



Inclusive Cashless  
Payment Partnership



# CATALYST'S INCUBATOR PROGRAM:

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## About CATALYST

CATALYST is a user-centric 'digital financial inclusion innovation platform' for the underserved last mile. The initiative is funded by the United States Agency for International Development (USAID) under the mSTAR Program, through funding provided to FHI 360. Housed within the Institute for Financial Management and Research, Leveraging Evidence for Access and Development (IFMR LEAD), the initiative aims to expand digital payments and financial inclusion in India.

CATALYST identifies, develops, and validates solution frameworks and business models in collaboration with facilitating government agencies and participating industry solution providers to responsibly transition small business ecosystems (i.e., merchants, consumers, suppliers) from an inefficient cash economy to digital payment platforms, and further onto broader digital finance solutions. CATALYST has also launched a new business incubator, 'Fintech for the Last Mile,' to promote entrepreneurs focused on developing innovative digital finance solutions for traditionally underserved segments.

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# 1 OVERVIEW

Advancing innovation and technology have led to a revolution in traditional financial services with the emergence of more than 12,000 startups globally and a substantial global investment of US\$58 billion in the fintech sector.<sup>1</sup> Fintechs are eliciting interest from users of banking services, retail groups and telecom operators who are willing to offer financial services via their existing networks.<sup>2</sup> In this literature review, the term 'fintech' refers to the amalgamation of the words 'finance and technology', alluding to ecosystems that are launching innovations to contest traditional financial services.

CATALYST is an initiative funded by the United States Agency for International Development (USAID) under the mSTAR Program to increase adoption

of digital payments in India, using a targeted ecosystem approach. CATALYST, along with its partners, is creating a digital ecosystem by combining and coordinating different use cases and business models for small businesses, suppliers and retail consumers. CATALYST is focused on understanding how digital payments enable small businesses achieve real and tangible goals, including access to financing and other financial services to grow their business, protect against shocks and business volatility, and build more streamlined operations.

With the aim of reaching every segment, one of CATALYST's thrusts was the launch of a unique incubator program themed 'Fintech for the Last Mile.' As India has the largest unbanked/underbanked

population, the CATALYST incubator was aimed at garnering insights that could boost fintech startups by providing them with a strong technology and entrepreneurial ecosystem. The incubator program's focus was to work on supporting various innovative digital payment solutions based on network effects to realize an inclusive digital economy; this in turn would meet the needs of the last mile customers. During the incubation period, CATALYST hosted four roundtables and 10 'finposiums,' engaging innovators and policymakers from its 150+ member network including financial institutions, non-banking financial companies (NBFCs), fintechs, infrastructure companies, policymakers and regulators, key mentors, venture capitalists (VCs) and investors.



<sup>1</sup>BCG. 2018. *Digital Lending*. Mumbai: Boston Consulting Group.

<sup>2</sup>RBI. 2017. *Fintech and Digital Banking*. Mumbai: Reserve Bank of India.

# 2

## BACKGROUND AND CONTEXT

### 2.1 Financial inclusion in the age of digitization - setting the context

This review summarizes several fintech reports forming the foundation of the CATALYST incubator program in the wake of digital transformation to achieve financial inclusion of the last mile. The first section contextualizes key growth drivers for financial inclusion and digital payments while the second section talks about the fintech ecosystem in India including startups, incubators, and frameworks followed by banks and the government. Then, the next section briefly discusses the pain-points of the sector in reaching last-mile clientele and provides a short analysis of existing trends. The last section provides information on the uniqueness of and need for the CATALYST incubator.

Digitization has led to a shift toward the electronic means of capturing, processing, storing, transferring and communicating information. With digitization impacting all aspects of life, notions of ease, convenience, and innovation are being reimaged globally in the payments landscape. Influenced by this transition, money has now evolved to electronic versions from paper and gold.<sup>3</sup>

The promise of digital payments' contribution to financial inclusion lies in its power to provide access to improved services at reduced transaction costs, low human resource requirements, better infrastructure and quick access to financial products. The digital banking footprint is projected

to grow faster than ever before with the smartphone user base in India expanding to around 500 million users by 2020 from a mere 150 million in 2016.<sup>4</sup> Of late, robust policy level backing from the government has provided a boost to user adoption of digital payments. To enhance the power of digital payments for greater financial inclusion, the Government of India launched various enabling platforms such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), Digital India Campaign, Aadhaar Enrolment, Unified Payments Interface (UPI), among others.<sup>5</sup>

Initiatives such as India Stack provide a world-class technological infrastructure to entrepreneurs and innovators to accelerate growth of fintech startups. Access to bank accounts is driven through initiatives such as PMJDY which created bank accounts for a huge underserved section of the society. Similarly, approval of Aadhaar-based authentication by the Reserve Bank of India (RBI) has allowed bank accounts to be opened through e-Know Your Customer (e-KYC) at any Banking Correspondent (BC) location.<sup>6</sup> In fact, this boost to the fintech industry resembles the policy support offered to the telecom industry in the 1990s and will provide a solid footing for a digitally enabled financial sector in India. It will also give fintech startups the opportunity to leverage these policies to provide access for the underserved to a mainstream banking experience.

The opportunity in India remains promising with the setting up of more than 291 funded fintechs in the last five years and US\$2.8 billion invested in the last two years in the sector.<sup>7</sup>

From a 'kirana wala' to an 'investment banker,' individuals across working classes and segments play a key role in driving India's gradual shift to a digital and cashless economy. It is estimated that 80 percent of economic dealings in India still materialize through cash, as opposed to around 21 percent in the developed economies, thus leaving significant room for the growth of fintechs to escalate cashless transactions. While the digital revolution has noticeable implications for financial inclusion, its potential remains greatly untapped due to the vast unbanked or underbanked population.<sup>8</sup>

India ranks 91 among 139 countries in the World Economic Forum's Networked Readiness Index, which is a key indicator of a country's readiness and progress in leveraging the information and communication technology.<sup>9</sup> Additionally, a few reports show that in 2016 in India, 97 percent of retail transactions were conducted in cash or check; only 6 percent of merchants accepted digital payments; and just over 10 percent customers had used a debit card for payments.<sup>10</sup>

Digital lending is estimated to be a US\$1 trillion opportunity over the next five years.<sup>11</sup> Technology is of course at the center of the payments landscape, with new and improved solutions and capabilities influencing customer behavior and expectations, as well as driving substantial industry change. Drivers of change include new technology and the subsequent behavioral changes catalyzed by the introduction of this new technology.<sup>12</sup> We now discuss the existing stakeholders in the fintech sector in India.

<sup>3</sup>ORF. 2018. *Cashless India: Getting the incentives right*. New Delhi: Observer Research Foundation.

<sup>4</sup>BCG. 2018. *Digital Lending*. Mumbai: Boston Consulting Group.

<sup>5</sup>PWC. 2017. *Fintech Trends Report. India: PricewaterhouseCoopers*.

<sup>6</sup>Ibid.

<sup>7</sup>Tracxn. 2018. *Fintech - India*. India: Tracxn Technologies.

<sup>8</sup>PWC. 2017. *Fintech Trends Report. India: PricewaterhouseCoopers*.

<sup>9</sup>WEF. 2016. *Networked Readiness Index. India: World Economic Forum*.

<sup>10</sup>USAID. 2016. *Beyond Cash. India: United States Agency for International Development*.

<sup>11</sup>BCG. 2018. *Digital Lending*. Mumbai: Boston Consulting Group.

<sup>12</sup>Cappgemini. 2018. *World FinTech Report*. Paris: Cappgemini, LinkedIn, and Efma.

## 2.2 Stakeholders in the Indian fintech ecosystem

India has had a rapidly growing fintech market in the last three years powered by a large market base of more than a billion. Its rise has been accelerated by several government policies supporting digital and startup related ecosystems, making the environment for fintechs economically favorable for private and public players. Yet, India has half of the average digital payments usage in the top 10 emerging markets.<sup>13</sup> A visible trend in the fintech ecosystem is the growing number of partnerships between banks and fintech startups. The available fintech market provides a robust opportunity to significantly increase demand in customer lending, wealth management, savings, insurance, trade finance and digital payments.<sup>14</sup> The largest segment in fintech is digital payments with a total transaction value of US\$50,215 million in 2018.<sup>15</sup>

India currently has about 600 fintech startups in the space of lending, payments, InsurTech, and Blockchain. This number is expected to grow with initiatives such as focused incubator or accelerator programs launched by local governments and banks, and funding support by leading corporates and VCs. The investments are mostly in diverse fintech innovations which expand beyond traditional verticals and hubs.<sup>16</sup> At present, around 15+ fintech incubators exist in India which are trying to support the abundant talent and existing infrastructure. Despite the numbers and support, the market in India is largely untapped with an unbanked

population of 40 percent and more than 80 percent of the payments still being made in cash.<sup>17</sup>

Some well-knit fintech ecosystems include incubators or accelerators which help startups boost existing operations by providing financial support, managerial advice, office space and/or training workshops. Zone Startups, located at the Bombay Stock Exchange, runs a variety of fintech programs such as the Barclays' Rise accelerator program; Thomson Reuters' fintech Innovation Challenge; and Axis Bank's startup accelerator program. Similarly, THub has fintech companies in its portfolio which it supports. Several incubators such as Start Tank launched in 2013 by PayPal have been providing startups with support facilities and the likes of Rainmatter and K-start provide mentorship, technological benefits and funding opportunities of about US\$100-500,000 for scaling operations,<sup>18</sup> while global equivalents such as Accion Venture Labs and DFS Lab are helping businesses aimed at small ticket financial services by fostering innovation to focus on research to optimize products for early adopters of digital payments.

Fintech in India operates under the purview of four regulators: RBI, the Securities and Exchange Board of India (SEBI), the Telecom Regulatory Authority of India (TRAI) and the Insurance Regulatory and Development Authority (IRDA).<sup>19</sup> Banks have also recently recognized the potential of fintech incubators by supporting them in various ways. A few working examples include YES Bank's partnership with Ultracash Technologies to

enable sound-based proximity payments and provide products, payment gateways, and open application program interfaces (APIs) that help accelerate the development of innovative technology solutions in the banking and finance sector. Similarly, HDFC Bank has partnered with fintech startup 'Tone Tag' to provide phone-based proximity services.

In the payments space, for example, mobile- and web-based payment platforms, such as Alipay, Paytm, Airtel Money, Amazon Pay, Android Pay, Apple Pay, M-Pesa, PayPal and Samsung Pay, offer end users the ability to pay for goods and services online or through handheld devices, potentially providing the ability to reduce transaction costs relative to more traditional payment methods.<sup>20</sup> The year 2010 saw the emergence of payment startups in mobile wallets, ebill payment and mobile recharge services. Major fintech startups such as Oxigen, MobiKwik, Paytm and Freecharge also originated between 2005 and 2010.

However, the stakeholders are diversified across different categories with only a few focused on financial inclusion. There is an inherent need for new solutions which enable fintech startups to leverage the infrastructure created by banks to enhance their existing offerings with a superior product experience and easier customer onboarding process. There is a dire need for incubators with an exclusive financial inclusion mandate.<sup>21</sup> Apart from this, there are several pain-points faced by fintechs to reach out to the last mile which are elaborated on in the next section.

## 2.3 Need for innovation in the fintech space

Liberalization of the Indian banking industry began post 1990s with the introduction of tech-based financial services. The government also undertook legislative action to enhance the banking system and pushed new technologies to revolutionize the sector. However, technological innovation in financial services witnessed slow growth until around 2005, when the BC model was used to increase penetration of financial services in rural households.<sup>22</sup> The BC model led to enhanced private sector focus on low-income communities with the development of affordable smartphones, better access to mobile data, emergence of combined physical or digital service delivery models, and low cost infrastructure. FinoPayTech and Eko India were the initial startups that took advantage of this opportunity and built their services around the BC model.<sup>23</sup>

Despite these developments, there remains a need to focus on core product functionalities to effectively address the pain-points of fintechs to reach low-income users within large and unaddressed markets. India has the highest share of inactive bank accounts in the world at 48 percent.<sup>24</sup> This highlights a need for the right products, or the failure of existing products that have not yet achieved transformative scale. The following reasons have played a vital role in the lack of financial services uptake in low-income communities. These segments have typically suffered from lack of financial data for credit profiling, financial illiteracy, low

capital requirements, unbanked accounts, and lack of customized products for the last mile.

- Members of several households in rural India do not have bank accounts, credit scores, or home ownership details.
- Accessing financial services in rural areas is a tiresome and arduous task with regulatory challenges on KYC compliance such as physical document verification for identification proof, pay slips, verification of signatures, and property inspections.<sup>25</sup>
- There is a dire need for innovation in developing segment-specific products that address a vertical unique to India. While rural India has high aspirations, there is a lack of clear pathways to save. The rates of savings increase drastically with household education and income and there is a need for intuitive, efficient, risk-free wealth management tools for low-income groups. There is a lack of awareness about insurance and low perceived value in insurance solutions which has resulted in only 3.49 percent of India's population purchasing insurance.<sup>26</sup>
- Digital and financial knowledge is low in India. Inability of the less literate users to establish and state a case for financial services is another factor. The current set of financial products and services does not really cater to the vast majority of Indians and is designed for the top 40 million of the population, neglecting around 400 million Indians who earn between US\$3,000 and US\$15,000 a year.<sup>27</sup>
- Those who lack financial data and credit history become suboptimal borrowers for

traditional lenders as it is difficult to perform risk assessments for them. Due to the paucity of reliable data, it becomes difficult for algorithms to ensure the execution of a financial plan to achieve the investors' goals while still complying with the investors risk profile.<sup>28</sup>

For reasons stated above, a larger number of customers are underserved or unserved by traditional lending institutions. Startups have yet to develop an in-depth understanding of the segment and create solutions that are usable, affordable and profitable. For instance, solutions such as credit schemes focused on women entrepreneurs, social financing, and crowd financing are yet to see any large-scale disruptions.<sup>29</sup> Addressing these challenges by not only building on the innovations already initiated by Indian fintech startups, but also by creating disruptive solutions, can provide a unique opportunity for startups to profit from the large Indian fintech market.

