

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

## TOOLKIT #5: CREATE OWN MOBILE BANKING CHANNEL PART 1: BUSINESS MODEL DESCRIPTION

By PHB ACADEMY and MICROLEAD



Mobile banking agent at UOB Rwanda  
Courtesy of PHB Development

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# LIST OF ACRONYMS

<b>ADC</b>	alternative delivery channel	<b>MM</b>	mobile money
<b>AMfB</b>	Accion Microfinance Bank	<b>MNO</b>	mobile network operator
<b>API</b>	application programming interface	<b>₦</b>	Nigeria naira*
<b>ATM</b>	automated teller machine	<b>OpEx</b>	operational expenditures
<b>CapEx</b>	capital expenditures	<b>PIN</b>	personal identification number
<b>CBS</b>	core banking system	<b>POS</b>	point of sale
<b>FI</b>	financial institution	<b>RF</b>	Rwanda franc*
<b>FSP</b>	financial service provider	<b>SMS</b>	short message service
<b>HR</b>	human resource(s)	<b>SOFIPE</b>	Société de Financement de la Petite Entreprise
<b>IFC</b>	International Finance Corporation	<b>STK</b>	SIM application toolkit
<b>IT</b>	information technology	<b>UOB</b>	Urwego Opportunity Bank
<b>KPI</b>	key performance indicator	<b>UNCDF</b>	United Nations Capital Development Fund
<b>MCBL</b>	Mwanga Community Bank Limited	<b>US\$</b>	United States dollar*
<b>MFI</b>	microfinance institution	<b>USSD</b>	unstructured supplementary service data
<b>MIS</b>	management information system	<b>VSLA</b>	village saving and loan association

\*Currency symbols: UNCDF uses the currency symbol ₦ for the Nigeria naira, 'RF' for the Rwanda franc and 'US\$' or just '\$' for the United States dollar.

# DEFINITIONS

CONCEPTS	DEFINITIONS
AGENCY BANKING	Refers to when clients can transact on their mobile wallet and financial institution account either directly themselves or through assistance from a third party (e.g., agent). Note that deposits (cash-in) and withdrawals (cash-out) require an agent as intermediary. In Toolkits #3 and #4, the type of transactions and the interactions between the mobile money and the bank account are detailed.
ALTERNATIVE DELIVERY CHANNELS (ADCs)	Comprise 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-and-mortar and automated teller machines).
DIGITAL FINANCIAL SERVICES (DFS)	Refer to financial services provided to clients through alternative distribution channels (e.g., mobile, Internet, agent) that have developed over the past 10–15 years.
DIGITAL FINANCIAL SERVICE PROVIDERS (DFSPs)	Can either be financial institutions or non-bank financial institutions, such as payment service providers, mobile network operators, etc. They offer a broad range of financial services that may be accessed through digital channels and/or over the counter. Usually they recruit their own agent network.
FINANCIAL SERVICE PROVIDERS (FSPs)	Comprise banks, mobile network operators and financial institutions that provide financial services to clients.
MOBILE AS A SERVICE	Refers to financial transactions performed using mobile technologies (e.g., mobile phone, tablet) that impact the account of the financial service provider.
MOBILE FINANCIAL SERVICES (MFS)	Refer to financial services provided to clients through mobile phones and mobile devices (e.g., tablet). The term is gradually being replaced with digital financial services, which is a broader term that also covers other distribution channels.
MOBILE BANKING	Comprises financial transactions performed via mobile technologies by the client him/herself, directly on the client's financial institution account (e.g., account balance check, loan reimbursement). Note that deposits (cash-in) and withdrawals (cash-out) still require an agent as intermediary. In Toolkits #5 and #6, the type of transactions and the interactions between the mobile money and the bank account are detailed.
MOBILE NETWORK OPERATORS (MNOs)	Refer to companies that have a government-issued licence to provide telecommunications services through mobile devices. Mobile penetration rate is measured by the number of SIMs in circulation as a percentage of the total national population. <sup>a</sup>
NON-BANK FINANCIAL INSTITUTIONS (NBFIs)	Comprise microfinance institutions, savings and credit co-operatives and microfinance banks, as opposed to mobile network operators and traditional banks, that provide financial services to clients.

CONCEPTS	DEFINITIONS
AGENT	Refers to 'any third party acting on behalf of a bank, mobile network operator or other financial service provider to deal directly with customers.' <sup>a</sup>
CASH-IN/CASH-OUT (CICO)	'Cash-in is the exchange of cash for electronic value (e-money); cash-out is the exchange of electronic value (e-money) for cash.' <sup>a</sup>
ELECTRONIC MONEY (E-MONEY)	Is 'a monetary value represented by a claim on the issuer that is stored in electronic form, including magnetic; issued immediately against delivery of funds of an amount not less than the monetary value issued; and accepted as means of payment by persons or entities other than the issuing institution.' <sup>a</sup>
E-MONEY ISSUERS	Comprise 'banks, financial institutions specialized in payments (or payment institutions), authorized microfinance institutions and other authorized non-financial institutions, which have been authorized by BCEAO [Banque Centrale des Etats de l'Afrique de l'Ouest] as EMEs [e-money establishments].' <sup>a</sup>
ELECTRONIC WALLETS (E-WALLETS)	Comprise 'electronic accounts that clients can manipulate directly to send payments to other wallets or merchants.' <sup>a</sup>
FLOAT	Is 'the balance of e-money, or physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash-in) or sell (cash-out) electronic money.' <sup>a</sup>
KNOW YOUR CUSTOMER (KYC)	Comprises 'a set of due diligence measures undertaken by a financial institution, including policies and procedures, to identify a customer and the motivations behind his/her financial activities. KYC is a key component of anti-money laundering/combating the financing of terrorism efforts.' <sup>a</sup>
OVER-THE-COUNTER (OTC) TRANSACTIONS	'Occur when clients hand cash to or receive cash from agents, who execute transfers electronically on behalf of senders and receivers. In such transactions, clients do not need to have their own e-wallets.' <sup>a</sup>

# DEFINITIONS

CONCEPTS	DEFINITIONS
CORE BANKING SYSTEM (CBS)	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. <sup>b</sup>
ENHANCED DATA RATES FOR GSM EVOLUTION (EDGE)	Is a technology that can provide up to three times the data capacity of general packet radio services. 'EDGE enables the delivery of more demanding mobile services, such as ... multimedia messaging, full web browsing and e-mail on the move.' <sup>c</sup>
GENERAL PACKET RADIO SERVICES (GPRS)	Is a broadly deployed wireless data service, which 'enables people to enjoy advanced, feature-rich data services, such as e-mail on the move, multimedia messages, social networking and location-based services.' <sup>d</sup> The data system charges based on volume of data transferred, instead of billing per minute of connection time.
MANAGEMENT INFORMATION SYSTEM (MIS)	Is the entire back-office system, including portfolio management and reporting. It is broader than a core banking system, which is for capturing and processing data. As described by the World Bank, it is a system that helps management make, carry out and control decisions. They 'capture and store data, process data to produce meaningful and relevant reports, and support operations by enforcing defined processes and providing an audit trail.' <sup>e</sup>
MOBILE POINT OF SALE (mPOS)	'Is a smartphone, tablet or dedicated wireless device that performs the functions of a cash register or electronic point of sale terminal.' <sup>f</sup>
POINT OF SALE (POS)	Is a device that interfaces with payment cards to make electronic fund transfers. It is also known as a payment terminal, POS terminal, credit card terminal, or electronic fund transfer at POS terminal.
UNSTRUCTURED SUPPLEMENTARY SERVICE DATA (USSD)	Is a communications service controlled by mobile network operators. It is accessed from any mobile phone by dialling a number that starts with * and ends with #. It opens a session enabling the user to perform transactions such as mobile payments.
VALUE ADDED SERVICE (VAS)	Is 'a popular telecommunications industry term for non-core services of mobile network operators.' <sup>g</sup>

CONCEPTS	DEFINITIONS
VIRTUAL PRIVATE NETWORK (VPN)	Is a network that is constructed using public wires—usually the Internet—to connect to a private network, such as a company's internal network. There are a number of systems that enable the creation of networks using the Internet as the medium for transporting data.
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 Raksha Vasudevan with others, 'Market System Assessment of Digital Financial Services in WAEMU,' CGAP Working Paper, pp. xxi–xxiii (Washington DC, CGAP, 2016). Available from <http://www.cgap.org/publications/market-system-assessment-digital-financial-services-waemu>

b Gartner, 'IT Glossary: Core Banking System.' Available from <http://www.gartner.com/it-glossary/core-banking-systems/> (accessed April 2017).

c GSMA, 'EDGE.' Available from <http://www.gsma.com/aboutus/gsm-technology/edge> (accessed April 2017).

d GSMA, 'GPRS.' Available from <http://www.gsma.com/aboutus/gsm-technology/gprs> (accessed April 2017).

e Lauren Braniff and Xavier Faz, *Information Systems: A Practical Guide to Implementing Microfinance Information Systems*, p. 2 (Washington DC, CGAP/The World Bank, January 2012).

f Margaret Rouse, 'Definition: mPOS.' Available from <http://searchcio.techtarget.com/definition/mPOS-mobile-point-of-sale> (accessed April 2017).



# INTRODUCTION: OVERVIEW OF THE TOOLKIT PROJECT

Delivery channels have evolved drastically over the past 10 years from traditional delivery channels that were mainly physical locations, such as bank branches or automated teller machines, towards alternative delivery channels, also often called digital channels. The latter encompass Internet banking, mobile banking and agent banking.

In the past, traditional channels could theoretically provide the full range of financial services to clients, whereas alternative delivery channels/digital channels could only provide limited services (cash-in/out in the case of mobile network operators, deposits/withdrawals in the case of financial institutions), balance enquiries, payments and transfers. This vision is less and less accurate as alternative delivery channels/digital channels 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 sale devices, mobile phones, tablets and notebooks are now enabling transactions anywhere, anytime. The technology is the means for transactions, whereas alternative delivery channels are the means of distribution. As pointed out in the 2015 International Finance Corporation *Handbook: Alternative Delivery Channels and Technology*, this distinction (technology versus channels) is fundamental.

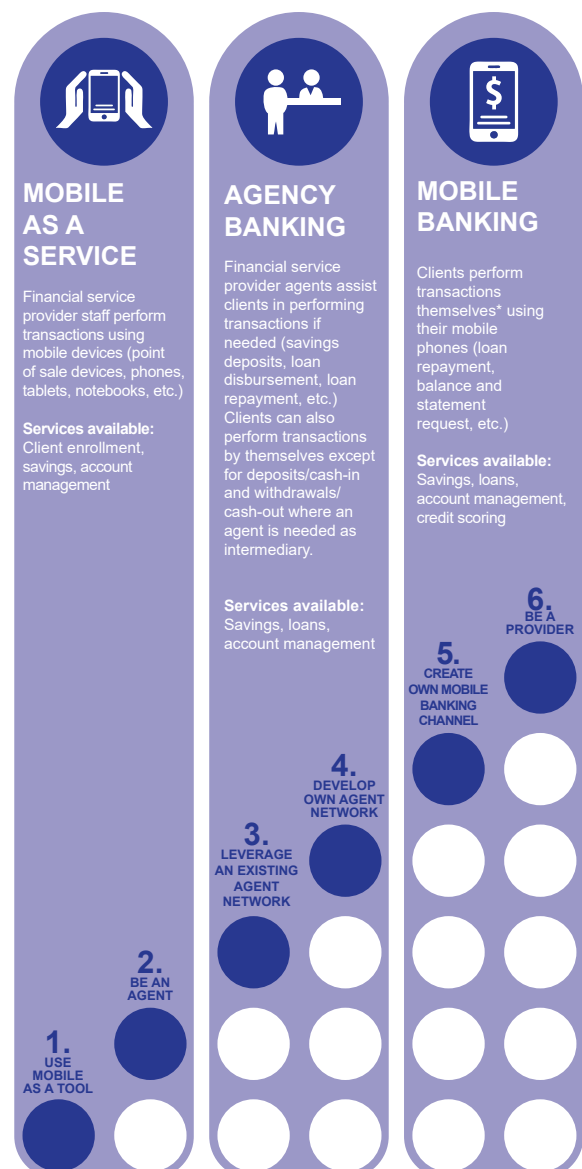
Another fundamental distinction is the critical difference between financial institutions and mobile network operators when it comes to digital finance transactions. Financial institutions 'own' the funds and hence prefer storing value (making money out of intermediation), while mobile network operators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

## MicroLead toolkit project

PHB Academy is supporting MicroLead, a United Nations Capital Development Fund global initiative, in releasing a series of toolkits designed for financial service providers to succeed on 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 the experience of MicroLead and PHB with over 100 digital financial service implementations.

## Six-step business framework

Six possible business models have been defined for financial service providers eager to go digital (see the figure). The business models are conceived as different steps financial service providers can take on their digital journey. Financial service providers are free to start anywhere in this framework but should be conscious that, the higher up they decide to start in the journey, the greater the efforts to bear.



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

The first two business models of this framework consist of using mobile as a service, where basic transactions are performed by staff of the financial service provider using mobile devices. They are described in 'Toolkit #1: Use mobile as a tool' and '#2: Be an agent.' Models 3 and 4 describe agency banking, where agents (of a mobile network operator, payment service provider or financial institution) assist 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. They are described in 'Toolkit #3: Leverage an existing agent network' and '#4: Develop own agent network.' Models 5 and 6 describe mobile banking, where clients transact directly on their financial institution account, performing the operations themselves using their mobile phones. They are described in 'Toolkit #5: Create own mobile banking channel' and '#6: Be a provider.'



## OVERVIEW OF TOOLKIT 5

This toolkit is the **fifth** in a series of six toolkits aimed at supporting financial service providers to integrate digital channels into their service delivery approaches.

It describes the fifth model a financial service provider can choose: **to create its own mobile banking channel internally**. As defined in a CGAP publication, 'mobile banking is the delivery of financial services outside conventional bank branches using mobile phones and nonbank retail agents.'<sup>4</sup> In this model, a financial service provider invests in a mobile banking platform to enable its clients to perform a range of transactions from their mobile phone. (The financial service provider's own agents are used as cash-in/cash-out points.) Transactions impact the core banking system (CBS) in real time and require an integration between the CBS and the mobile banking platform.

The authors use the following definition of mobile banking: the use of a mobile handset as a channel to access/perform financial transactions on an account that has been opened at a financial institution.

This toolkit is composed of two documents:

- This document, 'Part 1: Business model description,' describes the business model and recipe for success. Two international cases, featuring Accion Microfinance Bank (AMfB) in Nigeria and Urwego Opportunity Bank (UOB) in Rwanda, illustrate how to successfully implement this model.
- The document 'Part 2: Case studies' describes the detailed case of three MicroLead partners that have developed their own mobile banking channel: Equity Bank in the United Republic of Tanzania, Mwanga Community Bank Limited (MCBL) in the United Republic of Tanzania and Fidelity Bank in Ghana.

In this toolkit, the authors make a clear difference between financial service providers (FSPs) and financial institutions (FIs; banks or non-banks).

FIs are a form of FSP. FSPs are broader and cover FIs, mobile network operators (MNOs) and payment service providers.

When the term 'FI' is used in this toolkit, the authors refer specifically to financial institutions and non-bank financial institutions but NOT to MNOs and payment service providers.

While in many cases an FI would offer both agency banking and mobile banking, this toolkit focuses on mobile banking. Note that, as deposits (cash-in) and withdrawals (cash-out) still require an agent as intermediary for a mobile banking service, the FI can decide to either leverage an existing agent network (as explored in Toolkit #3) or develop its own agent network (as described in Toolkit #4).

In this toolkit, the authors go further than mobile banking operations, which are partially covered in Toolkit #3 in the case studies of UGAFODE in Uganda and SOFIPE (Société de Financement de la Petite Entreprise) in Burkina Faso. Mobile banking operations covered in Toolkit #3 include loan disbursements/repayments and deposits. The FIs discussed leveraged existing agent networks and mobile banking platforms of MNOs to enable clients to perform these transactions. In this toolkit, however, the authors cover a wider range of transactions and discuss FIs that chose to create their own mobile banking channel/platform, including an agent network, instead of leveraging an existing mobile banking system for loan transactions and savings or an agent network as described in Toolkit #3.

The authors recommend reading Toolkit #3 and Toolkit #4 prior to this one. In addition, as suggested in a [briefing note](#) (see Appendix B: Key reference publications) published to accompany the entire series of toolkits, the authors recommend reading the following: [Mobile Money Toolkit](#) by International Finance Corporation (IFC) (2014); [Alternative Delivery Channels and Technology Handbook](#) by IFC, Mastercard Foundation and Software Group (2015); [Agent Management Toolkit](#) by CGAP (2011); [Digital Financial Services Toolkit for Financial Institutions](#) by Accion International (2016); and [Digital Financial Services and Risk Management Handbook](#) by IFC and Mastercard Foundation (2016).

**Disclaimer:** Although digital financial services and mobile banking services in particular have developed throughout the world, this series of six toolkits focuses only on cases in Africa, where most partners of MicroLead and Mastercard Foundation operate. References to Asian and South American examples are occasionally made, yet the focus is mostly on Africa, which is also where digital financial services started and where experience already allows lessons to be learned.

<sup>4</sup> Kabir Kumar, Claudia McKay and Sarah Rotman, 'Microfinance and Mobile Banking: The Story So Far,' CGAP Focus Note No. 62, p. 1 (Washington DC, CGAP, July 2010). Available from <http://www.cgap.org/sites/default/files/CGAP-Focus-Note-Microfinance-and-Mobile-Banking-The-Story-So-Far-Jul-2010.pdf>

## SECTION 1: EXECUTIVE SUMMARY

Mobile banking is defined here as the use of a mobile handset as a channel to access/perform financial transactions on an account that has been opened at an FI.

Although mobile banking developed for high-end customers who can deposit into and transfer between accounts without using an agent, here the authors refer only to mobile banking for un/underbanked populations. As stated in a CGAP publication from 2010 and which is still true in 2017, 'most m-banking services used by commercial banks focus on existing (often up-scale) customers who want more convenience, as opposed to bringing the unbanked into the financial system.'<sup>5</sup>

Note that deposits (cash-in) and withdrawals (cash-out) for a mobile banking service still require an agent as intermediary. An agent refers here to any third party acting on behalf of a bank, MNO or other FSP to deal directly with customers.

In this model, **transactions are always initiated by the client on his/her mobile phone**. Contrary to the first model (see 'Toolkit #1: Use mobile as a tool') in which the staff member is the one using the mobile device to perform transactions or previous models in which the client is assisted by an agent, in this model the client is responsible for conducting his/her own transactions directly on his/her mobile phone. This model requires the client to have a (bank) account and then to interact directly with his/her account through a mobile device. The customer most often accesses the account through a USSD (unstructured supplementary service data) menu of the FI on his/her mobile phone. In general, the client can conduct the following transactions:

1. Deposits: wallet2bank transfers (mobile money [MM] account to bank account)
2. Withdrawals: bank2wallet transfers (from bank account to MM account)
3. Loan disbursements and repayments (using the same logic of bank2wallet and wallet2bank transfers)
4. Inter- and intrabank transfers
5. Instant loan applications

6. Account information access (account statements, balances, etc.)
7. Other products such as bill payments directly from the mobile bank account (electricity, water, DSTv, etc.)

Transactions are recorded directly on the FI CBS (or via middleware). It should be noted that some FIs have a separate 'CBS Lite' for their financial inclusion accounts in order to save money.

Mobile banking does not allow the following:

1. Cash-in/Cash-out, which is done with an agent
2. Account-opening, which is normally done at a branch though the agent may collect the application form and know-your-customer documentation (depending on regulation)
3. Foreign exchange transactions

For an FI, the benefit of investing in mobile banking technology is to provide access to a wide range of financial services to clients who can access the services 24/7 on their mobile phone from the convenience of home. In essence, the model increases the number of financial access points (the number of registered clients) in a cost-efficient way (even though initial investment is high<sup>6</sup>), as opposed to using salaried, roving staff (as in Toolkit #1) or investing in an agent network (as in Toolkits #3 and #4). However, in many instances, the FI **also** invests in an agent network, either its own or through partners, and/or has roving staff.

