HOW TO SUCCEED IN YOUR DIGITAL JOURNEY:
A SERIES OF TOOLKITS FOR FINANCIAL SERVICE PROVIDERS

TOOLKIT #1: MOBILE AS A TOOL

PART 2: CASE STUDY

- SINAPI ABA SAVINGS & LOAN IN GHANA
- BUUSAA GONOFAA MICROFINANCE IN ETHIOPIA
- CPEC IN BENIN

By PHB ACADEMY and MICROLEAD



Credits: Courtesy of Sinapi Aba and Opportunity International

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ACRONYMS

ADC	Alternative Delivery Channels
ATM	Automatic Teller Machine
CBS	Core Banking System
DFS	Digital Financial Services
e-money	Electronic Money
FI	Financial Institution
FSP	Financial Service Provider
IVR	Interactive Voice Response
KYC	Know Your Customer
MB	Mobile Banking
MFI	Microfinance Institution
MIS	Management Information System
MM	Mobile Money
MNO	Mobile Network Operator
OTC	Over the Counter
POS	Point of Sale
PSP	Payment Service Provider
SMS	Short Message Service
USSD	Unstructured Supplementary Service Data

DEFINITIONS

CONCEPTS	DEFINITIONS
ROVING AGENTS	Refers to staff (salaried or contracted) used by DFS providers to deliver Mobile as a Tool services in the field using mobile devices. Those agents (collectors, susu,...) are roving as opposed to fixed agents we will describe in future toolkits.
MOBILE BANKERS	Is the terminology used by Sinapi Aba S&L to name their roving agents.
DIGITAL FINANCIAL SERVICES (DFS)	Refers to financial services provided to clients through alternative distribution channels (mobile, internet, agents) that have developed over the past 10-15 years.
MOBILE FINANCIAL SERVICES (MFS)	Refers to financial services provided to clients through mobile phones and mobile devices (eg: tablets). The term is gradually being replaced with DFS, which is broader also covering other distribution channels.
ALTERNATIVE DELIVERY CHANNELS	Comprises new distribution channels that have developed over the past 10-15 years: internet banking services, mobile banking services, agency banking service (as opposed to traditional distribution channels such as brick & mortars and ATMs).
FINANCIAL SERVICE PROVIDERS (FSPS)	Comprises banks, MNOs, and financial institutions providing financial services to clients.
NON BANK FINANCIAL INSTITUTIONS (NBFI)	Comprises MFIs, cooperatives and SACCOs, and MF Banks, as opposed to MNOs and traditional Banks, providing financial services to clients.
MOBILE AS A SERVICE	Refers to financial transactions performed using mobile technologies, such as the mobile phone or tablet, and impacting the bank account of the financial service provider.
AGENCY BANKING	Clients can transact on their mobile wallet and FI account either directly themselves or be assisted by a third party (e.g: agent). Note that deposits (cash in) and withdrawals (cash out) require agent as intermediary. Agents are contracted by a FSP (FI, PSP, or MNO). In toolkits 3 and 4, we will detail the type of transactions and the interactions between the mobile money and the bank account.
MOBILE BANKING	The client can transact directly him/herself on his/her FI account without requesting assistance from a third party (e.g: agent). Note that deposits (cash in) and withdrawals (cash out) still require an agent as intermediary. In toolkits 5 and 6, we will detail the type of transactions and the interactions between the mobile money and the bank account.

CONCEPTS	DEFINITIONS
DIGITAL FIELD APPLICATIONS (DFA)	Refers to digital tools/devices such as tablets, smartphones and mPOS, equiped with an application on the device, and used by DFS providers' staff to perform transactions in the field.
CORE BANKING SYSTEM (CBS)	A core banking system is the back-end data processing application/software for processing all transactions that have occurred during the day and posting updated data on account balances (source: Gartner[a]).
MANAGEMENT INFORMATION SYSTEM (MIS)	A MIS is the entire back office system, including portfolio management, and reporting. It is broader than CBS, which is for capturing and processing the data. As described by World Bank, a MIS is a system that helps management make, carry out and control decisions. It captures and stores data, processes data to produce meaningful and relevant reports, and supports operations by enforcing defined processes and providing an audit trail. (source: CGAP, 2012[b])
POINT OF SALES (POS)	A payment terminal, also known as a Point Of Sale terminal, credit card terminal, or Electronic Funds Transfer at Point of Sale terminal, is a device which interfaces with payment cards to make electronic funds transfers.
MPOS (MOBILE POINT OF SALE)	An mPOS (mobile point of sale) is a smartphone, tablet or dedicated wireless device that performs the functions of a cash register or electronic point of sale terminal. (source: TechTarget[c])
MOBILE AGENCIES/ BRANCHES	A mobile branch or satellite branch is a self-contained financial center - capable of fulfilling clients' main financial transactions needs, but not providing the full range of services as a traditional branch, and using mobile devices to perform transactions.
NETBOOKS	Netbooks are small, light, low-power notebook computers with less processing power than a full-sized laptop, but still suitable for word processing and internet access.
GPRS	General Packet Radio Service (GPRS) is a widely-deployed wireless data service, which enables people to enjoy advanced, feature-rich data services, such as e-mail, multimedia messages, social networking and location-based services (definition from GSMA [d]). The data system charges based on volume of data transferred, instead of billing per minute of connection time.
EDGE	Enhanced Data rates for GSM Evolution (EDGE) is a technology that can provide up to three times the data capacity of GPRS. EDGE enables the delivery of more demanding mobile services, such as multimedia messaging, full web browsing and e-mail on the move. (source: GSMA[e])
WAN	A wide area network (WAN) is a telecommunications network or computer network that extends over a large geographical distance. The Internet is an example of a WAN.

a http://www.gartner.com/it-glossary/core-banking-systems/

b https://www.cgap.org/sites/default/files/CGAP-Technical-Guide-Information-Systems-Jan-2012.pdf

c http://searchcio.techtarget.com/definition/mPOS-mobile-point-of-sale

d http://www.gsma.com/aboutus/gsm-technology/gprs

e http://www.gsma.com/aboutus/gsm-technology/edge

Credits: Courtesy of Sinapi Aba and Opportunity International

SINAPI ABA GHANA CASE STUDY





EXECUTIVE SUMMARY

With more than 138,000 clients, Sinapi Aba Savings and Loans (SASL) is one of Ghana's leading MFIs in terms of number of borrowers (MixMarket, 2016). Sinapi's initiatives in digital finance must be read in the context of its transformation from a credit-only NGO MFI to a deposit-taking savings and loans company in 2013. In this sense, the objectives of going digital for Sinapi were to promote savings collection amongst its clientele in the most accessible, efficient and transparent way.

To pursue these objectives, and with the support of UNCDF's MicroLead Programme, Sinapi opted for a combination of alternative delivery channels and technologies:

- Roving agents called "Mobile Bankers" by Sinapi Aba, equipped with POS devices or feature phones allow customers to open, deposit and withdraw from their savings accounts remotely. Sinapi's roving staff circulate in markets and communities to collect savings from customers at their doorsteps, mimicking a traditional and very popular informal savings mechanism in Ghana called "Susu," especially among the economically active poor.
- Netbooks (small, low cost notebook type laptops) with internet connectivity enable customers to perform basic transactions (e.g. balance enquiry, withdrawals, deposits, transfers etc.) in real time in Sinapi branches that have not yet been converted to savings collection (i.e. not yet equipped with the necessary infrastructure, such as a wide area network or not fulfilling regulatory requirements, etc.).
- SMS banking[1] was launched to enable clients to perform transactions from the comfort of their homes.Through Sinapi's SMS banking platform, clients can access account information and make transactions by using pre-determined short codes, regardless of their type of phone.

Sinapi invested significant time and resources in the development of its alternative delivery channels (ADCs), which had a variety of operational and financial implications, such as:

- Recruiting and managing more than 400 new staff members to serve as "mobile bankers";
- Investing in the purchase of required mobile hardware (POS devices, netbooks and multifunctional phones) and the development of the various front-end and back-end interfaces;
- Developing and adapting policies and procedures to reflect the new positions, products and delivery channels; and
- Training staff in the new policies and procedures and in using the newly introduced technologies.

These channels and technologies supported Sinapi in building its depositor client base. Within three years of its transformation, Sinapi was able to acquire more than 200,000 voluntary savings clients. Of these, 43% are Susu account clients served by "mobile bankers", representing Sinapi's most popular savings product/channel. Today, Susu account balances represent 24% of Sinapi's deposits. Among the key success drivers for Sinapi's alternative delivery channels were: an extensive research and development process, the presence of a core banking system (T24), the access to external technical assistance and training from MicroLead, and the progressive roll-out of the different channels and solutions.

