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

TOOLKIT #1: USE MOBILE AS A TOOL
PART 1: BUSINESS MODEL DESCRIPTION

By PHB ACADEMY and MICROLEAD



Sinapi Aba Ghana, Credits: Courtesy of Opportunity International

The MasterCard Foundation
MICROLEAD
PHB Academy towards financial inclusion



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INTRODUCTION

Delivery channels have evolved drastically over the past 10 years from traditional delivery channels which were mainly physical locations, such as bank branches or ATMs, towards alternative delivery channels (ADCs), also often called digital channels (DCs). The latter encompasses internet banking, mobile banking, and agent banking.

In the past, traditional channels could theoretically provide the full range of financial services to clients, whereas ADCs or DCs could only provide limited services (cash in/out in the case of Mobile Network Operators (MNOs), deposit/withdrawals in the case of Financial Institutions), balance enquiry, payments, transfers. This vision is less and less accurate as ADCs/DCs evolve towards providing a full range of services, from client registration to savings collection through collectors or phones, and even credit scoring and loan requests, disbursements and repayments. Technology is facilitating the development of these new channels. Point of Sales (POS), mobile phones, tablets, netbooks, are now enabling transactions anywhere, anytime. The technology is the means for transactions whereas ADCs are the means of distribution. As pointed out in the IFC-The Mastercard Foundation's "Alternative Delivery Channels and Technology Handbook (2014)*", this distinction (technology vs channels) is fundamental.

Another fundamental distinction is the critical difference between financial institutions (FIs) and MNOs when it comes to digital finance transactions. FIs "own" the funds and hence prefer storing value (making money out of intermediation), while MNOs "transact" the funds and hence prefer moving value (making money out of commissions). For the purpose of these toolkits, we will refer to cash in/out transactions when discussing MNOs and deposit/withdrawal transactions when discussing FIs.

MicroLead's Toolkits initiative

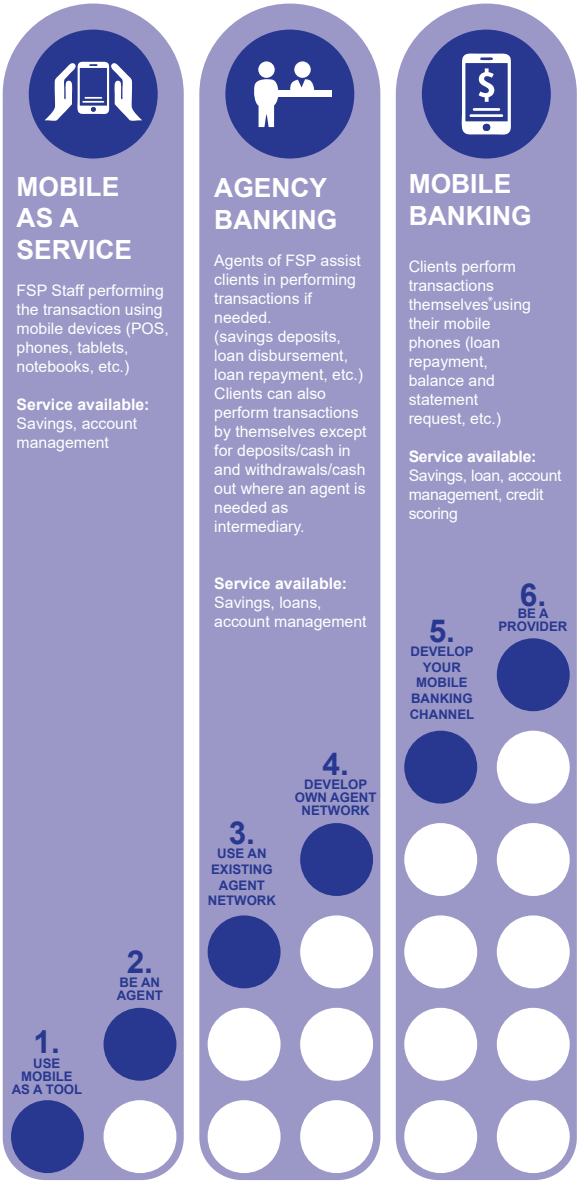
PHB Academy is supporting UNCDF's MicroLead in releasing a series of Toolkits for Financial Service Providers to succeed in their Digital Journey, with a focus on Financial Institutions in particular.

These toolkits capitalize on and complement existing research, publications and documentation and have been developed based on MicroLead and PHB's experience with over 100 digital financial service implementations.

The 6-step business framework

Six possible business models have been defined for FSPs eager to go digital (see Figure 1). The business models are conceived as different steps a FSP can take in its digital journey. FSPs are free to start anywhere in this framework, but should be conscious that the higher up in the journey they decide to start, the heavier the efforts to bear.

Figure 1: The 6-step business framework

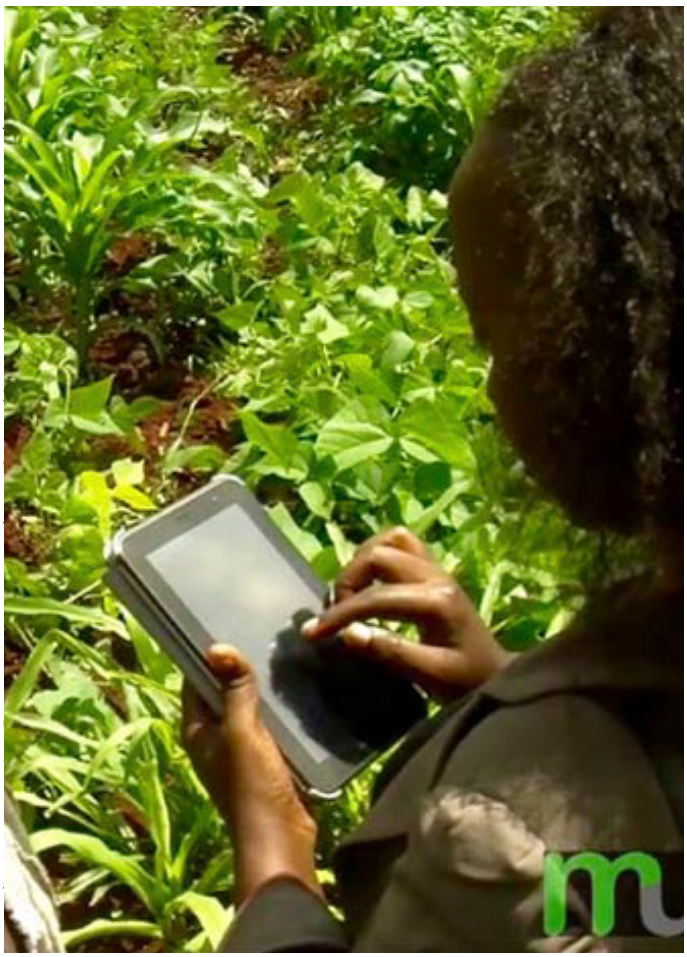


*http://www.ifc.org/wps/wcm/connect/5d99c500477262e89844fd299ede9589/ADC+Handbook_ISBN.pdf?MOD=AJPERES

* Except for cash in and cash out transactions performed at agents

The first two business models of this framework consist in using mobile as a service where basic transactions are performed by staff of the FSP using mobile devices. We will describe them in toolkit #1 "Use Mobile as a Tool" and #2 "Be an Agent." Models 3 and 4 describe agency banking where an agent (of a MNO, PSP or FI) assists clients with the transactions if needed. Clients can also perform transactions by themselves except for cash in/out where an agent is needed as intermediary. We will describe them in toolkit #3 "Use an existing agent network" and #4 "Develop Own Agent Network". Models 5 and 6 describe mobile banking where clients transact directly on their FI´s account, performing the operations themselves using their mobile phones. We will describe them in toolkit #5 "Develop your Mobile Banking Channel" and #6 "Be a Provider."

Tablet in Action - Courtesy of Musoni Systems[2]



2. Musoni is a 100% Digital MFI in Kenya and Musoni Systems is a software for microfinance organizations. See http://musonisystem.com/

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34 SUMMARY: THIS IS THE RIGHT MODEL FOR YOU IF...

ACKNOWLEDGEMENT

We would like to thank the management and staff of Sinapi Aba Savings & Loans in Ghana, Buusaa Gonofaa Microfinance in Ethiopia and technology provider Musoni Services for contributing to this business model and the case studies. We thank them for their time and for sharing their information, lessons learnt and recommendations, to enable other financial service providers to succeed in their digital financial services path.