An FI that wishes to offer clients the opportunity to conduct mobile banking must invest in platform capacity. The FI can do so via one of these options:

1. Adding the mobile banking functionality from its existing CBS vendor
2. Buying an off-the-shelf (middleware) platform and interfacing with the CBS
3. Developing/Customizing its own platform

5 Ibid, p. 2.

6 For it to be a cost-effective investment, the FI needs a very high volume of transactions to reach economies of scale.

5

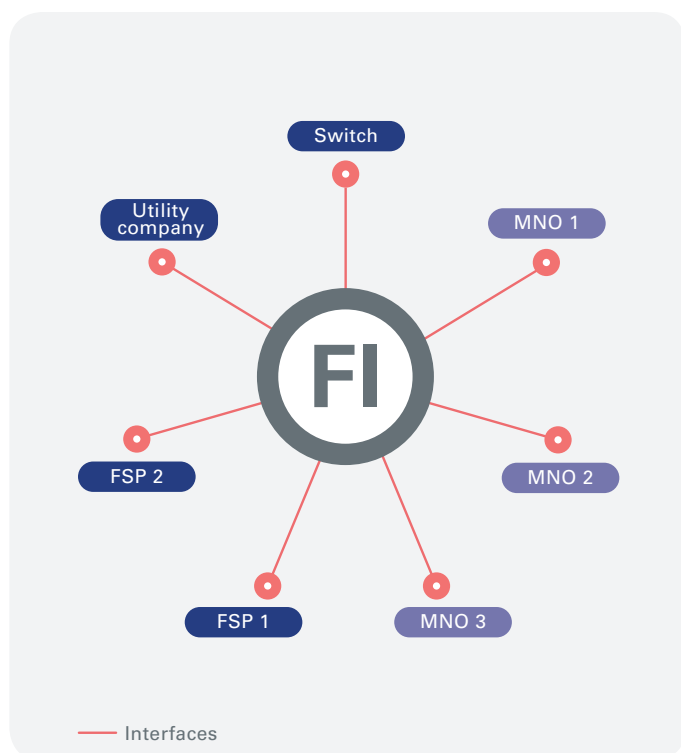
These options are detailed in the technology part of this toolkit. Whichever option an FI chooses, it is imperative to have **real-time connectivity** between the USSD menu (the mobile banking functionality in which the FI has invested) and the CBS, which means the CBS must be capable of real-time transactions. The mobile banking platform must also interface with the MM platforms of MNOs for bank2wallet/wallet2bank functionality. This connectivity can be achieved via robust middleware linked to the CBS, yet nowadays more and more CBS integrate the middleware function. Additionally, the FI should have a USSD code that can be accessed on any phone network (combined USSD and wallet access can represent a large part of the financial and technical investments the FI must make). Clients may only be able to access the service on one network in some instances, though it may only be the case at roll-out. The FI must interface with FSPs as well if it wishes to offer its clients the opportunity to, for example, buy airtime, pay bills and conduct MM

transfers. In every instance, the platform must have a user interface that takes into account the wide variety of mobile phones on the market, from the basic feature phone to the smartphone.

There are two API (application programming interface) models with FSPs from which an FI can choose:

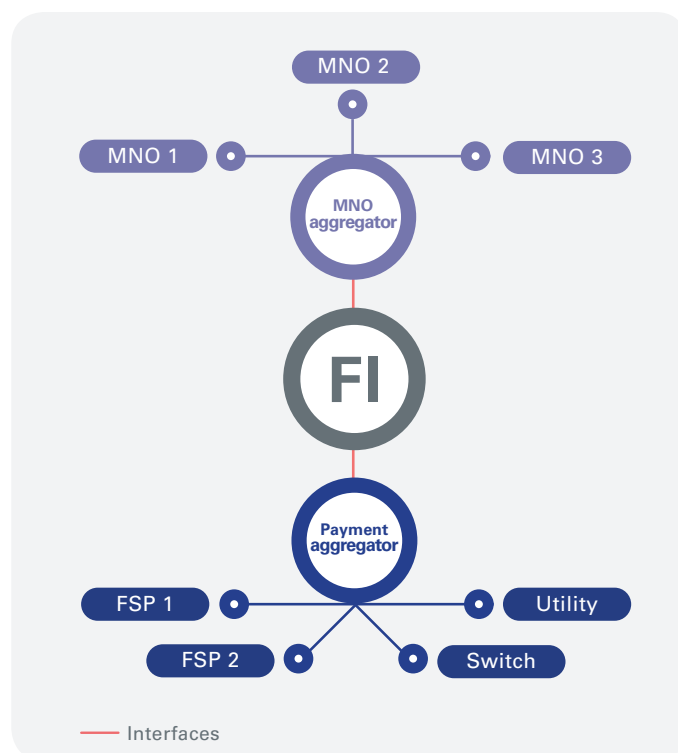
1. Develop an API interface with each partner on a one-on-one basis (e.g., to a switch, MNO, FSP, utility company; see figure I, as indicated by the red lines)
2. Develop one or more interfaces with the following (see figure II):
  - a. Payment aggregators (e.g., aggregating switches, FSPs, automated teller machine [ATM]/point-of-sale [POS] networks, utility companies)
  - b. MNO aggregators

**Figure I: Interface model 1: Interface with each partner**



The main advantage of interface model 1 is that there is no third party (aggregator), and the fee charged to the client is split only between the FI and the partner. As such, revenues are higher for the FI with this model. The main disadvantage is that the FI must sign an individual partnership or commercial agreement with each partner, which is a highly time-consuming effort and can be quite difficult for a small/mid-size FI with limited bargaining power and resources available to dedicate to this task.

**Figure II: Interface model 2: Interface with aggregators**



The main advantage of interface model 2 is that the FI can offer a broad range of partners' services to clients quickly, as the interfaces are already established. The main disadvantage is having an intermediary between the FI and the partners, which takes its share of the revenues and can complicate the relationship if responsibilities of each stakeholder are not very clearly defined.

An FI that wishes to embrace mobile banking should be aware that it requires considerable planning, financial investment, human resources (HR), organizational and operational change, technical expertise and time; for this reason, creating one's own mobile banking platform is only recommended for microfinance institutions (MFIs) with significant resources and a stable infrastructure. However, for those FIs that do have the financial muscle, mobile banking does give them complete control over fees, service quality, branding and product range since there are no third parties facilitating the transactions with the customers (except agents when needed to provide cash-in/cash-out services). Developing a mobile banking platform requires an estimated US\$1 million to US\$3 million. It represents a considerable investment both in time and financial resources, and none of the FIs in the case studies featured in this toolkit have reached breakeven within three to five years.

Education of clients is not to be underestimated, particularly when working in rural areas or with clients with low literacy levels. Teaching clients how to perform transactions on a mobile phone requires significant effort by an FI, and as such, the FI has to invest sizable resources in the area of customer awareness and education (e.g., field officers and marketing/training materials) and to spend time educating/training customers. For instance, SOFIPE in Burkina Faso dedicated an entire year to train its clients (on a monthly basis) to perform mobile banking transactions.

Not all FIs have the capacity or an adequate number of clients to engage in this model.<sup>4</sup> Thus, the number of FIs that have created a mobile banking channel is limited at the time of writing this toolkit and confined to large FIs and microfinance banks due to the heavy technical, financial and operational requirements (see table 1 for examples). In the case studies included in this toolkit, the authors present examples of FIs that have developed a mobile banking channel when having 120,000 clients (MCBL in the United Republic of Tanzania), 350,000 clients (Equity Bank in the United Republic of Tanzania) and 1,000,000 clients (Fidelity Bank in Ghana).

**Table 1: Examples of financial institutions that developed mobile banking in Africa**

Area	Financial institution examples	MicroLead Partners
East Africa	<ul style="list-style-type: none"> <li>AccessBank, United Republic of Tanzania</li> <li>Equity Bank, Kenya</li> <li>FINCA, United Republic of Tanzania</li> <li>National Microfinance Bank, United Republic of Tanzania</li> <li>Zemen Bank, Ethiopia</li> </ul>	<ul style="list-style-type: none"> <li>Equity Bank, United Republic of Tanzania</li> <li>Mwanga Community Bank Limited, United Republic of Tanzania</li> <li>UGAFODE, Uganda</li> </ul>
West Africa	<ul style="list-style-type: none"> <li>AccessBank, Nigeria</li> <li>Accion Microfinance Bank, Nigeria</li> <li>Diamond Bank, Nigeria (Y'ello account)</li> </ul>	<ul style="list-style-type: none"> <li>Fidelity Bank, Ghana</li> <li>Réseau des Caisses Populaires du Burkina, Burkina Faso</li> <li>Société de Financement de la Petite Entreprise, Burkina Faso (soon)</li> </ul>
Southern Africa	<ul style="list-style-type: none"> <li>Opportunity International Bank, Malawi</li> <li>Urwego Opportunity Bank, Rwanda</li> </ul>	<ul style="list-style-type: none"> <li>NBS Bank, Malawi</li> </ul>

<sup>4</sup> An FI is recommended to have more than 50,000 clients to implement this model.

## SECTION 2: DESCRIPTION OF THE BUSINESS MODEL

As seen in previous toolkits, the rise of mobile phone ownership has drastically changed the way previously unbanked clients around the world are now able to access financial services—specifically seen in the rapid rise of clients opening an MM wallet. Indeed, in many cases, the first time clients interact with the formal financial sector is through opening and using an MM wallet.

Mobile banking thus represents a means for FIs to use mobile phones as a channel for clients to access their bank account. Clients no longer need an MM account as an intermediary to access their bank account but can transact directly on their bank account from their phone, from the convenience of home.

This toolkit examines the benefits and challenges for FIs that decide to provide their own financial products and services through

a mobile banking platform, the types of partnerships they need to develop, and how mobile banking fits into developing an agent network as discussed in Toolkits #3 and #4.

### DISTRIBUTION OF AND ACCESS TO THE MOBILE BANKING CHANNEL

An FI willing to create its own mobile banking channel usually decides to also create a proprietary agent network in order to facilitate deposits/withdrawals and enable the client to transact directly on his/her FI account at an agent location. An FI has three options to do so (see also table 2):

- Option 1:** Leverage an existing network by contracting with an agent network aggregator
- Option 2:** Leverage an existing network by contracting with an existing chain of shops (not an agent network but an organized retail network)
- Option 3:** Create an agent network from scratch

**Table 2: Summary of the three options for building a proprietary agent network**

	<b>Option 1: Leverage an existing network—contract with an agent network aggregator</b>	<b>Option 2: Leverage an existing network—contract with an existing chain of shops</b>	<b>Option 3: Create an agent network from scratch</b>
Partner	Manager of an existing network of points of sales/services	An existing network of organized points of sale (e.g., post office, petrol station company, retail chain or pharmacy chain)	None
<i>Split of roles for agent network</i>			
<i>Identifying agents</i>	Partner/Super dealer in coordination with FI ANM	Partner	FI
<i>Recruiting agents</i>	Partner/Super dealer in coordination with FI ANM	Partner	FI
<i>Training agents</i>	Partner/Super dealer in coordination with FI ANM	FI	FI
<i>Managing agents</i>	Partner/Super dealer in coordination with FI ANM	FI	FI
<i>Handling liquidity management</i>	Partner/Super dealer in coordination with FI ANM and/or ALM	FI	FI

**Table 2: Summary of the three options for building a proprietary agent network (continued)**

	<b>Option 1: Leverage an existing network—contract with an agent network aggregator</b>	<b>Option 2: Leverage an existing network—contract with an existing chain of shops</b>	<b>Option 3: Create an agent network from scratch</b>
<i>Split of roles for agent network</i>			
<i>Monitoring quality</i>	Partner/Super dealer in coordination with FI ANM	FI	FI
<i>Role of ANM</i>	Monitors the agent network	Trains and monitors the agent network	Recruits, trains, manages and monitors agents
<i>Role of ALM</i>	<ul style="list-style-type: none"> <li>Plans liquidity</li> <li>Ensures reconciliation</li> <li>Manages commissions</li> </ul>	<ul style="list-style-type: none"> <li>Plans liquidity</li> <li>Ensures reconciliation</li> <li>Manages commissions</li> </ul>	<ul style="list-style-type: none"> <li>Plans liquidity</li> <li>Ensures reconciliation</li> <li>Manages commissions</li> </ul>
<i>Advantages</i>	<ul style="list-style-type: none"> <li>FI can build upon a network of service points quickly</li> <li>Partner already knows how to manage an agent network</li> <li>There is no need to identify and recruit agents one by one</li> <li>Peaks in liquidity needs (e.g., loan disbursements) can be more easily forecasted and managed</li> </ul>	<ul style="list-style-type: none"> <li>FI can build upon a network of service points quickly</li> <li>There is no need to identify and recruit agents one by one</li> <li>Peaks in liquidity needs (e.g., loan disbursements) can be more easily forecasted and managed</li> </ul>	<ul style="list-style-type: none"> <li>FI has full control over the entire agent network structure</li> <li>FI has maximum visibility across agents (who are branded and clearly identifiable as FI agents)</li> <li>FI avoids potential conflicts of interest, as in the super-dealer option</li> </ul>
<i>Disadvantages</i>	<ul style="list-style-type: none"> <li>Visibility of the FI may be reduced</li> <li>Agents may not be keen to take on an additional set of functions</li> </ul>	<ul style="list-style-type: none"> <li>The partner retail chain may not be aligned with the target client segments of the FI</li> <li>The shops may have other priorities than being the agents of the FI</li> </ul>	<ul style="list-style-type: none"> <li>It is costly and time consuming</li> <li>Multiplication of different agent networks developed by a variety of providers such as MNOs, FIs, etc. can lead to increased competition for the agents' time and liquidity</li> </ul>
<i>Cost/Benefit</i>	Revenues from both transaction fees charged and savings realized (on transactions costs, for instance) have to be in the range of \$300,000–\$1,000,000 per year to make the model profitable. Usually breakeven is not reached before year 3 at best, year 5 most often.		
<i>Investment</i>	Initial investment cost (capital expenditure) for these models is estimated at \$250,000 but can easily go up to \$500,000–\$1,000,000, depending on the investment needed for information technology and the agent network size.  Recurring cost (operational expenditure) is in the range of \$250,000–\$500,000 yearly.		

Please refer to Toolkit #4 for more details on how an FI can develop its own agent network.

Fidelity Bank in Ghana chose option 3. Third-party agents (e.g., grocery stores, supermarkets, pharmacies, phone shops) are recruited, trained and certified by Fidelity Bank to conduct basic banking transactions on its behalf and become Fidelity Bank agents (i.e., proprietary network).

An FI may also decide to use an existing agent network, in which case it is a hybrid model and not its own mobile banking channel.

Please refer to Toolkit #3 for more information on how an FI can leverage an existing agent network.

## Access of clients to the service

Depending on the distribution option (i.e., agent network) the FI chooses, the client performs transactions directly on his/her FI account using either a USSD code for the FI or a mobile app. The FI may also have wallet2bank and bank2wallet functionality; although the FI may not directly partner with an MM service provider, the FI should be aware of potential liquidity challenges involved with this functionality. In this instance, the FI is indirectly leveraging third-party agents. Please refer to the section on transactions for more details on how a client performs each transaction.

## PRODUCTS AND SERVICES OFFERED THROUGH THE MOBILE BANKING PLATFORM

Mobile banking enables FIs to offer, through clients' mobile phones, a range of services that were previously offered either in branches or via agents, such as (1) MM transfers, (2) facilitation of deposits, (3) facilitation of withdrawals, (4) loan disbursements and repayments, (5) inter- and intrabank transfers, (6) instant loan applications, (7) account information access and (8) other products such as bill payments.

### Transfers between mobile money account and bank account

These transfers only occur in the case that the FI is not creating its own mobile banking channel but rather leveraging an existing mobile banking channel. FIs understand the potential of leveraging MM transfers as a way to increase both their reach and range of products and services to new and existing clients and as a means to complement/replace (a) setting up brick-and-mortar branches, (b) investing in an ATM or POS network and/or (c) developing an agent network (though different channels can be complimentary in increasing outreach). As such, many FIs decide to partner with MM service providers in order to 'leverage' the brands and the agent networks of the MNOs (to handle cash-in/cash-out) by linking the clients' FI accounts to the MM service providers' e-wallets, which allows the clients to conduct wallet2bank and bank2wallet transactions. Table 3 lists the reasons for each stakeholder to get involved in this type of partnership; please note the authors do not discuss these reasons in detail in this toolkit since they are covered in 'Toolkit #3: Leverage an existing agent network.'

#### Wallet2bank transactions

A wallet2bank transaction is when a client transfers value from his/her e-wallet (or MM account) to his/her bank account. This transaction is considered a deposit on the FI CBS and an effective withdrawal on the e-wallet. Clients often complete this type of transaction in order to earn interest on their savings, which they generally do not earn on an MM account,<sup>5</sup> or to make a loan repayment. The MM service provider charges a cash-out/transfer fee for this service that sometimes is absorbed by the FI since the FI considers this transaction to be equivalent to a deposit, for which it does not normally charge customers. One of the reasons for the FI to subsidize this cost is to encourage clients to adopt the service. However, after some time, the FI

<sup>5</sup> A contentious issue in the industry is what happens to the interest accrued on the e-value cash equivalent that is held in a bank. Regulation differs by country. Some countries have no specific regulation, others say it should be used for corporate social responsibility type programmes. Some FSPs give an equivalent amount of interest to their clients.



Mobile banking menu

Source: Afromum, 'Co-operative Bank needs a mobile app for Mobile banking,' 10 June 2014.

**Table 3: Reasons for a mobile network operator and a financial institution to form a partnership for mobile banking**

Benefits for the MNO
• Offers existing customer base of the FI
• Adds to brand integrity/confidence
• Can be considered socially responsible
Benefits for the FI
• Leverages customer base, agent network and brand of the MNO
• Is relatively cheap
• Offers increased outreach to rural areas

may decide to pass that cost on to customers, which is what UGAFODE did in Uganda.

#### Bank2wallet transactions

A bank2wallet transaction is when a client transfers value from his/her FI account to his/her e-wallet (or MM account). This transaction is considered a withdrawal on the FI CBS and an effective cash-in on the e-wallet. Clients often complete this type of transaction in order to make a cash withdrawal with an MM agent, which may be more convenient than with an FI agent or at a branch, or to make a person-to-person transfer to someone who does not have an FI bank account. The FI may charge a withdrawal/transfer fee to its client for this service, though the MM service provider usually does not charge a fee to the FI or the client as it is the equivalent to a cash-in by the client to his/her MM wallet.

For more information on fees, please refer to 'Toolkit #3: Leverage an existing agent network, Part 2: Case studies.'

## Facilitation of deposits

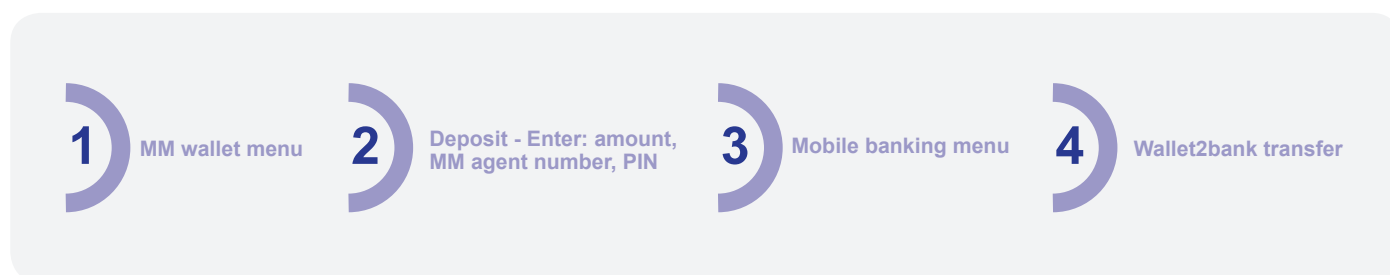
There are two options for an FI to facilitate deposits, depending on whether the FI has leveraged a mobile banking channel from an existing provider (most likely an MNO) or whether the FI has created its own mobile banking channel with a proprietary agent network. In the former case, a client performs a cash-in with an MM agent (third-party agent), requiring the client to first make a deposit into his/her MM wallet before the client pushes

the money to his/her FI bank account via a wallet2bank transfer. In the latter case, a client cashes in with an FI agent.

### *With a mobile money agent*

In a deposit transaction with an MM agent, the client goes to his/her MM wallet menu, chooses to make a deposit, and enters the amount, the MM agent number and the client's own personal identification number (PIN). The client then gives physical cash to the agent. Once the money is in his/her MM wallet, the client goes to the FI mobile banking menu, chooses the wallet-2bank function and sends the money from the MM wallet to the bank account. See figure III for a summary of this process.