Sinapi's key lessons learned can be summarized as follows:

- Maintain focus on your core customer base, i.e. the economically active poor in the case of Sinapi.
- Involve senior management throughout the product development and roll-out phases to ensure consistent ownership and buy-in.
- Set up a strong supervisory structure to provide on-going training, coaching and monitoring for roving staff.
- Emphasize the security of ADCs to build trust and loyalty towards clients, e.g. through receipts for transactions and branded staff.
- Set a cap on how much cash a mobile banker can carry at any point in time to mitigate both security and potential fraud issues.
- Be prepared for both success AND failure. SASL was surprised by the speed at which they were able to reach out to so many new deposit clients so quickly. Operations had to be ready to follow that fast pace.

SASL is, therefore, a unique example of an FSP concurrently adopting a combination of mobile solutions – i.e. "mobile bankers", mobile devices (POS) and SMS banking.

This case study first describes the digital journey of Sinapi Aba in Ghana and its key achievements before analyzing key success factors and lessons learnt. The paper also features a short case study of Buusaa Gonofaa in Ethiopia and CPEC in Benin, which are in the process of implementing this model.

1 Although mentioned here as part of the overall Sinapi Aba digital strategy, SMS banking initiated by the client does not pertain to the model "Mobile as a tool" SMS banking will be discussed in future toolkits which pertain to mobile banking.

Box 1: Context of Ghana

Digital financial services in Ghana are helping expand financial access. However, a lot of Ghanaians are left out from any form of financial services.

Financial Institutions' Market Situation

Over the past decade, there have been positive developments in the financial services industry helping to increase financial inclusion in Ghana. The number of clients of microfinance institutions (MFIs) has grown over fivefold (515.4%), from 1.3 million in 2001 to 8 million by the end of 2013 (GHAMFIN 2014). Financial institutions (FIs) have reached a wide range of market niches, from rural smallholders to traders and urban small enterprises, due to the variety of FSP (both formal and informal) engaged in microfinance including: rural and community banks (RCBs), savings and loans companies (S&Ls), credit unions (CUs), and financial non-governmental organizations (FNGOs).

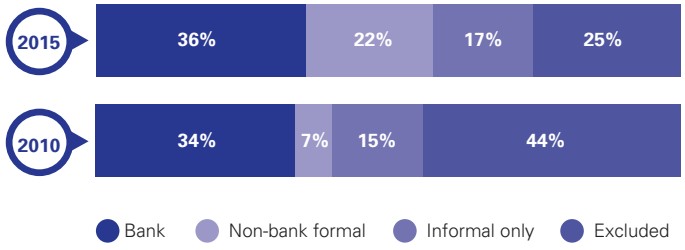
Number of Commercial Banks	28
Number of Commercial Banks Branches	900+
Microfinance Institutions	661
Savings & Loans companies	27
Rural & Community Banks	143
Rural & Community Banks branches	651
Credit Unions	555
Financial NGOs	38
Susu Collectors	2000+
Commercial bank prime lending rate	27%

Source: Bank of Ghana, 2015

Financial Inclusion countrywide (in %)

Access Strand in FII 2015 vs FinScope 2010

NON-BANK FORMAL: regulated microfinance institutions, insurance companies, retail credit providers, remittance service providers
INFORMAL: Financial services provided by individuals and/or associations which are not regulated by government such as savings clubs (susu clubs) and private moneylenders.
EXCLUDED: Individuals who are not using any formal or informal financial product.



Source: 2015 Financial Inclusion Insights Survey

Telecom Sector

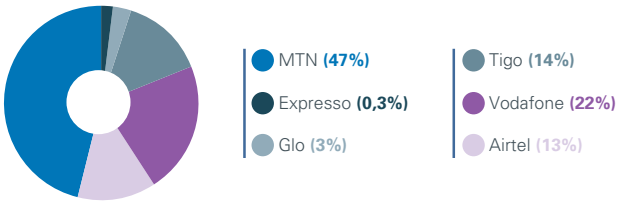
Out of a population of more than 25 million people, more than half of the country has access to internet. Currently, internet penetration in Ghana stands at 67.27% as per National Communication Authority´s April 2016 report. Today, Ghana has over 35 million mobile subscribers from six telecommunication companies. MTN is the market leader (46% market share) but Airtel, Vodafone and Tigo are actively competing.

Telecom operators	Subscribers(#)	Market Share
MTN	17,192,534	47%
Vodafone	7,976,348	22%
Tigo	5,213,398	14%
Airtel	4,942,197	13%
Glo	962,338	3%
Expresso	108,292	0,3%

Source: National Communication Authority, 2016
http://nca.org.gh/assets/Uploads/Telecom-subscription-trends-for-April-2016.pdf

Market share of the leading MNOs (% of subscribers)

Market Share



Source: National Communication Authority, 2016

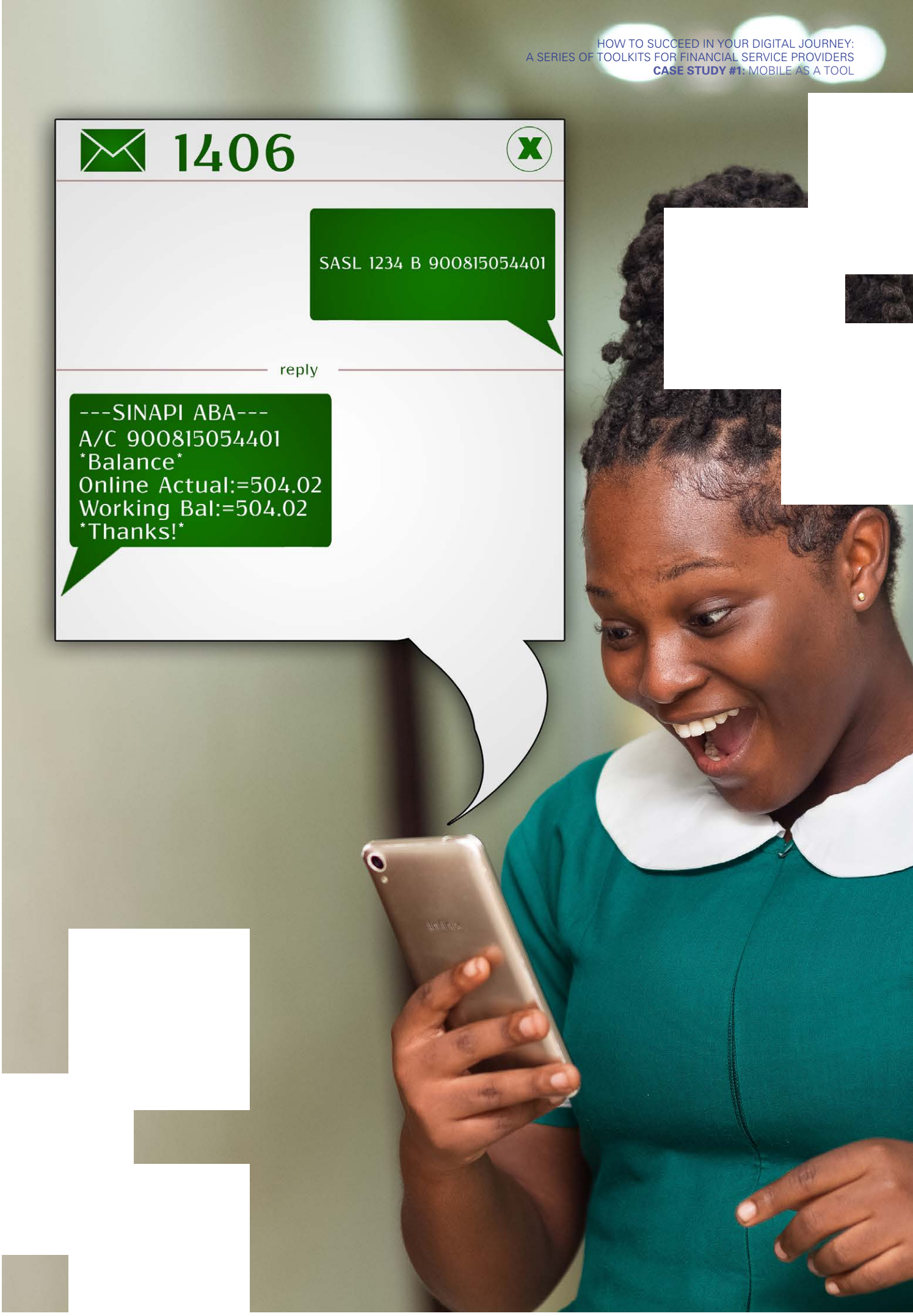
Digital Financial Services (DFS) initiatives

From 2010 to 2015, DFS helped spur a 41% increase in financial inclusion in Ghana. The main driver of this change is a substantial increase in access to nonbank formal financial services, which tripled in the last five years, from 7% in 2010 to 22% in 2015 (CGAP). More than half of the expansion is directly attributable to mobile money, which was virtually nonexistent in 2009 but is now actively used by about 25% of Ghanaians (FII 2015). 50% of the population is now registered for mobile money. MNOs have been largely leading the mobile money services – Airtel Money, MTN Mobile Money, Tigo Cash and Vodafone Cash. Yet, they had to form non-exclusive partnerships with banks in order to issue mobile money due to central bank regulations. Bank branches also act as agents of MNOs. MNOs are also in partnerships with some financial institutions in developing the DFS landscape (e.g. Fidelity Bank). A total of ~80,000 independent agents (of which are ~56,000 active) serve DFS clients.

