

Data Capital

UNLOCKING FORMAL FINANCE
FOR A BILLION INDIANS



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Foreword

Today, India stands at the cusp of change. With a vibrant and growing economy supported by a globally enviable demographic dividend, the country is poised for unprecedented economic growth and human development. The democratization of technology, rapid digitization, widespread smartphone penetration, and access to affordable high-speed internet has laid the foundation for a promising future.

These technological advancements, combined with India's digital public infrastructure for identity, authentication, and real-time payments, have revolutionized the financial services industry. This transformation has dramatically improved access to and usage of financial services, enabling millions of people to participate in the formal financial system. According to the Bank of International Settlements (BIS), India has achieved in **nine** years, the kind of financial inclusion that would have traditionally taken nearly five decades!

However, a substantial chunk of the Indian population remains excluded from the benefits of formal financial services due to a lack of formal income proofs, collateral, and credit histories. At the same time, the majority

of micro-enterprises and small businesses operate in the unorganized sector. These systemic barriers hinder financial institutions from effectively serving these "thin-file" and "no-file" customer segments.

The growing volume of transactional data has created a rich digital financial footprint, enabling financial institutions to innovate alternative financial decisioning models. However, this data is often fragmented, limiting its potential to drive inclusive growth. The **Account Aggregator (AA) framework** sets up **consent-based data sharing** to empower customers with **agency and control** over their financial data in institutions across banking, securities, insurance, pension, and tax.

The AA ecosystem transforms information into a valuable asset that customers—individuals and MSMEs—can leverage to their advantage—ushering in the paradigm of "**data capital**." This data capital is poised to bring unprecedented financial inclusion across access, usage, and quality of financial services. We envision that the ecosystem can empower customers to access collateral-free, sachetized credit, cash-flow-based insurance, a 360° view of personal finance,

investment advisory and wealth management solutions as well as other eligibility-based financial products.

At the same time, the AA ecosystem equips institutions to leverage real-time data sharing from the source for drastically reduced turnaround time (TAT), straight-to-processing (STP) flows, data tampering fraud prevention, and better risk management. At the second-order level, the ecosystem will enable institutions to serve marginalized customer cohorts better. **Operational efficiency, profitability, and market expansion** are poised to drive **productivity** gains in the financial sector.

The AA ecosystem not only enables individuals and small businesses to access financial services at better terms, but also opens up the financial sector in the country. The framework fundamentally shifts the **balance of power** in favor of customers and heralds a profound shift in the financial services industry.

The AA framework employs a global-first approach to unbundle consent management into a specialized entity. These “consent managers,” or Account Aggregators, are responsible for providing the best consent experience

to the customer. This framework also aligns with the principles enshrined in the Digital Personal Data Protection (DPDP) Act 2023. Thus, we believe that the AA ecosystem is one of the pioneering implementations of India’s nascent data protection regime.

The AA ecosystem is one of the world’s most sophisticated implementations of consent-based data sharing. Akin to the techno-legal approach of DPIs, the AA ecosystem is built atop open protocols. These standardized specifications ensure a rigorous technology foundation for the ecosystem. This approach enables the market to innovate products, services, and customer experiences across diverse cohorts. In addition, participatory governance at the ecosystem level engenders agile self-regulatory initiatives. As a result, the ecosystem fosters **resilience, scalability, and efficiency**.

At Sahamati, we believe that much like Aadhaar and UPI, the AA framework is a world-class DPI conceived in India and poised to benefit the world!

Letter From Our CEO

Dear Fellow Stakeholders,

In today's digital age, data protection is not a choice — it is a fundamental priority. Worldwide, data protection has dominated discussions, with experts, users, policymakers, and stakeholders advocating for strengthening user privacy. However, few countries have successfully addressed true 'data empowerment' — putting control in the hands of the data principal. It is a moment of pride for all of us that India has not only championed data empowerment in thought leadership but has also implemented it effectively through the Account Aggregator (AA) framework.

We have embarked on a simple yet ambitious mission—to positively impact the lives of over 140 crore people in our country. Our focus has always been on ensuring that those who previously lacked access to formal financial services and products can now avail them seamlessly through the ecosystem.

I am delighted to share that from launch to March 2024, the ecosystem has facilitated loan disbursement of **Rs 42,300 crores** across **4.22 million loans** with **39%** going to MSMEs, primarily sole proprietors. At the same time, we estimate that the ecosystem has facilitated

10.5 million customers with tools and services for managing their personal finances. These milestones represent the potential of the ecosystem to bridge financial inclusion gaps and drive economic growth.

FY24 has been a pivotal year for the AA ecosystem as it became cross-sectoral, tapping into its true potential. Key interventions by the RBI led to the onboarding of all public sector banks (PSBs) as FIPs and FIUs. Additionally, SEBI-regulated entities like AMCs, general and life insurers under IRDAI, CRAs under PFRDA, and the Goods and Services Tax Network (GSTN) have integrated into the network, representing a significant milestone in India's journey toward data empowerment.

The ecosystem recently crossed the **100 million** cumulative successful consents mark in August 2024! Currently, the ecosystem fulfills around **3,00,000 daily** consents-based data sharing transactions! Although the demand has been fueled by institutional incentives to leverage efficiency gains, customers have recognized the value proposition of using AAs. We believe the ecosystem is at an inflection point for exponential growth. In the coming years, we expect customer



BG MAHESH, CEO SAHAMATI

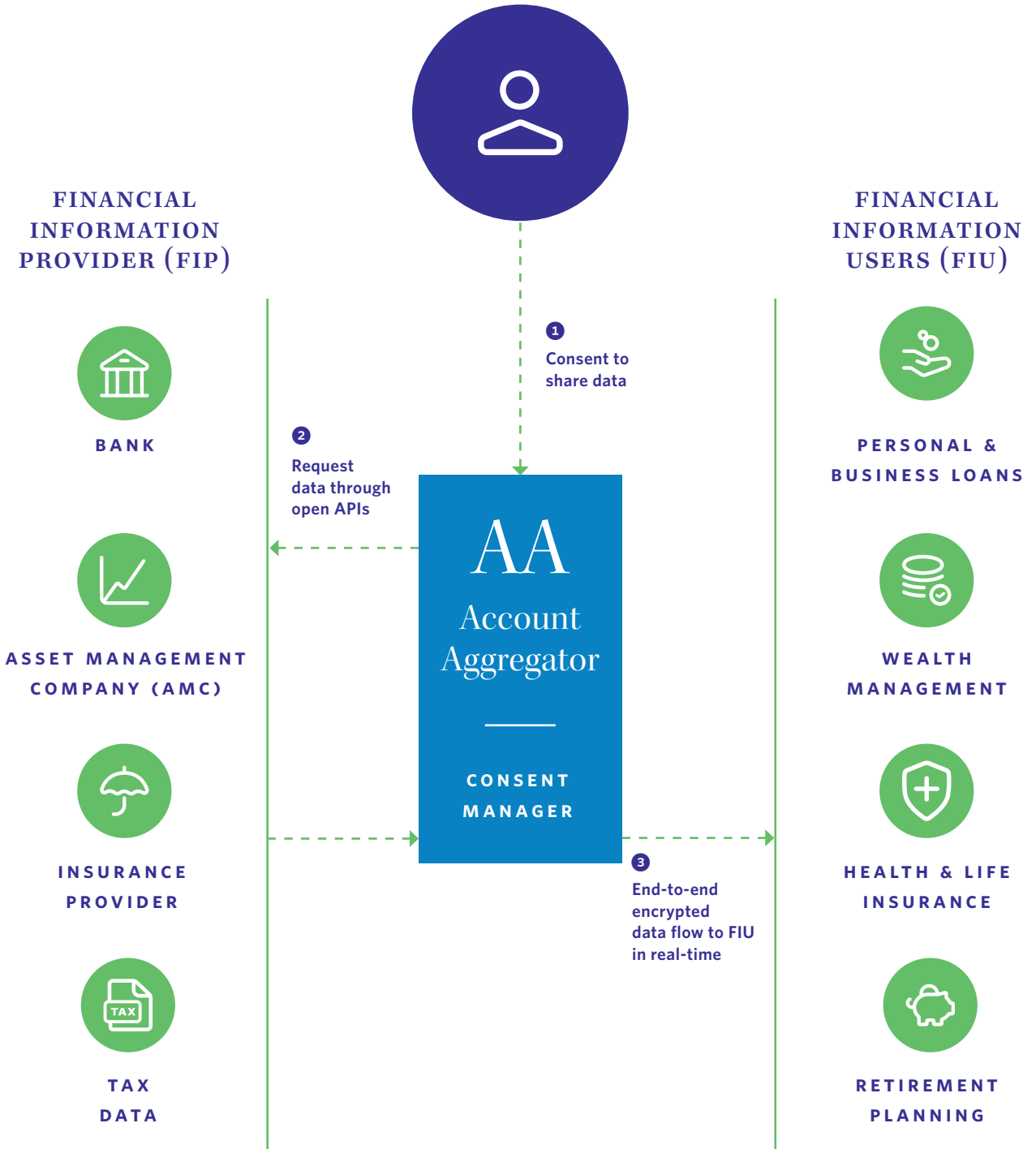
demand for convenient, safe, and secure data-sharing to scale the ecosystem to **3 million** daily consents!

