**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)

Part II

10:30
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Voices from pilots:
- Thomas Carrié, Peter Okordion
- Khin Moet Moet (Kay) Nyein, Imran Ahmed

11:10
Q & A (Isabelle Barrès)

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

Saiyna Bashir, C4D 2021

PART I

Natalie Brown, 2018 CGAP Photo Contest

Speakers

Xavier Faz
Lead Financial Sector
Specialist

Ivo Jeník
Senior Financial Sector
Specialist

Mark Flaming
Technical Lead

Isabelle Barrès
Community of Practice
Lead (Moderator)

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Opening Remarks

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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

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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

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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

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The Product Roadmap for implementation of the 5 principles

Project Set Up	Hypothesis	BI Build-Out	Product Design	MVP Build-Out	Sprint 1

Tony Karumba, 2020 C4D

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Project Set up

Project Set Up → Hypothesis → BI Build-Out → Product Design → MVP Build-Out → Sprint 1

Resource and empower the product development team

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Hypothesis

Project Set Up → **Hypothesis** → BI Build-Out → Product Design → MVP Build-Out → Sprint 1

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?

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Business Intelligence Build-Out

Project Set Up → Hypothesis → **BI Build-Out** → Product Design → MVP Build-Out → Sprint 1

Transaction behavior by Journey Month

of customers (in percent)

Journey Month

- A: 0 TXN
- B: 1-2 TXN
- C: 3-4 TXN
- D: 5+ TXN

Loan Renewal Rate

Loan Renewal Rate (in percent)

Journey Month

— Women — Men

Lorena Velasco 2021 C4D

Business Intelligence Build-Out

Project Set Up	Hypothesis	BI Build-Out	Product Design	MVP Build-Out	Sprint 1
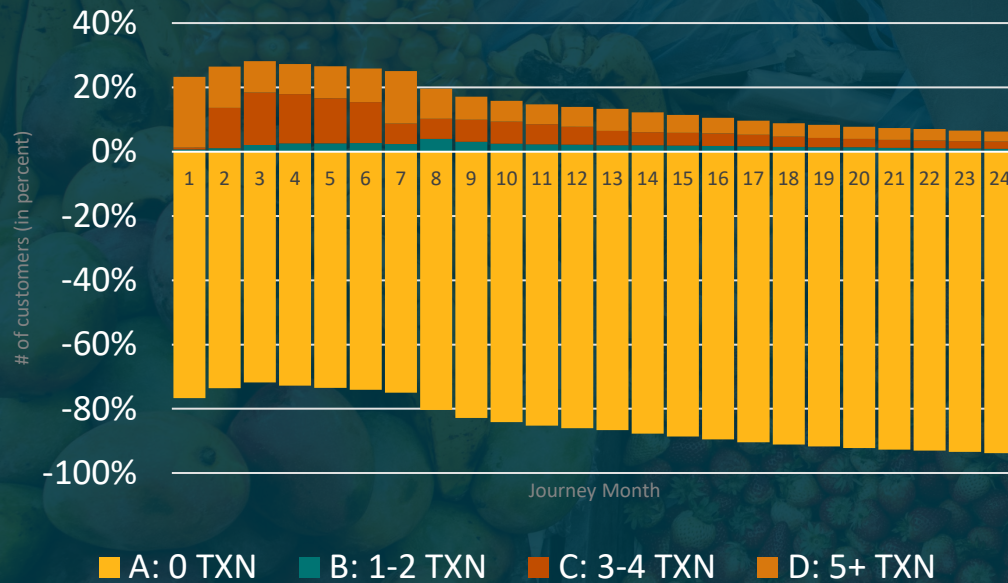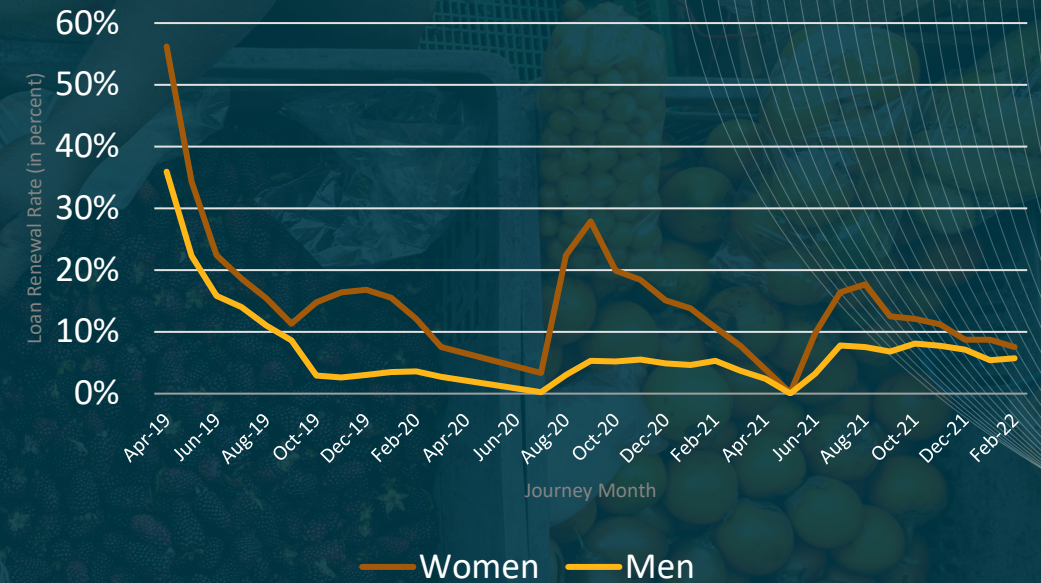
	Traditional	Automation	Automation + first loan growth	Automation + follow up loan growth
Monthly loan disbursements/LO				
First loans	5	5	8.2	5
Follow loans	10	5	5	5
Automated follow up loans	0	5	5	25
TOTAL	15	15	18.2	35
% of FTE used	86%	64%	86%	86%
% automation of follow up loans		50%	50%	83%
loan disbursement growth		0%	21%	133%
Steady State Results				
Outstanding loans	165	165	193.8	405
Outstanding portfolio	$247,500	$247,500	$279,180	$643,500
Portfolio growth		0%	13%	160%
LO Expense/Income Ration (EIR)	20%	20%	18%	8%