A supply-side approach to digital financial services for the last mile has borne limited results. The total transaction value in the digital payments segment amounted to US\$50,215 million in 2018.<sup>30</sup> There is potential to boost financial resilience at scale through customer-centric innovation around core financial services. Previously excluded 'thin file' borrowers are now within the reach of innovative fintech solution providers. The next section aims to outline what makes the CATALYST incubator unique by firstly describing the niche market it serves.

<sup>13</sup> Gol. 2017. Revolutionary Financial Inclusion Program. New Delhi: Government of India.

<sup>14</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>15</sup> Statista. 2018, 10 20. www.statista.com. Retrieved from Statista-The statistics portal: <https://www.statista.com/outlook/295/119/fintech/india>

<sup>16</sup> KPMG. 2018. The pulse of fintech. UK: KPMG International.

<sup>17</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>18</sup> Scott, A. 2016, 06 29. Tech Bullion. Retrieved 2018, from [www.techbullion.com/10-popular-fintech-startups-incubators-india/](http://www.techbullion.com/10-popular-fintech-startups-incubators-india/)

<sup>19</sup> RBI. 2017. Fintech and Digital Banking. Mumbai: Reserve Bank of India.

<sup>20</sup> Deloitte. 2014. Digital Transaction Banking. UK: Deloitte.

<sup>21</sup> BNY Mellon. 2015. Innovation in Payments. New York: The Bank of New York Mellon Corporation.

<sup>22</sup> Charkrabarty, K. 2011, September 21. Retrieved 2018, from <https://www.livemint.com/Companies/lz3rd8d5pPsnucEWkFREHJ/Financial-Inclusion--A-road-India-needs-to-travel.html>

<sup>23</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>24</sup> World Bank. 2017. The Global Findex Database. Washington DC: World Bank Group.

<sup>25</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>26</sup> Chitra, R. 2018, January 29. Retrieved 2018, from <https://timesofindia.indiatimes.com/india-business/insurance-penetration-in-india-has-risen-to-3-49-economic-survey-says.cms>

<sup>27</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>28</sup> FSB. 2017. Financial stability implications from fintech. Switzerland: Financial Stability Board.

<sup>29</sup> LTP. 2016. Fintech in India. Bangalore: swissnex India; Let's talk payments.

<sup>30</sup> Statista. 2018. www.statista.com. Retrieved from Statista- The statistics portal: <https://www.statista.com/outlook/295/119/fintech/india> on October 20.

## 2.4 CATALYST Incubator - Fintech for the Last Mile

The launch of the unique incubator program themed 'Fintech for the Last Mile' was aimed at supporting various innovative digital payment solutions based on network effects to drive an inclusive digital economy; this, in turn, would meet the needs of the last-mile customer.

The incubator's first phase of the application process kick-started in June 2017, with a two-month long outreach drive that threw up 51 eligible applicants across 13 fintech sectors. The top three sectors were Credit (~39 percent), Payments (~18 percent) and Invoice Management (~12 percent). The evaluation was a three-step process based on impact, product uniqueness, market potential, cost effectiveness, and team:

- Phase 1: The applicants were assessed based on a self-assessment, budget, certificate assurance, monitoring and evaluation (MnE) workbook and their work plan.
- Phase 2: Shortlisted applicants met with a technical evaluation committee, (TEC). TEC evaluated them on idea fit, product, market potential, traction, team, investment readiness, and cost effectiveness. Parallel to this, a budget evaluation committee (BEC) evaluated startups on cost realism, cost share, cost principles as applicable (non-profit/for profit) as well as provided valuable feedback on budget and organizational due diligence.
- Phase 3: In this phase, the top nine shortlisted startups were invited for an in-person discussion which was facilitated by a team of experts from CATALYST, USAID, FHI 360, the Institute for Financial Management and Research - Leveraging Evidence for

Access and Development (IFMR LEAD), and industry experts. Of this, five were finalized.

The five fintech startup finalists were provided with financial support of US\$50,000 each to test their solutions with merchants, distributors and customers in low-income communities of Jaipur. The following incubatees were funded through this program:

- **PayBee** operates on a business-to-business (B2B) model by automating invoicing for the distributor-retailer value chain. It currently works with business partners in Chennai and Jaipur, and has onboarded 210+ retailers within six months of operations.
- **Bix42** (formerly MeraPaper) has built a digital ecosystem around home-based subscription models of newspaper and cable distributors by automating billing and offering other technology solutions such as customer management, product management, and payment records. It currently works with 80+ retailers in Jaipur reaching out to more than 65,000 customers digitally.
- **PayNearby** operates on a business to business to consumer (B2B2C) model, where it partners with neighborhood retail stores that can offer digitally assisted financial services such as Aadhaar deposit, khaata (recordkeeping) service, recharges, and payment services like Bharat QR and UPI using the PayNearby app. PayNearby has empowered more than 1,100 retailers as Digital Pradhans in Jaipur.
- **Fingpay** allows customers to shop bare pockets, that is, without card, cash, mobile phone, and wallet. It facilitates biometric-based payments for all with a special focus on financial inclusion. Through this solution, Fingpay has encouraged 1,500+ merchants to use digital payments in Jaipur.

- **Kaleidofin** is a platform that provides tailored financial services to the mass market, including populations that are underbanked and have significant variability in their income. It specializes in goal-based wealth management and has successfully convinced 200+ customers to adopt formal savings.

In addition, these startups were also offered support services such as easy market access, mentorship, technology infrastructure enablement, product development, research expertise along with operational support for their functionalities and a work environment. The startups underwent a successful innovation cycle at CATALYST's Jaipur Payments Lab and are currently raising additional funds to expand into new markets.

### Incubator's impact on digitizing Jaipur

The incubator program had a large impact on digitizing the peri-urban merchant ecosystem and low-income groups, truly reaching the last mile. Some major outcomes include a direct impact on digitizing retail merchants, supply chain merchants, government eMitra service centers, and Aadhaar-enabled payment solutions. The aggregated impact of six months in terms of the number of merchants digitized and engaged in the digital landscape, number of unique end-use customers who transacted digitally, and the net worth of transactions digitized are as follows:

- # 3,000+ merchants digitized
- # 600,000+ customers engaged in the digital landscape\*
- # 11,000+ unique customers tried digital payments at merchant stores
- # INR 2.05 crore worth of transactions digitized\*\*

\*While we know the number of merchants digitized, unique customers trying digital payments and total worth of transactions being digitized, we assume customers engaged based on an average of 200 unique end users as the incubatees gave this figures based on engaged clients in the six-month period.  
\*\*INR 64 lakh + 63 lakh + 12 lakh + 62 lakh + 2.5 lakh (without Aadhaar Enabled Payment System (AEPS), Domestic Money Transfer (DMT) from PayNearby).



# 3

## PILOT DESIGN AND IMPLEMENTATION

### 3.1 Theory of Change

The essence of running an incubator lies in collaboration with established brands to facilitate new product delivery and improve customer experience. Startups enable new product development by piloting customer-centric innovations, lean management, quick decision making, cost reduction and convenience. The theory of change to reach the last mile at an incubator and incubatee level is simply explained in Table 1.

Table 1: Theory of Change

Access to an array of financial services can create opportunities vital for financial inclusion				
1. Drive adoption and usage of digital payments by small merchants to extract more business value, better transaction experience, and reduce inefficiencies		2. Expand access to tailored financial services like savings, credit, and insurance to increase capacity to weather financial shocks and grow their businesses		3. Deepen economic stability and social transformation
Problems	Inputs	Outputs	Outcomes	Impact
Inadequate awareness of digital financial services and products to low-income customers	Provision of feet-on-street for end-to-end support with sales and on ground operations	Better awareness of digital financial services	PayBee digitized the invoicing and payment processes between retailers and wholesalers to improve transparency and efficiency in B2B transactions	The CATALYST incubator 'Fintech for the Last Mile' addressed the needs of traditionally underserved market segments by supporting innovative and scalable fintech solutions
	Financial assistance in the form of a performance grant	Better participation in digital payments		
Lack of digitization in the entire value chain	Partnership connects with an established partner network	Better access to the field	PayNearby provided an app-based solution to retailers enabling them to be Digital Pradhans by providing services like bill payments, khaata, AEPS and domestic money transfer	
	Mentorship support from thought leaders in the fintech industry	Diversification of formal savings and automation of credit/bill/payment accounts		
	Provision of an office space for field work in Jaipur	Efficient monthly startup operations	Bix42 digitized the subscription-based billing processes to ease operational challenges for the vendor and improve transparency for the buyer by providing options for bill payments	
Lack of access to digital payments for small-ticket payments by customers	Workshops on customer centricity to help startups realign their core values	Higher focus on customer-centric approaches and business models		
	Visibility via conventional media like newspaper articles and blogs	Startups reaching the last mile with the following end users	Kaleidofin used digitally assisted models to improve financial health of the lower income households by providing goal-based wealth advisory	
	Outreach in the form of finposiums and VC connects	<b>Bix42:</b> Newspaper and cable vendors and their customers <b>PayNearby:</b> Retailers, low-income group customers, migrant workers <b>PayBee:</b> Pharma retailers and distributors <b>Kaleidofin:</b> Low-income households <b>Fingpay:</b> eMitras, micro-finance institutions (MFIs), customers	Fingpay enables merchants to accept digital payments from customers through Aadhaar Pay with just a fingerprint leading to augmentation in digital financial inclusion	
	Monthly support in monitoring progress and challenges			
	Pilot 5 fintech startups in Jaipur for 6 months			



## 3.2 Incubator Design

### 3.2.1 Implementation design

CATALYST laid down foundations that served as a basis for incubator compliance. These guidelines pertained to grant structure and selection criteria for the first batch of startups that entered the ecosystem.

#### Grant structure

An all-inclusive total grant of US\$50,000 each was awarded to the five startups in the first cohort:

- A fixed award amount of US\$50,000 with multiple tranche disbursements. Costs inclusive of product development or improvement, capacity building of field teams, marketing and operational costs.
- The amount was disbursed based on the startups achieving certain milestones, agreed upon between the startups, CATALYST, and donors.
- The framework for the milestones was decided by an expert panel with varied expertise from USAID Development Innovation Ventures (DIV). The structure was then subsequently customized as per CATALYST's requirements.
- The grants were given for a fixed duration, i.e., as in a traditional incubator model, incubatees 'graduate' out of the program with a demo-day in the presence of potential funders.

#### Startup selection criteria

All the startups selected for this incubator were to have direct complementarity to the CATALYST Payments Lab's pilot being undertaken in Jaipur. While CATALYST cast its net wide to get as many startups as possible into the funnel

(especially during the initial rounds) the following remained our areas of focus:

- Innovative credit models for the last mile, especially those that help non-digital merchants or users transition to digital;
- Software as a Service (SaaS) platforms that help digitize many of the manual processes used by small merchants;
- Micro savings;
- Micro-insurance products that can be implemented at scale;
- Flow-based credit solutions; and
- Startups whose target audience is small to medium merchants and households earning less than INR 25,000 per month.

The business models for the startups were required to be sustainable on their own over the long term, determined by the following;

- Ability to raise subsequent rounds of funding (whether from traditional VCs or from social impact VCs); and
- Ability to demonstrate a path to profitability/sustainability (for social enterprises).

CATALYST wanted to ensure that the early-stage startups shortlisted for the incubator had a version of Minimum Viable Product (MVP) ready prior to entering the incubator. Since CATALYST's focus is on market access, having a MVP ready helped the startups test their solutions on potential users.

#### CATALYST incubator support system

The roles and responsibilities of the CATALYST incubator formed the support services it provided:

- CATALYST leveraged competencies of thought

partners in the following areas:

- a. Shortlisting and evaluation for entry into the incubator
- b. Active mentoring
- c. Demo-day evaluation;

- Infrastructure provision to the startups during incubation, i.e., co-working space, mentoring, industry connects, technical infrastructure, technical/product advisory;
- Sharing of data and insights from the Jaipur pilots with the startups to accelerate their learning and in-depth customer insights;
- Sharing of the startups' data with CATALYST for non-commercial usage and research insights as part of the grant funding; and
- Facilitation of mentoring and networking sessions through multiple events and sessions to help startups forge the right partnerships and collaborations.

#### Selection process

CATALYST incubator's selection process started on August 1, 2017, on the website (<http://cashlesscatalyst.org/>). During phase 1, startups were asked to submit pitch decks and certificates of incorporation for the evaluation process; the deadline was September 24, 2017. Over a period of two months, we received 51 applications for the incubator program. After receiving the phase 1 documents, an evaluation committee consisting of CATALYST's core team evaluated these startups based on product idea fit, MVP readiness, and whether it was an Indian fintech company.

Based on the evaluation, 35 startups were shortlisted for the next phase of the process. During phase 2, the shortlisted startups received a document template package consisting of self-assessment, application proposal, budget, certificate assurance, MnE workbook,

and work plan documents. A deadline of October 10, 2017 was communicated to the shortlisted startups. We received 31 complete applications in this phase. A TEC was formed with equal representation from IFMR LEAD, CATALYST, FHI360, USAID and an external committee member (Chief Incubator Mentor). TEC members individually evaluated the 31 shortlisted startups based on idea fit, product, market potential,

traction, team, investment readiness, and cost rationale.