Source: Bank of Ghana (BoG)

Regulation of Digital Financial Services

In 2015, Ghana's DFS sector changed with the introduction of e-Money issuers guidelines (replacing the 2008 branchless banking guidelines) and agent guidelines issued by the BoG. The BoG was widely praised by stakeholders in the financial services sector for coming out with such a framework for agency banking and mobile banking. The new guidelines came with agent guidelines as well, making it possible for agents to participate in e-Money business, with clear rules/ guidelines covering their activities in the DFS space in Ghana. The guidelines clearly defined agents commission structure, amount limit that they can hold and limits that individuals/customers can transact in a day. Thus making it more engaging and participatory for even non-banks and Telcos to be licensed as e-money issuers and operate in the DFS space to drive financial inclusion in Ghana. This is expected to bring about an increase in uptake and growth in user adoption of digital financial services in Ghana since FIs can now develop their own DFS services.



Credits: Courtesy of Sinapi Aba and Opportunity International

THE DFS IMPLEMENTATION APPROACH

To promote savings collection amongst its clientele, Sinapi opted for a combination of alternative delivery channels in the form of roving agents called "mobile bankers" by Sinapi, and technologies through POS devices, netbooks and SMS banking.

SINAPI ABA AT A GLANCE

With more than 130,000 clients, Sinapi is one of Ghana's leading MFIs in terms of number of borrowers. Sinapi's mission is "to serve as the 'Mustard Seed' (Sinapi Aba in Twi) through which opportunities for enterprise development and income generation are provided to the economically disadvantaged to transform their lives."

Sinapi operated as a Tier 3 financial NGO – Sinapi Aba Trust – from its foundation in 1994 up until 2011, when it embarked on a complex transformation process to become a regulated Tier 1 savings and loans company, so as to mobilize savings and expand its financial offering. Sinapi received its savings and loans license in March 2013, becoming Sinapi Aba Savings and Loans.

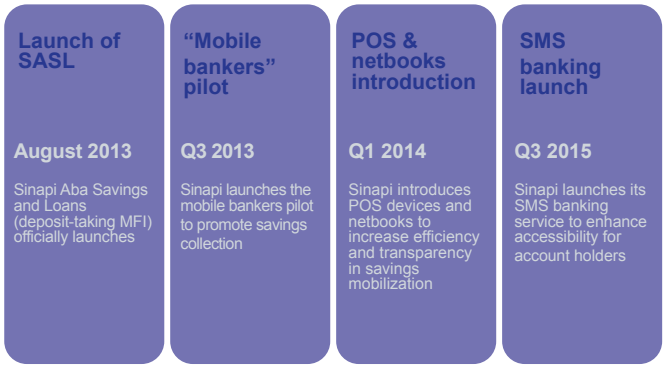
Table 1: Key information on SASL (June 2016)

Regulatory status	Tier 1 Non-banking financial institution regulated by BoG
Operating since	1994
Geographical coverage	Countrywide
Products	Loans, savings and money transfers
No. of staff	579
No. of "mobile bankers"	400
No. of branches	47
No. of borrowers	138,499
Loan portfolio (USD)	22 millions
No. of depositors	206,474
Deposits (USD)	20,5 millions

THE DIGITAL JOURNEY

The process

Figure 1: Digital Finance journey for Sinapi Aba S&L



Objectives of going digital

Sinapi's initiatives in digital finance must be read in light of its conversion from a credit-only MFI to a savings and loans company. Up until then, Sinapi's experience with savings mobilization had been limited to informal compulsory savings, i.e. savings collected as a form of collateral for loans. With the granting of the S&L license by Bank of Ghana in 2013, Sinapi's new challenge was to begin mobilizing voluntary savings from existing and new clients alike.

In this sense, the objectives of going digital for Sinapi were essentially to promote savings collection amongst its clientele in the most accessible, efficient and transparent manner. For clients, the benefits of going digital were to be able to open and access savings accounts at their doorsteps, i.e. without having to leave their workplaces, especially for low-income informal entrepreneurs, who remain the core target market of Sinapi. To pursue these objectives, Sinapi opted for a combination of alternative delivery channel, in the form of "mobile bankers" and technology, through POS devices, netbooks and SMS banking.

Reasons for choosing this DFS model

Sinapi's DFS approach is an interesting example of business model 1 ("Mobile as a Tool"), where three different mobile solutions were used to respond to different needs:

1. "Mobile bankers" were developed to rapidly begin mobilizing savings from Sinapi's clients by mimicking a traditional and popular informal savings mechanism in Ghana called "Susu". Susu collectors circulate in markets and communities to collect savings from customers at their doorsteps.
2. Netbooks were introduced in an effort to serve customers even in those network or "satellite" branches that had not yet been converted to savings collection and equipped with the necessary infrastructure. Netbooks allow customers to perform at least the basic transactions from satellite branches.
3. SMS banking[2] was launched to enable clients to perform transactions as and when they wish, particularly outside of bank working hours (e.g. weekends, holidays).

THE DIGITAL MODEL AND STRATEGY

Products and services



"Mobile bankers"

Sinapi Aba decided to call its roving agents "Mobile Bankers" with the view that they would perform financial transactions in the field.[3] Sinapi's "mobile bankers" enable customers to open a Sinapi account, and deposit and withdraw cash from their accounts remotely. Withdrawals usually take 24 hours, as the request needs to be validated at the branch before the "mobile banker" can take the cash back to the client in the field. Initially, the system was purely manual, with "mobile bankers" using passbooks and hand-written receipts. Through MicroLead, Sinapi tested and rolled-out POS devices, which allowed "mobile bankers" to record transactions in real time in the field and print receipts, thus increasing efficiency and transparency towards clients. POS devices, however, were found to be expensive, so Sinapi is now piloting multifunctional phones to support roving staff not yet using POS devices. Today, out of more than 400 "mobile bankers" staff, approximately 130 use POS devices and 90 use multifunctional phones (in pilot phase), with the remaining still using paper.



Netbooks

Netbooks with internet connectivity allow Sinapi customers to perform basic transactions (balance enquiry, deposit, withdrawal, money transfer) in "satellite" branches, that are not yet equipped with the needed infrastructure, such as a Wide Area Network, for real-time processing of transactions linked with Sinapi's core banking software (CBS). Currently, out of 47 branches, 25 are satellite branches using netbooks. The remaining are fully-fledged branches with real-time connection to the CBS.



SMS banking

Through its SMS banking platform, Sinapi can push SMS alerts to clients confirming account transactions. Account holders can also perform a range of pull transactions by texting pre-determined syntaxes regardless of their type of phone (traditional or smart phone). Transactions include mini-statements and account balance information, as well as account-to-account transfers[4]. The SMS banking platform also includes a functionality for deposits and withdrawals, which is currently disabled as it would require a network of agents providing cash-in/cash-out services. Sinapi is considering adding agency banking to its DFS offer in the future.

2 Although mentioned here as part of the overall Sinapi Aba digital strategy, SMS banking initiated by the client does not pertain to the model "Mobile as a tool" SMS banking will be discussed in future toolkits which pertain to mobile banking.

3 Although called "mobile bankers", these roving agents do not pertain to mobile banking nor agency banking model since they are Sinapi's staff and not that of MNO or provider and perform transactions on behalf of clients. No e-money nor e-wallet is involved in this model. We decided to keep the word "mobile bankers" throughout this case study since Sinapi uses that word but it should be clear to the reader that those "mobile bankers" are indeed roving agents and staff of Sinapi.

4 These operations fall under mobile banking as they are initiated by the clients.

The table below provides a summary of the products and services offered through the different technologies.