Product Design

Project Set Up → Hypothesis → BI Build-Out → **Product Design** → MVP Build-Out → Sprint 1

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

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Lorena Velasco 2021 C4D

MVP Build-Out

| Project Set Up | Hypothesis | BI Build-Out | Product Design | **MVP Build-Out** | Sprint 1 |

Test prototypes with simple technology:

- **MVP with a SaaS solution**
- **12-month proof of concept timeframe**

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Lorena Velasco 2021 C4D

Sprint 1

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

Sprint 1 → Sprint 2 → **Sprint 3** → ... → Scale-up

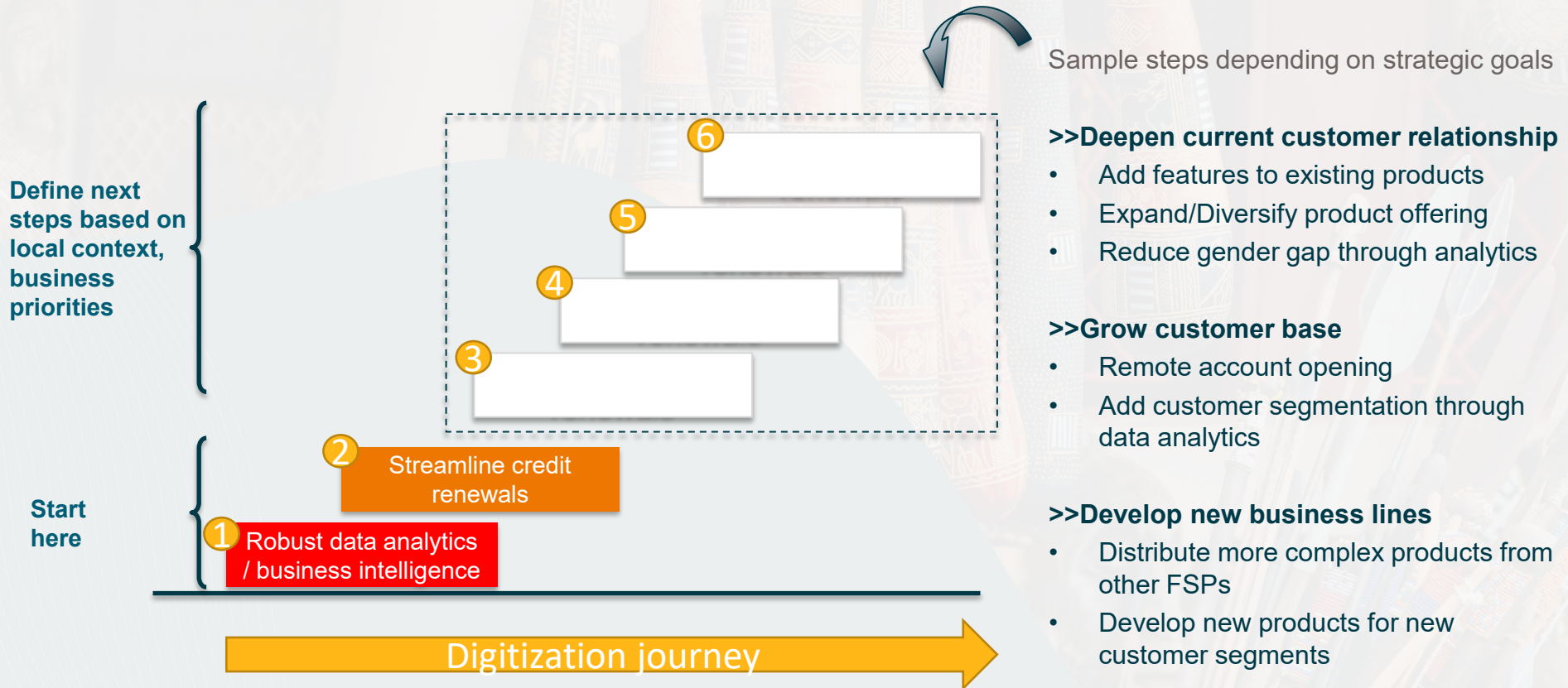| assessment | assessment | assessment | decision |
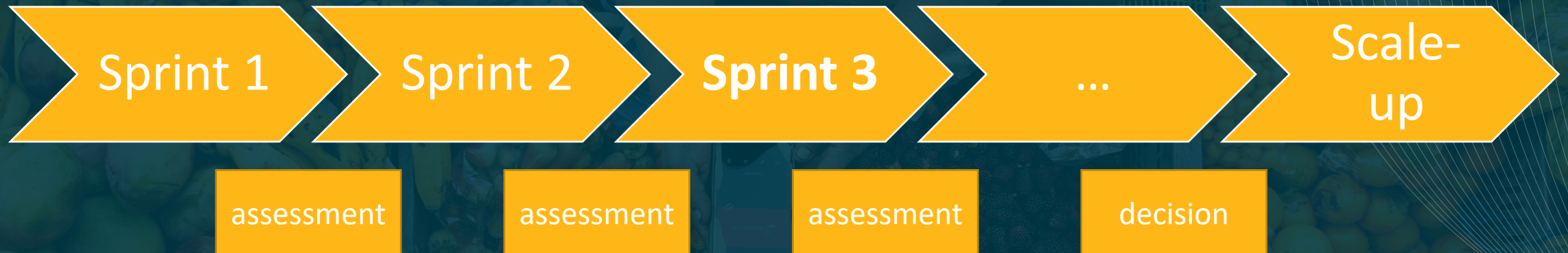
(This is an agile, iterative process where Sprint 1 is followed by other sprints testing other MVP aspects before the final decision about scale-up is made.)

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Q & A

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Closing Part I

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Building blocks of value-driven digitization

Sample steps depending on strategic goals

Define next steps based on local context, business priorities

6

5

4

3

2 Streamline credit renewals

Start here

1 Robust data analytics / business intelligence

Digitization journey

>>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

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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)

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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.

