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The U.S. Government's Global Hunger & Food Security Initiative

DIGITAL TOOLS FOR FOOD SECURITY AND RESILIENCE

FINDINGS AND RECOMMENDATIONS FOR NIGER

February 2019

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DigitalFrontiers
SCALING DIGITAL DEVELOPMENT

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EXECUTIVE SUMMARY

The USAID Sahel Regional Office (SRO) in Dakar requested that the USAID Bureau of Food Security (BFS) and the U.S. Global Development Lab (the Lab) conduct an assessment of the current and potential use of digital tools to enhance the reach and impact of its activities aimed at food security and resilience under the new U.S. Government Global Food Security Strategy (GFSS) country plan for Niger. The assessment was broadened to include USAID/Burkina Faso given its joint resilience programming and relevance as a USAID resilience focus country.

This report covers the second part of the joint assessment, conducted through desk research and a 10-day trip to Niamey, Niger. The assessment team was managed by DAI's Digital Frontiers initiative and supported by Katie Hauser in the Bureau for Food Security. The team found, in contrast to Burkina Faso, telecommunications services were less robust with only 32 percent market penetration (unique cell phone subscribers), coverage across 55 percent of the country (with likely less connectivity in rural areas), 3G service (good enough for mobile internet) but no 4G service at all (needed for robust cell phone applications), and only 28 percent of connections via smart phones. Still, the team found that Niger's digital ecosystem (service providers and organizations that support them) was adequate with a handful of local firms. The national government has a strong digital initiative, Niger 2.0, that includes strong encouragement of local entrepreneurs as well as an innovative effort to improve the digital literacy of all Nigeriens. Supported by a World Bank project, the public extension service (RECA)[1] was also implementing a suite of e-extension services to support public and private extension agents.

Hence there are opportunities for SRO's activities to take advantage of digital tools and services to increase their reach and impact. Care must be taken in the design of any such tools and services to accommodate the country's low literacy, the probable gender gap related to the use of digital devices (no data are available to confirm this but it is likely), and gaps in telecom coverage in rural areas.

Most RISE implementing partners (IPs) were using digital solutions to some extent, especially for monitoring and evaluation and via radio or ad hoc WhatsApp groups. All IPs were interested in learning more about using digital and were generally unaware of how others were using digital. There were two private IVR (interactive voice response) services starting up—one international, one local—and a drone company (from Burkina Faso) exploring ways to monitor land restoration efforts. There were two digitally enabled water services, one for urban users and one for irrigation.

Use of mobile money and formal financial services is lower in Niger than other countries in the region, and is lower still for women and in rural areas. There are three mobile network operators (MNOs) offering basic mobile money services, though awareness and usage remains low. There are not yet any advanced digital financial services (DFS) such as digital credit, savings, or insurance available in the market.

[1] Reseau National des Chambres d'Agriculture du Niger http://www.reca-niger.org

Finally, there were two World Bank projects that contribute to digital capabilities, one increasing basic telecom access and another (working with Millenium Challenge Corporation) that offers grants for climate smart innovations, including digital ones.[2]

Based on the results of the assessment, below are the team's overall recommendations.

1. **Technical assistance (TA) to implementing partners.** Provide tailored TA to help IPs improve digital interventions they are now using or figure out if, where, and how digital tools can help address key constraints to scale and success.
2. **Facilitate action-oriented digital user working group.** Provide expert TA for one year to set up and moderate a digital user working group of IPs (and others with goals aligned with SRO) to share experience with digital service providers and tools; aggregate demand for such services where it makes sense; meet with key service providers; and more. The group would be hosted by local digital support organization and set priorities based on members' demands.
3. **Technical assistance to promote adoption and use of digital payments and digital financial services (DFS).** Provide sector-wide technical guidance for coordination (e.g. aggregation of demand and service provider linkages), capacity-building (e.g. learnings through workshop on the basics, working group cross-sharing, and technology fair), and creation of public goods (e.g. market research and digital literacy). Target technical assistance to individual IPs to facilitate partnership with service providers and engagement with the Government of Niger (GoN) Smart Villages initiative (part of Niger 2.0).

[2] In our meeting with MCC regarding their work in Niger (in which they are collaborating with the World Bank's climate smart support project), MCC reported they are setting up new water associations that could benefit from digitally enabled management tools as well as working with a livestock vaccination campaign, again something that might benefit from digital tools to increase its reach and success.

1. INTRODUCTION

The USAID Sahel Regional Office (SRO) in Dakar requested that the USAID Bureau of Food Security (BFS) and the U.S. Global Development Lab (the Lab) conduct an assessment of the current and potential use of digital tools to enhance the reach and impact of its activities aimed at food security and resilience under the new U.S. Government Global Food Security Strategy (GFSS) country plan for Niger. The assessment was broadened to include USAID/Burkina Faso given its joint resilience programming and relevance as a USAID resilience focus country.

Understanding the potential for digital tools to strengthen food security and resilience and advocating for their availability and affordability in Niger and Burkina Faso is an important step in ensuring USAID's programming can take full advantage of the region's emerging digital economy. Connectivity issues and network reliability, availability of energy to power mobile devices, gender norms and their effect on access to mobile devices, and the impact of literacy levels (digital literacy, as well as the ability to read and write) must all be taken into consideration to ensure inclusive and effective results.

In more detail, the purpose of the assessments in Niger and Burkina Faso was to help USAID determine ways digital technology can enhance the scale and impact of their work in agriculture, food security, and resilience, taking into account the unique challenges in each country. Specific objectives of this assessment included:

- Investigate current trends in the digital ecosystems and identify where challenges and opportunities may exist for use of digital tools by USAID partners and populations of interest. To the extent possible, the assessment focused on the programming zones established for Niger and Burkina Faso, under the Niger GFSS plan and the Resilience in the Sahel Enhanced (RISE) II program. *Specifically, USAID is interested in the practicality and viability of reaching significant portions of vulnerable rural populations, especially women and youth, in these zones through digital services, such as money transfers, inputs price and availability, market information, and weather and climate information.*
- Include an expert in DFS in the assessment team to pay special attention to financial inclusion, a critical component in USAID programming in the Sahel as per the GFSS and the RISE II results framework.[3]
- Conduct stakeholder interviews with key members of the government, private sector, donor communities, research partners, and mobile network operators.
- Understand how digital tools have been used by previous or current food security and resilience activities, by:
  - Surveying a broad set of USAID and other implementing partners (IPs) via an online survey on the use of and plans for digital tools within their activities.

[3] https://www.usaid.gov/documents/1860/resilience-sahel-enhanced-2-results-framework

  - Conducting interviews with a more narrow set of relevant IPs who have worked on digital tools and reviewing past evaluations of their programs (such as the SPRING project) to solicit deeper examples of best practices and lessons learned.

- Share best practices and evidence from elsewhere to facilitate learning among USAID and IPs through in-country workshop in Burkina Faso (Niger's USAID team opted for no workshop.)
- Recommend ways digital tools can be harnessed and strengthened by USAID and its partners to achieve agriculture, food security, and resilience objectives in Niger and Burkina Faso, potentially including public policy interventions, private sector and civil society engagement, and partnership opportunities.

The detailed tasks conducted in the assessment are described in Appendix B. The assessment was led by BFS, building upon the Digital Development for Feed the Future (D2FTF)[4] assessment model that has been used successfully with nine other USAID missions. The assessment was carried out through the Lab's Digital Frontiers mechanism (managed by DAI), through a team designed to carry on best practices established during the three-year D2FTF partnership, including previous digital assessments in seven other GFSS countries.

This trip report covers the second part of the assessment in Niger from February 18 to March 2, 2018. The trip was conducted by a DAI Digital Frontiers-managed team with Judy Payne and Marcella Willis (Digital Agriculture Technical Experts), Alana McGinty (DAI Operations Support), Idrissa Karimou (local Operations Support), and Katie Hauser (USAID lead, remote).

The assessment draws on several guides and toolkits developed by D2FTF including the GFSS Technical Guidance on Digital. For a list of such resources, see https://www.usaid.gov/digitalag.

