

# Digitizing Payments in Ghana's Cocoa Supply Chain

Four Building Blocks  
for Responsible and  
Scalable Digitization

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World Cocoa  
Foundation

BETTER THAN CASH  
ALLIANCE







# FOREWORD

**Digital financial services represent a powerful opportunity to deliver on our vision of a sustainable and thriving cocoa sector, where farmers prosper, communities are empowered, and the planet is healthy. Embracing digital payments can benefit all players in the supply chain, most importantly farmers: they report experiencing improved security; better access to savings, insurance and financial products; higher incomes; and better cash management.**



In 2018, when the World Cocoa Foundation (WCF) and the Better Than Cash Alliance launched a partnership aimed at supporting our member companies to transition from cash to digital payments, we could not have imagined how far we would come. Since then, six of the largest License Buying Companies in Ghana are experimenting with digital payment methods to Purchasing Clerks or directly to farmers. Our engagement has helped some of our members to start their first digitization initiatives. These efforts have led to around 700 digital transactions with a value of \$1.2 million, with close to 2,000 farmers receiving some form of digital financial literacy training. These experiences and the engagement of all players have resulted in a wealth of lessons that are now presented in this report.

Why did we choose this 'building blocks' title? Our objective is to pull together and share the fundamental issues to consider for any actor in the cocoa value chain as they initiate or scale up their journey towards digitization. The building blocks and the associated tools herein are not an all-encompassing blueprint, but do shine a light on common challenges and options for navigating towards a responsible and scalable digitization. It is our hope that those who read this report find practical and effective lessons that can be applied by any type of actor, irrespective of their size, role in the cocoa value chain, or experience with digitization.

The World Cocoa Foundation would like to extend our deepest thanks to the Better than Cash Alliance for their stewardship and partnership throughout the years, as well as to the Ghana Cocoa Board and the WCF member companies that took advantage of the digital financial services technical assistance provided through this partnership. Many of the lessons highlighted in the building blocks have come to light through their experience. We are grateful for their contribution as others make the important move towards a digital future in cocoa.

**RICK SCOBEY**

President, World Cocoa Foundation

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# EXECUTIVE SUMMARY

The purpose of this report is to share key lessons and tools that are critical to launching and scaling successful responsible digital payments initiatives in Ghana's cocoa value chain. These lessons and tools have been recognized by companies, farmers and financial service providers (FSPs) in Ghana as essential for shedding light on how to approach digitization in a way that maximizes the likelihood of a successful outcome. They are intended to be used by cocoa buyers and other value chain actors in their own digitization efforts at the initiation or scale-up stages.

This report should be read in conjunction with the recent study published by the Better Than Cash Alliance (the Alliance) and the World Cocoa Foundation (WCF): "The Hidden Costs of Cash to Ghana's Cocoa Sector" (referred to as "Cost of Cash study"). This Costs of Cash study sets out the many pitfalls of cash payments, including significant risk to personal safety, much higher costs and lower productivity and transparency, among many others. It also sets out the key opportunities and advantages in shifting to digital payments throughout the supply chain.

The Costs of Cash study confirms that cash remains the primary payment method used to purchase cocoa in Ghana. **Over 90% of farmer-level transactions in Ghana take place in cash, representing more than GH¢7 billion, or US\$1.26 billion of payments annually.**<sup>1</sup> At the same time, 91% of Ghanaian adults own a mobile phone,<sup>2</sup> and there were 32.5 million mobile money accounts in Ghana as of the end of 2019.<sup>3</sup> Of these, 14.5 million were active consumers of mobile money services across four providers.<sup>4</sup>

By adopting digital payments direct from licensed buying companies (LBCs) to farmers, firms can shorten their operational cycles, reduce their interest cost and achieve a higher return on their capital. The safety of staff and purchasing clerks (PCs) will be greatly improved, and farmers will be able to access relevant financial services and credit needed to invest in their farms.

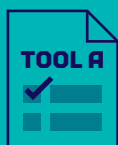
**To complement the Costs of Cash study, which set out why it is in all stakeholders' interests to digitize payments, this report sets out how to digitize payments in a way that is responsible and scalable and to the benefit of all stakeholders.** Recognizing how digital payments can make a fundamental difference to farmers, WCF, along with its company members (LBCs, traders, exporters, manufacturers) and the Better Than Cash Alliance, supported and studied various payment digitization projects in Ghana between 2018 and 2020. **Based on these various experiences, this report presents four key building blocks along with practical tools designed to help companies put in place scalable and responsible digitization measures in the cocoa sector.**

# FOUR BUILDING BLOCKS

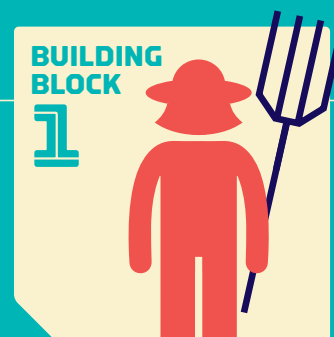
## FOR RESPONSIBLE AND SCALABLE PAYMENT DIGITIZATION BY COCOA COMPANIES

### Know your smallholder farmers

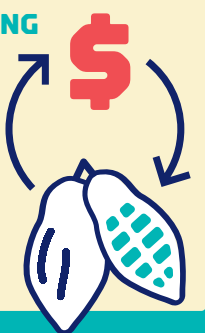
Responsible digitization starts with understanding the financial lives of farmers, establishing their level of comfort with digital financial services (DFSs) and gauging their demand for those services. This information helps to put farmers' financial behavior and expectations at the center of digitization measures. It also serves as an initial sensitization tool, which builds farmers' familiarity with digital payments and helps ensure companies move at the right pace as they implement their digitization measures.



The Alliance and WCF have developed a farmers' survey questionnaire that cocoa companies (LBCs, traders, exporters or other) can use to better understand farmers' digital and financial lives and build familiarity with digital payments. *See Tool A in Appendix*



### BUILDING BLOCK 2



### Build the internal and external value proposition for digitization

Creating a clear understanding across the entire value chain of the benefits of digitization is essential to increase the level of acceptance and update from the various value chain actors. This applies equally when making the initial decision to switch to digital payments, selecting an FSP and agreeing on an implementation approach with the selected FSP. There are two key elements to building this value proposition. First, ensuring there is agreement on the objective and scope of digitization within the company, including with PCs, district officers of LBCs and other partners. Second, rigorously selecting and overseeing the FSP and ensuring that implementation plans and timelines are developed jointly with the FSP.

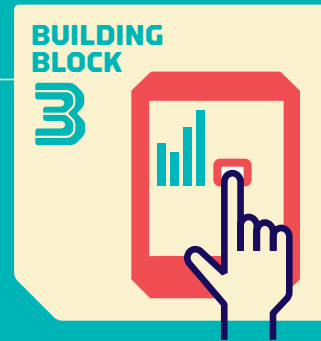


The Alliance and WCF have developed a request for proposal template for companies to collect information to understand existing options to digitize. The template is neutral and designed to help companies make the most suitable decision based on their needs and circumstances. *See Tool B in Appendix*

Tool B collects information from FSPs on how they address the Alliance's "[Responsible Digital Payments Guidelines](#)", specifically the eight recommended practices for engaging with clients who are sending or receiving digital payments and who have previously been financially excluded or underserved. The tool requires the details of how all eight practices are incorporated by the FSP in its digital solution.

## Enable farmers to spend funds and access services digitally

by building a robust digital payments acceptance ecosystem



Digitizing cocoa payments alone is not sufficient to drive adoption and scale in Ghana's supply chain. Success in this regard will depend largely on developing an ecosystem in which farmers can buy goods and services digitally without having to cash-out. Access to digital services (financial or non-financial) that present a good value proposition for the farmers is also critical. To build a robust digital payments acceptance ecosystem in Ghana requires focusing on four areas:

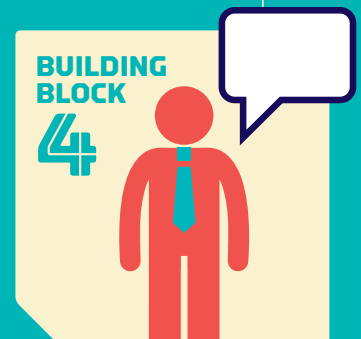
1. **DFS access points**, which need to be numerous and well-located for farmers and PCs.
2. **DFS liquidity management**, which helps ensure all farmers can access their cash where and when they need it.
3. **DFS merchant acceptance**, which includes targeted efforts to identify and digitize common farmer transactions, such as at input shops, pharmacies, grocery stores, and creates awareness among farmers that they can pay digitally in these places.
4. **Access to other digital services** (both financial and non-financial), including digital savings, credit, insurance or pay-as-you-go solar energy panels and products.



The Alliance and WCF are sharing examples of Digital Financial Services-enabled products and services available to farmers in Ghana. The presentation also sets out the benefits of digitizing payments and can be used as a knowledge-sharing and advocacy tool to help farmers understand and embrace digital payments. *See Tool C in Appendix*

## Sensitize company staff and farmers on the value of digital payments

Given the low level of financial and digital literacy in Ghana's rural areas, helping staff and farmers understand and embrace digital payments is crucial to success. This starts with developing materials for staff and PCs that explain why digitization is beneficial to the company and materials for farmers that explain the benefits for them to move away from cash to digital payments.