Table 2: Product and services available per technology

Products and services		Technology			
		POS	Mobile	Netbooks	SMS
Savings	Account opening	X	X	X	
	Deposits	X	X	X	
	Withdrawals	X	X	X	
Transfers to another Sinapi account			X	X	X
Account management	Account statement	X	X	X	X
	Balance	X	X	X	X
	Transaction receipt (printed)	X			
	Transaction confirmation				X

Distribution channels

As explained, Sinapi introduced two new alternative delivery channels (ADCs): "mobile bankers" and SMS banking. "Mobile bankers" are contracted staff who extend the traditional "Susu" savings collector model to clients. They circulate daily in busy markets, in rural areas on market days, near larger manufacturing plants, and at other locations where Sinapi's target clients, the economically active poor, are based.

Through SMS banking, Sinapi gives its clients the possibility to access their bank account information via their mobile phones, whether they use simple or smart-phone technology.

Partnerships

With funding provided by MicroLead, SASL purchased POS devices and netbooks from Jethro Ltd, the software company working on the deployment of its core banking system. Sinapi also relied on Jethro for the development of its SMS banking platform, after having approached other companies, particularly MNOs, without managing to negotiate a satisfactory agreement.

IMPLEMENTATION EFFORTS

Time needed for implementation

The development of alternative delivery channels and mobile solutions was a long and time-consuming process that began in 2013 and is still on-going, due to the constant improvements pursued by Sinapi's management. The following table summarizes some of the key activities carried out and their corresponding timelines.

Table 3: Key activities and timing

Activity	Timing
Selection of mobile device provider	2 weeks
Development of interface between POS/ netbooks and CBS	2 months
Recruitment of "mobile bankers"	Monthly
Training of "mobile bankers"	2 weeks
Adaptation of policies and procedures	6 months
Development and integration of SMS banking module	2 months

Financial implications (CAPEX and OPEX)

The development of Sinapi's mobile-related solutions came at a time when the institution was already burdened by huge capital and operational demands as part of its transformation to a deposit-taking MFI. These included, the deployment of a CBS (Temenos T24) and the set-up of fully-fledged banking branches compliant with minimum standards (security and building requirements, etc.). This had an impact on Sinapi's digital finance initiatives.

As an example, the choice of netbooks came as a convenient solution to serve customers even in those access points – the so-called "satellite" or network branches – which Sinapi could not afford to convert to fully-fledged banking branches in the short term given the significant costs of such conversion. In this instance, mobile technology helped ease the financial challenges experienced by Sinapi. Alternately, the purchase of POS devices, each one of which can cost up to USD 1,500, proved to be too expensive. Sinapi has been looking at less expensive alternatives, such as multifunctional/ feature phones, to enable its "mobile bankers" to mobilize deposits without providing each of them with a POS device.

Among the key capital and operational expenses that Sinapi incurred in developing its mobile-related solutions were the following:

- The recruitment and training of additional staff, namely some 400+ "mobile bankers" staff, and the purchase of the various mobile hardware, such as POS devices, netbooks and multifunctional phones,
- A series of IT-related costs, e.g. for the development of the different front-end applications (SMS module and mobile agent application), and back-end interfaces of the various solutions with Sinapi's CBS, and
- Recurrent costs for data connectivity (internet) for POS devices, netbooks and phones.

Without taking into consideration the recurrent operational costs, which vary year-to-year depending on the channel, Sinapi invested more than USD 250,000 in capital expenses for the set-up of its alternative delivery channels. These CAPEX were covered with the support of MicroLead.

Table 4: Financial costs (CAPEX and OPEX)

Key CAPEX for ADC development (one-off)	Cost (USD)
Mobile hardware (POS, netbooks, phones)	120,000
Mobile Banking Gateway and Processing Interface	45,000
Development of mobile agent application	80,000
Development of SMS banking module	15,000
TOTAL	260,000

Key OPEX for "mobile bankers" (recurrent) – for 2015	Cost (USD)
Salaries for "mobile bankers"	420,000
Transport allowance for "mobile bankers"	136,000
Data connectivity for POS devices	26,400
TOTAL	582,400

Operations overview

Similarly, the operational implications of setting-up digital finance solutions were closely linked to Sinapi's conversion to an S&L company. Most of the operational changes involved were part of the wider changes associated with the transformation, such as developing seven new savings products, re-branding and reinforcing its marketing, updating policies and procedures, and hiring, training and re-orienting staff members.

The following were some of the main operational implications associated with the introduction of ADCs:

- Hiring and managing more than 400 new staff members to serve as "mobile bankers". This also involved: a) setting up an ad-hoc supervisory system in which "mobile bankers" are supervised by monitoring staff, who are in turn supervised by deposit officers, b) developing an adapted incentive system to entice "mobile bankers" based on a combination of performance indicators, such as new customer accounts, total deposits, and average account balance.
- Developing and adapting policies and procedures to reflect the new positions (e.g. "mobile bankers"), new products (e.g. Susu savings) and alternative delivery channels (e.g. satellite branches with netbooks).
- Training staff to use the newly-introduced technologies and orienting customers in their usage, e.g. POS devices and feature phones for roving staff, netbooks for satellite branch staff, etc.

Management and Information System

In terms of MIS, each new mobile device introduced required Sinapi to call upon its IT consultants to develop the interface with the core banking system. More specifically:

- POS devices and netbooks allow for real-time connection to Sinapi's CBS as long as there is mobile phone connectivity. If connectivity fails, Sinapi has a back-up mobile connection through a separate provider. In addition, transactions can be stored and posted later when the device manages to connect.
- The SMS banking platform is also fully integrated to Sinapi's CBS via a dedicated server. It is used both by clients to access their accounts directly from their mobile phones, as well as by a sample of "mobile bankers" equipped with multifunctional phones, who are pilot-testing the platform and phones as an alternative to POS devices.



Credits: Courtesy of Sinapi Aba and Opportunity International

ACHIEVEMENTS

Alternative delivery channels strongly contributed to building SASL's depositor base – 43% of whom are served by "mobile bankers" today – as well as enabling it to increase its loan portfolio by 40%.

ADOPTION AND USE OF THE DFS CHANNELS

With the introduction of alternative digital channels, SASL achieved the following results over the period 2013-2016:

- Sinapi Aba increased its number of savings accounts by over 200,000 and its client base by over 120,000 in three years, out of which over 80% were due to POS. Of these, 43% are Susu account clients served by "mobile bankers", which represents Sinapi's most popular savings product/channel. Today, Susu accounts form the majority of Sinapi's deposit portfolio (24% of total), equal to a total of USD ~5 million (out of USD 20 million).
- In satellite or network branches, netbooks made it possible for clients to perform at least the most basic transactions (e.g. balance enquiry, withdrawals, deposits, transfers etc.). Without online connection to the CBS made possible by the netbooks, Sinapi would otherwise have had to turn these clients away.
- The adoption of POS devices recording transactions live in the field allowed tellers at branches to save significant time previously spent on recapturing data from passbook paper records. This brought about notable improvements, including efficiency in operations and transparency in client transactions.



Credits: Courtesy of
Buusaa Gonofaa Ethiopia

The graph below illustrates the transactional performances in Q1 2016 of the main digital solutions adopted by SASL: "mobile bankers" with and without POS devices, "mobile bankers" with multifunctional phones and Sinapi clients using the SMS banking platform.

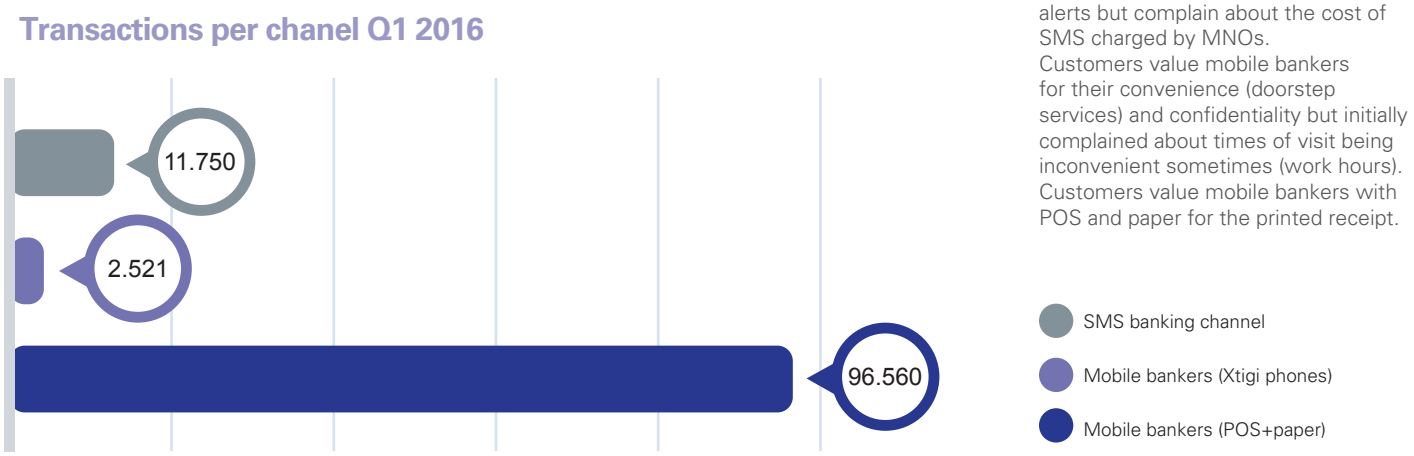
As can be seen, the large majority of mobile transactions in Q1 2016 came from "mobile bankers" with or without POS devices (1,000 transactions/day). As a reminder, some 30% of "mobile bankers" are equipped with POS devices currently[5]. On the other hand, transactions from "mobile bankers" with multifunctional phones remain marginal for the moment, but it should not be forgotten that these are still in a pilot phase, with no more than 90 phones currently deployed.