As Sahamati, the ecosystem has come together to foster innovation, and customer-centricity, with equity, transparency, and neutrality in the sector. Our mission is to be a source of strength, especially in challenging times, for the AA ecosystem. After five transformative years, we recognize the challenges we've faced and are deeply grateful for the contributions of our volunteers, Governing Council, and advisory council. Looking ahead, we remain dedicated to expanding financial access for more individuals and MSMEs across India.

We are strengthening the ecosystem across the demand and supply sides to enable this scale-up. We have ramped up our advocacy and plan to

extend that to customer education and awareness initiatives. We are building a high-performance technical infrastructure to support interoperability and streamlined network-wide operations. At the same time, we are transitioning from a loosely bound, voluntary alliance to a rigorously structured member-driven association to engender enforceability and self-regulatory initiatives of the ecosystem.

As we inch towards the inflection point for exponential scale-up of the ecosystem, we look forward to the backing of our stakeholders, including participants, regulators, policymakers, and well-wishers, to enable us to provide a “**personal balance sheet**” for every Indian!



Introduction to the Account Aggregator (AA) Ecosystem

The AA ecosystem implements the consent-based data-sharing framework laid down by the RBI NBFC-AA Master Directions, 2016. The framework is an outcome of the joint consultations of financial sector regulators (FSRs)- Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI), the Insurance Regulatory Development Authority of India (IRDAI), and the Pension Fund Regulatory Development Authority (PFRDA) under the auspices of the Financial Stability and Development Council (FSDC) anchored by the Ministry of Finance, Government of India. The ecosystem has adopted a digital public good (DPG) for electronic consent artefact released by the Ministry of Electronics and Information Technology (MeitY) in 2019.

The AA ecosystem comprises four participants: customers, Financial Information Providers (FIPs), Financial Information Users (FIUs), and Account Aggregators (AAs). FIPs and FIUs are data fiduciaries licensed and regulated entities (REs) that store, manage, and protect customer data. These entities are regulated by financial sector regulators (FSRs) as well as the Department of Revenue (DoR) under the Ministry of Finance (MoF).

On the other hand, Account Aggregators (AAs) are a category of RBI-regulated NBFCs. AAs enable customers to access and share financial data across institutions with explicit, informed consent. Through this consent management service, AAs act as a single point of contact for customers to give, manage, review, and

withdraw consents from FIUs to access their data from FIPs. Thus, AAs act as consent managers (CMs) for customers in the financial sector, aligning perfectly with the Digital Personal Data Protection (DPDP) Act 2023.

As of 31st October, 2024, the ecosystem comprises **15** operational Account Aggregators (AAs). Over **570+** cross-sectoral financial institutions across banking, securities, insurance, pension, and taxation have joined the ecosystem - **168** as Financial Information Providers and **522** as Financial Information Users. These entities have empowered customers with access, agency, and control over financial data across more than **2.12 billion** financial accounts.

As the supply has strengthened, we are witnessing a rising demand for data usage. Cumulatively, till 31st October 2024, the ecosystem has facilitated successful consent-based data-sharing transactions based on more than **124 million** consents across more than **112 million** financial accounts. Banking (**74%**) and securities (**25%**) sectors account for most consents fulfilled in the ecosystem. Lending and Personal Finance Management (PFM) are among the most popular use cases in the AA ecosystem today.

Since public launch in September 2021 to March 2024, the ecosystem has facilitated loan disbursement of **88,700 crores** across **9.70 million** loans with **25%** going to MSMEs, primarily sole proprietors. At the same time, we estimate that the ecosystem has facilitated **10.5 million** customers with personal finance management.

PARTICIPATION
& REACH (SEPT
2021 - OCT 2024)

15

OPERATIONAL
ACCOUNT AGGREGATORS

570+

CROSS-SECTORAL
FINANCIAL INSTITUTIONS

168

FINANCIAL INFORMATION
PROVIDERS

522

FINANCIAL
INFORMATION USERS

2.12B

FINANCIAL ACCOUNTS
ACCESSIBLE THROUGH
THE ECOSYSTEM

DATA SHARING
& USAGE (SEPT
2021 - OCT 2024)

124M

CONSENT-BASED DATA-
SHARING TRANSACTIONS

74%

CONSENTS FULFILLED BY
THE BANKING SECTOR

112M

FINANCIAL ACCOUNTS
INVOLVED IN DATA
SHARING

25%

CONSENTS FULFILLED BY
THE SECURITIES SECTOR

LENDING IMPACT
(SEPT 2021 - MAR 2024)

INR 88,700Cr

IN LOANS DISBURSED
THROUGH THE ECOSYSTEM

9.705M

LOANS DISBURSED
THROUGH THE ECOSYSTEM

INR 92,086

AVERAGE LOAN
TICKET SIZE

PERSONAL FINANCE
MANAGEMENT (SEPT
2021 TO MAR 2024)

10.5M

CUSTOMERS USING THE
ECOSYSTEM FOR PERSONAL
FINANCE MANAGEMENT
(ESTIMATED)

ECOSYSTEM MILESTONES

SEPTEMBER 2016

The Reserve Bank of India (RBI) Master Directions on AA released

MARCH 2017

Electronic consent framework published by Ministry of Electronics & IT (MeitY)

JUNE 2017

Justice Srikrishna Committee Panel on Data Protection set up by the Government of India (GoI)

AUGUST 2017

Launch of the Data Empowerment and Protection Architecture (DEPA)

MARCH 2018

Draft Technical Standards for AA published by Reserve Bank Information Technology Pvt. Ltd. (ReBIT)

JULY 2018

Draft Privacy Bill and Justice Srikrishna Committee Report released

JUNE 2019

Sahamati launched as an industry alliance for the ecosystem to drive the adoption of AA

OCTOBER 2019

First NBFC-AA operating license issued by the Reserve Bank of India (RBI)

NOVEMBER 2019

Final v1.1.1 Technical Standards for AA published by Reserve Bank Information Technology Pvt. Ltd. (ReBIT)

MAY 2021

First AA transaction done by LendingKart FIU, Axis-IndusInd-FIP, and Onemoney AA

JULY 2021

Managed rollout with 2 AAs and 6 financial institutions to test out tech rails in production

SEPTEMBER 2021

The Account Aggregator (AA) ecosystem launched publicly with 8 FIPs, 2 FIUs, and 4 AAs!

The RBI, the Ministry of Finance, and the NITI Aayog publicly advocate the adoption of AA

JANUARY 2022

Market guidelines on Reciprocity Obligation published

MARCH 2022

Assisted-mode journeys of AAs for adoption at scale

AUGUST 2022

All Public Sector Banks (PSBs) go live as FIPs

MARCH 2023

PFRDA entities join the network and Central Recordkeeping Agencies (CRAs) go live as FIPs with NPS data

APRIL 2023

CDSL — the first depository on the network — goes live!

MAY 2023

SamvAAAd 2023, first annual event of the ecosystem, held and attended by more than 1100 people

JULY 2023

GSTN — the first entity with tax data—goes live on the AA network!

AUGUST 2023

SEBI consultation paper on collating and defining use cases of FIUs in the securities market

Digital Personal Data Protection Act 2023 passed in the parliament and ratified

ReBIT released the upgraded technical specifications for the AA ecosystem with the NBFC-AA Specifications 2.0.0

NOVEMBER 2023

National Housing Bank released an advisory asking all housing finance companies (HFCs) to join the ecosystem

PFRDA authorized Points of Presence (POPs) only to function as FIUs in the ecosystem

ReBIT separated insurance schemas into two distinct data schemas for Life Insurance and General Insurance

JANUARY 2024

Sahamati Report on Lending facilitated by the AA Ecosystem until FY24 H1 published. Ecosystem crossed the Rs. 200 billion mark for cumulative loans disbursed via AAs!