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www.cgap.org/microfinance

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Natalie Brown, 2018 CGAP Photo Contest

PART II

Agenda

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Saiyna Bashir, C4D 2021

Speakers

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

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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.
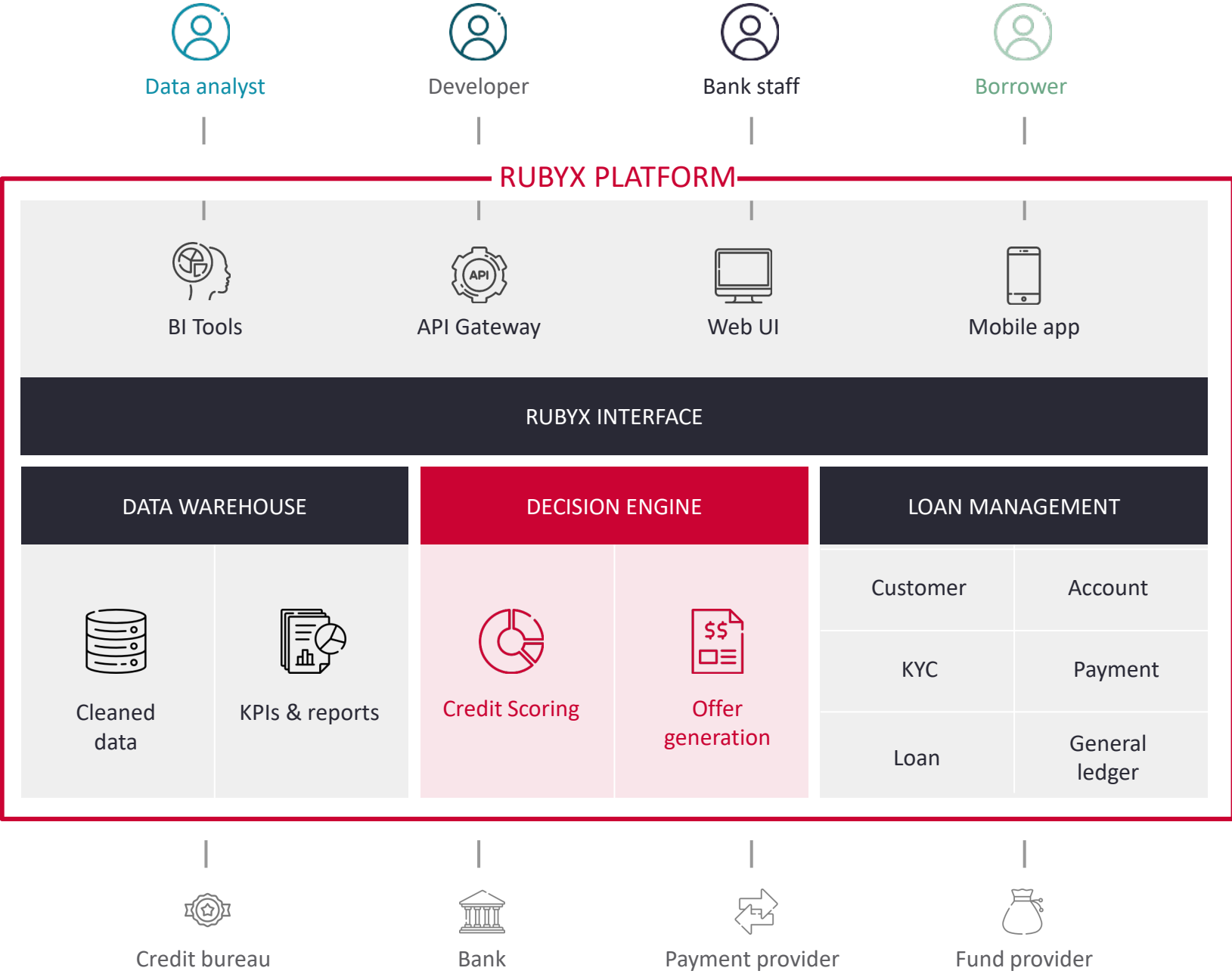
2. Offer loans