The Alliance and WCF have developed scripts for audio-modules (each approximately five minutes long and in English) that introduce Digital Financial Services to staff and farmers and can be translated into local languages. *See Tool D in Appendix*

# THE FUTURE OF COCOA IN GHANA IS INCREASINGLY DIGITAL

The Alliance and World Cocoa Foundation's (WCF) recent study, "The Hidden Costs of Cash to Ghana's Cocoa Sector" (referred to as "Cost of Cash study"), found that over 90% of farmer-level transactions are completed in cash, representing more than GH¢7 billion, or US\$1.26 billion, of payments annually.<sup>5</sup> Cash transactions come with many challenges: they expose farmers to delays between cocoa delivery and payment; they result in very low transparency across the entire cocoa value chain; they increase the risk faced by value chain actors, particularly purchasing clerks (PCs) who have become targets for theft and even victims of murder; and finally, they prevent farmers from developing a digital footprint that they can use to access digital credit, savings and other financial services available through their mobile phone.

The same study found that companies and PCs lose approximately US\$21.5 million (approx. GH¢124 million) annually – equivalent to 19% of licensed buying company (LBC) revenues annually – due to transacting in cash. A US\$100 bag of cocoa beans sold in cash earns an LBC approximately US\$0.15 in profit, whereas the same bag sold by digital means would earn over three times more, or US\$0.51.<sup>6</sup>

At the same time, 91% of Ghanaian adults own a mobile phone, and there were 32.5 million mobile money accounts in Ghana as of the end of 2019.<sup>7</sup> Of these, 14.5 million were active consumers of mobile money services across four providers.<sup>8</sup> By adopting digital payments direct from LBCs to farmers, firms can shorten their operational cycles, reduce their interest costs and achieve a higher return on their capital. The safety of staff and PCs will be greatly improved and farmers will gain access to relevant financial services and credit needed to invest in their farms. The Ghana Cocoa Board (COCOBOD) – the government institution with exclusive rights to purchase, market and export cocoa in Ghana – is working to promote a full transition from cash to digital payments for all cocoa transactions in Ghana. Key industry players are also driving innovation in the supply chain and the growth of digital financial services (DFSs).

Recognizing how digital payments can deliver vast benefits for farmers, including higher incomes, the Alliance and WCF worked together with WCF company members to drive greater digital payments in the cocoa value chain. This work aims to promote inclusive growth, boost productivity and improve the livelihoods of smallholder cocoa farmers, especially women, with some encouraging early results. It is important to note that, going forward, we shall look to collect a deeper set of sex-disaggregated data to further shape the gender intentionality of this initiative. The initiative promotes and supports the engagement and implementation efforts of LBCs (and their intermediaries) by providing technical expertise, cost



of cash analyses and DFSs related technical assistance. As part of this initiative, two companies have embarked on digital payment initiatives at the farmer and PC levels. A third company has laid the groundwork for a future pilot that focuses on building awareness and acceptance of digital payments among farmers.

Many other LBCs are taking steps to move away from cash to digital payments. Companies such as Cargill, Olam, Federated Commodities, Nyonkopa, Ecom and Royal Commodities are all implementing some form of digitization. Measures range from small pilots to full digitization of all payments, as in the case of Cargill. In most pilots, funds are transferred into a mobile wallet; however, over 30,000 farmers selling to various LBCs are also being paid using e-Zwich cards.<sup>9</sup> See box 1 below for an overview of the cocoa landscape currently:

#### BOX 1

### Overview of Ghana's cocoa value chain

Cocoa makes up **19% of all Ghana's exports** and 2% of its gross domestic product (GDP).

Ghana produces **25% of the world's cocoa bean exports**, second only to Côte d'Ivoire.

In 2018, the **export value of Ghana's raw cocoa beans was USD 2.4 BILLION**

**The sector employs 800,000 farmers**, 20% of whom are women.

#### BOX 2

### Key actors in cocoa sector digitization of payments



#### 1. Cocoa farmers

Around 800,000 cocoa farmers are estimated to be part of the value chain in Ghana,<sup>13</sup> 25% of which are women.<sup>14</sup> At least four million Ghanaians rely on the sector to some degree, supporting households of an average 5.8 people.<sup>15</sup>



**2. COCOBOD** buys all Ghanaian cocoa from LBCs and then sells it to foreign and domestic processors.



**3. LBCs** use funds from COCOBOD, internal resources and/or banks to purchase cocoa from farmers via a network of local PCs (who are non-salaried agents of LBCs).



**4. The local PCs** withdraw cash from District Offices or rural banks, then transport that cash to the farming communities they live in, where they use it to purchase cocoa.

# FOUR BUILDING BLOCKS FOR RESPONSIBLE AND SCALABLE DIGITIZATION

This report sets out four building blocks to guide LBCs in their transitions to digital payment and help them achieve scalable and responsible digitization. The building blocks are based on an analysis of the pilots supported by the Better Than Cash Alliance and WCF as well as consultations with other LBCs who have piloted digitization and a wide range of other stakeholders in the sector.





# BUILDING BLOCK 1

## Know your smallholder farmers

### Data drives results

When designing the core elements of a digitization plan, it is essential to start with a focus on cocoa farmers, assessing both their baseline understanding and demand for digital payments. Tool A is a survey to collect data on specific digitization issues from farmers. Insights from this tool can be combined with small group engagement with farmers to form a holistic picture of farmers' digitization needs and priorities.



The Alliance and WCF have developed a farmers' survey questionnaire that cocoa companies (LBCs, traders, exporters or other) can use to better understand farmers' digital and financial lives and build familiarity with digital payments.  
>> See Tool A in Appendix

For example, of the two farmer groups engaged in WCF's digitization initiatives thus far, a surprisingly high 67% had either a bank or mobile money account, or both. This means that LBCs should not hesitate to digitize based on a concern that few farmers have digital accounts. That said, significant gender differences in account access do persist, with between 20% and 30% more men than women having an account. Similar trends also exist in phone ownership. Acknowledging and assessing these gaps through a farmers' survey allows the LBC to tailor specific measures to women where needed.

The farmer survey is a critical tool that is focused on the following criteria:

- Farmer demographics, such as gender, income, education, phone ownership, etc.
- The level of experience with digital products and services, such as mobile money and bank cards as well as with financial institutions.
- The number and accessibility of financial access points (bank branches or mobile money agents) in the survey respondent's community. This is important, as low agent levels make it difficult for farmers to cash-out and may act as a disincentive to uptake of digital payments.
- Farmers' experiences with those access points, whether positive or negative.
- Trends in farmer income and expenditure and the locations where most of their transactions take place in their communities.

For the two Alliance/WCF-supported digitization pilots in Ghana, a sample of 10% (~350 farmers) of the farmers participating in the pilots were surveyed by the LBC field officers using tablets or phones and an open-source data collection application with offline capability. The ability to collect data offline was particularly important given the very poor internet coverage in most of these rural areas. Steps were taken to ensure that at least one-third of farmers surveyed were women and there was appropriate representation along the lines of age and education levels.

The survey also served as a tool to build awareness and comfort of DFSs with farmers. Field officers who administered the survey used the opportunity to educate respondents about DFSs in general. For one particular LBC, the survey and awareness building that came with it was instrumental in gaining the trust of farmers to share their phone numbers and digital account ownership to start the digitization process.

## Data-driven opportunities

Figure 1 below sets out what a sample of 193 farmers interviewed felt were the advantages and disadvantages of mobile money (MM) in Ghana. **These results show that the surveyed farmers had a generally positive view of mobile money as being more convenient, secure and faster and easier to use.** However, they also show that challenges remain with this mode of digitization, most notably fraud, network issues and transaction fees. Given their collective influence in the sector, LBCs have a significant role to play in working with mobile money providers to address some of these challenges.

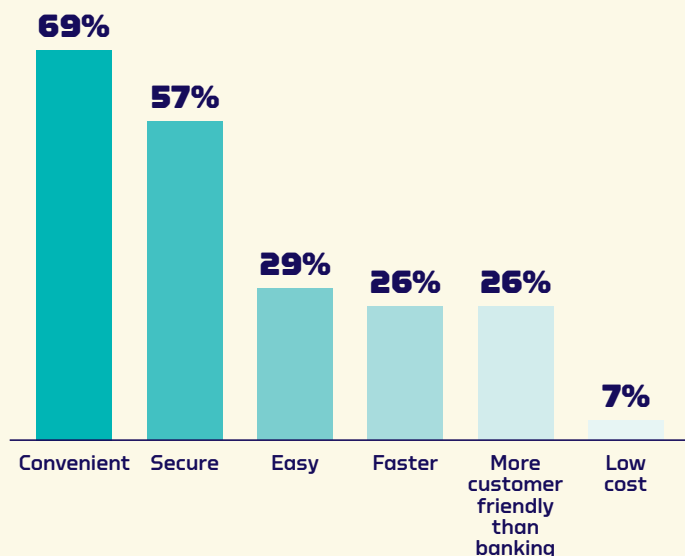
**The survey also showed varying levels of awareness of digitally enabled financial products, such as digital savings, credit, insurance and pay-as-you-go solar products.** Less than one-third of farmers in one of the pilots had ever heard of digital credit, insurance or pensions. As seen in figure 2 below, three-quarters of respondents were aware of savings products on their mobile wallet, and two-thirds of respondents said they might use those products to save.

From the LBC perspective, the key takeaway from this survey data is that farmers are very interested in saving on mobile wallets, so it would be beneficial to highlight this opportunity when explaining the benefits of digitization. Various mobile money savings products available in Ghana

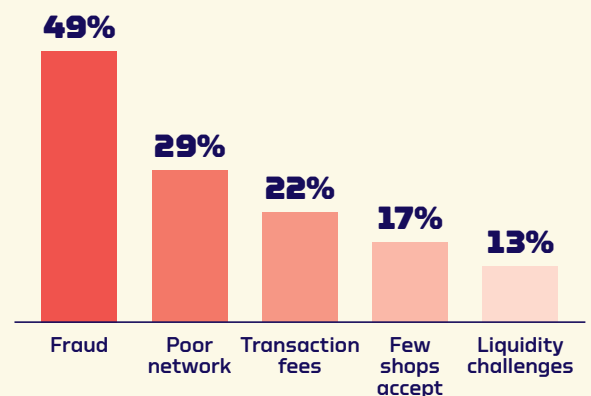
FIGURE 1  
**Advantages and disadvantages of mobile money**

### Advantages of MM

% of farmers surveyed through the LBC questionnaire  
(193 farmers)



### Disadvantages of MM





The various insights of the farmers' survey substantially helped the LBC to design a more successful pilot.

offer interest returns significantly higher than most savings accounts. For example, MTN Mobile Money has partnered with Fidelity Bank to offer a savings account than returns 12% interest per annum.