**Figure III: Steps performed by customer for a deposit with a mobile money agent**

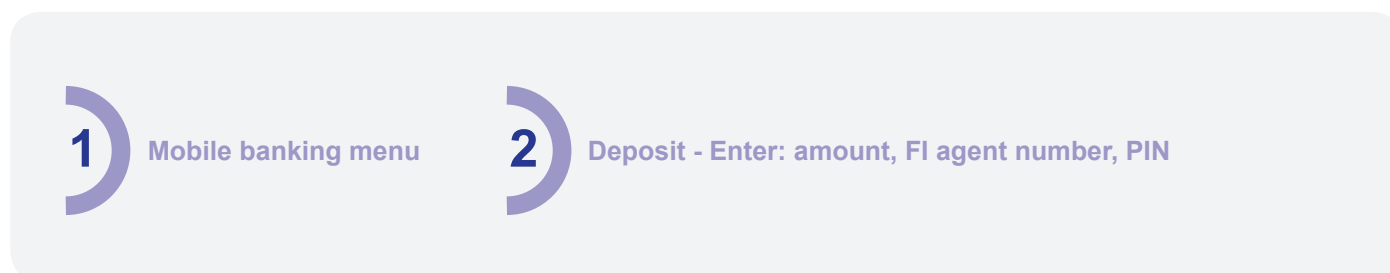


### *With a financial institution agent*

In a deposit transaction with an FI agent, the client chooses the deposit function from the FI mobile banking menu and enters the amount, the FI agent number and the client's own PIN.

The client then gives physical cash to the agent. The agent's account is debited and the client's FI account is credited. See figure IV for a summary of this process.

**Figure IV: Steps performed by customer for a deposit with a financial institution agent**



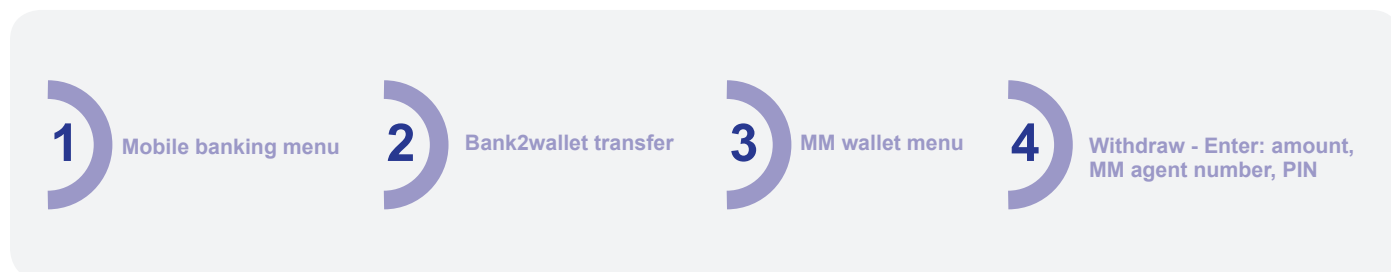
## Facilitation of withdrawals

There are two options for an FI to facilitate withdrawals, depending on whether the FI has leveraged a mobile banking channel from an existing provider (most likely an MNO) or whether the FI has created its own mobile banking channel with a proprietary agent network. In the former case, the client performs a cash-out with an MM agent (third-party agent), first pulling money from his/her FI bank account to his/her MM wallet via a bank-2wallet transfer and then cashing out with the MM agent. In the latter case, the client cashes out with an FI agent.

### *With a mobile money agent*

In a withdrawal transaction with an MM agent, the client chooses the bank2wallet function from the FI mobile banking menu. Once the money is in his/her MM wallet, the client completes a withdrawal via the MM wallet menu, entering the amount, the MM agent number and the client's own PIN. See figure V for a summary of this process.

**Figure V: Steps performed by customer for a withdrawal with a mobile money agent**

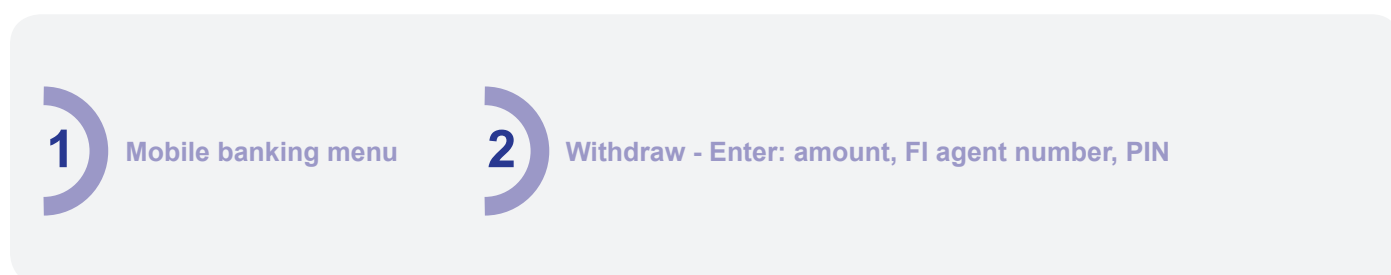


#### *With a financial institution agent*

In a withdrawal transaction with an FI agent, the client chooses the withdrawal function from the FI mobile banking menu and enters the amount, the FI agent number and the client's own PIN. The cash the FI agent gives the client is from his/her own cash liquidity resources. The agent's account is credited and the client's FI account is debited. See figure VI for a summary of this process.

Contrary to deposits, withdrawals are very often accompanied by a client fee (whether with an FI agent or an MM agent). The fee is usually deducted automatically from the client's FI account or MM wallet respectively. It is usually shared between the FI and the agent (in the form of a commission) and MNO (in the case of an MM withdrawal).

**Figure VI: Steps performed by customer for a withdrawal with a financial institution agent**



### **Loan disbursements and repayments**

In a loan disbursement, the FI credits a client's FI account with an approved loan amount, which can be withdrawn by the client at his/her convenience directly at an agent outlet and which follows the same logic as a withdrawal previously described (either directly from his/her FI account with an FI agent or via a transfer to his/her MM wallet and then a cash-out with a third-party agent). The loan can be withdrawn all at once or in several instalments. The FI needs to carefully plan for liquidity with agents, as discussed later in this document.

In a loan repayment, the client deposits a loan instalment (amount due) in his/her account. The client can repay in one or several instalments. It can either be done via (a) MM cash-in and then wallet2bank transaction, in which case the customer is the one doing the transfer between the MM account and the bank account, or (b) deposit with an FI agent directly into his/her account. The loan repayment then either automatically debits on the loan repayment date or the client does a 'manual' early loan repayment via the mobile banking menu, if the FI offers that functionality.

For both loan disbursement and repayment, the FI may wish to restrict which agents provide this liquidity service and indeed provide special liquidity management support, as not all agents are capable of handling such volume or value of transactions.

### **Inter- and intrabank transfers**

A transfer through mobile banking is when the sender's bank account at the FI is debited a given amount and the receiver's bank account is credited by the same amount. No MM account is involved in this process. These transactions are made possible only when the FI has created its own mobile banking channel, not using an MM wallet as intermediary.

Whether account-to-account money transfers are only allowed within the same FI, or also between different FIs, depends on whether the national payment system allows for bank interoperability (e.g., through a national payment switch).

## Instant loan applications

The idea of this service is to enable the customer to request a loan from the mobile banking menu and for the FI to be able to instantly score the customer and respond to the application.

One of the objectives of an FI to go digital is to collect digital data on customer behaviours through their saving and borrowing patterns via one of these approaches: (a) through FI staff devices (as described in 'Toolkit #1: Use mobile as a tool'), (b) through partnerships with MNOs for loan disbursement and repayment (as explained in 'Toolkit #3: Leverage an existing agent network'), or (c) by building its own mobile banking channel, which will ultimately provide the FI with a set of digital data that can be used to score a credit application submitted by a customer using the mobile banking interface. Although this service is a goal of several FIs, none has achieved it as of the writing of these toolkits (though it is in the pipeline and near to implementation for some).

For now, FIs are increasingly looking to launch mobile saving and loan products in partnership with MNOs. In this scenario, the FI takes on the loan loss risk and has the regulatory approval while the MNO provides a large potential client base, has the mobile channel connectivity and offers the MM service, meaning customers can withdraw MM from a nearby agent. This model is described in Toolkit #6. As is the case for Equity Bank, the FI may ultimately want to become a mobile virtual network operator<sup>6</sup> and thus be able to provide the entire service by itself (without an MNO). This approach is also described in Toolkit #6.

Mobile savings and loans are enabled by instant credit scoring, which is based on algorithms that use enterprise and mobile data sources. So far, the typical mobile banking loan product has a repayment length of one month and charges interest that is higher than for a normal loan. The higher interest is due to the following factors: (a) though it is for a short period of time, a similar amount of administration costs are incurred as for a bigger loan; and (b) it is a riskier loan, as a result of the decision being based on mobile data and the FI perhaps not having previously interacted with the applicant through branch operations.

One key data point used in the algorithms to determine a client's credit-worthiness is the client's savings behaviour. Loans and savings are often linked, with the FI using the loan product to encourage clients to save and thus to mobilize savings and reduce the cost of funding for the FI.

Two of the most well-known examples of these saving and loan products are M-Shwari in Kenya, a product co-launched by an MNO (i.e., Safaricom) and a bank (i.e., Commercial Bank of Africa), and Equitel in Kenya.<sup>7</sup> Several others are currently under development from MNOs in partnership with banks or FIs, from FIs themselves, or from other FSPs (e.g., Musoni Kenya). They are discussed further in Toolkit #6.

## Account information access

Mobile banking allows an FI client to access information about his/her bank account, such as through balance enquiries (savings and loans) and account statements (full statements or mini-statements with the last three to five transactions). Sometimes these services are free; other times the FI offers a limited number of free enquiries per month, after which a fee is charged.

The menu also gives the client the functionality to call the FI call centre for any non-menu queries or complaints.

## Other products

Depending on regulation on the one hand and the business case on the other, the FI may launch other services via mobile banking, such as bill payments and airtime purchases.

## FEES FOR MOBILE BANKING TRANSACTIONS

The customer pays a fee for some of the mobile banking transactions he/she conducts. The customer fee structure may follow one of three models: (a) flat, (b) percentage of the transaction value or (c) tiered (see table 4 for more detail on these models). A flat fee per transaction is usually used for activities such as completing intrabank transfers or checking balances. A percentage fee is normally used when the customer completes withdrawals. A tiered fee is typically used to make the fees easier for the client to remember.

Note that examples of fees can be found in the case studies.

<sup>6</sup> A mobile virtual network operator provides mobile services to end users without possessing its own radio spectrum licence or operating the infrastructure (i.e., base stations, switches and gateway with the home location register). A bank in this case buys, leases or partners with an MNO to use the excess capacity of its existing network and can issue its own SIM cards.

<sup>7</sup> Daily Nation, 'Equitel loans hit Sh4bn, says Equity Bank,' 17 September 2015. Available from <http://www.nation.co.ke/business/Equitel-loans-hit-Sh4bn-says-Equity-Bank/996-2874774-rmdfxb/index.html>

13 **Table 4: Fee models by transaction type**

	Flat fee	Percentage fee	Tiered fee
Description	Charges a single fixed fee for a service, regardless of usage (e.g., \$1 per transaction)	Charges a percentage of the transaction amount	Charges a higher amount as the transaction amount increases; tiers are defined by transaction amount and then by pricing (e.g., \$1 fee for transactions from \$10 to \$50, \$2 fee for transactions from \$50 to \$100)
<b>Transaction type</b>			
Account-opening	No fee	No fee	No fee
Deposit	No fee	No fee	No fee
Wallet2bank transfer	n/a	n/a	Customer pays fee to MNO, though bank may absorb it
Bank2wallet transfer	n/a	n/a	Customer pays fee to bank
Intrabank transfer	Often a combination of flat fee (as per regulation) and percentage of value (often up to a maximum amount)	n/a	n/a
Interbank transfer	X	n/a	n/a
Account information	X	n/a	n/a
Main advantage	Is easy to communicate to customer	Charges a consistent percentage regardless of value	Becomes progressively cheaper (as a percentage) as value goes up
Main disadvantage	Is disproportionately expensive for low-value transactions compared to high-value transactions	Can be difficult for customer to calculate actual cost	May seem unfair to customer depending on whether transaction is in the lower or upper bracket of the tier (e.g., \$1 for the \$10–\$50 tier may seem very expensive for somebody transferring \$10 and cheap for someone transferring \$50)

## PARTNERSHIPS AND/OR COMMERCIAL AGREEMENTS FOR MOBILE BANKING

At a minimum, the FI must have a commercial agreement with one MNO, so that customers have connectivity to their account via their phone; however, the FI often signs commercial agreements with all MNOs in the country. Connecting to multiple MNOs might be achieved through an MNO aggregator (as discussed in a later section).

The FI needs partnerships/commercial agreements<sup>8</sup> for the following:

- Its mobile banking platform
- Its short message service (SMS) platform
- Linkage of a mobile wallet to the FI bank account
- Any service payment (e.g., bills, utilities, goods) that the FI wants to offer via mobile banking

If the FI wants to offer partner services (bank2wallet transactions, utility payments, airtime purchases, etc.), then it must also develop partnerships, though again it may decide to go through an aggregator—in this case, a payment aggregator. See the section on technology regarding partner interface for more details.

## TECHNOLOGY USED FOR MOBILE BANKING

A CGAP publication summarizes some of the technology needs for mobile banking: ‘Developing a technological solution is time consuming and expensive. First, the bank’s own banking software must have the ability to be integrated with an m-banking platform. Second, the phone’s interface with the bank (e.g., SMS, USSD, STK [SIM application toolkit], etc.) must be selected. Finally, the interface or middleware between the management information system (MIS) and the customer-facing application must be developed.’<sup>9</sup>

<sup>8</sup> The difference the authors make between a partnership and a commercial agreement is that a partnership involves revenue-sharing. In this business model, most often there is no revenue-sharing.

<sup>9</sup> Kumar, McKay and Rotman, ‘Microfinance and Mobile Banking: The Story So Far,’ p. 3.

## Selecting a mobile banking platform

The FI must, at a minimum, have a computerized CBS/MIS and robust middleware, which needs to be centralized with a virtual private network connection between headquarters and branches.

If the FI does not meet that minimum, the FI needs to upgrade its MIS to be able to integrate with the mobile banking platform. Upgrading its system cost Opportunity International Bank in Malawi more than \$100,000 and lasted over one year, before it was able to add its mobile banking module.

If the FI does not already have a mobile banking module in its CBS/MIS, then it is necessary that the FI (a) buy this additional functionality from its existing vendor(s) if the vendor platform has this functionality, (b) tender for a new vendor, or (c) develop its own platform. For each option, a suitable interface is necessary, which thus requires the CBS to have that minimum interfacing capability (i.e., API functionality); otherwise, the FI must buy a new CBS. Some mobile banking platform vendors include ACI, FIS, Fiserv, Infosys, Jwaala, mobiquity, Monitise, NCR, Oracle, SAP, Temenos and Wipro.

A list of business and technical requirements needs to be developed to ensure that potential vendors match the needs of the FI.

Besides the mobile banking platform needing to interface with the MNO and payment partner platforms, the mobile banking platform should also be able to issue reports and easily change fee and commission calculations.

## Selecting a customer interface

### Mobile phones

When considering mobile banking, it is important for an FI to remember that clients use their mobile phone to access the mobile banking service and that clients use a wide range of mobile phones, from the basic to the very advanced. Different devices have different capabilities and require different levels of data transfer. The platform must be able to cater to different data transfer levels:

- 2G/EDGE (Enhanced Data Rates for GSM Evolution) allows for voice, SMS and USSD; works with traditional phones/smartphones and tablets (only text)
- GPRS (general packet radio services) allows for light data transfer and can transfer very light media files
- 3G/4G works with the above and can transfer photos/signatures/biometrics
- WiFi

The FI must choose a mobile banking platform that caters to these different devices that its clients would use, making sure the platform is compatible with the most basic of feature phones as well as the most advanced of smartphones.

### Phone interface with the bank

As seen in other toolkits, selecting one technology channel over another depends on a series of factors, such as quality of mobile network, compatibility with available devices, user experience, security, cost and ease of deployment.

The main communication channels available for mobile banking are those listed below, and it is likely that the FI would use a combination of these channels so as to be accessible on the maximum number of its clients' phones (i.e., USSD for feature phones and native apps for smartphones):

- **Unstructured supplementary service data (USSD):** Most large-scale digital FSPs in developing countries, particularly MNOs, rely on USSD as their primary connectivity channel with agents or clients.<sup>10</sup> USSD messages travel over GSM (Global System [or Standard] for Mobile) signalling channels and are used to query information and trigger services. It opens a real-time session between the application for the service and the mobile phone. USSD exchanges are not stored on the network (unlike SMS). Depending on the country, the FI can apply to get its own USSD code or must use that of an MNO or other provider. Examples of banks using USSD include Ecobank, Standard Bank and United Bank for Africa in all operations.
- **SIM application toolkit (STK):** STK-based interfaces comprise a set of commands programmed onto the user's SIM card. The menu for accessing the commands is embedded in the SIM card and accessible on the phone's menu. Examples include Bank Islam Malaysia and Industrial and Commercial Bank of China. In Africa, STK is mostly used for MM (e.g., Airtel in Malawi, Equitel in Kenya and M-Pesa in Kenya).
- **Native applications:** IFC explains these applications thus: native applications 'are manually installed on the phone and run in almost the same way as a computer program installed on a PC [personal computer]. Native apps depend on the operating system on which the mobile phone runs, for example, Android, iOS or Windows. Native applications can be developed to serve as a user interface for staff, agents or customers.'<sup>11</sup> These applications can be used by clients with

10 Michel Hanouch and Gregory Chen, 'Promoting Competition in Mobile Payments: The Role of USSD,' CGAP Brief (Washington DC, CGAP, February 2015). Available from <https://www.cgap.org/publications/promoting-competition-mobile-payments-role-ussd>

11 IFC, *Handbook: Alternative Delivery Channels and Technology*, p. 19 (n.p., 2015). Available from <http://www.ifc.org/wps/wcm/connect/5d99c500477262e89844fd-299ede9589/ADC+Handbook++2014.pdf?MOD=AJPERES>

smartphones. Examples include Bank of Africa, Commercial Bank of Africa and United Bank for Africa.

- **Internet/Web applications:** Through a mobile, wireless or fixed-line Internet connection, clients can open a webpage to access the services. Examples include Barclays, First Merchant Bank and First National Bank.

### *Short message service receipts*

It is critical for an FI to build clients' trust in the mobile banking channel, especially since clients do not have direct contact with FI staff or even an FI agent (e.g., when doing a balance enquiry); thus, they may be very wary at the start of the service to conduct such sensitive transactions. As such, it is very important that, at the completion of each transaction, the client receive an SMS receipt/transaction confirmation.

Depending on the model for providing transaction confirmations, it may be necessary for the FI to interface with an SMS gateway so that an SMS is automatically sent upon completion of a transaction. Negotiating this partnership/service with an MNO may be both time consuming and costly. However, it is also possible for the FI to interface with a third-party bulk SMS provider (e.g., Bulksms.com, Clickatell, Nexmo and Route SMS). The usual model for working with a bulk SMS provider is to pre-purchase an SMS bundle (e.g., 10,000 SMS). Another option is to have an SMS platform developed for the FI, like Sinapi Aba did in Ghana.

It should be noted that, if an FI is using the aggregator model, the MNO aggregator should have bulk SMS as part of its service offering.

### *Call centre*

Since clients do not interact directly with FI staff in the mobile banking channel, it is crucial that they be able to call the FI directly to ask about products and services, question any information on their account, provide feedback and/or lodge complaints. Thus, the FI should investigate whether the vendor has a call-centre module and/or whether the FI needs to separately (a) invest in appropriate call-centre-type software so that all queries can be logged and a resolution process developed or (b) outsource call-centre management.

The FI should decide whether this service is free of charge for customers (most often the case with a toll-free number) or whether customers have to pay a communication fee to access it.

### *Contingency communication strategy*

In this model, it is impossible for clients to perform transactions when they are outside a connectivity area and/or when the mobile banking platform is down. However, it is still very important for the FI to have a contingency communication strategy as well as a risk mitigation plan in case of a drop in

network connectivity, as this situation would cause considerable inconvenience for clients and potentially a lot of additional work for the FI. For example, if a client is due to make a loan repayment but is unable to complete a wallet2bank transfer, the CBS may automatically charge the client a late payment fee as well as the accrual of interest. With this kind of situation in mind, it is imperative that the FI have the capability to quickly address technical challenges and allow for suitable corrective actions so the client is not overly inconvenienced.

A contingency communication strategy is especially important in rural areas where connectivity is not as consistent, which a client could potentially use as a convenient excuse if he/she is late on a loan repayment.

