Guide to the Use of Digital Financial Services in Agriculture

USAID
FROM THE AMERICAN PEOPLE

mSTAR

ADVANCING DIGITAL FINANCIAL INCLUSION FOR SMALLHOLDERS FARMERS

Smallholder farmers are the frontlines of every developing country's food supply. They serve as the linchpin in poverty-reduction strategies, such as Feed the Future.

However, most farmers lack access to financial services and products to enable them to invest in their farms.

Evidence suggests that there is a **$430 billion short-fall** in serving this population's demand for finance.

Farmers face a range of roadblocks in managing their farms as a business, from purchasing inputs, to accessing financial services, to storing and selling produce.

Digital financial services (DFS) present a promising opportunity to address some of these pressing needs and complement USAID's past and current portfolio of work to achieve greater impact.

SUSTAINABLY REDUCE GLOBAL POVERTY AND HUNGER

ROADBLOCK

Smallholder farmers not competitive in commercial supply chains

DFS can enable: Digitizing payments throughout the value chain to lower costs for buyers (and farmers) and increase price transparency

ROADBLOCK

Appropriate credit products don't exist for smallholder farmers

DFS can enable: Lower transaction costs to lend to smallholder farmers, making credit more available

ROADBLOCK

Women disempowered in decision-making in agriculture

DFS can enable: Improved access to markets and better control of funds

ROADBLOCK

Limited ability to manage post-harvest loss and speculate for higher prices for harvests

DFS can enable: Access to storage facilities with inventory-based credit

ROADBLOCK

Smallholder farmers cannot save for long-term investments

DFS can enable: Savings products and services

ROADBLOCK

Cost of buying quality and quantity inputs is prohibitive and risky

DFS can enable: Increased purchasing power, reduced risk, decreased transaction costs

ROADBLOCK

Managing and mitigating weather risks to crops

DFS can enable: Weather-indexed microinsurance, purchase of weather risk-mitigating farm equipment (i.e., drip irrigation, climate resilient seeds)

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Introduction

$430-440 BILLION

The estimated shortfall in serving the global demand for smallholder finance.

80%

OF THE WORLD'S POPULATION IS FED BY SMALLHOLDER FARMERS

1.5 BILLION

# of people living on smallholder farms globally

Smallholders have the potential to play an ever increasing role in feeding the world through sustainable supply of key agricultural commodities. However, most smallholders lack their own funds to invest in their farms to improve productivity and connect to markets, Without inclusive market systems, smallholders must rely on their own limited savings to invest in their farm, education and other household needs, which contributes to lower productivity, persistent income inequality and slower economic growth.

The nature and scale of these challenges are familiar to those of you who are driving the progress of USAID's Feed the Future initiative, which, over the past few years, has been addressing many of these challenges in order to unlock the potential of agriculture to reduce hunger, extreme poverty, and malnutrition. This *Guide to the Use of Digital Finance in Agriculture* aims to provide a quick and easy-to-use tool to understand how one new technology platform, digital finance, can help address some of the challenges that smallholder farmers are experiencing today—mainly, lack of access to financial services and convenient payment systems.

Digital financial services (DFS) can help to address specific chronic challenges in the value chain—especially those challenges that need financial services solutions, and where the traditional finance sector is not fully addressing the demands in rural markets. This is often due to high infrastructure costs and a lack of incentives to adapt products to the unique needs of farmers. Digital finance offers a way to expand access to the formal financial system (through a basic transaction account supervised by the banking regulator), taking advantage of the rapid growth of digital and mobile telephone infrastructure and the advent of branchless banking (which offers the ability to transact outside of a traditional bank branch). This has a direct link to increasing farmer income and decreasing malnutrition.

1. Digital Finance for Development Handbook

Digital financial services (DFS) are fundamentally about saving money, accessing credit and insurance, and performing transactions via digital channels—mobile phones, cards, computers, tablets, and so on. We often talk about "mobile money" because in developing countries mobile phones are the most widely distributed and most functionally adaptable means for accessing digital financial services[1].

The goal of this Guide is to identify specific challenges in value chains that can be addressed by improved payments or financial services, and then to identify corresponding DFS solutions to these specific challenges—with the aim of improving the ability of value chains to increase farmer incomes. In doing so, it is possible to increase farmer household access to a transaction account that builds household resiliency and which offers access to payments and financial services long after an aid project or intervention is complete. Ultimately, this will move us closer to Feed the Future's joint high level objectives of inclusive agricultural sector growth and improved nutritional status.

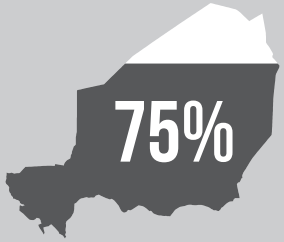
It is important to note that while DFS is not a panacea for agriculture development, the integration of DFS to address the specific challenges identified does have significant impacts beyond the immediate goal. First, due the rapid growth of digital finance providers (including Mobile Network Operation (MNOs), banks, and technology start-ups) in many Feed the Future (FTF) priority markets, integrating DFS helps to engage the private sector in the rural economy,

spurring lasting market growth (the goal of FTF's market systems approach[2].) Second, each time a farmer opens a digital account to address a specific value chain challenge, they are also gaining access to a wide range of formal financial services—often for the first time. **Lack of access to finance is not a banking challenge—it is a livelihoods challenge,** one that directly impacts FTF goals of improving household economic resilience and links farmers to new market opportunities.

BACKGROUND AND WAY FORWARD

This Guide is based on four in-country assessments conducted jointly by the USAID Bureau for Food Security's (BFS) Office of Market and Partnership Innovations (MPI), the Global Development Lab DFS team and USAID's FHI 360-led Mobile Solutions Technical Assistance and Research (mSTAR) project. The assessments covered four different FTF countries: Tanzania and Uganda, relatively mature DFS markets; Ghana, a rapidly expanding DFS market; and Haiti, a relatively nascent DFS market. These four markets are informative, but of course not conclusive, and therefore we have used the analysis from the in-country assessments to create an analytical framework, rather than provide an exhaustive list of answers. The framework draws insights from all four markets with the aim of allowing USAID Mission staff and implementing partner staff to do similar assessment and *plan interventions for specific context, and the specific results they are trying to achieve*.

The Guide is a work-in-progress: both DFS and the agricultural sector are complex market systems that are rapidly evolving.[3] The methodology relies on



A randomized evaluation in Niger found that using mobile payments for unconditional cash transfers saved recipients 75% on payments, and they used those savings to purchase a greater variety of food stuffs and to grow a greater variety of crops.

In 2011, evidence gathered from households in Kenya over a two-year period found that households with access to the mobile money product M-Pesa were able to withstand financial shocks with no impact on consumption, while those households without access to mobile money suffered a 7% decrease in consumption.[4]

2. http://agrilinks.org/events/facilitating-market-led-agricultural-growth-comparison-models-nigeria-and-uganda

3. For more information on the partnership between the Bureau for Food Security and the Global Development Lab/DFS team which informed the development of this Guide, check out "How Digital Financial Services Can Meet The Financing Demands Of Smallholder Farmers" on Microlinks, a blog post co-written by Elizabeth Diebold, Nandini Harihareswara,and Harsha Kodali.

4. "Risk Sharing and Transaction Costs: Evidence from Kenya's Mobile Money Revolution," Jack, William and Tavneet Suri, 2011. https://www.poverty-action.org/sites/default/files/jack_suri_aer_.pdf

your knowledge of agriculture in your specific context to develop the most appropriate approach. We have included a host of resources and case studies to provide additional context and information, and hope that after reading this Guide, you will be excited to learn more. We encourage you to join the conversation by engaging with USAID's Digital Finance Community of Practice, BFS/MPI's Inclusive Markets Division, USAID Mission staff, and other donors and implementing partners working to advance agricultural sector growth in your country or region.

LIMITATIONS

This Guide takes a value chain approach to identifying challenges and relevant DFS solutions. This approach is very useful in many ways; however, it does not take into account the full complexity of the financial lives of many smallholder farmers (for more on this, please refer to the outstanding Financial Diaries of Smallholder Farmers conducted by CGAP). Therefore, we hope that the reader will benefit from the simplicity of the framework, while understanding the complexity of the specific context in which their program operates.

A second limitation is that this Guide focuses on DFS specifically, and does fully account for the integration with all FTF goals, such as gender and climate-resistant agriculture. Nor does it take into full consideration other digital technologies, such as the importance of reliable connectivity, affordable handsets and services, and necessary digital literary and digital skills required to use digital financial products. This is by design, in an attempt to simplify the Guide, but should not suggest that DFS can or should be isolated from these other issues.