Post individual evaluation and compilation of the scores, the 31 shortlisted startups were met by the TEC members; a further shortlisting of the startups for the next phase took place. Based on mutual agreement and understanding from TEC members, the top 13 startups were shortlisted for the next phase of the process. During

this process, a BEC was formed which simultaneously evaluated the top nine startups on budget and organizational due diligence, and provided clearance for the next phase of the process. During phase 3, the top nine shortlisted startups were invited for personal interview discussions with the TEC. Based on this process and multiple skype discussions, the TEC agreed on the top five startups to be shortlisted for the first batch of the incubator.

#### Outreach : Applicants across 13 sectors and 14 cities

- Top sectors: **Credit (~39 percent), payments (~18 percent), invoice management (~12 percent), insurance (~10 percent), assisted banking (~8 percent), hardware product startup (~5 percent)**
- **Locations: 14 cities** including Jaipur, Kanpur, Aligarh, and Bhubaneswar
- Startup vintage ranged between **1 month to 15 years**
- One-fifth of applicants had a **female (co)founder**

### 3.2.2 Operational Design

Given its access to real-time users in the segment, grant funds (US\$250,000 over six months) were provided to help the startups build and refine MVPs that validate their market fit. To leverage these funds more effectively, the incubator team worked closely with the Indian VC ecosystem, especially VCs that use a longer-term investment horizon, to find the right entrepreneurial talent, provide mentoring and offer potential future venture funding. Additionally, CATALYST also provided selected incubatees with on-ground support in Jaipur to enable them to effectively enter and execute in the Jaipur market.

Market access support was provided in the following ways:

- Human resources in the form of five-member Feet on Street (FoS) teams for each startup. These teams visited the customers on behalf of the startups, pitched their products, gathered feedback, and also completed the entire sale process;
- Partner connects with government bodies such as Government of Rajasthan's

Department of Information Technology and Communication (DoITC) and the Jaipur Municipal Corporation. The partnerships ensured all possible support from the government in the execution of the incubatees' operational plans;

- Social and referral network connects to help the startup build credibility within the community that they will be operating in. CATALYST was able to leverage its relationships within the community and linkages with market associations. It also aligned public knowledge with the goals of the central as well as the state governments to meet this objective; and
- Facilitation of partnerships with organizations that compliment or provide support to the startups' activities as well as with others startups that were part of the incubation cohort to support streamlined execution of their vision.

## 3.3 Pilot

### 3.3.1 Partnerships

CATALYST focused on identifying partners who would add value to the startups in the following manner:

- Provide software or services that would be invaluable to the startups as they build their products;

- Provide capital or show the startups a pathway to capital that they would require as they try to scale up in the next phase of their growth; and




- Provide mentorship and assistance to the startups in solving the complex business problems they face on a day-to-day basis.

CATALYST therefore reached out to potential partners and explained the concept of the incubator to them. Many partners expressed interest and started working with CATALYST quickly.

### 3.3.2 Portfolio of selected startups

Table 2 provides a brief profile of the startups and links to their original page that will help the reader understand the scope of their business and their focus during the incubation period. Details about each incubatee are shown in Annex 1.

Table 2: Startups' profiles

Startup Name	Payments Type	Financial Service Type	Target Segment	Brief Description of Startup
	UPI, PPI, net banking	Mobile payments, invoicing and payments	Individual Service Providers (ISPs)	Bix42 provides a micro- Enterprise Resource Planning (ERP) to digitize the customer lifecycle, billing and payments for small B2C merchants
	AEPS, Aadhaar Pay, UPI, Payment Protection Insurance (PPI)	Payments, biometric payments, multiple solutions	MFIs, gas agencies, government Common Service Centers (CSCs)	Fingpay is a payment and collection solution that enables merchants to accept digital payments from customers who do not have either a card, wallet, or mobile phone
	eNach	Wealth management, robo-advisor, investment tech	Low-income households and home-based entrepreneurs	Kaleidofin is a platform that provides tailored financial services to the mass market including populations that are un/under-banked and have significant variability in their income
	UPI	Mobile payments, invoicing and payments	Pharma retailers	PayBee's solution automates and digitizes B2B collections in the distributor-retailer value chain
	AEPS, UPI, PPI, net	Payments, money transfer, carrier billing, multiple solutions	Micro-retailers	PayNearby enables existing corner shops to become a digital financial services hub thereby creating a world's largest hyperlocal fintech network



# 4

## OBSERVATIONS AND INSIGHTS

### 4.1 Challenges and barriers in improving financial access to the last mile

#### Infrastructure and app design

- Authentication on UPI mandates that the user share debit card details to onboard any UPI payments app. Since most small and mini retailers operate as sole proprietors, they generally do not request for a debit card on their business account. It therefore causes a misalignment for any instant payment solution designed to service the B2B payments space.
- Robust back-end architecture is crucial for an effective and streamlined customer experience on the app. Timeouts during transactions and pending status on transactions impact trust for the last mile user in adopting digital payments solutions.
- Frequent network/switch downtime becomes a significant bottleneck for fintech players, especially for those working for financial inclusion. Difficulties in processing transactions or network downtime thus lead to loss of business at points of transaction, affecting credibility of the solution at large.
- Technology standards set by custodians such as the National Payments Corporation of India (NPCI) are rapidly evolving with new releases. The transition of platforms complying with these changing standards thus becomes a time- and resource-consuming affair. Due to the phase-wise rollout, some banks have now transitioned to the new protocol whereas others are still active on older peer-to-peer (P2P) protocol, creating multiple delays and transaction timeouts.

#### Lack of human capital

- Hiring and retaining a technical team for a startup based out of a tier-2 city is significantly more challenging as compared to in metros such as Mumbai and Delhi NCR. Talent migrates to the metros and is hesitant to shift to tier-2 cities such as Jaipur due to lack of opportunities and an active startup community in these towns.
- Finding and establishing a proper oversight for monitoring the sales team was a major challenge for the incubatees. Since a majority of the incubatees operates through channel partnerships, they rely heavily on local representation from these channels for hiring the right set of field team members. While having no direct field operations staff keeps costs low, it also limits their oversight and access to clientele to some degree, serving as a major challenge in receiving feedback.
- There is a strong preference for cash transactions in Jaipur. Most traders do not immediately recognize the value in transacting digitally and thus Jaipur continues to be a cash-sticky market. This feature manifests itself as a challenge in terms of very low conversion rates and smaller number

#### Behavioral inertia

- Retailers perceive no significant business value in accepting digital payments. Since there is no cost to withdrawal of cash and convenient availability of ATMs in the markets, it is easier for the customer to just keep paying the bills in cash which disincentivizes switching to digital payments for both parties. Merchants do not calculate the time and transportation costs of operating in cash and visiting banks neither do they consider security-related issues since this has become routine and they do not see the immediate effects.

of leads due to the retailers' unwillingness to move to a digital platform.

- Most lead generation and community mobilization by local entities in a low-income cluster address an audience that mostly consists of women. Insights from lead generation exercises point to the fact that a significant proportion of these women are not the sole decision makers of the household. In several cases, women show interest in enrolling but the decision maker of the family (male) denies permission.

#### Industry readiness and motivation to support

- Most members of the low-income community rely on public sector banks since most of the government benefits are transferred through these zero balance bank accounts. The empanelment is only for e-Nach mandate; however they can be used for any other digital payment/ solutions. So it is a challenge for some products. This creates a bottleneck for fintechs to acquire customers from these communities to work towards financial inclusion.
- Banks in tier-2 cities such as Jaipur lack orientation and readiness to support fintech startups based in these cities. A simple process such as setting up a nodal account for transaction settlements can take from three to seven months due to ambiguity about bank policy and procedures at these local branches as can be seen in the case with Bix42.

#### Need for financial literacy and orientation

- Acquiring merchants is cheaper and has a shorter gestation period but it is hard to create awareness amongst end users. Thus, merchants require proper orientation to understand the features of any financial solution to be able to nudge their customers.
- Since a majority of the fintech products are marketed as an

alternative to traditional banks or banking services, individuals tend to perceive them as a bank and query about the presence of its physical branches. This poses a challenge of perception for the incubatees.

- Although DMT and AEPS are popular digital means in the low-income community for remittance and money withdrawal, AEPS usage is significantly lower than that of DMT. Field visits within the city suggest geographical inequality in information dissemination to the agent as well as to the final customer regarding the operability and availability of AEPS, respectively. The absence of this information acts as a hurdle in improving AEPS transaction volumes.
- For our incubatees working as retail fintech solution providers,

customers rely on the retailer to process the transaction. So, there is the possibility that the wrong amount would be charged to the customer's bank account. Some issues related to fraud and chargebacks arise as there is no physical receipt provided. At the same time, there is no way of telling whether the retailer is at fault or the customer is leveling wrong allegations.

#### Regulatory challenges and friction in compliance

- Recent regulatory changes in the storage of Aadhaar information were another setback for the incubatees working on India Stack due to the delays associated with digitally transacting. This increased transaction time has made the entire process less convenient for customers as they now need

to provide their Aadhaar number every time they make a purchase, while earlier they only needed it for their first transaction.

- Goods and Service Tax (GST) compliance: PayNearby's pricing model on DMT works without a Tax Deduction at Source for markups beyond the existing rate. This has led to agents and distributors being wary of using DMT on the PayNearby's platform. The GST compliance issue will be resolved by requesting clarifications from the RBI and relevant ministries. If it is resolved, there may be an overhaul of the pricing model pan India.

#### Enablers

##### Deep Domain Expertise

The unique combination of deep domain expertise in the fintech space combined with key assets such as the Jaipur Payments Lab provided a robust platform of research, experimental design, rapid execution, and regulatory support for new business models. CATALYST's research in the Jaipur market on various aspects of digitization, be it digital readiness of low-income households, ways of integrating digital payments and lending to small merchants or encouraging digital payment usage and acceptance by merchants was of significant help to the startups as they could tweak their product features and customer acquisition strategies to suit the context. This expertise was a much needed leg up for startups such as Bix42 (MeraPaper).

"The learning that the CATALYST team has in terms of an understanding of the financial system was of big help. So, when we started to build this payment process, wherein a customer can click on the payment link to get to the nodal account and then to a vendor's account, it was not clear to us because none of us were from banking and our understanding of technology was limited. The CATALYST incubator team helped us to set this process up so that we did not get into any legal hassles.... so that part happened very quickly." (Jagdish Ghuge, Bix42).

While the domain expertise was acknowledged by all the startups as a key enabler, some also pointed out that the quality of interaction with the CATALYST team members and their accessibility also helped their businesses.

##### Partner Ecosystem

The partner network that CATALYST had developed — government agencies, channel partners, solution support, mentors and VCs — was another key enabler for the incubator.

Most startups acknowledged the leverage they gained by accessing this network. Expansion of new verticals for a startup such as PayBee was facilitated because of the partnership that CATALYST had nurtured with the Government of Rajasthan.

"We were able to make some quick inroads into a new vertical such as dairy because of CATALYST's relationship with DoITC, Government of Rajasthan. The complete credit for it should go to CATALYST." (Murali Krishnan, PayBee)

This relationship also helped other startups such as PayNearby to build trust and credibility into their brands which facilitated onboarding of retailers onto the digital payments platform.

Another important layer of the partner ecosystem was the connections established with commercial banks, alternative lenders and channel partners. CATALYST's studies show that there is a gap between credit requirement and supply, and introducing a digital line of credit would not only be cheaper but would also act as a 'hook' to bring in the merchant onto a digital payment platform.<sup>31</sup> For PayBee, this meant an opportunity to bring retailers into its fold by offering a credit product in partnership with Capital Float, an alternative lender, at flexible and attractive terms.

"The concept of credit as a hook is certainly a pull and was made tangible at the incubator, particularly with the references provided to these lenders. It provides an option to the retailer to either pay it from his account or with a click of a button avail an instant loan against the invoices raised. The payout is made to the distributor and it would be a win-win for all the three parties: the lender because he knows the loans are against invoices and have been paid to the distributor; the distributor of course is happy; and the retailer has a flexible and

user-friendly loan option." (Murali Krishnan, PayBee)

Similarly, Bix42 also leveraged these networks and partnered with Axis Bank to enable its payments service operation. The startup also has plans to extend Axis Bank's digital services to offer online card-based payments on its platform. In addition, Bix42 has signed up with other partners such as Aditya Birla payments bank for its secondary payment gateway and to provide UPI-based collections services to merchants.

CATALYST also counted a set of high-quality mentors as an important component of the network. For some startups, the engagement with these mentors was quite productive as they were able to incorporate some of the ideas into their business models. In particular, mentoring sessions around technology and customer engagement issues were well received.

To facilitate more structured engagement with the ecosystem partners, CATALYST had also organized four roundtables and 10 finposiums with a curated set of partners, innovators and policymakers.

