Digital Future of Microfinance: A Realistic Path towards Big Dreams

June 6th, 2023
Agenda

Part I

9:00
Welcome and introductions (Isabelle Barrès)

9:10
Opening remarks (Xavier Faz)

9:20
CGAP MFI Digitization project: What did we learn? What did we do? (Ivo Jeník, Mark Flaming)

10:05 – 10:30
Q & A and closing (Isabelle Barrès and Ivo Jeník)

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11:15 – 12:00
  • Breakout session 1: Credit renewal automation
  • Breakout session 2: Business Intelligence

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Speakers

Xavier Faz
Lead Financial Sector Specialist

Ivo Jeník
Senior Financial Sector Specialist

Mark Flaming
Technical Lead

Isabelle Barrès
Community of Practice Lead (Moderator)
Opening Remarks
CGAP Digitization Project
Among MFIs, digitalization has proven potential to create value for customers and for the business

- **Amret** (Cambodia) Business strategy transformed a group-loan MFI into a full-service financial institution with 500,000 customers and US$1.4 billion assets.

- **Bancamía** (Colombia) improved efficiency by digitizing workflows, creating a mini-branch model and a mobility strategy, digitalizing credit officer operations, and customer interactions through app.

- **MFW** (Jordan) digitized the loan application process and integrated with popular payments solutions (36% of customers receive loans to their e-wallets).

- **AL-KURAIMI ISLAMIC MICROFINANCE BANK** (Yemen) adopted omnichannel strategy to achieve greater scale and to operate in a difficult environment.

- **FINCA** group developed behavioral score based on customer repayment history to automate credit decisioning.

- **27% increase** in loan officers’ productivity (Bancamía mobile app)

- **50% decrease** in loan processing time (Bancamía mobile app)

- **176% annual increase** in use of digital channels by women (Bancamía)

- **227% annual increase** in transactions made by women (Bancamía)

- **30-50% of renewals** streamlined (FINCA Impact Finance score)

- **US$22 million in savings** mobilized (Amret mobile savings officers)

- **45% of transactions** performed through alternative channels (Al Kuraimi Islamic Microfinance Bank)

Source: CGAP 2021
Five principles of successful digital product development

MFIs who can show value for their investments in digitization follow in general these principles:

1. Resource and empower the product development team
2. Define and measure the value you aspire to create
3. Prioritize product features that create value
4. Test prototypes with simple technology
5. Create a good user experience for everyone
What CGAP was testing

How to implement value-based approach?

First cohort: Digitizing credit renewals
• 5 MFIs already with digital customer relationships
• High TA provided by CGAP

Can MFIs digitalize on their own, following guide?

2nd cohort: Implementing Business Intelligence Dashboards
• 23 MFIs without previous digitization
• Document-based Guidance
• Low-touch TA provided by CGAP
The Product Roadmap for implementation of the 5 principles

- Project Set Up
- Hypothesis
- BI Build-Out
- Product Design
- MVP Build-Out
- Sprint 1
Resource and empower the product development team
Define and measure the value you aspire to create:

- How will customer behavior change when you are creating customer value?
- How will you create business value?
Business Intelligence Build-Out

**Project Set Up**

**Hypothesis**

**BI Build-Out**

**Product Design**

**MVP Build-Out**

**Sprint 1**

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### Transaction behavior by Journey Month

<table>
<thead>
<tr>
<th>Journey Month</th>
<th>A: 0 TXN</th>
<th>B: 1-2 TXN</th>
<th>C: 3-4 TXN</th>
<th>D: 5+ TXN</th>
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</tbody>
</table>

### Loan Renewal Rate

- **Women**
- **Men**

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Lorena Velasco 2021 C4D
## Business Intelligence Build-Out

### Project Set Up

- Hypothesis
- BI Build-Out
- Product Design
- MVP Build-Out
- Sprint 1

### Summary Table

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>Automation</th>
<th>Automation + first loan growth</th>
<th>Automation + follow up loan growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly loan disbursements/LO</td>
<td></td>
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<tr>
<td>First loans</td>
<td>5</td>
<td>5</td>
<td>8.2</td>
<td>5</td>
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<tr>
<td>Follow loans</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Automated follow up loans</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>15</td>
<td>15</td>
<td>18.2</td>
<td>35</td>
</tr>
<tr>
<td>% of FTE used</td>
<td>86%</td>
<td>64%</td>
<td>86%</td>
<td>86%</td>
</tr>
<tr>
<td>% automation of follow up loans</td>
<td></td>
<td></td>
<td>50%</td>
<td>83%</td>
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<tr>
<td>Loan disbursement growth</td>
<td>0%</td>
<td>21%</td>
<td>133%</td>
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<tr>
<td>Steady State Results</td>
<td></td>
<td></td>
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<tr>
<td>Outstanding loans</td>
<td>165</td>
<td>165</td>
<td>193.8</td>
<td>405</td>
</tr>
<tr>
<td>Outstanding portfolio</td>
<td>$247,500</td>
<td>$247,500</td>
<td>$279,180</td>
<td>$643,500</td>
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<tr>
<td>Portfolio growth</td>
<td>0%</td>
<td>13%</td>
<td>160%</td>
<td></td>
</tr>
<tr>
<td>LO Expense/Income Ration (EIR)</td>
<td>20%</td>
<td>20%</td>
<td>18%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Product Design