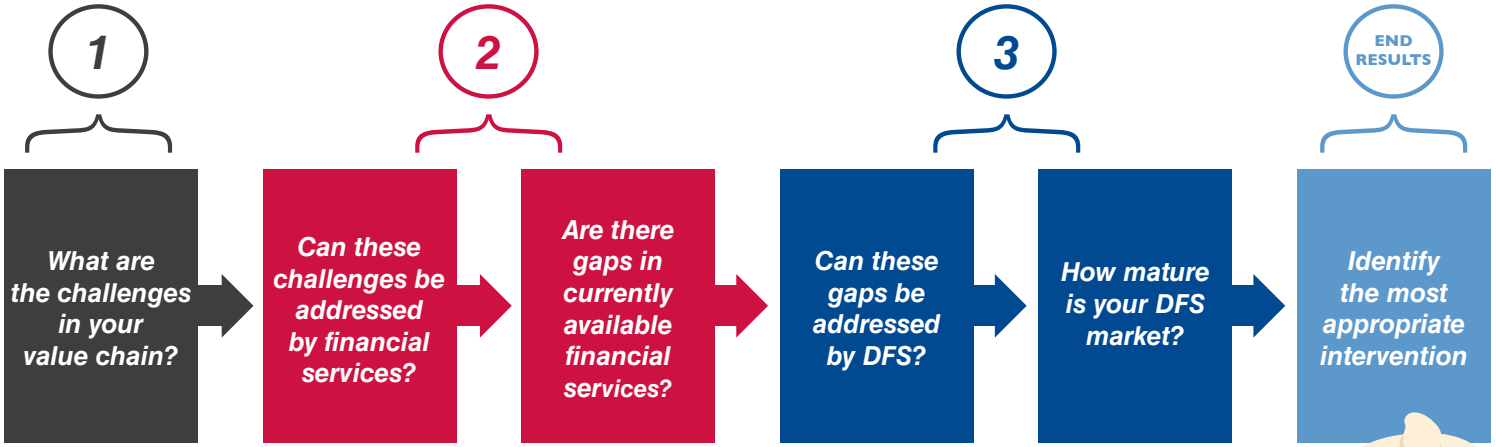
Analytical Framework

A 3-D Methodology:
Can DFS Help You in Achieving Feed the Future Goals?

This exercise is meant to be illustrative and provide a general sense of how digital finance can be leveraged most appropriately. The exercise is split into 3 high level steps:

A 3-D Methodology:
Can DFS Help You in Achieving Feed the Future Goals?

These 3 high level steps can be further broken down as follows:



This "3-D" methodology is designed to rapidly assess how DFS can help address value chain challenges to accelerate progress towards your agriculture development goals. By the final step, you should have an idea of which specific challenges you are addressing, which actors need to be engaged, and what type of intervention is most appropriate for implementing a DFS solution to your challenge.

Remember! This tool is not meant to be a complete list of all challenges or all solutions. It is an analytical framework only: use your expertise to identify new challenges and new solutions not listed here. There are lots of helpful resources listed for further information, and many USAID staff members, consultants, and implementing partners that can be engaged to help map out more specific next steps once you have completed your rapid assessment.

Ultimate Destination: How can DFS help you?

Once you have completed this exercise, you will have a chart such as this, specific to your program, which will help you determine appropriate interventions in the next section.

EXAMPLE

FEED THE FUTURE RESULT BEING ADDRESSED	FINANCE NEED	APPLICABLE DFS-ENABLED PRODUCT	DESCRIPTION	PRODUCT AVAILABLE IN YOUR MARKET?
Increase use of improved seeds by farmers	• Savings products • Product financing	• Digital savings products • Input credit for smallholders in closed-loop ecosystem of integrated value chain actors	• Zero-minimum mobile savings accounts for smallholders • Seasonal, working capital loans for smallholders • Inputs credit for smallholders in closed-loop ecosystem of integrated value chain actors	Yes, I'm in a consolidated market with a mature DFS ecosystem
Increase delivery and utilization of input subsidies	• Payments • Short-term savings • Product financing	• Evouchers for government input subsidy disbursement	• Electronic platform (mobile phone or card-based) for digital issuance, verification, and redemption of input vouchers	Yes, I'm in a nascent market and eVouchers will work without a full DFS ecosystem
Increase resilience of farmers through adoption of insurance products	• Product financing • Payment mechanism for premiums and for payouts	• Weather-indexed crop insurance enabled by digital platform	• Insurance product to mitigate the risk of extreme weather events with digital purchase, claims filing, resolution, and payout	Maybe, I'm in a expansion market where some microinsurance is available but has not yet been adapted for farmers.
Increase price transparency of markets for farmers	• Payments connected to timely/ accurate information • Supply-chain financing	• Mobile system for agriculture information dissemination and collection of smallholder data with integrated payments	• Digital portal for collection and dissemination of agronomic, weather and market data, with extension of financial products based on detailed consumer profile	No, in my market no one has been able to created a sustainable ag information service that is ready for integration of payments and financing.
Increase ability to withstand shocks (related to climate or other threats to household resiliency)	• Convenient storage of funds • Ability to receive payments • Access to short-term financing	• Basic transaction account	• A mobile wallet allowing for funds storage and for farmers to easily receive payments in times of need	Yes, I'm in a nascent market, and this is the first product launched by most DFS producers.

Assessing the Value Chain Worksheet

FTF RESULT	VALUE CHAIN GAP(S)	DRIVERS	VALUE CHAIN ACTOR(S)	VALUE CHAIN SEGMENTATION	FINANCE NEED?	FINANCE NEED MET?	POTENTIAL FSP PARTNERS TO ENGAGE	REASONS HINDERING USE OF FINANCIAL SERVICES

1

Assessing Your Value Chain Challenges

Assessing Value Chains

	STEP	TASK
Value Chain Assessment	1	Identify the key Feed the Future or relevant program results that you want to address through this exercise.
	2	For each value chain, identify the challenges/gaps experienced by value chain actors, along with the drivers and sub-drivers behind those challenges.
	3	Identify the actors who would need to be involved in addressing the drivers and sub-drivers for each challenge.
	4	Determine if the value chain operates as tight, loose, or subsistence. This will have implications on financial solutions that would be most relevant.
	5	For each driver and sub-driver, determine if there is a potential finance solution. If so, complete the analysis in the next section.
FinancialServices Assessment	6	For drivers and sub-drivers with potential finance solutions, complete a finance gap analysis to assess which finance needs are not being met, and can be supported by DFS.
	7	Identify potential financial services providers (FSPs) to engage.
	8	DFS could serve as a great complement to traditional financial services and/or fill gaps in financial service provision. In all cases where there is a potential finance solution to the value chain challenges/drivers, determine if there is a potential DFS solution. If so, complete the analysis in the next section.
DFS Assessment	9	Determine which type of DFS market you are in.
	10	Identify specific DFS solutions to your problem.
	11	Identify whether or not the DFS solutions exist in your market yet.

Assessing Value Chains

For this section, use the worksheet template on page 19 to fill out your answers as you work through the five tasks.

Task 1. _____

Task 2. Identify the challenges in your focus value chains by component. For example:

EXAMPLE: Value Chain Component Challenges

INPUT PROVISION	PRODUCTION	STORAGE & DISTRIBUTION	SALE	PROCESSING
				
Agrodealers have insufficient stock on hand to meet demands	SHFs subject to weather risks	Poor use of storage	Lack of price discovery/ transparency	Insufficient supply (quality/quantity) for optimal processing
DRIVER: Lack of access to working capital loans to maintain optimal supply of stock		DRIVER: Poor access to off-site, fee-based storage		
DRIVER: Farmers unable to pay for inputs until harvest		SUB-DRIVER: Minimum storage quantities too large for individual SHFs to meet		

Assessing Value Chains

How do your focus value chains operate?

Knowing how your value chains operate will help inform the most appropriate financial solution that can be successful in your environment. The following **segmentation framework** (pioneered by CGAP) is designed to highlight differences in SHF demand for financial services related to agriculture – different SHFs have different needs, and this variety in demand cannot be met by the same suite of financial products, terms of service, or even pool of financial service providers.

As defined by CGAP, these three segments are differentiated by ***what they grow***, ***how they engage with markets as buyers and/or sellers***, *and* ***how those markets are organized***. *These segments are not meant to be fixed, iron-clad divisions, but rather categories based on common traits that can begin to illuminate the financial mechanisms that might best fit the given financial goals and cash flows.*

Using the framework on the next slide, categorize each of your focus value chains according to the most relevant segmentation. Note some value chains can operate in multiple segments depending on the geographic characteristics – tight in one area but loose in another, for example.

EXAMPLE: Value Chain Segmentation

	VALUE CHAIN	GEOGRAPHY	CATEGORIZATION
	Coffee	Zone A	Tight
	Maize	Zone B	Loose
	Maize	Zone C	Tight
	Cassava	Zone B	Subsistence

source: CGAP

Assessing Value Chains

TABLE 1: Segmentation Framework

COMMERCIAL	MOSTLY COMMERCIAL	NONCOMMERCIAL
Tight value chains:	***Loose value chains:***	***Subsistence value chains:***
• SHFs main source of income tends to be higher-value crops but also likely staple crops as well (staple crops may be sold more informally through local and regional markets) • SHFs take a more business-like approach to farming • SHFs have access to buyer-provided bundles of improved seeds, inputs, agricultural and weather information, finance, and secure markets and prices • SHFs generate reliable, high-quality outputs, generally sold on a contract basis • Highly organized and structured value chains with strong relationships between value chain actors ***FINANCE IMPLICATION:*** SHFs likely to demand and use wider range of both formal and informal financial services than other segments.	• SHFs crop mix generally focuses on staple crops but could also include high-value crops • SHFs are poor but tend to be less so than subsistence segment • SHFs have limited access to inputs, financial services, and information about weather, markets, and prices • SHFs tend to rely on unimproved seeds and traditional production methods • SHFs tend to sell their surplus production in informal local or regional markets • SHFs may be looking for opportunities to diversity assets and sources of income ***FINANCE IMPLICATION:*** SHFs have access to some financial services but constraints in accessing a wider range	• SHFs are concentrated in staple crops and may include small livestock • SHFs farm not as a strategic business choice or vocation but to contribute to their own sustenance and survival; may endure periods of food deficits throughout the year • SHFs are generally buyers of food and sellers of labor (limiting their ability to produce) • Very limited access to land, technology, education, markets, and information about weather or production methods • SHFs use very few purchased inputs and little (if any) mechanization • Outputs are relatively low and consumed largely by the household; irregular, small amounts of surplus are sold in informal local market • SHFs not connected to a structured value chain of any kind ***FINANCE IMPLICATION:*** SHFs largely limited to informal financial mechanisms and simple tools (such as local savings and loan groups) to meet relatively basic financial service needs