As for SMS banking, with close to 12,000 transactions, these are gradually increasing after a relatively slow start due to the high illiteracy rate among Sinapi's client base. Currently, about 250 customers have enrolled on Sinapi's SMS banking platform.

"Sinapi Aba Savings and Loans gives me the needed comfort to bank with them, especially with the introduction of the SMS alerts. I get messages whenever a withdrawal is made or a cash deposit is made into my account and with this, I am able to confirm my account balance at all times. They also have Mobile Bankers, who visit us here in the market every day to collect our daily sales/ cash and pay into our accounts. For me, this is peace of mind."

Trader, Central Market, Kumasi

Figure 2: Transactions per channel at Sinapi Aba



Customers value SMS banking for alerts but complain about the cost of SMS charged by MNOs.
Customers value mobile bankers for their convenience (doorstep services) and confidentiality but initially complained about times of visit being inconvenient sometimes (work hours).
Customers value mobile bankers with POS and paper for the printed receipt.

5 Sinapi does not currently track separately "mobile bankers" using paper and those using POS devices.

The table below gives an overview of some of the main features of these mobile solutions that Sinapi's clients like or dislike (source: Sinapi customer survey conducted in 2015).

Table 5: Strenghts and weaknesses of Sinapi Aba's mobile solutions for customers

	Easy and convenient banking services.		Ineffective communication regarding changes to product and services.
	Ease of account opening procedures.		"Mobile bankers" visiting clients at inconvenient times.
	Banking at clients' door steps through the "mobile bankers" approach.		Cost of SMS messaging charged by mobile service operators.
	SMS messaging /alert services.		No interest component with the Susu savings account.
	Appropriateness of products.		Lack of rewards (waived fees/commissions, gifts, discounts) for loyal clients.
	Respect for clients´ confidentiality and staff friendliness.		

BENEFITS FOR THE FSP

Source of funding through savings mobilization

SASL experienced important benefits thanks to the deployment of ADCs. Today, Susu Savings constitute 24% of the value of the savings portfolio, compared to 18% for compulsory savings and 19% for flexi savings accounts. This helped in savings mobilization, leading to a more reliable, lower-cost source of on-lending as compared to the fund available from commercial banks. Indeed, the outstanding portfolio grew from GHS 60.77 million in 2012 to GHS 84.56 million in 2015, which represents an almost 40% increase. Voluntary savings represented 50% of Sinapi's total liabilities by end-2015, an increase of over 27% compared to 2014.

Operational efficiency

The introduction of POS devices allowed Sinapi to increase efficiency in transactions performed by "mobile bankers", by allowing for a real-time reflection of transactions in Sinapi's core banking system. This minimized the number of transactions that must be captured by the teller after close of day's activities, allowing them to focus on other tasks, as well as reducing the rate of error, since transactions are captured instantly.

BENEFITS FOR CLIENTS

Enhanced customer service (Convenience)

Thanks to the combination of human and technology-based alternative delivery channels, transactions are more efficient. This has benefited clients in more than one way. Banking has become more convenient for clients. Clients can now open and manage savings accounts at their doorsteps. Clients can also transfer cash between different accounts using their mobile phones. Lastly, through "mobile bankers", customers can withdraw cash from their accounts without needing to physically visit Sinapi's premises.

Building trust with technology and alternative delivery channels

Thanks to the SMS banking platform, clients receive SMS alerts or calls on their mobile phones to confirm transactions or provide information on their accounts (balances, mini-statements, etc.). Thanks to the POS devices, clients can see their accounts credited in real time and have access to account information without walking into a Sinapi branch. Clients also appreciate the receipts printed by POS devices, even though they do not seem to prefer these to the hand-written ones delivered by "mobile bankers" without POS devices (some clients report that the printed receipts also fade very quickly).

Cost and Benefit Analysis

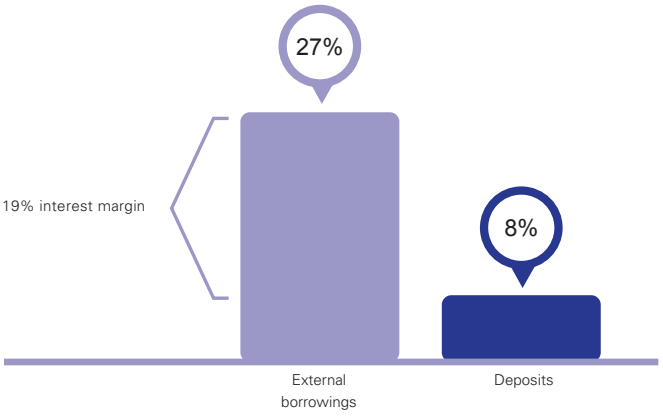
As seen, Sinapi had to make significant investments (CAPEX) to develop, pilot and launch its alternative delivery channels and mobile solutions, such as purchasing technological hardware and infrastructure (POS devices, Netbooks and WAN infrastructure). It also had to face considerable operating expenses (OPEX), for example with regards to the hiring and training of new staff. Total operating cost for deposit taking mobilization was equal to 34.5% of total deposits[6].

On the other hand, Sinapi's transformation to a deposit-taking institution, coupled with the introduction of ADCs (mainly "mobile bankers"), allowed it to boost its savings mobilization, minimize dormancy and reduce the cost of borrowing from external funders and investors. From zero in 2011, deposits increased from 26% to 52% of capital sources between 2012 and 2015. At the same time, the increase in savings also helped spur a 40% increase in its loan portfolio, which in turn brought about an increase in revenue. As of year-end 2015, the ratio of voluntary deposits to loan portfolio reached 65%.

Sinapi is still assessing whether the overall costs (operational and financial) of savings mobilization through alternative delivery channels are lower than the costs of external borrowing. Nevertheless, preliminary analysis from its financial accounts suggests that Sinapi is currently making a net interest margin of 19%, the difference between interest paid on external borrowings (wholesale funding from commercial and social investors) and interest paid on deposits, as shown by the bar chart below.

Cost of funds for 2015

Figure 3: Cost of funds for Sinapi Aba



6 Deposit-taking OPEX figures for alternative delivery channels alone are currently not available.



Understanding the customer journey

Credits: Courtesy of Sinapi Aba

KEY INFLUENCING FACTORS

(1) Careful preparation of its DFS journey, through in-depth market research and timely technical assistance and training, (2) a robust IT system and (3) a progressive roll-out were key success drivers of Sinapi's project.

ANALYSIS OF READINESS

Readiness at the time of DFS engagement

The spider chart briefly summarizes SASL's readiness at the time of its engagement in ADCs and DFS.[7] Sinapi scored very high in terms of internal capacity (commitment and qualifications of staff), technical capacity (presence of a CBS) and stability (it is a highly reputed and leading FSP). On the other hand, its weaker points were at the levels of: a) operational capacity, in terms of savings mobilization and liquidity management, as Sinapi had just converted from a credit-only MFI to a deposit-taking one, and b) financial capacity, as the costs of launching ADCs coupled with those of the transformation process represented a severe burden on the institution, despite its ability to raise funds from different donors, including MicroLead.[8]

Figure 4: Spider chart with internal strengths and weaknesses



7 Using the capacity assessment tool provided in the Business Model (Part 1) of this toolkit

8 REGMIFA funded the market research for the transformation process, MicroLead funded the full implementation once Sinapi received its license.

Prerequisites

The table below describes Sinapi's status at the time of its engagement in DFS vis-à-vis the various prerequisites for this DFS business model presented in the toolkit. As can be seen, Sinapi met most prerequisites, with some challenges remaining in terms of financial and operational capacity.