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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
SMS	Short Message Service
USSD	Unstructured Supplementary Service Data

DEFINITIONS

CONCEPTS	DEFINITIONS
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 services (as opposed to traditional distribution channels such as brick & mortar 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 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. 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	We define it as financial transactions performed via mobile technologies by the client him/herself, directly on the client's Financial Institution account (eg: account balance check, loan reimbursement, etc). 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.
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.

CONCEPTS	DEFINITIONS
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]).
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.
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[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 GSMA: http://www.gsma.com/aboutus/gsm-technology/edge

OVERVIEW OF THIS TOOLKIT

This Toolkit is the first of a series of six toolkits aimed at supporting financial service providers (FSPs) to go digital.

It describes the first model a FSP can choose: Using Mobile as a Tool:

- Using mobile devices (POS, phones, tablets) as tools to facilitate daily operations;
- Providing new services through mobile devices (eg: savings collection); and
- Using mobile agencies (mobile branches, netbooks) instead of physical branches.[1]

This toolkit is composed of two documents:

This document "Part 1: Business model description" describes the business model and recipe for success. An international case study of Musoni Kenya illustrates how to successfully implement this model;

The document "Part 2: Case study" describes the case of three MicroLead partners: Sinapi Aba Savings & Loans in Ghana, Buusaa Gonofaa in Ethiopia and CPEC in Benin. Sinapi Aba S&L implemented roving agents collecting savings, with mobile phones or POS, netbooks in satellites branches and sms banking, while Buusaa Gonofaa MFI implemented POS devices for doorstep savings in local markets. CPEC in Benin implemented roving agents with mobile phones to collect savings.

In this toolkit, we make a clear difference between Financial Service Providers (FSPs) and Financial Institutions (FIs) (banks or non banks).

FSP is broader and covers both Mobile Network Operators (MNOs), Payment Service Providers (PSP) and Financial Institutions (FIs) (banks and non banks).

When we use "FI", we refer to both FI and Non Bank Financial Institutions (NBFIs) as opposed to MNOs and PSPs.

When we want to differentiate within FIs, we use "NBFIs" to refer to MFIs, cooperatives, SACCOs and MF Banks.

1 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.

SECTION 1:

OVERVIEW OF THE BUSINESS MODEL

A financial service provider (FSP) can use mobile devices to provide existing services at a lower cost or to offer new services through a mobile channel. This toolkit only addresses using mobile as a service performed by staff of a FI.[2]

A FSP can choose between several channels:

- Pushing services through mobile phones (payment reminder SMS, informative SMS, promotional campaigns SMS);
- Developing a "mobile branch"[3] (using mobile devices such as small laptops) for cash-digital transactions (i.e., deposits/ withdrawals/ currency exchange); and
- Digital field applications to register clients, to do follow up, to collect savings.

FIs throughout the world have decided to embrace the path of using mobile devices for one or several of the following objectives: (1) greater efficiency, (2) time and cost saving, (3) savings mobilization as a source of funding, (4) increased outreach and (5) better customer service.

The main benefits for the clients are (1) improved customer service (proximity, rapidity); (2) incentive to save; (3) familiarization with digital transactions (before performing transactions on their own); and (4) security of transactions and keeping money safe.

The table below displays examples of FIs in Africa that have embraced this path.

In this model, transactions are performed by a FI's representative using mobile devices. Clients are not initiating the transactions.

Mobile as a tool is often considered a first step towards agency banking[4] (e.g.: disbursement and reimbursement through FI/mobile money agents in partnership with MNOs) and mobile banking[5] (clients performing digital financial transactions themselves).

As recently as 2014, this model was mainly employed by early adopters or new market players and was considered nascent.[6] This is no longer the case, as FIs are embracing the use of mobile technology to reach their customers. "Mobile as a Tool" is poised to be the mainstream gateway to digital finance in less than five years.

Table 1: Examples of FIs in Africa employing Mobile as a Tool

Geographical area	Examples of Financial Institutions in Africa	MicroLead Partners
East Africa (Kenya)	• Musoni, Kenya	
East Africa (others)	• Uganda Microfinance Limited (UML) (reminder sms for repayment)	• Buusaa Gonofaa, Ethiopia (doorstep collection of savings with POS) • NBS Bank, Malawi (for instant account opening)
Anglophone West Africa	• Diamond Bank Nigeria (for collecting savings)	• Sinapi Aba (sms banking) • Fidelity Bank, Ghana (for account opening)
Francophone West Africa	• Fececam, Benim • U-IMCEC, Senegal	• CPEC Benin

2 Transactions performed by staff of MNO or other FSP will be addressed in future toolkits.

3 A mobile branch is a self-contained financial center - capable of fulfilling immediate banking needs, but not providing the full range of services as a traditional branch and using mobile devices to perform transactions.

4 Agency banking will be described in toolkit #3 and 4 ("Use an existing agent network" and "Develop own agent network").

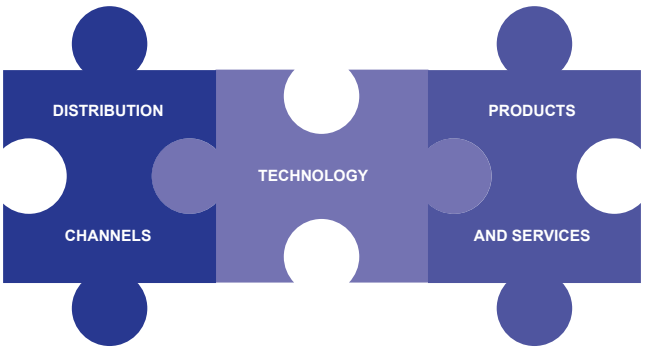
5 Mobile banking will be described in toolkits #5 and 6 ("Develop your mobile banking channel" and "Be a provider").

6 See Accion´s case study (2015) on Digital field applications: http://www.accion.org/sites/default/files/consolidated_dfa_study.pdf.

SECTION 2:

DESCRIPTION OF THE BUSINESS MODEL

In this toolkit, we review the alternative delivery channels and technologies used to facilitate access to FSPs' products and services, while detailing which technology better serves which purpose.



In this model, only the staff of the FI performs the transaction using a mobile device. If the transaction is initiated by the client with his/her mobile phone, it no longer is a "Mobile as a Tool" model but a mobile banking model[7] (refer to the Introduction for the distinction).

Table 2: Technology Available to provide products and services

Products & Services		Technology				
		Digital Field Applications			Satellite Branch	Phone-based Services
		POS	Mobile	Tablet	Netbooks[9]	Push SMS
Data entry	Client registration	X	X	X		
	Loan application		X	X		
Savings	Deposits	X	X	X	X	
	Withdrawals	X	X	X	X	
Loans	Credit scoring (done by loan officer)			X	X	
	Loan disbursement (in cash)	(X)	(X)			
	Loan repayment (in cash)	X	X			
	Payment reminders					X
Account management	Account statement	X	X	X	X	X
	Balance	X	X	X	X	X
	Transaction receipt (printed)	X	X	X		
	Transaction confirmation					X

(X) Infrequent transactions

7 These models will be described in coming toolkits (#5 and 6): "Develop your Mobile Banking Channel" and "Be a Provider".

8 Netbooks are portable computers. We use interchangeably in this toolkit "notebooks" or "netbooks" to refer to small portable laptops.

PRODUCTS AND SERVICES

Digitizing field operations

Using mobile devices and Digital Field Applications (DFAs), staff of FIs can carry out transactions related to data entry, savings, loans, and account management:

- Data entry: client registration and loan application;
- Savings: collection of deposits, withdrawals;
- Loan: credit scoring done by loan officer, disbursement, repayment and payment reminders; and
- Account management: account statement, balance, transaction receipt and confirmation.

Data entry

Mobile devices are commonly used to digitize field operations (replacing paper forms with digital data) for both client registration and loan application. FIs see the cost and efficiency benefits of digitizing field operations as being the main reason for adopting this model.

Registration of new clients through mobile devices is done to digitize data and replace paper forms. It requires a camera or scanning functionalities (for taking a picture of clients and/or ID cards or scanning ID).

Processing loan applications in the field using tablets and mobile phones is becoming increasingly popular. Digital data can be synchronized with FI's core banking systems, avoiding any manual upload and later enabling approval of the loan in real time (through credit scoring).

For the time being, digital loan applications are mostly used to save time on data entry, but some FIs are starting to use digital data for real time processing of loan applications. Either loan officers perform credit scoring using the FI data or credit bureau data for a client, or for the most advanced FIs such as Musoni, the system performs the credit scoring directly. Musoni was a pioneer in using tablets for loan applications (started in 2012) and is about to launch its credit scoring system, enabling real-time approval of loan applications.