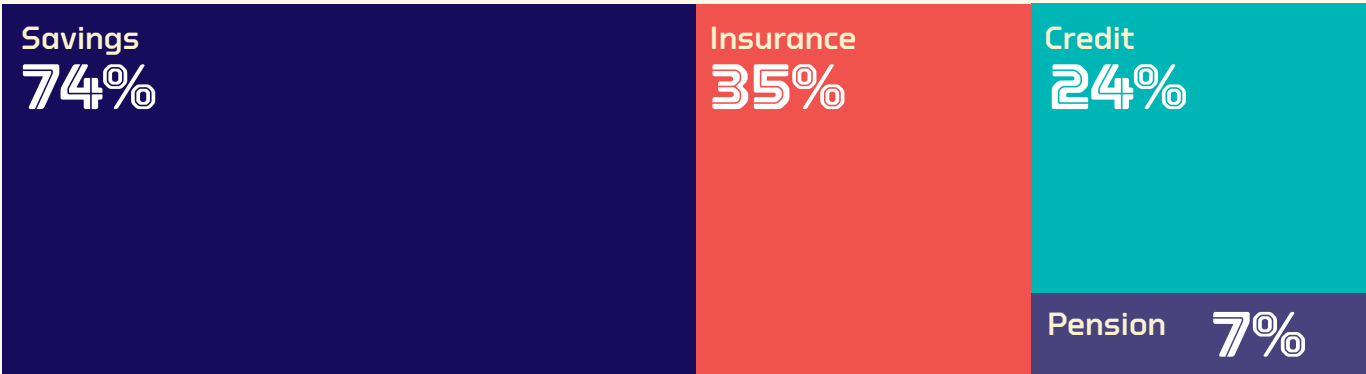
Given the challenges of reliable electricity access in these rural areas, it came as no surprise that farmers who were told about pay-as-you-go solar products in the market were overwhelmingly eager to find out more. One way in which LBCs may be able to differentiate themselves could be by connecting farmers with the companies providing these solar products, potentially even providing credit or subsidies for these products as incentives. One LBC recounted that they had previously gifted a solar set to a high-performing farmer at a special ceremony, which received an extremely positive response because of the utility of a home solar system.

**The various insights of the survey substantially helped the LBC to effectively design their pilot.** For example, the survey showed that around one-quarter of farmers felt mobile money was more customer-friendly and easy-to-use than banks. This led the LBC to prioritize e-wallets as opposed to bank cards for farmer payments. Similarly, survey data showed that fraud and poor networks were viewed as greater disadvantages of mobile money than transaction fees. This insight helped the LBC in their approach to manage cash-out fees for the farmers. In one pilot, digital payment fees were absorbed by the LBC, although they indicated that this approach would be increasingly less favorable as they scaled up digitization.

Finally, the surveys also provided a short-list of merchants to be approached for onboarding as DFS-accepting merchants, which is a critical element for building the DFS ecosystem (as explained in the “Building Block 3” section later in this report).

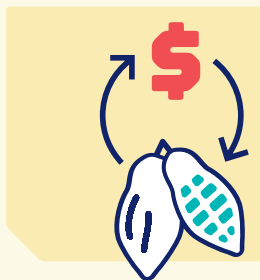
FIGURE 2  
Level of farmers' awareness of DFS products

% of farmers surveyed through the LBC questionnaire (189 farmers)



Awareness of mobile money (MM) enabled products needs to be increased

- 74% of respondents are aware of saving products on MM, and 66% of all respondents are either somewhat or very likely to save on their MM in the future
- No farmers had heard of investments or purchasing solar systems via MM
- 20% of respondents had not heard of ANY of the DFS enabled financial products listed



## BUILDING BLOCK 2

### Build internal and external value propositions for digitization

#### **Build the value proposition for digitization across all parts of the supply chain**

Effective change management within the LBC and across all stakeholders is essential in delivering a successful shift from cash to digital payments. Digitization effort can be made more difficult by resistance from middle management, PCs and farmers; this can lead to significant inertia in the digitization process. LBCs piloting digitization should anticipate and account for this and forging ahead with transition measures. Even though PCs often bear most of the risk in paying farmers in cash,<sup>16</sup> they can resist digitization because they often on-lend credit in cash to farmers for a small fee. This type of informal lending would come to an end if transactions were digitized.

As such, it is important to create a clear understanding across the value chain of the benefits of shifting from cash to digital payments. This requires close and ongoing collaboration with key actors in the sector. One LBC worked closely with WCF to put in place digitization measures that solved challenges as they arose. The outcome was a successful pilot in which all layers of the LBC were proactive and knew their roles. The LBC is now planning to scale-up the pilot with a target of enlisting three times more farmers to participate. Another LBC had strong commitment at the highest leadership levels, but this did not permeate throughout the organization, which reduced the effectiveness and value of the pilot.

**One important success factor is training staff and familiarizing farmers with digital payments before any digitization initiatives begin.** For example, one of the LBC's initiatives had to be suspended briefly because farmers did not understand why they had been asked by a financial service provider (FSP) to share their phone numbers. This created suspicion and distrust, leading to a decision by the LBC to delay farmers' onboarding by the FSP until field officers could engage more closely with farmers to explain the changes.

The Alliance recommends some methods<sup>17</sup> (see graphic below) that LBCs can use to build this value proposition for digitization, including 1) identifying champions both inside and outside the company who can be catalysts for digitization; 2) engaging with supply chain partners to encourage them to digitize; and 3) initially identifying early adopters within existing partners who can expand the benefit of the digitization drive.

## Work with external partners to develop common solutions

In addition to internal alignment, it is vital for LBCs to carefully select and then closely align with various external partners, including the selected FSP. When deciding which channel to choose for digital payments, the LBC should consider the business model of each solution and how the FSP addresses the various challenges of digitization in rural areas. Mobile money and bank accounts linked to cards have their own challenges relating to factors such as network coverage, liquidity management, access to cash-in-cash-out points, the cost of infrastructure, trust and brand awareness among farmers.

## Partnership options for LBCs when mobile money is the chosen payment channel

**When mobile money is the chosen payment channel, LBCs can either partner directly with a selected mobile money provider or partner with an aggregator who can facilitate payments using any mobile money service.** Key differences in these two approaches are shown in figure 3 below.

In the two Alliance/WCF-supported digitization pilots, both LBCs opted for mobile money payment solutions; however, one LBC chose to work directly with a Telco operator, while the other opted for an aggregator. The LBC using the Telco model wanted to ensure that farmers could choose which mobile money wallet to receive funds in, so both MTN and Vodafone were engaged to provide payments to farmers using their respective wallets. The LBC was also interested in assessing the coverage area and service provision of the two providers. The LBC recognized that this meant extra work in managing two service providers, but at least for the pilot, they felt it was important that

FIGURE 3  
**Understanding the economics of a DFS operation**

	DIRECT TO TELCO	AGGREGATOR
Products	Products are mainly Business -to-Consumer (B2C) bulk disbursements	Products are mainly B2C bulk disbursements
Features	Products are quite standardized and difficult to customize	Agile enough to develop Value Added Services, such as security features or vouchers Usually able to send to multiple wallets because of integrations
Pricing Models	Disbursement fee, usually charged per transaction <ul style="list-style-type: none"><li>• If direct to wallet, request a waiver since cash-ins are at no cost to Telco</li></ul>	Disbursement fee, usually charged per transaction
Challenges	Most cases only able to send to single wallet You are dependent on partners agent network	Dependent on several telecommunication companies' networks

farmers were not forced to switch to a new mobile money provider if they did not need to. The same LBC is now scaling up their initiative and has decided to try the aggregator model. This will allow participating farmers to effectively use any mobile money provider, so farmers participating in the initial phase of the pilot are able to stay with MTN or Vodafone.

The other LBC decided to try the aggregator model because liquidity management was still a challenge; both MTN and Vodafone had limited capacity to ensure mobile money agents had adequate liquidity at the moment of payment.

## **A practical tool to help licensed buying companies chose external partners**

To help LBCs collect appropriate information about potential partners, understand the different digitization operating models and decide on partners to work with, the Alliance and WCF developed a request for proposal template. The document provides a mechanism for a LBC to obtain information on each Financial Service Providers' company background, the technical and commercial aspects of their payment service as well as the geographical coverage of infrastructure, agents and merchants in target areas.

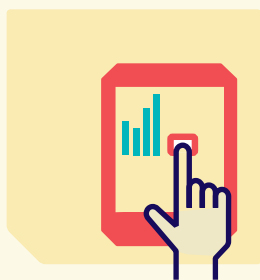
**The template was developed in part because it can be difficult for LBCs to know which questions to ask and which criteria to use when evaluating different FSPs as potential partners, from both a commercial and technical standpoint.** The template was developed to be comprehensive and agnostic as to the digitization model (whether bank, Telco or aggregator). The template also requires respondents to set out how their proposal will ensure payments are responsible, using the relevant principles set out in the Alliance's "[Responsible Digital Payments Guidelines](#)". These guidelines identify eight recommended practices for engaging with clients who are sending or receiving digital payments and have previously been financially excluded or underserved.