##### Feet on Street

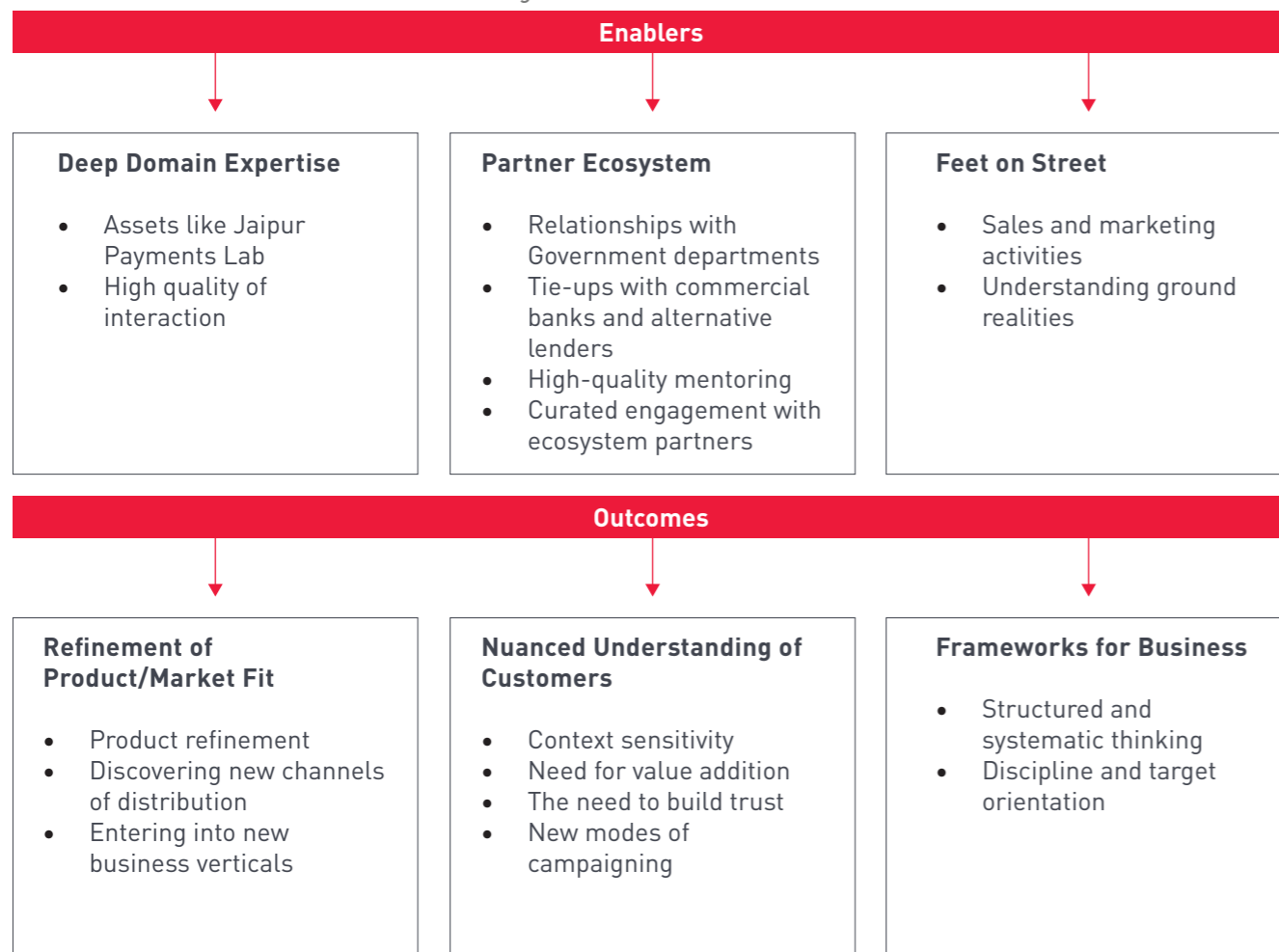
As part of the incubation process, CATALYST provided a dedicated five-member sales force each to the startups. The objective was to encourage the enterprises to test products, initiate marketing activities, and also to onboard and guide customers. Most startups welcomed this idea.

"Nothing gave us traction with retailers more than a local guy visiting the merchants, sitting with them for an hour, telling them about the product and also talking to the customers who came to the shop and demonstrating it to them...and that bit clicked." (Pratyush Halen, Fingpay)

Even experienced entrepreneurs realized the need for a FoS team

## 4.2 CATALYST's Contributions

Figure 1: Enablers and outcomes



<sup>31</sup>CATALYST. 2018. *Mapping the Merchants Mind*. New Delhi: Cashless CATALYST and Ice360.

quite early in their foray into the Jaipur market. Kaleidofin, for instance, saw it as an important addition to its marketing efforts.

“When we started we thought that we may not need it (FoS team) but when we went on ground we realized we can’t do without it. Because the channel was such and without the help of the FoS team I don’t think we would have been able to set it up on our own. We thought that we would have but realized that we couldn’t have.”  
(Vipul Sekhsaria, Kaleidofin)

### Outcomes

#### Refinement of the Product

The incubator provided support for the startups to refine their products to suit the market. Significant value addition was made to MVPs during the incubation period by incorporating additional technical features.

PayBee, which was aiming to digitize Fast-Moving Consumer Goods (FMCG) supply chain payments, tweaked its app as it progressed through a pilot project launched by CATALYST for the dairy segment. Market feedback and discussions with the CATALYST incubator team resulted in additional features such as multiple logins for the distributor’s employees and a call feature to make it easy for the team following up on payments.

For some startups, the incubation resulted in the discovery of additional channels of distribution which had a positive impact on their business models. Kaleidofin, which provides Artificial Intelligence (AI)-driven and tailored financial solutions to the un/underbanked, had partnerships as a key component of its business model. MFIs were seen as natural partners and Kaleidofin considered them as a key channel in other locations. But the CATALYST incubator gave it an opportunity to identify and use a different channel of

distribution — non-governmental organizations (NGOs).

“The SEWA Bharat (partnership) opportunity came because of CATALYST... and that was a great learning for us in many ways, for example, in partner selection. Because of that experience, today, we have partnerships with six NGOs. This has had a far reaching impact on the business model itself.”  
(Vipul Sekhsaria, Kaleidofin)

The CATALYST incubator also facilitated the startups in exploring new business verticals. PayBee, for instance, focused on automation and digitization of B2B collections in the distributor-retailer value chain.

#### Nuanced Understanding of Customers

The CATALYST incubator was useful for the startups in understanding the profile and behavioral dynamics of customers. Inputs from the incubator helped these startups to devise appropriate strategies for onboarding and retaining customers. For instance, a survey of small merchants with fixed establishments showed that lack of customer demand, low awareness, and absence of trust were some of the top cited reasons for non-adoption of digital payments by merchants.<sup>32</sup> The survey also suggested that any upfront costs on digital payment solutions would discourage a potential customer. Insights like these were factored in by some startups as they redesigned their customer acquisition strategy to become more context sensitive.

CATALYST, with its prior experience and studies in the area, had also underlined the need for value in digital payment solutions and encouraged startups to acquire a broader focus beyond just the payment transactions such as integrated workflows that combine payments

with better customer record management, invoicing and reconciliation efficiencies, and less onerous tax compliance features. Based on these insights, a startup like PayBee has introduced features that allow retailers to club multiple invoices, pay these at once with one-click UPI payments and simultaneously provide a streamlined per invoice reconciliation for the distributor. Learnings from the CATALYST incubator also helped the startup in the process of creating other value-added services such as credit and one-click GST to their core product to make it a comprehensive one-stop solution for the merchants.

Financial transactions also depend on trust and credibility. The startups, in their interactions with merchants/end-consumers and also with the resource persons at the CATALYST incubator, realized the significance of this hurdle and created ways of establishing trust. Kaleidofin, for instance, quickly realized that, for the customer, proof of financial transactions was still a hard-copy receipt and app-based payments and SMS acknowledgements had to be tweaked.

PayNearby, which has plans to convert corner shops to digital financial services hubs, initially had difficulties in onboarding merchants because of the trust factor. It was then decided that an introductory letter from a Government of Rajasthan representative or the Municipal Commissioner would be an effective ice-breaker when interacting with merchants. According to PayNearby, it seemed to have helped the onboarding process. Taking a cue from the CATALYST study that pointed out that more than 95 percent of the digital payment users are active consumers for communication and networking applications, PayNearby experimented with a

targeted social media campaign to generate leads. The campaign reached out to 1 lakh Facebook users in Rajasthan, which resulted 1,100+ downloads.

#### Frameworks for Business

The CATALYST incubator provided the startups with frameworks for needs assessment, as well as workbooks for tracking key performance indicators for products, organization, operations, finance and impact. In addition, templates were also

provided for budgeting and work plan design. For inexperienced entrepreneurs, these frameworks paved the way for monitoring performance in a more structured and systematic way. Furthermore, it also instilled a sense of discipline and target orientation. It pushed them to achieve targets and frequent discussions with CATALYST also helped in identifying reasons for deficits and ways of addressing them. Though the projects were on a pilot mode, the CATALYST incubator facilitated

a structured thinking process. “These incubatees were chosen based on a three-stage rigorous selection process that drew more than 50 applicants through qualified leads, including VCs, incubators, universities as well as key partners. The chosen fintech solutions are geared for areas of retail and supplier payments, goal-based savings, hyperlocal retail of financial services, micro-ERP solutions, and new credit models.” (Badal Malick, Chief Innovation Officer, CATALYST)



<sup>32</sup>CATALYST. 2018. *Mapping the Merchants' Mind*. New Delhi: Cashless CATALYST and Ice360.

# 5 ANNEX

## Incubatees at the CATALYST Incubator

### Bix42 (MeraPaper)

Bix42 (earlier known as MeraPaper), a mobile-based invoicing and payments solution for ISPs and micro vendors such as newspaper vendors, aims at simplifying cash collection for ISPs whose business has a subscription-based mode of payments. It was incubated at an early Proof of Concept (PoC) stage with some traction for the invoicing product for the ISPs. Over the last six months of the incubation, the team has achieved initial market validation for its payments portal prototype and has ventured into new parallel verticals such as cable TV, tiffin delivery and water bottle supplies.

#### Founders Profile

Started by three Birla Institute of Technology and Science, Pilani

(BITS Pilani) graduates of the 2012 batch:

**Gaurav Karwa, Chief Executive Officer (CEO)**, worked for M.S. Software and Deloitte before starting up with this idea in November 2016. Gaurav's family has been in newspaper distribution business for the last 60 years.

**Parth Garg, Chief Technology Officer (CTO)**, worked as a freelance back-end developer before Bix42.

**Jagdish Ghuge, Chief Operating Officer (COO)**, earned a Master's degree from the Indian Institute of Management-Calcutta (IIM-C) in 2016 and has worked with the Hindustan Times and Bank of America before joining Bix42.

#### Incubator Project

A six-month on-ground pilot tested a new simplified SMS-based payments collection

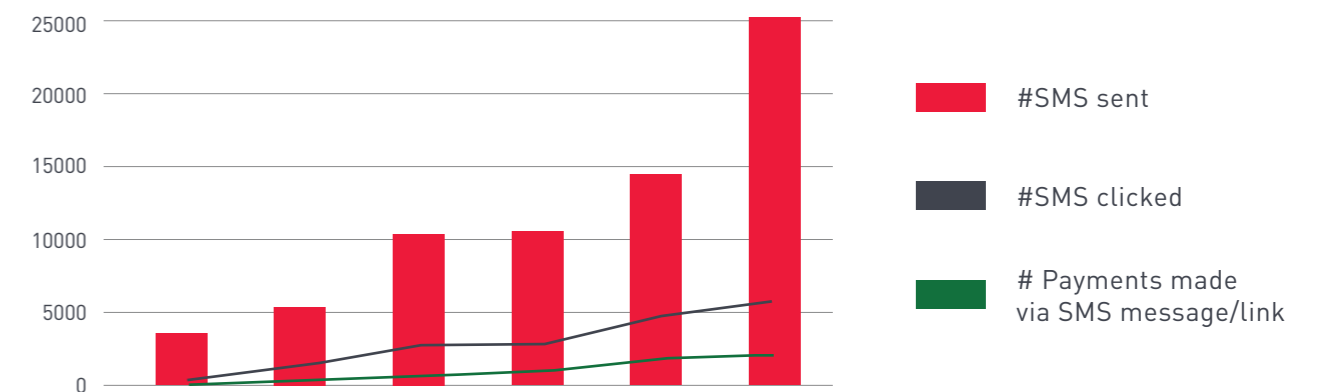
solution with the existing base of newspaper vendors and newly onboarded merchants from other parallel verticals such as tiffin delivery, milk delivery and cable TV to validate a working payments services business model and scale up of the solution.

Bix42 has shown positive growth in the last six months of the pilot duration in both existing (newspaper) and new verticals (such as cable TV). On an average, an active vendor is collecting 20 percent of his monthly payments through the Bix42 payments platform. There has been a substantial rise in adoption rate in rural areas and vendors have shown interest in the payment platform's services as well.

Table 3: Bix42's key metrics for six months

	Target KPI	Actuals
Number of merchants	42	83
Number of transactions	5,509	6,568
Revenue (INR)	106,031	107,225
Gross Merchandise Value (GMV) (INR)	-	128,000

Figure 2: Consumer engagement - monthly SMS invoices sent and click rate



The plot highlights consumer engagements with monthly automated SMS invoices sent by Bix42 to the onboarded merchant's consumer. The SMS click rate improved month on month due to increasing awareness and the marketing drive conducted by Bix42. Engagement improved in June after revising the messaging of the SMS invoice. In the revised version of the SMS, the amount to be paid was positioned in the first line on the message and the name of the newspaper vendor was highlighted to establish credibility and trust of the SMS.

**Startup Progress**

**Product**

Bix42 partnered with Paytm as a payment gateway to offer payments collection services through the platform via SMSs for micro-merchants and ISPs such as newspaper vendors. A streamlined reconciliation process now enables these merchants to keep a real-time track of all digital payments made on the Bix42 platform.