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

Data analyst   Developer   Bank staff   Borrower

RUBYX PLATFORM

BI Tools   API Gateway   Web UI   Mobile app

RUBYX INTERFACE

DATA WAREHOUSE		DECISION ENGINE		LOAN MANAGEMENT	
Cleaned data	KPIs & reports	Credit Scoring	Offer generation	Customer	Account
				KYC	Payment
				Loan	General ledger

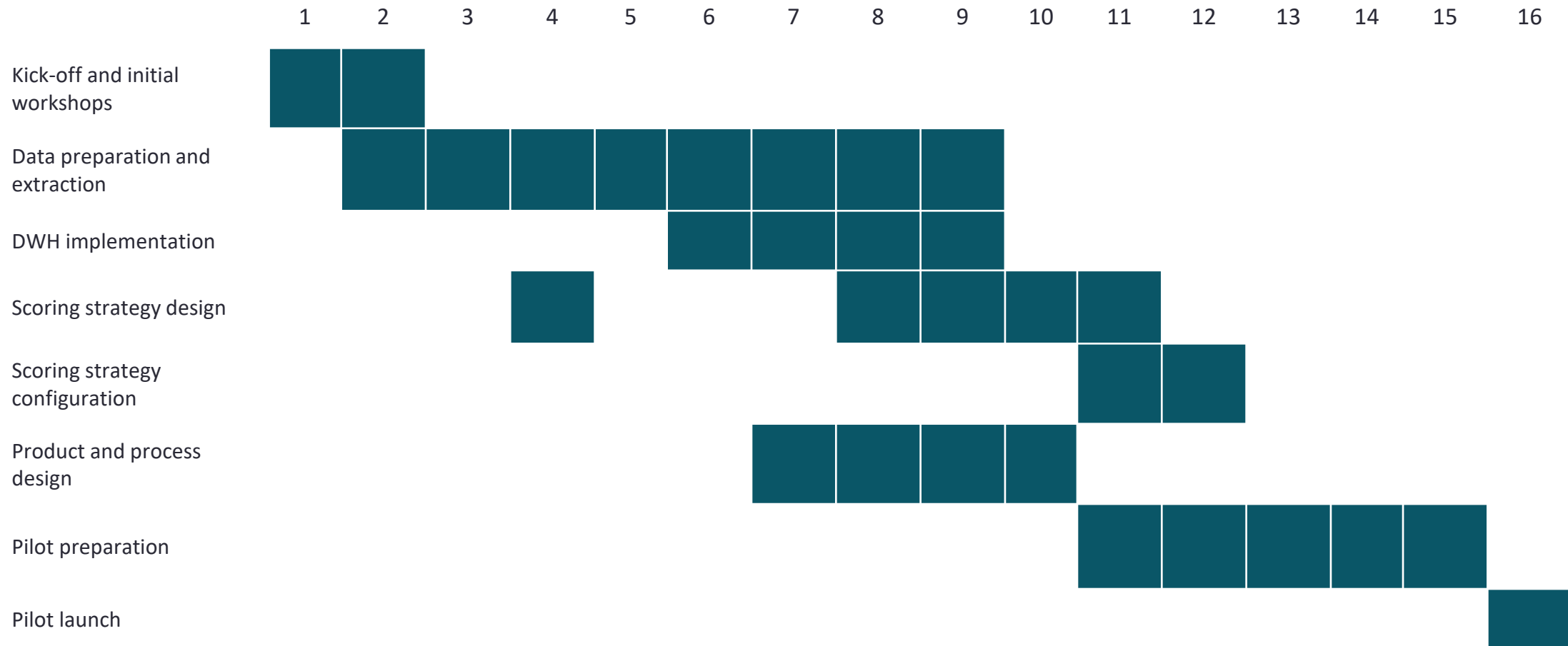Credit bureau   Bank   Payment provider   Fund provider