Digital loan applications require digital signatures using tablets or biometrics devices for clients to sign their applications. Thus, it is important to understand the laws regarding acceptance of digital signatures in your country of operation. Digital loan applications also require printing functions to give clients a copy of their signed loan application.

Tablets are the most frequently used devices because of their larger screens, longer battery life and ease of data entry.

Savings related transactions

The most frequent transactions under this model "Mobile as a Tool" are savings related. FIs equip their staff with POS devices or mobile phones to **collect savings** from clients in the field (such as in local market, using a door-to-door approach). A printing device associated to the POS or mobile phone can enable clients to receive a printed paper receipt as proof of their deposit which builds trust in the service. Confirmation of transactions through SMS is also quite common. Sinapi Aba S&L in Ghana, Buusaa Gonofaa in Ethiopia, Diamond Bank in Nigeria and Musoni in Kenya are all providing these services.

Enabling **savings withdrawals** through POS and mobile phones is less common, mostly for security reasons: staff would have to carry cash to enable clients to withdraw. Yet, some institutions such as Sinapi Aba S&L in Ghana[9] are offering withdrawals of savings accumulated via mobile phones. At Sinapi Aba S&L, clients can request a withdrawal that is effective the following day or Day +2. Diamond Bank in Nigeria has implemented this option as well. Buusaa Gonofaa in Ethiopia is currently in the pilot phase for savings withdrawals to assess feasibility and risks.

Savings account opening can be performed in the field depending on KYC requirements enacted by the central bank of the country or might require a visit at the branch. NBS Bank staff in Malawi perform account opening in the field, taking a picture with their phone. The bank received permission from the central bank to implement light KYC procedures for these types of accounts (and limited transaction possibilities).

9 Read Sinapi Aba S&L's story in the Part 2: Case study of Toolkit #1.



Courtesy of Sinapi Aba S&L and Opportunity International

Savings reminders: Some FIs use SMS reminders to encourage customers to save up. This is mainly done in the case of commitment savings or targeted savings schemes and also in the case of some promotions for account reactivation campaigns. Ugafode in Uganda has used SMS campaigns for that purpose.

Loan related transactions

Loan reimbursement through mobile devices is used by some providers. Staff of the FIs using POS, phones or tablets are able to collect cash repayments, especially in rural areas where access to service points for depositing money can be a challenge for clients. In this model, the client does not repay with mobile money (in which case it would be agency banking[10] or mobile banking) but with physical cash. This can lead to the issue of security of the cash and of staff collecting it. Buusaa Gonofaa in Ethiopia has successfully tried this option.[11]

Loan disbursement through mobile devices is rarely used, because most FI's procedures require clients to come physically to the branches to sign loan papers, as well as for obvious security reasons (e.g. staff of the FI carrying large amounts of cash for field disbursement and the risk of internal fraud). If the FI resorts to a mobile money agent to disburse the loan (which is common, as we will see in future toolkits), this would be related to agency banking and will be addressed in toolkit #3 on "Use an existing agent network" with a MNO or a technical service provider.

Payment reminders are SMS based. The FI sends clients a reminder stating that their loan repayment date is approaching or that their installment is due. The purpose is to decrease the default risk and PAR. Musoni Kenya and Uganda Microfinance Limited are now using payment reminder SMS.

Account management related transactions

Using mobile devices, staff can provide clients with their **balance and account statement** detailing the most recent transactions performed. In this model, clients are not able to perform the request themselves but have to ask the FI's staff to do it for them. Clients receive a **printed receipt confirming transactions** performed (deposit, reimbursement, statement request) and/or an **SMS confirmation** as proof of the transaction.

10 This will be addressed in the toolkit #3 "Use an existing agent network" and #4 "Develop an agent network."

11 Read Buusaa Gonofaa´s story in the Part 2: Case study of Toolkit #1.

DISTRIBUTION CHANNELS

In the "Mobile as a Tool" model, there are two types of distribution channels: (1) the FI using technology such as Digital Field Applications and Mobile Branches (notebooks), or (2) a FI employing a SMS channel to deliver services through mobile phones (e.g. repayment reminders, confirmation of transactions). As previously mentioned, in this model, all transactions are initiated by the staff of the FI.

Staff can either be salaried, such a loan or savings officers, or contracted, recruited for this specific purpose (depending on what the regulation permits), but considered/assimilated to staff of the FI (vs. agents assimilated to MNOs). In the case of salaried staff, loan officers and/or savings officers are equipped with devices replacing their usual paper forms; they are sent to the field to perform transactions with these new devices. The way these staff work is thus completely changed. Training of staff is the key to success but also one of the biggest challenges as it is a tremendous change of mindsets and working habits. In case the integration between mobile devices and the FI's core banking system (CBS) is not complete (see the Technology section), this can be perceived as extra work if staff has to enter data into the FI's system once they return to the branch. The rationale for using existing staff is to improve productivity and build client trust. For instance, Sinapi Aba in Ghana equipped its staff in remote branches (without access to the FI's network) with notebooks to enable savings-related transactions using General Packet Radio Service (GPRS) connectivity to reach the CBS in headquarters. Buusaa Gonofaa in Ethiopia has equipped its loan officers with POS devices for loan reimbursement, Buusaa Gonofaa used own staff to ensure that the trust they had developed with clients would be leveraged. Caurie in Senegal has given its loan officers tablets with an integrated application to collect savings. Musoni in Kenya also equipped its loan officers with tablets.

On the other hand, contracted staff can also be used for savings collection, to create a workforce of "foot soldiers" or "roving agents" entirely dedicated to deposit collection in the field, working in markets or using a doorstep approach to collect savings where clients are located. Diamond Bank in Nigeria recruited 116 Beta Friends[12] and gave them mobile phones to navigate the markets on a daily basis to collect savings. Sinapi Aba in Ghana recruited 450[13] susu collectors or "roving agents" equipped with POS devices to collect savings. CPEC in Benin has hired roving agents for savings collection. U-IMCEC in Senegal is contracting an agency to recruit roving agents. This contracted staff is assimilated to the FI staff by clients. This is key to differentiate from another model we will address later where the FI recruits/creates a network of agents.

This mobile staff channel (salaried and affiliated) complements existing channels such as branches, call centers and agency banking.

TECHNOLOGY

With this model, FIs can use several mobile devices to serve clients:



- POS devices replacing paper forms
- Mobile phones with integrated applications (smartphones or feature phones)
- Tablets
- Notebooks or computers
- Internet interface/Web application to send SMS

Front end technology

POS devices can be basic POS devices or m-POS enabled to read cards or use fingerprint biometrics. For example, FINCA in DRC, Tanzania and Zambia is using fingerprint identification to enable illiterate customers to perform transactions (i.e. confirm withdrawals, balance enquiries). POS often have printing capacity embedded, so physical receipts can be given to clients for each transaction.

12 Beta meaning "good" in pidgin English (used in Nigeria)

13 These figures are from July 2016.

Mobile phones employed under this model are mostly smartphones or feature phones with applications enabling them to perform various operations. Tablets are similar to smartphones, but more convenient for data entry considering their larger screens. Mobile phones and tablets can display fingerprint readers for loan applications and for confirming transactions in the field. Alternatively, external devices for printing and/or fingerprint reading can be connected to a smartphone via Bluetooth which is what MicroLead partner CPEC in Benin is doing.

Notebooks are used by FI staff (contracted or salaried) in the field to avoid heavy integration with the core banking system of the FI (eg: FINCA in Zambia and Sinapi Aba in Ghana). Staff can perform savings and account management related transactions using these devices, when connected to 3G or 4G (real time data exchange) or GPRS (data exchange not in real time).

Web interfaces are used to access digital data collected in the field, but also to send SMS to clients if needed (e.g. repayment reminders, confirmation of transactions). These SMS can be automated if the devices are integrated with the core banking system of the FI.