2. CONTEXT

Burkina Faso and Niger are two of the least developed countries globally, ranking 183 and 189, respectively, out of 189 on the UN Human Development Index (http://hdr.undp.org/en/2018-update). They have low literacy rates. In Burkina Faso, literacy is only at 35 percent overall, with 44 percent of males and 25 percent of females able to read (UNESCO, 2012). In Niger, literacy rates are even lower, 31 percent (overall), 39 percent (male), 23 percent (female) (UNESCO, 2012). In Niger, 6 percent of households in the RISE zone live on $1.90 or less per day (RISE midline quantitative assessment). In Burkina Faso, there is 55 percent poverty, based on poverty headcount ratio at PPP $1.90/day.

In Burkina Faso, 80 percent of the population is reliant on subsistence farming; 21 percent of children under 5 suffer from chronic malnutrition with 10 percent suffering from acute malnutrition. Similarly, in Niger, 80 percent of the population remains rural and dependent on agriculture for survival. Sixty percent of Nigerien children in the current RISE zone are stunted (compared to 45 percent nationally) and 16 percent of all children are affected by wasting, compared to 15 percent nationally (RISE mid-line survey).

[4] D2FTF was a three-year collaboration (2015-2018) between BFS and the Lab to demonstrate how leveraging digital tools holistically and according to best practices can improve the cost effectiveness, reach, and impact of the U.S. Government's Feed the Future (FTF) Initiative.

2A. OVERVIEW AND EVIDENCE: DIGITAL SOLUTIONS FOR RESILIENCE & FOOD SECURITY

In the last decade (2008 - 2018), the ICT4Ag (information and communications technologies for agriculture) global community has learned about specific tools and services and their use cases, seen the rapid growth in many countries of a local IT industry capable of providing continued supply of those tools, increased access even in rural areas to telecommunications services including mobile phones and the Internet, and seen significant interest from private sector entities to establish distribution channels for products and services to farmers using digital technologies.[5]

USAID lessons learned from Malawi, Kenya, Tanzania, Ghana, and elsewhere highlight the need to "bundle" digital tools into a set of solutions, conduct organizational change management and create digital agriculture partnerships that provide a value proposition for each partner.[6] Those lessons learned also align with research from the GSMA (the global industry association for telecommunications companies), which has established similar recommendations regarding delivery of digital and financial literacy in rural areas.[7]

DIGITAL TOOLS CAN BE DESIGNED TO OVERCOME CHALLENGES SUCH AS LOW LITERACY, LIMITED CONNECTIVITY, AND LACK OF PHONE OWNERSHIP.

Digital solutions[8] have already transformed the way that farmers do business throughout middle- and high-income countries. In the least developed markets, development partners have worked hard to adapt these solutions to the local needs of smallholder farmers, but efforts have often been piecemeal – leading to impact but also, in some cases, to fragmentation. In the next decade, a more strategic approach to the advancement of digital innovations in agriculture will better connect the development and use of tools and the desire of local private sector IT and agribusinesses, and mobile network operators (MNOs) to set up distribution channels for products and services that deliver services to targeted farmers and other alliance participants, as informed by market research.

There are a wide range of digital options for resilient food systems, including:

- Cell phones with voice, text, and/or data
- Radios, both conventional and digital
- Digital cameras
- Videos (low cost especially)

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[5] See for example, Yu, D. (2017, May 17). Olam cocoa to source 100 percent sustainable beans by 2020. *Confectionary News* https://www.confectionerynews.com/Article/2017/05/18/Olam-to-source-100-sustainable-cocoa-by-2020 and Cargill press release (2017, Sep 11). For first time 10,000 Ghana cocoa farmers able to receive premium by payments mobile phone https://www.cargill.com/2017/10000-ghana-cocoa-farmers-able-to-receive-mobile-phone-payment

[6] See, for example, USAID (2016, Aug). Performance Evaluation of the USAID/Malawi Feed the Future Mobile Money Project https://pdf.usaid.gov/pdf_docs/pa00m8qj.pdf USAID/Vodafone/Technoserve (2016). Connected Farmer Alliance: Assessing the impact of a commercial mobile agriculture (mAgri) solution for Kenya Nut. http://www.technoserve.org/files/downloads/case-study-connected-farmer-alliance.pdf. AGRA/Advantech (2016, Oct). How to Grow and Sustain the Digital Harvest? https://www.raflearning.org/sites/default/files/digital_harvest_executive_summary_1.pdf?token=S0vo-Ydc

[7] The GSMA's mAgri Programme https://www.gsma.com/mobilefordevelopment/magri/ has conducted partnerships with USAID and other donors and developed a useful set of resources. https://www.gsmaintelligence.com/research/?file=e2f5981f5184fb3f389aa6c9d826f6c5&download as well as more listed at https://www.gsma.com/mobilefordevelopment/resources-2/?programme_search%5B%5D=11

[8] "Digital solutions" is a term used to describe a wide range of electronic options for disseminating, collecting, and analyzing data. Here, we used this interchangeably with ICT.

- Television
- GPS (global positioning system)-enabled applications
- Internet access, presence, and Internet-enabled applications
- Remote sensors, on the ground and in the sky
- Big (and small) data
- Digital Financial Services (DFS) and digital payments

The wide range of options is important, especially in countries such as Burkina Faso and Niger, where prerequisites for the use of some tools are not yet in place: for example, affordable, widespread access to the required telecom services; access to power; access to devices (e.g., phones or digital tablets); and literacy (in cases with text). Understanding the context and the nature of the target users helps to ensure that we choose options that can handle multiple languages; on-again off-again telecom access; and low literacy, and may not even require users to have a phone (for example, MyAgro is operating in Mali and Senegal with scratch cards, rather than phones, for the end user.)

Gender is a key consideration when selecting digital options and preparing users for them. Globally, women are 14 percent less likely than men to own a mobile phone (GSMA).[9] This is especially important to consider in the Sahel given the social differences between gender in many aspects of rural life.

Digital tools and services can be used in many aspects of agriculture, health, nutrition, governance, and resilience, helping transform life for the poor in at least four key ways.

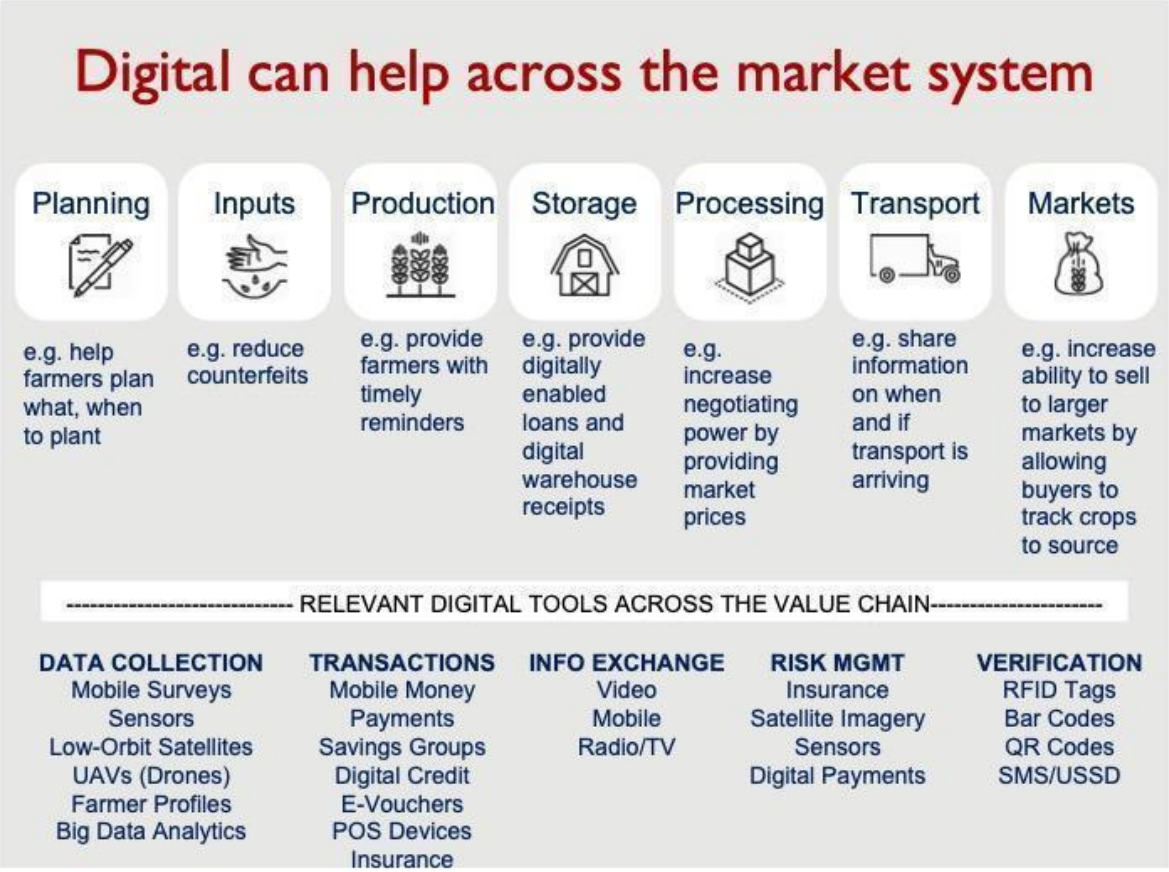
- ***Improve feedback between actor.*** Digital data collection, analysis, and dissemination can tighten the feedback loop to near real-time between actors—including USAID staff, our implementing partners, sub-contractors, and end users—so activities can be adapted quickly when necessary to increase impact and stay on track toward objectives. This means that the "M" in "M&E" can occur more often and be used to improve our work more frequently.
- ***Increase precision/timing of decision-making*** for farming and actions in health and data, especially when disaggregated to the farm, individual, household, or clinic, can add precision to *where and when* interventions occur and can improve outcomes.
- ***Extend reach and improve timing*** of advisory services. Face-to-face encounters usually work but are costly to extend to the hundreds of thousands who might benefit. Using digital tools helps reach far more people, allowing advice and information to be delivered when circumstances (e.g., weather, time in a crop cycle) are right. Think about Google: you can get information exactly when you need, rather than waiting to visit a doctor, for example. The same principle can help to empower community health workers (CHWs) and agriculture extension officers to answer questions on demand and serve a far greater number of people with precise information.
- ***Tighten connections*** across an agricultural or health system. This can happen through increased information sharing, as well as quicker and more transparent payments. By tracking payments and information digitally, different actors in a system can increase trust. It also provides the opportunity to improve **traceability,** which is critical in agriculture for increasing