As noted above, the importance of internal alignment within the LBC on digitization is paramount. However, it is equally important to ensure alignment between the LBC and the FSP selected as partner. **This alignment can include jointly developing an implementation plan and timeline for onboarding staff, PCs, farmers and (if relevant) digital merchants in the target communities.** If the LBC and FSP do not fully align, this can lead to unnecessary delays or a breakdown in their relationship and negative customer experiences for farmers, which will hinder trust and scale-up. One of the pilot digitization initiatives did not ensure adequate mediation between the FSP and the LBC to iron out misunderstandings, collectively find solutions and course-correct where needed. **One key lesson from this experience is to allocate specific resources at the LBC to build and maintain their relationship with the FSP to promptly and effectively address any issues that arise.** Doing so could prove critical to the success of a digitization initiative.



The Alliance and WCF have developed a request for proposal template for companies to collect information and understand existing options to digitize. The template is neutral and designed to help companies make the most suitable decision based on their needs and circumstances.  
>> See Tool B in Appendix





## BUILDING BLOCK 3

### Enabling farmers to spend funds and access services digitally

#### Building a robust digital payments acceptance ecosystem

As digitization pilots in the agriculture sector proliferate, farmers are becoming more open to earning in e-money. In fact, some farmers are eagerly seeking this option out, mostly because of the security benefits. A phone survey of 375 farmers selling to the two pilot LBCs revealed that 73% of respondents were either very or somewhat willing to receive their cocoa payments via mobile money or e-Zwich card as opposed to cash. An additional 12% were neutral on the mode of payment.<sup>18</sup> This shows that demand for digital payments is very encouraging. However, successfully meeting this demand requires an enabling environment that seamlessly accepts digital transactions so farmers can not only be paid digitally but can also buy goods and services digitally. **The extent of DFS acceptance in a community - that is, the extent to which one can transact digitally without having to cash-out - is an essential factor for the growth and sustainability of DFS in agriculture.**

As detailed in figure 4 below, there are four key factors to building out a robust digital payments acceptance ecosystem, as set out below.

FIGURE 4

#### Key factors for an inclusive DFS ecosystem



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It is important for LBCs to work with mobile money providers and rural banks to **ensure adequate agent/branch coverage within a reasonable distance of farmers.**



## 1. Digital financial service access points

To be effective, a DFS ecosystem needs enough DFS agents to serve farmers when and where they want that service. Of the two farmer groups surveyed for the pilots, 36% of farmers selling to one LBC and 18% of farmers selling to the other LBC said that agents not being at their post was a key challenge they faced. Clearly, it is important for LBCs to work with mobile money providers and rural banks to ensure adequate agent/branch coverage within a reasonable distance of farmers from the beginning of their digitization initiative. If farmers must travel too far to cash-out from their cards or e-wallets, the cost and time required to do so will make the shift to digital payments less attractive. Moreover, requiring farmers to travel large distances fails to address the key pain points associated with cash, such as personal security, and can act as a further barrier to scale-up.

**A 2015 national survey of financial access points in Ghana found that 71% of mobile money users know of a mobile money agent less than 1km from their home, whereas this figure was only 52% for bank users and 32% for microfinance users.<sup>19</sup>** At the end of 2015, there were just over 40,000 active mobile money agents in Ghana; by end of 2019, that number ballooned to over 220,000.<sup>20</sup> Across all categories of DFS access points, mobile money access points are currently the most prevalent and fastest growing in Ghana's rural areas. The apex body for rural banks in Ghana has also received World Bank funding to roll out 5,000 shared bank agents that will work with multiple banks and significantly boost the number of bank access points in rural and agricultural areas. In addition, companies such as Onango have developed models that increase the number of places where agents can cash-in and cash-out, thereby increasing liquidity in targeted communities. It is open to LBCs to work with such models to help expand DFS ecosystems in their target markets. More information is in box 3.

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While access to agents in itself is important, those **agents must have enough liquidity (e-money and physical cash) to operate effectively.**



## 2. Digital financial service liquidity management

While access to agents in itself is important, those agents must have enough liquidity (e-money and physical cash) to operate effectively. In one farmer group surveyed, 58% of respondents said that mobile money agents often did not have enough cash or e-money to service the farmer's needs. In addition, farmers have complained that some bank branches falsely claimed that their point-of-sale device was damaged or the network was down to avoid reducing their liquidity by providing large amounts of cash to farmers. This is especially the case with farmers who are not customers of those banks but simply use the bank agnostic aspect of e-Zwich cards. These types of issues pose a serious constraint to the growth of DFSs in Ghana's cocoa sector, so it is imperative that agents and bank branches work to develop ways of maintaining enough e-money and cash, especially given the relatively large income farmers can receive for cocoa in a single transaction.

### BOX 3

## Onango - a new model for liquidity management

Onango is an innovative aggregator operating in the value chain digitization space in Ghana's agriculture sector. They were the FSP partner on one of the Alliance/WCF-supported digitization initiatives and are working with at least three other large LBCs currently digitizing in Ghana. Their model is interesting in offering the following services, which in combination, are designed to offer a "one-stop-shop" for digitization:

- 1. Onango offers a proprietary payment software**, which digitizes payments from the LBC's headquarters to the farmer. They use their own field staff to onboard farmers into the digital platform, collecting not only biographical but also farm data, which is then available to the LBC. The digitization of payments is provided at very limited cost because Onango's ultimate objective is to have access to farmers for upselling purposes (see point 4 below).
- 2. Onango have their own e-wallet (named "Lemon")**, which allows farmers to receive funds and transact to any mobile money wallet at no fee. If the farmer then wishes to cash-out, they can either go to a mobile money agent in their community and pay the standard cash-out fee, or if they wish to avoid the fee, they can travel to the nearest Onango pay point to cash-out for free. This gives the farmer a choice between paying a fee to avoid traveling or traveling to avoid paying a fee. An important driver of success is that Onango works together with each of their partner LBCs to determine the best location for pay points, considering factors such as where PCs and farmers are concentrated.
- 3. Onango manages liquidity in the communities where they operate**, ensuring that their pay points have sufficient cash or e-money when it is needed (especially during peak cocoa season). This is possible because Onango's partner LBCs push payments into their communities through Lemon, and Onango ensures that their pay points in those communities have sufficient liquidity. This works well most times, but there were some challenges in the pilot around where to locate the pay points and how to ensure that the PCs and farmers relying on those pay points use them efficiently. Onango also lends to mobile money agents to help them maintain liquidity and services as many agents as possible with loans in communities where farmers are being paid digitally. Other aggregators use rural banks to manage liquidity, which often creates its own challenges, such as banks not making any provision for agent liquidity requirements, especially in rural areas.
- 4. Through a subsidiary company called "Afarmco", Onango is developing a product to provide digital credit for farm inputs** and could later add other services based on demand from farmers. This initiative contributes significantly to the DFS ecosystem by providing other DFS-enabled products for smallholder farmers.

Of course, there are other aggregators in the market, including Farmerline, Esoko and IT Consortium, that offer a combination of the above services. Even so, the most significant pain point in rural payments is liquidity management.



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In addition to agent location and liquidity, it is essential for LBCs and FSPs to **ensure there are sufficient shops and merchants traditionally used by cocoa farmers that accept either mobile money or cards.**

When payments to farmers are made with e-Zwich cards, as is the case for many of the farmers selling to Cargill<sup>21</sup> and Olam<sup>22</sup> in Ghana, it is firmly in the LBCs' interests to work closely with rural banks to ensure that farmers with e-Zwich cards are fully serviced, even if they cash-out the maximum amount allowable by the Bank of Ghana. Often, farmers need to travel long distances to a larger city where a bank has enough liquidity to service them. **Again, aggregators can be engaged to provide or even lend float to rural agents and banks to ensure that they maintain sufficient liquidity, and LBCs can play a valuable role in facilitating this. When farmers frequently experience access points that do not give them access to their money, they become increasingly frustrated; ultimately this leads to farmers rejecting digital payments and compromises digitization goals.**



### **3. Digital financial service merchant acceptance**

In addition to agent points, it is essential for LBCs and FSPs to ensure there are sufficient transaction points traditionally used by cocoa farmers that accept either mobile money or cards and are clearly identified.

The farmer survey template (Tool B) also highlights where farmers spent most of their money. Based on sample survey responses collected for the Alliance/WCF-supported pilots, ideal locations that could serve as digital acceptance points for cocoa farmers are schools, pharmacies, input dealers, building material shops and supermarkets.

A key lesson from working with FSPs to increase the number of merchants accepting digital payments in rural areas is to ensure close collaboration with the FSPs' teams in charge of recruiting new merchants. An LBC and their FSP partner will likely have different timelines and priorities in recruiting merchants. Although FSPs have an interest in increasing the total number of merchants they have digitized, they tend to be more focused on merchants in urban or affluent areas that are more likely to have large transaction volumes and values, as opposed to merchants in rural areas. As an example, in the farmer surveys referenced above, 52 target merchants were identified as important points for farmers to be able to spend their digital funds. This list was then provided by the LBC to the mobile money provider's merchant recruitment team for onboarding and training new merchants. Several months later, only 10 of the 52 target merchants had been fully onboarded.