MARCH 2024

Omnibus Self-Regulatory Organization (SRO) Framework for Regulated Entities (REs) under the RBI notified. Application for SRO-AA is awaited

JUNE 2024

Ecosystem successfully transitioned to ReBIT API version 2.0.0.

Sahamati Report on Lending facilitated by the AA Ecosystem until FY24 H2 published. Ecosystem crossed the Rs. 400 billion mark for cumulative loans disbursed via AAs!

JULY 2024

Sahamati Report on Personal Finance Management (PFM) facilitated by Account Aggregators (AAs) estimated around 10.5 million customers to have used PFM by FY24

AUGUST 2024

100 Million cumulative successful data-sharing consents crossed!

NOVEMBER 2024

SamvAAAd 2024 convened with 1500 participants set to attend!

COMPREHENSIVE USE CASES IN THE AA ECOSYSTEM

Diverse use cases are being ideated, piloted, and implemented across various segments of the AA ecosystem. The following use cases track a typical customer journey in financial services, from discovering financial products to onboarding and authentication, through to eligibility checks, and risk management. As we continue to explore and expand these use cases, we reaffirm our commitment to driving innovation and improving customer experiences in the financial sector.

DISCOVERING FINANCIAL PRODUCTS

Marketplaces & Lead Generation

ONBOARDING & AUTHENTICATION

Bank Account &
Co-Applicant Verification

Income Verification

360 DEGREE FINANCIAL OVERVIEW

Interoperable Passbooks &
Consolidated Statements

Spend Analyzer and
Cash Flow Management

CUSTOMER

Discover the varied range of financial products on offer on a single customer interface.

Simplified identity and financial checks for account setup.

Income verification for F&O trading account setup or insurance policy issuance

Access unified views for easy tracking of finances.

Analyze spending, set budgets and alerts, and manage cash flows.

INDUSTRY

Widening of the funnel through increased outreach.

Streamlined onboarding, improved efficiency, and reduced fraud risk.

Brokers ensure compliance and efficiency with automated checks.

Holistic customer profiles support proactive service recommendations.

FSPs benefit from strong engagement and can follow with advisory services.

ELIGIBILITY, PRODUCT FIT & UNDERWRITING

Loan & Insurance Product Matching

Income and Risk Profiling

Loan Underwriting & Credit Adjustments

Personalized Offers

CUSTOMER

Find products tailored to financial needs.

Comprehensive financial assessment for Income validation and risk profiling.

Faster approvals with data-backed decisions.

Access financial products that align with financial habits and behavior.

INDUSTRY

Increased approval rates by matching customers with appropriate products.

Simplify eligibility, evaluate risk, and offer suitable financial products.

Accurate credit assessments speed up lending processes, improving approval times and reducing defaults.

Transaction data enables targeted offers, increasing approval and reducing churn.

RISK MONITORING & MANAGEMENT

Collections Optimization

Early Warnings

End-Use Monitoring

Fraud Prevention

Insurance Claims Processing

Receives reminders for upcoming repayments. This helps prevent missed or overdue payments.

Receives alerts about potential financial risks. This helps prevent missed or bounced payments.

Benefits from funds being used for the right purpose, fostering financial responsibility.

Benefits from enhanced security measures, safeguarding against fraudulent activity.

Experiences easier claims processing with proactive updates and reminders.

Sends tailored reminders based on customer payment patterns. This improves collections and reduces defaults.

Detects early signs of payment risks. This allows proactive steps to reduce defaults and missed payments.

Tracks loan use to ensure compliance and prevent misuse.

Monitors for unusual activity to detect and prevent fraud, lowering risk.

Verifies claims data to reduce fraud and improve accuracy.

Who is Sahamati?

DigiSahamati Foundation, also known as Sahamati, is a market-led alliance to anchor the adoption and implementation of the Account Aggregator (AA) framework in India. We aim to contribute to a paradigm shift where data capital becomes an instrument to drive positive change and foster opportunities for individuals across backgrounds. We envision a future where individuals, businesses, and institutions realize the benefits of agency and control over their data.

“We believe in a world where everyone has access and control over their data. We believe agency over data could empower Indians with opportunities to improve their own lives.”

We recognized that opening up financial data across institutions is a paradigm shift. Although some processes, platforms, and institutions have made customer data accessible, pivoting institutions toward an open data ecosystem is arduous. Sahamati was formed as a coalition of market players dedicated to the fundamental objective of data empowerment. This visionary commitment of a nascent ecosystem to strengthening customer agency and choice proved critical in institutionalizing the Account Aggregator (AA) ecosystem in the financial sector.

The journey of Sahamati is a testament to the sheer willpower, grit, and resilience of the collective efforts of the industry to realize a customer-centric data empowerment paradigm. Nonetheless, the proactive succor and recognition from regulators and policymakers have been crucial for the ecosystem prosperity. As we celebrate three years since the public launch, we would like to convey immense gratitude to our stakeholders, advisors, volunteers, and well-wishers.

OUR VALUES

High Agency & Ownership
Customer-centric
Ecosystem Approach
Population-Scale
Community Building
Collaboration
Participatory Governance
Universality

JOURNEY SO FAR

JUNE 2019

Sahamati soft-launched as an industry alliance for the ecosystem to drive the adoption of AA

First Account Aggregator (AA) workshop conducted by Sahamati

OCTOBER 2019

Sahamati's Governing Council and Advisory Council formed

MARCH 2020

Central Registry v1.0 launched for trust management in the ecosystem

JULY 2020

Month-long AA Hackathon comprising 50 teams and 500 developers launched

AUGUST 2020

Token Service and Sahamati Tools launched for trust and network management

SEPTEMBER 2020

Certification Framework v1.0 launched by Sahamati

DECEMBER 2020

AA Community Launch

First 10 institutions (including 3 AAs) achieve certification

MARCH 2021

Common Ecosystem Participation Terms v 1.0 released

MAY 2021

First AA transaction: LendingKart FIU, Axis-IndusInd FIP, and Onemoney AA



OCTOBER 2021

TSP Membership drive launched and 30 TSPs list themselves as offering AA-enabled services

DECEMBER 2021

TSP Steering Committee formed

JANUARY 2022

Monthly newsletters from Sahamati started

FEBRUARY 2022

Monthly Pragati events started

MARCH 2023

SaaS, an API health dashboard, launched

MAY 2023

Sahamati Volunteers' Bootcamp conducted at Bangalore International Centre (BIC)

Support Portal v2.0 released

SamvAAd, first annual event for the ecosystem, conducted by Sahamati in Mumbai

SEPTEMBER 2023

Knowledge Partnership with the Ministry of Finance for G20

OCTOBER 2023

PFM & Lending Use Case Councils created

GC Committees for Interoperability, Fair Use, and Economic Model created

NOVEMBER 2023

Sahamati collaborated on the COBOF Regulators Online Programme with the Cambridge Centre for Alternative Finance.

DECEMBER 2023

sAANs Health API went live!

Comprehensive day-long workshop at the Indian Institute of Technology (IIT) Madras Research Park in Chennai

MARCH 2024

Mr. Nandan Nilekani inaugurated the Sahamati office in Bengaluru

AA Fraud Prevention Working Group convened

MAY 2024

First set of Fair Use Templates created through an extensive collaboration released

Delhi Roadshow Workshop on the Account Aggregator Ecosystem

JUNE 2024

Cross Sectoral Use Case Council convened for use cases across sectors.

JULY 2024

Bengaluru Roadshow Workshop attended by 45+ organizations in Bengaluru

Sahamati Router, a technology intervention to foster interoperability amongst FIPs, FIUs, and AAs, proposed.

SEPTEMBER 2024

Sahamati Technology Advisory Committee (TAC) convened to oversee and review technology infrastructure proposals

Sahamati AA Survey finds overwhelming positive reception and adoption of the Fair Use Framework

OCTOBER 2024

Sahamati and CGAP launch a customer research exercise for the AA ecosystem

Sahamati BuildAathon, an innovation-focused hackathon launched for the AA ecosystem, in the run up to SamvAAad 2024!