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

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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															■	
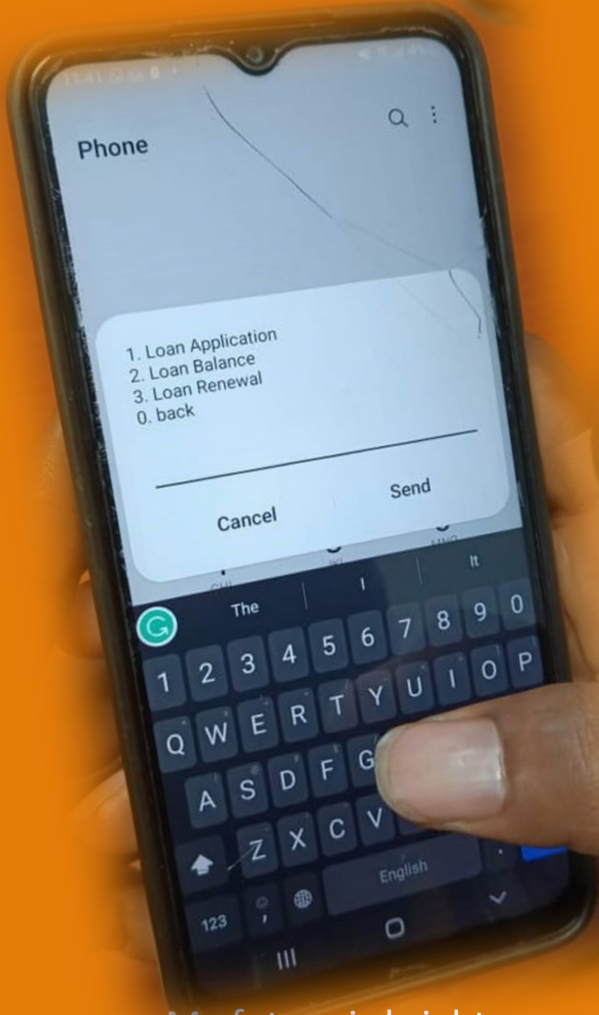
Executive Summary