[9] See GSMA's Global Gender Gap Report, 2019 https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/GSMA-Connected-Women-The-Mobile-Gender-Gap-Report-2019.pdf

access to markets, and for tracing the source of public health scares that originate in the food supply.

These approaches can be applied across an entire market system or value chain. Figure 1 provides examples of relevant digital tools used across a market system from crop planning, inputs, production, storage, processing, transport, and finally to links with markets. The bottom of the figure shows relevant tools that can be applied across a value chain.

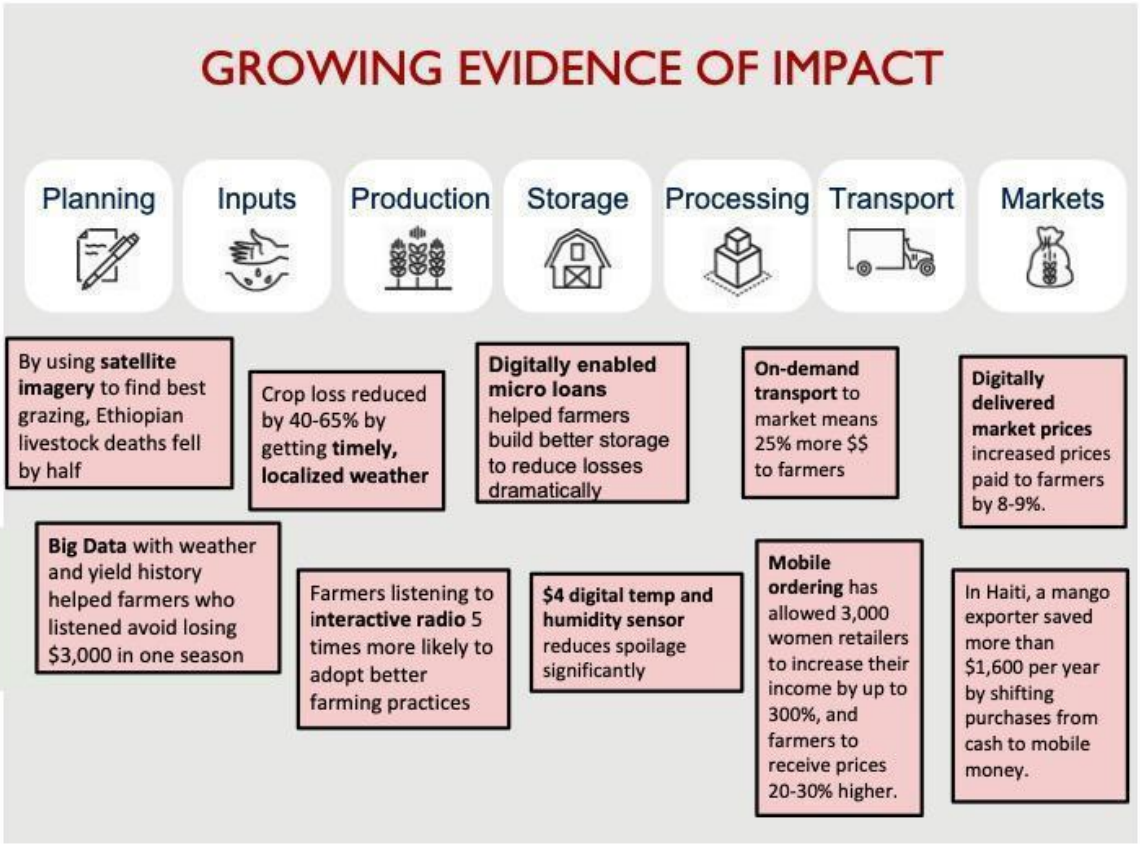
Figure 1: Digital Tools Across a Market System



Today, we have a growing body of evidence that digital tools and services in agriculture have a measurable impact. Figure 2 provides examples of such impacts across the agriculture market system. There are many other examples as well.[10] Many examples show how digital tools can significantly increase the reach of development efforts from helping thousands of producers to tens of thousands or even hundreds of thousands.

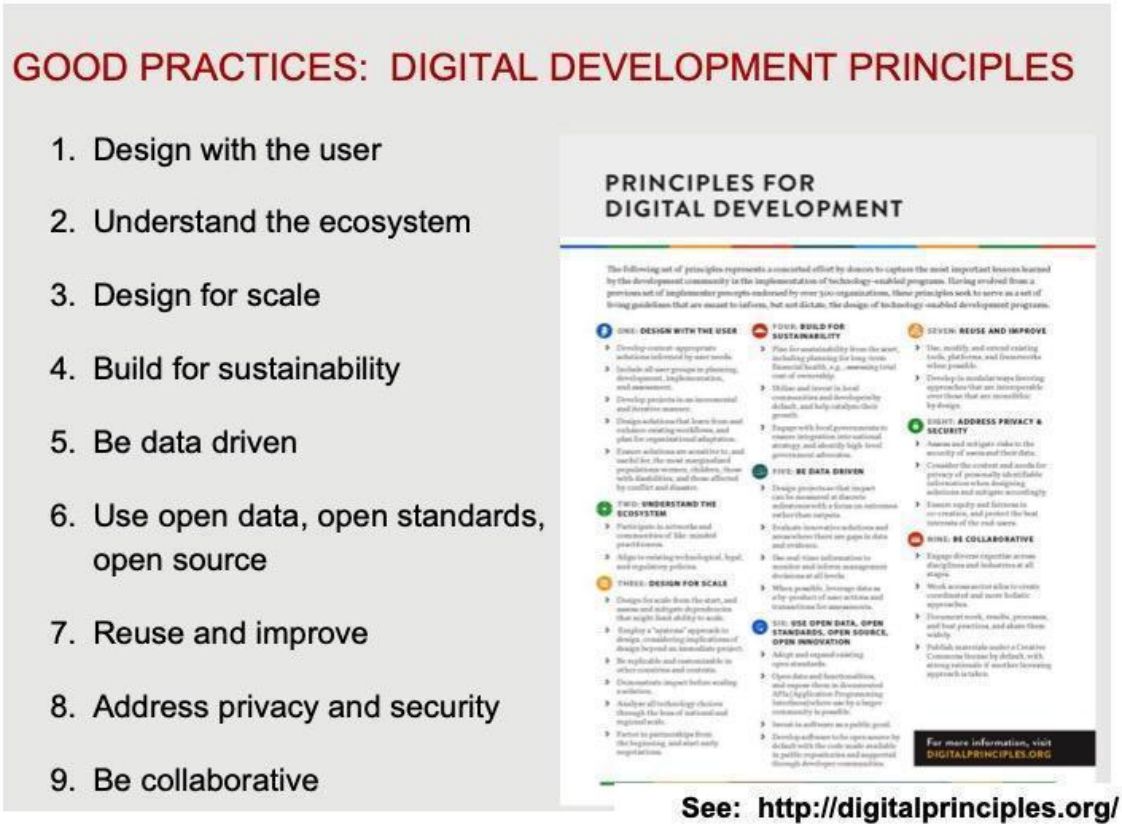
[10] There is an Excel database with significantly more pieces of evidence, which were collected as part of the D2FTF effort. For access, please email Katie Hauser in BFS at khauser@usaid.gov.