Bix42 also restructured its back-end architecture to offer an integrated platform to onboard merchants from different segments such as cable TV, water bottle supply, etc. The app now has a customized User Interface (UI)/User Experience (UX) for merchants from different verticals catering to their varied frequency of collections and market practices.

Since, the name MeraPaper narrowed the appeal of the product to the newspaper distribution business only, the product was rebranded as Bix42 with the tagline Collection Simplified (Bix stands for Billing Invoicing and X-Transactions).

**Partnerships**

Bix42 partnered with Axis Bank as its supporting bank to enable its payments service operation. It is now exploring the option of extending Axis Bank's digital services to offer onlinecard-based payments on its platform.

Also, Bix42 has recently signed Aditya Birla payments bank as the secondary payments gateway to provide UPI-based collections services through the Bix42 platform to its client merchants.

**Business model**

Bix42 has two main revenue channels through an annual subscription cost and a percentage fee per transaction for using the SMS-based payments collection services. The team introduced a tier-based flat subscription charges to simplify cost for merchants. Now, it is aiming to provide a flat transaction charge as the platform fee for high ticket size transactions such as water bottle supply collections.

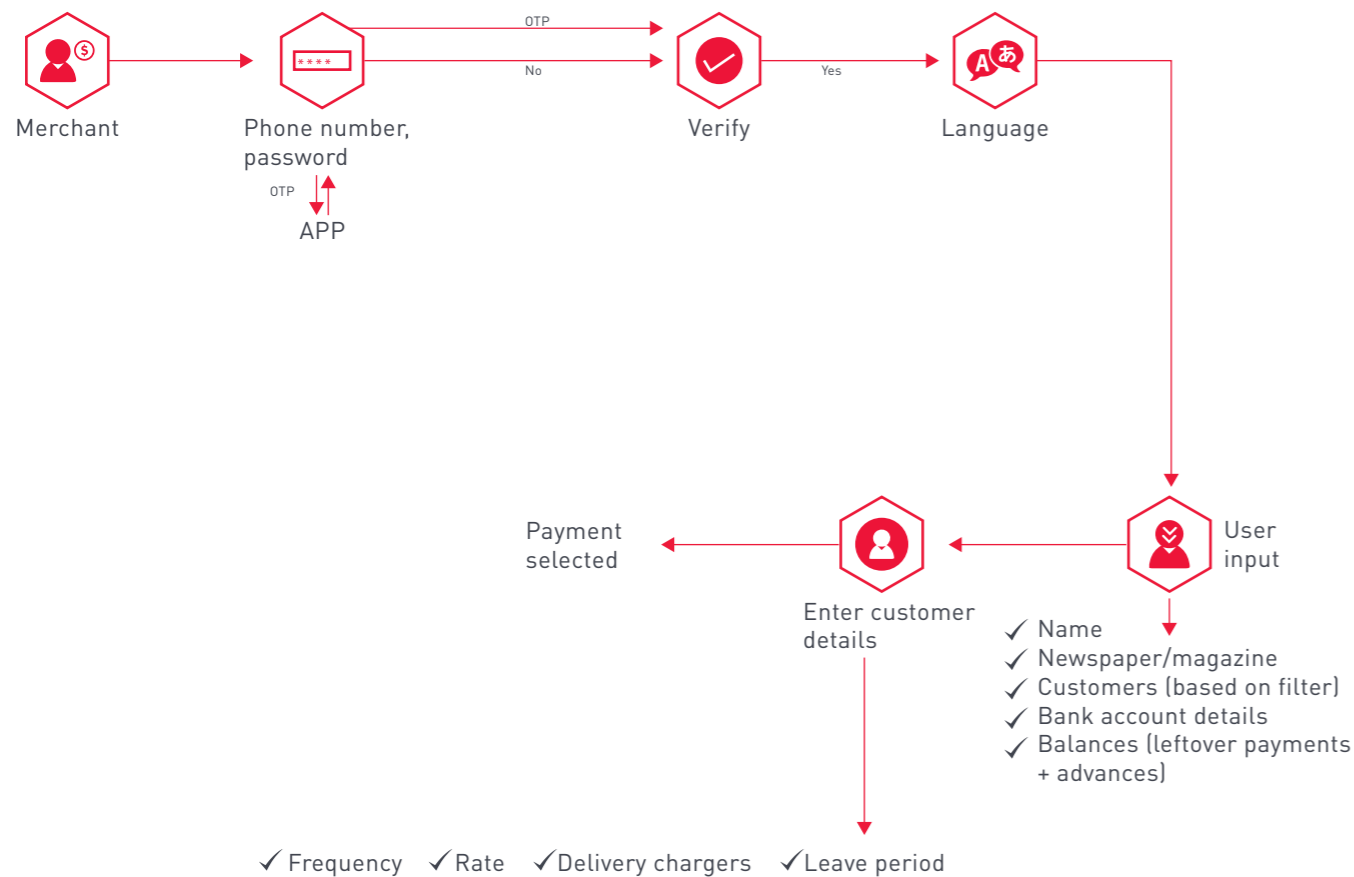
**Sustainable and scalable**

Based out of Jaipur, Bix42 has successfully scaled operations to parallel verticals like cable TV operators, tiffin delivery service providers, and water bottle suppliers. Now it is distributing franchises to distributors and aggregators to expand operations in other geographies beyond Jaipur.

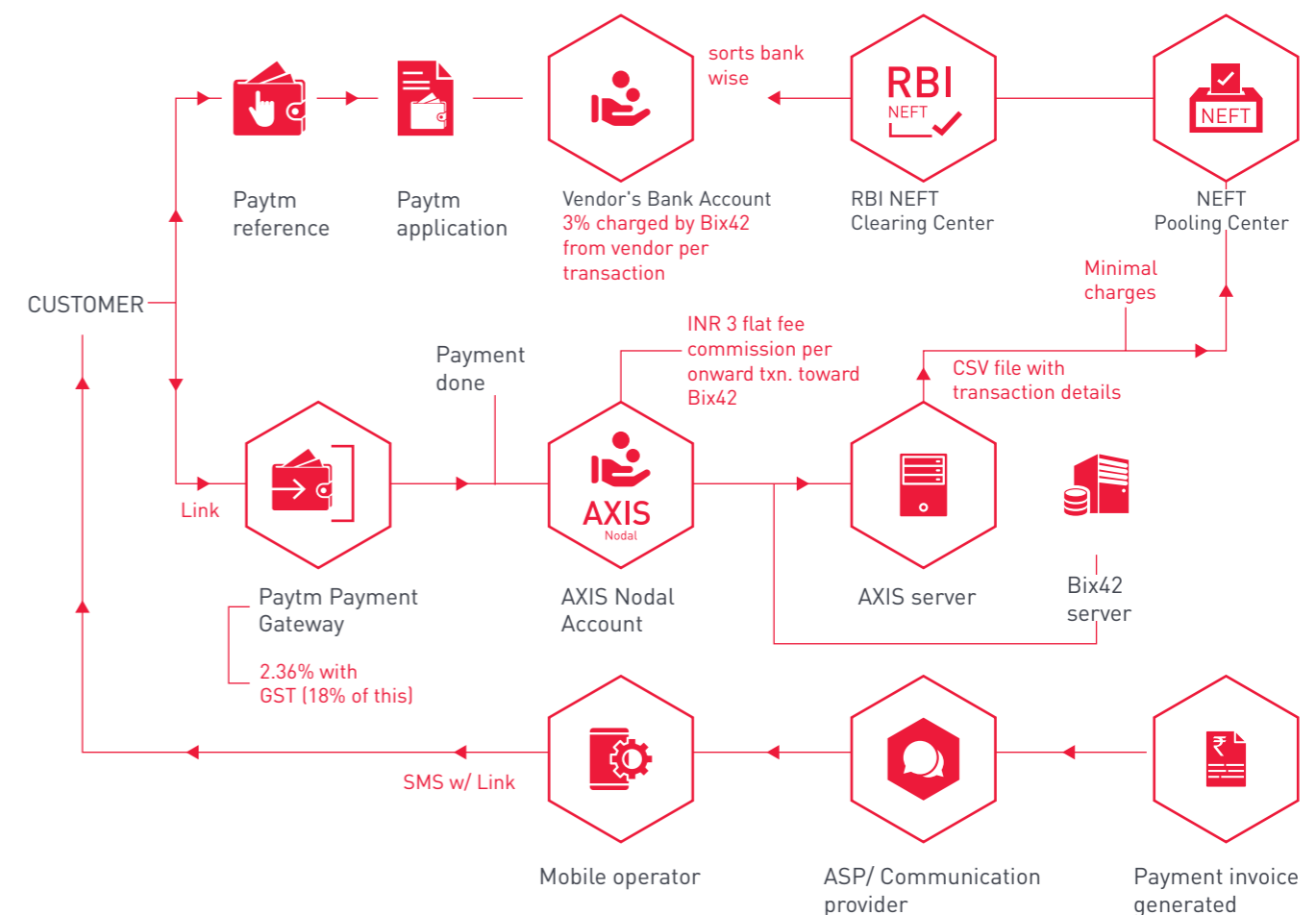


Figure 3: Bix42 product structure

**Onboarding**



**Process Flow**



**Product testimonials**

**Shravan Kumar, newspaper vendor**

"I have been using MeraPaper since August 2017. Earlier, I used to spend 10-12 hours on maintaining books. The bill books would cost me INR 500. With this app, life has become much easier. I can generate bills online, and share the links through WhatsApp with my clients. I'm planning to do most of my collections through the MeraPaper app linked to the Bharat Interface for Money (BHIM)/Paytm. I'm sure many vendors like me will start using this service."

**Mahaveer, newspaper vendor**

"So many of our handicaps are being solved — be it time spent in going door-to-door to collect payments, cost of employing help, untimely payments or the sheer sum of money spent on petrol. I am now able to pursue my secondary job as a tourist guide, and can even find more time to spend with my family."

**Mannuji, newspaper vendor**

"Digital literacy fears are being vanquished. I find that in the matter of just three minutes, I can convince my customers to make

the switch! Student areas are especially responsive!" Having around 600 customers in rural areas and having completed more than 50 digital transactions, he goes to show that the path to achieving the rural target, while laden with a few obstacles, is not too tough.

**Vijay Singh, cable TV operator**

"The auto-update feature, automatic transfer to my bank account and the convenience with regard to record-keeping are what attracted me to it. I'm sure I can save more than 50 percent of my time and generate higher revenues."

**PayBee**

PayBee is a UPI-based B2B invoicing and payments solution for retail merchants to manage and record distributor payments. PayBee was part of the initial pilot activities in Jaipur and has gained early traction in the FMCG supply chain. As part of the incubator, PayBee aimed at venturing into other supply chains such as pharmacy. Due to organic overlap across pharma and FMCG retailers, its team focused on capturing the pharma market in the Jaipur region.

**Founders Profile**

**Murali Krishnan, CEO and Cofounder**, is a seasoned banking professional with 20+ years of experience. Murali has worked with CITICorp, ICICI Bank, Bank of Muscat, Paypal before starting PayBee in 2017.

**Siva Subramaniam, CTO**, a data security and fintech expert with a rich 20 years+ experience of creating IT products

**Incubator Project**

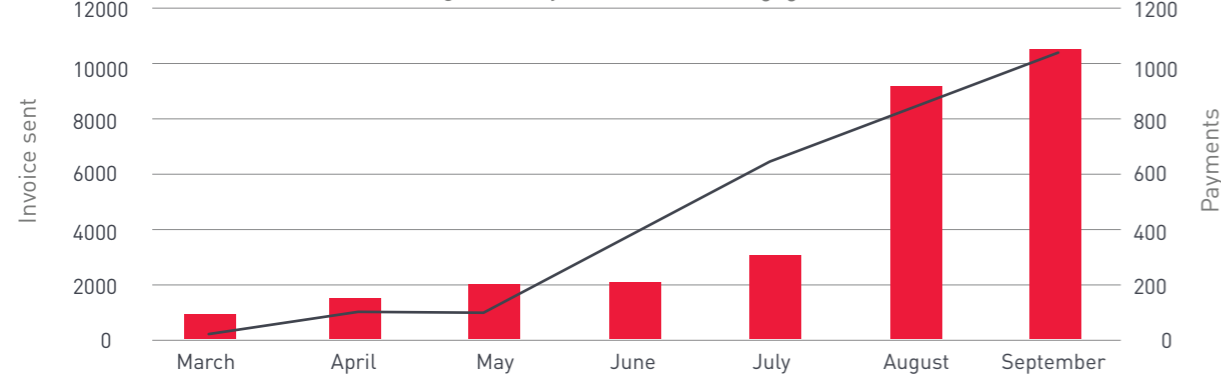
The six-month on-ground pilot aimed to digitize retailer to distributor payments in the pharmacy value chain and create a business case and go-to-market strategy to scale up the solution.

The team has partnered with three of the largest pharmacy distributors over the last six months and has onboarded 200+ active retailers in Jaipur making daily payments to their distributors using the PayBee app. It is now working on adding other value-added services such as credit, one click GST on its core product to make a comprehensive one-stop solution for its client merchants.

Table 4: PayBee's key metrics for six months

	Target KPI	Actuals
Number of merchants	175	316
Number of transactions	3,305	3,359
Revenue (INR)	75,000	3,500
GMV (INR)	-	6,345,000

Figure 4: PayBee's customer engagement



The plot highlights growth of digital payments against the total number of invoices sent to active retailers. The spike in May was caused after introducing the credit note feature in the app. This feature allows the distributor to raise a negative invoice against the product returned by the retailer. Onboarding two new distributors resulted in the second spike in July.

