based on the quality of SHG operations in the last 6 months (as per DAY-NRLM’s Pancha Sutras\(^2\)), a group grade and corresponding credit limit are auto-calculated by the bank’s internal Business Rule Engine (BRE)

2. Pre-Approval of Bank Loan - A branch manager thereafter verifies the SHG’s grade and the auto-calculated credit limit to pre-approve a Straight-Through Process (STP) bank loan

3. Notification of Pre-Approval - The SHG members are proactively notified about the SHG’s pre-approved bank loan through SMS in their respective preferred languages

4. Generation of Micro Credit Plan - Based on the group’s decision, eligible members are selected and the individually requested loan amounts are digitally recorded in a Micro Credit Plan (MCP) as per recommended DAY-NRLM’s guidelines and formats

5. eSigning of Application - The loan application and SHG Bank loan agreement is auto generated and a group resolution is uploaded post which they are e-signed by all members of the SHG

6. Instant Disbursement Loan - The required loan amount is digitally disbursed first to the SHG group savings account, and then immediately to individual member accounts as per the MCP. This ensures a digital trail of information of a loan disbursement not just to the group but to each of the individual members as well.

---


This solution is currently being piloted by Canara Bank across 150 branches in 72 districts and 9 states (as of March 2024), in collaboration with a TSP (MoneyPurse) selected through a competitive process in the RBIH-Swanari Techsprint program. This pilot was launched on December 2023, and as of March 2024, 674 SHG group savings accounts have been opened digitally and 177 bank loans have been disbursed through an STP process to SHGs as well as directly to the individual SHG members. The RBIH is also in conversations with more TSPs and banking partners to build other customized versions of this journey suited to varying contexts.

Glimpses on successful execution of Phase 3

Potential Impact

The RBIH’s proposed solution has been designed with a view to complement and enhance past and current efforts to strengthen the SHG promotion and capacity building efforts. The solution defined here is aimed at streamlining access and disbursement of frictionless credit for all SHGs as well as their individual borrowers. Specifically:

- **From up to 5 Bank Branch visits to zero visits**: Doorstep delivery of services allows SHGs to avoid significant wage loss incurred from multiple branch visits.

- **From 100% reliance on physical documents to a complete digital trail of individual member transactions**: Digital capture of member-level savings, transactions, internal and bank loan disbursements builds a digital footprint for individual members of their banking history with SHGs, potentially paving the way for them to graduate to individual borrowers over time.

- **From 100% reliance on cash and cheques to hassle-free and secure transactions**: Secure digital transactions reduce the chance of fraud and security risk for SHG members.

- **From a TAT of up to 3-4 weeks to avail a bank loan to maximum 24 hours**: Instant availability of formal credit reduces the dependence of SHG members on alternatives such as high interest money lenders.
RBIH will continue to learn from this pilot to distill learnings and refine the solution, while simultaneously, partnering with more banks and TSPs to expand the implementation landscape.

The solution articulated in this document is only one potential framework amongst many, and many more technological and process innovations can be conceived on this premise. To this end, the RBIH invites partners to join hands to deepen these efforts. This pilot program is just a beginning towards deeper and more meaningful collaborative efforts between several stakeholders to unlock frictionless finance to 9.89 Cr. women in the country, and the RBIH is committed to play a facilitative role to achieve this Vision.
Contributors

Authors
Shilpa Rao
Robin Philip

Supported By
Simran Singh
Aayush Kedia

Other Contributors
Shalini Sahay
Ranjeet Rane
Devina S
Pallavi Mane
Khushboo Kumari

Acknowledgement
RBIH would like to acknowledge the contribution of the Information Technology Wing, Priority Credit Wing, and Financial Inclusion Wing of Canara Bank for their support in documenting this journey and creating this white paper.
Disclaimer

Any content published on this document, including but not limited to, case studies infographics, and other information and materials (“Content”) offered by RBIH is solely for informational and educational purposes only. Information expressed in the document do not necessarily reflect the complete views of RBIH. While every effort has been made to ensure the accuracy and completeness of the information provided on the document, such information may not be exhaustive or entirely accurate and users or readers are encouraged to conduct their own research and not rely solely on the information provided on the document or Content.

The Content may contain typographical errors or inaccuracies and may not be complete or current. RBIH reserves the right to correct any errors, inaccuracies, or omissions and to change or update the Content at any time without prior notice. RBIH disclaims any responsibility or liability for the accuracy, completeness, errors, omissions, or the overall usefulness of the information or any loss or damage or defamation of any kind incurred as a result of your use of or reliance on such Content published on the document. Readers or users are responsible for verifying the relevance/applicability of information to their specific circumstances and the information in the document might be a snapshot of projects initiated by RBIH and may not represent the current status or future developments in relation to the projects.

RBIH holds the copyright and related rights for the Content published on this document. Users may not modify, copy, reproduce, republish, upload, display, post, transmit, or distribute, in any manner, or create derivative works of the Content on the document without the express written permission of RBIH.

In the event you find any Content provided on the document incorrect or obscene, or if you are the owner of any Content and wish that such Content is not displayed on the document, kindly notify us at the address provided at the bottom of the page.
About RBIH

RBIH is a wholly-owned subsidiary of the RBI to promote and facilitate an environment that accelerates innovation across the financial sector. RBIH intends to foster and evangelize innovation across the financial sector to enable “Frictionless Finance for a Billion Indians”. To do so, RBIH serves to enable synergy between technology companies, banks, non-banking financial companies, fintech, academia, behavioral economists, and investors through three pillars of focus – Product innovation, Process innovation, and Policy innovation, spearheaded by technology. The motto of RBIH (नवोमेष | समावेश | भाव) translates to ‘Innovation | Inclusion | Impact’ lying at the heart of our project initiatives. The key program areas areas include:

- **Swanari - Women and Finance Program**
- **Innovation for the Next Half Billion**
- **Incubation and Start-up Engagements**
- **Emerging Technologies**

About the RBIH-SWANARI Program

The RBIH-Swanari program was set up with the vision of enabling frictionless finance for every woman in India through innovations at the intersection of technology, financial services and gender through a purposeful women-centric approach. The program endeavors to leverage the potential of technology, frugal innovation, women solving women's issues and building partnerships & alliances across all its pillars of work to leverage frictionless finance at scale. The program focuses on three pillars: **Data** - publishing gender-disaggregated data and insights, **Design** - crafting gender-centric financial solutions, and **Demonstrate** - showcasing the effectiveness of gendered design thinking through Proof of Concepts (PoCs) and pilots. Some of the key projects in this vertical include - **Digitalisation of SHG lending**, **Frictionless Savings Products for Women** and **Frictionless Credit for Women Nano-Entrepreneurs**.