Figure 2: Some Evidence of Impact of Digital Tools in Agriculture



Digital tools and services must be designed and implemented correctly to have their intended impact. This report has taken this into account in developing the recommendations. For more information, please refer to the Digital Development Principles (http://digitalprinciples.org) that have been developed through USAID's leadership and adopted by a wide range of development partners. Figure 3 provides a quick glimpse at the nine helpful principles.

Figure 3: The Digital Development Principles



3. FINDINGS

The findings are divided between the general digital ecosystem in the Sahel Region (3a); the digital ecosystem in Niger (3b); and the current use of digital tools among USAID partners with whom we met during the assessment in Niger (3c).

3A. DIGITAL ECOSYSTEM: SAHEL REGION

In terms of the broader digital ecosystem, the Sahel Region falls generally in line with sub-Saharan Africa, but significantly below global averages, in mobile phone market penetration, percent of connections that are smartphones, and mobile internet. Network coverage, for both 3G and 4G, are above average (see Table 1.) (A 3G telecom network can be used to access the Internet; 4G enables users to handle more robust Internet applications, including video streaming).

Table 1: Digital Ecosystem Statistics

	SAHEL REGION (%)	SUB SAHARAN AFRICA (%)	GLOBAL (%)
Market penetration, unique subscribers	4.	44	66
Smartphones, percent of connections	33	34	57
Market penetration, unique subscribers, mobile internet	21	21	43

	SAHEL REGION (%)	SUB SAHARAN AFRICA (%)	GLOBAL (%)
Network coverage, by population, 3G	68	36	31
Network coverage, by population, 4G	28	4	29

Source: GSMA Intelligence,[11] Q2 2018 and GSMA Mobile Economy 2018[12]

Table 2 summarizes mobile money and financial inclusion statistics for the Sahel region. On a positive note, the data shows upward trends on all metrics from 2014 to 2017. Overall, 20 percent of adults have a registered mobile money account, while 30 percent have either made or received digital payment, suggesting that there is some usage by non-registered adults (i.e. they don't have mobile money accounts and are using agent-assisted, over the counter (OTC), digital payments services). However, across the region, mobile money account ownership and digital payments usage are lower for women and those in rural areas.

Table 2: Mobile Money Statistics - Sahel Regional Average

	2014 (%)	2017 (%)
Account (financial institution or mobile money account) (percent age 15+)	22	35
Mobile money account (percent age 15+)	7	20
Made or received digital payments in the past year (percent age 15+)	16	30

Source: World Bank Findex,[13] 2014 & 2017

3B. DIGITAL ECOSYSTEM: NIGER

PRIVATE SECTOR MARKET DEVELOPMENT

Niger has four mobile network operators: Airtel (Bharti Airtel, 51 percent market share), Moov (Maroc Telecom, 22 percent market share), Orange (21 percent), and Niger Telecom (3 percent). In terms of mobile phone market penetration, percentage of smartphone connections, and 3G network coverage, Niger is below regional averages (See Table 3). Niger falls below the regional average in terms of cell phone users, percentage with smartphones, and 3G network coverage and has no 4G coverage.

Table 3: Digital Ecosystem Statistics - Niger

KEY DEMOGRAPHICS	NIGER	REGIONAL AVERAGE
Population (World Bank 2017)	19 million	N/A
Rural Population (World Bank 2017)	84%	
Literacy (age 15+) (World Bank 2012/14)	31 percent (23 percent female)	

[11] A subscription (fee-based) service from GSMA https://www.gsmaintelligence.com

[12] https://www.gsmaintelligence.com/research/?file=061ad2d2417d6ed1ab002da0dbc9ce22&download

[13] https://globalfindex.worldbank.org

TELECOMMUNICATIONS (GSMA 2018)	NIGER	REGIONAL AVERAGE
Market penetration, unique subscribers	32%	46%
Smartphones, percent of connections	28%	35%
Market penetration, unique subscribers, mobile internet	9%	21%
Network coverage, by population, 3G	55%	68%
Network coverage, by population, 4G	0	34%

Source: GSMA Intelligence,[14] Q2 2018

3C. FINANCIAL AND DIGITAL FINANCIAL ECOSYSTEM: NIGER

Customer access to and usage of formal financial services is extremely low in Niger. Overall, 10 percent of adults in Niger have a registered account at a formal financial institution, and 9 percent have a mobile money account, while 13 percent have either made or received digital payment (e.g. OTC). For women, these indicators are significantly lower than for men, and rates are also lower in rural areas. These are the lowest rates in the entire Sahel region for access to formal financial services, and access and usage of mobile money. See Table 4 for additional details about mobile money usage in Niger.

Table 4: Mobile Money Statistics - Niger

TYPE	REGIONAL AVERAGE	ALL	FEMALE	MALE	RURAL
Account (financial or mobile money) (percent age 15+)	35	16	11	20	14
Financial institution account (percent age 15+)	n/a	10	8	11	9
Mobile money accounts (percent age 15+)	35	9	5	12	7
Made or received digital payments in the past year (percent age 15+)	30	13	8	18	11

Source: World Bank Findex 2017[15]

The **supply-side of the financial sector** ecosystem is thin (Table 5), comprising a dozen or so commercial banks, a few larger national microfinance institutions (MFIs), and 37 decentralized financial systems / *systèmes financiers décentralisés* (SFDs)[16] with its own association (*Association Professionnelle des SFDs du Niger* (APSFD-Niger), and its own regulator. [17] The sector is noticeably lacking in service

[14] A subscription (fee based) service from GSMA https://www.gsmaintelligence.com

[15] https://globalfindex.worldbank.org/

[16] The SFD is an institution whose main purpose is to provide financial services to persons who generally do not have access to the operations of banks and financial institutions as defined by the Banking Regulations Act and that is empowered under the law regulating SFDs to provide these benefits. https://www.bceao.int/fr/documents/quest-ce-quune-institution-de-microfinance-ou-systeme-financier-decentralise

[17] As of June 30, 2018, the microfinance sector has 37 SFDs, including 34 mutual or savings and credit cooperative institutions (IMCEC) and 3 public limited companies (SA). http://www.finances.gouv.ne/index.php/une/586-rencontre-de-concertation-entre-l-arsm-et-les-systemes-financiers-decentralises

providers that cater to the low-income segment, and many of the MFIs that traditionally serve this retail segment are currently experiencing governance and portfolio performance issues. The largest of them (ASUSU) has recently been taken control over by government administrators, and has an uncertain future. Generally, the financial service providers (FSPs) are risk averse in terms of agriculture lending and expect subsidies from donor programs in order to lend in this sector. The low-income segment is mainly accessing informal financial services provided through savings groups (aka *Mata Masu Dubara* (MMDs), Village Savings and Loans Associations (VSLAs), *tontines* (SILCs).[18] Originally developed in Niger by CARE in 1991, these informal groups are promoted by most NGOs in Niger, and members are estimated in the hundreds of thousands, which indicates a high demand for savings and credit.