**Startup Progress**

**Product**

PayBee has developed a comprehensive end-to-end solution for digitizing retailer to distributor payments across value chains. A web-based dashboard allows the distributor to manage and pull payments from the added retailers through a click upload of an excel file from his ERP system. Retailers can use the PayBee app to manage the invoices from multiple distributors in a single app and can settle invoice 24x7 using the UPI payments feature on the app.

To accommodate the market practices and general payments behavior of active retailers, PayBee introduced a credit note feature in the app which allows a distributor to generate a negative balance invoice for the return of supplies. The PayBee app also allows the retailers to now club

multiple invoices and pay these invoice at once in a one click UPI payment while still providing a streamlined per invoice reconciliation for the distributor.

**Partnerships**

PayBee has partnered with the local pharma merchant association to establish credibility and trust amongst distributors and to expedite the retailer onboarding process using their network.

PayBee has also partnered with Capital First to offer credit to the active retailers using the app, based on the digital footprint on the app. PayBee believes the option of availing credit might influence uptake in the adoption of the app amongst retailers.

**Business model**

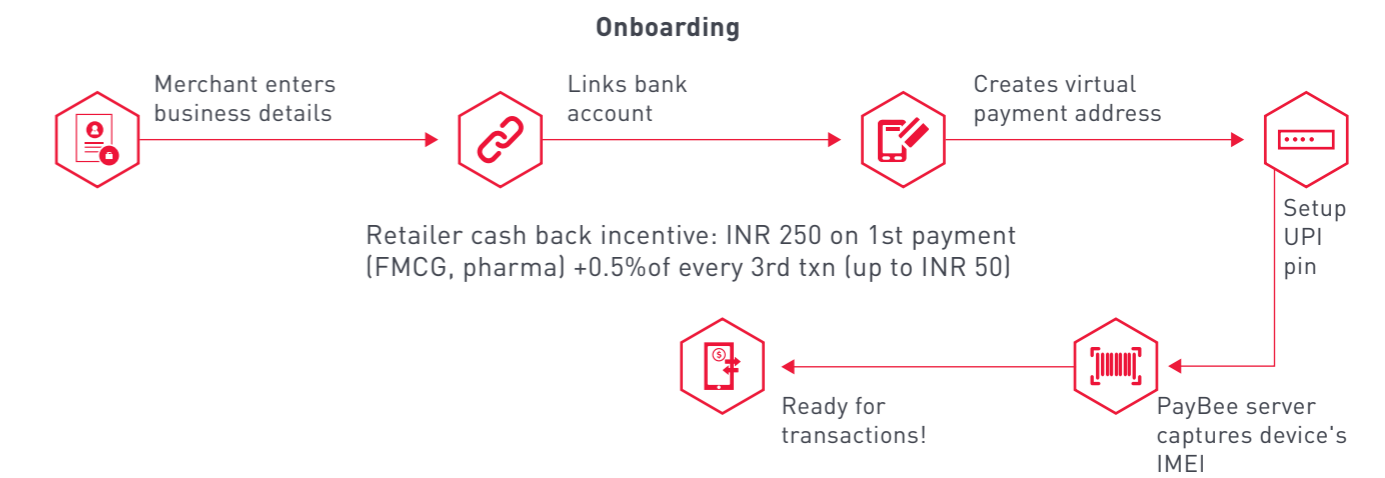
Since there is a supporting cost per transaction which a Payment

Service Provider (PSP) bears to enable transactions, the option of clubbing multiple invoices will help PayBee in lowering its unit cost and improve overall margins on this transaction.

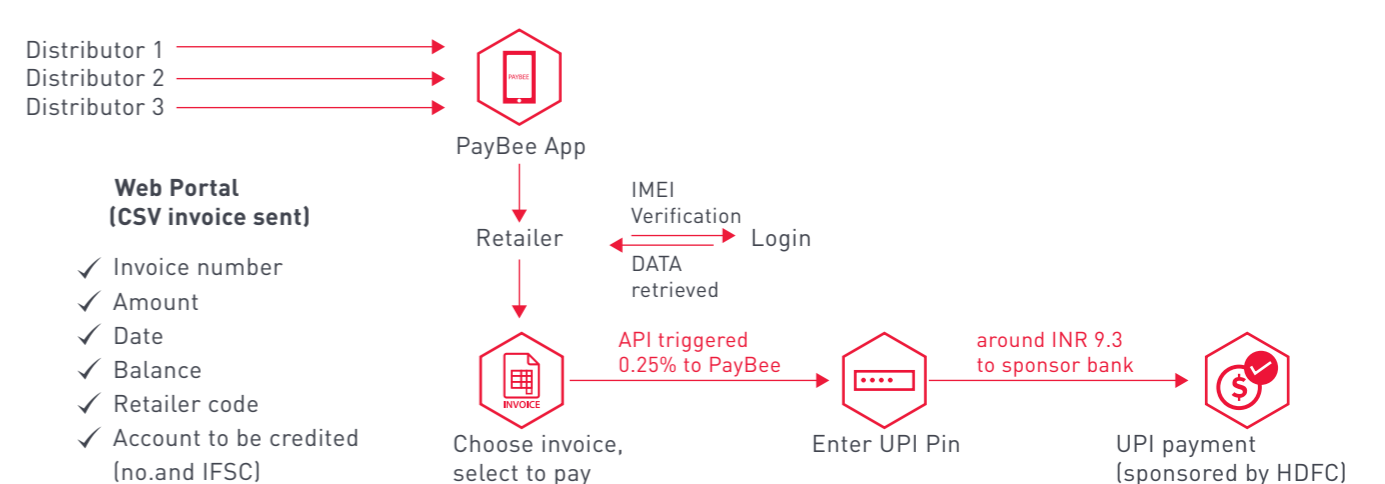
PayBee charges a small percentage as fee per transaction to the distributor for providing the digital platform and supporting payments collection.

Sustainable and scalable PayBee has commercially onboarded three distributors during the first phase of the pilot and has seen steady growth in onboarding active paying merchants for these distributors. One of the three distributors who commercially adopted the solution also invested in the startup, highlighting the value proposition realized by the stakeholder.

Figure 5: PayBee's product structure



**Process Flow**





**Product testimonials**  
Nimit Kasiwal, TARA Medicos Pvt. Ltd.

“Adopting PayBee reduces our time to collect the cash/ checks from the retailers and in depositing them in our bank accounts as the payments are now credited to our account instantaneously. It also reduces the work force to be sent to each and every retailer for payment collection and infidelity on their part. Getting onboard PayBee helps in cutting down the cash-handling charges and reduces the transit time of cash.”

**Abhishek, pharmacy owner for 18 years**

“Digital is very good and safe if the transaction happens on time. I adopted PayBee to negate the problem of check-bouncing and to make timely payments. I would like for them to expand in B2C as well.”

**Ravi, Salesman, Procter & Gamble**, one of the key distributors using the PayBee solution, receives an incentive of INR 200 for every five retailer payments via the PayBee app. “I take it up as a challenge. But it is not too hard, as the retailers say the app is very easy to operate

and get accustomed to. Their grievances are also promptly redressed by the PayBee team.”

**Guru, Prem Medical**  
“Operating the app is definitely a lot faster and more convenient than manual invoicing. I had hired a person to help with collecting payments and it used to take up a lot of time and money. I’m now able to save on personnel and transport cost.”

**FingPay**  
Fingpay allows customers to shop bare pockets, i.e., without cards, cash, mobile phones, and wallets. With Fingpay, customers can pay for products, services and utilities at a Point of Sale (PoS) from any of their bank accounts and/ or wallets with just a scan of a finger. Fingpay has unified AEPS, Bharat Bill Payment System (BBPS) and UPI in a single merchant application. The focus of Fingpay is on payments using biometrics. Fingpay facilitates biometric-based payments for all with its focus on financial inclusion. Here the payments are made digitally using bank accounts. The customers authenticate identity through biometrics and their accounts are debited. Through this solution,

Fingpay is encouraging people to use digital payments.

**Founders Profile**  
**Pratyush Halen, CEO and Cofounder**, a graduate from Medicap, has worked with Amdocs-Telecom before starting Fingpay in 2016.

**Anurag Agarwaal, CTO**, is a seasonal IT professional with 22+ years of experience while working for Ex-Pharmadeal, Motorola, AT&T, Deutsche bank, Satyam, TCS, and EDS. Anuraag also has five US patents to his name.

**Incubator Project**  
In Jaipur, Fingpay has been working with MFIs and retailers to digitize its customers. With Fingpay, retail customers can pay for products, services and utilities at PoS from any of their bank accounts with just a scan of a finger.

Similarly, the MFI industry in Jaipur has seen a push towards adopting Fingpay’s cashless and paperless systems as it leads to mitigation of risks associated with cash management and increasing operational efficiency.

Table 5: Fingpay’s key metrics for six months

	Target KPI	Actuals
Number of merchants	1,500	1,510
Number of transactions	5,000	5,359
Revenue (INR)	203,243	302,000
GMV (INR)	-	6,400,000

**Startup Progress**

**Product**  
Fingpay has matured into full suite of biometric-based solutions developed on India Stack with service offerings such as eSign, AEPS, Aadhaar Pay, to name a few. On the app for merchants, Fingpay now offers the full range of payment acceptance options from UPI to AEPS and Aadhaar Pay.

Fingpay developed a new refund mechanism on its platform to

complete the integration of the biometric payments system into the government’s CSCs (eMitra centers). In case of transaction failure or delay in transfer funds leading to void transactions, the funds need to be reverted to the payer’s bank account directly through the Fingpay platform. This feature was added later by the startup to comply with the established mechanism by the government’s department.

**Partnerships**  
Fingpay has partnered with its

supporting bank (ICICI Bank) and Kotak Mahindra Bank as its channel partners to offers the Fingpay app to all merchants who have their business accounts in these banks.

Fingpay also ventured into a partnership with the DoITC, Government of Rajasthan, to enable biometric-based payments solutions on the CSC (eMitra) and Bhamasha portals for accepting payments of various payments for utility bills and multiple government to citizen (G2C) services.

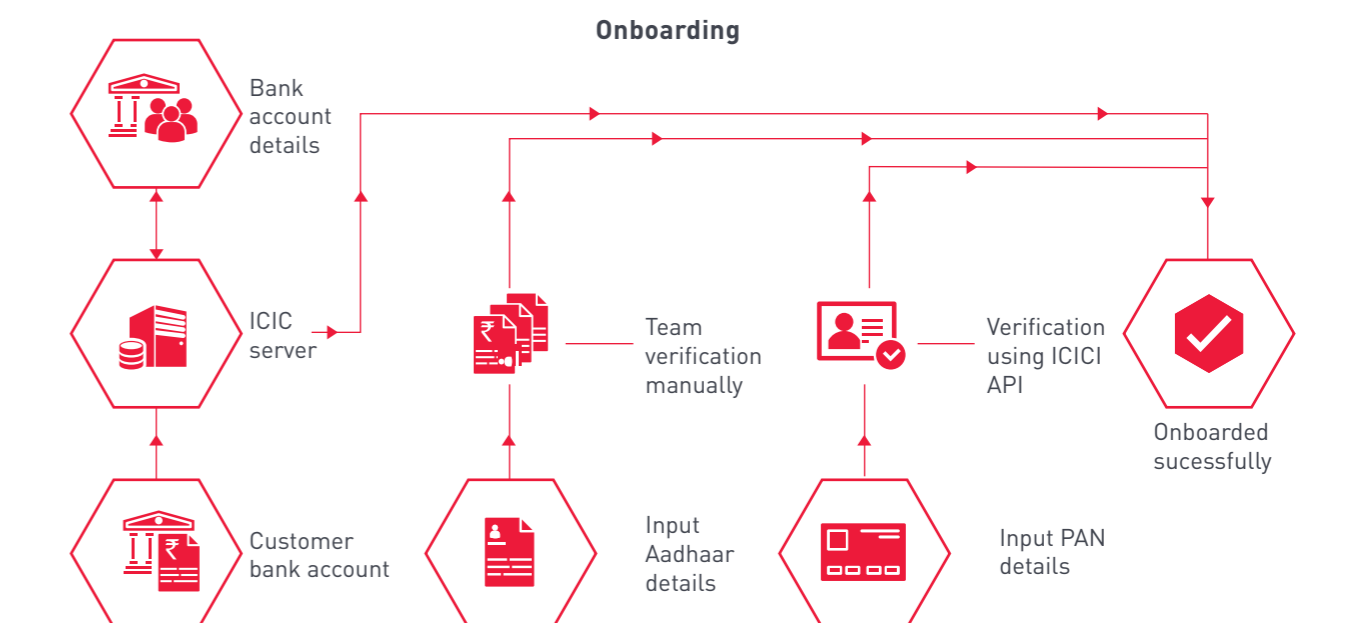
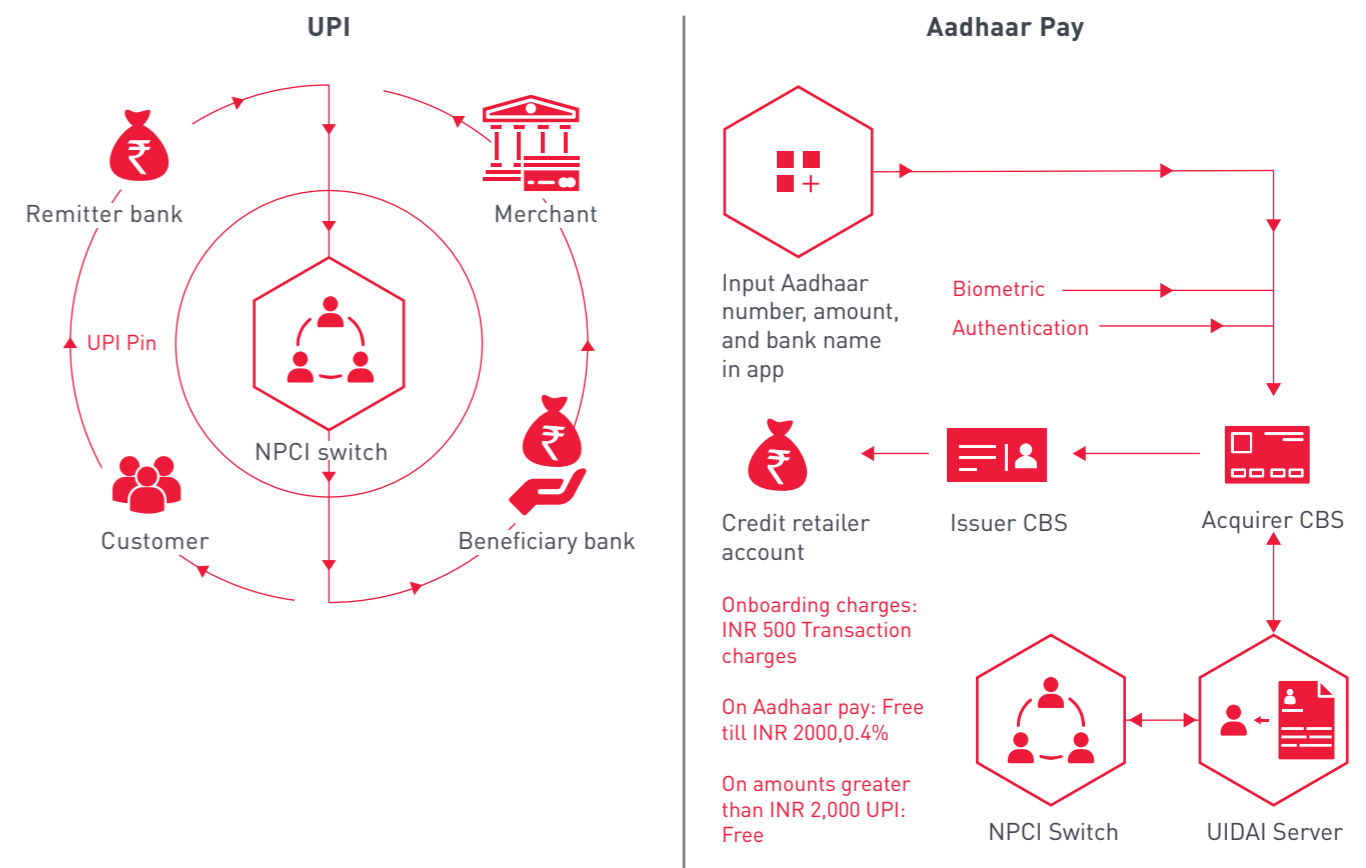
The startup has also explored partnerships in new use case such as gas agency payment collections, MFI cash collection for banking correspondents and insurance agents, etc. Also it is partnering with service providers such as JC Pay, A2Z Suvidha and Mobisafar to extend its AEPS solution and other biometric-based and payments collection services to these service providers’ customers.