After reading the descriptions, determine which one best fits your value chain and make a note of it in the worksheet below. Keep the finance implication in mind in the later sections when you are determining potential solutions and interventions.

source: CGAP

Assessing Value Chains

TABLE 2: Assessing the Value Chain Worksheet Template

FTF RESULT	TASK 1: VALUE CHAIN GAP(S)	TASK 2: FINANCING NEED	TASK3: VALUE CHAIN ACTOR(S)	TASK 4: VALUE CHAIN SEGMENTATION	TASK 5: FINANCE NEED?
Increased access to market	Poor use of storage	SHF unable to pay for on-site storage equipment	Xxx, xxx, xxx	Loose	Yes
		No storage facility exists within catchment area	Xxx, xxx, xxx	Loose	Maybe
		Lack of coordinated access to storage points to meet minimum quantities required	Xxx, xxx, xxx	Loose	No

TASK 5: *If "Yes" or "Maybe" is indicated for any drivers and sub-drivers of a given value chain gap, then carry those elements forward for the financial services assessment in the next section. If there is no finance need (for example, if the driver needs a regulatory change), then there is no need to carry this issue forward into the rest of the guide. However, there could be other ICT solutions that are not finance related—for more on this, refer to Section III on different types of interventions.*

2

Assessing Existing Financial Services

Assessing Existing Financial Services

COMPLETED

	STEP	TASK
Value Chain Assessment	1	Identify the key Feed the Future or relevant program results that you want to address through this exercise.
	2	For each value chain, identify the challenges/gaps experienced by value chain actors, along with the drivers and sub-drivers behind those challenges.
	3	Identify the actors who would need to be involved in addressing the drivers and sub-drivers for each challenge.
	4	Determine if the value chain operates as tight, loose, or subsistence. This will have implications on financial solutions that would be most relevant.
	5	For each driver and sub-driver, determine if there is a potential finance solution. If so, complete the analysis in the next section.
FinancialServices Assessment	6	For drivers and sub-drivers with potential finance solutions, complete a finance gap analysis to assess which finance needs are not being met, and can be supported by DFS.
	7	Identify potential financial services providers (FSPs) to engage.
	8	DFS could serve as a great complement to traditional financial services and/or fill gaps in financial service provision. In all cases where there is a potential finance solution to the value chain challenges/drivers, determine if there is a potential DFS solution. If so, complete the analysis in the next section.
DFS Assessment	9	Determine which type of DFS market you are in.
	10	Identify specific DFS solutions to your problem.
	11	Identify whether or not the DFS solutions exist in your market yet.

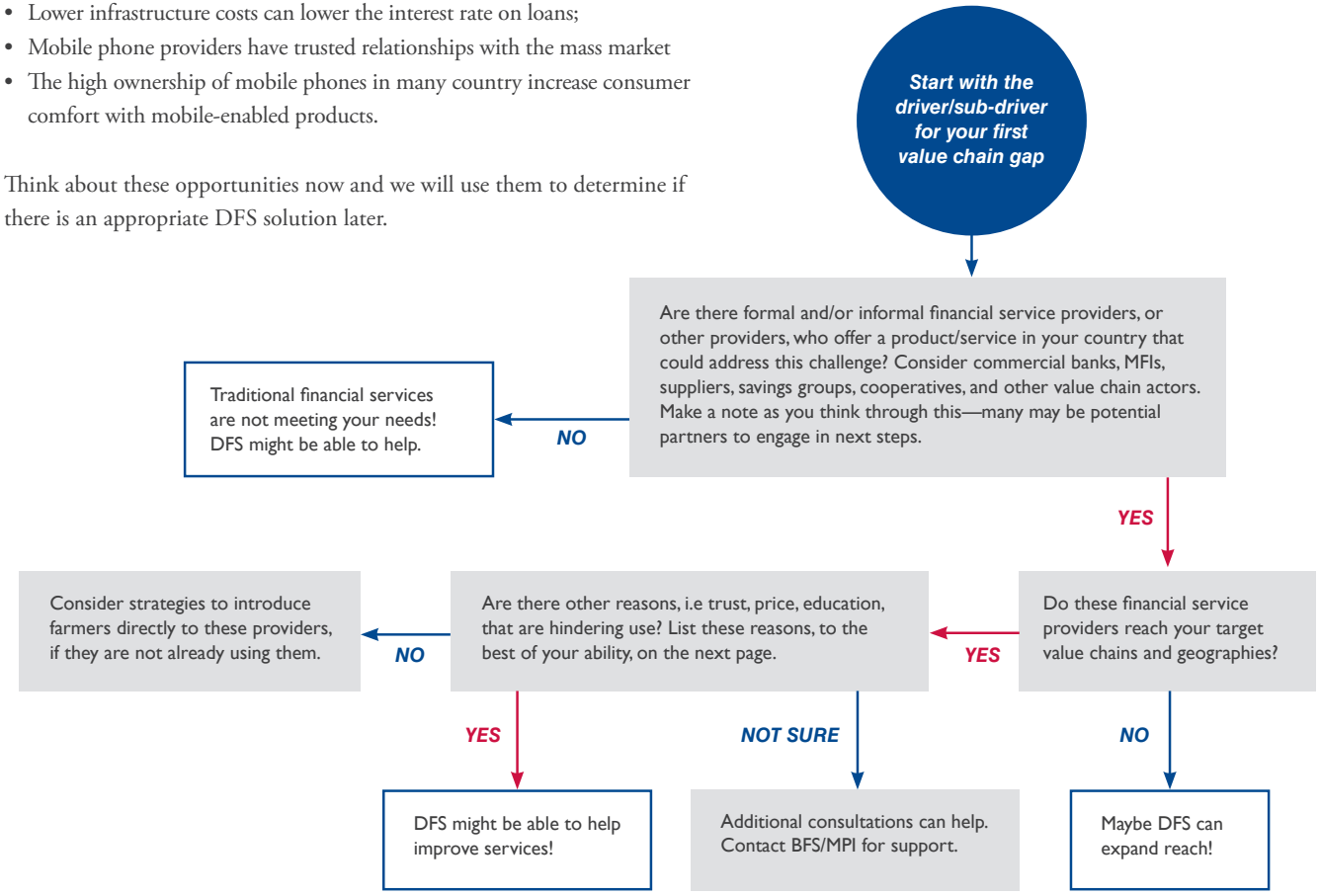
Assessing Financial Services

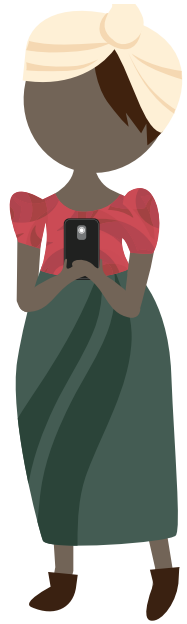
Task 6: For each of the relevant drivers and sub-drivers identified, complete the following value chain finance gap analysis

DFS have been successful in many markets because they overcome many of the challenges that have historically hindered use of banking products. For example:

- Lower infrastructure costs can lower the interest rate on loans;
- Mobile phone providers have trusted relationships with the mass market
- The high ownership of mobile phones in many country increase consumer comfort with mobile-enabled products.

Think about these opportunities now and we will use them to determine if there is an appropriate DFS solution later.





Assessing Financial Services: Final Ouput

TABLE 2: Assessing the Value Chain Worksheet Template

FTF RESULT	VALUE CHAIN GAP(S)	DRIVERS	VALUE CHAIN ACTOR(S)	VALUE CHAIN SEGMENTATION	FINANCE NEED?	FINANCE NEED MET?	POTENTIAL FSP PARTNERS TO ENGAGE	REASONS HINDERING USE OF FINANCIAL SERVICES
Increased access to market	Poor use of storage	SHF unable to pay for on-site storage equipment	Xxx, xxx, xxx	Loose	Yes			
		No storage facility exists within catchment area	Xxx, xxx, xxx	Loose	Maybe			
		Lack of coordinated access to storage points to meet minimum quantities required	Xxx, xxx, xxx	Loose	No			

If you got to any of the blue boxes in the decision tree, the financing need is not currently met. Enter no and proceed to assess if there is a DFS solution!

If known, make a note of some of the FSP partners who are involved in this space you could engage—MFIs, commercial banks, cooperatives, ag buyers, savings groups, etc. If you are not sure, leave blank and revisit later.

3

Assessing Digital Finance Feasibility

Assessing Digital Financial Feasibility

COMPLETED

	STEP	TASK
Value Chain Assessment	1	Identify the key Feed the Future or relevant program results that you want to address through this exercise.
	2	For each value chain, identify the challenges/gaps experienced by value chain actors, along with the drivers and sub-drivers behind those challenges.
	3	Identify the actors who would need to be involved in addressing the drivers and sub-drivers for each challenge.
	4	Determine if the value chain operates as tight, loose, or subsistence. This will have implications on financial solutions that would be most relevant.
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FinancialServices Assessment	6	For drivers and sub-drivers with potential finance solutions, complete a finance gap analysis to assess which finance needs are not being met, and can be supported by DFS.
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DFS Assessment	9	Determine which type of DFS market you are in.
	10	Identify specific DFS solutions to your problem.
	11	Identify whether or not the DFS solutions exist in your market yet.