Table 5: Financial & DFS Ecosystem - Supply Side

Banks	BAGRI (Banque Agricole du Niger, state owned) Ecobank (mobile banking app) Bank of Africa (BoA) (linked with Airtel and Orange) Orabank Banque Atlantique (SMS banking to access balances) BIA (Banque International pour l'Afrique) SONIBANK (Société Nigerienne de Banque) (SMS banking to access balances) BINCI (Banque Islamique du Niger pour le Commerce et l'Investissement) Banque Régionale de Solidarité Niger Banque Sahélo-Saharienne pour l'Investissement et le Commerce (BSIC) Crédit du Niger Banque Commerciale du Niger
Micro-finance institutions	ASUSU Capital Finance ACEP Niger Tanadi MF Bank 37 Systèmes Financiers Décentralisés (SFDs)
E-money issuers	Airtel M-Koudi Orange Money Moov Flooz
Money transfer companies	Al Izza (newly acquired license to offer savings accounts) BNIT Wari
Other	Niger Poste: transfers with Poste e-Money, and current/savings accounts for civil servants, students, pensioners.
Informal	Savings groups: Village Savings and Loan Associations - aka MMDs, Tontines, SILCs – i.e. informal self-organized groups, often organized with support from NGOs, they contribute savings, lend to members, and provide social safety net functions

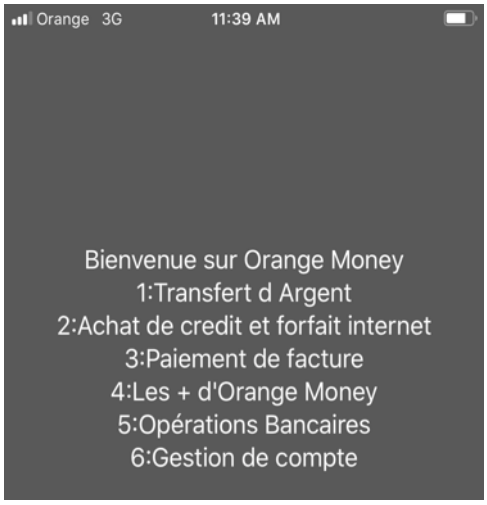
*Banks: https://en.wikipedia.org/wiki/List_of_banks_in_Niger#cite_note-1

The **digital financial services (DFS) market is underdeveloped and nascent**. At least one bank (Ecobank) has their own mobile banking application, and several offer SMS banking (balance messaging)

[18] https://www.mangotree.org/Resource/VSLA-Programme-Guide-Field-Operations-Manual

and/or pre-paid cards.[19] There are also **three mobile money providers**: Orange Money,[20] Airtel's M-Koudi,[21] and Moov's Floov.[22] They offer mobile wallets with basic mobile money services:

- Send/receive money (person to person (P2P) transfers)
- International remittances (w/ Mali & Cd'I)
- Bill payments
- Airtime top up
- Merchant payments (Airtel said to be starting)
- Bulk disbursements (e.g. D2P) through a bulk payment user interface self-managed by the corporate customer.



Orange Money menu

The services to link bank accounts and mobile wallets so that the customer can push/pull money between accounts exists but seems limited. One MNO reported it has set up partnerships with three banks, but details related to functionality are unclear. Interoperability to send P2P between different mobile money services or between MNOs and MTOs does not exist. However, per one source, the interregional switch that allows interoperability between banks is expected to eventually be opened up for mobile money.

[19] The assessment team did not meet any private commercial banks, and some do not have working websites so information on their products and services is limited.

[20] http://www.orange.ne/particuliers/1/29/presentation-orange-money-44.html

[21] https://airtelne.com/airtelmoney/faq

[22] https://www.moov.ne/flooz/

E-Money Policy & Regulations in WAEMU

As the regulator in the West African Economic and Monetary Union (WAEMU), the regional central bank (BCEAO) defines DFS broadly to include full range of products (including digital transfers, payments, stored value, savings, insurance, credit, and more), with channels outside of bank branches (such as mobile phones and ATMs), and providers including MNOs, banks, non-bank financial institutions, and others.

The BCEAO authorizes two types of models for the issuance of e-money: the banking model and the non-bank model. Under the banking model, e-money issuance is the responsibility of a credit institution or microfinance institution, whether in partnership with a technical operator or not. The non-bank model is implemented within the framework of a non-banking institution, called an electronic money institution (EME), which is approved to issue e-money.

The BCEAO updated guidelines in 2015 (replacing the 2006 framework) on e-money issuance and distribution that allows for MNOs to issue e-money themselves by creating a separate entity for e-money issuance, although they must continue to partner with financial institutions for second-generation DFS products, such as savings, insurance, or credit.

For more reading on policy regulations in WAEMU, refer to this blog and the reports linked therein: https://www.cgap.org/blog/digital-finance-waemu-whats-new, including this overview: https://www.afi-global.org/publications/2020/Overview-of-DFS-in-the-West-Africa-Economic-and-Monetary-Union.

For money transfers, the use of **Money Transfer Operators (MTOs)** seems to dominate as the preferred means for sending domestic remittances,[23] e.g., Al Izza and BNI. These MTOs deliver remittances OTC and have their own internal agent distribution network that is made up of paid staff, as opposed to the MNOs, which contract agents and merchants.

3D. GOVERNMENT COMMITMENT TO DIGITAL DEVELOPMENT

The Government of Niger has a comprehensive and very ambitious digital initiative, Niger 2.0[24] housed in ANSI[25], whose CEO reports directly to the President. The CEO is also Niger's High Commissioner for ICT.[26] He is a Nigerien with international business experience and reports directly to the President. The initiative's goal is to leverage digital technology for the country's development, transforming the country. It is building on collaboration with several international organizations, including the FAO, the World Health Organization, the ITU (the International Telecommunications Union), the World Bank, the African Development Bank, and AFD (Agence française de développement).

[23] Niger is divided into seven regions, 36 départements, 265 communes, 122 cantons, 81 groupements, and 17,000 villages. https://en.wikipedia.org/wiki/Communes_of_Niger

[24] https://news.itu.int/smart-villages-empowering-rural-communities-in-niger-2-0/

[25] National Agency for Information Society

[26] For profile of this leader (Ibrahima Guimba-Saidou), see https://cpl.hks.harvard.edu/event/IbrahimaGuimbaSaidou

Per the assessment team's interview with ANSI, Niger 2.0 has four ambitious components, being implemented simultaneously:

- E-government, with the ambitious goal of moving the government away from paper by 2028.
- Smart Villages,[27] which will provide broadband internet services to the country's rural areas using private and public funding. (The World Bank's planned smart village project[28] will play a role here as well as other collaborators.)
- A Center for Excellence, i.e., an "innovation city" in Sadore to showcase digital solutions for each UN development goal. It will include an accelerator for small business entrepreneurs with clusters by sector (including agriculture, health, education, and digital financial services, and local content). Further, this component will include a national data center, a digital certification center, and perhaps a place to manufacture digital devices.
- A public awareness campaign with monthly "boot camps" for citizens already underway, as well as hackathons (e-Takara[29]) and more.

In July 2019, Niger 2.0 is planning a side event, "Innovation for Development," to the African Union Summit to be held in Niamey including highlighting the Smart Village Integration Lab. This event is organized in collaboration with the International Telecommunications Union, FAO, WHO, and UNESCO.

RECA, legislatively created and affiliated with the government,[30] with funding from the government and partners, has comprehensive plans to offer e-extension services (including IVR, an "e-Lab" or testing and an expert network). Per interviewees, it currently has a small call center to serve 10,000 farmers (extension agents for farmers) handling 9,687 calls and 589 registered farmers in a year. They also handle the two government market price services (SIM-A (crop prices) and SIM-Betail). The World Bank's Climate Smart project[31] is working with RECA and provides some assistance for them.

Finally, like most countries, Niger has a telecommunications universal service fund, (called FAU, *Fonds d'Accès Universel* in Niger)[32] funded by a small tax on telecom licensees in order to provide telecom services (including phone and internet) to rural areas not served by the competitive marketplace. As part of Economic Community of West African States (ECOWAS), Niger has a universal service law consistent with a regional framework. It was recently labeled as "inactive" (see footnote 33), having not disbursed any funds.

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[27] See this video from ITU on Smart Villages: https://youtu.be/0uYKKJg00eo

[28] See World Bank's project, Niger Smart Villages for Rural Growth and Digital Inclusion, P167543 http://projects.worldbank.org/P167543?lang=en. Appendix D of this report has contact information for this project.