- Prioritize product features that create value
- Create a good user experience for everyone
MVP Build-Out

Test prototypes with simple technology:
- MVP with a SaaS solution
- 12-month proof of concept timeframe
Sprint 1

• Definition of Done + KPIs
• Results collected and evaluated
• Decision about next steps

(This is an agile, iterative process where Sprint 1 is followed by other sprints testing other MVP aspects before the final decision about scale-up is made.)
Closing Part I
Building blocks of value-driven digitization

Robust data analytics
/ business intelligence

Streamline credit renewals

Start here

Define next steps based on local context, business priorities

Sample steps depending on strategic goals

>>Deepen current customer relationship
• Add features to existing products
• Expand/Diversify product offering
• Reduce gender gap through analytics

>>Grow customer base
• Remote account opening
• Add customer segmentation through data analytics

>>Develop new business lines
• Distribute more complex products from other FSPs
• Develop new products for new customer segments
Longer-Term Strategic Choices

**Incremental digitization of the existing operation:** Continued improvements (e.g., expanding the dashboard library, introducing dynamic pricing) and expanding digitization

**Shift to a new business model:** Focus exclusively on a certain segment of customers (e.g., embedded finance focused on customers with strong digital data trails)

**Exploration of new partnerships in modularized financial markets:** Using the newly acquired digital capabilities to form new partnerships (e.g., with finetchs, e-commerce platforms)
A vision for the future of microfinance

Microfinance is part of a competitive market that comprises a range of providers, from digitized incumbents to scaled innovators, responsibly addressing the needs of all underserved segments with efficient and effective offerings.

www.cgap.org/microfinance
PART II
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**Thomas Carrié**
Co-Founder, Rubyx

**Peter Okordion**
Head of Project Management Office, AMFB Nigeria

**Khin Moet Moet (Kay) Nyein**
Data Analyst, CGAP

**Imran Ahmed**
Deputy Executive Director, Shakti Foundation for Disadvantaged Women
CGAP Credit Automation Project: Data analysis, scoring and automated renewal

June 2023
We build and grow loan portfolios

How we provide our partners’ customers with fast and fair access to working capital

1. Score customers
We collect customer data from our partners and run our behavioural analysis based scoring algorithms.

2. Offer loans
Our partners receive a list of prequalified customers and a recommended loan renewal amount and conditions to offer to their customers.

3. Optimise strategy
We help our partners run a profitable lending business through continuous monitoring and control of scoring strategies.
Platform overview

RUBYX PLATFORM

- BI Tools
- API Gateway
- Web UI
- Mobile app

RUBYX INTERFACE

DATA WAREHOUSE
- Cleaned data
- KPIs & reports

DECISION ENGINE
- Credit Scoring
- Offer generation

LOAN MANAGEMENT
- Customer
- Account
- KYC
- Payment
- Loan
- General ledger

Platform overview

- Credit bureau
- Bank
- Payment provider
- Fund provider
Our proposition

Score all customers daily and provide loan renewal offers to be disbursed without analysis to the best customers.

› Anticipate renewals and improve retention of the best customers by proactively offering them renewal opportunities.
› Accelerate decision-making for loan renewal of customers who prove their capacity and willingness to repay their loan
› Remove tasks with low added value in the renewal process of the best customers, liberating time for loan officers to improve their productivity
› Encourage good repayment behavior by increasing customer satisfaction and loyalty through an innovative customer experience.
Implementation planning

Kick-off and initial workshops
Data preparation and extraction
DWH implementation
Scoring strategy design
Scoring strategy configuration
Product and process design
Pilot preparation
Pilot launch
My future is bright

Credit renewal automation pilot
Accion MfB’s Summary Report

Digital Future of Microfinance: A Realistic Path towards Big Dreams
Executive Summary

Brief Background

- The CGAP Digitization Project kicked off January 2022.
- The Auto-Renewal Loans Pilot commenced August 5, 2022. Was planned to run for 6 months but extended to March 31.
- The auto-renewal loans initiative is currently being piloted Bankwide but with only My Own Loan only (Working Capital Product).
- The auto-renewal loan is accessed via the 572 USSD.
- Minimum loan amount of N50k and maximum of N2m.