Assessing Digital Financial Feasibility

Take this quiz to the best of your ability. We've added resources in case you don't know the answers: however, don't feel that you need to do a full or exact assessment right now. The idea is just to get a feel for the type of market you are operating in by asking around and taking a look at available resources.

TOTAL POINTS

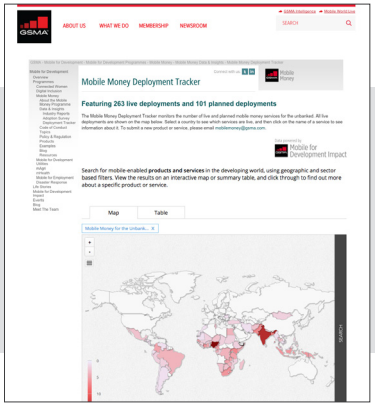
Access and reach of current mobile infrastructure

1. *What is the overall quality and reliability of mobile phone services in the geographical areas relevant to your work?*
   a. Very good (no complaints) – 4 points
   b. Good (a few, infrequent complaints) – 3 points
   c. Fair (frequent complaints, but not enough to halt usage) – 2 points
   d. Poor (frequent complaints, customers need to travel elsewhere to use mobile services) – 1 point

2. *How competitive is the mobile network operator market? In other words, are multiple providers competing? This can be indicated by high levels of marketing, prices decreasing overtime, and/or continued investment in infrastructure.*
   a. Highly competitive – 4 points
   b. Somewhat competitive – 3 points
   c. One dominant player, highly active – 2 points
   d. Not competitive, dominant player not active – 1 point

WHERE TO LOOK

Mobile Access Diagnostic Tool (under development)
GSMA Mobile Mobile for the Unbanked (MMU) Deployment Tracker



Digital Finance Services Assessment

Current levels of mobile adoption

1. *How many people have access to mobile devices in geographical areas relevant to your work? Note that people can often use phones in their family or community, even if they do not own one.*
   a. 85-100% – 4 points
   b. 60-84% – 3 points
   c. 40-59% – 2 points
   d. 0-39% – 1 point

2. *How many people individually own a mobile phone in your area? This becomes increasingly important for financial services, since privacy becomes more critical than with other mobile services.*
   a. 85-100% – 4 points
   b. 60-84% – 3 points
   c. 40-59% – 2 points
   d. 0-39% – 1 point

3. *What types of phones are most prevalent?*
   a. Basic phones, talk/SMS only – 1 point
   b. Feature phones – limited access to the internet – 2 points
   c. Smartphones – access to the internet and to a diverse range of mobile applications – 4 points

Role of Government and Regulation in Digital Finance

- *Does Government Regulation permit digital finance and e-money issuance?*
  YES (1 point) or NO (0 points)

- *Does the Government support multiple actors and partnerships? In other words, are MNOs, banks, and independent companies all allowed to participate in the expansion of digital finance?*
  Yes (2 points) or NO (0 points)

- *Does the Government use digital payments for any of its need (e.g, pensions, salaries, per-diems, welfare payments, conditional cash transfers, disbursements)*
  YES (3 points) or NO (0 points)

- *Is the Government a member of the Better than Cash Alliance (BTCA)? *Government usage of digital payments and/or membership in the Better than Cash Alliance are strong signs of support for sound, secure digital finance expansion.* YES (4 points) or NO (0 points)

TOTAL POINTS

WHERE TO LOOK

Mobile Access Diagnostic Tool
Ask around! In-country observations are very relevant and can give you a great sense of your beneficiaries' general comfort level with mobile phones.

CGAP – you can easily search by country to see what has been written about your country of interest lately. The BTCA website has a list of all members.

Digital Finance Feasibility

DFS Availability

- *What types of providers offer digital finance products? (Circle all that apply)*
  a. Mobile Network Operators (1 point)
  b. Banks (1 point)
  c. Microfinance Institutions (1 point)
  d. 3rd Parties or Other (1 point)

- *What types of digital finance products exist? (Circle all that apply)*
  a. Mobile Money (1 point)
  b. Card-based products (1 point)
  c. Internet-based (1 point)
  d. eVouchers (1 point)

DFS Adoption

- *How active users of DFS services, either mobile or card-based?*
  a. <1% of adult population (1 point)
  b. 1-5% of adult population (2 points)
  c. 5-35% of adult population (3 points)
  d. >35% of adult population (4 points)

- *What are these products used for? (1 point each)*
  a. Air-time top up
  b. Person-to-Person Payments/Domestic Remittances
  c. Utility payments
  d. Bulk Payments (NGOs, companies, and/or government agencies are using DFS to send salaries or other cash transfers)
  e. International remittances
  f. Merchant Payments (people can readily use DFS at stores to purchase goods)

- *Can a randomly-selected target beneficiary demonstrate how to transfer money via their mobile wallet?* YES (4 points) or NO (0 points)

TOTAL POINTS

WHERE TO LOOK

GSMA Blog & State of the Industry Reports
CGAP Blog

Asking around! What are your local colleagues, implementing partners, and beneficiaries saying? What are the local advertisements showing in terms of different ways that DFS products can be used?

Assessing DFS: Categorization

Add up the points next to each of your answers. The total will fall in range of one of the four categories below. This will help determine the most appropriate intervention types in te next section.

TOTAL POINTS

What type of DSF ecosystem are you in?

10 points or less – Inception

Mobile infrastructure
- Large, decentralized airtime distribution networks

Mobile adoption
- High levels of access to a mobile phone (not necessarily ownership)

DFS regulation
- Lack of regulatory/policy framework

DFS availability
- Fragmented payment system
- Interested but uncertain MNOs and banks

DFS adoption
- < 1% of adult population using DFS
- Transactions mainly P2P and airtime

10–20 points – Start-up

Mobile infrastructure
- Competitive mobile voice and expanding mobile data services

Mobile adoption
- Medium levels of individual *ownership* of mobile phones

DFS regulation
- Basic guidelines, permitting agent banking and e-money

DFS availability
- MNOs and/or banks launch services
- Providers developing, managing own networks

DFS adoption
- Transactions are mainly airtime and P2P as well as bill pay
- High customer awareness, but low use
- 1-5% of adult population using DFS

20–35 points – Expansion

Mobile infrastructure
- Mostly reliable electronic infrastructure, low down times

Mobile adoption
- High levels of individual ownership of mobile phones

DFS regulation
- Clear guidelines which allow for a diverse set of providers and consumer protection

DFS availability
- Several players of different types competing in DFS , and a few at break-even
- Widespread agent networks with decent liquidity, starting to reach rural areas

DFS adoption
- Transaction include bill pay, G2P, international transfers
- High customer understanding, increasing usage
- 5-35% of adult population using DFS

35–52 points – Consolidation

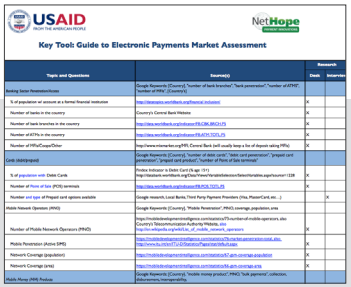
Mobile infrastructure
- Very reliable electronic infrastructure, multiple technologies

Mobile adoption
- High feature phone adoption; smartphone adoption increasing

DFS availability
- Mobile and card-based systems both available
- Growth in consortiums and third parties among providers
- Interoperability between electronic payment systems
- Fully developed agent networks

DFS regulation
- Well regulated market with consumer protection, move toward standardization of fees

DFS adoption
- New businesses services relying on DFS arise
- Transactions include merchant payments
- >35% of population using DFS


USAID
NetHope
Key Tool: Guide to Electronic Payments Market Assessment

Topic and Questions	Source(s)	Research: Desk	Research: Interview
Banking Sector Penetration/Access			
% of population w/ account at a formal financial institution		X	
Number of banks in the country		X	
Number of bank branches in the country		X	
Number of ATMs in the country		X	
Number of POS/Cospe/Other		X	
Cards (debit/prepaid)			
% of population with Debit Cards		X	
Number of Point of Sale (POS) terminals		X	
Number and type of Prepaid card options available			X
Mobile Network Operators (MNO)			
Number of Mobile Network Operators (MNO)		X	
Mobile Penetration (Active SIMS)		X	
Network Coverage (population)		X	
Network Coverage (area)		X	
Mobile Money (MM) Products			

Note: This is a rapid assessment. If you are interested in doing a more complete assessment, check out the NetHope E-Payments Market Assessment Tool.

Adapted from categories originally published by UNCDF

Assessing DFS: Categorization

Identify DFS products related to your Finance Problem! Examples listed below to get you started. Fill in the worksheet below with your answer.

WHAT ARE YOUR FINANCING CHALLENGES? *illustrative examples*	RELEVANT DFS PRODUCTS
Lack of accessible savings products for Farmers	
Lack of accessible, affordable credit products	
Lack of credit history for farmers	
Financing gap hindering access to storage	
Insecurity around cash	
Savings groups available but without enough liquidity to meet financing needs	
High travel costs for payments to suppliers	
Lack of incentives to purchase improved inputs	
Need for weather-based insurance	

By definition, *inception* markets will have the least products available, and *consolidation markets* will have the most products available. Use this illustrative list to think about which DFS products can help address your challenges, and the market assessment you just completed to understand if these products are likely available in your market.

Note that the illustrative list start with the most basic products available in nearly every DFS market, and moves towards those products only available in more advanced markets.