OUR TEAM

Our team has been a critical force that steers the future where data empowerment is not just a goal but a reality we actively shape. At Sahamati, we recognize the importance of diversity of opinion, independent thinking, high agency, and ownership of our work. As a result, collectively, our team surpasses the sum of our individual capabilities. Bound by a shared vision to pioneer consent-based data-sharing in India, our team embodies the belief that choice and agency are fundamental to empowerment.



SAHAMATI TEAM, MARCH 2024



BG MAHESH
Chief Executive Officer



SIDDHARTH SHETTY
Chief Technology Officer



RAVI VISHWANATH
Chief Financial Officer



SHALINI GUPTA
Head of Strategy & Policy



GANESH JAYADEVAN
Head of Products and
Engineering Operations



PRANAV NARAIN
Legal Counsel



RUCHI PAI
Practice Lead AA Adoption



GEETHASHREE SRIKANTA
Lead, Operations



ABHISHEK VARSHNEY
Sr. Lead, Partnerships



RUTVIK PAIKINE
Policy & Communications Analyst



DIVYA KUMAR
Operations Analyst



PIYALI CHATTERJEE
Advocacy Analyst



VOLUNTEERS

Volunteers have been a key pillar of the organizational capacity of the alliance. Like-minded individuals with ecosystem-building expertise contributed to the adoption, operationalization, and expansion of the ecosystem. Individuals across organizations have proactively worked to identify challenges and

solve them. We deeply appreciate the contribution of our volunteers to foundational elements of product, policy, technology, legal, and other areas. The AA Network is strengthening because of the initial ideas, efforts, and leadership provided by the community through the volunteer program.



VOLUNTEERS FACILITATED BY MR. NANDAN NILEKANI IN SAMVAAD 2023

Building an Ecosystem Ground-Up

As an industry alliance for the AA ecosystem, we drive adoption through advocacy and education, build a cohesive community, anchor participatory governance for self-regulation, create technical infrastructure to operationalize, support implementation and network operations, strengthen the legal foundation, and undertake international knowledge exchange for the ecosystem.

ADVOCACY AND EDUCATION

Sahamati's advocacy efforts consist of four key levers: promotion, research, education, and collaboration. Our approach involves promoting the AA ecosystem among institutions, educating stakeholders about its technical, legal, and business aspects, and publishing authoritative research and whitepapers. Through these concerted efforts, we aim to foster understanding, boost adoption, & contribute to the sustainable growth of the AA ecosystem. Sahamati has strategically formulated an advocacy approach founded on some key objectives.

- › **COHORT-BASED TARGETING** · We co-opt financial institutions across sectors that integrate diverse financial information (FI) types and novel use cases. We undertake cohort-based advocacy initiatives that identify the regulatory, legal, market, and business needs which the AA ecosystem can address.
- › **BILATERAL ADVISORY** · We conduct bilateral workshops and interactions with financial institutions to offer advisory on implementation and strategy. These engagements are tailored to provide insights into the unique needs and challenges of the institutions.
- › **INNOVATION FOR INCLUSION** · We believe the ecosystem will usher in unprecedented inclusion across access, usage, and quality of financial products and services. Sahamati facilitates pilots to explore and implement innovative use cases for the ecosystem through collaboration with various interest groups, NGOs, and ecosystem participants.
- › **HANDS-ON APPROACH** · We identify and seek out challenges that hinder the adoption and expansion of the ecosystem. We collate critical market feedback on aspects that necessitate change, and collaborate with the market to solve problems, promote adoption, and create an adaptive ecosystem that embraces diversity and growth.
- › **COLLECTIVE VOICE FOR POLICYMAKERS & REGULATORS** · Sahamati facilitates a structured engagement across the ecosystem with decision-makers to foster a regulatory and policy landscape that aligns with the evolving needs and aspirations of the industry.



SAHAMATI PARTICIPATED IN THE NATIONAL WORKSHOP ORGANIZED BY THE NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD) AT THE BANKERS INSTITUTE OF RURAL DEVELOPMENT (BIRD), LUCKNOW, ON THE POTENTIAL OF AAS FOR RRBS TO EXPAND FINANCIAL INCLUSION IN THE COUNTRY. THE WORKSHOP WITNESSED PARTICIPATION FROM 70+ OFFICIALS REPRESENTING 43 REGIONAL RURAL BANKS (RRBS) FROM DIFFERENT PARTS OF INDIA.



RESERVE BANK INNOVATION HUB (RBIH) CONDUCTED A WORKSHOP ON THE ASSISTED ACCOUNT AGGREGATOR (AAA) MODEL, AIMED TO ORCHESTRATE AAS FOR FINANCIAL CUSTOMERS DEPENDENT ON BUSINESS CORRESPONDENTS (BCS). THIS WORKSHOP FOCUSED ON AA FLOWS VIA BC APPS OR JOURNEYS TO ENABLE DATA-SHARING WITH LENDERS.



SAHAMATI CONDUCTED A COMPREHENSIVE DAY-LONG ACCOUNT AGGREGATOR (AA) WORKSHOP AT THE IIT-MADRAS RESEARCH PARK IN CHENNAI, TAILORED FOR THE FINANCIAL SERVICES INDUSTRY IN THE REGION. THE WORKSHOP GARNERED A PHENOMENAL RESPONSE, MARKED BY ENTHUSIASTIC PARTICIPATION AND DYNAMIC DISCUSSIONS.

COMMUNITY BUILDING

Community building is an integral part of our advocacy strategy for the ecosystem. We believe a cohesive, vision-bound ecosystem is essential for growth and expansion of the ecosystem.

SamvAAad 2023, the inaugural annual event for the AA ecosystem, was a pivotal effort in community building. It was a comprehensive day-long event attended by more than 1,100 representatives across 300 cross-sectoral financial institutions, technology service providers (TSPs), and fintechs.

The event witnessed insightful knowledge sessions and expert panel discussions from prominent policymakers and practitioners. It also featured Show-and-Tell Sessions where real demos showcased how AA applications enhance customer experience and enable institutions to serve customers better. The event catalyzed collaborative discussions, knowledge sharing, and establishing common goals among stakeholders.





ECOSYSTEM GOVERNANCE

The AA ecosystem has a diverse, one-of-its-kind participant mix of financial institutions across 25+ license types and five regulators. These institutions vary from large public & private sector banks to single-proprietor portfolio managers and large general insurance companies to small points of presence sub-entities. This diversity of stakeholders across sectors, licenses, use cases, and scale presents a novel complexity in institutionalizing cross-sectoral data-sharing. Thus, the alliance has been proactive in self-regulation through a **participatory governance model**.

Sahamati has orchestrated a “ground-up” approach through diverse forums for the ecosystem to convene and collaborate at various levels. The participatory governance model for the Sahamati AA ecosystem has democratized problem detection, formulation, analysis, and solution through collaborative cross-sectoral forums. These forums, designed to be inclusive & representative of the diverse industry, are structured as shown on the infographic on the right.