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By focusing on both payments acceptance and DFS usage, **LBCs and FSPs will reap the benefits of farmers becoming more active in the use of their mobile wallets.**



The Alliance and WCF have developed a user-friendly presentation that sets out examples of DFS-enabled products and services available to farmers in Ghana. The presentation also sets out the benefits of digitizing payments and can be used as a knowledge-sharing and advocacy tool to help farmers understand and embrace digital payments. >> See Tool C in Appendix

Some recommendations on actions that can be taken to drive up the merchant conversion rate are:

- The LBC can help their FSP partner understand the total size of the opportunity in commercial terms over the long-term.
- Merchants themselves can actively advocate for digitization measures in their communities. For example, following efforts by the FSP to build familiarity with digital payments, several merchants in the two trials came to understand they were a preferred transaction point for farmers in their community and that DFS acceptance was important to retain those farmers as customers once the farmers began receiving digital payments.
- LBCs can train and enlist PCs and field officers to regularly identify new transaction points for payment digitization and share that information with their colleagues who are engaging directly with the FSP.
- Information can also flow both ways, with PCs and field officers informing farmers of newly digitized merchant points. During previous digitization initiatives in Ghana, field officers were particularly helpful in reporting whether signage at merchants' premises was correctly displayed. Field officers were also able to share information about whether agents were using the official merchant SIM card, as opposed to the merchant's personal SIM. This is a critical difference; merchant SIMs are tagged for commercial activity and entail significantly lower fees payable by the customer than personal SIMs, which treat the transaction as a person-to-person remittance. Given that most customers would not be aware of this difference, LBCs can work with FSPs to ensure that training on this issue is included in onboarding of merchants and farmers.
- Given there is some competition among FSPs in Ghana to recruit merchants in cocoa growing areas because those rural communities have quite a lot of money in the system, LBCs have some leverage to push FSPs to provide support in digitizing and training merchants and farmers on merchant payments.



#### **4. Other digital financial services**

Being paid digitally is not an end in of itself for farmers. **The value proposition of digital solutions for coca farmers is greatly improved by gaining access to additional services, such as better access to working capital through digital credit, risk mitigation through digital insurance and better financial management through digital savings and investments.** There are also companies that use digital payments to offer farmers access to utilities they might otherwise not have access to. Many cocoa farmers have no formal access to financial services; however, this may change once they are able to receive digital payments into their mobile wallet and then use those accounts to access some of these services.

Several digitization pilots and initiatives have been completed, and several pilots remain ongoing in Ghana. These include initiatives aimed at providing farmers with access to both financial and non-financial services that can be of substantial value to them. A review of these initiatives indicates there has been a consistent focus on enabling digital payments but not on onboarding or informing farmers about additional DFSs made possible by receiving funds digitally. **Stepping up efforts to inform farmers about the DFSs available to them would have the dual benefit of driving usage of these services and minimizing cashing out.** Without a robust acceptance ecosystem that enables farmers to spend funds digitally, and thus encourage farmers to keep money in their mobile wallet, farmers will likely continue to complain about absorbing cash-out fees, rather than focusing on the benefits of digitization. By focusing on both payments acceptance and DFS usage, LBCs and FSPs will reap the benefits of farmers becoming more active in the use of their mobile wallets.

Fortunately, in Ghana there are numerous digital financial services that farmers can access via their mobile phone, including:



## Digital savings

Research shows that many farmers do not save in a bank because they felt intimidated when engaging with a bank, which they consider better suited for the rich and well educated. Instead, the surveyed farmers felt more comfortable saving on their mobile wallet, which they view as more pro-poor. While interest rates for most savings accounts are in the single digits, MTN and Fidelity Bank have partnered to offer a savings account with a 12% return.



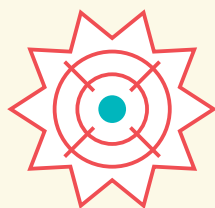
## Digital credit

Access to credit for smallholder farmers continues to be a major challenge; however, digital credit has provided farmers with access to small, but increasing, amounts of credit to cover their daily needs. Currently in Ghana, there are several digital credit offerings that allow borrowing of up to GH¢1000 (~ US\$200). So, provided responsible lending practices are followed, farmers can benefit from borrowing for working capital to smooth out their income. There are also some companies in Ghana that are digitizing input credit; LBCs may wish to explore partnering with such companies directly to bring these services to farmers.



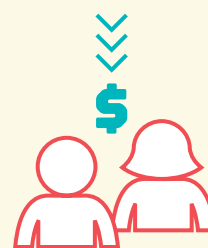
## Digital insurance

There are several services that provide digital health and life insurance at an affordable cost, with premiums automatically deducted from mobile wallets. There is an opportunity for LBCs to form partnerships with insurance companies to offer more favorable terms to their farmers. Some health insurance benefits also cover extended family, which may improve health and well-being. It is worth noting that digital claims handling and pay-outs are often very rapid, which is critical given most farmers in Ghana have very low incomes and are extremely vulnerable to any financial shock.



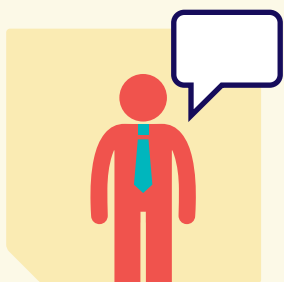
## Pay-as-you-go utilities

There are now providers in Ghana that sell solar systems and water pumps, collecting payment via mobile money. This allows farmers who would otherwise face unstable power supply to access reliable electricity using a payment model that they can manage. In addition, some utilities have facilitated the payment of their bills via mobile money, especially for pre-paid services.



## Digital pensions

The average age of a cocoa farmer in Ghana is 55 years old,<sup>23</sup> and in the two farmer surveys previously mentioned, 21% of the farmers were aged over 60. Thus, a key financial need of these farmers is a pension plan; however, most farmers are unaware digital pension plans exist. In one group of surveyed farmers, only one-third of respondents knew about digital pensions. LBCs may have an opportunity to help address this issue, and in doing so, help farmers avoid financial hardship and deprivation when they become too old to work.



## BUILDING BLOCK 4

### Sensitize both staff and farmers to the value of digital payments

A key learning from the Alliance/WCF-supported digitization pilots is the paramount importance of building knowledge among both staff and farmers about the benefits of DFSs. Companies that invested in digitization saw a direct impact on farmers, helping to build their levels of comfort with the digital future of cocoa and finance in Ghana.

Key success factors of the sensitization are:

- 1. Sensitization of staff** – One clear lesson from the Alliance/WCF-supported pilots is the importance of repeating messages to LBC staff, field officers and PCs about the benefits of digital payments. Doing so helps achieve internal alignment, as recommended in the “Building Block 2” section earlier. This also builds staff knowledge and confidence to engage with farmers as digitization ambassadors.
- 2. Sensitization of farmers** – Messages about the benefits of digitization may not be effectively delivered if they come at the wrong time (e.g., when farmers are busy tending their crops or female farmers are cooking for their family), from the wrong organization (i.e., the messages have no reference to the LBC that the farmer sells to or do not have endorsement from a trusted institution, such as COCOBOD) or through the wrong channel (e.g., written messages to a population that has low literacy rates). As noted previously, when farmers do not feel adequately informed about an initiative, they are more likely to resist it.



The Alliance and WCF have developed scripts for three audio-modules (each approximately five minutes long and in English) that introduce DFSs to staff and farmers and can be translated into local languages.  
>> See Tool D in Appendix

**The channel through which messages about the benefits of digitization are shared with farmers is as important as the content of the messages.** LBCs generally share information through two channels:

- Via trainings that are akin to a “farmer business school”. Typically, these entail half a day of training for three to five days and include financial literacy training, but not training on DFS.
- Via key messages provided to field officers to share with farmers in their day-to-day engagements.

The Alliance/WCF supported work focused on delivering messages through 1) small groups of up to 15 farmers; 2) 5-minute recordings disseminated via phone call or played by the FSP during the onboarding process; and 3) telephone surveys in which farmers used their phone keypads to make selections.





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Farmers were more likely to listen to sensitization messages in full if **they were coming from the LBC they were selling to.**

The first lesson learned from this work is that it is important to meet the farmer at their level of technological experience when introducing digital payments technology. For example, when farmers were asked to respond to recorded questions using their phone keypads, this was likely the first encounter with such technology for many of them. Based on the inconsistency in some of the responses, it was determined that this channel was not best suited to this target audience. Two companies that have separately developed materials to build farmers' familiarity with digital payments have also stopped using this channel to share information, having found it ineffective for the same reasons.

**A second lesson learned is to tailor the length of the messages to the channel.** For example, a five-minute message when played in person to a group is more likely to hold the group's attention than if the same message is shared as a recording on the phone.

**A third lesson learned is that LBC's have a significant role to play in helping farmers accept and absorb the sensitization messages.** For example, when farmers could clearly identify that the voice calls they received were from the LBC they were selling to, they were more likely to listen to the messages in full. This was also true where farmers had been given advance notice by the LBC that they would be receiving these calls. In fact, after receiving these calls, farmers were, on average, 7% more willing to receive cocoa payments digitally, while the proportion of farmers who preferred to be paid in cash rather than digitally fell by 6%.

# CONCLUSION

Despite its many challenges, Ghana's cocoa sector has an incredible opportunity to embrace digitization right across the supply chain, and in doing so, strengthen businesses, boost incomes and financial inclusion and drive economic opportunities and growth. The Costs of Cash study by the Alliance and WCF highlighted not just the major harm and loss that cash causes but enumerated the vast benefits of switching to digital payments.

**This paper aims to provide practical assistance for key actors in the supply chain on how to realize these vast benefits. The building blocks and tools presented here have been developed with a view to ensure the future digitization journey takes place responsibly and that new initiatives are scalable.** As in any country's digitization journey, cooperation and communications are essential ingredients of success. The more collaboration that takes place between all stakeholders affected by the shift to digital payments, the more inclusively those initiatives will be designed and deployed and the more uptake they will ultimately enjoy. By contrast, a clear lesson from the Alliance/ WCF-supported digitization initiatives is that most challenges occur when there has been a failure to adequately consult and include key stakeholders through both the design and implementation phases.