## **Choosing a partner interface**

A CGAP publication summarizes the need and options for choosing a partner interface for mobile banking: 'The interface or middleware between the MIS and the customer-facing application must be developed. Institutions can purchase an off-the-shelf solution or develop their own, although both options are expensive.'<sup>12</sup>

Mobile banking requires real-time processing, which in turn necessitates integration between the CBS and the partner interface through the use of APIs, which specify how two different systems can communicate with each other through the exchange of messages.

An FI wishing to offer mobile banking has two options for its partner interfaces:

1. Interface with each partner involved in the mobile banking channel (e.g., switch, MNO, FSP, utility company)
2. Develop one or more interfaces with the following:
  - a. Payment aggregators (e.g., aggregating switches, FSPs, ATM/POS networks, utility companies)
  - b. MNO aggregators (these aggregators would enable the FI to simply plug into their systems and link to different players, without the FI having to connect to all these players one by one.)

Implementing mobile banking requires the FI to scrutinize the offerings from technology vendors for both the mobile banking platform and the interfaces. Thus, the FI needs to have defined its strategy and listed its business and technical requirements to form a basis for assessing the offers received from providers through a request for proposal/tender process.

<sup>12</sup> Kumar, McKay and Rotman, 'Microfinance and Mobile Banking: The Story So Far,' p. 3.

### Interface option 1: Interface with each partner

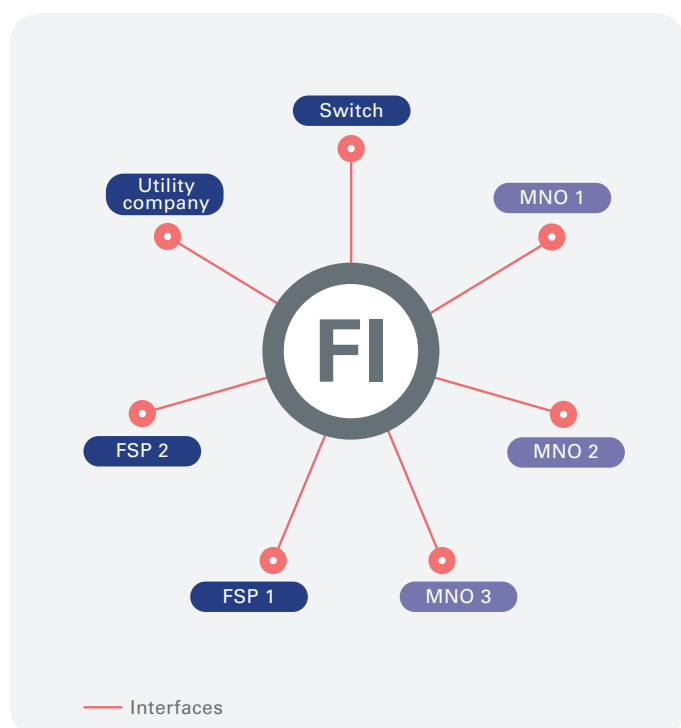
In this option, the FI enters into a partnership with each partner (see figure VII). The FI or the vendor is solely responsible for all aspects of the partnership.

The principle advantage of this option is that, as there is no third party (aggregator), the fee charged to the customer is split only between the FI and the partner—as a flat fee, percentage or revenue-share. As such, revenues are higher for the FI.

The main disadvantage of this option is that it costs more to plug into each partner and is considerably more time consuming than working through an aggregator, since each interface—and indeed each partnership—needs to be built from zero. Therefore, the downsides to this option are the following:

- Time to develop partnerships/commercial agreements
- HR to complete multiple interfaces
- Platform capacity for multiple interfaces
- Capital expenditure (CapEx) needed for all interfaces

**Figure VII: Interface model 1: Interface with each partner**

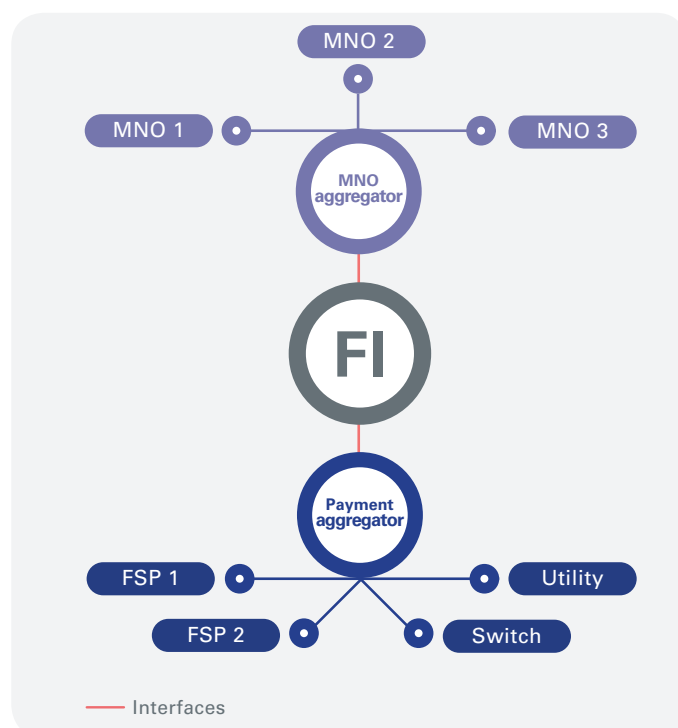


### Interface option 2: Interface with aggregators

CGAP explains this option in a blog<sup>13</sup> and in a working paper<sup>14</sup> thus (see also figure VIII): 'Aggregators can be thought of as the glue that helps many parts of the digital financial services ecosystem to work together. They allow payment instrument providers (like MNOs offering MM services or banks offering mobile banking) to easily integrate with entities that want to send money to or receive money from end customers. These entities can be utility companies who want to receive payments, businesses who want to pay salaries or donors who want to pay recipients, for example.'

There are two aggregator types: payment aggregators and MNO aggregators. As the name implies, payment aggregators aggregate payments from multiple FSPs, whether they be payment switches, other FSPs, ATM/POS networks, utility companies, etc. MNO aggregators provide a service whereby an FI can interface with the aggregator and allow its clients to use the mobile banking menu on any mobile network (with which the aggregator has a relationship).

**Figure VIII: Interface model 2: Interface with aggregators**



<sup>13</sup> Claudia McKay and Rashmi Pillai, 'Aggregators: The Secret Sauce to Digital Financial Expansion,' 27 January 2016. Available from <http://www.cgap.org/blog/aggregators-secret-sauce-digital-financial-expansion>

<sup>14</sup> Raksha Vasudevan with others, 'Market System Assessment of Digital Financial Services in WAEMU,' CGAP Working Paper (Washington DC, CGAP, 2016). Available from [https://www.cgap.org/sites/default/files/Working-Paper-Market-System-Assessment-of-Digital-Financial-Services-in-WAEMU\\_0.pdf](https://www.cgap.org/sites/default/files/Working-Paper-Market-System-Assessment-of-Digital-Financial-Services-in-WAEMU_0.pdf)

The principle advantage of the aggregator option is that the FI can offer a broad range of partners' services to clients quickly, as the interfaces are already established. Another advantage is that, if a client has used another digital channel to previously pay the partner, then the client needs less education on the payment process and/or on the benefits of making a digital payment through the mobile banking channel. The main advantage for the FI is the ease of connecting only to one aggregator instead of having multiple interfaces to multiple providers, whether that be for payments, bulk SMS, connectivity, etc.

The main disadvantage of the aggregator option is that a third party is involved (the aggregator), which has its own business case and thus needs to receive either a fee or revenue-share. Another disadvantage to the involvement of a third party is that one more set of variables, persons, business case priorities and considerations, etc. must be considered. When combined, these additional variables can slow partnership development as well as overall project management and product development, thus delaying the deployment of mobile banking.

The main aggregators operating in the West African Economic and Monetary Union are Supernet Technologies (Côte d'Ivoire), which developed the GIM-UEMOA (Groupement Interbancaire Monétique de l'Union Economique et Monétaire Ouest Africaine) mobile banking solution; InTouch SA (Senegal), integrating Total with several payment platforms; and Digital Afrique Telecom (Côte d'Ivoire), connecting MNO MM platforms and bank accounts in 25 countries. One of the largest integrators on the entire continent is MFS Africa, connecting mobile wallets and money transfer operators and enabling cross-border transfers.<sup>15</sup>

## Selecting a vendor

Whichever interfacing option the FI chooses, and bearing in mind the variety of client mobile devices that are on the market, it is paramount for the FI to carefully choose a vendor with the technical platform(s) that best meet(s) the needs of the FI. As such, the FI should complete a thorough business-requirement-led vendor selection process rather than a service-provider-led process (i.e., what the FI needs versus what the vendor offers). The latter can lead to the FI getting functionalities it does not need and missing other functionalities it requires, as the vendor naturally pursues its own agenda to increase its profitability.

The process for vendor selection should include auditing current technical capability and capacity of the FI as well as reaching clarity on business requirements. Together with a draft business case, the FI can develop a formal request for proposals for potential vendors.

The FI should prepare a vendor assessment scorecard<sup>16</sup> that considers the following:

- Technical capacity of vendor that highlights past projects
- Platform functionality that meets the business requirements
- Availability of vendor resources
- Project timeline versus the FI projected go-to-market in its mobile banking business plan
- Budget that includes terms of payment
- Interfacing capabilities (i.e., does the vendor have an open or closed API?)

The platform should include, at a minimum, the functionality to interface with multiple partners and the ability to report on the following key performance indicators (KPIs): volume and value of transactions, types of transactions, fees paid by clients, fee/revenue-share due to partners, and number of total and active clients (i.e., in 30-day period).

MCBL, which is described in 'Part 2: Case studies' of this toolkit, became a consortium member of UmojaSwitch, which interfaced with aggregators Selcom and Maxcom and deployed its own proprietary mobile banking capabilities as a switch. In Toolkit #6, an example is discussed in which MFIs in Benin joined forces to leverage the platform one developed. Similarly, Fidelity Bank in Ghana is considering opening its platform to smaller MFIs (for a small fee), which would enable the smaller MFIs to achieve mobile banking functionality without the associated investment. However, it should be noted that mutualized platform projects planned in Ethiopia, Malawi and Senegal have not yet been implemented and that a similar project in Madagascar has been in the 'project phase' for a number of years.

## Negotiating pricing with the vendor

A vendor typically uses a range of pricing strategies that vary greatly depending on the scope of the project and often are a combination of the below, depending on the specific business model and where the vendor believes it can have a competitive advantage in its pricing/fee propositions:

- Invoice for CapEx items
- Monthly invoice for project-management-related costs
- Monthly invoice for ongoing-support-related costs
- Transaction pricing:
  - Per transaction pricing: An expense the FI must pay each time it processes a transaction

<sup>15</sup> Ibid.

<sup>16</sup> A template is provided in the toolbox.

- Volume pricing: A 'tiered' or 'volume' pricing that the FI may be charged (e.g., as the mobile banking service is used more, the price per transaction is reduced)

The FI must assess the business model that makes the most sense for it.

## TEAM FOR MOBILE BANKING

An **alternative delivery channel (ADC) manager** at the senior management level is usually appointed at headquarters and dedicated to all non-staff channels (to mobile banking, agency banking, POS, ATMs, etc.). The ADC manager informs the CEO of channel activity on a regular basis (e.g., initially through weekly reports that can later evolve to monthly ones). The CEO reports channel activity to the board of directors.

A **project manager** and a **project team** are usually recruited as well, whose responsibility it is to manage the relationship/project with partners. This responsibility is especially important when developing the service and for building the interfaces, though it should be an ongoing task in an 'account management' type role as well. There also needs to be a permanent dedicated support team, including marketing staff, information technology (IT) staff in charge of system integration and management, and back-office staff in charge of service-level monitoring, partner settlement, KPI monitoring, etc.

The positions of ADC manager and project manager are often filled by people with agent experience, as these are full-time positions. Job descriptions must be adapted/created, and staff involved in the new channel must be trained.

Equity Bank Tanzania has an ADC Manager located at the head office who is in charge of ADCs while another team member is in charge of agency banking specifically. The team is composed of 11 staff members.

UOB in Rwanda started with two full-time staff at the launch of its mobile banking channel. After four years of operation, the team has grown to nine permanent staff members in charge of ADCs.

Fidelity Bank in Ghana has an Agency Banking Department. The Head of Agency Banking leads the team, with Area Managers overseeing activities, tracking transactions and monitoring agent complaints coming from assigned zones. Agent Officers and Area Managers recruit agents and are responsible for agent branding as well. They also handle liquidity management of agents.

## FINANCIALS FOR MOBILE BANKING

Costs paid by different FIs for their mobile banking channel and proprietary agent network are provided in tables 5 and 6. The purpose of these tables is to illustrate the range of costs to anticipate.

**Table 5: Example costs from financial institutions that have deployed mobile banking**

CBS upgrade	\$100,000 for Opportunity International Bank Malawi
Mobile banking platform	\$1,200,000 over three years for Equity Bank Tanzania but part of regional CBS upgrade
SMS platform	\$15,000 for Sinapi Aba in Ghana
Interface	<ul style="list-style-type: none"> <li>• Software linking agents/field officers with CBS to capture real-time information through use of mobile phone or POS device: \$20,000 for MCBL in United Republic of Tanzania</li> <li>• POS device integration with CBS: \$10,000 for MCBL</li> <li>• Integration of group wallet menu in mobile banking platform: \$3,000 for MCBL</li> <li>• Bank2wallet and wallet2bank integration: \$200,000 for Equity Bank Tanzania</li> </ul>
Devices for its own agents	POS devices: <ul style="list-style-type: none"> <li>• \$500 per device for Fidelity Bank in Ghana</li> <li>• \$90 per device for Equity Bank Tanzania</li> </ul> Phones: <ul style="list-style-type: none"> <li>• \$90 per phone for Fidelity Bank in Ghana</li> <li>• \$100 per phone for Equity Bank Tanzania</li> </ul>
Technical assistance from consultants	<ul style="list-style-type: none"> <li>• In the lower range, \$22,500 for MCBL</li> <li>• Around \$100,000 for UOB in Rwanda</li> </ul>
Marketing and training	<ul style="list-style-type: none"> <li>• Agent branding: \$3,000 for MCBL</li> <li>• Training of franchisees and village agents on uses of menu: \$2,500 for MCBL</li> <li>• Awareness-building: \$100,000 for Equity Bank Tanzania</li> </ul>

UOB in Rwanda invested \$300,000 for development, consultancy and marketing from 2013 to 2015. For its mobile banking channel, it spent a total of RF 4,548,620,000 (\$5,458,344)<sup>17</sup> in 2014 and RF 5,827,116,000 (\$6,992,539) in 2016.

Equity Bank Tanzania invested \$206,000 in 2014, \$510,000 in 2015 and \$572,000 in 2016 for its mobile banking channel (over \$1,200,000 in three years). These numbers do not include IT investments and CBS investments done at the Equity Group Holdings level (amounts not disclosed).

**Table 6: Example operational expenditures from financial institutions that have deployed mobile banking**

Agent recruitment	\$200–\$400 per agent
Agent training	\$100–\$200 per agent (specific amounts not disclosed by FIs)
Agent officer and manager training	One year of training of Equity Bank Tanzania head office staff at Equity Group offices in Nairobi, Kenya
FI staff salaries to manage mobile banking channel	\$150,000–\$500,000
Agent commissions	<ul style="list-style-type: none"> <li>Customer enrolment: \$1 per account opened for Equity Bank Tanzania</li> <li>Transfers</li> </ul>
Data connectivity	\$7,000–\$10,000 yearly for Equity Bank Tanzania
Yearly marketing	\$50,000–\$100,000
Client education	Significant investment of time by loan officers/staff of the FI (specific amounts not disclosed by providers)

## EDUCATION OF CLIENTS ON MOBILE BANKING

Client education is a key element of mobile banking. Since clients have to perform transactions by themselves, they need to be properly trained on how to do so. This education requires significant effort by the FI. Training on transactions can be provided by

agents, yet overall education about the product and how to use it is mostly provided by FI staff (loan officers, etc.) who are in contact with clients. Later, agents can step in to reinforce education on the transaction process. For instance, SOFIPE in Burkina Faso dedicated an entire year to train its clients during their monthly meetings in order for clients to be able to conduct transactions on their own. Training provided by different FIs is provided in table 7.

**Table 7: Example training provided by financial institutions that have deployed mobile banking**

Equity Bank Tanzania	Provided customer training at branches and from agents, as well as general above-the-line marketing that explained the process
Fidelity Bank	Conducted marketing and publicity campaigns that were crucial in creating the right attitude by the public to accept the product offering and in ultimately bringing the mobile and agency banking model to scale
MCBL	Partnered with CARE International, which trained village saving and loan association members (who were the main source of an increase in customers through linkages between the groups and the bank)

<sup>17</sup> Currency conversion: RF 1 = US\$0.0012 (Source: [www.xe.com](http://www.xe.com), 6 May 2017).  
Note: This rate is used throughout this document when United States dollar equivalents are provided for Rwanda francs.

## SECTION 3: DIVING INTO THE PERKS

The main reasons for an FI to develop its own mobile banking channel are to (1) improve the client experience, (2) decongest branches, (3) reduce cost in the long term, (4) increase client trust and (5) reach underserved (rural) areas. The main benefits for clients are to (1) achieve proximity and convenience, (2) experience improved services at the branch and (3) gain trust. The main benefits for partners supporting the FI in its mobile banking journey are (1) increased revenues and (2) opportunities for co-branding.

### PERSPECTIVE OF THE FINANCIAL INSTITUTION

#### Improve the client experience

One of the key reasons for an FI to develop mobile banking is to have complete control over the client experience in terms of service quality, service offering, pricing and branding. A proprietary solution enables an FI to be fully responsible for the client experience it offers, but then it is up to the FI to make sure that the services offered are comparable to the standards at branches. The FI can also brand its services as it wishes, rather than potentially being considered the 'minor' brand in a co-branding campaign (if it partners with a digital FSP).

The FI should integrate its mobile banking strategy with other services, specifically its agency banking strategy.

Fidelity Bank in Ghana is expanding its range of products to further improve the customer experience. It is introducing micro-loans and micro-insurance products in 2017, by leveraging its partnership with Airtel Money.

#### Decongest branches

Giving clients the possibility to perform the most common transactions, such as accessing account information and conducting transfers, through mobile banking allows branches to reduce congestion and to focus more on sales and value added services, thus improving branch staff productivity. Similarly, if clients can withdraw and repay loans via mobile banking, field officers can devote more time to prospecting and appraising new loan clients.

MCBL in the United Republic of Tanzania has four branches. To decongest the branches while simultaneously growing the customer base, it implemented an ADC strategy by becoming a member of the consortium of banks on UmojaSwitch. It started with ATMs in 2011, added linkages with village saving and loan associations (VSLAs) using M-Pesa in 2012, and offered mobile banking in 2014.

#### Reduce cost in the long term

Offering mobile banking allows an FI not only to reduce fixed asset investments associated with building/renting brick-and-mortar branches, and to a lesser extent the operational expenditures (OpEx) of building an agent network, but also to decrease cost of funding since mobile banking helps the FI to increase deposit mobilization among clients and hence reduce its dependency on commercial funding sources. However, reducing funding costs is a long-term strategy, since in the short term building a mobile banking channel requires significant investment and creates additional costs. Few FIs track this data point properly and the long-term cost reduction is still to be assessed.

Part of the strategic objectives of Equity Bank Tanzania for mobile banking was, on the one hand, to limit CapEx for branch roll-out but, on the other hand, to ensure branches were providing good service and were not overly congested. Table 8 shows its growth of branches as compared to number of agents.

**Table 8: Growth at Equity Bank Tanzania of branches versus agents, 2013–2016**

	2013 (basis)	2014	2015	2016
Branches	6	9	10	14
Agents	43	383	625	998

## Reach underserved (rural) areas

Another common reason for an FI to deploy mobile banking is to expand its outreach into rural areas, increasing penetration and coverage among underserved clients in these areas. This goal is yet to be demonstrated.

An FI often starts mobile banking as a convenience service for existing clients, with the intent to expand the service to capture new clients and/or new geographical areas.

MCBL had a strategy of working with VSLAs to increase outreach and bring services closer to Tanzanian communities. As of the end of 2015, it had reached 3,272 VSLAs with a membership of 94,086.

## Increase client trust

Having control over the client experience can help the FI build its clients' level of trust, which in turn can help the FI in its overall brand positioning and client loyalty.

Through the launch of its agency and mobile banking channel, Fidelity Bank in Ghana was able to improve the relationship with its customers, which had benefits for all (see table 9).