CODE OF CONDUCT

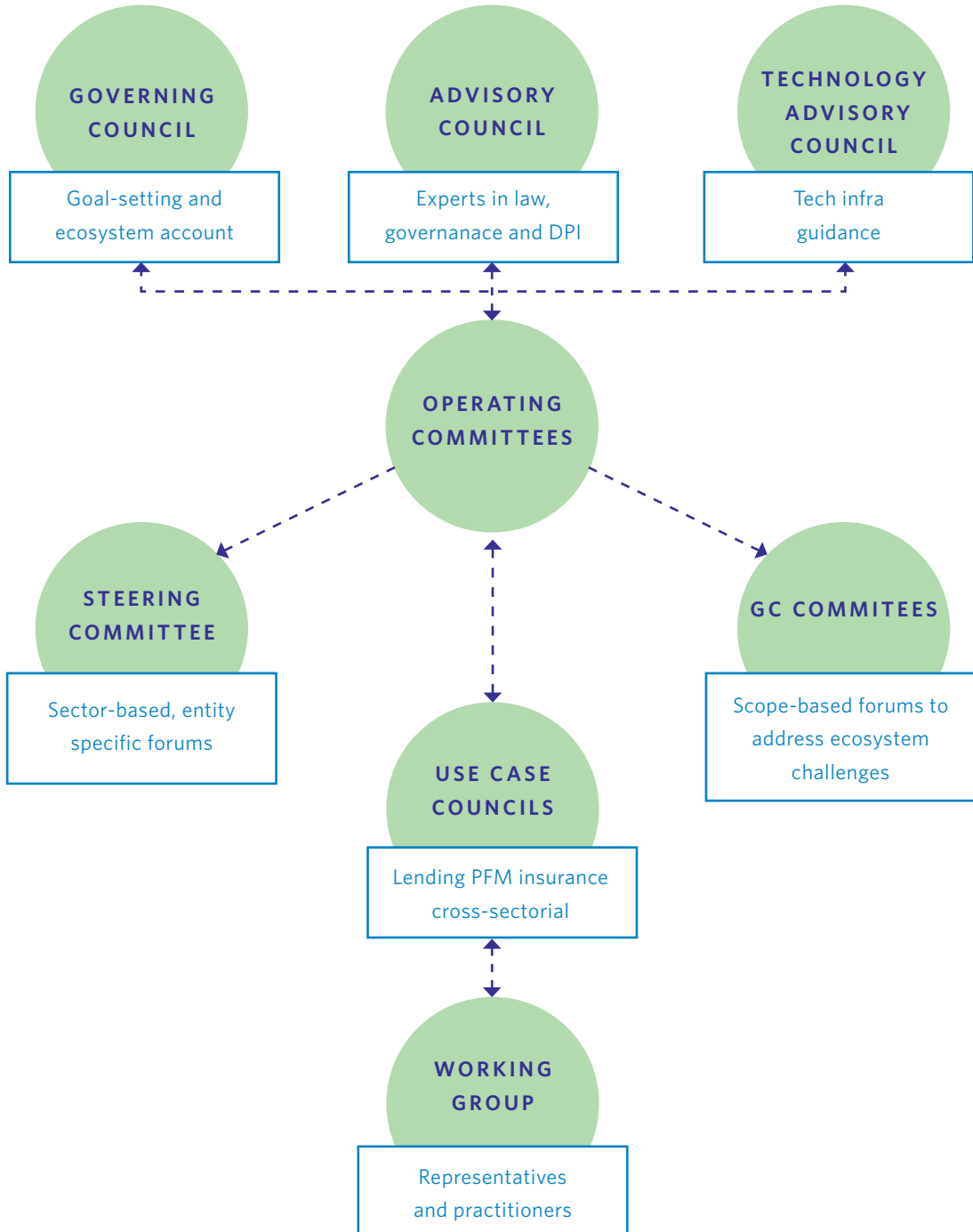
The frameworks established by the RBI, ReBIT, and MeitY are the foundation of the AA ecosystem. This high-level guidance required translation into an ecosystem-wide Code of Conduct comprising actionable guidelines and procedural decisions. Developing such codes of conduct entails thorough and extensive deliberations within the ecosystem to establish a consensus on rules across parties in the ecosystem.

Fostering such cooperation and coordination across diverse entities requires nuanced stakeholder engagement and management. Sahamati has acted as a neutral anchor within the ecosystem, allowing participants to collaborate and deliberate through bilateral and multilateral forums. These ecosystem deliberations have been codified into the AA Uniform Code of Conduct for the AA ecosystem, and continue to evolve based on market feedback or regulatory updates.

These codes of conduct are essential for fostering uniformity and understanding among participants. The overarching spirit of these codes is to provide clarity and encourage convergent thinking among participants. This clarity aims to foster healthy debate or, ideally, widespread adherence, contribute to a well-organized and coherent AA ecosystem.



SAHAMATI'S "GROUND-UP" APPROACH



PARTICIPATORY GOVERNANCE SUCCESS STORY: FAIR USE TEMPLATES FOR THE AA ECOSYSTEM

Addressing Financial Information User (FIU) overuse has been a key focus in all governance forums within the ecosystem. The ecosystem coalesced on the need to set upper bounds for variables in consent artefacts based on specific use cases. The “Fair Use Templates” are designed to establish best practices, ensuring that data collection and usage adhere to predefined limits and guidelines, thereby promoting fairness and protecting customer interests.

FIU and AA representatives across Use Case Councils, Fair Use Committee, and the Governing Council have collaboratively defined consent templates for various use cases. Currently, **8 templates** have been finalized across various use cases such as Loan Underwriting, Account Monitoring (subject to loan activation), Wealth Management and Advisory Services (WMS), Income Verification, Personal Finance Management (PFM), Account Monitoring (subject to loans where Installment/EMI/ payable amount is due more than one day from the due date).

To operationalize fair use templates, we are building a **programmatic fair use compliance** implementation to enable real-time detection and mitigation. This proactive approach aims to address compliance issues as they arise, rather than relying on post-facto analysis and delayed responses. This approach can ensure more immediate and effective enforcement of fair use policies, enhancing overall compliance and trust.

OPEN HOUSE ON THE GOVERNANCE FOR DATA EMPOWERMENT

The Governance for Data Empowerment Open House, co-organized by Sahamati & Vidhi Centre for Legal Policy, was a culmination of the churn within the ecosystem to articulate the need to formalize and strengthen ecosystem governance. Industry leaders like Nandan Nilekani, Dr. Pramod Varma, R. Gandhi, and Rahul Matthan shared their insights on the governance of the AA ecosystem. Arghya Sengupta and Manjushree RM of the Vidhi Centre for Legal Policy shed light on the pertinent themes discussed in their [‘Nurturing a User-Driven Governance Entity \(N.U.D.G.E.\) for the Account Aggregator Ecosystem’](#) report.



THE ROUNDTABLE DISCUSSION AMONGST ECOSYSTEM PARTICIPANTS EMPHASIZED THE NEED FOR FORMAL GOVERNANCE WITH PROPOSALS FOR TRANSITIONING SAHAMATI INTO A CENTRAL QUASI-REGULATORY BODY.



DISTINGUISHED SPEAKERS AT THE OPEN HOUSE ON GOVERNANCE FOR DATA EMPOWERMENT – 22/08/2024

Orchestrating Infrastructure for a Population Scale Rollout

SahamatiNet is the technological infrastructure being developed by Sahamati to support the AA ecosystem. Hosted in a secure, highly available, and scalable environment, this technological infrastructure ensures the robustness and reliability of the AA ecosystem. The infrastructure aims to engender trust, build visibility in ecosystem health, offer implementation support and grievance redressal mechanisms, carry out network operations, foster a culture of compliance through certifications, and foster network trust. Sahamati has co-created these crucial technology artefacts with the collective intelligence of the ecosystem to serve its diverse needs.

NETWORK TRUST

We maintain a **Central Registry (CR)** to facilitate the discoverability of public information related to each member endpoint. It is a comprehensive database listing all authenticated and authorized entities within the AA ecosystem. The CR is supported through a **token service** that ensures the validity & reliability of end-point information. It enhances security by managing secure and efficient data exchanges between entities. Additionally, **Rahasya** — an encryption reference library — equips participants to use and test their encryption implementations. **Sahamati.tools** provides a standardized environment to test and validate digital signature implementations in the network.

Trust is crucial to nurturing a stable, efficient, and dynamic ecosystem. Establishing network trust is critical for the scalability and interoperability of a network. Sahamati architected the **Participation Terms (PT)** — a uniform multiparty contractual agreement with common, non-commercial, and standard terms to establish shared legal and contractual foundations.

This legal arrangement provided uniformity, fair play, and a common framework for roles, responsibilities, and adherence to evolving standards. This framework also established a structured mechanism for neutrally and independently addressing inter-participant disputes—a critical aspect, given the complex interdependencies within the ecosystem.

NETWORK HEALTH

We have built a network health monitoring infrastructure that provides visibility into various ecosystem parameters. The **Real-time API Health Dashboard** enables real-time detection and reporting of API health across the network. The **FIP Health API** enables ecosystem participants to pull real-time data from the dashboard to make intelligent decisions and ensure a seamless customer experience. The **Daily Network Traffic Dashboard** facilitates reporting the AA network adoption by customers, FIUs, and FIPs. These dashboards provide detailed insights into the volumes of accounts linked and consents fulfilled.

NETWORK SUPPORT

We have institutionalized a **certification framework** that participants can opt-in to ensure adherence to the Technical Standards set by ReBIT. We have empanelled organizations to provide independent certification services, guaranteeing compliance and impartial assessment. During the implementation phase, Sahamati provides comprehensive support, offering technical assistance, guidance, and resources to ensure smooth onboarding and effective infrastructure utilization. We also provide a **Support Application** to expedite implementation support and dispute resolution through automated first-response processes, escalation processes, and seamless grievance redressal.