The sector is in the initial stages of its digitization journey, but the road ahead presents huge potential. The authors encourage all stakeholders to share their own experiences – both positive and negative – throughout their journeys towards digitization. Doing so will help improve future digitization initiatives. Working together will help ensure the sector the bright future it deserves, with benefits flowing to all people whose livelihoods depend on it.





*Women from Ivory Coast working in the countryside for cocoa production.*





## Farmers survey template - digital financial services questionnaire

Thank you for agreeing to take part in responding to this questionnaire. You have been selected by [ENTER NAME OF BUYING COMPANY] to complete this survey. This will enable us to know your general knowledge of digital financial services and where you could use your digital money in the future. This is because [ENTER NAME OF BUYING COMPANY] would like to explore making some of the payments for your produce in either mobile money or by bank card transfer. [ENTER NAME OF BUYING COMPANY] wants to collect your opinion on this and also ensure you have what is required to receive digital money if payments are made that way in the future. The interview will be about 15 minutes. All the information obtained will remain confidential.

### A. General information

1. Name of district
2. Name of community
3. Gender of respondent
  - a. Male
  - b. Female
4. Age of respondent
  - a. 16-30
  - b. 31-45
  - c. 46-60
  - d. >60
5. What is your level of education?
  - a. No formal education
  - b. Primary
  - c. Middle School/JSS/JHS
  - d. SSS/SHS/Vocational
  - e. Tertiary
6. Do you have a phone of your own?
  - a. Yes
  - b. No
7. If no, do you have access to a phone?
  - a. Yes
  - b. No
8. Do you have a SIM card registered in your name?
  - a. Yes
  - b. No
9. What is your phone number?
10. What network do you use?
  - a. MTN
  - b. Vodafone
  - c. Airtel-Tigo
  - d. Other

### B. Experience of mobile money

11. Have you ever heard of mobile money?
  - a. Yes
  - b. No
12. From which source(s) of information did you learn of mobile money?
  - a. Radio
  - b. Newspapers
  - c. Posters
  - d. TV
  - e. SMS messages from providers
  - f. Mobile money agents
  - g. Others
13. Do you have any of the following financial tools in your name (bank account, card, mobile money)?
  - a. Yes
  - b. No
14. If yes, which of the following?
  - a. Bank account
  - b. Credit card (debit, credit, e-Zwich)
  - c. Mobile money
15. If no, why?
16. When undertaking a transaction, do you do it yourself or you are assisted by an agent?
  - a. Self
  - b. Assisted by agent
17. Which of the following mobile money services/products have you heard of?
  - a. Savings
  - b. Credit/loans
  - c. Pensions
  - d. Insurance
  - e. Digital pay as you go solar
  - f. Investment (e.g., treasury bills)
  - g. None
18. Which of the following services have you used your mobile money for before?
  - a. Deposit money
  - b. Withdraw money
  - c. Buy airtime top up
  - d. Pay school fees
  - e. Pay utility bills (electricity, solar lantern, water, TV, cable)
  - f. Send money to family or friends
  - g. Receive money from family members or friends
  - h. Loans
  - i. Pensions products
  - j. Insurance
  - k. Digital investment
  - l. Other
  - m. None
19. How do you save your money?
  - a. Bank account
  - b. Village savings and loans
  - c. Mobile money account
  - d. At home
  - e. No savings
20. How likely is it for you to save on your mobile wallet?
  - a. Very likely
  - b. Somewhat likely
  - c. Not likely
  - d. Don't know

### C. Experience with mobile money agents in your community

21. Do you know of mobile money agents in your community?
- Yes
  - No
22. If no, where is the nearest agent?
23. How long does it take you to get to the nearest agent?
- Less than half an hour
  - Half an hour to one hour
  - One hour
  - One to two hours
  - More than two hours
24. What is the average wait time to finish a transaction?
- Less than 10 minutes
  - 20 minutes
  - 30 minutes
  - More than 30 minutes
25. Have you ever experienced any of the following?
- Agent did not have enough cash or e-float and could not perform transaction
  - Agent was not there
  - Agent was rude
  - Agent over charged transaction or asked to pay deposit
  - It was time consuming.
  - Voice, mobile network
26. Do you know what a pension is?
- Yes
  - No
27. Have you heard of digital pension where your contributions and benefits are paid via mobile money?
- Yes
  - No

### D. Information on income: receiving payments

28. What is the average land size of your cocoa farm?
29. What is the average yield of your cocoa farm per acre?
30. Which of the following are the main sources of income for your household this year?
- Cocoa Sales
  - Livestock/livestock products
  - Other agricultural produce
  - Trade sales (agricultural/other)
  - Employment (permanent/casual)
  - Remittances received
  - Asset sale
  - Other

31. Tick the method(s) of payment you have received for your cocoa beans sold?
- Mobile money
  - E-Zwich
  - Cash
  - Other
32. If you have received payment by mobile money/e-Zwich, did you cash out at once?
- Yes
  - No
33. If no, how often did you cash out?
- More than once a week
  - Once every week
  - Twice a month
  - Once a month
  - Other
34. On a scale of 1-5, with 5 being most receptive and 1 being the least, how receptive will you be to receive digital payment again?
35. Do you receive income for produce apart from cocoa?
- Yes
  - No
36. If yes, what are they?
37. How often do you get paid for service rendered/sales of agro produce apart from cocoa?
- Daily
  - Weekly
  - Monthly
  - Yearly
  - According to the harvest
  - Other

### E. Information on expenses: making payments

38. Which of the following accounts for your top 4 areas of expenditure?
- Seeds and seedlings
  - Herbicides/pesticides
  - Fertilizer
  - Veterinary/medicine
  - Payment for workers (e.g., Land preparation, pruning, spraying services, harvesting etc.)
  - Land purchase/rental
  - Electronic equipment (TV/radio)
  - Food and beverages
  - Clothes
  - Airtime
  - Educational related expenditure (school fees, learning materials, school uniforms etc.)
  - Health expenses (pharmacy, hospital bills)
  - Building materials

39. Who do you normally purchase your cocoa farming inputs from?
- Government agency (Ministry of Food and Agriculture)
  - Wholesalers
  - Retailers
  - Middlemen
  - Other (please specify)

40. For each of the following products/ services provide up to 2 shops and location where they are patronized

- Fertilizer
- Pesticides and herbicides
- Seedling and seeds
- Other farm inputs (wellington boots, cutlass, protective equipment, etc.)
- Food and beverages
- Building materials
- Health and medical supplies
- Educational related expenses (School fees, Books, uniforms etc.)

41. For each of the product/services patronized/purchased below, indicate how it was paid for.

- Fertilizer
- Pesticides and herbicides
- Seedling and seeds
- Other farm inputs (wellington boots, cutlass, PPEs etc.)
- Food and beverages
- Building materials
- Health and medical supplies
- Educational related expenses (books, uniforms etc.)

42. On a scale of 1-5, with 5 being most challenging and 1 being the least, rate how challenging payment digitally was as compared to cash.

### F. Conclusion on mobile money

43. In your own experience what are the benefits of using mobile money?
- Easy to use
  - Secured
  - Low cost
  - Convenient
  - Easy to register
  - More customer friendly than banking
  - Faster
44. In your own experience, what are the disadvantages of mobile money
- Fraud
  - Liquidity challenges
  - Few agents
  - Transaction fees
  - Few shops accepting mobile money
  - Network availability
  - None



## TOOL B

## Template for request for proposals: digital payment services for cocoa licensed buying companies and their supply chain partners

### A. Objectives and payment provider selection process

The objective of this process is for payment providers/facilitators to provide as much information as possible on the commercial and technical aspects of their offering to interested cocoa licensed buying companies (LBCs).

This request for proposals (RFPs) is aimed at supporting LBCs in making the shift from the traditional cash-based payment method to using digital means (bank, mobile money, or both). In the status quo system, the LBC, which purchases cocoa on behalf of upstream processors, receive their payment from such processors digitally, predominantly by bank transfer. From that point onward, however, transactions further down the supply chain tend to be in cash. That is, the payment flow follows the pattern above right.

The large amounts of cash that move through this supply chain in the current scenario exposes DMs, PCs and farmers to significant risks of theft and insecurity. Similarly, LBCs lose from the inability to trace funds at each stage in the supply chain. The status quo also relies on paper receipts, which are inefficient and make audits more challenging. Overall, shifting from a cash to a digital ecosystem facilitates the following benefits:



**Improved efficiency** - reduced transaction costs, high productivity, better cash and business management;



**Greater transparency and security** - transparent and traceable transactions, better fraud detection, higher personal security;



**Increased revenue** - data analytics for business development, new business opportunities, growth of suppliers/distributors through access to capital;



**Stronger business relationships** - increased loyalty from suppliers/distributors, reduced employee/worker turnover, better products for the consumer, stronger strategic partnership with government.

This RFP should outline how the payment provider will facilitate the digitization of the above detailed processes in terms of payment and receipting, all the way from the LBC to the farmer, making sure to detail the changes in the customer journey at each point in the supply chain.