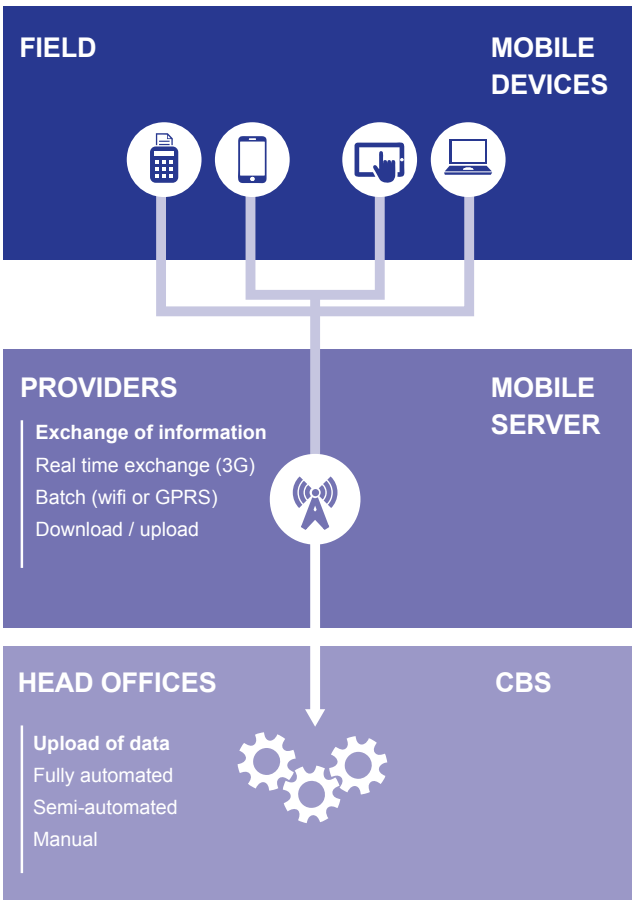
Integration to FI systems

No integration between mobile devices and the CBS is compulsory, but it is highly recommended to have an interface between the two, to fully leverage the benefits of using mobile devices, such as automated data entry and data exchange. The level of integration between the devices and the CBS of the FI depends on the FI's objectives, existing CBS and the financial means. Upload of data from devices to the CBS can either be manual, semi-automated (requiring manual intervention to download from the device and then upload to the CBS but requiring no manual data entry) or fully automated. The risk of errors and fraud is high with manual and semi-automated modes, so those modes are not recommended. Upload can be in real time if automated (data from the field is sent to the CBS via 3G) or asynchronous[14] when the staff returns to the offices, using wifi.

Mobile devices can thus be:

- Fully integrated to the FI's CBS with real time exchange of data enabling automatic upload of data collected in the field through POS, tablets, phones;
- Exchanging information in batch through wifi;[15]
- Connected to the FI's CBS through data export via a software: data is downloaded from the device and then uploaded to the CBS without requesting any manual entry; or
- Not connected to the CBS, requesting manual entry from staff as they return to the office.

Figure 2: Connectivity between devices and FSP systems



14 Provided regulation permits it (offline transactions are not allowed by some regulators such as Central Bank of Malawi).

15 In batch, there is a delay between the moment transaction is performed and time it is recorded in the system. Data is transferred through transfer of files, either automated (File Transfer Protocol) or manual.

Connectivity

Devices use communication frequencies classified by their speed of transfer as follows: 2G (mainly SMS or USSD), EDGE[16], GPRS (most POS devices can run on GPRS, which consumes less data than 2G/3G/4G and hence is suitable for remote areas), 3/4G (smartphones and tablets), wifi or satellite (both mainly available in branches, but smartphones and tablets can be connected as well). All of these enable real time exchange of data but at very different speeds. 3G is used for real time exchange of data between the field and head office, wifi for transferring data from devices to CBS upon returning to the office. Payment reminders are channeled through SMS.

Some devices can function in both online and offline[17] mode. The offline mode enables staff to perform transactions even when connectivity is low or nonexistent. Transactions are documented in the device and uploaded once the device is connected to the network (through wifi or 3G, preferably on a secure channel). The benefits for customers living in rural areas are huge, but the downsides are the risks associated with these transactions, such as data loss, hacking of data, fraud by customers claiming transaction has been performed before it is recorded in the system. Therefore, the FI needs to have clear policies to ensure deposits are registered in the system before withdrawals are made using another distribution channel (e.g., a client makes a deposit with a roving agent and a withdrawal at the branch before the transaction is recorded). Sinapi Aba in Ghana and CPEC in Benin are, for example, allowing savings withdrawals with clear rules and thresholds. To our knowledge, no institution has implemented an offline mode for disbursement or withdrawal transactions for obvious security/fraud reasons (the client could try to withdraw twice from two different channels – branch and roving agents – or even from two different roving agents before the transaction has been recorded into the system).

PARTNERSHIPS

In the "Mobile as a Tool" model, the FI can form a partnership with mobile device providers to purchase tablets, POS, mobile phones, or with technology providers. Most often, it is a mere client-vendor relationship, where the FI purchases the devices needed. In some cases, the FI can ask the mobile device manufacturer to develop a customized version for their unique use, for instance, a customized application on mobile phones or tablets. For example, Sinapi Aba asked its CBS provider to develop a unique SMS module.

Technical assistance and/or funding from donors and other technical assistance providers are another form of partnership. MicroLead supported Sinapi Aba in Ghana for its pilot with susu collectors, funding POS, notebooks and an SMS banking platform, as well as funding technical assistance from Opportunity International while Buusaa Gonofaa received funding from MicroLead for POS devices and application development in addition to technical assistance from BASIX (India). Both Sinapi Aba and Buusaa Gonofaa also received training and support for financial literacy programs.

Musoni Services received financial support from Hivos to offset costs of the development of their mobile application.

Sinapi Aba — POS in action — Courtesy of Opportunity International



16 EDGE stands for Enhanced Data rates for GSM Evolution and is an evolution of GPRS in between the 2G (GPRS) and the 3G for data connection

17 Provided regulation allows offline transactions.



Courtesy of Sinapi Aba S&L and Opportunity International

SECTION 3:
DIVING INTO THE PERKS

THE FINANCIAL SERVICE PROVIDER PERSPECTIVE

Operational efficiency

Mobile devices enable gains in FI productivity: data entry, time savings on transactions, and staff control.

With data entry becoming automated, a FI can save time and avoid mistakes and the need for supervisors' systematic checks. Staff no longer needs to fill out paper forms before entering data into the system. Buusaa Gonofaa in Ethiopia has achieved an 80% gain in efficiency, reducing data entry from 60 to five minutes (the time to export data from the device to a software and upload it to the CBS without any manual entry). Musoni has achieved a 68% increase in loan officer productivity (increased caseload).

Mobile as a tool also enables time savings when performing transactions. Loan approvals, deposits and reimbursements have a faster turnaround time when using mobile devices. Musoni has, for instance, reduced its loan turnaround time from 72 hours to six hours.

Monitoring of credit/savings officers (in the case of salaried staff) can also be another objective for FIs, and devices are a tool to achieve this control with real time data exchange between the field and the head office.

PAR reduction

Thanks to SMS reminders for payment installments, FIs witness reduction of payment delays and defaults. For instance, Musoni managed to reduce its PAR by up to 50%, thanks to its SMS reminders (Mastercard Worldwide study, 2013).

Client acquisition through savings mobilization

Using mobile devices to collect savings enables FIs to increase the amount of savings collected. Mobile devices:

- Entice existing clients to save more because of the convenience of staff coming to them for collection; and
- Attract new clients to the institution.

Thanks to its POS, Sinapi Aba has attracted 16 million Ghana cedis savings (USD 4 million) in three years and increased its client base by 200,000. Buusaa Gonofaa in Ethiopia attracted 56,000 savers in four years (prior to which it did not mobilize any voluntary savings) using POS to collect savings where clients live and work. Diamond Bank opened 39,000 savings accounts and collected up to USD 1.5 million in deposits during its six-month pilot. Musoni attracted USD 86,000 extra revenue in one year thanks to tablet equipped with the Musoni application (additional loans managed by loan officers).[18]

Cost of funding reduction

Savings can be used as an affordable funding source for FIs, lowering the overall cost of funding when using ADC versus using brick and mortar channels. With this additional savings, FIs can lend to new clients at a very limited cost (the interest paid on savings are much lower than the cost of funding for most FIs). In the case of FINCA Tanzania, this was a clear objective as their annual cost of funds was 30%.

Outreach into rural areas

A fairly common motivation for using mobile devices as a tool is to expand the FI's outreach in rural areas. The cost of mobile as a tool is only a fraction of the cost of opening a new branch[19]. Transaction costs at branches vary from 0.9 USD to 1.20 USD/transaction versus 0.1 to 0.2 USD/transaction with POS.[20] FIs thus prefer to equip their roving agents with mobile devices, e.g., notebooks, tablets, POS and mobile phones.