[29] http://www.etakara.ne

[30] The team was unable to clarify RECA's affiliation with the government but it appears to be the ministry's appointed source of agriculture content for extension agents.

[31] Climate Smart Agriculture Support Project http://projects.worldbank.org/P153420?lang=en

[32] For more information on Universal Service Funds and the fund in Niger, see https://www.itu.int/pub/D-PREF-EF.SERV_FUND-2013; https://webfoundation.org/docs/2018/03/Using-USAFs-to-Close-the-Gender-Digital-Divide-in-Africa.pdf; and https://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/Sub-Saharan_Africa_USF-Full_Report-English.pdf (the first reference is a primer to USF's and provides a summary of good practices on pp. 16-20)

3E. KEY TAKEAWAYS ON THE MOBILE ECOSYSTEM

The results of the analysis of Niger's digital ecosystem are mixed. Telecom access and usage lags behind the rest of the region and is reportedly worst in rural areas where RISE IPs focus. It is encouraging that over half (55 percent) of the population has access to 3G services, good enough for access to the Internet via mobile phones, but only 28 percent of the population has smartphones, needed for using mobile Internet services. On the positive side, the government's efforts via Niger 2.0 to tap digital to enhance development is encouraging as is the growing number of donors and other organizations that are collaborating with this effort.

Mobile money usage is lower than initially expected given the regional averages and the experience in Burkina Faso. Females lag dramatically behind males in mobile money accounts and usage, though market research to explain barriers and enablers is non-existent.

KEY DESIGN CONSIDERATIONS

Based on the ecosystem findings, there are some key design considerations for any digital service intended to reach those in rural areas, along with the digital design principles[33] mentioned above:

- Ideally services should work on-line and off-line (i.e., data can be collected offline where there is no connection and uploaded once back "on the grid").
- Services should be highly visual and/or rely on audio and video to reflect low literacy levels and the multiple languages of target users (building on best practices elsewhere for such applications).
- Leverage lead farmers or farmer groups (i.e., producer organizations and federations) with higher technical capacity.
- Consider low power applications, which require less electricity.
- Services should conduct research and test prototypes specifically with women to ensure that their needs and interests are adequately accounted for in design and implementation.

3F. DIGITAL USAGE AMONG USAID FOOD SECURITY AND RESILIENCE ACTIVITIES

Before traveling to Niger, the team conducted a short survey of implementing partners (see Appendix A) that showed that most respondents were using digital tools of some sort, although the survey did not provide information on the types of applications used nor the scale of usage. Respondents cited a variety of challenges to using digital; not surprisingly, low literacy was most often cited.

The team interviewed dozens of individuals across an array of types of organizations, including implementing partners, digitally enabled service providers, mobile network operators, mobile money providers, public sector, and other development partners. All interviewees are listed in Appendix D.[34] Appendix C provides the summary of the meeting schedule.

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[33] www.digitaldevelopment.org

[34] Contact information has been omitted. If a reader would like contact information, contact Katie Hauser at USAID khauser@usaid.gov and she will request permission to release this information.

- Implementing organizations (NGOs working on resilience, food security or cash transfers in some way; see Appendix D for full names for these acronyms): REGIS-AG;[35] REGIS-ER;[36] USAID's Food or Peace (FFP[37]); DFSA (Development Food Security Activity) grantees (Catholic Relief Services, Save the Children, CARE); Lutheran World Relief; UN High Commissioner for Refugees; World Vision; Equal Access; UNOCHA; Mercy Corps; World Bank; WFP.
- Telecom sector (mobile network operators) with a focus on their mobile money offerings: Orange (Orange Money[38]), Airtel (M-Koudis)[39], Moov (Moov's Floov).[40]
- Government: ANSI (National Agency for Information Society), Niger Poste, RECA (Réseau des Chambres d'Agriculture).
- Digital service providers: Novatech, Tech-Innov, Viamo, InnovELLE, 2MInvest, City Taps.
- Organizations supporting digital service entrepreneurs: CIPMEN, TechHouse, Women's ICT Network.
- Financial service sector (other than mobile money): Al Izza, AP/SFD (Association Professionnelle des Systèmes Financiers Décentralisés du Niger), BAGRI, Capital Finance, MECREF, MicroSave.
- Other stakeholders: Mooriben;[41] AGRHYMET, International Media Support, International Livestock Research Institute Project: Innovation Lab for Livestock Systems; Millennium Challenge Corporation.
- The team also made to visits to the RECA Agriculture Fair and had conversations at many booths.

SUPPLY SIDE OF DIGITAL SERVICES: REASONABLE, GROWING STRONGER

We found a few local digital service providers focused on the agriculture sector, including:

- Novatech, led by a former Young African Leaders Inititative[42] fellow, piloting an interactive voice response (IVR) system for agriculture (e-Kokari) in three languages including agriculture content for three crops (moringa, millet, cowpea) from RECA. It reported support from FAO and the World Bank and ANSI in one smart village (Fashi). It hopes to add crop prices and animal prices (from RECA SIMA (crop prices now via radio and bulletins (http://simaniger.cilss.int) and SIM Bétail), weather from the national weather service, and a service to contact an expert. Tech-Innov offers a digitally enabled system for farmers to control their irrigation (especially in groups) with weather stations for the same farmers. They have been showcased by Niger 2.0.

[35] https://2012-2017.usaid.gov/sites/default/files/documents/1860/REGIS%20AG%20Fact%20Sheet.pdf

[36] https://files.globalwaters.org/water-links-files/REGIS-ER-fact-Sheet.pdf

[37] https://www.usaid.gov/niger/food-assistance

[38] http://www.orange.ne/particuliers/1/29/presentation-orange-money-44.html

[39] https://airtelne.com/airtelmoney/faq

[40] https://www.moov.ne/flooz/

[41] http://www.mooriben-niger.org/spip.php?article3 F.U.G.P.N - Federation des Unions de Grupments Paysans du Niger

[42] https://yali.state.gov

- City Taps focuses on digitally enabled water utility services in towns and cities (Niamey for now) with 1,500 digitally enabled water meters for households. Customers pre-pay for water.
- Equal Access provides radio services to NGOs; program development including a soap opera approach for social behavior change; station strengthening; sharing recordings in round tables; and WhatsApp and Facebook outreach. Has used video competitions to engage women and young people. They also have a tech camp for smartphones, videos, free mobile applications, and more. It reported that it uses Viamo for monthly surveys and provides some support to radio stations. They reported they may try television next year.
- Viamo is an international provider of IVR (3-2-1 service) and other data-related services.
- International Media Support provides capacity building and programming for community radio stations (among other services). They promote call-in (via "voice bank" set up with Orange) and group listening. They also enable radio stations to disseminate audio programs. They reported using WhatsApp as a support tool for radio stations.
- InnovELLE, a small female-owned firm offering training and GPS-related services.
- Espace Geomatique (based in Burkina Faso) offering drone services for, among other uses, monitoring land restoration efforts.
- Weather forecasts. AGRHYMET,[43] based in Niger but a regional body, works with the national meteorological agency, FEWSNET and CILSS (Permanent Interstate Committee for Drought Control in the Sahel) to collect, analyze, and share seasonal and 10-30 day weather forecasts. This is critical information for farmers. The assessment team was not able to identify a service that is delivering directly to farmers or farmer groups in digital form. The forecasts suffer from insufficient working ground weather stations, a chronic problem in sub-Saharan Africa. A recent USAID-funded climate information systems project developed a case study for Niger along with a series of documents and guides for improving climate information delivery.[44]

Importantly, the team found a few organizations supporting and encouraging digital service providers, an important part of any digital ecosystem so entrepreneurs can find partners, learn from each other, and share resources such as space. These included:

- CIPMEN, an incubator that provides work space, advice, and training in business planning, leadership, taxes, and public-private partnerships. Also sponsors regular hackathons (one in July on financial inclusion). Involved with Niger 2.0 in Smart Villages effort and more. Most entrepreneurs they help have a digital component. One challenge they reported is to get their skills training capabilities to those outside of Niamey; they may try video conferencing.
- TechHouse[45] helps build the technical capacity of entrepreneurs, including geoanalytics; provides work space and works on other activities to strengthen the use of digital, such as its work with the U.S. Embassy on a hackathon on gender issues.[46]

[43] http://www.agrhymet.ne/eng/

[44] See https://www.winrock.org/wp-content/uploads/2019/01/CIS-Market-Assessment-Business-Model-Review-2018-FINAL.pdf and the full set of helpful documents from this project https://www.winrock.org/issue/energy-and-environment/climate-change/

[45] https://www.geoacenter.com/ongoing-activities

[46] For hackathon information, see https://www.geoacenter.com/upcoming-events

- ANSI's Niger 2.0 team.
- The Women's ICT Network.
- A Google development meetup group.