## B. Required content of proposals

### I. Company background information

The Respondent must provide a brief introduction, which includes the following information:

- a. *Core business, including the technology platform used, distribution networks (e.g., access points, such as agents and ATMs), integration with e-money providers or other payment service providers, as relevant.*
- b. *Track record with digital payments in Ghana.*
- c. *Ownership structure.*
- d. *Regulatory oversight structure or certifications.*
- e. *Any system certifications (e.g. ISO27001, PCI DSS compliance, etc.).*
- f. *Professional qualifications, specialized experience and local availability of key personnel who will be dedicated to the services described in this RFP.*
- g. *Respondent's experience with payment services for agribusinesses (please indicate the value chain and whether you have undertaken a pilot).*

### II. Functional parameters

The Respondent must provide the following details on the functional aspects of their payment services:

- a. *Payments dashboard* – Respondent must provide an overview of the dashboard and its functionality, including whether it allows data exports, has business intelligence/report generation functionality, allows searches by various variables, etc.
- b. *Integration with existing systems* – Respondent must describe in detail the Respondent's front-end software applications and/or hardware that will be used to process payments as well as technical and functional requirements to allow for successful integration. Should there be the need for additional integration, indicative information on the process and costing for the same should also be detailed here.
- c. *Special wallet functionalities (e.g. restricted funds in wallet, restricted funds redemption points, zero rates fee wallets, etc.) as well as any limitations.*
- d. *Modalities for use of cards or over-the-counter solutions and ability to interoperate with global standards and allows cardholders/wallets to transact at any EMV-enabled point of sale terminal or ATMs, as relevant.*
- e. *Other value-added services – customized receipts, payment across networks, split disbursement into bank accounts, mobile money wallet or e-Zwich card etc.).*

### III. Non-functional parameters

The Respondent must provide the following details on the non-functional aspects of their payment services:

- a. *Commercials* – Respondent must provide details of the pricing and fees for implementing the digital payment system, including set up, training, disbursement, customer service, transaction, account service and cash-out fees (incumbent to end recipients). Respondent must also indicate the amount of time this pricing and fee structure can be guaranteed.
- b. *Partnerships* – Respondent must provide details of any external partners to be engaged as a means of providing the payment service, including partners in liquidity management, on-boarding, cash-in-cash-out, agent management, etc. The respondents must provide indications on how these partners are managed and what is the respondents' approach to managing transaction failures, non-compliance with services to be provided, etc.
- c. *User journey* – Respondent must outline the user journey, including education, onboarding and set up for the client (LBC), purchasing clerks and farmers. Respondent should explain any differences in this journey depending on where funds start or terminate (purchasing clerk vs. farmer)
- d. *Support* – Respondent must describe how they plan to deal with transaction failures, reversals, funds not delivered, assistance with establishment/leveraging of agents and any type of fraud, whether it originated at the service provider, agent or customer. Respondent must also detail the infrastructure in place for customer support, including whether a call center will be in operation (and if so, whether it is 24/7) and how large the engaged team will be, how many languages are supported and what the process will be for complaint resolution and documentation.
- e. *Security* – Respondent must describe in detail system protocols, policies and procedures to ensure security and confidentiality of all hardcopy and electronic data and payment transactions. Respondent must also list any certifications that demonstrate the respondent's ability to maintain the said security standards.
- f. *Resilience* – Respondent must describe mechanisms to ensure a high availability and resilience, such as disaster recovery plans, system availability standards,

redundancies, detailed off-line processes during power outages or network connectivity down-times, etc.

- g. Oversight and tracking** – Respondent must describe the availability of the types of tools that have been used, if any, by the Respondent to measure or otherwise track the performance of its payment processing services. Respondent must also detail any standard reports they are able to provide (and the interval) and whether customized reports based on sub-categories such as gender, location, etc. are also available. Respondent must also describe the disbursement audit mechanisms that ensures compliance with maker-checker best practice.

## C. Responsible digital guidelines

For clients to adopt and use digital payments, they need to be treated fairly and feel protected from risks, such as loss of privacy, exposure to fraud and unauthorized fees. Service providers should proactively take steps to

protect their clients and respect the consumer protection regulatory framework. This is particularly important for financially excluded and underserved clients – especially women and those with low financial and technological capability who are acceding new types of financial services, providers, partnerships and distribution channels for the first time.

Following intensive consultations with industry stakeholders, the Alliance's "Responsible Digital Payments Guidelines" identify eight good practices for engaging with clients who are sending or receiving digital payments and who have previously been financially excluded or underserved. The guidelines are oriented toward financial services providers in designing and delivering their payments services. The respondent should read each guideline and provide details on how they will address the eight key guidelines in their service offering (see table below).

Guideline	Respondent adherence to this guideline
<b>1</b> <b>Treat clients fairly.</b> Clients need to be treated fairly if they are to trust digital payments, especially those clients with low levels of financial and technological capability.	
<b>2</b> <b>Keep client funds safe.</b> Clients, especially the financially excluded or underserved, need reliable and secure access to funds in digital transaction accounts.	
<b>3</b> <b>Ensure product transparency for client.</b> Providing clients with transparent product information requires special attention in a digital environment, especially where information is only available electronically, such as on a mobile phone.	
<b>4</b> <b>Design for client needs and capability.</b> Designing digital payments to address the needs, economic roles, and capabilities of clients, especially women, will increase suitability and use.	
<b>5</b> <b>Support client access and use through interoperability.</b> While recognizing the need to balance competition and innovation, ensuring the interoperability of platforms, agents and clients is highly desirable so customers of different schemes can make payments to each other and agents can work for different providers. This is especially important for clients living in remote rural areas.	
<b>6</b> <b>Take responsibility for providers of client services across the value chain.</b> Clients are more likely to trust and use digital payments if providers take responsibility for the actions of agents, employees and third-party service providers across the value chain.	
<b>7</b> <b>Protect client data.</b> Protecting clients' digital data is increasingly important given the volume, velocity and variety of data being used for marketing and credit scoring, while recognizing that use of client data can increase the range of products a client can access.	
<b>8</b> <b>Provide client recourse.</b> Clients need access to a fair recourse system for dealing with complaints about digital payments. This is especially necessary for complaints about innovative and unfamiliar products delivered via new channels and for clients who live remotely and may have little to no direct contact with providers.	



## Examples of digital financial services-enabled products and services available to farmers in Ghana

### Mobile Money Payment for Solar Systems

- PEG uses a unique approach called “pay-as-you-go” financing to provide products such as solar home systems to customers who would never be able to afford them otherwise. Customers repay using mobile money on a monthly basis.
- Their products not only help improve health outcomes, fight climate change and save customers money by replacing expensive poor-quality polluting fuels such as kerosene, but also give the customers a path to asset ownership and financial inclusion.
- Once a solar system is paid off, customers are eligible for other assets such as phones, TVs, etc.
- LBCs can provide an avenue for farmers to learn more about buying the devices (e.g. a premium ceremonies).
- Because the solar system shuts down automatically if payment is not made, there is no need for the LBC to guarantee the product or directly deduct payment from the farmer on behalf of PEG



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### Digital Insurance

- MicroEnsure and BIMA both work in partnership with companies to develop customized insurance product for their employees.
- LBCs can engage with MicroEnsure to develop a customized product for crop insurance in Ghana which farmers can then pay for use digital money.
- BIMA has a strategic partnership with PEG solar which may mean that insurance and solar purchase services could be bundled in a preferential manner if a formal partnership is forged between the LBC and either BIMA or PEG
- BIMA also has “BIMA Doctor” in which individuals can pay a subscription fee via mobile money which gives them unlimited calls to a doctor for medical advice over the phone for the individual, their spouse and any children under 18 years.
- In addition to MicroEnsure and BIMA, both MTN and Airtel-Tigo also have digital insurance products available. Customers should dial \*170# for MTN and \*111# for Airtel-Tigo. LBCs may opt to promote these options until more preferential or more formal partnership model is formed to offer farmers insurance products.



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### Digital Credit

- MTN has partnered with Jumo (Quick Loan) and Ecobank (Express Loan) to offer two digital credit options. They have different interest rates and terms for qualification, but both have a ceiling of GhC 1,000 for lending.
- Farmers press \*170# in order to begin the loan application process.
- Loans are for a short period (1 or so months) so farmers should be educated about this option through the field officers if there are some needs they consistently have which can be met with these digital loans.



## Digital Input Payments

- Onango is a subsidiary of nFortics, which is an aggregator that does bulk payments in the agriculture value chain. Onango benefits from this close link with its technology partner and thus make it possible for farmers to buy organic inputs using mobile money.
- Onango is in discussion with several LBCs to explore a formal partnership for inputs. The model would have farmers who receive digital payments volunteer to have a small portion of those payments withheld until the amount required to cover their following season's input need is collected.
- The inputs would then be delivered in the following season, having been paid in full and thus minimize the risk to all parties. This approach was first trialed by Cargill in the 2018/2019 season in which 2,300 farmers took part in the scheme.
- From that pilot, it was evident that the technology partner making bulk payments for cocoa payments should ideally be the same partner who deducts the input pre-payment fees. This way, there is no chance that the farmer can provide a different account for receiving payment and thus avoid making payment towards the inputs.
- Onango hopes to make this service available to the farmers in the 2019/2020 season.



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## Digital Pensions

- Both People's Pension Trust (PPT) and IT Consortium (ITC) provide a digitally enabled pension product that is flexible enough to allow some withdrawal for emergencies as well as having an insurance component.
- Both companies provide several options for formal and informal workers and work both with companies or directly with individuals.



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## Digital Village Savings and Loan (VSLA) Services

- Several LBCs are supporting traditional VSLAs for their farmers. These same LBCs should consider supporting the transition to e-VSLAs given the higher level of security of the funds. This would require engaging with Emergent, a Ghanaian technology company that has received funding from the MasterCard Foundation, to develop a tool for digitization of VSLAs.
- In this model, a formal partnership would be required between the LBC, Emergent (technology partner) and a bank that would hold the funds. The model would allow for savers to contribute to their saving box via mobile money, and the funds would then be transferred by an agent to the approved bank.
- Once that partnership is established, the LBC would also use its existing networks to educate farmers about savings and the benefit of e-VSLAs so as to increase the portion of each farmer's cocoa payments that is not cashed out but rather saved digitally.
- A key consideration in the digitization process is to ensure that the social and community-based norms of the traditional cash-based VSLA system are replicated as much as possible in the digital form.