RELEVANT DFS PRODUCTS *illustrative examples*

- Digital wallet (encouraging active use through education)
- E-vouchers for incentivizing input purchases
- Bulk Payments
- Digitally-enabled microfinance
- Savings/Credit products (i.e. mPawa in Tanzania)
- Digitally-enabled index insurance
- Person-to-Person (P2P) payments
- Bill Pay
- Savings groups linked to a micro-deposit taking institutions
- Commitment savings accounts linked to digital wallet
- Merchant payments available at input dealers

Think about the obstacles to use of existing financial services you listed in Task 8. How can the relevant DFS solution help to overcome these hindrances?

Putting it All Together

Only carry forward those challenges that have a financing need that's not met. Not everything has a DFS solution; by this point in the exercise you should have a better idea of which challenges do, and to focus on those as you move onto the next section on interventions.

TABLE 2: Assessing the Value Chain Worksheet Template

FTF RESULT	VALUE CHAIN GAP(S)	FINANCING NEED	APPLICABLE DFS-ENABLED SOLUTION	DFS SOLUTION DESCRIPTION	DFS SOLUTION AVAILABLE IN YOUR MARKET?	POTENTIAL FSP PARTNERS TO ENGAGE
Increased access to market	Poor use of storage	SHF unable to pay for on-site storage equipment – access to affordable credit needed.	Yes	Inventory-based credit	Yes	Microfinance institution

Based on your market assessment + product selection, determine if this DFS solution is likely already available, or not, in your market. If not—don't give up! There are lots of creative solutions in the next section on Intervention Type.

You already listed these in these in the Assessing Financial Services section, so copy them down here. Remember, these can be formal or informal, and could be the DFS provider directly, depending on your product.

Intervention Types

By now, you have identified specific challenges in your value chain which can be addressed by DFS; gained an understanding of which DFS solutions are relevant; and assessed whether or not the relevant solution is available based on the maturity of the market in which you are working. Next, it is time to decide on an ***intervention***. While there are variations, interventions will likely fall into one of the listed interventions below, each relevant in different contexts.

INTERVENTION TYPE 1: ***Utilizing Digital Finance along the Value Chain***

INTERVENTION TYPE 2: ***Organizing Implementing Partners around DFS solutions***

INTERVENTION TYPE 3: ***Implementing ICT-enabled services before/simultaneously with DFS in the value chain***

INTERVENTION TYPE 4: ***Working with Mission colleagues to impact key constraints in the DFS ecosystem***

These intervention types are not mutually exclusive, and many lead back to each other. In fact, intervention types 2-4 are all ways to support intervention type 1, *Utilizing Digital Finance along the Value Chain*.

For each intervention type, we have provided a brief description, examples, and a list of potential next steps to consider. In the next section, there is a detailed case study for each intervention type.

Most of these steps can be used to support existing programs and can be completed without additional funding or a new procurement, using only Mission resources, TDY support from BFS or Lab colleagues from Washington, D.C., and/or consultations with implementing partners. The designing of new procurements is an ideal time to consider many of these steps, and to consider integrating the PEB language described in Section IV.

INTERVENTION TYPE 1:
Utilizing Digital Finance along the Value Chain

Most relevant when:

- Challenges in the value chain can be addressed by DFS
- DFS ecosystem is in *Start-up* or *Expansion* phase (see case studies for examples in a wide range of markets) and the DFS solution is already available.

Description:

- Digital finance can be used in a variety of ways to address challenges in the value chain.
- Integrating digital finance into the value chain connects farmers to a basic transaction account, which improves household resiliency and the ability to manage nutrition during financial shocks.
- Digital payments and financial services offer a wide variety of solutions to relevant challenges including: microsavings, affordable credit, credit histories, payments between producers and suppliers, digitally-enabled index insurance, and others mentioned elsewhere in this Guide.

Example: FTF implementing partners can help buyers transition payments to mobile money, and can also help nucleus farmers to become mobile money agents in order to increase the flexibility of farmers to manage their own liquidity and to cash out from their mobile wallets when necessary. This instant payment can strengthen the relationship between the buyer and the farmer, and is especially useful when the payment does not take place in the same location (or at the same time) as the exchange of goods.

Example: Farmers are having trouble keeping money received during harvest on-hand until inputs are ready for purchase. FTF implementing partners can help educate farmers on using a mobile wallet for savings by depositing money at a local agent; if available, programs can link farmers to mobile savings products such as mPawa in Tanzania.

Potential Next Steps:

- ❑ Connect with Implementing Partners and other donors to find out what they are already doing with DFS. Encourage them to ask their staff and beneficiaries how they are using digital payments already, if at all.
- ❑ Consider integrating DFS into existing trainings to help farmers increase their comfort level with electronic payments.
- ❑ Start to send per diems and other payments via DFS to field staff, both to lower the burden on the program of sending cash to the field, and to get field staff increasingly comfortable with using DFS products.
- ❑ Allow IPs to spend resources to engage/train both farmers and agents. Agents are ultimately the responsibility of the DFS provider; however, many IPs have found additional training support necessary to encourage rural agents to work with farmers.
- ❑ Where the agent network is a key constraint (due to lack of agents or low liquidity), consider supporting actors within the value chain to become agents themselves (such as farmers groups and cooperatives).
- ❑ Assess SHF willingness to pay for services—is the DFS service clearly demonstrating value to farmer, or is the value more to the agribusiness or program? Whichever actor is receiving the most value from the digital service is likely the one that will be most willing to pay. This is a key step to consider in order to ensure that the integration of DFS is sustainable after the donor funding is over.
- ❑ Engage financial services providers (identified in the previous section) to support them in adopting digital new channels to reach your target population.
- ❑ Consider a wide variety of agri-finance products, based on your analysis, for example: facilitation of saving for/purchasing quality inputs, secure transportation of cash when transporting goods to market, e-warehousing schemes, etc. As you start to work with farmers on one product or service, it will become much easier to bundle in other services in order to increase overall impact and farmer capability.

INTERVENTION TYPE 2:
Organize Implementing Partners Around DFS Solutions

Most relevant when:

Challenges in the Value Chain can be addressed by digital financial services DFS ecosystem is in *Start-up* or *Expansion* phase, and relevant DFS products are available in the country but may not be available in your region or already adapted to the needs of farmers.

Description:

- DFS is a cross-cutting issue that can facilitate conversations across FTF partners, as well as with partners working on sectors including Health, Humanitarian Response, and Energy.
- Implementing partners can come together to aggregate demand: often, small projects have trouble getting the attention of private sector DFS providers; however, by coming together and finding areas of mutual interest, partners can approach DFS providers with much larger demand.
- If there are insufficient partners ready to "aggregate demand", one implementing partner can potentially negotiate lower fees from service providers with support from the Mission or another implementing partner
- Partners can learn from other implementers who have already piloted DFS in their programs.

Example: In Ghana, some IPs have already successfully piloted DFS for savings groups, while others are just starting to explore the same idea and are unsure of the way forward. Those IPs that have expertise in the subject can share that knowledge with the other IPs interested in the subject.

Example: In Bangladesh, the USAID-funded mStar project was able to negotiate prices and fees with DFS providers based on the demand of four implementing partners (see case study in Section IV for more detail.)

Potential Next Steps:

- ❑ Ask Mission and IP colleagues to see which other sectors are using or testing how to advance their objectives with DFS.
- ❑ Connect IPs with overlapping programmatic goals together to share lessons learned and/or encourage subcontracts to those partners that have already implemented DFS successfully to do so in other programs.
- ❑ Consider organizing a Digital Development training in your country, or holding your own workshop to bring IPs together to discuss opportunities and challenges with the use of DFS in general.
- ❑ In conversations, if you find that IPs are all reporting the same issues, such as high fees, encourage them to approach DFS providers together to negotiate, or to approach a 3rd-party technology provider who may provide better technology and more responsive service. In addition, consider encouraging the private enterprise office to find other connections to regulators or industry associations that IPs can engage with, together.
- ❑ Identify market facilitators already in place such as the Financial Sector Deepening (FSD) projections in many sub-saharan African countries. These programs may be great partners for helping with efforts to bring about market changes

INTERVENTION TYPE 3:
Implementing ICT-Enabled Services Before/Simultaneously with DFS in the Value Chain

Most relevant when:

- Challenges in the Value Chain can be addressed or need to be addressed by a broader set of digital tools, including e-vouchers and information services.
- DFS ecosystem is in *Inception*, *Start-up*, *Expansion*, or *Consolidation* phases. This approach can be valuable when DFS services are available and can be integrated with other digital services, and can also be valuable when DFS services are not yet fully available.

Description:

There are many ICT-enabled services that are not financial services which can help address challenges in the value chain. When these services are available and being used, they help to increase implementing partner and beneficiary comfort with technology and can help to provide a platform for implementing DFS. This approach is relevant in nascent DFS markets where mobile services are available and useful; it's also relevant in mature DFS markets where offering multiple ICT tools can help to comprehensively address a broad set of value chain challenges.

Example: e-Voucher platforms can be used to deliver input subsidies to farmers; often, farmers pay for a portion of the input cost to encourage the transition towards a commercial input market. E-vouchers do not require agents to have cash on hand (since they are redeemed for inputs, rather than cash) and therefore work in places where agent liquidity is a problem. At the same time, they help to move towards the use of DFS, since they bring input dealers onto an electronic payment platform, and get farmers used to the idea of electronic payments.