18 Accion study, Digital Field Applications, 2015 https://www.accion.org/sites/default/files/consolidated_dfa_study.pdf

19 CAPEX costs include purchases of devices and training, OPEX costs are not to be underestimated (personnel salaries, terminal life duration, data consumption…)

20 Source: CGAP 2011 and McKInsey study 2012

THE CLIENT PERSPECTIVE

Enhanced customer service (client acquisition and retention)

Mobile devices enable FIs to reach clients where they live and work, thus creating convenience for clients. This is an attractive element in the value proposition. Clients no longer need to travel to branches to make deposits. Instead, mobile staff collect deposits where clients live or work. This benefit is especially valued in rural areas, where the time and cost to travel to a point of service can be burdensome.

Proximity to the client is another benefit. Clients get used to regularly seeing their roving agents and build a relationship with them. This in turn can lead to increased trust and a tendency to deposit higher amounts or subscribe to other FI products and services. Proximity is what enables FIs to differentiate against the competition.

Rapidity of transactions is another key differentiating feature valued by customers. The faster turnaround time of mobile devices enables clients to save in a few seconds, without having to close their business, and this is highly valued by customers. Diamond Bank saw 74% of account holders transact monthly and 30% transact weekly with Beta Friends visiting them. If Beta Friends were not visiting daily, customers' balances would have been lower (Women's World Banking study).[21]

This enhanced value proposition can create a competitive advantage for the FI.

Enticing clients to save

Financial service providers with a commitment to improve customers' lives and financial inclusion place high on their agenda the opportunity for clients to save formally. Roving agents visiting customers where they live or work to collect their savings are a great incentive to save, greater than the interest rate earned on savings according to FIs interviewed.

Familiarization of clients with technology

A reason mentioned by many providers for choosing the "Mobile as a Tool" model is the desire to familiarize their clients with technology. The objective is to first have staff perform the transactions for clients, and gradually educate clients into performing their own transactions using mobile phones (mobile banking). This model is thus perceived as a first step before graduating to other models such as agency banking or mobile banking, under which clients become gradually responsible for conducting the transactions themselves.

This model enables clients to build trust in the digital system: the paper receipts delivered with transactions are a big part of trust (confirmed by all providers interviewed[22]) along with the relationship built with the collector, be it contracted or FI staff. The trust factor is especially important when it comes to depositing money for savings or reimbursing a loan. The client needs to trust the cash recipient. The daily or weekly interactions, always utilizing the same collector, create that needed trust.

21 https://www.womensworldbanking.org/wp-content/uploads/2014/03/Womens-World-Banking-A-BETA-Way-To-Save.pdf.

22 Musoni, Sinapi Aba, Buusaa Gonofaa, FINCA.

THIS IS THE RIGHT MODEL FOR YOU IF YOUR STRATEGIC OBJECTIVES ARE:

- Operational efficiency;
- Time savings;
- PAR reduction;
- Additional revenues;
- Increased deposits;
- Convenience;
- Improved customer service (proximity, rapidity) and rural outreach;
- Increase digital literacy of customers with expectation that FI will offer more digital options in the future.

THIS MODEL IS NOT FOR YOU IF YOUR STRATEGIC OBJECTIVES ARE:

- Cost reduction: roving agents are an expensive channel, especially when dedicated only to savings collection (except if you compare roving agents with the cost of setting up a branch);
- Reduction of operational risks: with staff carrying cash deposited by clients or for clients wishing to make withdrawal (in the case of providers enabling clients to withdraw with roving agents), the risk of fraud, theft and attacks on staff increase. Many providers have imposed a threshold on the amount of money a client can deposit or withdraw with a collector and a threshold on the amount of money collectors can have with them before going to a branch to deposit that money (eg: Diamond Bank and Sinapi Aba);
- Having clients perform transactions by themselves (for this, you should turn to mobile banking).

Box 1: International Case Study: Musoni Kenya

Launched in 2009, the MFI Musoni pioneered early in 2012 the use of mobile applications as tools to replace its brick and mortar branches, in line with its mission to "leverage technology to optimize operational efficiency." The software was developed by Musoni Systems, which also made it available to other MFIs. The software is now used by 45 MFIs worldwide.

DIGITAL MODEL

Musoni MFI (Musoni) is a 100% mobile financial institution launched in Kenya in 2009, providing credit only. Musoni has used two models in its digital finance journey:

(1) Partnering with the 2 MNOs, Safaricom & Airtel, to go "cash-less." (model 3: "Use an existing agent network"). Since its inception, Musoni has enabled its clients to receive and repay their loans using M-PESA and Airtel Money.

(2) Using mobile devices and tablets as a tool: in 2012, Musoni implemented a SMS Module which enables sending payment reminders. In 2012, Musoni equipped its staff with tablets and the Musoni App replacing paper forms.

OBJECTIVES OF MUSONI USING MOBILE AS A TOOL

Musoni decided to use tablets and mobile devices to achieve several objectives:

- Reduce loan turnaround time and increase loan officer productivity;
- Reduce PAR through payment reminders;
- Extend outreach to rural areas;
- Reduce paperwork and manual tasks/ bureaucracy and improve efficiency;
- Digitize client information to develop a credit scoring database for real time decision making on credit applications in the future;
- Improve customer service;
- Improve communication with clients about new products and services.

TOOLS & TECHNOLOGY

Musoni MFI uses the Musoni System as its CBS[1], which is integrated with M-PESA for loan repayments & disbursements. The CBS is cloud--based and thus accessible in branches and on the field.

Loan officers (own Musoni staff) in the field have been equipped with 7" tablets - preferred to phones for the size of the screen for data entry and viewing reports. An application on the tablet enables loan officers to perform client registration, group registration, loan applications, custom surveys/ questionnaires and Progress Out of Poverty Index (PPI) and viewing reports (including account balances). The android application was customized for Musoni MFI and is running on tablets in both offline and online mode.

Finally, a SMS module- customized for Musoni - was developed to improve communication with clients through messages such as "Happy Birthday" messages and to reduce PAR through payment reminders and arrears follow-ups.

MUSONI'S DIGITAL JOURNEY

Step 1: Musoni performed a detailed market assessment and analysis of business and technical requirements: business, quality and availability of connectivity, regulatory analysis, need of branch staff.

The main findings of this market research phase were the following:

(1) Musoni identified a need for offline mode in the field as data connectivity was not always adequate and a need for synchronization of data on request upon return to connectivity areas. Musoni System developed the offline and batch mode;

(2) Musoni identified a need to perform real time transactions and thus for an integration between the CBS and mobile devices;

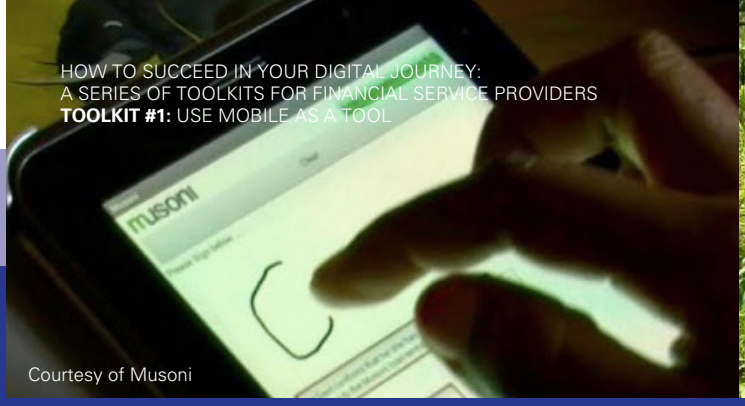
(3) Whereas the objective was to be 100% digital/paperless, Musoni identified that paper contracts were a must for loan applications performed in the field using the tablet devices for regulatory compliance;

(4) Through this market research, Musoni identified that the SMS module would need to be fully integrated into the Musoni System, rather than relying on the MNOs. Musoni Services- thus developed a customized SMS Module for Musoni MFI, instead of using the SMS technology of MNOs.

1 Musoni System has been developed by Musoni Services, an independent software company part of the Musoni group but also supporting other MFIs around the world (www.musonisystem.com);

KEY FIGURES AS OF 2015

- **Credit only MFI**
- **Launched in 2009**
- **35,000 clients for Musoni MFI**
- **USD 5.4 million loan portfolio**
- **USD 23 million disbursed in total**
- **75,000 loans disbursed**
- **15 branches**
- **Average loan size: USD 500**



Courtesy of Musoni



Step 2: Musoni then carried out a development and integration phase: All development & integration work was carried out by Musoni Services in close consultation with Musoni MFI.