**Sustainable and scalable**  
Fingpay has received an initial round of startup capital from ICICI Venture Funds. It is rapidly scaling up across the nation through channel partnerships, creating a network of merchants who can later be leveraged as agents to deliver financial services.

Fingpay is also monetizing the technology through white labeling

the solution for corporate and government departments. It has recently partnered with Andhra Pradesh government to integrate its biometric payment solutions into multiple government-run portals.

Figure 6: Fingpay’s product structure



**Product testimonials**

**Santosh Sharma, a 31-year-old mobile phone shop owner**

“Until now I was using mobile wallets, but I prefer Fingpay as using direct account to account services is more feasible since several of my customers do not have smartphones. Mobile wallets have often given issues in transactions due to which most of my payments have been in cash. With Fingpay, I like the fact that only with the Aadhaar number and a thumb print, transactions can take place.” While he has only used the app twice, he hopes to nudge his young customers to use this service by telling them that Fingpay provides bank to bank transactions which can be easily checked via message alerts. He adds “There is a need to create awareness in the market as trust is a main factor, especially with the fraudulent transactions we keep hearing about in the market.”

**Shyam Shekhawat, owner of Nutriment Hub**

“The two most important things that attracted me to Fingpay were that it seems innovative and that it has an agent referral program. I nudge my customers who use cards to use Fingpay by telling them that this is a direct money transfer.” He does not see any challenges in adoption as he considers support by the government is crucial. He is impressed by the Fingpay transactions which require

only the Aadhaar number and mentioned that more marketing of the service, with stickers and pamphlets, will help to increase uptake.

**Pratyush Halen, founder, Fingpay**

“The incubator is designed to support startups which can reimagine and reinvent FinTech products for the masses in ways that optimize for specific needs and contexts through affordable channels.” As is the case with all new solutions, Fingpay’s platform had to evolve and adapt in accordance with learnings in the initial stages. Pratyush says, “The product had to be iterated a few times. It continues to evolve in response to various challenges on the field.”

**PayNearby**

PayNearby operates on a B2B2C model; it partners with neighborhood retail stores that can offer assisted digital financial services such as Aadhaar ATM, Aadhaar Deposit, SMS payment, khaata service, utility payment, prepaid cards, mutual funds and insurance, money transfer, hyperlocal services, and payment services like Bharat QR and UPI using the PayNearby app. Its solutions are designed to make financial transactions seamless, quick and easy as well as to empower its retailer partners. PayNearby aspires to empower 2,000,000 stores across Tier I, II cities and rural towns in India.

The stores will serve as a base to digitize cash, so that the mass market customer can benefit from fintech services which were hitherto available only to customers having digital money.

**Founders profile**

**Anand Bajaj, Founder and CEO**, a banking stalwart who has held top CXO positions at Yes Bank and ICICI Bank before starting PayNearby in 2016 after 16 years of experience in the industry; has four Indian banking patents to his name.

**Rajesh Jha, Director and Cofounder**, an MBA graduate with 18 years of experience, is a serial entrepreneur and financial services expert; has also previously cofounded a successful wealth and investment advisory business across India and Singapore.

**Incubator Project**

PayNearby operates on a B2B2C model, where it partners with neighborhood retail stores that can offer assisted digital financial services.

It has active retail agents and distributors across areas of Vidyadhar Nagar, Sitapura Industrial Area, Jhoutwara, Raja Park, Shastri Nagar and Vishwakarma Industrial Area in Jaipur. PayNearby has established a firm footing in Jaipur and is set to expand.

Table 6: PayNearby’s key metrics for six months

	Target KPI	Actuals
Number of merchants	400	1,188
Number of transactions	5,650	2,246
Avg. merchant income (INR)	590	6,518

**Startup Progress**

**Product**  
PayNearby has successfully created a network of merchants across Rajasthan offering its core services including DMT, AEPS, and mobile recharges. It has added a list of other value-added services such as bill payments, hotel bookings and

travel bookings on top of its core services to increase retail use cases for its network of merchants.

Also, it will now offer small ticket size insurance and mutual funds to its existing customer base. It aims to bridge the financial gap for the last-mile user and provide

new channels of revenue for local merchants by offering these financial services through its network.

As part of the incubator, PayNearby tested its first targeted social marketing campaign to generate organic leads. This was the first experiment as a heavily

on-ground team to generate leads and bring retailers into the network. The targeted campaign reached out to 1 lakh Facebook users in Rajasthan, which resulted in 1,100+ downloads.

**Partnerships**

PayNearby has explored multiple government-level partnerships including with Jaipur Municipal Corporation, Jaipur Development Authority, and DoITC. It is exploring a partnership with

Jaipur Dairy to support cash collections for the supplies and act as a banking correspondent for the dairy. Also it aims to offer a consumer to business (C2B) payments solution to dairy booth retailers for accepting payments from their customers.

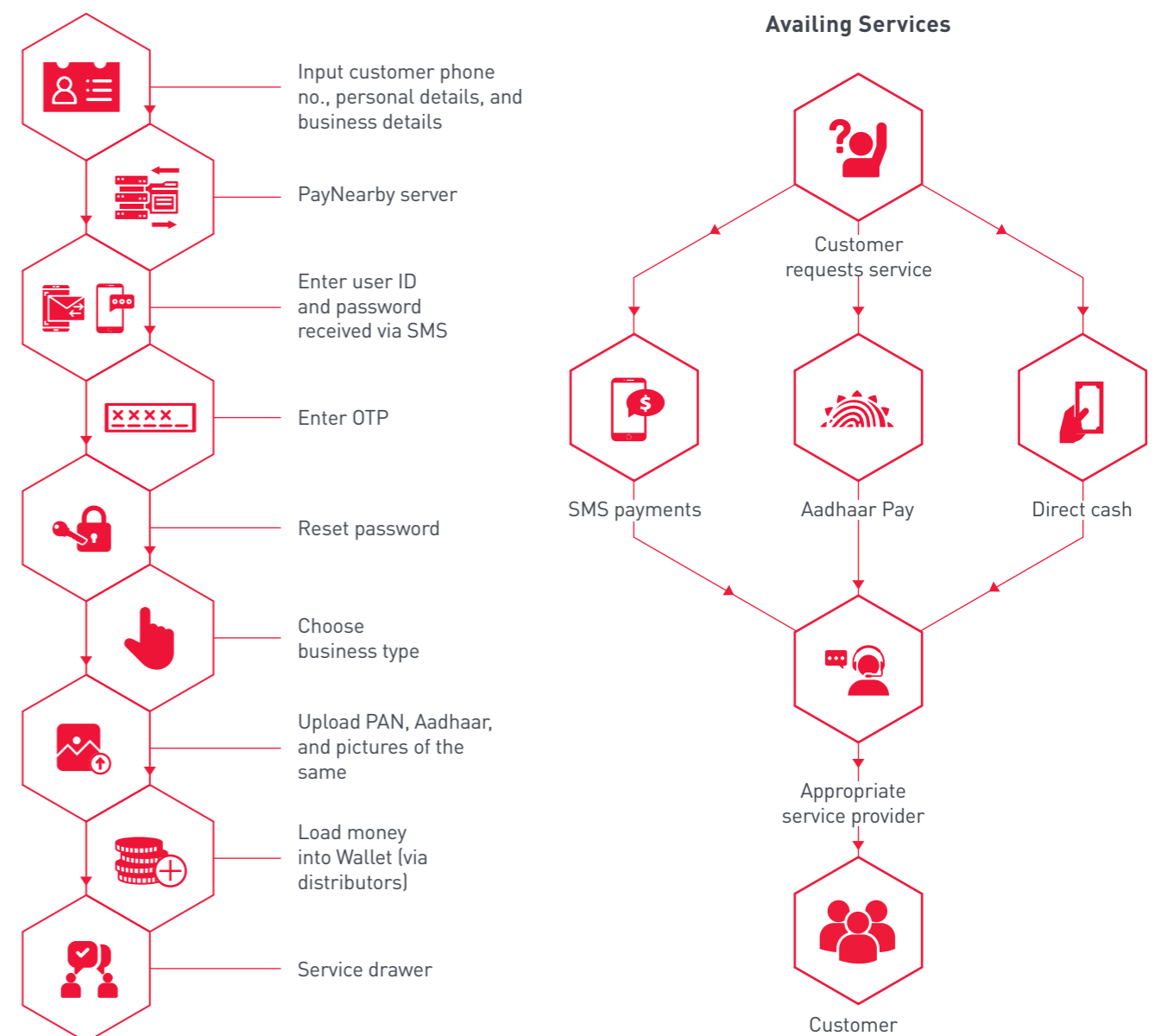
**Sustainable and scalable**

The bootstrapped venture is now present in 220+ cities across India and has a network of more than 100,000 merchants on its platform.

It is also a banking partner for YES Bank, extending its operations as banking correspondents for the bank.

It will extend in the hyperlocalized delivery market through the BUYNEARBY app which will enable a local nearby merchant to accept orders from his digital tech savvy customer using this app.