Auto-Renewal Loans Pilot Performance between Aug 2022 – May 11, 2023

<table>
<thead>
<tr>
<th>Total No of Loans Disbursed</th>
<th>Sum Disbursed Value</th>
<th>Avg. TAT to Process E2E</th>
</tr>
</thead>
<tbody>
<tr>
<td>876</td>
<td>N682.9m</td>
<td>3Hrs</td>
</tr>
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</table>

Benefits/Objective of the Initiative

- **Process Improvement:** The initiative has improved loan process. TAT for processing loans disbursed reduced from 2 days (48Hrs) to 3hrs.
- Quality of Loans disbursed via the auto-renewal has improved.
Expected Benefits from the Initiative after full rollout

- Account Officers (Portfolio Managers) productivity
  - Focus on growing new Loans
  - Drive Collection

- Customer satisfaction

- Improve loan quality

- Driving process optimization

- Customer turnover (retention) and savings habits
On a daily basis, a script is executed post-COB, customer loan data is extracted from CBA and uploaded to a database in the cloud storage.

**High-Level Workflow of the Repeat Loans Automation Process**

1. **Data Extraction Stage**
   - Rubyx engine analyses the data and generates scorecard. Scores each eligible customer, advising on the maximum loan amount.

2. **Evaluation, Pre-approval Scoring & Ranking**
   - Rubyx cloud-based predictive analysis server.

3. **Loan Offer Notification**
   - Auto-Loan Offer SMS Notification is sent to the customer. The SMS contains the maximum loan amount the customer is eligible to apply. An instruction to dial the Bank’s USSD code (*572#) to apply.

4. **Customer Applies for Loan**
   - Customer applies for the loan via the USSD channel. Indicates:
     1. Loan Amount Request
     2. Tenor

5. **Approval Notification**
   - Customer gets instant SMS Loan Approval notification. Ask to visit the branch for contractual letter signing.

6. **Pre-disbursement Process at the Branch**
   - Customer visits the branch with a guarantor and signs the contractual letters. Which will be archived in the Bank’s DMS.

7. **Automatic Loan Disbursement**
   - Loan is disbursed.
Next Steps

01 • Review the impact for improved Business decision and customer experience

02 • Full Launch: Roll out the Auto-Renewal loans initiative to more identified Loan products (we currently piloted only one (1) production; My Own Loan.)

03 • Drive adoption and grow the numbers – Review KPIs of Portfolio Managers to put more emphasis on new loan

04 • Explore more value proposition to derive from the Rubyx platform
THANK YOU
Data Analytics Journey

1. Requirement Gathering
   - Identification of requirements for the dashboard requested by the business owner

2. Data Availability
   - Translating the available data points against the requirements

3. Queries
   - Writing the SQL and/or python queries to access the data in the data warehouse / data marts

4. Visualization
   - Pushing the relevant data points from the data warehouse / data marts
   - Visualization tool to create graphs and charts

5. Validation
   - Communicating and confirming with the business whether the prepared report meets the requirements

6. Deployment
   - After the validation, the report is deployed and becomes a tool for monitoring customer behavior.

7. Publishing
   - Publishing the report in relevant workspace so that business users can access it at any given point.
## Data Bootcamp Sequence

<table>
<thead>
<tr>
<th>Session 1: Segmentation</th>
<th>Session 2: Query</th>
<th>Session 3: Visualization</th>
<th>Session 4: Communication and publishing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Covered in the session</strong></td>
<td>Walk through the dashboards. Define who's digital and who's traditional customers in terms of the data points available.</td>
<td>Use the segmentation logic produced in session 1, walk-through query preparation for 5 dashboards.</td>
<td>Preparing visualizations using charts and graphs.</td>
</tr>
<tr>
<td><strong>Expected output</strong></td>
<td>1/ Produce the definition of digital and traditional customers 2/ Prepare query that separates digital vs traditional customers 3/ Put output in temporary table / excel extract.</td>
<td>Produce output table for each dashboard will be produced (refer to &quot;sample output table&quot; in Annex)</td>
<td>1/ Get confirmation from key stakeholders that visualization is directionally accurate 2/ Finalize dashboards</td>
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Shakti Foundation for Disadvantaged Women, Bangladesh

Imran Ahmed
Q & A
We invite you to join a Breakout Session...

• For **Breakout Session 1**: Credit Renewal Automation, **stay in this room**

• For **Breakout Session 2**: Business Intelligence, **click on the link in the Chat** [https://bit.ly/Busint606](https://bit.ly/Busint606)
Breakout Session 1:
Credit Renewal Automation