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

Total No of Loans Disbursed

876

337
M

Cumulative No of Disbursed Loans

529
F
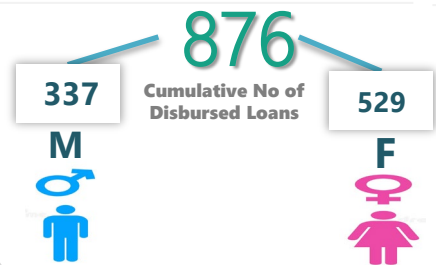
Sum Disbursed Value

N682.9m

Avg. TAT to Process E2E

3Hrs

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

Benefits

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
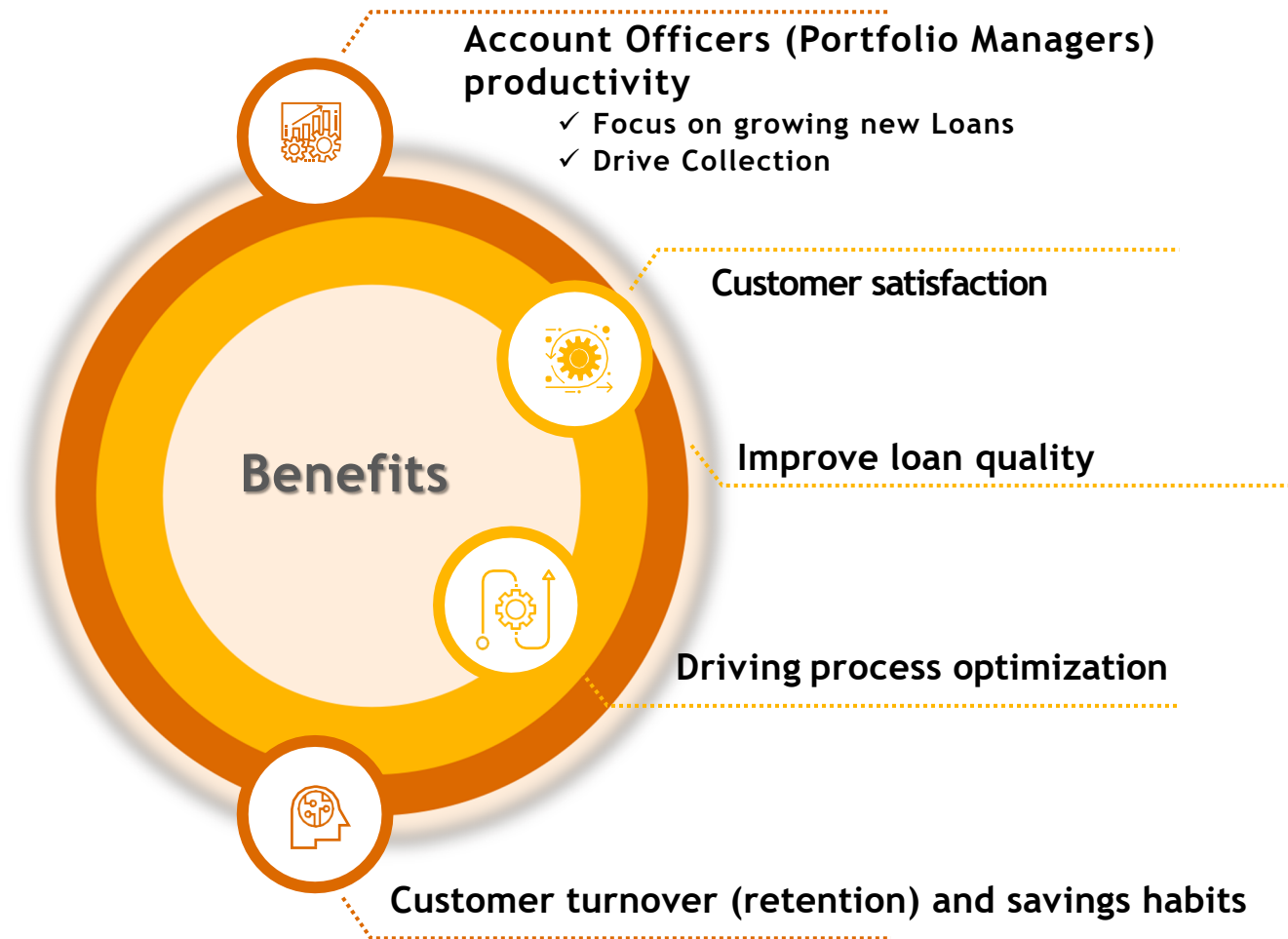
HIGH-LEVEL WORKFLOW OF THE REPEAT LOANS AUTOMATION PROCESS

Start

On daily basis, a script is executed post-COB, customer loan data is extracted from CBA and uploaded to a database in the cloud storage

Rubyx cloud based predictive analysis server

Customer gets SMS notification of Max loan offer

Customer applies for the loan via the USSD channel. Indicate
1. Loan Amount Request
2. Tenor

i. Customer visit the branch with a guarantor and sign the contractual letters. Which will be archived in the Bank's DMS

| 1 | **Data extraction stage** | 2 | **Evaluation, pre-approval scoring & ranking** | 3 | **Loan Offer Notification** | 4 | **Customer Applies for Loan** | 5 | **Approval Notification** | 6 | **Pre-disbursement process at the branch** | 7 | **Automatic Loan disbursement** |

Rubyx engine analyses the data and generate score card. Scores each eligible customers, advise on the maximum loan amount.