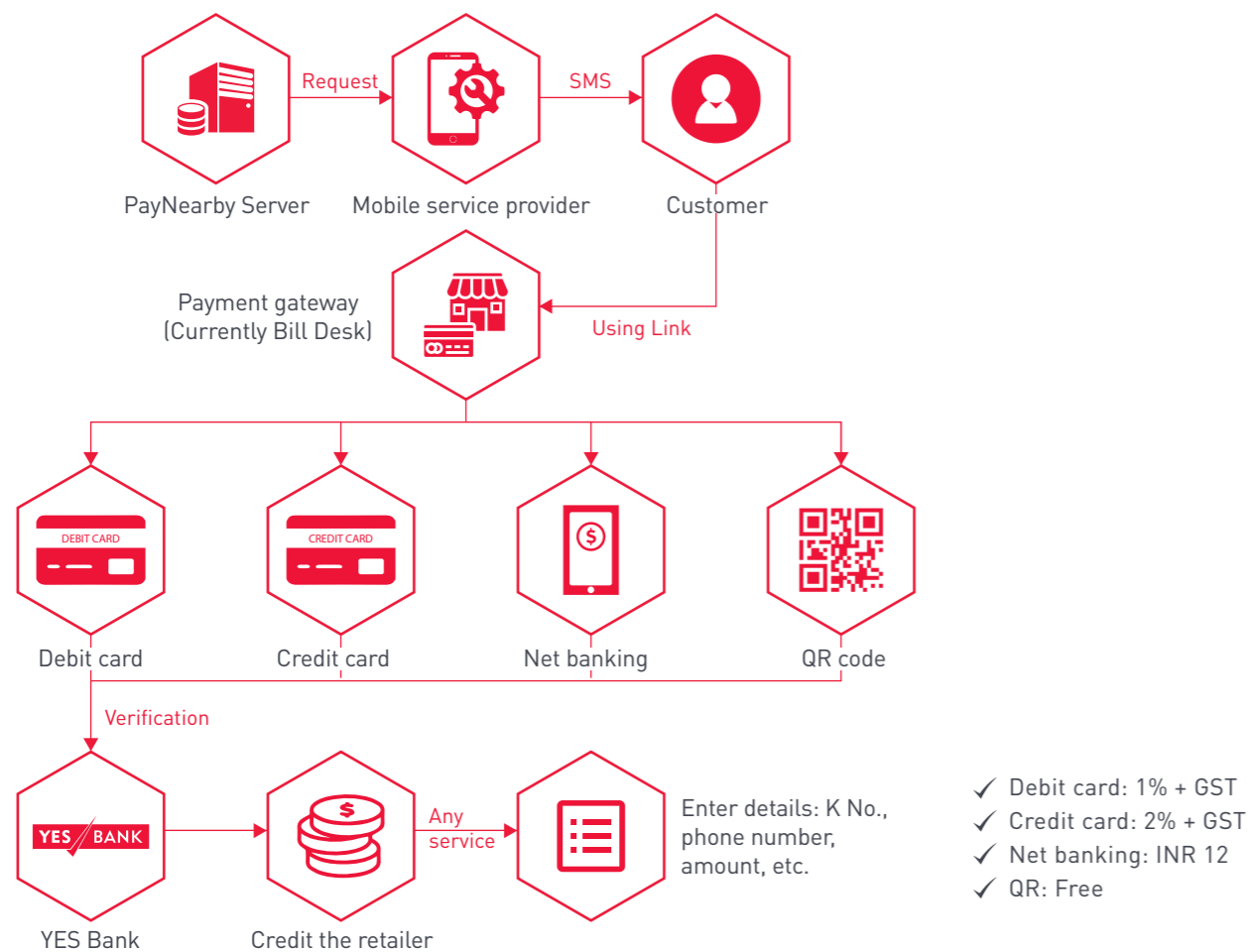
Figure 7: PayNearby’s product structure



INR 1,000 of onboarding charges per retailer.

Distributor given an ID for INR 650; in bulk 20 IDs for INR 13,000

### SMS Payments (Card missing)



#### \*Services offered and commissions

Mobile recharges average of 1.5 percent per transaction

DTH recharges average of 1.5 percent per transaction

Utility bill payments 0.25 percent per transaction

SMS Payments

Aadhaar withdrawal INR 5 per transaction

Balance enquiry INR 5 per transaction

Bus booking 7 percent per transaction

#### Product testimonials

**Lokendra Singh Choudhary, a distributor of PayNearby**

"PayNearby's platform is the smoothest amongst all such service providers. Their commissions and rates are very attractive and reasonable." He insists that if PayNearby adds more services such as rail ticket booking, it would significantly boost the platform's appeal amongst distributors and agents alike.

**Kamran Ahmed, owner, Aarzo Communications**

"PayNearby holds an edge over other service providers due to its ease of operations, its error-proof transaction process and grievance redressal mechanism."

**Saurabh Maheshwari, owner, Shree Ji Solutions**

"PayNearby's competitors are not foolproof in their transactions and hence I prefer PayNearby to them." He also appreciates the immediate response from the company's relationship manager to any queries.

**Amit, Digital Pradhan, Sri Balaji Telecommunications**

"Using PayNearby's portal, I can easily withdraw money, book bus tickets, pay utility bills and do mobile recharges for my customers. I have been using the application and so far the rate of transaction failures has been low. In case of any technical issue, I receive assistance and

requisite help from the company's relationship manager who typically resolves issues within one working day."

**Prashant, shop owner**

"Thanks to PayNearby, I can offer customers services that are similar to the services provided by any bank. There has never been a technical issue with the application. My sources of income have increased owing to PayNearby, and I can offer customers the convenience of transacting digitally with their Aadhaar number and a tap on my mobile phone."

**Anand Bajaj, Cofounder**

"We intend to digitize Jaipur as a role model for other cash sticky

states with support from DoITC (Rajasthan) and CATALYST. We have smoothly launched our digital financial services here and are now excited to expand our retailer/customer reach via the 'Har Dukaan, Digital Pradhan' campaign. We are looking forward to reach the last mile retailers and learn from this experience in the months to come!"

#### Kaleidofin

Kaleidofin is focused on bringing financial services to last mile users through a goal-based model using cutting edge AI and deep tech technology. Kaleidofin offers bundled financial services products to customers, based on

their personas created using their income profile, family structure, etc. A customer can subscribe to these packages with the help of local community leaders appointed by network partners of Kaleidofin.

#### Founders

**Sucharita Mukherjee, cofounder and CEO**, a serial entrepreneur, cofounded and managed IFMR Capital (now part of Davra Trust) for 10 years before starting Kaleidofin in 2017. She has also held senior positions in IFMR Holdings, IFMR Investment, Morgan Stanley (UK) and Deutsche Bank.

**Puneet Gupta, cofounder**, was a part of the team that set up the

IFMR Trust Group; has set up and managed an equity fund, a mezzanine fund and has been a part of a large private sector bank in the rural and micro banking sector.

#### Incubator Project

Kaleidofin partnered with an existing CATALYST partner, SEWA Bharat, to conduct a pilot in the low-income area of Shastri Nagar (Bhatta Basti) in Jaipur which is mainly inhabited by daily wage laborers and taxi drivers. As part of the pilot, these low-income households and home-based entrepreneurs were offered a package consisting of savings, insurances and overdraft products.

Table 7: Kaleidofin's key metrics for six months

	Target KPI	Actuals
Number of customer engaged	1,000	1,100
Number of users	500	155

#### Startup Progress Product

The 'skip contribution' facility was introduced in the app; in cases when the customer would not be able to contribute that particular month for some unavoidable reason the agent can click on the skip contribution.

Only the agent application was deployed in the field but, based on the insights from the pilot, Kaleidofin preponed the launch of the customer application on demand. In the customer application, the end customer can directly track his/her goal-based savings and remain updated. The customer application is

currently in Beta version and will soon be available on Google Play for android users to download.

#### Partnerships

Based on the learnings from the CATALYST incubator pilot, Kaleidofin is now exploring partnerships with NGOs and impact organizations. Recently, it partnered with the Center for Microfinance to conduct a similar pilot in the city of Ajmer.

#### Business Model

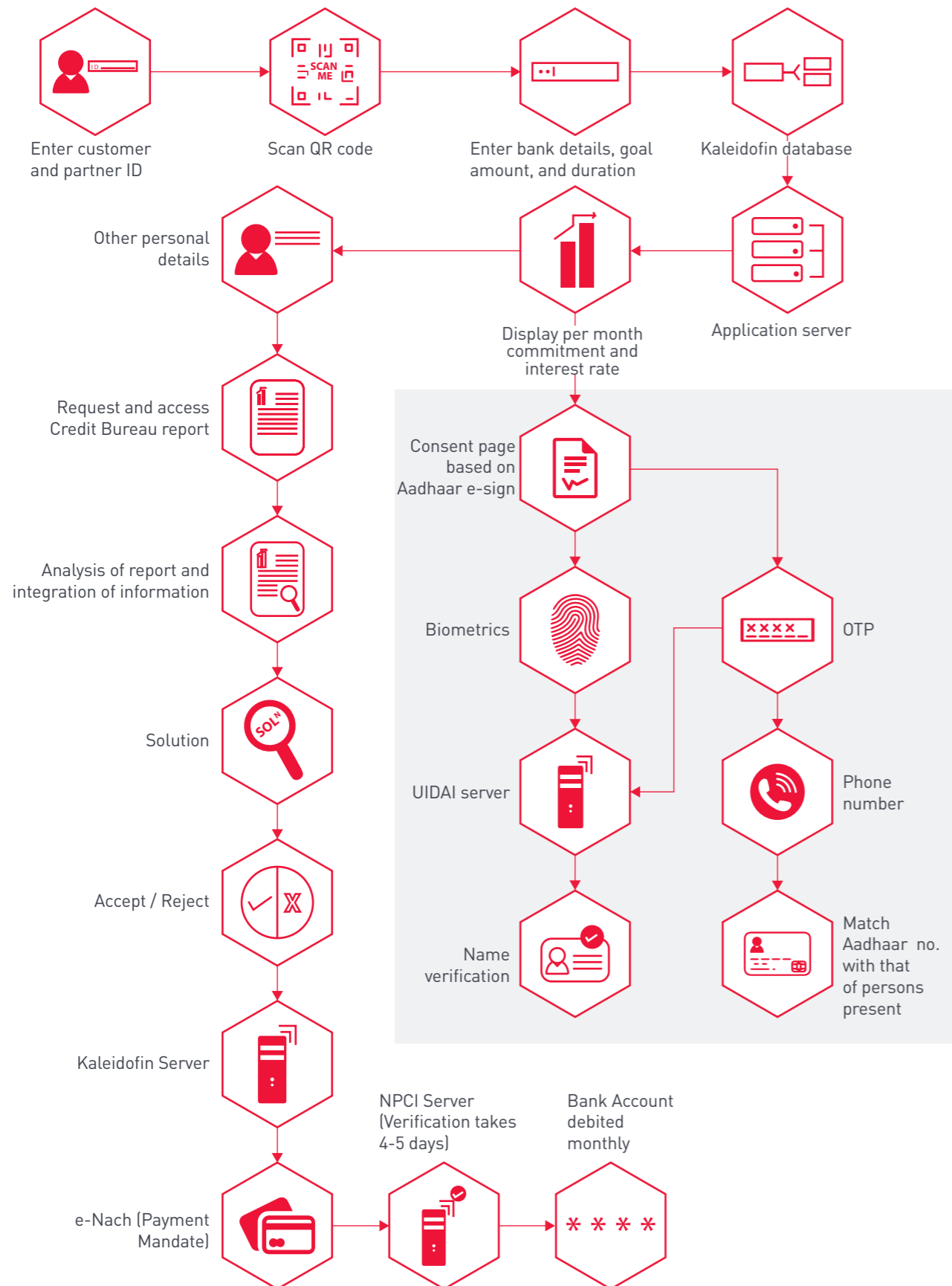
Kaleidofin works with channel partners such as corporates and MFIs to reach out to the end customer and utilize their network assisted onboarding

and customer support. Through the incubator pilot, it explored a new channel of NGOs and impact organizations to reach out to the last mile user. Building on the experience from the incubator, it is now approaching NGOs in other parts of the country to expand operations.

#### Sustainable and scalable

Kaleidofin now has operations in four major states including Uttar Pradesh, Gujarat, Bihar, and Rajasthan. It has recently raised funds from Omidyar network, Bharat Fund, etc., to support further innovation.

Figure 8: Kaleidofin's product structure



\*Amounts charged  
 0.6 percent of principle or INR 20 (whichever is higher) per month for advisory and insurance  
 Credit processing fee for lifetime charged in with the first installment of INR 177  
 \*Trainer incentive structure  
 INR 1,000 per month fixed.  
 INR 50 for every new enrolment (target of 50 enrolments per month)  
 For every recurring installment, INR 3.125 credited to the trainer

**Product testimonials**

**Mehrunisa, Sewa Sathi, community leader**  
 "All individuals are impacted by training differently. While Amna adopted the product for her daughter's education, Amzad adopted it for his house renovation. Some are attracted as they can save for their child's marriage and others prepare for unexpected events such as illness. I ensure that I go door-to-door and identify their needs."

**Vipul Sekhsaraia, founding team member, Kaleidofin**  
 "Right from thinking about their daughter's school fee payments to saving for long-term goals such as retirement, we want our customers to see us as a partner in their life journey — a partner that helps them realize the unlimited possibilities that life holds for them." He believes that the key to Kaleidofin's success

is to offer intuitive financial solutions that help customers meet their real life goals across all aspects of life right from business needs, personal goals, to other aspirations.

**Asifa, a young woman, Banda Basti**  
 "This is a great product for young people like me who look to save actively. It is especially suited for people who cannot save in large amounts but would like to plan for something in the future". She was a very interested candidate who said she would convince her parents to let her invest in the account.

**Shabnam, a community leader, Banda Basti**  
 "This Lakshya\* account can truly bring about a change in the way people handle their money in this area. It seems to be tailor-made for people who are not

particularly sure of their incomes and expenses. I will definitely invest in it and I think I can onboard at least 30 customers post the launch of the product."

**Amna, customer**  
 "Diversifying savings is helpful. I used to keep money in the house in some boxes and never knew where the money was since I had no account of it and always ended up spending it. It is for these reasons that I started saving with the Lakshya\* account to support my family with basic financial capital."




**Amzad, customer, 52**  
 "Lakshya\* combines the power of savings to provide a much needed cushion during crisis, further adding a goal protection insurance to safeguard against larger shocks."

\*Lakshya is a curated financial solution for customers who are interested in saving for a minimum of two years. It is specifically designed for households in the informal sector, whose income and expenses are quite volatile, making regular savings challenging.





Inclusive Cashless  
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