Step 3: Musoni decided to conduct a pilot for 2 months in 2 branches, selected for their maturity (>1-year existence), semi-rural locations and PAR issues. Project champions were identified to support the pilot. After a 2-month pilot with one branch, Musoni carried out pilot for another 2 months at 2 branches.

Step 4: Musoni rolled out the tablet devices to all its loan officers in 2013. The apps and tablets are currently being used by 61 loan officers and in 96% of the cases for group loan clients.

COST BENEFIT ANALYSIS

Equipping its loan officers with tablets and developing and integrating the SMS module cost Musoni MFI a total of USD 100,000. The main costs were device purchase and platform implementation (58 000 USD CAPEX) and the rest is recurring costs (OPEX) for data connectivity, insurance, batteries of tablets.

Musoni achieved revenues of USD 115,000 the first year of operations of the new devices, through efficiency gains, salary savings and paper and storage savings. Musoni was able to break even in 1 year.

Musoni has made an estimate that the technical costs of SMS module, integration, tablet application & credit scoring represent the equivalent of USD 1.5 per client per year and USD 3.5 per client for the total investment.

KEY SUCCESS FACTORS

The following factors were identified as contributors to the success:

(1) The market environment (Kenya) was favorable: mobile phone ownership is high and rising, the cost of internet/ data is decreasing, and Musoni was able to leverage the success of existing mobile services (awareness and usage by population);

(2) Musoni MFI performed an analysis phase with capacity assessment before launch, to identify strengths and weaknesses and opportunities for improvements;

(3) Musoni MFI worked with a technology provider with a strong understanding of the MFI processes;

(4) Musoni carried out a pilot phase (1 month extended to 3 months) to test and adapt the products and technology.

CHALLENGES AND LESSONS LEARNT

The main challenge that Musoni faced was data synchronization for offline transactions performed in the field, which was addressed by the technical provider Musoni services providing an option for synchronization on request upon return to a connectivity area.

Musoni has drawn the following lessons, that could benefit other FSPs:

(1) A FSP should purchase robust mobile devices with good battery life. Quality should be preferred over price (several other FSPs also mentioned choosing low cost devices and subsequently having to replace an entire fleet of devices);

(2) FSP should be aware of potential security issues (theft of devices) in some areas. Musoni lost three out of 61 tablets;

(3) Change management should not be underestimated. As these new devices impact the roles of staff, their buy-in is fundamental;

(4) A FSP engaging on the path of using mobile devices should use an agile approach and be prepared for adaptation, particularly at the start. The research phase and pilot phase were very helpful for Musoni to identify adaptations needed and implement changes quickly.

NEXT STEPS

With a few years' experience using the tablets, Musoni now intends to extend their usage to individual loans.

In the midterm, Musoni also intends to use data collected in the field for automated credit scoring, enabling real-time credit decision making by loan officers using their tablets in the field.

To go further and for references, two studies released on Musoni:

- IFC Study (2014): Mobile Financial Services in Microfinance Institutions: Musoni in Kenya: http://www.ifc.org/wps/wcm/connect/697b590047c346969662f7299ede9589/Tool+11.5+-Mobil+Finan+Serv+Musoni+in+Kenya+2-3-15.pdf?MOD=AJPERES
- Accion case study (2015): https://www.accion.org/sites/default/files/consolidated_dfa_study.pdf

RESULTS ACHIEVED THROUGH TECHNOLOGY (2012-2015)

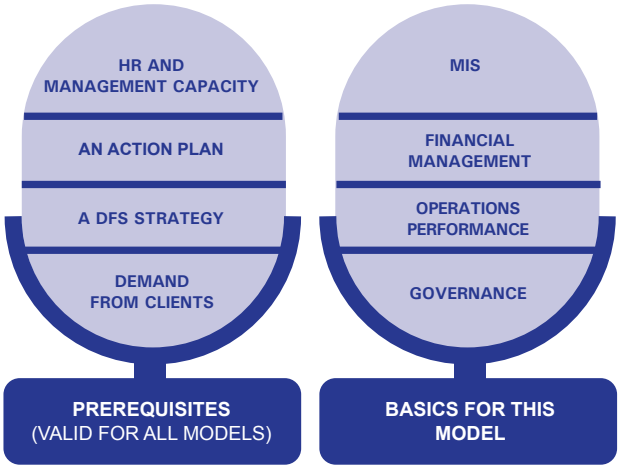
- **2 million SMS payment reminders sent**
- **100,000 clients registered with Musoni App (for the 45 MFIs using the software)**
- **Loan turnaround time reduction from 72 to 6 hours on average (Accion, 2015)**
- **PAR reduction by up to 50% (Mastercard study, 2013)**
- **+68% loan officer productivity (Accion, 2015)**

SECTION 4:

INGREDIENTS FOR SUCCESS

What are the prerequisites you should meet if considering this business model?

Figure 3: Prerequisites and basics to meet



PRE REQUISITES

A demand/need from clients

Any new product or service should address a client's need to ensure its adoption. Understanding the clients' needs is crucial, especially when it comes to introducing a new channel. Focus group discussions and/or quantitative studies can help identify these needs/gaps (e.g. the challenge of travelling long distances to branches), customize the new channel accordingly and improve it over time. Trust is of the utmost importance for mobile devices where clients deposit money with a savings collector, and the need for a paper receipt or confirmation SMS often arises from focus group discussions.[23]

A strategy and action plan for digital finance

The first step in going digital is to define a strategy. What are the objectives of going digital? What will be the benefits for both the institution and clients? Which products and services will be available through the digital channel? Which clients will be targeted (existing/new, rural/urban, middle end/low end, etc.)? How will the new digital channel or product be distributed and pushed (own staff/contracted, agents)? Which technology will be used?

The next step, once the strategy is defined, is to define an action plan. An action plan should consider the different steps needed to achieve the strategy and define for each one: (1) the activities to carry out, (2) the person(s) responsible, (3) the deliverables and (4) the deadlines. A list of activities is not enough.

A project manager should be in charge of following up on the action plan and ensuring everything is on track. Key performance indicators also need to be defined and followed up on from the beginning. Mapping potential risks with mitigation strategies is highly recommended.

Template for Action Plan

MicroLead and PHB have developed an action plan template that can be used for inspiration.

It contains the different categories required for an action plan and provides a non-exhaustive list of activities to carry out for this model.

Am I ready?

Use our self- readiness assessment tool

You will be able to assess which prerequisites your FSP currently meets and which ones need to be worked on.

23 See the Musoni case study in this toolkit.

Basics To Have In Place For This Model

Table 3: Prerequisites for "Use Mobile as a Tool"

Dimensions	Prerequisite	Description of the prerequisite
Internal capacity	Management	Management should display buy in and involvement in the project.
	Daily organization	FSP staff need to be involved in the project (but not necessarily dedicated).
	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.
Financial capacity	Financial resources	The FSP should ensure its has the needed financial resources, either internal or external.
Operational capacity	Liquidity/cash management	The FSP should be able to manage the cash collected by roving agents/collectors.
	Regulation	No need for a special license for this model. The FSP should discuss its plans with its regulator and get no objection.
Technical capacity	Connectivity	All places of operations (branches, in the field,…) should have access to mobile phone network (at least EDGE, preferably 2/3/4G).
	MIS	Data between MIS and mobile devices should be consolidated in batches at minimum (at evening/nights when the roving agents return to branch).
	Interface capacities	MIS should be connectable to third parties´ mobile devices (POS, phones, etc.).
Stability	Quality of portfolio	PAR30<15%, PAR reduction can be one of the reasons for engaging in this model.
	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.

Challenges And Risks To Anticipate

The FSP should anticipate challenges along the path and prepare for them. We list here the most common challenges experienced by providers having implemented this solution. This list is not exhaustive, and new risks may arise during the implementation process.

Table 4: Challenges to anticipate

Dimensions	Potential challenges
Marketing and products	Poor customer targeting or misidentification of needs.
	High costs of services leading to rejection of services by customers.
Distribution	Risk of losing clients due to: • Poorly trained customer service; • Poorly trained agents; • Insufficient number of points of sales.
Technology	Time needed for integration between mobile devices and CBS (integration took six months for Buusaa in Ethiopia).
	Mobile data connectivity (crucial for tablets, POS and phones).
	Consolidation of data between CBS and mobile devices in batch minimum (at nights). Poor reception of SMS confirmation.
	Data loss.
Operations	Client fraud.
	Provider fraud.
Financials	Non-compliance with cash levels.
	Project cost exceeding plans.
	Cost/benefit analysis not in line with plans.
Security risks	Excess of cash with collectors.
	Sharing passwords or pins.
	Hacking.
	Backups not performed.
	Theft, vandalism, or loss of mobile devices.