The team heard from several IPs and the International Media Support organization that there are dozens of community radio stations that have been strengthened (they still need more help) and are used by IPs and other NGOs especially by peace-building activities.

HIGH INTEREST, LOW USAGE

In general, we found IPs had a high level of interest in learning more about the range of digital tools available; yet few(perhaps one) partners are taking advantage of these tools at scale. Further, there was next to no sharing of experience with digital tools between IPs, an approach that works well to increase usage and opportunities to aggregate demand for services, and learn what service providers are available. There was also little deep understanding of global best practices for using digital in agriculture to improve results for the poor.

The most common use of digital tools by implementing partners is to collect data to report and measure results for monitoring and evaluation (M&E) purposes. The M&E data usage typically included some sort of profiling of farmers or households with either GPS location and, in some cases, GPS-measured plot sizes. Unfortunately, we found no instances of empowering farmers (and, ideally farmer groups) to use such data themselves in order to understand their progress and challenges, to "right size" inputs based on plot size, to track their productivity (and compare it with their neighbors), and to figure out what information they needed to improve it. We have seen elsewhere (see a recent USAID case study from Senegal[47]) how well this can work for farmers given the steady increase of digital data.

A few IPs (e.g., Mercy Corp, CARE, and WFP) are piloting drones; CARE is doing so to monitor land restoration. Espace Geomatique, a Burkina Faso-based drone company, provides services in Niger as well.

Several also mentioned using radio programming, but not in combination with inbound and outbound messages (voice or text) to increase interactivity of radio programming and remind listeners of upcoming programs. Several mentioned using WhatsApp groups on an ad hoc basis for their teams and for farmers. All of these NGOs have experience in other projects elsewhere using digital solutions, but we focused on the team's experience and plans in Niger. Some specific examples of using digital tools and services include (note that use of or interest in mobile money is covered in a later section of this report):

- REGIS-AG (CNFA consortium lead) reported that it has purchased and distributed smartphones for "relay" farmers (the assessment team has asked for an update on this usage). They reported they are interested in figuring out where they can use digital better. The assessment team had a brainstorming session with them in Burkina Faso, at their request, to begin sorting out how digital might help them address key constraints in vet services provision.

[47] https://www.usaid.gov/digitalag/naata-mbay-case-study

- REGIS-ER (NCBA-CLUSA consortium lead) (Their team in Burkina Faso has experience with a GPS-enabled land tenure application, MAST; DiMagi, an international software provider is part of the consortium and is being used for M&E.) They use radio with Equal Access as a partner and some video using SPRING's approach (the SPRING project is now closed). They reported they are considering whether price alerts would be helpful.
- Save the Children, an FFP RISE II grantee, reported an interest in using digital tools, especially given their ambitious goal of reaching 27,000 households and 189,000 participants. They work with community organizations (e.g., women's groups as well as men's groups) with great potential to use digital tools for training and group management.
- CARE, an FFP RISE II grantee, is working with rural savings groups with some digital tools, summarized in the report's section on Digital Financial Services (DFS).
- Catholic Relief Services (CRS), another FFP RISE II grantee and a member of the RISE REGIS-AG consortium, has a digital team in their headquarters offices in the United States that supports field projects. Some use of interactive voice response (IVR) working with Viamo (content in four areas (e.g, WASH, health) with agriculture information coming in second year). Has worked with 84 radio stations (for malaria) using Farm Radio International's interactive radio approach that includes listening groups for increased effectiveness. CRS is also working with mobile money. (See next section of this report on DFS.) They have also done some low-cost video in the past using an approach learned from SPRING (a closed project), which used the Digital Green approach. They are familiar with using DiMagi's CommCare software for data collection, but are not currently using it in Niger.
- Lutheran World Relief (USAID funded Alliance 12/12) is the one IP that the assessment team found that is implementing a digital tool at scale to support 19,000 farmers in 6 unions. It selected Taroworks software after a competitive search, and has 114 producer enterprise agents using it with smartphones. It is using videos to help with training (for learning the software and training farmers on topics such as mobile money) and, so far, is operating at basic capabilities. The DFS section describes their plans related to DFS. The software can eventually link the system to a variety of non-DFS services in the agriculture value chain such as inputs or transport. They reported that they have digital profiles for all of the farmers, but the farmers themselves do not have access to their profiles. This IP would be a good candidate to share their experience so far with other IPs.
- World Vision has used radio with three stations; programming with no digital tools for the stations (although did have call-in from listeners). Has used video in the past using the SPRING (i.e., Digital Green) approach. They have used smartphones to collect health M&E data. They use a digital tool internally to track child sponsorships. Discussion regarding mobile payments is covered later in this report.
- The Livestock Innovation Lab (managed by ILRI) uses digital tools for M&E plus some radio with clubs for group listening. They reported they have plans to try using cell phones to manage drip irrigation and an early warning system for livestock disease outbreaks.
- PSI uses digital tools for M&E, not in their work itself, except radio with listening groups.

PROMISE THAT HAS NOT YET BEEN REALIZED

There are several digital tools and services that the team did not see being well utilized, although several were mentioned and some used to a certain extent. These are all options to be considered but not necessarily used unless they address an important constraint for an IP or offer an opportunity to increase cost effectiveness, scale and impact. Also there are many resources available for these options that reflect good practices learned globally and adapt applications to Niger that have worked elsewhere. Examples include:

- Digitally enabled extension services that leverage face-to-face approaches to deliver time-sensitive reminders (via voice or text "pushed," for example based on where a farmer is, what he or she is growing, time in the crop cycle) (these alone can increase productivity by 15 percent); provide options for farmers and others to find information they need ("pulling" it via IVR or other such systems); or low-cost video (shown in groups). All of these tools complement face-to-face training and extension services. Radio is being used, but radio stations could use a suite of open-source tools to improve their interactions with listeners (highlighting voices of women and youth as needed) and remind them of upcoming programs.
- Using digital tools to improve the management of farmer (or other) groups (e.g., in the self reliance groups Mooriben manages with more than 57,000 members), including aggregating demand for inputs and managing their distribution, managing any storage and transport services, and financial products offered to members.
- Using farmer profile data collected in many M&E systems to empower farmers, but gradually training farmers in the basics of their profile data (e.g, plot size, yields, plant start dates) so they can compare their data with others and demand ("pull") answers to their questions regarding how to improve.[48]
- Managing and strengthening linkages between market actors and across market systems, including digitally facilitated services (e.g., input delivery, transport) "on demand" so that inputs can be distributed more efficiently and equipment can be shared more cost effectively.
- More systematic use of and shaping of groups on WhatsApp, a widely used tool that is being applied on an ad-hoc basis so far.
- Given its efforts to provide e-extension services to tens of thousands of extension service providers, work with RECA to design and scale such services reflecting global experience, not simply that in West Africa. Hone design and delivery of agronomic information, market price services, and weather forecasts.
- Take full advantage of the two IVR services now starting in Niger. Such services are more useful to all when they offer more content, attracting more users and increasing the likelihood of financial sustainability.

[48] This was mentioned earlier. This case study provides an example of how this powerful approach has helped farmers in Senegal. https://www.usaid.gov/digitalag/naata-mbay-case-study

3G. DIGITIZING PAYMENTS AND FINANCIAL SERVICES - EXPERIENCES AND USE CASES

A prior section (3c) of this report indicates that **mobile money access** (indicated by number of accounts) in Niger is the **lowest in the entire region,** with just 9 percent of adults owning a mobile money account. Similarly, Niger is the lowest in the region for access to formal financial services, with just 10 percent of adults having a formal financial institution account.