NETWORK OPERATIONS

We are dedicated to fostering a resilient and efficient AA network through comprehensive "Network Operations & Support" services. These services are designed to ensure the seamless functioning, scalability, and integrity of the ecosystem. We aim to play a pivotal role in maintaining operational excellence within the ecosystem. Through the following efforts, Sahamati enhances the technical and operational capabilities of its participants and drives the overall growth and sustainability of the AA framework:

DUE DILIGENCE AND ONBOARDING

We conduct meticulous due diligence that includes verifying and documenting the Certificate of Registration (CoR) of all regulated entities seeking to get onboarded on the AA ecosystem. We request participants submit their use case demos and relevant assertions to review alignment between their license types and intended usage. These submissions also allow the team to assess compliance with the ecosystem codes of conduct and principle-level alignment with the DPDP Act, 2023. These thorough procedures are conducted bonafide to engender high standards of integrity within the ecosystem.

IMPLEMENTATION SUPPORT

Sahamati offers comprehensive implementation support to all participants in the AA ecosystem. This support is vital during the initial phases when Account Aggregators (AAs), Financial Information Providers (FIPs), and Financial Information Users (FIUs) integrate their modules into the ecosystem. We provide robust technical assistance to these entities, which involves guiding them through the integration process, ensuring they meet all necessary compliance and technical requirements, and assisting them in establishing a strong foundation within the ecosystem.

We aim to ensure that participants can seamlessly integrate, whether managing the process independently or collaborating with Technology Service Providers (TSPs). Beyond technical implementation, Sahamati offers **strategic advisory services** to ecosystem participants. This involves providing expert guidance on effectively navigating the ecosystem, from understanding regulatory frameworks to leveraging the capabilities of the AA framework. We help participants on their queries while developing and refining their use cases, to optimize for maximum impact within the ecosystem.

DEBUGGING AND TROUBLESHOOTING

After the initial implementation, we remain actively involved in providing ongoing technical support to ecosystem participants. This support is critical for identifying and resolving any bugs or technical issues arising as the system evolves and scales. We work closely with participants to troubleshoot problems in real time, ensuring that any disruptions are swiftly addressed. We also identify potential bottlenecks or inefficiencies for continuous

performance improvement in the ecosystem. This continuous cycle of debugging, troubleshooting, and performance enhancement contributes to the long-term reliability of the AA ecosystem.

INTER-ENTITY DISPUTE RESOLUTION

Sahamati offers a comprehensive framework for swiftly and effectively resolving inter-entity disputes within the AA ecosystem. At the primary level, Sahamati operates a support application for participants to raise a ticket(s) on other regulated entities participating in the AA ecosystem. This platform serves as an accessible and efficient mode to seek resolution for disputes. Sahamati facilitates discussions in good faith upon mutual agreement to achieve consensus and resolution. In case the parties fail to resolve through the above process, Members may also refer the dispute to any of the **Online Dispute Resolution (ODR)** providers empanelled by Sahamati. In parallel, Sahamati is building technical infrastructure to inform the dispute resolution processes with evidentiary support regarding the individual transactions conducted over the AA ecosystem.



The Importance of Strong Legal & Contractual Backbone for the Network

The Sahamati AA Ecosystem Participation Terms (PT) established shared legal and contractual foundations for the AA ecosystem. In March 2024, the Reserve Bank of India (RBI) notified the Omnibus Framework for recognizing Self-Regulatory Organisations (SROs) for Regulated Entities (REs) of RBI. The SRO framework provides a broad construct for RBI to recognise SROs within specific industries & sectors. While RBI is yet to open applications for recognition of an SRO for the AA ecosystem, Sahamati is already restructuring the alliance into a membership-driven construct to align with the broad requirements of the SRO framework. We aim to retain all the essential aspects of the Participation Terms and incorporate feedback from stakeholders to ensure alignment with industry needs and standards.

The Digital Personal Data Protection (DPDP) Act 2023 has initiated a formal data protection regime in India. The DPDP Act has employed a technological approach to data protection in India. It has institutionalized consent-based data sharing, at the instance of the data principal(s), via specialized entities called Consent Managers (CMs) in India. CMs have been envisaged as a single point of contact for the end customers to give, manage, review, and withdraw consents, enabling them to control their data across sectors. Thus, CMs are envisioned to ensure not just data protection but also data empowerment of the customers.

This dual approach of data protection and empowerment aims to prevent misuse and unauthorized access to data and empower individuals to harness the value of their data, fostering trust in the digital economy. Ultimately, this Act equips

individuals with the agency to access, share, use, and manage their data. CMs functionally align with Account Aggregators (AAs) in the financial sector. Effectively, this legislation makes AAs a pioneering implementation of CMs in the country.

The DPDP Act emphasizes key privacy principles like explicit informed consent, notice, and purpose limitation, which are crucial for data protection and empowerment. In the AA ecosystem, consent templates (CTs) operationalize these principles, effectively aiding data fiduciaries in complying with statutory principles. The DPDP Rules will provide much clarity, informing the specific legal parameters for notice and consent. Sahamati will ensure these standards are integrated into the technical infrastructure and other codes of conduct for the AA ecosystem once the Rules are notified.

International Knowledge Exchange

India's DPIs in identity and authentication, real-time payment systems, and consent-based data sharing have garnered immense interest worldwide for adoption and replication. India has assisted in developing national identity infrastructures and real-time payment systems in many countries. The world has also turned its attention to the data-sharing infrastructure in the country. Sahamati has played a key role in shaping these developments through engagements across central banks, financial institutions, and universities.

Sahamati has advanced the global understanding of data empowerment and consent-based data-sharing ecosystems. In a critical capacity, Sahamati was a **knowledge partner** to the Indian Ministry of Finance (MoF) during India's G20 Presidency for the Global Partnership for Financial Inclusion (GPII) track. This track resulted in the historic **Delhi Consensus** articulated in the G20 Policy Recommendations on the Impact of DPIs for Financial Inclusion and Productivity Gains Report.

Consent-based data-sharing infrastructure has achieved global priority as an integral part of digital public infrastructure. India's bilateral interactions with the USA and France have reiterated their interest in adopting and propagating consent managers similar to Account Aggregators (AA) across developed and developing countries. In addition, multilateral institutions such as the Shanghai Cooperation Organization (SCO) have recognized India's implementation of consent-based data-sharing as an exemplary approach to implementing an open data regime.

Sahamati has engaged bilaterally with regulatory, administrative, and industry representatives from countries and regions across the globe. We have forged partnerships with prominent international and multilateral agencies such as the Bank for International Settlements (BIS), the World Bank, and the International Monetary Fund (IMF). These engagements involve knowledge sharing, open-source technology exchange, and learning sessions to share valuable insights and best practices in Open Finance and consent-based data-sharing.

In addition, Sahamati contributed to the Course on Open Banking and Open Finance (COBOF) for Regulators at the Cambridge Centre for Alternative Finance (CCAF) at the University of Cambridge Judge Business School. Sahamati designed and delivered the concluding module on India's DPI approach to implementing Open Banking and Open Finance in India. Global regulatory representatives and policymakers from ministries and central banks attended the course.

These international collaborations solidify India's thought leadership in shaping digital public infrastructure regimes, especially open banking, open finance, and consent-based data-sharing implementations. Such engagements provide a pathway for the global adoption of our standards and technology, enabling Indian companies to expand their solutions into new markets. DPIs are transforming human and economic development, and Sahamati is at the forefront of driving this global shift, pioneering efforts to internationalize these innovations.