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

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

Loan is disbursed

4

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

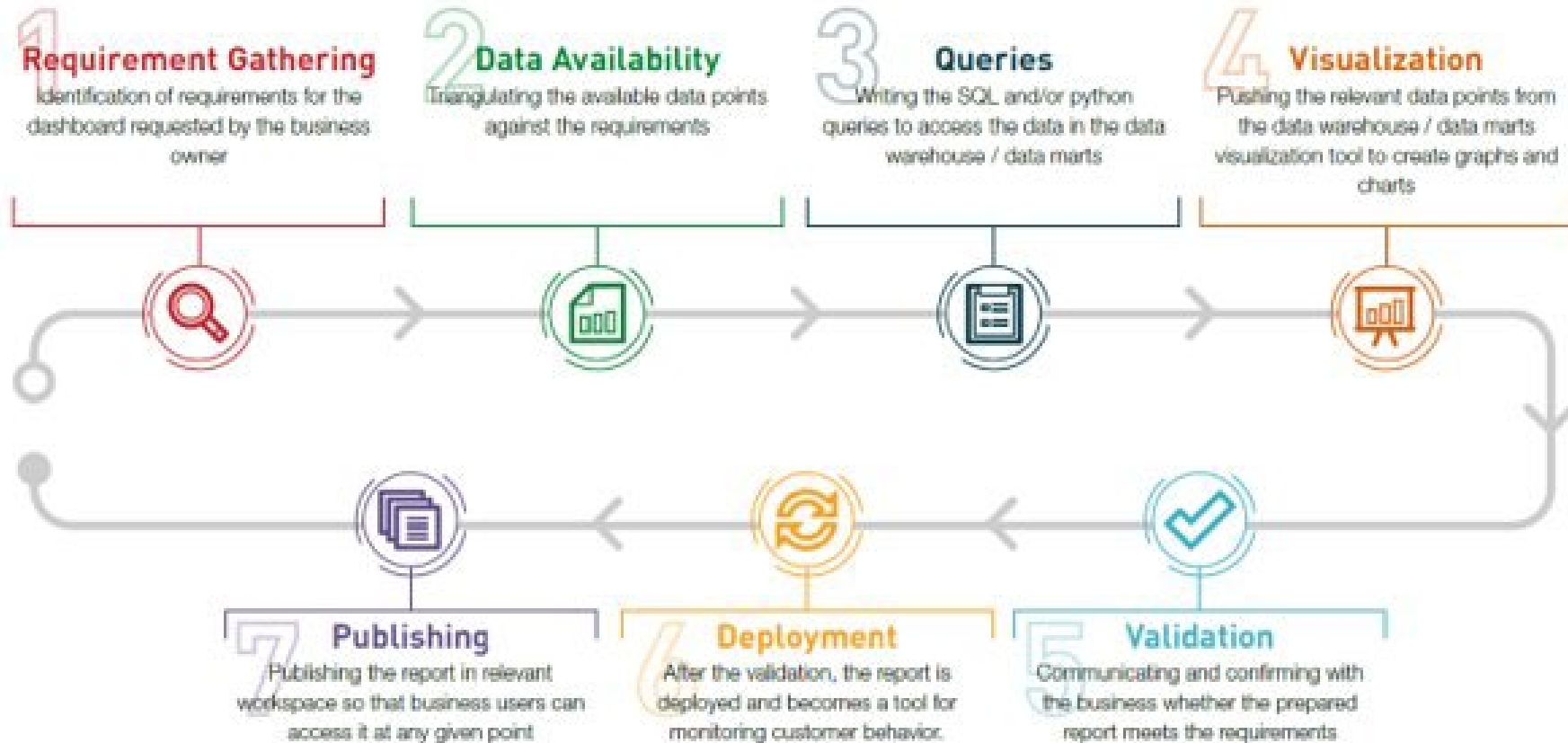**04** ▪ **Explore more value proposition to derive from the Rubyx platform**

THANK YOU

Data Analytics Journey

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

2 Data Availability
Triangulating 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

7 Publishing
Publishing the report in relevant workspace so that business users can access it at any given point

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

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

Data Bootcamp Sequence

	Session 1: Segmentation	Session 2: Query	Session 3: Visualization	Session 4: Communication and publishing
Covered in the session	Walk through the dashboards. Define who's digital and who's traditional customers in terms of the data points available.	Use the segmentation logic produced in session 1, walk-through query preparation for 5 dashboards.	Preparing visualizations using charts and graphs.	Preparing to get feedback on dashboards from the business teams and senior management.
Expected output	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.	Produce output table for each dashboard will be produced (refer to "sample output table" in Annex)	Produce final draft dashboards	1/ Get confirmation from key stakeholders that visualization is directionally accurate 2/ Finalize dashboards

Shakti Foundation for Disadvantaged Women, Bangladesh

Imran Ahmed

Q & A

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Instructions for breakout session

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

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Breakout Session 1:
Credit Renewal Automation

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CGAP Members