Example: Econet Wireless in Zimbabwe developed Ecofarmer, a digital ecosystem offering agricultural information and financial services for smallholder farmers. Ecofarmer bundles crop insurance with free daily SMS weather information, farming tips, and market advisory information. Econet believes that adding information services will help to familiarize smallholders with mobile financial services and will therefore increase adoption of savings, credit, and insurance offered through Econet's platform. (Source: CGAP "Serving Smallholder Farmers")

Potential Next Steps:

- ❑ Depending on the value chain challenges identified, other ICT tools such as ag extension services may be more relevant at this time. Check out the Digital Development Principles as a place to start understanding the broader picture around using ICT in development programming. Also, check out Vodaphone's Connected Farmer work to get more ideas as to how mobile phones can support farmer livelihoods.
- ❑ Encourage IPs in the planning phase to take an integrated approach to digital development, considering DFS and other ICT-enabled services together rather than separately. This can be as simple as encouraging that the same organization or set of consultants is engaged to look comprehensively at ICT, rather than issuing separate, siloed scopes of work.
- ❑ If there are already ICT-enabled ag extension services in place, and the DFS market is in an *Expansion* or *Consolidation* phases, consider integrating DFS wherever payments are made (for example, for payments to extension workers).
- ❑ If the DFS market is *Inception* or *Start-up* phases, and agent liquidity is insufficient, consider using e-vouchers which are redeemable for goods rather than cash. E-vouchers have also been used to help farmers with short-term savings for inputs (see Zoona case study here for more information.)

INTERVENTION TYPE 4:
Working with Mission Colleagues to Impact Key Constraints in the DFS Ecosystem

Most relevant when:

- Challenges in the Value Chain can be addressed by digital financial services.
- DFS ecosystem is in *Inception* or *Start-up* phases and relevant DFS products are not yet available.

Description:

When Feed the Future sees an opportunity to address value chain challenges with DFS, but the DFS ecosystem is not strong enough to do so, USAID has many tools to support the development of the overall ecosystem and/or to work towards very specific regulatory or market changes. USAID has had great success in countries such as India, Bangladesh, Haiti and others in engaging with regulators and other stakeholders to address common issues including: encouraging the adoption of sound regulations and guidelines, fostering interoperability, encouraging policies that allow for strong agent networks, and ensuring adequate consumer protection. Often in partnership with CGAP, the World Bank, IFC, and other donors, we're able to help to help ensure that the market is shaped for more rapid, pro-poor growth.

Example: In Haiti, the Haiti Mobile Money Initiative (HMMI) helped to incentivize the private sector to launch DFS for the first time. The program, funded by USAID and Gates, was designed after the 2010 earthquake. During the response to the disaster, the donors saw clearly the benefits of DFS to deliver assistance quickly and effectively, and through HMMI, they were able to spur the launch of two new DFS services in the country where none previously existed.

Example: In Bangladesh, when the USAID-funded mStar project published the transactions prices of all DFS providers, the comparison stimulated higher-priced providers to make changes to their pricing structure to make it more attractive relative to their competitors.

Potential Next Steps:

- ❑ Research CGAP, GSMA, and Alliance for Financial Inclusion (AFI) websites to see if there are policy issues being discussed in your country.
- ❑ Engage with the Lab/DFS team, other colleagues in the Mission, and with other donors to see what is already happening and where there are mutual areas of interest. Assess if there are existing projects or initiatives in which you can engage. Remember that key constraints are cross-cutting and may be relevant to colleagues in other sectors as well.
- ❑ Check if your country is a member of the Better than Cash Alliance. If not, consider encouraging the government to join in order to specify their commitment to digital payments and to get additional technical support.
- ❑ Consider issuing a Broad Agency Announcement (BAA) with the support of the Lab in order to call for new policy, program, or private sector ideas. The BAA is a great way to find new partners and to co-create relevant programs to address key constraints in the market.

IV

Case Studies

INTERVENTION TYPE 1:

Utilizing Digital Finance along the Value Chain

As described in the previous sections, digital payments can be used at various points in the value chain to address the challenges experienced by smallholder farmers. The following examples from Haiti, Ghana, and Uganda illustrate how USAID implementing partners (IPs) have leveraged digital financial services (DFS) show how the varying levels of maturity in the markets had an impact on their approach.

HAITI - NASCENT DFS MARKET

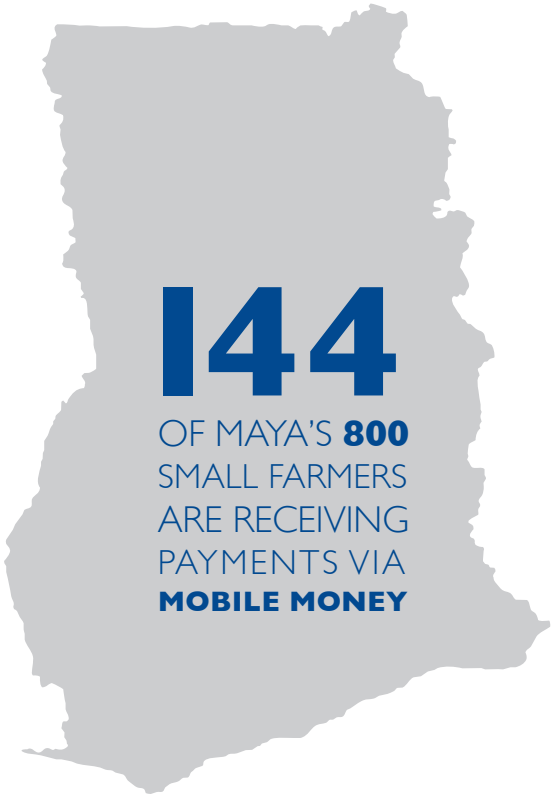
One of the objectives of the USAID-funded organization **Technoserve (TNS)** in Haiti was to strengthen the mango value chain with particular attention paid to organizing and supporting growers and improving market linkages between producers and exporters. In order to do so, TNS worked with a mango exporter (Perry's) to use Digicel's TchoTcho Mobile (TTM) to pay the producers.

Digicel provided TNS with a list of agents in the region that could be used for cashing out payments. However, as is the case in many nascent DFS markets, TNS found upon investigation that most of the agents listed were in fact not active and/or were not sufficiently trained or supported to properly serve the farmers with cash-out services. TNS then took on the task of training a select group of agents in three areas of operation: security, liquidity and quality customer service. In total, twelve TNS-trained agents were used to make payments to 1,000 farmers. The effort was successful in that multiple rounds of payments were issued, the farmers were all able to get their cash in a timely manner, and the buyer was more satisfied with the payment method than with cash.

A cash-out fee is charged on all withdrawals, and since most of the recipient farmers tend to quickly withdraw the entire amount of their digital payment, that cost can be an inhibiting factor for the farmers. In this case, the exporter paid the cash-out fee on their behalf. The Fair Trade laws that govern Perry's mango exports require that the farmers receive the full amount of payment for their products. Since there was no choice in the matter, the project did not conduct a full cost-benefit analysis on the fee payment, but it a useful example of how the issue of cash-out fees can be addressed to facilitate uptake.

Despite the start-up challenges cited by TNS, overall satisfaction levels were high enough among growers, cooperatives, and export enterprises that TNS decided to expand its pilot and diversify the types of payments made using TTM. They are currently looking at scaling up the number of growers from 300 lead farmers to between 750 -1,000 and estimate that they will process up $450,000 in payments.

IN TOTAL, TWELVE TNS-TRAINED AGENTS WERE USED TO MAKE PAYMENTS TO **1,000 FARMERS**.



GHANA - EMERGING DFS MARKET

USAID/Ghana's Agricultural Development and Value Chain Enhancement (ADVANCE) II project implements a value chain approach to improve linkages between smallholder farmers and markets, finance, inputs, equipment, and information, working along with larger commercial farmers and traders. Advance II is currently piloting a program to 1) digitize payments to farmers, 2) support the growth of mobile money agent networks and 3) encourage the farmers to save. Operating in an emerging DFS market, they've needed to invest in infrastructure and support the DFS provider in training and selecting agents in order to ensure uptake.

The project helped Maya Farms integrate their back-end systems with MTN Mobile Money to enable digitized payments to their farmers and also provided strategies for encouraging the farmers to participate. With ADVANCE II's support and training, 144 of Maya's 800 smallholder farmers successfully received payment for their 2014 harvest via mobile money. The greatest benefit of digitization to Maya farms was security – the manager no longer had to carry large sums of cash for payment. And in this case, the farmers were "happy" to pay the 1% cash-out fee to save the fuel or other costs related to the need for travel to receive their cash payments.

The availability and capacity of mobile money agents is a key element to the success of any DFS ecosystem. ADVANCE II conducted agent outreach, identifying new agents in the regions where the farmers will be cashing out and providing training (along with MTN). The preferred agent profile is a business that already has cash transactions (merchants, chemists, input dealers) and can pay the up-front cost of the required point-of-sale (POS) device. The agent will also need to have a bank account nearby to make it easier to rebalance their physical and electronic cash and ensure they can meet the needs of their customers. In this case, the projected business case for the agent was that their commissions on each transaction should cover the cost of the POS within six months.

An important development goal of the project is to promote savings among farmers. The first step is to receive payments digitally (and safely), and then to encourage the farmers to not immediately cash out all the funds but rather to manage their finances and develop saving habits. The project is looking to integrate and promote the use of savings through partners such as Fidelity Bank's SmartAccount and community-based savings groups.

In addition to the tangible benefits of greater cost savings, security and efficiency, ADVANCE II noted social benefits. **Women can better manage the household expenditures since no other family member or anyone within the village community will know how much they have received or saved.** To maintain discretion, some farmers have traveled to another village to withdraw their mobile money payments. This new-found privacy has high value.

Though its DFS activities are still largely at pilot stage, mobile money is a strategic ADVANCE II effort, and the project will eventually scale the activities to include to the 35,000 farmers connected to the 170 out-grower businesses that it works with in its value chain programs in Northern Ghana.