**Table 9: Benefits vis-à-vis increased client trust for Fidelity Bank and its customers and agents**

Fidelity Bank	Customers	Agents
Improved relationship with customers through the introduction of agency and mobile banking and greater trust by customers in the Fidelity brand	Ability to open an account in five minutes and to receive an ATM card immediately	Additional volume of transactions

## PERSPECTIVE OF THE CLIENTS

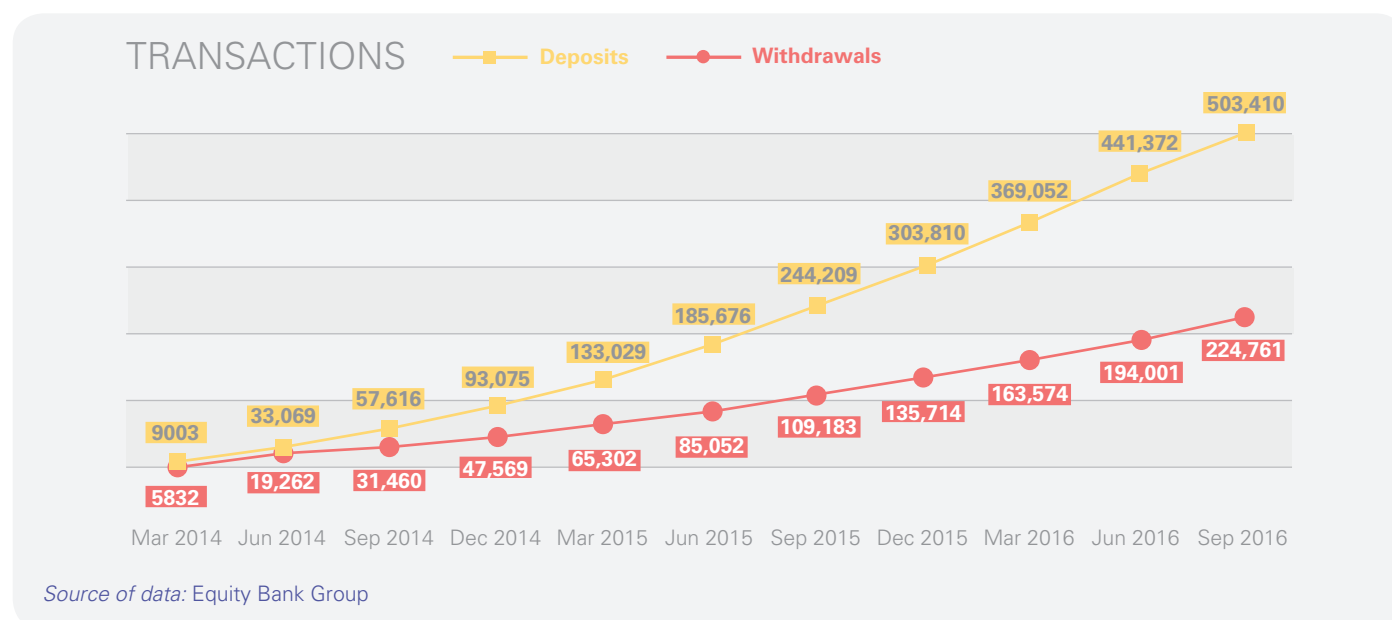
### Achieve proximity and convenience

Considering that going to a branch and standing in a long queue is a primary client complaint, customers may choose the FI that offers them the most convenience. Thus, an FI that offers mobile banking, allowing clients to carry out a range of the most common financial transactions, is more

likely to attract clients, especially if the clients were previously unbanked. Note, however, that often there are other bigger determinants in customers' decision about which FI to use, such as loan availability, collateral requirements and loan interest rates.

Equity Bank Tanzania has recorded impressive and consistent transaction growth, indicating that customers (old and new) are happy with the service (see figure IX).

**Figure IX: Agent transactions at Equity Bank Tanzania, 2014–2016**



## Experience improved services at the branch

As branches become less congested and the FI starts to offer additional services, the value proposition to clients improves for branch visits. The speed of service at a branch (e.g., queue waiting time), one of the major negatives that clients often highlight, improves. Not only will the number of clients who queue in a branch be fewer, but the queue waiting time for clients who do banking services in a branch will be less, which can mean significant value added for premium clients who want a strong relationship with branch staff.

All three FIs in the case studies mentioned improving services in their branches, though none had quantifiable data on the same and admitted they needed to collect/measure data in that area.

## Gain trust

Trust is of utmost importance. From the perspective of clients, carrying out a transaction through mobile banking should make them feel like they are interacting directly with the FI—as if they were in front of a staff member or even an agent. It is for this important reason that clients should always get an SMS receipt after every transaction.

At Fidelity Bank in Ghana, the number of Smart Accounts (an easy-to-access, low-requirement bank account) increased 900% in three years, showing a high level of customer trust (see table 10).

**Table 10: Account growth at Fidelity Bank, 2013–2016**

	End-2013	End-2014	End-2015	End-2016
Smart Accounts	32 683	201 868	282 244	294 245

## PERSPECTIVE OF THE PARTNERS

### Increase revenues

The main benefit for partners of the FI in the mobile banking channel is increased revenues, assuming they ‘drive’ the product into the market with suitable investment in marketing. Whereas aggregators and service providers usually charge a fee or have per transaction pricing (see ‘Negotiating pricing with the vendor’ section), partners (depending on the product/service) may prefer a revenue split (e.g., 40:60)—especially when both parties conduct a number of joint activities (i.e., interfacing, co-branding and other marketing-related activities).

One financial website explains revenue-sharing thus: ‘Revenue-sharing takes many different forms, although each iteration involves sharing operating profits or losses among associated financial actors. ... The practical details for each type of revenue-sharing plan is different, but their conceptual purpose is consistent’ (i.e., mutual benefit).<sup>18</sup>

In 2010, MCBL became a member of UmojaSwitch, which is a shared switch/technical platform that provides the technical backbone for ATM services, agency banking and mobile banking. Through UmojaSwitch, member banks can integrate with other service providers, such as MNOs, as well as be interoperable so as to extend their range of services to their customers. As of March 2017, there were 27 UmojaSwitch members in the country, providing a national footprint of 220 ATMs as well as serving as a platform for mobile banking.

### Co-brand

Though a mobile banking service is (predominantly) FI branded, there are opportunities for some co-branding with FSPs. Co-branding can provide positive brand associations for both the FI and partner MNOs (e.g., ‘the FI mobile banking service is available through X,Y,Z mobile networks’). Similarly, in the case that the FI provides payment services, there are co-branding opportunities (e.g., ‘You can now pay your X,Y,Z utility bill through FI mobile banking service’). In the case of bank2wallet and wallet2bank transfer services, there is a clear opportunity for both the FI and the FSP to advertise their services.

<sup>18</sup> Sean Ross, ‘How does revenue sharing work in practice?’ 9 January 2015. Available from <http://www.investopedia.com/ask/answers/010915/how-does-revenue-sharing-work-practice.asp>

Fidelity Bank in Ghana has a range of partnerships that address bottlenecks as well as provide co-branding opportunities:

- Airtel Money and MTN Mobile Money: For bank2wallet and wallet2bank services
- CARE International, with funding from United Nations Capital Development Fund (UNCDF): To link VSLAs with banks
- GIZ (Gesellschaft für Internationale Zusammenarbeit): To develop financial literacy material for clients (how to use an ATM, how to use agency banking) and training of trainers for agents
- International Fund for Agricultural Development: To create customer icons and interface for smallholders
- UNCDF – MicroLead: To stress test business model in rural areas and to test partnerships with MNOs
- United States Agency for International Development – Feed the Future: To provide smallholder clients
- United States Agency for International Development – Gender in Economic and Social Systems Project: For change management
- World Bank: To get women to save (to be launched)



## THIS MODEL IS FOR AN FI THAT...

- ☑ Has a high percentage of mobile phone ownership among its clients
- ☑ Has clients who are partially literate, or the FI is willing to invest in educating its customers (dedicating both financial and HR to train customers)
- ☑ Has a strategy to increase outreach through added convenience to clients
- ☑ Has suitable resources to deploy the channel (financial, technical, human and operational)—key costs are acquiring and deploying the back-end technology/mobile banking platform, creating a channel-specific commercial and technology team, and establishing strong marketing and communications teams with expertise in financial literacy
- ☑ Has a strong presence in the market



## THIS MODEL IS NOT FOR AN FI THAT...

- ☒ Does not have a centralized CBS or robust middleware
- ☒ Does not have significant financial resources to invest, especially in the back-end technology
- ☒ Does not have an agent network, either its own or leveraged through an existing agent network—an agent network is not a prerequisite, though the agent model is very much aligned with the mobile banking model
- ☒ Does not have branchless banking/mobile banking and IT teams or robust risk and audit teams equipped to monitor this part of the business
- ☒ Works in a country with regulatory restrictions on deploying mobile banking, such as limitations on the types of providers allowed to do mobile banking (e.g., the Nigerian regulator chose a bank-led approach, so MNOs there need a partner bank or service provider to provide MM and mobile banking services)
- ☒ Has integrated channel and business strategies

## Box 1: Creating its own mobile banking channel—The case of Accion Microfinance Bank in Nigeria

24

Accion Microfinance Bank (AMfB) is a Nigerian microfinance service provider that started operations in May 2007 as a state microfinance bank (state of Lagos). Demand quickly exceeded expectations. In December 2014, it became a licensed national microfinance bank, having met the minimum capital requirement and received the approval of the Central Bank of Nigeria.

AMfB has a wide network of 56 branches and provides its 160,000+ customers easy access to various products and services such as savings, loans, micro-insurance, e-commerce, and agency and mobile banking. It has solid shareholder investments from Accion International, three major banks (Citibank, Ecobank and Zenith Bank) and IFC (a subsidiary of the World Bank). All shareholders subsidize the financial base; therefore, AMfB can provide services to a continuously increasing number of customers—particularly un(der)banked customers.<sup>19</sup>

The mission of AMfB is to provide sustainable financial services in a proper, cost-effective manner and to economically empower micro-entrepreneurs and low-income earners. Its vision is to reach world-class standards and to be a market leader in the provision of microfinance services.<sup>20</sup>

AMfB started its digital journey in 2014 and launched agency and mobile banking in 2016. To facilitate access to its services, AMfB introduced a USSD-based mobile banking solution to the market in August 2016. Dubbed **Brighta 143**, the product targets customers at the bottom of the pyramid as it does not require a smartphone but rather can be accessed through a USSD code using a basic phone.

## OBJECTIVES FOR DEVELOPING A MOBILE BANKING CHANNEL

AMfB wanted to complement its normal business by focusing more on the young client segment with the new mobile banking service and raising client awareness and confidence.

When it introduced Brighta 143 to the market, AMfB had four main business objectives:

1. Increasing client outreach
2. Increasing savings mobilization and better serving clients
3. Improving productivity
4. Improving operational efficiency

Brighta 143 complements physical channels such as ATMs and POS devices, and it can be accessed from anywhere. It positions AMfB for future development as it allows AMfB to continue deepening its market reach outside Lagos through the use of the mobile phone, which has become the new and preferred banking channel in Nigeria.

In order to access Brighta 143, a customer needs to have an AMfB account and a mobile number linked to the account. Brighta 143 works regardless of the phone type or the telecom service provider and 'makes banking transactions, especially payments and transfers, faster, safer and more convenient and effective for all customers as it fits into the lifestyle of the customers.'<sup>21</sup>

AMfB is known as one of the most ground-breaking MFIs in Nigeria for its use of technology. Through Brighta 143, it reinforces the efforts of the Central Bank of Nigeria to lay the foundation for a cashless economy and further enhance financial inclusion.

## SERVICES OFFERED AND CHANNELS USED

Brighta 143 is 'an innovative but yet simple mobile banking solution'<sup>22</sup> launched in partnership with Interswitch.<sup>23</sup> It uses the USSD short code \*322\*143# and 'allows anyone with a mobile phone to do transactions such as buy airtime, transfer money, pay bills, [and] check balances anytime and anywhere ... without having to go online or download any mobile apps' (see table 11 for the transactions that can be performed via mobile banking and their corresponding short codes).

Transactions can only be performed from the mobile number linked to the customer's AMfB account. The transfer service has minimum transfer amount of ₦1,000 (\$3) and a daily transfer limit of ₦20,000



Advertisement for Accion mobile banking channel in Nigeria  
Courtesy of AMfB

19 Description in this paragraph is based on information provided in the following: Nairaland Forum, 'Massive Recruitment At Accion Microfinance Bank Limited,' 18 January 2016. Available from <http://www.nairaland.com/2873009/massive-recruitment-accion-microfinance-bank>

20 Description in this paragraph is based on information provided in the following: Accion International, 'Accion Microfinance Bank.' Available from <http://accion.org/our-impact/accion-microfinance-bank> (accessed July 2017).

21 AMfB, 'Banking In The Easiest Way,' 17 August 2016. Available from <http://www.accionmfb.com/News-Events/BANKING-IN-THE-EASIEST-WAY.aspx>

22 Ibid. Note: All quoted text in this paragraph is from this source.

23 Interswitch is the national switch platform.

## Box 1: Creating its own mobile banking channel—The case of Accion Microfinance Bank in Nigeria (continued)

(\$64).<sup>24</sup> To initiate a fund transfer to another AMfB account, the customer simply has to dial \*322\*143\*1\*Amount\*NUBAN Account No#. The customer can also perform a third-party transfer to either an AMfB accountholder or any other bank accountholder in Nigeria. For a third-party transaction, a four-digit PIN is required for authentication.

To make sure there is enough money in the account to perform transactions through Brighta 143, the client must visit an AMfB branch to deposit cash. Similarly, cash withdrawals can be done only at an AMfB branch or, for other banks' accountholders, at another bank branch. AMfB has chosen to have its branches serve as agents and not to use third-party agents.

**Table 11: Short codes for mobile banking transactions at Accion Microfinance Bank**

Service	Short Code
Self-recharge	*322*143*Amount#
Third-party recharge	*322*143*Phone number*Amount#
Transfer	*322*143*NUBAN No*Amount#
Bill payment	*322*143*Biller ID*Amount#
Balance enquiry	*322*143*0#

Source: AMfB, 'E-Channel.' Available from <http://www.accionmfb.com/Product-Services/E-Services.aspx> (accessed July 2017).

## IMPLEMENTATION EFFORTS

The digital journey of AMfB started with agency banking, as it developed its own capacity, increased its exposure, looked for an optimal technical solution and built a strong partnership. **For its agency and mobile banking channel, AMfB envisaged two possible options.**

**In option 1, AMfB would work with a partner service provider.** This option offered opportunities for AMfB to use the partner's already existing solutions, country distribution and marketing. It was perceived to be an easy option for both AMfB (from the technical point of view) and its clients, since they would be able to easily use the product—regardless of the telecom provider they were already using or from where they were accessing the service.

**In option 2, AMfB would develop its own agent network.** Option 2 was discarded because it would have required a licence, which involves a process that is both unpredictable and time consuming. In addition, the experience of current payment service providers and MNOs in Nigeria was not encouraging, as they have had a hard time implementing this solution and have only reached 4,000 agents with just a 10% active rate.<sup>25</sup>

Moving forward with option 1, AMfB assessed a number of parameters in order to choose a partner:

- Interest in and credibility to serve AMfB focus areas and segments
- Market reputation
- Technical solution and support
- Flexibility (rapid decision-making and IT development to support AMfB needs)
- Openness to co-branded commercial efforts

After assessing several partners, AMfB chose **IFIS** (Interswitch Financial Inclusion Service) since (a) it is the leader in payment processing, (b) it is an existing provider for the AMfB card service and (c) this partnership required no licence and no agents and had the capacity to adapt to AMfB needs.

AMfB started with a pilot in 6 branches (out of 40) in July 2016. Almost at the same time, AMfB launched its mobile banking channel (August 2016).

## FOCUS ON INCREASING CUSTOMER ACTIVITY, SAVINGS AND OPERATIONAL EFFICIENCY

AMfB launched its mobile banking channel with a focus on the following:

- **Increase customer activity** → Due to accessibility of the account and payment flexibility, customers will be able to make more frequent transactions (deposits/withdrawals/transfers/bill payments).
- **Increase savings mobilization** → Clients will leave more money in their account as they can use the mobile banking channel 24/7 for value added service transactions (airtime purchases/payments/transfers) through their own phone and withdrawals through an ATM.
- **Improve operational efficiency** → By adding the mobile banking channel, the workload per field assistant will decrease proportionally.

## KEY SUCCESS FACTORS

1. **Performing a feasibility study** prior to product development and launch in order to investigate market demand, options and best possible solutions that met its objectives and its clients' needs: convenient access, trustworthy, affordable, impactful and efficient.
2. **Ensuring that mobile banking complemented its other channels:** branches, POS devices and debit cards through ATMs.
3. **Targeting the right market segment:** existing « young » clients who are interested in ADCs and are looking for ways to avoid bank queues. Being tech savvy, they prefer to use the mobile phone to check their account balance, buy airtime and conduct transactions, such as paying suppliers (or being paid), paying bills and transferring money.

<sup>24</sup> Conversion rate: ₦1 = US\$0.0032 (Source: [www.xe.com](http://www.xe.com), 4 June 2017). Note: This rate is used throughout this document when United States dollar equivalents are provided for Nigeria naira.

<sup>25</sup> This conclusion was derived from an assignment PHB Development performed in 2014 for AMfB.

## Box 1: Creating its own mobile banking channel—The case of Accion Microfinance Bank in Nigeria (continued)

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4. **Educating customers:** AMfB developed agency banking tutorials on YouTube to explain to customers how to use the new channel.<sup>26</sup>
5. **Providing continued and easy-to-access support to customers** through a customer helpline as well as email and social media (Facebook, Twitter). Clients can also visit any AMfB branch countrywide for support.
4. Performance shall be managed on a daily basis in order to constantly improve.
5. The daily limit should be increased to accommodate higher transactions values.
6. Quarterly promotions as incentives for staff and customers to ensure activity and usage growth over time.

### CHALLENGES

1. Identifying a **strategic partner** for developing the USSD code was one of the first main challenges;
1. **Competition.** One of the main challenges was rapidly increasing competition from commercial banks (e.g., Diamond Bank, Ecobank) and from large MFIs (e.g., Grooming Centre, LAPO), endangering the existing base and putting the model in question. It has become necessary to have an adaptive, competitive model to stay relevant in the Nigerian market, thus mobile banking was a requirement for AMfB.
2. **Less favourable country context.** A history of MFIs closing their doors is still very present in Nigerians' minds and causes strong feelings of distrust. This challenge was addressed by using a combination of delivery channels, maintaining physical presence and close relationships while using enhanced ADCs to address convenience and cost-efficiency requirements.
3. **Less tech-savvy market segments**, such as existing « mature » clients who are not particularly interested in ADCs and prefer to rely on branches and staff. To address them, specific benefits will be highlighted: having regular access to money and paying suppliers (or being paid) at a distance, as well as helping micro-entrepreneurs digitize their transactions.
4. **Agent liquidity issues.** To address this challenge, a new loan product for agents was introduced: My Agent Loan allows agents 'to borrow between ₦50,000 to ₦1,000,000 (about \$150–\$3,100) for the business at a minimum interest rate with flexible repayment terms. The value of the loan is dependent on the previous loan performance and business analysis.'<sup>27</sup>
5. **Staff and client education.** Marketing and training material (videos, flyers, etc.) were developed based on customer feedback to address this challenge.

### LESSONS LEARNED

1. The service needs to be adapted and be beneficial to different client segments, bringing immediate benefits and returns on investment.
2. The service needs to be easy to access and use, convenient and affordable.
3. Activity should be driven by AMfB staff who are also using the channels and providing client education.

### NEXT STEPS

Other projects included a pilot for the Digital Field Application initiative, which was meant to improve the way data is gathered during the loan process (this initiative is an application of the model 'Use mobile as a tool' described in Toolkit #1). This has been fully concluded and it deployed bankwide across AMfB branches.