SECTION 5:

RECIPE FOR SUCCESS, OR "HOW TO"

Figure 4: Digital Journey steps



This section describes the key activities financial service providers should perform to implement their DFS digital project. Key success factors are identified, while practical tips for FSPs are provided in side boxes. Useful implementation tools (excel files) are also provided to assist in the digital journey.

PHB and MicroLead defined six different steps for a successful DFS implementation based on 100+ implementations across the globe:

1. Opportunity assessment;
2. Market entry strategy;
3. Development and pilot preparation;
4. Pilot;
5. Implementation phase;
6. Performance improvement.

Throughout the digital journey, seven work streams should be assessed to ensure all key areas are covered:

1. Regulation and partnerships;
2. Market and products;
3. Distribution;
4. Technical/IT;
5. Internal organization (operations and HR);
6. Financials;
7. Project management.

Figure 5: Digital Journey Workstreams



STEP 1:

OPPORTUNITY/ MARKET ASSESSMENT

RECOMMENDED TIMING: One month minimum

OBJECTIVE	Define whether there is an opportunity for you to seize and decide whether you should go digital: • Assess clients´ needs and pain points to understand how you could address them; • Identify the devices you could use (tablets, mobiles, phones, netbooks, etc.); • Identify potential business strategies, critical success factors and constraints.
KEY ACTIVITIES	Analyze the demand, define your objectives and assess your readiness.
DECISION	GO or NO GO

Workstream	Activity
Regulation and partnerships	• No need for a license and in most countries no need for central banks´ approval though informing them about the project is always useful. • Validate regulatory requirements for digital signature, physical receipt, offline transactions, use of contracted staff. • Identify potential partners for the project (e.g. technical & financial assistance providers, technical providers for the devices).
Market & Products	• Carry out a market study: understand customers' needs and pain points (focus group, qualitative study, quantitative study).
Distribution	• List all possible options for leveraging mobile as a tool: in branches, in the field, using own or contracted staff.
Technical / IT	• Assess your current CBS consolidation of data. • Assess your connectivity. • Identify needs for mobile devices: data needed (KYC, scanning, picture, etc.), type of integration desired (real time or batch), device management, battery, settlement and reconciliation, reporting.
	Key success factors
Internal organization & operations	• Assess your institution´s readiness. • Anticipate impact on your staff (resistance to change): if possible, make them part of the change from the start.
Financials	• Prepare a macro budget listing all the costs (Capex and Opex) and the expected revenues. • Anticipate expenses needed to scale-up.
Project Management	• Identify the project team. • Appoint Project Manager who is supported by the executive suite. • Set up Steering Committee (should be executives higher up in the hierarchy than project team. Project Manager should be in both Project Team and Steering Committee).

Your checklist of deliverables:

- ☑ Contacted central bank;
- ☑ Developed list of potential partners/providers;
- ☑ Completed market study report;
- ☑ Identified benefits for both clients and FSP;
- ☑ Reviewed options for distribution: locations, own or contracted staff;
- ☑ CBS assessment completed;
- ☑ Connectivity assessment completed;
- ☑ List of devices to be used finished;
- ☑ Completed organization capabilities scan and what-is needed-to-reach- objectives;
- ☑ Developed macro budget;
- ☑ Designed potential business strategies and models;
- ☑ Steering committee and project team formalized.

Implementation tools

Budget template (costs)

You will find the main categories of costs to consider to plan your budget

Project team

You will find a template for the project team and steering committee

STEP 2:

GO TO MARKET STRATEGY

RECOMMENDED TIMING: One month minimum

OBJECTIVE	Define how you will seize this opportunity/ decide how you will go digital: • Select your partners/ providers for the mobile devices; • Define your market strategy (positioning, targeting, segmentation); • Define your distribution strategy; • Plan the overall project.
KEY ACTIVITIES	Partnership agreement, market strategy, distribution strategy, internal strategy, IT plan, selection of provider, recruitment of project team
DECISION	Choice of technical solution and partners

Workstream	Activity
Distribution	• Determine whether you will equip your own staff with mobile devices and have them perform transactions or need to recruit external staff. • Define the role of other channels vs roving agents, from a transaction role to a customer service role.
Technical / IT	• Define your CBS and connectivity improvement plan (if needed). • Prepare RFP: collect requirements (functionalities needed (picture, scanning, printing), type of integration, device management, online/ offline, battery, settlement and reconciliation, reporting). • Launch a RFP to identify technical providers for the mobile devices. • Shortlist your technical providers. • Define the interface options between your CBS and the mobile devices.
	Key success factors
Internal organization & operations	• Define rules for cash management of mobile staff (maximum amount they can carry, procedures for depositing cash at branches, etc.). • Identify training needed for staff (topics and categories of staff to train).
Partners	• Discuss with potential partners the main elements of the desired partnership. • Shortlist your partners/providers.
Market & Product	• Define your target groups and segment your customers if needed (female/male, rural/urban, by products, etc.). • Define range of products and services that will be available through mobile devices (loan, savings, etc.). • Define the client value proposition(s) (could be more than one for different segments targeted). • Create a simple communication campaign in clients' local language and preferably with pictorials for illiterate clients.
Financials	• Define detailed business case (revenue & cost streams).
Project Management	• Plan project as a whole including the pilot and corresponding resource allocation.

Your checklist of deliverables:

- ☑ Developed shortlist of partners
- ☑ Designed market strategy: positioning, entry, customer value proposition, product and services roadmap
- ☑ Designed distribution strategy: own or contracted staff, roadmap
- ☑ Created internal strategy: organization, job descriptions, hiring plan, training needs, incentive structure
- ☑ Completed technical roadmap validation
- ☑ RFP finalized and technical provider selected
- ☑ Detailed business case
- ☑ All stakeholders validated global project plan

Implementation tools

Technical provider grid

You will find here a short grid to assess your potential technical providers

Tips

- Involve staff from all departments in the process.
- Do not underestimate the need for buy-in of staff and the change management required to implement new tools.
- Prepare an education plan for the clients on the product itself but also on financial education.

STEP 3:

DEVELOPMENT AND PILOT PREPARATION

RECOMMENDED TIMING: One month minimum

OBJECTIVE	Prepare your detailed project management process: • Design and set-up partnerships, product, branding & marketing, distribution, organization and processes, technical solution, and monitoring scheme to successfully run services; • Define and prepare the institution motivation & capacity to run the pilot.
KEY ACTIVITIES	Build partnership, define marketing and communications strategy, identify locations for pilot, recruit staff, integrate CBS and mobile devices, set pricing and incentives structures.
DECISION	Launch pilot or not?

Workstream	Activity
Distribution	• Identify locations for pilot. • Recruit and train staff who will use mobile devices.
Technical / IT	• Select your technical provider among the shortlist. • Contract your technical provider. • Define functional specifications. • Have provider develop the interface for you if needed. • Start integration between platform and mobile devices. • Perform user tests with mobile devices.
Internal organization & operations	• Develop or refine business processes impacted by the use of mobile devices to perform transactions (process manual). • Prepare mapping of risks and mitigation strategies. • Define KPIs and monitoring scheme.
Financials	• Formalize pricing: per transaction or package, define who is paying (FSP, client). • Define incentives for roving agents.
	Key success factors
Regulation and partnerships	• Define the partnership agreements. Negotiate with business partners product and service offerings, and sign contracts. • Get regulatory approval (for piloting).
Market & Products	• Define product specifications and customer experience. • Refine the branding, communication strategy & plan for the pilot. • Design, test & produce communication material. • Start with a limited product range (eg: savings collection only).
Project Management	• Ensure project team is fully committed to the project. • Pilot implementation plan.

Am I ready for pilot to go live?

- ☑ Completed partnership agreement
- ☑ Documented approval of regulator
- ☑ Finalized marketing plan and communication material
- ☑ Identified locations for pilot
- ☑ Roving agents team recruited
- ☑ Finalized functional specifications
- ☑ Formal declaration that IT preconditions are ready
- ☑ Designed new processes
- ☑ Updated risk management process
- ☑ Completed KPIs and monitoring scheme
- ☑ Revised pricing structure
- ☑ Revised incentive structure
- ☑ Authored detailed and validated pilot implementation plan

Implementation tools

Risk mapping

You will find here a suggested list of frequent risks with impact and mitigation for inspiration

KPIs template

You will find here suggested KPIs and measurement strategies

Tips

- Anticipate and do not underestimate the impact on your organization. There will be financial, operational, and HR implications.
- Do not underestimate the time needed for integration between your CBS and mobile devices (plan at least two-three months, can go up to six-twelve months).