Table 6: Prerequisite met or not by Sinapi Aba

Dimensions	Prerequisite	Description of the prerequisite	SASL's status	In place
Internal capacity	Management	Management should display buy in and involvement in the project.	Sinapi's management was fully committed to developing ADCs as part of its transformation to a deposit taking institution.	✓
	Daily organization	FSP staff need to be involved in the project (but not necessarily dedicated).	Sinapi not only involved existing staff in ADC initiatives, but also recruited dedicated staff ("mobile bankers").	✓
	HR policy and training	The FSP should have regular trainings on new technologies for all staff, but particularly for those staff who will use the technology.	All Sinapi staff underwent substantial training as part of the transformation, including on ADC/DFS.	✓
Financial capacity	Financial resources	The FSP should ensure its has the needed financial resources, either internal or external.	Sinapi leveraged both internal and external financial resources (MicroLead, REGMIFA, etc.), but was nonetheless constrained by the concurrent transformation process.	
Operational capacity	Liquidity/cash management	The FSP should be able to manage the cash collected by roving agents/collectors.	Sinapi had limited experience in liquidity management associated with savings mobilization, given its recent conversion to SASL. However, it received specific training in the framework of its transformation.	
	Regulation	No need for a special license for this model. The FSP should discuss its plans with its regulator and get no objection.	Sinapi had just acquired a savings and loans company license, with more stringent regulatory requirements.	✓
Technical capacity	Connectivity	All places of operations (branches, in the field,…) should have access to a mobile phone network (at least edge, preferably 2/3/4G).	All Sinapi branches had mobile network coverage, albeit with some fluctuation and instability.	✓
	MIS	Data between MIS and mobile devices should be consolidated in batches at minimum (at evening/nights when the roving agents return to branch).	Mobile devices chosen by Sinapi (POS, phones, netbook) allowed for realtime data consolidation with Sinapi's MIS (through the internet).	✓
	Interface capacities	MIS should be able to connect to third parties' mobile devices (POS, phones, etc.).	Sinapi's MIS (T24) supported interfacing with a range of third party devices.	✓
Stability	Quality of portfolio	PAR 30 <15% PAR reduction can be one of the reasons for engaging in this model.	Sinapi's PAR 30 stood at 2.8% in 2015 (before the transformation and launch of ADCs).	✓
	Governance	Past governance issues should not affect the FSP's ability to engage in that model but current governance issues should prevent the FSP from engaging in that model.	Sinapi Aba Trust was one of the leading MFIs in Ghana before its conversion to a savings and loans company, with reputed and committed board members.	✓

Recipe for success

These are the activities Sinapi Aba performed during its DFS journey.

Table 7: Sinapi Aba's DFS Journey

Workstream	Step 1: Opportunity/ market assessment	Step 2: Market entry strategy	Step 3: Development and pilot preparation	Step 4: Pilot	Step 5: Implementation phase	Step 6: Performance improvement
Regulation & Partnerships	Regular contacts by Bank of Ghana (as part of transformation process)			Kept central bank informed of progress		
Market & Products	Focus group discussions to gauge clients' habits and needs	Defined target groups and products and services	Developed marketing material	Tested the product features	Fine tuned marketing materials based on learning from the pilot	Aligned customer segmentation, value proposition, and customer journey
Distribution	Listed all options and identified "mobile bankers"	Defined delivery channels: "mobile bankers", network branches	Recruited "mobile bankers"; Identified locations for netbooks	Launched with 10 POS devices; Launched netbooks in few branches	Launched with 19 POS, went to 30 and progressively 130	Decided to test feature phones instead of POS (as an alternative)
Technical /IT	Identified needs for mobile devices (POS, netbooks, etc.)	Defined device interfacing options with CBS	Integrated mobile device platforms with CBS	Identified improvement needs for interface and mobile platform	Strengthened interface between CBS and mobile devices	Developed mitigation for mobile connectivity issues
Internal organization	Heavily involved staff in process	Identified staff training needs	Trained staff (mobile collection, etc.)	Identified improvements for business process		
Financials	Anticipated needed OPEX and CAPEX	Searched for funding and identified Microlead	Defined incentives for "mobile bankers"	Monitored performance against predefined targets	Evaluated pilot results and recommended next steps	
Project management	Identified a project team			Planned commercial launch		Conducted client satisfaction survey

KEY DRIVERS FOR SUCCESS

Extensive research and development

Sinapi carried out in-depth market research, pre-testing and piloting for the alternative delivery channels it introduced, which enabled it to thoroughly prepare to go-live with the different solutions. As an example, the launch of "mobile bankers" involved:

- The facilitation of focus group discussions with rural and urban clients, including both individual and group borrowers, to gauge their habits and needs with regards to doorstep savings collection ("Susu" collection).
- The pilot-testing of the new delivery channel in branches with different characteristics, to identify challenges in communication, marketing and delivery (including for the IT component).
- The fine-tuning of marketing materials, policies and procedures, staff training and IT and accounting systems prior to the actual launch based on experience acquired during the pilot.
- The monitoring of performance following the roll-out against pre-defined targets (e.g. number of accounts, account balances, etc.) and regular collection of client feedback.

An attractive value proposition for the Susu account

Convenience (deposits collected at customers' locations), fair pricing (lower than informal services), and security (receipts, confirmation SMS, "mobile bankers" branded with Sinapi Aba's logo and colours) played a key role in the success of the product. Sinapi reached in three years its five-year target for number of customers.

Access to external technical assistance and training

In the framework of its transformation process, Sinapi benefited from a wealth of external technical assistance made available by MicroLead and REGMIFA, to name a few providers. This included extensive trainings conducted by globally-recognized organizations like Opportunity International, Frankfurt School of Finance, MicroSave and the Boulder Institute for Microfinance, which covered alternative delivery channels and mobile banking, among other issues (e.g. trainings on POS and Netbook usage, savings mobilization, mobile banking and mobile money, etc.).

Leveraging client relationship and trust

In developing, piloting and rolling-out alternative delivery channels, Sinapi stuck to the job it knew best – providing financial services to low income people. It hence decided to first start mobilizing deposits with "mobile bankers" from its existing loan clients, with whom Sinapi had built a trusted relationship over time as a financial NGO (Sinapi Aba Trust), prior to its transformation into a savings and loans company. Indeed, Sinapi's clients had advocated for this, encouraging the FSP to begin providing savings services to them, just as it had offered loans to them over the years.

Presence of a core banking system

The deployment of a core banking system (Temenos T24) as part of Sinapi's transformation to a deposit-taking institution strongly supported the adoption of other mobile-related technologies, such as POS devices and netbooks. The presence of a CBS allowed for smoother interfacing of Sinapi's MIS with such technologies and platforms than a standard microfinance software could have done, and moreover ensured more reliable real-time processing of data and transactions between devices and branches.

Progressive roll-out of devices

Sinapi adopted a progressive and adapted roll-out for the various technological solutions it selected. POS were piloted with a few devices in a limited number of branches, and deployment was then done in phases with 10 devices and later 19 devices and more recently 130 devices. The same approach was used for netbooks, which were first piloted in in August 2013, but the software was found to have challenges. Netbooks were hence put on hold to focus on POS, and only later were they re-piloted and finally rolled out in Q1 2015. More recently, multifunctional phones are being introduced progressively, as a potential way to reduce spending on expensive POS devices. Ninety phones are currently being tested with "mobile bankers". This progressive and adapted roll out (fix and learn) was one of the keys to success.



Credits: Courtesy of Sinapi Aba and Opportunity International

LESSONS LEARNED

Sinapi has drawn a number of important lessons from its ADC initiatives so far, which will guide it in its next steps, namely in developing agency banking.

CHALLENGES EXPERIENCED AND MITIGATION STRATEGIES

The table below provides an overview of some of the challenges encountered and corresponding remedial measures put in place by Sinapi in developing ADCs.