UGANDA - ADVANCED DFS MARKET

The Commodity Production and Marketing Activity (CPM) is working to achieve sustainable increases in smallholder production and marketing in their three priority product lines by increasing the availability and effectiveness of support services, strengthening buyer/seller relationships to facilitate the movement of products and information, and by increasing access to competitive markets. Operating an advanced DFS market, CPM has been able to partner with a variety of private sector actors and has seen high levels of adoption of digital payments among target farmers. The key constraint is the relatively high transaction fees in Uganda, which also incur a relatively high government tax that is passed onto consumers.

A key strategy of CPM is to scale up services through a value chain approach whereby private sector partners (exporters, buyers, processors) select top traders who have established rural trading networks of Village Agents (VAs). Each VA works with about 200 farmers to provide a range of services from input delivery to post-harvest handling. CPM is using mobile money throughout the value chain by 1) training the farmers to receive payments using mobile money, 2) introducing mobile money to specific farmer groups along the value chain, and 3) mentoring new private sector players in the digital space to provide services to the farmers.

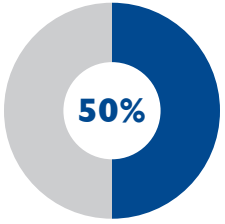
The farmers were paid by mobile money and while there were some complaints about the cash-out fees, all of the farmers interviewed on a TDY preferred the digital payments to cash and recognized the benefits. In the areas where CPM operates, mobile money agents were available within a few kilometers and there were few complaints about the services provided. If problems arose, the Village Agents are trained and expected to help the farmers deal with the issue.

ZAABTA, a CPM implementing partner, is a Farmer Group and SACCO serves as a "one-stop shop" for its farmer members with buying, processing and marketing services. Under CPM they are working with 8 village agents on the maize and bean value chain to provide production and marketing services to farmers. Farmers receive their payments through mobile money and can keep either keep it in their mobile wallet or transfer the funds to their SACCO account at no charge. ZAABTA is looking to Ensibuuko (a private sector software provider) to provide a core banking system that can connect to mobile networks. ZAABTA is also a mobile money agent themselves thus creating further savings for their farmer-members when making payments to them.

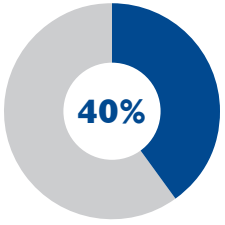
In addition, CPM has partnered with Akorion, a software provider that helps farmers create a digital profile that helps to gain access to credit and insurance products. They not provide financial data (crop yields, income and costs for at least one season) and a "geo-tag" that shows the exact location of the farm, the number of hectares, and the crops. In a current pilot under CPM, the Uganda Development Bank (UDB) pays Akorion for the information and provides credit on that basis. After the credit is established, Mobi-Pay (another private sector group mentored by CPM) facilitates the transfer of loan payments to the bank.

INTERVENTION TYPE 2:

Organizing Implementing Partners around DFS solutions



Reduction of the rates for organizations to send bulk payments by up to 50%



Reduction of the rates for fees for recipients to collect payments by up to 40%

AGGREGATING DEMAND IN A RAPIDLY EVOLVING DFS MARKET

In Bangladesh, an expansion DFS market with wide usage of DFS, IPs were still encountering challenges with the use of DFS, including relatively high prices and inadequate products for sending bulk payments. In response, the USAID-funded mSTAR/Bangladesh project is working directly with the two leading mobile financial service providers, bKash and DBBL, to negotiate lower rates and improved services by representing the aggregate demand of four USAID implementing partners (covering both FTF and Health programming). This has resulted in a reduction of the rates for organizations to send bulk payments by up to 50%, and the fees for recipients to collect payments by up to 40%. The project also worked with bKash to waive VAT charges (equal to 15%) that they had been assessing on bulk payment fees (DBBL does not charge for bulk payment disbursements). This change is consistent with the bilateral agreement between the US and Bangladesh, which exempts USAID implementing partners from paying VAT.

mSTAR/Bangladesh has also been able to advocate on behalf of implementing partners for service improvements by DFS providers. To date, this has included improvements to reports of payments sent by IPs to recipients. Previously some IPs reported receiving those reports on an irregular basis; now, they are received on a regular, monthly schedule. In addition, mSTAR/Bangladesh has promoted new service offerings that better serve the needs of USAID IPs and their beneficiaries, and as of September 2015, two DFS providers are planning to test new products with USAID IPs based on these recommendations.

INTERVENTION TYPE 3:

Implementing ICT-enabled services before/ simultaneously with DFS in the value chain

THE USE OF E-VOUCHERS FOR AGRICULTURAL SUBSIDIES IN NIGERIA

Electronic vouchers (e-vouchers) are digital coupons which can be redeemed for goods at local business. While not e-vouchers do not provide all of the same benefits as DFS, they are useful 1) when DFS systems are relatively immature and/or 2) when the stated goal of a program is to deliver full or partial subsidies.

In 2014, in recognition of the need to alleviate poverty and jump-start agriculture growth, the Government of Nigeria offered agricultural subsidies by directly procuring and distributing inputs. A well-intended program with the aim of boosting and increasing food output, the paper voucher distribution was prone to corruption. Since paper vouchers were easy divert and to copy, many beneficiaries never received the materials they expected to use for crop production, which put their livelihoods at risk. Estimations of the amount of fertilizer that was distributed by the government through subsidies and did not reach the intended recipient due to illicit diversion range from 50% -89%.

To address this issue, the Federal Ministry of Agriculture and Rural Development enacted the Growth Enhancement Support (GES) scheme to rebuild the private sector market and encourage its value chain actors to collaborate more effectively. To address the fraud and theft that occurred under the government's direct distribution of subsidies, a pilot was launched in 2011 to transition the provision of fertilizer subsidies to electronic wallets using mobile phones. Compared to the paper vouchers, the e-wallet system was able to better monitor and control distribution by assigning a database-linked GES personal identification number (PIN) to each farmer via mobile phone using technology by Cellulant Nigeria Limited. Farmers registered electronically to a core system and then receive an SMS message that supplies were ready to be retrieved.

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1. Jayne, T.S., Mather, D., Masona, N., Ricker-Gilbert, J. 2013. How do fertilizer subsidy programs affect total fertilizer use in sub-Saharan Africa? Michigan State University Department of Agricultural Economics, Purdue University.
2. Grossman, J., Tarazi, M. "Serving Smallholder Farmers: Recent Developments in Digital Finance" CGAP Focus Note. June 2014 No. 94. https://www.cgap.org/sites/default/files/Focus-Note-Serving-Smallholder-Farmers-Jun-2014.pdf.

The program pilot scaled up to national roll-out within several months and was able to reach ***4.3 million smallholders*** by 2013.

The program pilot scaled up to national roll-out within several months and was able to reach 4.3 million smallholders by 2013. In a second phase, the National Agriculture Payment Initiative (NAPI) was developed, and is now distributing PIN-enabled national identity cards to farmers. These cards not only hold individual subsidy information but also provide access to financial services such as loans and grants - demonstrating how an e-voucher program can help with the transition toward full digital financial inclusion. E-vouchers and the subsequent integration of payment cards have ensured that more inputs reach their intended targets, and millions of smallholder farmers have gained increased exposure to ICT and financial tools that have benefited their livelihoods.

3. Senyo, Innocent. "Kogi Govt Accredits over 145,000 Rural Farmers for NAPI Loans," World Stage. 21 June, 2015. http://www.worldstagegroup.com/worldstagenew/index.php?active=news&newscid=22955&catid=36.

INTERVENTION TYPE 4:

Working with Mission colleagues to impact key constraints in the DFS ecosystem

In September 2012, USAID awarded the two-year Malawi Mobile Money Acceleration Program (MMAP) to FHI 360, which focused on scaling the adoption and usage of mobile money to boost financial inclusion in Malawi. Despite high levels of mobile network coverage across Malawi, prior to the launch of MMAP, the mobile money sector was still in a nascent stage of development, with only one mobile network operator (MNO)—Airtel-offering mobile money services. In May 2013, a second MNO (TNM) entered the mobile money market, providing competition and lowering product prices. Zoona, an independent payments providers from Zambia, also entered the market through e-voucher activities in 2013 with support from MMAP, and rolled out full-scale operations in 2014.

MMAP's work found success in integrating digital finance into USAID's agriculture Zones of Influence, thus it was renamed the Feed the Future Malawi Mobile Money and given an extension through 2016.

The primary objectives of Feed the Future Malawi Mobile Money are to:

a. test platforms and models for increasing mobile money enrollment and adoption particularly with unbanked or under-banked market segments;
b. enhance product development and service delivery;
c. foster an enabling regulatory and policy environment for mobile money; and
d. disseminate lessons learned to advance the field of inclusive finance.