Ecosystem Challenges

The industry has identified opportunities for growth to roll-out the AA ecosystem at population scale. The Governing Council acknowledges the need to address these scale-related challenges through a phased and well-supported approach. A **multi-pronged approach** that incorporates technological, procedural, legal, contractual, governance, and other measures is essential to overcoming the following challenges —

- › **INTEROPERABILITY** · As the ecosystem scales, enhancing interoperability will unlock greater customer choice and competition. Addressing economic and technical complexities will pave the way for improved scalability and a better customer experience.
- › **FAIR USE** · The ecosystem can build stronger trust by refining data usage practices, implementing pricing structures, and reinforcing safeguards that ensure data privacy and security. These measures will foster long-term confidence among participants.
- › **DATA QUALITY AND SLA ADHERENCE** · As more entities join the ecosystem, maintaining high data quality and adherence to service-level agreements (SLAs) will strengthen consistency and efficiency of the ecosystem. Enhancing the technical performance of the ecosystem will also elevate customer experience.
- › **SUPPORT INFRASTRUCTURE** · By developing a common source of truth, the ecosystem can achieve greater accountability and transparency. This will streamline debugging, implementation, and dispute resolution, improving overall operational efficiency.
- › **STRENGTHENING OF SELF-REGULATORY INITIATIVES** · Currently, Sahamati is a voluntary, loosely bound industry alliance. Strengthening Sahamati's governance framework will allow for more effective self-regulation. As the ecosystem matures, a more structured and enforceable approach to governance will ensure alignment with industry standards.
- › **DIVERGENT LINGUAL AND VISUAL COMMUNICATION** · The ecosystem faces inconsistent terminology, visual representations, and user experiences, causing customer confusion and trust issues. This lack of uniformity leads to higher drop-offs during onboarding, complicating engagement and raising acquisition costs for FIUs.
- › **CUSTOMER EDUCATION AND AWARENESS** · Despite rapid growth, the AA ecosystem has minimal brand recognition, and customer awareness remains low. This gap prevents customers from fully understanding, adopting, and effectively utilizing the AA framework, limiting its broader impact.

The AA ecosystem currently faces formidable challenges across the supply and demand ends of the spectrum. These obstacles have significantly hindered the further adoption and utilization of the AA framework. The ecosystem has proactively convened participatory governance forums to address these challenges and recognized the structural changes essential to building capability for enforceability. The ecosystem approach has embarked on concretizing the foundations of the network that are conducive to competition, innovation, and fair use.

Future Roadmap

The next few years are critical for the Account Aggregator (AA) ecosystem. The collaborative efforts taken by the industry across law, governance, regulation, technology, and markets are converging. Many crucial developments, such as the DPDP Act, proactive regulatory support, the strengthening of technology specifications, and cross-sectoral adoption by FIPs and FIUs, have created conditions that enable exponential expansion. We aim to supplement this trend institutionally by broadening adoption and usage, strengthening the enabling techno-legal infrastructure, and cultivating enforceability in self-regulation initiatives. Currently, we have launched the following critical ecosystem-wide measures that address structural hindrances in the ecosystem.

SELF-REGULATORY ORGANIZATION (SRO) FOR THE AA ECOSYSTEM

In its current form, Sahamati is a loosely-bound industry coalition that operates on a foundation of trust and voluntary compliance. The voluntary nature of the alliance has fostered a collaborative and dynamic environment for the AA ecosystem. The market has broadly converged on the need for Sahamati to strengthen collective action and bolster participatory governance through enforceability of initiatives.

The recently released RBI's Omnibus Framework for Recognizing Self-Regulatory Organizations (SROs) of Regulated Entities (REs) has opened up a tangible

avenue for the alliance to transition into a quasi-regulatory body. While applications for recognition of an SRO for the AA ecosystem are awaited to be opened, the omnibus framework has laid down structural and normative criteria for prospective SROs in the RBI's jurisdiction. Although Sahamati aligns with the principles outlined in the framework, achieving formal recognition would require some structural changes.

One of the most significant restructuring we need to implement is transitioning into a member-driven association with broad-based shareholding amongst the members. Additionally, the alliance requires a corporate revamp to complement the transition. This formalization into an SRO can strengthen the responsible and proactive initiatives of the alliance and foster an environment conducive to collaboration and sustainable growth of the ecosystem.

STRENGTHENING SAHAMATI MEMBERSHIP

We are re-architecting Sahamati into a member-driven construct to meet the eligibility criteria of RBI's Omnibus SRO Framework. This transition will enable the alliance to derive sufficient authority from the members to set ethical, professional, and governance standards and enforce such standards in the ecosystem. Consequently, we have upgraded the Participation Terms (PT) into the Sahamati Membership Terms and Policies, read with the various codes of conduct, guidelines and other bye-laws incorporated therein.

Sahamati is onboarding Regulated Entities (REs) eligible to participate in the AA ecosystem as FIPs, FIUs, or AAs as **Sahamati Members**. Whereas, non-REs, such as Technology Service Providers (TSPs), are being onboarded as **Associate Members**. TSPs have played an important role as enablers in institutionalizing the AA ecosystem. They equip financial institutions with technological capability for integrating with the AA ecosystem and provide value-added services for institutions to make optimal use of the data-sharing infrastructure.

Sahamati Membership is set to be tiered and reasonable to ensure an inclusive, diverse, and representative association. With clear roles and responsibilities and codes of conduct for all stakeholders, membership is poised to cultivate a culture of accountability, transparency, and compliance. This will also equip Sahamati to ramp up advocacy, techno-legal infrastructure, support and operations, and other ecosystem-building initiatives. We believe that a member-driven construct will engender a collective force that steers the future of the AA ecosystem.

Under the omnibus SRO framework established by the RBI, entities seeking recognition as a Self-Regulatory Organization (SRO) must meet the requirement of broad-based equity shareholding within the industry. Therefore, in addition to a membership drive, we are also initiating an equity raise from across the ecosystem. This dual approach will ensure that the SRO is supported by a diverse range of stakeholders, reflecting a broad industry representation and enhancing its legitimacy and effectiveness.

CORPORATE REVAMP

We are formalizing Sahamati into a rigorous, member-driven association with broad-based equity shareholding, supported by a corporate revamp to facilitate these transitions. This strengthens our alignment with the SRO framework set by the RBI, while enhancing our corporate capability, accountability, and transparency—key factors for the population-scale rollout of the AA ecosystem. This restructuring emphasizes a shift toward a more robust, principle-driven governance structure as laid down below:

- › **BALANCED AND EXPERT GOVERNANCE** · A diversified Board of Directors includes independent directors, executive directors, promoter institution representatives, and an account aggregator, ensuring a blend of industry expertise and operational insight. Tenure limits and a rotation policy at AGMs promote fresh perspectives and accountability.
- › **MERIT-BASED APPOINTMENT AND OVERSIGHT** · A structured process ensures all directors meet "Fit and Proper" criteria, with transparent board evaluations conducted by an external agent, ensuring credibility and compliance.
- › **SPECIALIZED COMMITTEES FOR GOVERNANCE AND RISK** · The creation of focused committees—such as Audit, Risk Management, Technology Advisory, and Fraud Prevention—enhances oversight across critical areas. The Ecosystem Development Committee and its subcommittees (Fair Use, Interoperability, Economic Model) address ecosystem-wide growth and governance.

- › **PARTICIPATORY AND ADAPTIVE STRUCTURE** - Councils and steering groups, representing network members and industry-specific participants, create a participatory model. These bodies are empowered to create additional committees as needed, ensuring flexibility to adapt to emerging challenges and opportunities.

These pillars will ensure that the AA ecosystem remains transparent, adaptable, and capable of managing risks effectively, while fostering innovation and customer-centricity. By embedding these principles into the foundation, Sahamati is better equipped to meet the growing demands of the ecosystem and its stakeholders.

As part of the ongoing corporate revamp, we are also strengthening our organizational structure to support its transition into a more member-driven, equity-based model. This restructuring is underpinned by four key building blocks in the infographic below.

PARTICIPATORY GOVERNANCE

Ensures fairness and transparency, accountability to stakeholders, and adherence to regulatory guidelines.

EXPONENTIAL SCALABILITY

Focuses on growth without unnecessary structural expansion, adaptability, leveraging existing systems, customer education, and outreach.

RISK AWARENESS

Prioritize mechanisms for risk detection and mitigation, a strong focus on customer protection, grievance redressal, and dispute resolution.

CAPACITY FOR FORWARD-THINKING

Encourages both short and long-term planning, fosters a culture of research and development, and proactively develops products ahead of demand.

TECHNOLOGY ROADMAP FOR 1 BILLION + ANNUAL CONSENTS

To scale the ecosystem from 10 million to 100 million monthly consents, the tech infrastructure for all stakeholders, including ecosystem participants, regulators, and policymakers needs to be strengthened. We aim to introduce strategic interventions across products, platforms, and protocols to support this growth. The following initiatives are underway on priority.

SAHAMATI ROUTER

Interoperability among network participants is a cornerstone of the NBFC-Account Aggregator (AA) Master Directions laid down by the Reserve Bank of India (RBI). However, due to a trust deficit in the network, entities rely heavily on bilateral onboarding and compliance processes. Custom contracts, agreements, and processes have further complicated network onboarding. This **many-to-many** integration model has created a significant procedural burden on the participants to connect with the entire network.