Table 8: Challenges encountered and mitigation strategies

Type of challenge	CHALLENGES ENCOUNTERED	MITIGATION STRATEGIES
OPERATIONAL	Security of cash collected by "mobile bankers" in the field from theft or fraud and the security of the "mobile bankers" themselves.	Sinapi Aba introduced a threshold on the amount a client can deposit with a mobile banker: up to GHS 1,500 a day (approx. USD 400). Sinapi also introduced a threshold for the amount of cash a mobile banker can hold before being required to deposit the money at the host branch: up to GHS 5,000 (approx. USD 1,250). For withdrawals, Sinapi Aba introduced a process where the client has to make a request to the "mobile banker" and will get his funds delivered by the "mobile banker" in one to two days after approval from head office.
	Client complaints on inconsistency of mobile banker visits and service (e.g. coming at inconvenient/unexpected times, showing up without POS device, etc.).	Sinapi sought to tighten demarcated locations for "mobile bankers'" visits and adapt visit schedules to improve accessibility.
TECHNICAL	Carry out real-time transactions in the field impacting Sinapi's CBS.	Sinapi Aba developed: a secure Wide Area Networks and application to synchronize between the CBS and the POS, a secure WAN and application between CBS and netbooks, and an interface between SMS banking and CBS. Sinapi decided to have its CBS provider develop the SMS banking module for them, which was easier in terms of interface and integration, time and expense.
	Failure in SMS delivery (e.g. clients not receiving alerts to confirm a deposit), coupled with client illiteracy (i.e. clients unable to interpret SMS).	Despite this challenge being outside of Sinapi's control (due to network operators), it encouraged clients to contact the customer service helpline to seek clarification on whether transactions were successfully recorded or not. With respect to illiterate clients, Sinapi is considering adopting an interactive voice recording (IVR) system, which will transmit messages in the local languages for illiterate clients.
	Fluctuation/lack of mobile network coverage in some areas to perform transactions through POS devices.	Sinapi purchased dual SIM multifunctional phones to be able to rely on multiple networks to carry out transactions.
FINANCIAL	High cost of digital technologies, particularly POS devices (up to USD 1,500/device), in the context of Sinapi's already strained financial resources due to the transformation process (e.g. rental of new office premises, deployment of a CBS, etc.).	Sinapi Aba received financial support from MicroLead in 2013. Sinapi also looked into alternative solutions, such as Xtigi multifunctional phones, which are cheaper yet durable and very common in Ghana, to enable "mobile bankers" to perform transactions on behalf of clients through the SMS banking platform.

LESSONS DRAWN

Below are some of the key lessons learned by Sinapi in developing ADCs and DFS:

Maintain focus on your core customer base, i.e. the economically active poor in the case of Sinapi. Indeed, the Susu Savings product brought increased numbers of economically active poor customers.

Involve senior management throughout the product development and roll-out phases. Sinapi's managers were involved in revising marketing materials, product descriptions, policies and procedures, staff training and incentives, and IT and accounting systems.

Set up a strong supervisory structure to provide on-going training, coaching and monitoring to roving staff. In Sinapi's structure, one full-time supervisor is responsible for five contracted "mobile bankers."

Emphasize security of ADC to build trust and loyalty, for example through receipts for transactions (be they via SMS or paper) and branded staff ("mobile bankers" are branded with the Sinapi logo and colours and carry an ID).

Set a cap on how much cash a roving agent can carry at any point in time. Should he/she meet this limit, he/she would have to return to the office to offload. FSPs can also plan for a cash-pick service to support when roving agents receive cash exceeding their limits. Cash thresholds enable FSPs to address both security of roving agents (who could be attacked) and mitigation of potential fraud from staff themselves.

Be prepared for success AND failure. SASL was surprised by the speed at which they were able to reach out to so many new deposit clients. They reached their five-year target in three years. Within a period of one year, SASL had exceeded 100,000 Susu customers, who were mainly reached by "mobile bankers" facilitated by the POS. Operations had to be ready to follow the fast pace.

LOOKING FORWARD: WHAT IS NEXT?

As a next step, in order to increase clients' access to services on a continued basis, especially when branches are closed, Sinapi is looking to develop a network of external agents paid on a commission basis, rather than relying solely on internal, salaried staff. Sinapi is attracted to agency banking as a way to lower the cost of delivering susu savings and potentially other services and to reach more clients, particularly in rural areas. At the same time, Sinapi wants to ensure it preserves the strong customer service and brand identification of the Sinapi "family". Thus, it is still considering whether to develop its own agent network or rely on an existing one, such as those managed by mobile network operators. So far, however, Sinapi has experienced challenges in negotiating an appropriate agreement with MNOs.

Box 2: The Case of Buusaa Gonofaa in Ethiopia

OVERVIEW OF BUUSAA GONOFAA'S DFS OBJECTIVES AND BUSINESS MODEL

Buusaa Gonofaa started its digital journey in 2012, in an effort to move from a credit-only MFI and begin mobilizing savings. Buusaa's main objectives in going digital were to reach out to more clients and depositors, especially in rural villages, leveraging technology to bring banking to clients´ doorsteps and more importantly, to explore the numerous opportunities that DFS brings to in the microfinance industry.

With the support of MicroLead, Buusaa began by deploying POS devices to two branches as part of the pilot phase. The systems worked smoothly, integrating with the MFI's software and working properly in the field, so Buusaa decided to expand the pilot to additional branches. Today, a total of 80 POS devices are used in eight out of 29 branches. Loan officers go to the field collecting savings and loan repayments on fixed dates and provide clients with printed receipts. Account opening and loan disbursements are currently not offered through the devices, whereas withdrawals are but represent a very small fraction of transactions. Back at the branch, data is uploaded directly into Buusaa's MIS, saving time and reducing the risks of human error.

Buusaa partnered with Vision Tech, an Indian company, to provide it with the POS devices. The devices still operate exclusively in offline mode, as Buusaa's MIS does not support online connection to such devices. This is also the reason why POS devices have not been extended to other branches for the time being.

OVERVIEW OF OUTCOMES AND FACTORS OF SUCCESS

With the introduction of DFS channels, Buusaa achieved the following outcomes over the period 2012-2016:

- Buusaa attracted over 56,000 savers in four years, increasing its voluntary deposit to loan ratio from 0% to 17% and its total deposit to loan ratio increased from 16% to 35% (the initial 16% were compulsory savings).
- Staff efficiency improved by 80%. Data entry is now done electronically (via batch processing), taking away manual processes. Instead of hours as was previously the case, it now takes minutes to complete data entry.
- Buusaa is credited with being the first financial service provider to launch ADCs and DFS channels in the Ethiopian market, thereby enhancing its competitive advantage, and also opening the way for other players to enter the market.
- The deployment of POS devices and the printing of instant receipts upon each transaction has boosted client trust and created more convenience and security. Clients no longer have to travel long distances to access banking services.

CHALLENGES AND LESSONS LEARNED

Buusaa also experienced a number of challenges in its DFS journey, such as:

- The lack of a core banking system allowing for real time processing of POS transactions from the field, which had an effect on operations as well as on staff efficiency levels. As mentioned, transactions performed in the field were registered only in the evening, when loan officers returned to their branch.
- The logistical and technical challenges in the early stages of the pilot, as it took nearly eight months for the importation of the POS devices and about six months for the full integration of the devices with Buusaa's existing MIS.



Credits: Courtesy of Buusaa Gonofaa Ethiopia

- The limited savings culture of both Buusaa's clients and staff (with many of the latter believing that clients were unable to save or preferred in-kind savings), coupled with the country's high inflation rate – often higher than interest paid on savings – further discouraged clients from saving.
- The strong competition for savings coming from commercial banks, together with a branding/marketing issue whereby clients tend to see MFIs as credit-only institutions, hence turning to banks for savings.
- The high rate of clients' withdrawals, which basically equals the rate of deposits, meaning that many savings accounts in Buusaa's portfolio are virtually dormant. As said by Buusaa's General Manager, "Technology alone does not ensure usage of accounts!"

NEXT STEPS

As part of its next steps, Buusaa plans to:

- Change its MIS platform to a core banking system in the near future, in order to take full advantage of the POS deployment and allow loan officers to perform transactions in real time from the field.
- Expand on its product offering by developing new deposit products (such as term deposits to increase average balance of savings accounts) and allowing for withdrawals and loan disbursements to be transacted on the POS devices.
- Harmonize and standardize deposit collection locations and schedules to further increase efficiency and convenience.

Box 3: The case study of CPEC in Benin

OVERVIEW OF CPEC AND DIGITAL MODEL

Coopérative pour la Promotion de l'Epargne et du Crédit (CPEC) in Benin started operations in 1999 and began implementing digital finance solutions at the end of 2014. CPEC implemented a network of contracted roving agents otherwise called roving collectors ("tontiniers") using mobile phones to collect clients' savings in the field. As of July 2016, CPEC had just finished its pilot phase with 30 roving collectors and targets a network of 100 roving collectors by end 2016 and 300 roving collectors by end 2017.

CPEC is an illustration of model 1: "Mobile as Tool," having equipped its roving collectors with mobile phones so they can perform deposit and loan reimbursement collections at the customer's doorstep. Loan disbursement is the next service CPEC will launch through its roving collectors. In the subsequent phase, CPEC would like to develop its own proprietary network of fixed agents.

OBJECTIVES OF CPEC USING MOBILE AS A TOOL

CPEC Benin decided to implement roving collectors and mobile devices for the following reasons:

- To collect more savings in order to raise additional funds for on lending (provision of credit)
- To replace paper forms with digital
- To enhance clients' satisfaction by providing doorstep services
- To reduce costs through efficient, automated collection and better control
- To be an innovative FSP.