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## Digital financial service sensitization tool for farmers

### Module 1: Introduction to financial services

#### MESSAGE

1

Greetings Farmers. My name is Maame Esi and I am a cocoa farmer like you. As a farmer, going to the bank can be a hassle. For my farm business, I often rely on digital finance because it's safe, convenient and less costly than traveling to a bank branch.

It gives me access to monitor my account wherever I use my mobile phone. Plus, with digital financing, I can deposit and withdraw cash from any mobile money agent. Because it saves me time and money, my business is growing faster.

#### MESSAGE

2

For most farmers in the village, it has always been difficult for us to access money for high-quality inputs, such as fertilizer and weedicides.

In this new age where computer and mobile phones are used to provide solutions for most problems farmers encounter every day, most of us don't even know where and how to access such information or services.

The government is committed to moving the entire country, including the Agri sector, towards a cash-lite economy. Cash-lite simply means buying and selling without using solid money in your hand. Do you know a good example of this? You guessed right. Mobile money is a very good example. Digital finance allows us to promote the cash-lite agenda, and at the same time, avoid the risk of keeping large amounts of money, which often attracts armed robbers and thieves. It also empowers you to make speedy transactions when buying goods or receiving payment for good bought.

#### MESSAGE

3

Digital finance is the use of electronic money instead of cash. Digital finance enables you to enjoy the flexibility of banking on your phone (even basic yam phones) from the comfort of your homes, farm or anywhere. Banks also issue cards like e-Zwich, which you can use to access the money in your bank account to make transactions. This is another form of digital finance. For both mobile money and bank cards, you can buy products like fertilizers, weedicides by simply transferring money from your wallet or account to the seller's account. You can also pay school or hospital related expenses and even top up airtime on your mobile phone in the comfort of your home. Card transactions can be done by walking to an agent point as long as the agent has a POS (also known as Point of Sales machine) machine.

By avoiding transacting in cash and rather keeping your money digitally on your mobile money wallet or your e-Zwich-linked bank account, you will enjoy:

- i. Security of your money and yourself.
- ii. Rapid payments.
- iii. Not being cheated by middlemen but rather getting the full amount of money from your cocoa buyer.
- iv. Access to financial services, such as loans and savings accounts, which earn interest, pensions and insurance.

#### MESSAGE

4

Over the next month, we will call you once every week to educate you on what digital finance is all about and how you, a cocoa farmer, can access and utilize these services to your advantage.

#### MESSAGE

5

If you miss any of our calls, don't worry. Just flash back the number you missed the call from and we will call you back. You can always flash the call number any time to listen to the last message. This message is brought to you by the World Cocoa Foundation and endorsed by COCOBOD. Thank you.

## Module 2: How to use digital financial services

## MESSAGE

1

Greetings Farmer, this is Maame Esi the cocoa farmer. This week, we will talk about how to use digital financial services. There are two ways to do this. You can do it through a bank account or through mobile money.

## MESSAGE

2

For payment through your bank accounts, the buyer of your cocoa will make a transfer from their account into your account. You can withdraw this money either at a bank branch or through an e-Zwich card either at an ATM or at an agent point with a POS (also known as Point of Sales machine). Today, I have Mr. Entsil, who works with one of the rural banks, to educate us on how to operate a bank account.

## MESSAGE

3

Operating an account is very easy. You can send and receive money through your bank account. You can also secure loans from the bank through your bank. You need three things to open an account:

- One! Any national ID card. Examples of ID cards you can use include voters ID, passport, driver's license, Ghana card.
- Two! You need an original copy of your utility bill. This can either be your water bill, light bill or prepaid receipt. It does not need to be in your name.
- Three! You need two passport-size pictures.

Enter a recognized government-approved bank and request for an account opening form. The staff at the bank will assist you to complete the form if you need help. Once the process is complete, the bank will generate an account number for you. The process should not take more than 30 minutes if you have all the documents needed.

If you choose to use an ATM card, the bank can make one for you. You will be given a unique personal identification number (or PIN) to enable you to withdraw using your card either at an ATM or agent point. This unique 4-digit PIN is like a key to the money in your account that confirms that you approve each transaction. Please take good care it and never share it with anyone, even bank staff, agents, family or friends. This is for your own protection.

## MESSAGE

4

Thank you, Mr. Entsil. I hope this was as informative to you as it was to me. Now I have Mr. Sampson who will teach us a thing or two about how to operate a mobile money account.

## MESSAGE

5

You need two things to open a mobile money account.

- One! an ID card. You need an ID card to register a sim card. Any of the following IDs will be accepted: voters ID, passport, driver's license, national ID, NHIS card, etc.)
- Two! A registered SIM card. If you don't already have one, you can purchase a mobile SIM card from an agent or vendor anywhere close to you. Once you have the SIM card, you must insert it into your phone. If you are not sure how to do this, ask the seller of the SIM card to assist you.
- Three! Select your mobile money provider. Mobile money service is provided by all the telecommunication companies in the country, so you will need to select a provider and activate their SIM card. Recently, it has also become possible to send money from one mobile money network to another (for a fee).
- Four! Each mobile money service provider has a special short code used to initiate a transaction, please ask the agent/vendor to guide you through as it is their basic responsibility.
- Once you are done with the registration process, you'll be required to create and keep a unique 4-digit PIN to approve all your mobile money transactions. This number should be known and used by only you and no other person and allows you to confirm that you approve of any transaction.
- Before you make mobile money payment to anyone, make sure you have the person's correct mobile phone number so that you don't transfer cash to the wrong person. This is a costly common mistake that you will want to avoid. If this does happen to you, please contact the customer service desk of the mobile money provider you subscribe to and they will assist in trying to retrieve the money.

## MESSAGE

6

Today we have learned how to set up and use a bank account as well as mobile money account. In our next call, we will learn some of the digital financial service products available through your mobile money wallet or bank accounts.

## MESSAGE

7

If you miss any of our calls, don't worry, just flash back the number you missed the call from and we will call you back. You can always flash the call number any time to listen to the last message. This message is brought to you by the World Cocoa Foundation and endorsed by COCOBOD. Thank you.

## Module 3: Digital financial services products

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### MESSAGE

1

Agoo farmers, this week we will talk to you about some of the types of digital financial products to help you make a choice. Some of the products available are savings/investment, insurance, loans, pensions, etc.

---

### MESSAGE

2

#### **Savings**

Saving is the act of putting money aside for future use. You can save in your bank account (and have access to the money through your bank card or on mobile money wallet). Depending on the product you use, savings can give you up to 12% interest per year, which can be used to purchase additional inputs, pay school fees and also take care of the home.

---

### MESSAGE

3

#### **Insurance**

Insurance is a protection from financial loss of assets and properties. This often requires you, the policy holder, to pay a small premium to cover the asset being insured. If any misfortune befalls an asset that is covered by an insurance policy, you, as the policy holder, are compensated. Examples of assets being covered in an insurance includes houses, cars, personal health or even life. Insurance is important because it protects you and your family in the case of unexpected negative events.

---

### MESSAGE

4

#### **Loans**

A loan is a sum of money that is borrowed and expected to be paid back, normally with some interest. As a farmer, through digital financial services, you can take advantage of digital loan products to cover smaller expenses like inputs on your farm. There are now a few companies that, based on an evaluation of your phone use and payment history, can lend you money, which will be paid back via mobile money. These amounts are usually small to begin with but increase as you pay back your loans. Keep in mind that digital loans are just like traditional loans in the following ways: 1) they must be repaid in a timely manner; 2) you should only take loans if you are certain you can repay them; and 3) you should not take loans to repay another loan. This will drive you into too much debt.

---

### MESSAGE

5

#### **Pensions**

As you grow older, you will need to have some means of income when you are too old to work. For those in formal employment, their company also contributes a portion to the employee's pension fund. If, however, you are not a salaried worker, you will need to cater for this yourself. A pension plan allows you to contribute towards funds for your retirement while you are still productive. Most importantly, a pension increases the likelihood that you can rely on your own means even in old age.

---

### MESSAGE

6

#### **Merchant payments**

In addition to purchasing financial products such as savings, insurance and pensions, farmers can also use digital means to purchase products. This is called merchant payments. One such example is the purchase of solar sets. These days there are home solar systems, which include lights and can power small items such as a TV and radios. They require an initial down payment via mobile money and then work in the same ways as pre-paid electricity or airtime: you pay with mobile money and the system works until the money is used up. Once you pay again, the system works. This continues until you pay off the value of the solar system in about 18 months. Given how unstable and expensive electricity is, you may want to consider this type of option.

---

### MESSAGE

7

Today, we have learned about four different products that you can access with digital currency: namely savings, insurance, loans and pensions. We have also learned that we can use mobile money to access products such as pay-as-you-go solar systems. Finally, I'm sure you have noticed that more and more shops are now accepting mobile money as a form of payment. This allows you to carry less cash wherever you go, which, as you know, makes you more secure.

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### MESSAGE

8

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The Better Than Cash Alliance is a global partnership of governments, companies, and international organizations that accelerates the transition from cash to digital payments in order to advance the Sustainable Development Goals. Based at the United Nations Capital Development Fund (UNCDF), the Alliance has 75 members, works closely with other global organizations, and is an implementing partner for the G20 Global Partnership for Financial Inclusion.

## World Cocoa Foundation

The World Cocoa Foundation, a member of the Better Than Cash Alliance, is a non-profit international membership organization whose vision is a sustainable and thriving cocoa sector – where farmers prosper, cocoa-growing communities are empowered, human rights are respected, and the environment is conserved.





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