FIP-AA and FIU-AA interoperability has slowed with the rising number of AAs in the market. A set of AAs with an early-start advantage initially cornered integrations with many financial institutions. Consequently, the network is partially interoperable, and customers must onboard multiple AAs for transactions across FIUs. This has impacted the customer experience and created fragmentation for tracking, managing, and reviewing consents. Thus, as part of efforts to foster network trust, we have introduced **Sahamati Router** as a proposed solution.

Sahamati Router is an **open-source** technology intervention layered on top of the standard, open protocols of the AA ecosystem. By **routing** all API requests and responses amongst FIPs, FIUs, and AAs, the intervention aims to foster technical interoperability in the network. It is a rigorously built technology intervention with 99.9% availability and robust protection against threats to maintain consistent and secure operations.

The Router is set to facilitate **“Plug-&Play”** connectivity, provide immediate access to the wider ecosystem, and enhance the addressable market for participants. Onboarding the network via the Router will drastically reduce expenses for the participants in onboarding, implementing, testing, and going live with the ecosystem. At the same time, the Router will enhance API efficiency for the ecosystem participants.

As the Router supports routing all API requests and responses, it is well-placed to establish a **common source of truth** in the ecosystem. This singleness of truth enables the creation of critical network management services across billing and reconciliation, observability, dispute resolution, debugging, and implementation support. Thus, the Router serves as the **core layer** on which the ecosystem will build the capability to facilitate network-wide operations.

Furthermore, we are developing **common audit checklists** for information security and data governance to complement the Sahamati Router. These procedural interventions aim to eliminate the need for custom contracts, further simplify processes, and reduce the legal and administrative burdens on network participants. Thus, all network

participants must integrate only once with the Router. The necessary procedures to establish trust will be spearheaded by Sahamati.

Importantly, the Router does not change the existing responsibilities shouldered by ecosystem participants. Rather, the intervention will significantly **reduce the procedural burden**, allowing participants to redirect their operational resources towards critical aspects such as implementation, debugging, SLA adherence, and improving the quality of service. Overall, the ecosystem will persist in acquiring customers and optimizing customer experience.

NETWORK OBSERVABILITY

The ecosystem currently grapples with several critical challenges, including multiple versions of truth across the network, limited visibility, and fragmented datasets. Internal and external stakeholders face a lack of transparency, resulting in poor customer experiences, long regulatory reporting cycles, and significant customer drop-offs. Failures are often detected post-facto, making them difficult to trace, while actionable insights remain scarce, impeding decision-making processes. These challenges have perpetuated a cycle of delayed resolution, leading to erosion of trust and ultimately stifling the growth potential of the ecosystem.

We are building a network observability infrastructure atop the Router to leverage the **common source of truth**. This infrastructure will empower participants with an irrefutable source of truth to identify SLA deviations across the board. Network observability is poised to usher in real-time issue identification. With quick identification and categorization of issues, participants can debug and resolve technical issues efficiently, allowing for longer periods of high performance.

The observability system can create real-time actionable alerts and notifications to allow FIUs and AAs to better communicate with their customers. Furthermore, the system will enable participants to create **high-quality, actionable insights** for highly customized customer experiences over time. We also aim to build other technical systems atop the observability infrastructure for crucial network management initiatives such as billing and reconciliation, programmatic fair use implementation, fraud detection, etc.

FAIR USE COMPLIANCE

The AA ecosystem faces a significant challenge related to data overuse and misuse by FIUs, due to the lack of robust infrastructure to monitor and verify data usage against consent parameters in real-time. This issue not only undermines the core principles of consent and data empowerment but also compromises the overall trust and confidence within the ecosystem. Addressing these issues is crucial to foster a secure and transparent ecosystem, and enable sustainable growth and innovation.

As an integral part of the SahamatiNet, we are building a Fair Use Compliance infrastructure to verify compliance with consent parameters and fair use policies as laid down by the ecosystem. This framework operates programmatically, integrating with "Consent Request" and "FI Request" APIs to enforce compliance. The framework functions by processing inputs from consent requests and FI requests, including details on the data request and consent parameters. It utilizes a set of Consent Templates (CTs) that outline acceptable practices and limits for data usage.

At the heart of this framework is the **Policy Agent**, which plays a crucial role in evaluating API requests

against the established CTs. The Policy Agent uses the defined fair use parameters to determine whether to accept, reject, or report a request. If a request is compliant with CT, it is accepted and processed normally. If it fails to meet the parameters, it is rejected with an appropriate error message. In cases of partial compliance or ambiguous data, the request is accepted but flagged for further review.

To facilitate implementation, Sahamati will offer **open-source Policy Agent SDKs** for AAs, or AAs can develop their own agents based on the specifications. This framework is designed to enhance transparency, uphold data privacy, and build trust within the ecosystem by ensuring that data usage remains strictly within the agreed consent parameters.

REGULATORY TOOL FOR ECOSYSTEM MANAGEMENT

Effective regulatory management tools are crucial for oversight and smooth operations in the Account Aggregator ecosystem. They enable periodic reviews, issue identification, and timely interventions, ensuring transparency and accountability. Currently, regulators depend on monthly reports from Sahamati, which are manual and lack real-time insights, delaying issue identification and limiting oversight. This approach impedes timely interventions and reduces transparency, making it challenging to enforce compliance and address risks proactively. Automated, real-time reporting is essential for improving regulatory effectiveness.

As part of SahamatiNet, we have launched the Sahamati Ecosystem Manager to enhance regulatory oversight. This platform provides regulators real-time access to information on FIPs, FIUs, and AAs, featuring a CRM-based solution for efficient data

management, secure login access, and detailed entity lists. It includes alert mechanisms for timely enforcement and facilitates direct communication for advisories and updates. This tool improves visibility, communication, and enforcement, offering a comprehensive management system for regulators.

The primary function of the Ecosystem Manager is to grant regulators real-time access to critical information, including the Certificate(s) of Registration (CoR) status for FIPs and FIUs, ensuring compliance with regulatory basis for participation in the AA ecosystem. It also provides a repository of use cases and demos for FIUs, offering insights into their functionalities within the ecosystem. Additionally, the platform facilitates direct communication between regulators and network participants for sharing circulars, best practices, and updates while also establishing a direct line with Sahamati for managing licensing status changes.

We envision the tool to evolve from a basic portal to a sophisticated system with API integration, facilitating near real-time syncing of entity and SPOC details. The manager will ensure robust security through distributed cryptographic key control by transitioning to a "decentralized directory" and incorporating a multi-party key management solution. This advancement will transform the Ecosystem Manager into a vital tool for strengthening the regulatory framework of the AA ecosystem, enhancing oversight, and ensuring a secure and efficient environment for all stakeholders.

LAUNCHING CUSTOMER AWARENESS & EDUCATION CAMPAIGNS

In September 2023, CGAP conducted a comprehensive research to assess the penetration of Account Aggregators (AAs) in India. The study highlighted that while the ecosystem is gaining traction, its growth is impeded by limited awareness. On providing some understanding of the framework, and despite AAs being relatively unknown, 22% respondents were open to adopting consent-based data-sharing. The study indicates a substantial potential for building ecosystem trust and catalyzing growth through customer awareness efforts.

Therefore, to drive the next phase of growth in the ecosystem, we plan to launch widespread customer awareness and education campaigns. The customer awareness campaigns, centered on the collective identity of the ecosystem, will enable simplifying customer communication, strengthening the ecosystem brand, and customer demand & adoption for the ecosystem.

We believe that driving customer demand for consent-based data-sharing will spark unprecedented growth in the ecosystem. Our goal is to scale from 10 million to 100 million monthly consents. Achieving this vision requires leveraging user-centric marketing, targeted awareness campaigns, and strategic outreach efforts to effectively amplify engagement and adoption.

WAY FORWARD

The Account Aggregator (AA) ecosystem is at the heart of India's nation-building efforts, ushering in a new paradigm of data empowerment that transcends individual sectors. It is reshaping financial services by democratizing access, enabling all citizens to securely share their financial data and participate in the formal economy. This data-driven empowerment is not just fueling the growth of financial services but also setting the foundation for new industries, use cases, and opportunities beyond finance.

At the same time, as India leads the world in open finance, the AA framework is poised to become a global model for how digital public infrastructure can drive financial inclusion, efficiency, and innovation. The next phase will focus on deepening adoption, expanding benefits to underserved segments, and demonstrating India's global leadership in creating equitable, data-empowered financial ecosystems.



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