One area in which MMAP has been particularly successful is in facilitating the creation of the Mobile Money Coordination Group (MMCG) to bring together a range of stakeholders who embody a broad spectrum of interests and aspirations related to mobile money. The MMCG was established to support the implementation of the action plan, which seeks to promote broad uptake and usage of mobile money in Malawi, with an emphasis on reaching unbanked and under-banked market segments. The MMCG brings together stakeholders from a variety of backgrounds which include the private sector, regulatory bodies, international NGOs, and inter-governmental organizations to:

1. Champion mobile money initiatives throughout the country and develop performance targets intended to increase the efficacy and efficiency of digital financial services;
2. Act as a knowledge repository, helping to manage and distribute information regarding best practices, operations, guidelines, enrollment, market intelligence, and training tools relevant to digital financial services;
3. Coordinate market research and data analysis efforts to improve the performance of mMoney programs;
4. Act as a project pipeline, leveraging both ongoing programs and new programs to implement and improve the delivery of mMobile services; and
5. Monitor and report on successes and ongoing challenges in the mMoney sector

The MMCG conducted a review and provided recommendations on pending regulations, and conducted a field trip to visit agents in Mangochi to expose members to the practical experience of the agents and mobile money beneficiaries. It is a testament to its value and performance that the MMCG has been formally incorporated into the National Payments Council (NPC) which is made up of the Reserve Bank of Malawi, Ministry of Finance and a consortium of financial institutions. This case study illustrates how USAID can facilitate, through a markets systems approach, local stakeholders to support the inclusive growth of a nascent DFS market.

V

Procurement Language

In August 2014, USAID issued a long-anticipated Procurement Executive Bulletin requiring its contracting officers and agreement officers to make e-payments the default payment mechanism for implementing partners. The bulletin disallows the use of cash and requires that all new procurements require organizations receiving funds from USAID only use e-payments. This applies to payments throughout an organization's project budget, unless an exception is granted.

What does this mean for you? First, USAID realizes that each market is unique and even within the same country, multiple markets may exist in different regions. Therefore, use of this PEB language requires a thoughtful review of the market conditions—hence, it fits perfectly with this Guide, which should have already helped you to assess your market and the opportunities and challenges presented by the integration of DFS.

To help, we've added examples from three agriculture procurements from Bangladesh, Haiti, and Afghanistan, in which Missions added language around the use of DFS to meet their specific goals within the context of the larger project goals. We've also added some more generic sample language to help you in your own procurement drafting, based on the intervention type that you've identified.

1. 2014 Bangladesh RFI Feed the Future Strengthening Agriculture Production and Market Systems (SAPMS)

a. *Under expected Results Framework Section 2.2: Improve access to the finance needed to invest in intensification and diversification*

Despite the skyrocketing increase the number of mobile money accounts, agent outlets, and digital transactions between 2011 and 2013, almost all transactions in the rice value chain between farmers, millers, traders, and wholesalers continue to be in cash (Minten and Murshid, 2012). Moreover, digital payments are not yet integrated into financial services, for example, for disbursing loans, collecting repayments, or linking remittances to other financial services. While the expansion of mobile phones and mobile money is exploding in Bangladesh, digital payments are used primarily for people to people remittances. Wider use of digital payments could have a number of advantages—timeliness, security, trust—and help farmers access inputs, information and new financial products and services. However, digital payment platforms need to be further developed in Bangladesh in order to be used more extensively in commercial transactions (at the retail level and within supply chains).

…increasing access to finance through channels that are inclusive of marginal and small farmers, women, youth and create incentives the adoption of new technologies by producers can help to ensure depth and breadth of benefits of intensification of rice and diversification of field crops and other off farm activities.

Digital payments have potential for strengthening market systems, and for promoting inclusion. For example, they could lower the barriers for women in farm households to access inputs, information and financial services, to engage in market transactions (if remotely), to get paid for their work. Digital finance has potential for women to exercise more control over the income they earn and actively use a wider array of financial services. Digital technologies, in general, will increasingly become a day-to-day part of young people's lives, and they can play an important role as first adopters and teach their parents. Digital finance requires the development of retail and supply chain acceptance networks in order to support the growth, development and transformation processes underway in rural Bangladesh. Given the sheer volume of cash transactions in the rice system, it is a potential entry point for scaling digital payments, increasing financial inclusion of small and marginal farmers, and contributing to the purpose of SAPMS.

Strengthening Agriculture Production and Market Systems (SAPMS) innovations are based solidly on the financial needs, behaviors, and aspirations of small and marginal farming households as well as other value chain actors. *SAPMS could partner with others and/or promote new mechanisms to increase access to financial services, whether formal or informal.* For example, SAPMS could collaborate with USAID's AVC to scale successful approaches they are testing, and align work with other USAID partners developing new finance products, instruments, and models tailored to the needs of farmers and other value chain actors. Opportunities to build on other USAID work to leverage finance for inclusive growth and promote financial inclusion should also be considered. *In sum, increasing access to finance through channels that are inclusive of marginal and small farmers, women, youth and create incentives the adoption of new technologies*

by producers can help to ensure depth and breadth of benefits of intensification of rice and diversification of field crops and other off farm activities. Increasing access to innovative value chain financing by millers, traders, and other actors that can improve product quality, reduce post harvest losses and increase value addition will contribute to growth, competitiveness and resilience of the market system. Introducing digital payments, where feasible, can contribute to the development of a strong digital ecosystem with potential benefits for the overall market system.

- Uptake of agricultural finance by men, women, small, and marginal farmers increased.
- Use of finance for technology adoption by farmers increased (men, women, small, marginal)
- Use of finance to support diversification and value addition increased
- Use of digital payments in the rice and related market systems increased (e.g. by farmers, millers, wholesalers, input dealers, and other value chain actors)
- New approaches for linking market actors through value chain finance tested and lessons learned documented "

2. 2013 Afghanistan Request for Proposal (RFP) Regional Agricultural Development Program – South SOL-306-13-000022

SECTION C: DESCRIPTION/SPECIFICATIONS/STATEMENT OF OBJECTIVES "C.6 ELECTRONIC PAYMENTS. USAID, through the Financial Access for Investing in the Development of Afghanistan (FAIDA) program and other programs, has encouraged the use of electronic payments, including mobile money, to extend affordable and accessible payments to low-income populations, create cost savings, promote economic development, increase transparency, strengthen security, and broaden financial sector inclusion. The contractor should utilize these services to the greatest extent feasible within its company policy to strengthen the efficiency and security of financial transactions at all stages of value chain activities.

2. 2012 U.S.-Haiti Feed the Future Partnership: Northern Corridor

SECTION C – DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK: C.6.3.3 SUB RESULT 3.3: INCREASED ACCESS TO FINANCIAL PRODUCTS

Market actors in Haiti's agricultural value chains have insufficient access to financial products, notably credit. Lack of access to financial products results in difficulty in conducting basic financial transactions, underinvestment in farms and agribusinesses, greater difficulty in managing risk, and other challenges. This is partly due to supply-side constraints, such as the lack of availability of appropriate financial products and undercapitalization of banks, credit unions, and other financial institutions; these challenges are being addressed by USAID/Haiti's HIFIVE (Haiti Integrated Finance for Value Chains and Enterprises) Project. It is also related to the inability of value chain actors—farmer associations, small agribusinesses, etc.—to demonstrate to financial institutions that they are credit worthy. This results from poor internal systems (accounting, management, etc.) as well as from lack of understanding of how to interface with the financial sector.

The Contractor shall work with farmer associations, agribusinesses, and other value chain actors to assist them with access financial products from financial institutions. The Contractor shall consider both credit and non-credit financial products. Interventions shall be demand driven (e.g., cost sharing for trainings, business services, etc.) and sustainable (e.g., building capacity of local service providers) The Contractor shall consider financial products from non-financial institutions (i.e., value-chain finance). Such arrangements can take very simple forms, for example a farm supply shop extending inputs on credit. Although value-chain finance is not widespread in Haiti, innovative value-chain finance programs in other countries have been very successful and might be adaptable to the Haitian context. *The Contractor shall also explore the possibility of utilizing mobile money technology for conducting financial transactions (payments for purchases, cash transfers, payroll, credit disbursements, credit repayments, etc.)*. USAID/Haiti, along with the Gates foundation, has supported the launch of a mobile money platform through its HIFIVE activity. For more information, visit http://www.microlinks.org/HIFIVE.

Suggested language for inserting a Special Contract Requirement into Section H can be found in the Procurement Executive Bulletin.

Suggested generic language to insert into Section C regarding DESCRIPTION/SPECIFICATIONS/STATEMENT OF OBJECTIVES follows. Note that this is generic language that can (and likely should) be modified to meet your specific context and program needs, as the previous examples illustrate.

More than 1.5 billion people live on the world's roughly 500 million smallholder farms that supply about 80 percent of the developing world's food. But these farms are also home to the majority of people living in absolute poverty. Most smallholders lack funds to invest in their farms, and without inclusive market systems, they are unable to access financial tools and services. Evidence suggests there is a $430-440 billion shortfall in serving the global demand for smallholder finance.

In most countries, common approaches to meet this demand remain insufficient. Donors play a critical role in ensuring the creation of well-functioning financial systems. These systems must meet a wide range of needs (such as savings, credit, payment, and risk management), and serve farmers at scale in a financially sustainable way. Indeed, in addition to ongoing agricultural finance efforts supported by Feed the Future, the U.S. Government has added digital financial services (DFS) to its toolbox. It is also investing in mobile technology and information, communications and technology (ICT) platforms supported by Feed the Future and the New Alliance for Food Security and Nutrition.

DFS are uniquely positioned to deliver financial products cheaply, mitigate risk for both providers and consumers, and provide efficiency and cost savings at transaction points. For example, DFS can:

- Make it easier for farmers to save for their future and ongoing expenses
- Increase access to new and existing credit products
- Increase farmer household resilience
- Enable farmers to buy the inputs they need when they need them
- Address the needs of women

In light of USAID's 2014-06 PEB and the advantages DFS and electronic payments can provide to USAID Programs, this award/contract mandates respondents to include an incorporation of use of digital financial services to address specific needs within the needs of this agricultural program. For examples of types of interventions that can be advanced by DFS, see the USAID Guide for Feed the Future and Digital Finance.