AMfB plans to continue leveraging technology to drive its expansion strategy and to achieve the objective of providing easy financial access through simple, convenient platforms and channels. Regarding Brighta 143, AMfB plans to create its own USSD code so that it can add additional services, such as loan renewal, account opening and statement generation.<sup>28</sup>

### KEY FIGURES ON THE INSTITUTION (2017)<sup>29</sup>

- Launch date: May 2007
- Loan portfolio: N 6,517,399,337 (~18 millions de dollars)
- Average loan: N 168,731 (464 \$)
- Deposits N 2,334,067,020 (~6.5 millions de dollars)
- Assets: N7.5 billion (~20.6 millions de dollars)
- Active borrowers: 38,626
- Depositors: 162,855
- Branches: 56

### RESULTS ACHIEVED THROUGH BRIGHTA 143 (2017)

- Launch date: August 2016
- Number of clients registered to the channel: 153,700
- Number of clients using the channel: 3,739 (July 2017 ending active position on mobile banking)
- Number of active agents: 67 (total 168 agents)
- Volume of transactions: 11,866 for the month of July 2017 and 76,980 transactions since launch
- Channel mix: 93% of transactions at branches, 7% via agents (Deposit/Cash in only)

26 Module 1: [https://www.youtube.com/watch?v=0FRaX\\_pj4co](https://www.youtube.com/watch?v=0FRaX_pj4co); Module 2: <https://www.youtube.com/watch?v=KzMb-LwCJro>; Module 3: [https://www.youtube.com/watch?v=o\\_CigQA3P1w](https://www.youtube.com/watch?v=o_CigQA3P1w)

27 Oladapo Famuyide, 'How Agency Banking Bridges the Technology Gap in Nigeria,' 13 January 2017. Available from <http://blogs.accion.org/features/agency-banking-technology-gap-nigeria/>

28 AMfB, 'Accion MfB In - Branch POS Reaches N1billion Value,' 18 July 2016. Available from <http://www.accionmfb.com/News-Events/Accion-MfB-In-Branch-POS-Reaches-N1billion-Value.aspx>

29 MIX Market, 'Accion MfB Nigeria,' data available via registration. Available from <https://www.themix.org/mixmarket/profiles/accion-mfb-nigeria> (accessed July 2017).

## Box 2: Creating its own mobile banking channel—The case of Urwego Opportunity Bank in Rwanda

Headquartered in Kigali, Rwanda, **Urwego Opportunity Bank (UOB)** is the first and largest licensed microfinance bank in the country.<sup>30</sup> Created in July 2007 through a merger of Urwego Community Banking and Opportunity International Bank of Rwanda, UOB has as its mission ‘to achieve economic, social and spiritual transformation in the lives of the underserved, using financial services and related training.’<sup>31</sup> UOB currently has ~44,000 borrowers and ~300,000 depositors.

UOB provides a full range of financial services to those traditionally excluded from the formal financial sector:

- Savings: group savings, personal savings, micro-savings (Teganya Savings Account), fixed deposits (Tuza Account), transactional savings (Ikaze Account) and children’s savings
- Loans: individual and small/medium enterprise loans, consumer loans, educational loans, agricultural loans, asset loans, home improvement loans, emergency loans, etc.
- Insurance: life insurance
- Mobile banking and mobile savings (TIGO Sugira)<sup>32</sup>
- Remittances
- Foreign exchange services
- Education/Training for transformational impact

UOB launched, in partnership with Visa, a mobile and agency banking service called **mHose** (meaning ‘everywhere’) in April 2013. mHose is integrated with and runs on the mVisa platform. It delivers a varied range of digital financial products and services to smallholders. Via mHose, UOB started ‘migrating its microfinance loan groups to a mobile loan disbursement and repayment program.’<sup>33</sup>

### OBJECTIVES FOR DEVELOPING A MOBILE BANKING CHANNEL

The main objectives of going digital for UOB were to improve clients’ access to its services, reduce cash-handling for its loan officers and increase operational efficiency. Through mHose, UOB also aimed to reach clients in remote rural areas at a lower cost than previously possible, improve access to its services in areas without branches, reduce/remove cash-handling and increase operational efficiency.<sup>34</sup>

At launch, mHose primarily targeted group loan clients in order to facilitate liquidity management by relieving sales officers of cash. To facilitate the introduction of mHose on the market and to meet the expectations of customers and agents, while working towards its own goals, UOB had to shift from pursuing a bilateral ‘win-win’ business (UOB and client) to a trilateral ‘win-win-win’ business (UOB, client and agent). This approach is significantly more complex: UOB has to adapt to customer and agent expectations, and agents have to adapt to the UOB system and client demands.

Rwanda is a rural country with about 90% of the population engaged in smallholder farming and mineral and agro-processing.<sup>35</sup> It has the highest population density in Africa, but the formal financial sector only reaches a small percentage. Some of the drawbacks are broadly known: long travel distances to banks, absence of infrastructure, low literacy rates, low financial education in rural areas, etc. To overcome the obstacles in reaching smallholder farmers in remote rural areas, UOB identified digital branchless banking as a solution.

### PRODUCTS AND SERVICES OFFERED AND CHANNELS USED

#### Products and services provided

mHose is a completely integrated mobile banking product that can be accessed through a USSD code (\*501#) from all networks using the interoperable mobile banking mVisa platform. The USSD code is that of UOB, which it received from the communication regulator. The platform is also its own, having been created for UOB by Software Group, which developed the monitoring tools UOB uses for ATMs, TIGO Sugira and interbank transfers.

mHose offers UOB clients a wide range of services: easy access to their bank account, ability to send and receive money, deposit, withdrawal, UOB loan management (loan disbursement and repayment<sup>36</sup>), airtime top-up, balance enquiry, and bill and merchant payment. All clients who register with mHose automatically also open a UOB current savings account (Teganya Account).

mHose allows UOB customers and agents to transact with any other bank that is signed up with the mVisa platform: namely, UOB customers can transact with other banks’ agents and UOB agents can serve other banks’ customers. In this way, transactional freedom is created among banks, agents and customers across networks, as long as they are connected through mVisa. It also offers both customers and agents flexibility that is not provided by other closed-loop systems.

30 National Bank of Rwanda, ‘List of Licensed Banks.’ Available from [https://www.bnr.rw/fileadmin/AllDepartment/FinancialStability/BankingSupervision/List\\_of\\_licensed\\_banks\\_2015.pdf](https://www.bnr.rw/fileadmin/AllDepartment/FinancialStability/BankingSupervision/List_of_licensed_banks_2015.pdf) (accessed July 2017).

31 Urwego Bank, ‘Urwego Bank Mission | Vision | Values’ Available from <http://urwegobank.com/about.html> (accessed July 2017).

32 Urwego Bank, ‘TIGO Sugira.’ Available from <http://urwegobank.com/tigo.html> (accessed July 2017).

33 Visa, ‘Half of Rwandan banks to offer mVISA,’ press release from 28 October 2013.

34 Nick Meakin, ‘UOB Takes a Human-Centered Approach to Rwanda’s Smallholders,’ 11 February 2015. Available from <http://www.cgap.org/blog/uob-takes-human-centered-approach-rwanda%E2%80%99s-smallholders>

35 United States, Central Intelligence Agency, ‘The World Factbook: Rwanda,’ 11 July 2017. Available from <https://www.cia.gov/library/publications/the-world-factbook/geos/rw.html>

36 Nick Meakin, ‘UOB mobile banking,’ presentation at European Microfinance Week 2014: Developing Better Markets, November 2014. Available from <http://www.e-mfp.eu/sites/default/files/resources/2014/11/Nicholas%20Meakin.pdf>

## Box 2: Creating its own mobile banking channel—The case of Urwego Opportunity Bank in Rwanda (continued)

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UOB mHose agent  
Courtesy of UOB, Rwanda

mHose usage comes with its own benefits, such as interest and micro-insurance for the customer and two family members based on the mHose account balance. To do so, UOB partnered with MicroEnsure. Customers are notified of insurance through SMS, the simplest communication channel.

### Distribution

UOB decided to build its own network of mobile banking agents to provide cash deposit and withdrawal services. The agent network structure and the business model for the channel were designed with advantageous agent commissions and transaction fee pricing in mind. UOB identified a need for an agent network manager to ensure agents had continuous network access, sufficient liquidity or float when needed, and an attractive value proposition.<sup>37</sup> During the first year, mHose agents were constantly monitored remotely from UOB headquarters. They also received weekly on-site visits to examine their operations and refresh their training. By the end of 2016, there were 260 mHose agents located in all regions of UOB operations.

### Technology

UOB signed a partnership with Visa to use its MM platform, mVisa, based on an interoperable approach with a variety of MNOs and FIs. For mHose to work, UOB had to make changes to its CBS and build an interface with a number of external platforms, including these:

- Visa Mobile Money System, the MM platform for managing transactions conducted by telephone
- UT SMS, the SMS gateway for communication between UOB, mVisa and its clients via telephone text messages, developed by Software Group

- UT NET, the platform for remote communication between the UOB CBS eMerge T24 and the Enterprise opensky system on UOB net-books, developed by Software Group

## IMPLEMENTATION EFFORTS

### Partnership with Visa

The first step towards an interoperable mobile banking ecosystem was taken in November 2011 by Visa, which sought to deploy mobile solutions to reach the underserved, when it approached UOB about creating a new mobile banking service to boost its efforts to spread cashless commerce across Rwanda.<sup>38</sup>

Pilot testing and product design took place throughout 2012. mHose went live in early 2013, followed by ongoing improvements and adaptations.

Besides mHose, Visa also launched mVisa with the support of Bank of Kigali and UOB in July 2013.<sup>39</sup> mVisa is a mobile service designed to meet the basic banking needs of unbanked and underserved populations. An innovative mobile banking service, mVisa addresses the obstacle of access to physical bank branches and provides interoperability by allowing transactions across different FIs and mobile networks.

### Organizational changes

UOB had to recruit new staff: an agent management team and a customer registration and support team. UOB set up a call centre as well. UOB trained loan officers, branch staff and data entry staff. It also trained groups on the shift in the repayment process to mobile. UOB had to implement new procedures, especially for group lending processes. Finally, UOB invested in marketing (e.g., customer leaflets) on top of customer training.

**UOB dedicated two full-time staff for launch plus resources from IT, HR and marketing. The team has now grown to nine permanent staff.**

### Financial investment

UOB invested \$300,000 for development, consultancy and marketing from 2013 to 2015. For its new channel, UOB spent RF 4,548,620,000 (\$5,458,344) in 2014 and RF 5,827,116,000 (\$6,992,539) in 2016.

37 Carol Caruso, 'Advisory Services helps Urwego Opportunity Bank in Rwanda,' 24 January 2013. Available from <http://triplejump.eu/2013/01/24/advisory-services-helps-urwego-opportunity-bank-in-rwanda/>

38 Visa, 'Rwanda Reaps the Benefits of Electronic Financial Services,' 11 December 2012. Available from <http://pressreleases.visa.com/phoenix.zhtml?c=215693&p=irol-newsarticlePR&ID=1766019>

39 Bank of Kigali, 'Bank of Kigali launches mVISA-Rwanda,' press release from 23 July 2013.

## Box 2: Creating its own mobile banking channel—The case of Urwego Opportunity Bank in Rwanda (continued)

### RESULTS OBTAINED THROUGH MHOSE

In the first year of implementation (March 2013–February 2014), UOB registered more than 22,000 clients for mHose. Of those clients, some 40% were active (having performed at least one transaction in the past month), which is high compared to average activity rates worldwide. For loan repayments, 30% were going through mHose.

Within about three years (by end-2016), mHose reached 68,000 customers (versus 57,000 by end-2015), of which ~23,000 were women customers. Active depositors reached ~10,000 and borrowers ~32,000. There are 260 active agents.

Among the results achieved in three years (2013–2016) were the following:

- **Outreach:** UOB increased the number of voluntary deposit clients to 300,000, mainly due to the fact that all clients who signed up for mHose had to open a voluntary savings account. On the other hand, mHose did not lead to an increase in loan clients.
- **Portfolio quality:** mHose did not lead to significant improvement in the portfolio at risk between active and non-active clients, which may have been due to the fact that, even though agents were theoretically closer to clients, it became more difficult to solve repayment problems without group meetings.
- **Operational efficiency:** Overall, mobile banking was unable to replace the means of doing business that existed before. Mobile banking costs just became an overlay of existing costs.

### KEY SUCCESS FACTORS

1. There were already mobile banking and mobile saving products on the market (Tigo Cash launched in 2011 and MTN Mobile Money launched in 2010), which meant customers were already familiar with MM procedures (e.g., sending/receiving money, purchasing airtime, paying bills).
2. The product was delivered in English and the main spoken language countrywide, Kinyarwanda.
3. There was a dedicated team from the start (two full-time staff at launch, nine as of 2017) to manage agents, handle customer registration and support customers.
4. There was no rush to market: UOB dedicated time to the pilot (six months) and the development and launch (six months) in order to test, learn and correct.
5. There is a relatively high literacy rate in Rwanda (70.5%), which helped with understanding and adoption of the new channel.<sup>40</sup>

### CHALLENGES

Among the challenges that UOB experienced were the following:

1. **Delays in approval of agents by the central bank**, which limited the speed at which UOB could roll out mHose.
2. **Limited mobile network availability around the country**, particularly in rural areas. To overcome this challenge, UOB advised clients to buy a SIM card from the telecom provider with good network coverage in their area and advised agents to buy at least two SIM cards from two different network providers.
3. **Limited availability of potential agents with sufficient financial strength** to manage the liquidity involved in accepting deposits, let alone to manage loan disbursements. To address this challenge, UOB set up a liquidity management strategy for agents in which accounts at other banks are used for rebalancing. UOB also designed a line of credit to help support the liquidity needs of its agents.
4. **Increased portfolio at risk due to reduced group meetings.** UOB dealt with this challenge by maintaining group meetings, providing timely information on arrears, sending group payment reminders and conducting follow-up.
5. **Frequent problems related to text messages UOB sent to clients**, including clients receiving messages at the wrong time and messages that indicated the wrong date or the wrong amount. After consulting with branch leaders, UOB decided to halt the messages.
6. **Low financial literacy rates** (26%) despite the high literacy rate.<sup>41</sup>

### LESSONS LEARNED

Key lessons learned for UOB from its mobile and agent banking project were the following:

1. Choose the right partner and create a business model that responds to market needs.
2. Develop a strong agent network with sufficient liquidity.
3. Adapt products to be compatible with mobile banking.
4. Constantly research and resolve technical issues.
5. Systematically identify additional groups that could start transacting through the mobile and agent banking service to increase the transaction volume per agent and thus help improve the overall value proposition.
6. Effectively segment marketing and communication (ensure awareness by identifying what drives clients to use the mobile and agent banking service, tackle the lack of understanding at different phases of usage, and focus communication on the rationale and the emotional benefits for clients instead of on how the service works).

40 United States, Central Intelligence Agency, 'The World Factbook: Rwanda.'

41 Leora Klapper, Annamaria Lusardi and Peter van Oudheusden, 'Financial Literacy Around the World: Insights from the Standard & Poor's Ratings Services Global Financial Literacy Survey' (Washington DC, World Bank, 2015). Available from [http://gflec.org/wp-content/uploads/2015/11/Finlit\\_paper\\_16\\_F2\\_singles.pdf](http://gflec.org/wp-content/uploads/2015/11/Finlit_paper_16_F2_singles.pdf)

## Box 2: Creating its own mobile banking channel—The case of Urwego Opportunity Bank in Rwanda (continued)

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To improve group loan repayments, UOB implemented the following solutions:

1. Ensure that groups function properly by scheduling consistent group meetings, providing timely information on arrears, sending repayment reminders and conducting immediate follow-up with groups (UOB customers liked the convenience and security of paying their loans through mHose).
2. Improve the customer experience by supporting customers to start using the mobile and agent banking service and providing overdraft to agents.
3. Define roles and responsibilities of staff involved, including a re-fined customer and agent registration and activation procedure.<sup>42</sup>

## RESULTS ACHIEVED THROUGH MHOSE (2016)<sup>44</sup>

- Launch: April 2013
- Clients registered to the channel: 68,425
- Women customers: 22,590 (21,313 of these are active)
- Active clients/depositors using the channel: 10,263
- Percentage of loans disbursed via the mobile banking channel (end-2015): 50%
- Borrowers: 32,577
- Active agents: 250

## NEXT STEPS

- UOB is looking at more ways to improve usage of mobile banking as a tool to help halt cash-handling, especially in rural areas where there are no bank branches.
- It is currently designing operational procedures to facilitate the process of managing mobile banking. Part of this exercise will be examining how to curb OpEx by fully utilizing mobile banking.
- UOB is looking into linking its mobile banking service to platforms that facilitate interoperability, such as linking with MM wallets for push-and-pull transactions (i.e., Tigo Cash, MTN Mobile Money), which would increase the number of service access points for its clients.
- To ease the loan repayment process, it is considering the introduction of regular direct debits.
- Finally, to provide agents with enough liquidity to perform transactions, UOB is planning to roll out an extensive agent liquidity support programme. The support will be in the form of agent overdraft.

## KEY FIGURES ON THE INSTITUTION (2016)<sup>43</sup>

- Launch: July 2007
- Gross loan portfolio: \$16.6 million
- Deposits: \$19.32 million
- Assets: \$27.84 million
- Active borrowers: 43,397
- Depositors: 300,000
- Branches: 18
- Credit offices: 33
- ATMs: 17

<sup>42</sup> Andrew Tushabe, 'UOB mobile banking,' presentation at European Microfinance Week 2015: Financial Inclusion for Sustainable Development, November 2015. Available from [http://www.e-mfp.eu/sites/default/files/resources/2015/11/EMW2015\\_UOB%20Mobile%20Banking\\_A.Tushabe.pdf](http://www.e-mfp.eu/sites/default/files/resources/2015/11/EMW2015_UOB%20Mobile%20Banking_A.Tushabe.pdf)

<sup>43</sup> Data provided by UOB.

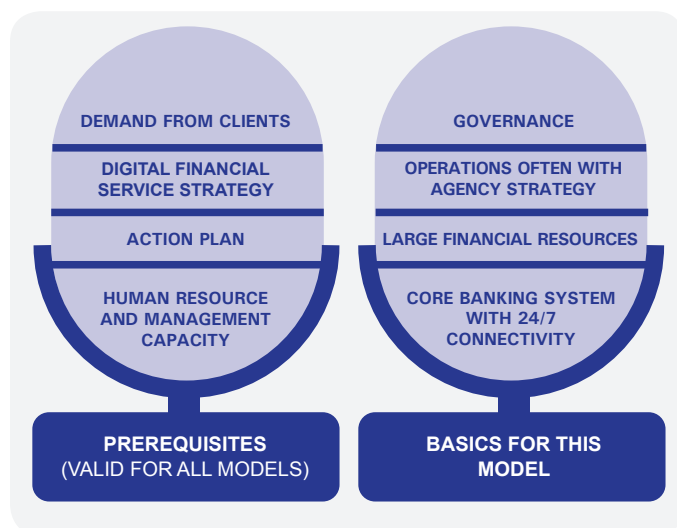
<sup>44</sup> Ibid.

## SECTION 4: INGREDIENTS FOR SUCCESS

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

Figure X provides a snapshot of the prerequisites for this business model, while the accompanying sub-sections, boxes and table 12 provide more detail.

**Figure X: Prerequisites for using this model**



### PREREQUISITES



#### Demand/Need from clients

Any new product or service should address a client need in order to ensure its adoption. Understanding client needs and challenges 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., cost of travelling long distances to branches, time spent queueing at branches). The FI should perform in-depth market research in order to do the following:

1. Validate the necessity to develop a new channel to address its clients' needs.
2. Customize its value proposition to meet as many of its clients' current pain points as possible and be attractive to new clients.
3. Be a data point for future research (i.e., act as a baseline).

4. Indicate where the FI should pilot first (i.e., where there is greatest need). Other considerations include network connectivity, local competition, etc.
5. Extract data that can be used to help build the business case for establishing mobile banking (e.g., data to forecast the number of new clients and the operational savings [from branch transactions] versus CapEx and OpEx).
6. Allow alignment with agent strategy/operations—if agents have already been deployed.
7. Understand if/where there will be cannibalization of other distribution channels.



#### Strategy and action plan

The first step in going digital is to define a strategy. What are the objectives of deploying mobile banking? What will be the benefits for both the institution and the 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 marketed and distributed (own staff, agents)? Which technology will be used? What interfacing strategy will be used? Which vendors have a local presence? Who will pay for what?

The next step, once the strategy is defined, is to create an action plan. An action plan should consider the different steps needed to achieve the strategy and should define, for each activity to be carried out, the person(s) responsible, the deliverables and 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 that activities are on track. KPIs also need to be defined and monitored from the beginning. Mapping potential risks with mitigation strategies is highly recommended.



#### Implementation tools



##### Action plan template:

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

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## Dedicated team

When making the decision to invest in mobile banking, a key cost and consideration (ultimately where success or failure will be determined) is the team that needs to implement the project. Mobile banking should be headed by an ADC manager (at the senior management level) who is positioned in headquarters and who should only be responsible for alternative channels, which can include mobile banking, agency banking, POS, ATMs, etc. This position is full time and should not be mixed with other

roles. Underneath the ADC manager, the FI may have channel managers (i.e., one manager each for mobile banking, agency banking, POS, ATMs, etc.); these managers should also be at headquarters. In each branch, there should be a manager who is responsible for all ADCs in the branch's area of operations. Sometimes the branch operations manager may take on this role. Depending on the promotion of mobile banking at the FI, part-time marketing and sales teams may be recruited to conduct customer awareness, recruitment and training activities; these part-time staff are in addition to full-time branch staff.