STEP 4:

PILOT

RECOMMENDED TIMING: Three months minimum, ideally six months

OBJECTIVE	Run pilot and prepare for launch: • Test products and services and take corrective actions; • Validate plan for the launch.
KEY ACTIVITIES	Test of all features and develop corrective actions as needed for improvement or design new features.
DECISION	Go or not? Readiness to move from pilot to national implementation.

Workstream	Activity
Distribution	• Train roving agents on delivering services via the tool. • Provide communication material for roving agents (branding, uniforms, etc.).
Technical / IT	• Plan the transition from pilot to organization-wide (route to market plan). • Improve the features or interface between CBS and devices as needed (e.g.: connection in real time, etc.).
Financials	• Verify adequacy of pricing (Too expensive for clients? Room for price increase?). • Check on fraud identification from both roving staff and clients. • Improve cash management process if needed: minimum and maximum amounts for roving agents, thresholds for depositing in branches.
Key success factors	
Regulation and partnerships	• Keep legal authorities informed of the progress. • Review pilot results with partners and manage relationships.
Market & Products	• Launch communication actions for pilot. • Test products and services and make needed corrections.
Internal organization & operations	• Adapt business process as needed. • Monitor KPIs on a daily/weekly basis. • Identify improvements needed or new features and implement on the run. • Develop incentive structure for staff/ agents.
Project Management	• Evaluate results of the pilot on a weekly and/or monthly basis and prepare improvement action plan. • Plan the commercial launch.

Tips

- Training of staff is key and can make the success or failure of the digital project. Your roving staff needs to master the operations and procedures before going into the field
- Even if approval of a regulator is not needed to launch, keep them informed.
- Perform weekly and monthly pilot assessments and take corrective actions.
- Monitor KPIs and implement changes as needed.

Am I ready for national go live?

- ☑ Pilot results (regulation conformity)
- ☑ Conducted regular pilot reviews with partner(s)
- ☑ Reviewed communication material
- ☑ Completed internal training material and reviewed results
- ☑ Devised transition plan to organization-wide.
- ☑ Reviewed fraud conformity results
- ☑ KPI follow up
- ☑ Evaluated pilot results and developed improvement action plan for follow-up
- ☑ Developed commercial launch plan

Implementation tools

At this stage, the implementation depends on the FSP. It becomes difficult to provide generic tools applicable to all FSPs.

Recommended KPIs to follow (please refer to the KPIs template for more details):

- Number of new registered customers per day and per roving agent
- Number of roving agents/ collectors
- Number of transactions per day and per roving agent
- Amount deposited per client per transaction
- Amount withdrawn per client per transaction (if applicable)

We recommend seeking support from technical assistance providers for this and the following phases. They will help you design your own customized tools.

STEP 5:

LAUNCH/ IMPLEMENTATION

OBJECTIVE	Operate the channel on a daily basis: • Check if all pre conditions for the launch have been met / assess all aspects of the service; • Formal hand-over from the project organization to the line organization, including an acceptable list "yet-to-be-done;" • Coordinate, refine and trouble-shoot the scaling up of the commercial launch and monitoring scheme.
KEY ACTIVITIES	Product expansion, scale up, strengthening, evaluation, hand over, monitoring.
DECISION	Go or not? Readiness to move from pilot to national implementation.

Workstream	**Activity**
Distribution	• Scale up (geographic expansion) / recruit additional roving agents.
Technical / IT	• Perform IT stress / capacity test: can the systems handle the predicted load? • Strengthen interface between CBS and mobile devices (real time connectivity, no manual data entry).
	Key success factors
Regulation and partnerships	• Share results of pilot with regulator. • Add additional partner/ provider if needed.
Market & Products	• Deliver intense marketing efforts. • Expand product and service offering (loan products vs savings products only at the start).
Internal organization & operations	• Evaluate the new processes. • Prepare human resource capacity plan with the upscaling in mind.
Financials	• Use the findings of the pilot to: 1) evaluate the business case, and 2) confirm or adapt the pricing.
Project Management	• Ensure project team hands over project to implementation team that will manage product on an ongoing basis. • Continue close monitoring of results.

Am I ready for implementation?

- ☑ Authorization of the regulator
- ☑ Signed contract with the new partners (if applicable)
- ☑ Identified new market segments and corresponding marketing campaign
- ☑ Developed roving agents resource policy with resource planning
- ☑ Completed final version processes
- ☑ Finalized human resource plan + KPI's
- ☑ Embedded continuous improvements
- ☑ Developed SLA for confidentiality, integrity and availability of the service / data
- ☑ Formalized incident-, problem- and change management
- ☑ Revised business case with multiple year targets (including final pricing)
- ☑ Completed back log of pending actions

Implementation tools

At this stage, the implementation depends on the FSP. It becomes difficult to provide generic tools applicable to all FSPs.

We recommend seeking support from technical assistance providers for this phase. They will help you design your own customized tools

Tips

- Even if approval of a regulator is not needed to launch, keep them informed.
- Create a feedback loop to assess (every quarter, every month, etc.) results and take corrective actions.

STEP 6:

PERFORMANCE IMPROVEMENT

RECOMMENDED TIMING: Six months minimum after launch, ideally 12 months after

OBJECTIVE	Improve performance of launched services and build a culture of continuous improvements: • Develop near-term improvement plan; • Set-up Business Intelligence to monitor service daily; • Implement corrective actions.
KEY ACTIVITIES	Assessment including interviews with clients' and staff perception of the services and new channel benefits.

Workstream	Activity
Distribution	• Align and assess the roving agents network (quantity, quality, localization, performance) and client experience through focus groups.
Technical / IT	• Evaluate the interface between CBS and mobile devices (connection, batch vs real time, loss of data). • Evaluate the connectivity of mobile devices.
	Key success factors
Market & Products	• Align customer segmentation, value proposition, and customer journey.
Internal organization & operations	• Identify efficiency opportunities in internal organization, resources, processes.
Financials	• Evaluate the business plan. • Evaluate the pricing structure and perception by clients. • Evaluate the incentive structure.
Project Management	• Based on assessments, define quick wins, near-term improvements and mid-term improvements.

Am I ready for continuous improvement?

- ☑ Revised segmentation, value proposition and customer journey
- ☑ Assessed client and roving agents' experience
- ☑ Evaluated interface and connectivity
- ☑ Revised business plan
- ☑ Pricing validated by clients
- ☑ Incentive structure validated by staff
- ☑ Plan for continuous improvement of internal processes devised



Courtesy of Sinapi Aba S&L and Opportunity International

SUMMARY:

THIS IS THE RIGHT MODEL FOR YOU IF…

YOU ARE LOOKING FOR A DIGITAL SOLUTION MEETING THESE CRITERIA:

Table 5: Key attributes of the model

6 months, up to 12 months time for implementation	POS, Phones, Tablets, Netbooks
Estimated cost: 30, 000 - 200,000 USD	Transactions enabled: Registration, Loan, Savings, Account Management
Operational efficiency • Time savings; • PAR reduction; • Reduced cost of funding; • Savings mobilization; • Convenience for costumers; • Improved customer service (proximity, rapidity)	Own staff or contracted staff

Table 6: SWOT analysis

Strengths	Weaknesses/ Challenges to anticipate	Opportunities	Threats
Possibility to use existing staff as roving agents.	Need of acquisition and installation of a suitable CBS (if not the case).	Improve the quality of services offered to customers.	Robbery of roving agents theft of equipment.
User friendly and easy-to-use application for roving agents.	Difficulty in deploying roving agents.	Increase total savings and deposits mobilized.	Risk of fraud by third party roving agents.
Integration with CBS (ideally native from the same provider).	Additional investment in equipment and HR.	Cross selling opportunities.	Dependency towards roving agent.
Model feasible without data consolidation and interconnection between agencies.	Insufficient human resources potentially (IT, marketing, etc.).	Increase effectiveness and operational efficiency.	Equipment and/or mobile application failure.
Control the price of the service (thus possibility of taking into account the financial constraints of customers).		Lower price for the customer.	Autonomy of tablets.
		Reduce the waiting time of customers at the counters.	Connectivity issue (web and/ or mobile).
		Secure operations with better tracking.	Rejection of the service by the roving agents (resistance to change).
		Create customer awareness and financial education (mostly rural and illiterate).	Rejection of the service by customers (doubt about the safety of the funds collected by the roving agents).

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 can be 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 http://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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