CHANNEL, TOOLS & TECHNOLOGY

Roving collectors are contracted by CPEC to perform savings collection. Collectors are either recruited amongst dynamic but often unemployed youth and trained for the job or recruited among existing susu collectors to become CPEC contractors. CPEC has also converted some of its staff to roving collectors. Consortium Alafia, the network of MFIs in Benin, has played a key role in supporting CPEC in the recruitment and training of these collectors.

CPEC's roving collectors are equipped with Android phones that are loaded with an application using cloud technology (KEBO), which was developed for CPEC by a local service provider (EurAfrik). The mobile phones are connected in real time to the institution's MIS (Perfecto) through an interface developed and fully implemented in June 2016 with MicroLead's financial support.

CPEC DIGITAL JOURNEY

CPEC started its digital journey at the end of 2014 with the support of MicroLead and Consortium Alafia.

STEP 1 (2015)	STEP 2 (2015-2016):	STEP 3 (2016):
Finding the right partner for the mobile phones and developing the application	Recruiting and training roving collectors with the support of Consortium Alafia.	The pilot has successfully been completed, enabling CPEC to move to a nationwide roll out by the end of 2016.

KEY FIGURES AS OF END OF JULY 2016

- **Started in 1999 with 10,000 FCFA (<20 USD)**
- **Loan portfolio (2015): 8.6 billion FCFA (14.6 million USD)**
- **Savings portfolio: 1.8 billion FCFA (3.1 million USD)**
- **10 branches**

COST-BENEFIT ANALYSIS

CPEC has invested 30 million FCFA (~50,000 USD) for the application, interface development, mobile phone purchases and servers. Objectives for roving collectors were set according to break even point (covering the 30 million expenses incurred). Net margin/ benefit for CPEC is 1% after all expenses and incentives paid to roving collectors.

KEY SUCCESS FACTORS UP TO ROLL-OUT

The following factors were identified as contributors to the success of the pilot:

- Using a test and learn approach: CPEC tested several options with roving collectors, both in terms of technology and recruitment criteria , until it was successful.
- Using an internet-based solution, which didn't require a relationship with an MNO.
- Implementing a threshold for cash collected by the collector. Above 50,000 FCFA, the collector must deposit the money at one of the FSP's branches for both security and fraud management purposes.
- Ensuring roving collectors remain at a reasonable distance from a branch: maximum 25km (for liquidity/cash management).
- The agent/mobile collector is positioned as a financial advisor, providing financial advice to clients such as how to plan expenses and creating different savings accounts for different purposes (e.g. rent, utility payment, and savings for school).

CHALLENGES AND LESSONS LEARNT

- Connectivity issues are the biggest challenge faced by CPEC. To address it, CPEC decided to use mobile phones with multiple SIMs, enabling roving collectors to switch from one MNO to another to find the best data connectivity.
- Integrating data collected with mobile device to the MIS required developing an interface between the mobile devices and the MIS. CPEC had the opportunity to receive MicroLead's technical and financial support to achieve this.
- Educating customers, especially in rural areas, proved challenging. CPEC had to build trust and confidence in its roving collectors, so clients would be comfortable with their savings doorstep collection option. CPEC developed a story around importance of savings through use cases depicted with visuals, which was used to educate clients during sessions. It proved very effective. CPEC also used a mix of radio promotions to build awareness and create confidence in CPEC being a solid financial institution. It also invested in educating roving collectors .
- Managing a network of roving collectors. Collectors are paid on a performance basis only (there is no fixed salary) with KPIs to meet. At the time of the writing, CPEC had to terminate two collectors' contracts for non-performance. This performance-based approach is new to Benin's work culture.
- Underestimating the change needed in the company's culture. Shifting from managing employees to managing independent contractors was a big culture change. The new service offerings also impacted on other functions. For example, cashiers in branches received the cash collected in the field at the end of day, when they were already quite busy. CPEC management highly recommends performing an internal assessment before implementing such as project to clearly identify areas for improvement and potential challenges to mitigate ahead of launch.
- The next challenge CPEC is facing is to find financial resources to extend the project to reach its target of 300 roving collectors by 2017. CPEC managed to find financial support for pilot, but financial support for implementation is scarcer and needs a strong business model for the board to avail the required resources.

NEXT STEPS

CPEC would like to expand its mobile service offerings to loan disbursements.
The institution also plans to develop their own network of fixed agents in the medium term (3-5 years).

RESULTS ACHIEVED THROUGH TECHNOLOGY

(2015-mid 2016)

- **Increased number of clients through the roving collectors: 7,796**
- **Increased number of accounts through the roving collectors: 28,604**
- **Average # of accounts per client: four**
- **Average balance per account: 25 000 FCFA (~43 USD)**
- **Two new products launched**
- **30 roving collectors operating mid 2016 (targets: 100 roving collectors by the end of 2016 and 300 by the end of 2017)**

ABOUT MICROLEAD

MicroLead, a UNCDF global initiative which challenges financial service providers to develop, pilot and scale deposit services for low income, rural populations, particularly women, was initiated in 2008 with support from the Bill & Melinda Gates Foundation and expanded in 2011 with support from The MasterCard Foundation and LIFT Myanmar. It contributes to the UN's Sustainable Development Goals, particularly SDG 1 (end poverty), SDG 2 (end hunger, achieve food security and promote sustainable agriculture) and SDG 5 (achieve gender equality and economic empowerment of women), as well as the Addis-Abeba Financing for Development Agenda (domestic resource mobilization).

MicroLead works with a variety of FSPs and Technical Service Providers (TSPs) to reach into previously untapped rural markets with demand-driven, responsibly priced products offered via alternative delivery channels such as rural agents, mobile phones, roving agents, point of sales devices and informal group linkages. The products are offered in conjunction with financial education so that customers not only have access but actually use quality services.

With a specific emphasis on savings, women, rural markets, and technology, MicroLead is a performance-based programme that supports partnerships which build the capacity of financial institutions to pilot and roll out sustainable financial services, particularly savings. As UNCDF rolls out the next phase of MicroLead, it will continue to focus on facilitating innovative partnerships that encourage FSPs to reach into rural remote populations, build on existing digital financial infrastructure and emphasize customer-centric product design.

For more information, please visit www.uncdf.org/microlead. Follow UNCDF MicroLead on Twitter at @UNCDFMicroLead.

ABOUT PHB ACADEMY

PHB Academy provides training and coaching aimed at improving financial inclusion. We focus on increasing the take-up and usage of digital financial services (DFS). PHB Academy offers training and coaching face-to-face and online, as well as in blended format (a mix of face-to-face and e-learning). Workshops and programmes are custom-designed and tailored to our clients' specific needs. The design of our programmes is based on the latest insights in adult learning and executive coaching. We change behaviour by doing more than just transferring technical knowledge. We focus on the development of the practical skills and positive attitudes that managers and field staff need to design, manage and deliver DFS in a sustainable manner. Experiential learning methods and a focus on self-management are key to our success. Our offer is available to financial institutions, mobile network operators, remittances & payment providers and development agencies that pursue financial inclusion through innovative delivery channels.

PHB Academy is the Training & Development Practice of PHB Development, a specialist consulting firm with operations across the world. Since 2006, PHB Development has been committed to increasing financial inclusion in underserved markets. PHB has helped its clients develop viable financial services and delivery channels throughout more than 100 projects.

For more information, please visit www.phbdevelopment.com. Follow PHB at @PHBDevelopment on Twitter.

ABOUT UNCDF

UNCDF is the UN's capital investment agency for the world's 48 least developed countries. With its capital mandate and instruments, UNCDF offers "last mile" finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through two channels: financial inclusion that expands the opportunities for individuals, households, and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and by showing how localized investments — through fiscal decentralization, innovative municipal finance, and structured project finance — can drive public and private funding that underpins local economic expansion and sustainable development. By strengthening how finance works for poor people at the household, small enterprise, and local infrastructure levels, UNCDF contributes to SDG1 on eradicating poverty and SDG 17 on the means of implementation. By identifying those market segments where innovative financing models can have transformational impact in helping to reach the last mile and address exclusion and inequalities of access, UNCDF contributes to a number of different SDGs.

For more information, please visit www.uncdf.org and sign up for our Newsletter at http://uncdf.org/en/content/subscribe-our-newsletter. Follow UNCDF at @UNCDF on Twitter and Facebook.

ABOUT THE MASTERCARD FOUNDATION

The MasterCard Foundation works with visionary organizations to provide greater access to education, skills training and financial services for people living in poverty, primarily in Africa. As one of the largest private foundations its work is guided by its mission to advance learning and promote financial inclusion to create an inclusive and equitable world. Based in Toronto, Canada, its independence was established by MasterCard when the Foundation was created in 2006.

For more information and to sign up for the Foundation's newsletter, please visit www.mastercardfdn.org. Follow the Foundation at @MastercardFdn on Twitter.

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