## Basics to have in place for this model

**Table 12: Basics to have in place for this model**

Dimension	Prerequisite	Description of the basics needed
Internal capacity	Management	<ul style="list-style-type: none"> <li>An ADC manager (at senior management level) needs to be recruited/appointed at headquarters and should be exclusively dedicated to all non-staff channels (to mobile banking, agency banking, POS, ATMs, etc.), as appropriate. The ADC manager should inform the CEO of channel activity on a regular basis (e.g., initially through weekly reports that can later evolve to monthly ones). The CEO should report channel activity to the board of directors.</li> </ul>
	Staff capacity	<ul style="list-style-type: none"> <li>A project manager and a project team should be recruited whose responsibility it is to manage the relationship/project with partners. This responsibility is especially important when developing the service and for building the interfaces, though it should also be an ongoing task in an 'account management' type role. There also needs to be a permanent dedicated support team, including marketing staff, IT staff in charge of system integration and management, and back-office staff in charge of service-level monitoring, partner settlement, KPI monitoring, etc.</li> </ul>
	Human resource policy and training	<ul style="list-style-type: none"> <li>Someone with agent experience should be recruited for the positions of ADC manager and project manager, as these are full-time positions. Job descriptions need to be adapted/created, and staff involved in the new channel must be trained.</li> </ul>
Financial capacity	Financial self-sustainability	<ul style="list-style-type: none"> <li>The FI should have reached financial breakeven for at least two years.</li> </ul>
	Financial resources	<ul style="list-style-type: none"> <li>Purchasing the platform, building interfaces and conducting marketing require significant financial resources, which could range anywhere from \$100,000 to \$1,000,000+ depending on specifics. The FI can use its own or external resources, though a part of the investment should come from its own resources.</li> </ul>
Operational capacity	Liquidity/Cash management	<ul style="list-style-type: none"> <li>Automated liquidity management and clear rules and procedures should be in place.</li> </ul>
	Operational self-sufficiency/Breakeven	<ul style="list-style-type: none"> <li>The FI should be over the operational self-sufficiency breakeven level. Ideally, operational self-sufficiency should be higher than 130% to handle the effort required to implement this model.</li> </ul>
	Regulation	<ul style="list-style-type: none"> <li>The FI should have a regular FI licence. There is likely a need for a specific mobile banking licence for this model.</li> </ul>
Technical capacity	Connectivity	<ul style="list-style-type: none"> <li>This model requires good phone network connectivity. It also requires Internet access with a back-up plan (e.g., satellite-based very small aperture terminals [VSAT]). The FI should develop a mitigation strategy as part of the risk management plan, specifically in relation to loan repayment, in case connectivity is lost.</li> </ul>
	MIS	<ul style="list-style-type: none"> <li>The FI must have a centralized CBS/MIS, which needs to include mobile-banking, SMS and call-centre modules. The MIS must be interfaced in real time between headquarters and branches. Depending on the current MIS functionalities and the interface required, the FI likely needs to invest in this new hardware and software.</li> </ul>

**Table 12: Basics to have in place for this model (continued)**

Dimension	Prerequisite	Description of the basics needed
Technical capacity	Interfaces	<ul style="list-style-type: none"> <li>The FI interfaces with a range of partners (MNOs, switches, utility companies, etc.) for mobile banking, either on a one-on-one basis or through the aggregator model. The FI must be able to reconcile all transactions on a daily basis (between the MM wallet and bank account in particular) and know which partners need to be compensated as per the commercial agreements signed.</li> </ul>
Institutional stability	Quality of portfolio	<ul style="list-style-type: none"> <li>Portfolio at risk greater than 30 days should be less than 5% for at least three years in a row.</li> </ul>
	Governance	<ul style="list-style-type: none"> <li>The FI should have stable governance to be able to plan and roll out mobile banking and should not have experienced a governance crisis in the past.</li> </ul>



### Implementation tools: Is the FI ready?



#### Self-readiness assessment tool:

Assesses which prerequisites of the model the FI currently meets and which ones still need to be addressed

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### Challenges and risks to anticipate

The FI should anticipate challenges along the path and prepare for them. Table 13 lists the most common challenges experienced by FIs that have rolled out mobile banking. This list is not exhaustive, and new risks may arise during the implementation process. Refer to the toolbox in this document for risk mapping and mitigation strategies. For more depth on risk, refer to the *IFC Digital Financial Services and Risk Management Handbook*.<sup>45</sup>

**Table 13: Most common challenges with this model**

Type of risk	Description of the risk
(1) Strategic risk	<ul style="list-style-type: none"> <li>Incomplete understanding by provider of its target market for digital financial services (misaligned client value proposition)</li> <li>Lack of targeted marketing to inform clients of new channel</li> <li>Poor education of clients, resulting in clients not being able to use services</li> <li>Lack of interoperability (services can only be accessed by clients of one MNO)</li> <li>High costs of services (e.g., fees), leading to rejection of services by clients</li> <li>Services too complex to use, leading to rejection of services by clients</li> <li>Resistance to change from internal staff who perceive new channel as competition</li> </ul>
(2) Operational risk	<ul style="list-style-type: none"> <li>Lack of dedicated team in charge of mobile banking channel at headquarters and branches (to educate and inform clients)</li> <li>Major impact on operations not carefully anticipated or addressed</li> <li>Reconciliation and account variances: Transactions not recorded in real time, causing issues for loan repayment and/or for customers making a deposit with an agent and wishing to withdraw with another agent or channel</li> <li>Non-compliance with authorized thresholds (cash and e-value)</li> <li>Lack of agent/customer helpline</li> <li>Poorly trained sales team or call-centre team, leading to inability to support clients</li> <li>Lack of instantaneous transaction confirmation (i.e., SMS receipt)</li> </ul>
(3) Technology risk	<ul style="list-style-type: none"> <li>System failure: Instability of network connectivity when customers are performing transactions</li> <li>Transaction delays</li> <li>Hardware failure: Poor reception and/or delay of SMS confirmation</li> <li>Integration failure: Unstable integration and/or technical problems between the partner platforms and the FI CBS/MIS</li> <li>Lack of (flexible and reactive) agent management software</li> <li>Lack of offline strategy</li> <li>Loss of data</li> </ul>

<sup>45</sup> IFC, *Digital Financial Services and Risk Management Handbook* (n.p., 2016). Available from <https://www.ifc.org/wps/wcm/connect/06c7896a-47e1-40af-8213-af7f2672e68b/Digital+Financial+Services+and+Risk+Management+Handbook.pdf?MOD=AJPERES>

**Table 13: Most common challenges with this model (continued)**

Type of risk	Description of the risk
(4) Financial risk	<ul style="list-style-type: none"> <li>• Project costs exceeding plans or revenues being less than planned</li> <li>• Longer time to pilot and roll out new channel than planned, delaying return on investment</li> <li>• Mobile banking channel divesting FI money from other projects</li> <li>• Commission structure not providing enough revenues to agents</li> </ul>
(5) Fraud risk	<ul style="list-style-type: none"> <li>• Customer fraud: Stolen identity</li> <li>• Customer fraud: Impersonation of provider or agent</li> <li>• Agent fraud</li> <li>• Unauthorized fees charged by agents</li> <li>• Internal collusion to commit fraud</li> </ul>
(6) Agent risk	<ul style="list-style-type: none"> <li>• Lack of agent availability for client to cash in/out</li> <li>• Poor customer experience with agents</li> <li>• Lack of agent liquidity</li> <li>• Agent inactivity</li> <li>• Lack of agent supervision</li> <li>• Poor agent branding</li> <li>• Agent business case: Rapid agent network roll-out that lacks business for sufficient return to agents, making them reduce investment and creating liquidity problems</li> <li>• Agent training: Agents poorly trained to support clients</li> </ul>
(7) Reputational risk	<ul style="list-style-type: none"> <li>• Transaction failure</li> <li>• Poor customer experience</li> </ul>
(8) Security risk	<ul style="list-style-type: none"> <li>• Clients sharing passwords or PINs with agents to perform transactions on their behalf</li> <li>• Hacking of the mobile banking platform</li> <li>• Lack of back-ups</li> <li>• Robbery of/by an agent</li> </ul>

*Note:* Terminology to describe the risk types is based on the following source, though the numbering has been modified: IFC, *Digital Financial Services and Risk Management Handbook* (n.p., 2016). Available from <https://www.ifc.org/wps/wcm/connect/06c7896a-47e1-40af-8213-af-7f2672e68b/Digital+Financial+Services+and+Risk+Management+Handbook.pdf?MOD=AJPERES>

Refer to the toolbox for a description of each risk, its mitigation strategy, its likelihood and its impact.



#### **Implementation tools: Are the risks carefully identified and mitigated?**



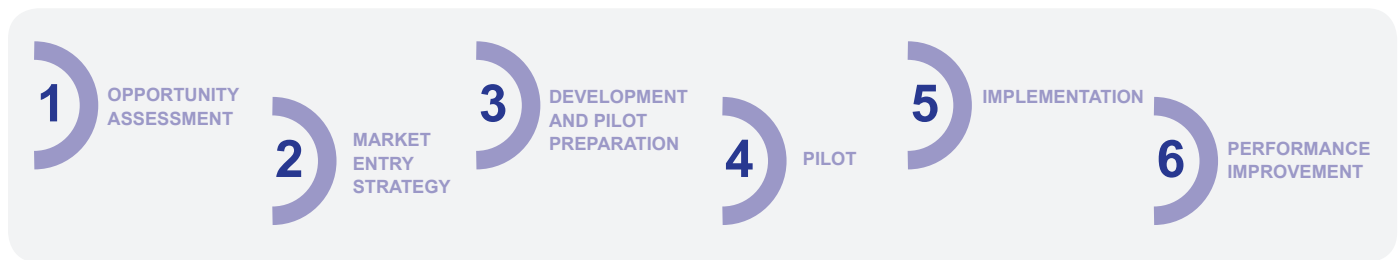
##### **Risk mapping grid:**

Provides a list of frequent risks with possible impacts and mitigation strategies

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## SECTION 5: RECIPE FOR SUCCESS, OR 'HOW TO'

**Figure XI:** Steps to take for successful implementation



This section describes the key activities FIs should perform to implement a mobile banking project. Key success factors are identified, while practical tips for FIs are provided in side boxes. Useful implementation tools (Excel files) are also provided to assist in the digital journey.

PHB Development and MicroLead defined six different steps for successful digital financial service implementation, based on 100+ successful implementations across the globe (see also figure XI):

1. Opportunity assessment
2. Market entry strategy
3. Development and pilot preparation
4. Pilot, assessment and evaluation, refinement and full implementation planning
5. Implementation
6. Performance improvement

Throughout the digital journey, seven workstreams should be assessed to ensure all key areas are consistently covered (see also figure XII):

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 XII:** Workstreams to assess



The authors recommend performing an analysis of strengths, weaknesses, opportunities and threats before launching a mobile banking project.


Table 14 lists some of the usual strengths, weaknesses, opportunities and threats associated with this model. Yet, each FI will find its own.

**Table 14: Analysis of strengths, weaknesses, opportunities and threats of this model**










Strengths	Weaknesses/Effort required	Opportunities	Threats
<ul style="list-style-type: none"> <li>Complete control over user experience (transactions, agents, technology)</li> <li>No need to work with third-party agents (although it remains an option)</li> <li>Opportunity to develop service-level agreement with vendor</li> <li>Typically, strong experience by FI staff in non-branch/ADCs</li> </ul>	<ul style="list-style-type: none"> <li>Very significant investment required in terms of time, money and HR to identify and finalize agreement with vendor</li> <li>Significant investment needed for client training, marketing/branding and sales</li> <li>Significant effort required for client awareness and financial education, especially for an FI that targets rural and/or illiterate clients</li> <li>Extensive staff training needed</li> <li>Real-time interconnection between branches and headquarters required</li> <li>Investment needed for new/upgraded platforms, depending on functionality/capacity</li> </ul>	<ul style="list-style-type: none"> <li>Improve range and quality of services offered to clients</li> <li>Enable clients to perform transactions on their own using their mobile device from the comfort of home</li> <li>Reach out to new client/market segments</li> <li>Reduce footfall in branches, thus freeing resources to offer better quality/other services</li> <li>Set fees for clients (distinct from previous models in which fees imposed by MNOs)</li> </ul>	<ul style="list-style-type: none"> <li>Platform or interface failure</li> <li>Network coverage failure</li> <li>Staff/Agent/Client fraud</li> <li>Equipment and/or application failure</li> <li>Rejection of service by clients who want human interaction</li> <li>Rejection of service by illiterate clients who cannot perform transactions alone</li> <li>Rejection of service by FI staff who feel 'replaced,' if change management not carefully planned</li> <li>Low project management capacity/ Lack of time to focus exclusively on mobile banking channel</li> </ul>

## STEP 1: OPPORTUNITY/MARKET ASSESSMENT

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<b>OBJECTIVE</b>	Decide whether there is an opportunity for the FI and whether the FI should roll out a mobile banking service: <ul style="list-style-type: none"> <li>Assess market readiness for mobile banking</li> <li>Assess clients' needs and pain points to understand how to address them</li> <li>Assess the different technology providers offering mobile banking solutions in the market</li> <li>Assess the existing MNOs and technology aggregators in the market</li> <li>Identify potential business strategies, critical success factors and constraints</li> </ul>		
<b>KEY ACTIVITIES</b>	Analyse the existing demand and supply, define objectives and assess operational readiness (see table 15 for more detail and accompanying boxes for more tips)		
<b>DECISION</b>	GO or NO GO?	 <b>RECOMMENDED DURATION</b>	3 months

**Table 15: Opportunity/Market assessment activities and key success factors**

Workstream	Activities
 Regulation and partnerships	<ul style="list-style-type: none"> <li>Note that, in many countries, there is need for central bank approval to roll out mobile banking, and likely there is specific mobile banking regulation.</li> <li>At a minimum, develop policies and procedures, which follow central bank guidelines, to roll out mobile banking channel.</li> <li>Review process of how customers register to access service (at FI branches only, via agents).</li> </ul>
 Market and products	<ul style="list-style-type: none"> <li>Carry out market study: understand clients' needs and pain points. Which areas make the most sense to pilot with (i.e., where is there good network connectivity)?</li> </ul>
 Distribution	<ul style="list-style-type: none"> <li>Assess which FIs have already launched mobile banking and what their value propositions are to existing/new clients. Which of these FIs are most visible in area of operations and which are actively promoting their mobile banking service?</li> <li>Decide whether the FI wants a proprietary agent network or will use an existing agent network.</li> <li>Assess capability of field and headquarters staff to roll out mobile banking.</li> <li>Assess capability of headquarters to handle more transactions, and ensure there is enough transaction processing capacity/audit control, especially in finance/accounting departments.</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>Assess Internet connectivity of headquarters and branches.</li> <li>Assess capacity of CBS. Can it be integrated with other systems? Does it allow for real-time transfer of data? Can it create reconciliation reports, etc.?</li> <li>Assess client network connectivity in area of operations.</li> <li>Identify most appropriate interface for clients (USSD, STK, smartphone app, etc.) by researching which mobile device clients most commonly use.</li> <li>Assess call-centre strategy. Should there be separate hotline numbers for clients and staff? Should it be in house or outsourced?</li> <li>Develop business/technical requirements specific for mobile banking.</li> <li>Based on requirements, develop a request for proposals for vendors.</li> </ul>
 <b>Key success factors</b>	
 Partners	<ul style="list-style-type: none"> <li>Decide whether to build partnerships on one-on-one basis or through the aggregator model.</li> <li>Develop shortlist of commercial partners needed.</li> <li>Understand and assess market strategy of partners: number of customers; number of transactions on a daily, weekly, monthly basis; mechanics of conducting a transaction; fee structure; positioning; client value proposition; market expansion strategy; etc.</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>Assess institutional readiness (using self-readiness assessment tool from this toolkit, for instance).</li> <li>Anticipate impact on staff (resistance to change), and make staff part of the change from the start if possible.</li> <li>Evaluate whether there is need to hire new staff with specific project management and ADC experience or whether the FI has this capability in house.</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>Prepare macro-budget listing all costs (CapEx and OpEx) and expected revenues, including those derived from operational savings, which will help the FI understand all elements to consider to balance costs with revenues and to calculate time needed to achieve return on investment).</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>Identify potential project team (front- and back-office support, dedicated members, project governance, etc.).</li> <li>Secure top management awareness and buy-in, and create a steering committee.</li> <li>Define how progress will be reported to the board.</li> </ul>



### Checklist of deliverables

- ☒ Identified legal requirements
- ☒ Developed shortlist of potential commercial partners
- ☒ Completed market study report
- ☒ Identified benefits for clients and the FI
- ☒ Completed software/hardware assessment, including CBS
- ☒ Formalized business and technical requirements
- ☒ Developed request for proposals for vendors
- ☒ Completed connectivity assessment
- ☒ Completed organization capabilities scan and what-is-needed-to-reach-objectives
- ☒ Developed macro budget
- ☒ Established steering committee and project team



### Implementation tools












**Project team template:**  
Provides template for the project team and steering committee  
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## STEP 2: MARKET ENTRY STRATEGY

38

<b>OBJECTIVE</b>	Define how to seize the opportunity/Decide how to roll out mobile banking: <ul style="list-style-type: none"> <li>• Select the right vendor that best meets the business/technical requirements—the FI should not be vendor led, rather it should be requirements led!<sup>46</sup></li> <li>• Enter negotiations with commercial partners</li> <li>• Define market strategy (positioning, targeting, segmentation)</li> <li>• Define distribution strategy</li> <li>• Plan the overall project</li> <li>• Develop a prototype</li> </ul>		
<b>KEY ACTIVITIES</b>	Identify vendors, start negotiating commercial partnerships, design market strategy, distribution strategy, internal strategy and IT plan, and conduct project team recruitment (see table 16 for more detail and accompanying boxes for more tips)		
<b>DECISION</b>	HOW TO GO TO MARKET	 <b>RECOMMENDED DURATION</b>	3 months

**Table 16: Market entry strategy activities and key success factors**

Workstream	Activities
 Regulation and partnerships	<ul style="list-style-type: none"> <li>• Inform and obtain licence from central bank for mobile banking channel.</li> <li>• Enter into partner and agent contracts, which should include service-level agreement and commission structure.</li> </ul>
 Distribution	<ul style="list-style-type: none"> <li>• Identify which MNO networks FI clients use.</li> <li>• Enter commercial negotiations either with MNO directly or through aggregator.</li> <li>• Develop market expansion strategy, if not starting with all networks.</li> <li>• Define agent network to be used for cash-in/cash-out.</li> <li>• Define training plan for agents (as entry point for client cash-in/cash-out).</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>• Upgrade CBS if necessary to allow for mobile banking and for real-time connections.</li> <li>• Shortlist vendors for mobile banking platform based on business requirements/desired functionalities being met, ability to add additional related modules, ongoing support, project timeline, platform capacity, cost-efficiency and speed-to-market.</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>• Determine whether existing staff can handle new tasks or if additional channel-specific staff need to be hired.</li> <li>• Adapt/Create job descriptions.</li> <li>• Develop a training needs assessment and put in place a training agenda, both for headquarters and field staff.</li> </ul>
 <b>Key success factors</b>	
 Partners	<ul style="list-style-type: none"> <li>• Start commercial agreements with partners.</li> </ul>
 Market and products	<ul style="list-style-type: none"> <li>• Define target groups and segment clients if needed (rural/urban, by products, etc.).</li> <li>• Define range of products and services that will be available through mobile banking: withdrawal, balance check, intra/interbank transfer, bank2wallet, wallet2bank, etc.</li> <li>• Define client value proposition(s) (there could be more than one for different target segments).</li> <li>• Define potential marketing campaigns, particularly if working with partners that already have a mobile payment service.</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>• Define detailed business case (cost and revenue streams, cash flows, breakeven point).</li> <li>• Negotiate fee structure and pricing/revenue-share with partners/service providers.</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>• Plan project as a whole, including the pilot and corresponding resource allocation.</li> <li>• Involve staff in the process (it is important not to underestimate the need for buy-in of staff and the change management required to implement new services).</li> </ul>



### Checklist of deliverables

- ☒ Shortlisted vendors and negotiated terms based on service-level agreements
- ☒ Started process for negotiating commercial contracts (if working with partners)
- ☒ Finalized market strategy: positioning, client value proposition, service(s) to be offered, market expansion strategy, etc.
- ☒ Designed internal strategy: organization, job descriptions, hiring plan, training needs
- ☒ Developed technical roadmap in case new or adapted MIS is needed
- ☒ Developed detailed business case
- ☒ Validated project plan and business case with all stakeholders



### Tips: Develop a prototype agent service

Mobile banking should be tested in the market to get user and staff feedback using human-centred design principles. The prototype will not be a fully developed service but will use quick, simple and cheap solutions to gather client and staff feedback on main functionality, terms and conditions, etc. The testing may involve some manual processes and, as such, will be considered a very limited research market. This testing is NOT the same as a full pilot, which will be done after the product/service has been fully developed. The prototype should test/investigate the following:

1. User interfaces
2. Pricing
3. Marketing/Promotional activities – communication strategies
4. Financial education and literacy messages

The prototype testing should include the following tasks:

1. Ensure the new products/services are launched in a timely manner and administered in line with product specifications
2. Ensure commitments to clients are kept
3. Understand operational processes, and define and design back-end processes
4. Troubleshoot any problems that emerge with a particular product feature, with a particular client or overall
5. Maintain effective partnership and cooperation between FI staff and agents involved in the testing



### Implementation tools



#### Assessment grid for vendor selection:

Assesses potential vendors based on criteria that matter most to a given FI  
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#### Action plan template:

Contains different categories required for an action plan and provides non-exhaustive list of activities to carry out for this model  
[Click on the icon to download](#)



#### Job descriptions:

Provides templates for key positions within the mobile banking team  
[Click on the icon to download](#)









<sup>46</sup> This suggestion means that the FI should look for a vendor that meets the business and technical requirements of the FI and that the FI should not adapt its requirements to fit the vendor's offering.

## STEP 3: PILOT PREPARATION

Once the FI defines the product and signs off for market launch, it will work to the agreed-upon pilot plan. The pilot should be used for any final fine-tuning before commercial launch.

<b>OBJECTIVE</b>	Sign contracts with all partners/providers and prepare a detailed project management process: <ul style="list-style-type: none"> <li>Finalize technical integration between FI system and other platforms (as required)</li> <li>Adapt business operations impacted by new channel, and develop appropriate process and procedures</li> <li>Define and prepare institutional motivation and capacity to run the pilot, including setting KPIs</li> </ul>		
<b>KEY ACTIVITIES</b>	Define marketing and communication strategy, including when appropriate with partners, identify location/network for pilot, recruit staff, perform user acceptance tests, and develop pricing and incentive structures (see table 17 for more detail and accompanying boxes for more tips)		
<b>DECISION</b>	<b>READY FOR PILOT?</b> If not ready, the design phase should continue until the FI is ready for pilot. Best practice is to pilot the service before launch. It is strongly advised not to skip this pilot phase.	 <b>RECOMMENDED DURATION</b>	3–6 months, depending on vendor capacity

**Table 17: Pilot preparation activities and key success factors**

Workstream	Activities
 Market and products	<ul style="list-style-type: none"> <li>Define service specifications and client experience.</li> <li>Refine branding and communication strategy as well as pilot plan.</li> <li>Develop marketing plan (e.g., co-branding as appropriate, delivery dates of posters and brochures, promotional gear for launch).</li> <li>Start with a limited service range (although many FIs offer a wide range of services, the FI might want to start with the services identified during the market study as being most needed by its clients, such as balance checks and transfers, so as to not overwhelm clients).</li> </ul>
 Distribution	<ul style="list-style-type: none"> <li>Identify locations and agents for pilot.</li> <li>Train agent network on new mobile banking channel, as agents are the first point of contact for clients doing cash-in/cash-out.</li> <li>Finalize call-centre strategy.</li> <li>Distribute marketing materials to FI staff and agents.</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>Purchase mobile banking platform and implement it.</li> <li>Integrate the FI system with the partners' platforms.</li> <li>Perform user acceptance tests.</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>Define incentives for staff (e.g., number of active customers, number of transactions through new channel, deposits mobilized).</li> </ul>
 <b>Key success factors</b>	
 Regulation and partnerships	<ul style="list-style-type: none"> <li>Define and sign commercial agreement: negotiate services, fees/revenue-sharing agreements, exclusivity clauses, etc.</li> <li>Include a service-level agreement with the vendor that 'stipulate[s] the expectations with regards to the services provided and the consequences for both parties in case of non-delivery to the agreed service level standards.'<sup>a</sup></li> <li>Get regulatory approval for pilot (if necessary).</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>Develop or refine business processes.</li> <li>Develop reconciliation, invoicing and accounting procedures at headquarters.</li> <li>Prepare map of risks and mitigation strategies (risk management framework).</li> <li>Define KPIs and monitoring scheme.</li> <li>Ensure all staff is clear on roles and job descriptions.</li> <li>Recruit and train staff to manage and provide the service during pilot, both at headquarters and branches (training should take place no more than two weeks before pilot launch so that staff do not forget what they learned).</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>Get project team up to speed.</li> <li>Validate pilot implementation plan.</li> <li>Create risk management framework.</li> <li>Have escalation matrix.</li> </ul>

<sup>a</sup> FINCA/ Mastercard Foundation, 'Expanding Access to Finance through Mobile Payments: Lessons Learned for MFI-Mobile Network Operator Partnerships,' Case Study, p. 4 (n.p., June 2015). Available from <http://www.finca.org/files/2015/06/FINCA-MasterCard-Case-study-2015.pdf>



### Is FI ready for pilot to go live?

- ☒ Completed and signed commercial contracts/agreements
- ☒ Signed service-level agreements with vendor and any other service providers
- ☒ Documented approval of regulator (if needed)
- ☒ Finalized marketing plan and communication material
- ☒ Identified locations for pilot
- ☒ Recruited and/or trained ADC team
- ☒ Finalized process specifications
- ☒ Completed IT integrations and user acceptance tests
- ☒ Updated risk management process
- ☒ Completed KPIs and monitoring scheme
- ☒ Revised pricing structure
- ☒ Revised incentive structure
- ☒ Detailed and validated pilot implementation plan



### Implementation tools



#### Service-level agreement:

Provides main elements to address in a service-level agreement with a partner  
**Click on the icon to download**



#### Risk mapping grid:

Provides a list of frequent risks with possible impacts and mitigation strategies  
**Click on the icon to download**



#### KPI template:


Offers suggested KPIs and measurement strategies  
**Click on the icon to download**











### Tips

- Anticipate and do not underestimate the impact on the organization—there will be financial, technological, operational, marketing, HR and client experience implications
- Do not underestimate the time needed for IT integration or the amount of HR involved/impacted
- Complete user acceptance tests before launch

## STEP 4: PILOT

<b>OBJECTIVE</b>	Run pilot and prepare for launch: <ul style="list-style-type: none"> <li>• Test services and liquidity management, and take corrective actions</li> <li>• Check pilot actuals against expectations (i.e., KPIs)</li> <li>• Monitor and evaluate outcomes of the pilot, and provide feedback on any technology and business issues (including marketing, pricing, sales, processes, etc.) that arose during the pilot to see how they can be addressed</li> <li>• Validate plan for the launch</li> </ul>		
<b>KEY ACTIVITIES</b>	Test all operational processes in real-life environment, identify outstanding risks and develop corrective actions as needed for improvement (see table 18 for more detail and accompanying boxes for more tips)		
<b>DECISION</b>	GO or NO GO? Readiness to move to national launch	 <b>RECOMMENDED DURATION</b>	3 months minimum, 6 months more likely

**Table 18: Pilot activities and key success factors**

Workstream	Activities
 Distribution	<ul style="list-style-type: none"> <li>• Provide communication material to staff to publicize/sell the new service to clients and train clients on it.</li> <li>• Distribute marketing materials about the new service to agents, in branches and with field staff.</li> <li>• Monitor and report number of queries through call centre.</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>• Test all technical functionalities and monitor performance.</li> <li>• Plan transition from pilot to full organization (route to market plan).</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>• Check on fraudulent behaviour (internal from staff and external from clients).</li> <li>• Ensure proper reconciliation between the partner and the FI accounts.</li> <li>• Check whether pilot is in line with business model plans.</li> </ul>
 <b>Key success factors</b>	
 Regulation and partnerships	<ul style="list-style-type: none"> <li>• Keep regulatory authorities informed of progress (if necessary).</li> <li>• Review pilot results with partners and manage relationships.</li> </ul>
 Market and products	<ul style="list-style-type: none"> <li>• Educate clients on the new channel (not a one-off but a repeated educational effort).</li> <li>• Launch communication actions for pilot.</li> <li>• Test services and make adjustments as needed.</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>• Adapt business processes as needed.</li> <li>• Monitor KPIs on a daily/weekly basis.</li> <li>• Identify improvements needed and implement on the run.</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>• Evaluate pilot results on weekly and/or monthly basis and prepare improvement action plan.</li> <li>• Plan commercial launch when ready (pilot should take as long as needed to sort out any challenges that arise).</li> </ul>



### Tips

- Start with restricted number of products/services (i.e., deposit, balance check, transfer)
- Remember that staff training is key and can determine success or failure of the digital project—FI agents need to master operations and procedures before going live since they serve as ambassadors of the FI for the service
- Even if approval of regulator is not needed to launch, keep regulator in the loop
- Prepare client education/sensitization plan for new products/services to build trust in new channel
- Perform weekly and monthly pilot assessments and take corrective actions
- Monitor KPIs and implement changes as needed



### Implementation tools









At this stage, implementation depends on the FI. It becomes difficult to provide generic tools applicable to all FIs. The authors recommend seeking support from consultants for this phase. They will help in designing customized tools.

## STEP 5: LAUNCH/IMPLEMENTATION

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<b>OBJECTIVE</b>	<p>Operate the business on a daily basis:</p> <ul style="list-style-type: none"> <li>Formally hand over from project team to operations team</li> <li>Conduct IT stress/capacity test: can the systems handle the forecasted load?</li> <li>Refine business model based on pilot results</li> <li>Complete plan for full launch with resource allocation</li> <li>Check if all preconditions for the launch have been met, and assess all aspects of the service</li> <li>Coordinate, refine and troubleshoot the scale-up of the commercial launch and monitoring scheme</li> </ul>
<b>KEY ACTIVITIES</b>	Implement product expansion, scale up, strengthen, evaluate, hand over and monitor (see table 19 for more detail and accompanying boxes for more tips)

**Table 19: Implementation activities and key success factors**

Workstream	Activities
 Distribution	<ul style="list-style-type: none"> <li>Scale up (geographic expansion), and recruit new channel staff for headquarters as needed.</li> <li>Extend training of all staff involved with the service offering.</li> <li>Provide training to new clients.</li> <li>Distribute marketing materials to clients.</li> <li>Monitor and report number of queries through call centre.</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>Ensure there are no bugs in the integration between the FI and partner platforms.</li> <li>Receive regular reports from vendor/FI IT team regarding system-related issues (connectivity problems, system being down, SMS messages not being received, etc.).</li> <li>Ensure back-up plans for connectivity issues are in place and working.</li> </ul>
 <b>Key success factors</b>	
 Regulation and partnerships	<ul style="list-style-type: none"> <li>Share results of pilot with regulator to ensure FI is meeting all regulatory requirements and FI is recording expected KPIs.</li> </ul>
 Market and products	<ul style="list-style-type: none"> <li>Identify new market segments, and expand product/service offerings over time if desired.</li> <li>Ensure agents and branches are well branded with FI posters and have communication material to take advantage of cross-selling opportunities if possible.</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>Ensure operations team has taken full ownership of the service(s).</li> <li>Evaluate new business processes, and adapt over time if necessary.</li> <li>Prepare HR capacity plan with scale-up in mind.</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>Use pilot findings to (1) evaluate business case and (2) confirm or adapt pricing.</li> <li>Ensure proper reconciliation between FI and partners/service providers.</li> <li>Ensure payment of fees/revenue-sharing as per terms of contract/agreement.</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>Ensure project team hands over project to operations team that will manage the product on an ongoing basis.</li> <li>Continue close monitoring of results.</li> </ul>



### Implementation tools

At this stage, implementation depends on the FI. It becomes difficult to provide generic tools applicable to all FIs. The authors recommend seeking support from consultants for this phase. They will help in designing customized tools.



### Is FI ready to go live nationally?


- ☒ 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 permanent organization
  - ☒ Reviewed fraud conformity results
  - ☒ Followed up on KPIs
  - ☒ Evaluated pilot results, and developed and implemented an action plan for improvement
  - ☒ Developed commercial launch plan
  - ☒ Revised business case with multiple year targets
  - ☒ Completed backlog of pending actions










### Tips

- Even if approval of regulator is not needed to launch, keep regulator in the loop
- Start with restricted number of services targeting different client segments to assess take-up and then decide on expansion plan (progressive or all at once)
- Create feedback loop to regularly (every quarter, every month, etc.) assess results and take corrective actions

## STEP 6: PERFORMANCE IMPROVEMENT

<b>OBJECTIVE</b>	Improve performance of services launched and build culture of continuous improvements: <ul style="list-style-type: none"> <li>• Develop near-term improvement plan</li> <li>• Set up business intelligence to monitor service daily</li> <li>• Implement corrective actions</li> </ul>
<b>KEY ACTIVITIES</b>	Conduct assessment including interviews with clients and staff to evaluate perceptions (see table 20 for more detail and accompanying box for more tips)
<b>RECOMMENDED TIMING</b>	 6 months after launch minimum, 12 months ideally

**Table 20: Performance improvement activities and key success factors**

Workstream	Activities
 Distribution	<ul style="list-style-type: none"> <li>• Align and assess the client experience of using mobile banking (quantity, quality, localization, performance, revenues) through focus groups and mystery shopping.</li> <li>• Evaluate compliance with service-level agreement.</li> </ul>
 Technical / IT	<ul style="list-style-type: none"> <li>• Evaluate IT capabilities (loss of data, ease of use, time per transaction, etc.).</li> <li>• Evaluate integration between systems.</li> </ul>
 <b>Key success factors</b>	
 Market and products	<ul style="list-style-type: none"> <li>• Align client segmentation, value proposition and client journey through focus groups and interviews with clients.</li> </ul>
 Internal organization	<ul style="list-style-type: none"> <li>• Identify efficiency opportunities in internal organization, resources and processes.</li> </ul>
 Financials	<ul style="list-style-type: none"> <li>• Evaluate and adapt business plan (if needed).</li> <li>• Evaluate perceptions of pricing structure by clients and adapt pricing structure for clients (if needed).</li> <li>• Evaluate and adapt incentive structure for internal staff (if needed).</li> </ul>
 Project management	<ul style="list-style-type: none"> <li>• Based on assessments, define quick wins, near-term improvements and mid-term improvements.</li> </ul>



### Is FI ready for continuous improvement?





- ☒ Revised segmentation, value proposition, agent interaction and client journey:
  - ☒ Assessed experience of clients and channel staff
  - ☒ Evaluated integration between FI system and partner/service provider platforms
  - ☒ Revised business plan
  - ☒ Pricing validated by clients
  - ☒ Commissions/Fees validated by partners
  - ☒ Incentive structure validated by staff
  - ☒ Devised plan for continuous improvement of internal processes

## SUMMARY:

# THIS IS THE RIGHT MODEL FOR A FINANCIAL INSTITUTION IF...

THE FI IS LOOKING FOR A DISTRIBUTION SOLUTION MEETING THESE CRITERIA (SEE TABLE 21)...

**Table 21:** Summary of this model

 <p><b>TIME NEEDED</b></p> <ul style="list-style-type: none"> <li>• 9–12 months to pilot</li> <li>• 12 months or more to pilot graduation based on meeting KPI targets such as service availability</li> </ul>	 <p><b>IT EFFORT NEEDED</b></p> <p>POS, Phones, Tablets, Computers</p> <ul style="list-style-type: none"> <li>• Integration between the FI CBS/MIS and the mobile banking platform</li> <li>• Integration between FI and partner platforms</li> <li>• Mobile phone or tablet interface for clients</li> <li>• Call-centre operations and dispute-resolution process</li> </ul>
 <p><b>MONEY NEEDED</b></p> <p>Total estimated cost is \$1 million.</p> <ul style="list-style-type: none"> <li>• In many cases, the primary expenses are buying the mobile banking platform and interfacing with partners.</li> <li>• The other main costs are marketing and client training.</li> <li>• There is likely a need for specialized consultants to help with vendor selection and development of new back-office processes.</li> <li>• Other expenses might include market research and staff incentives.</li> </ul>	 <p><b>OPERATIONS PERFORMED</b></p> <ul style="list-style-type: none"> <li>• Facilitate cash deposit and withdrawal (though an agent)</li> <li>• Transfer funds – interbank and intrabank</li> <li>• Repay loan (from a savings account)</li> <li>• MM transfer – bank2wallet (push) and/or wallet2bank (pull)</li> <li>• Apply for a loan (if there is credit scoring functionality)</li> <li>• Get account information (check balance, order statement, call client services)</li> <li>• Perform other services (pay bill, buy airtime)</li> </ul>
 <p><b>OBJECTIVES</b></p> <ul style="list-style-type: none"> <li>• Complete control over user experience</li> <li>• Improved client service (convenience, cost and time)</li> <li>• Increased client outreach</li> <li>• Increased deposit mobilization</li> <li>• Reduced footfall in branches</li> <li>• Improved operational efficiency</li> <li>• Added value to brand</li> </ul>	 <p><b>DISTRIBUTION</b></p> <ul style="list-style-type: none"> <li>• Decide whether to build own agent network or use existing agent network</li> <li>• Decide whether to work on a one-on-one basis with MNOs or through an MNO aggregator</li> <li>• Adapt staff training to offer services through this new channel, and in particular recruit and/or train field operations staff, marketing staff, new channel management staff, back-office/finance staff and IT staff</li> </ul>









... AND THE FI HAS CONSIDERED THESE STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SEE TABLE 22).

**Table 22:** Analysis of strengths, weaknesses, opportunities and threats of this model

Strengths	Weaknesses/Effort required	Opportunities	Threats
<ul style="list-style-type: none"> <li>• Complete control over user experience (transactions, agents, technology)</li> <li>• No need to work with third-party agents (although it remains an option)</li> <li>• Opportunity to develop service-level agreement with vendor</li> <li>• Typically, strong experience by FI staff in non-branch/ ADCs</li> </ul>	<ul style="list-style-type: none"> <li>• Very significant investment required in terms of time, money and HR to identify and finalize agreement with vendor</li> <li>• Significant investment needed for client training, marketing/branding and sales</li> <li>• Significant effort required for client awareness and financial education, especially for an FI that targets rural and/or illiterate clients</li> <li>• Extensive staff training needed</li> <li>• Real-time interconnection between branches and headquarters required</li> <li>• Investment needed for new/upgraded platforms, depending on functionality/capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Improve range and quality of services offered to clients</li> <li>• Enable clients to perform transactions on their own using their mobile device from the comfort of home</li> <li>• Reach out to new client/market segments</li> <li>• Reduce footfall in branches, thus freeing resources to offer better quality/other services</li> <li>• Set fees for clients (distinct from previous models in which fees imposed by MNOs)</li> </ul>	<ul style="list-style-type: none"> <li>• Platform or interface failure</li> <li>• Network coverage failure</li> <li>• Staff/Agent/Client fraud</li> <li>• Equipment and/or application failure</li> <li>• Rejection of service by clients who want human interaction</li> <li>• Rejection of service by illiterate clients who cannot perform transactions alone</li> <li>• Rejection of service by FI staff who feel 'replaced,' if change management not carefully planned</li> <li>• Low project management capacity/ Lack of time to focus exclusively on mobile banking channel</li> </ul>

## MICROLEAD AND PHB TOOLBOX

This page provides a summary of tools that MicroLead and PHB have developed to help FSPs succeed on their mobile banking journey and that are available throughout this toolkit.

TOOL	DESCRIPTION	DOWNLOAD DOCUMENT
Shared tools and templates across all toolboxes (but customized to each business model)		
Action plan template	A template that contains the different categories required for an action plan and provides a non-exhaustive list of activities to carry out for this model	
KPI template	A template of suggested KPIs and measurement strategies	
Project team template	A template for the project team and steering committee	
Risk mapping grid	A list of frequent risks with possible impacts and mitigation strategies	
Self-readiness assessment tool	A tool to assess which prerequisites of the model the FI currently meets and which ones still need to be addressed	
Specific tools for this model		
Assessment grid for vendor selection	A grid to assess potential vendors based on criteria that matter most to a given FI	
Job descriptions	Templates for key positions within the mobile banking team	
Service-level agreement	A template of the main elements to address in a service-level agreement with a partner	

## 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 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](http://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](http://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 MASTERCARD FOUNDATION

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](http://www.mastercardfdn.org). Follow the Foundation at @MastercardFdn on Twitter.



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