This is relevant because access to and use of **financial services is a critical component of USAID programming in the Sahel** (see box on GFSS below). Based on these indicators, there is significant room for improvement in Niger. As is the case in many parts of sub-Saharan Africa, DFS has the potential to more affordably extend financial services to the low-income segment beyond traditional "brick and mortar" services.

Global Food Security Strategy (GFSS) Niger Country Plan & Access to Finance, March 2018

As outlined in the GFSS, USAID, the MCC, United States African Development Foundation, and the small grants operations of the Department of State will contribute to the component of *Increased and Sustainable Economic Well-Being*. This component in these contributes to the third Mission Goal of the Integrated Country Strategy for Niger. Primary elements of this include:

Improved financial management and access to finance.

- Projects will establish or support VSLAs to build individual savings and capital. If possible, projects will foster these groups' entry into the market of formal finance, working with MFIs.
- The central and regional Development Credit Authority facilities will contribute to this component.
- Financial literacy will be included in individual and group capacity-building.
- Livestock insurance may be added to the activities.

Access to finance is also included in the Resilience in the Sahel Enhanced (RISE) II Results Framework as *Intermediate Result 2.4: Increased utilization of financial services:*

- Enhanced informal financial services
- Enhanced formal financial services
- Improved access to quality insurance products
- Increased equity investment and value chain financing

Traditional financial service providers (FSPs) in Niger have not adequately served the low-income, rural segment. There are currently issues with governance and portfolio quality in the microfinance sector. Many informants have noted a public mistrust of FSPs in general. In addition, there appears to be a high-risk approach to agriculture lending that necessitates donor subsidies. Though informal financial services through savings groups have been the primary solution for this segment of people to have access to savings and credit, the extent of these services may be limited. FSPs are not advanced in terms of digitizing their products and services or exploring agency banking. The few interviewed admitted their lack of expertise to pursue this, but expressed their interest to build capacity. As the mobile money industry has started to demonstrate, **DFS could be a viable solution**

to leapfrog over traditional financial services and service providers[49] to extend financial services to the low-income segment in Niger, and **IPs can play a critical role to drive adoption and usage through their programming**.

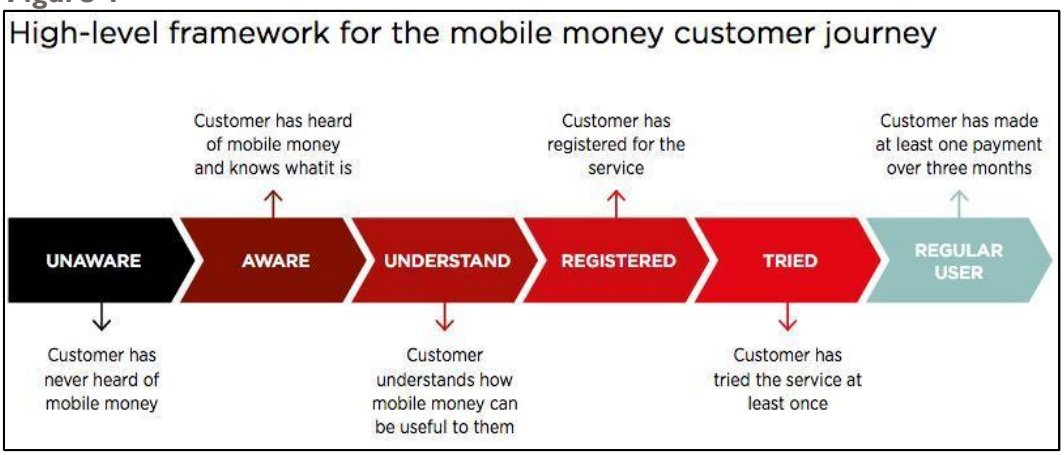
There are **three mobile money providers** (i.e. Orange Money, Airtel's M-Koudi, and Moov's Floov), though they **offer only basic mobile money services**, and the market is underdeveloped. Though this assessment was not extended to rural areas or focused on mobile money services specifically, it appeared that many of the mobile money agent kiosks available in Niamey were not operational. Interviews were conducted with all three MNOs, and they all expressed commitment to continuing their mobile money services, and interest to expand partnerships with NGOs. For money transfers, both for personal use and in programming, the **use of Money Transfer Operators** (MTOs) like Al Izza and BNIT seemed the preferred means for remittances and cash transfers. They offer retail person to person (P2P), but Al Izza at least (perhaps the others do as well) also has a bulk payment platform. One drawback with these OTC transfers is that neither senders nor recipients need to have their own transactional account. Though this may be more convenient, especially given such low literacy rates, it also hampers users' opportunities to build financial profiles and/or access additional digital financial services.[50]

In terms of understanding the extent of usage, other than the Findex, there is a **dearth of data on actual consumer use of mobile phones, mobile money, and financial services in Niger**. Despite lack of data, it appears based on the assessment team's limited observations that general awareness of mobile money, the first stage of a customer's journey, is low (see Figure 4). To drive adoption and usage of mobile money, relevant use cases for mobile money may need to be introduced, and user capability may need to be better understood.

[49] https://www.forbes.com/sites/worldeconomicforum/2018/04/21/global-findex-findings/#2f1432df1fa0

[50] https://www.slideshare.net/CGAP/wallet-and-overthecounter-transactions-understanding-financial-incentives

Figure 4[51]



Based on the IP survey and in-country interviews with **IPs, their experience using mobile money was mixed, but relatively low** – both for personal use, in operations, and in programming. (Appendix A IP Survey). There were surprisingly few that use it personally, and those that did, used it primarily for airtime top up and bill payment (electricity and cable TV). There were a few examples of experience using **bulk disbursements of mobile money cash transfers (MCTs)**[52] for programming, such as to disburse humanitarian or social (unconditional or conditional) cash transfers during the lean season or to pay stipends to animators. Many IPs also described their challenges to use MCTs, mainly with the distribution network (i.e. lack of agents and lack of liquidity) in the rural areas where payments were being disbursed.

Regardless of the mixed experience with mobile money, **there continues to be interest and efforts by IPs** and other humanitarian organizations **to use MCTs**. Many still use cash payments, but given the high security risks of carrying cash in Niger, and clear benefits of traceability, it is not surprising that many keep trying (Appendix A IP survey). Even as far back as 2010, Concern Worldwide tested delivery of humanitarian MCTs to drought-affected households.[53] In 2013, Save the Children and UNHCR used them for urban cash transfers for Malian refugees.[54] Of the IPs interviewed, at least three (CRS, Save the Children, PSI) tried them more recently, but then discontinued them given the challenges due to lack of agents and liquidity. Nevertheless there is a desire by WFP and others to keep trying to digitize their cash transfers, and UNHCR noted that this is now their agency's priority payment mechanism (both globally and in Niger); they reported that they are eager to lead the way. They are active in the sector through a cash working group that is hosted by UNOCHA and co-facilitated by UNHCR, WFP, and IRC. Currently, the technical expertise on digital solutions in the working group seems limited to the assessment team – i.e. they don't have any technical experts to build capacity for group members or

[51] https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/07/CW_Cote_Mali_gendergap_Phase2_V2_WEBOK.pdf

[52] Mobile money bulk payments: one payer paying to many recipients in a single batch, which therefore can be used for cash transfer programming (CTP), agribusiness purchases from producers, and loan disbursements. An online user interface allows the payer to upload a batch of payees and disburse in a single transaction, much like salary payments. Though the administration of bulk payments is made easier, these are often quite challenging for liquidity management at the disbursement points.

[53] Presentation on case study findings: https://youtu.be/ZnxSg-oMxeE

[54] http://www.cashlearning.org/downloads/mobile-cash-transfers-for-urban-refugees-in-niamey-niger-synthesis.pdf

negotiate with service providers on behalf of members, and don't disaggregate their member data between physical cash and MCTs. However, with UNHCR's momentum, and with WFP's one-year technical expert from UNCDF supporting their launch of MCTs, it may be an opportune time to leverage this expertise and aggregate demand by the many IPs, UN agencies, and potential government agencies that deliver cash transfers. The benefits can be significant – in one randomized evaluation in Niger of Concern's MCTs in 2010, they found "that using mobile payments for unconditional cash transfers saved recipients 75 percent on payments. They used those savings to purchase a greater variety of food stuffs and to grow a greater variety of crops."[55]

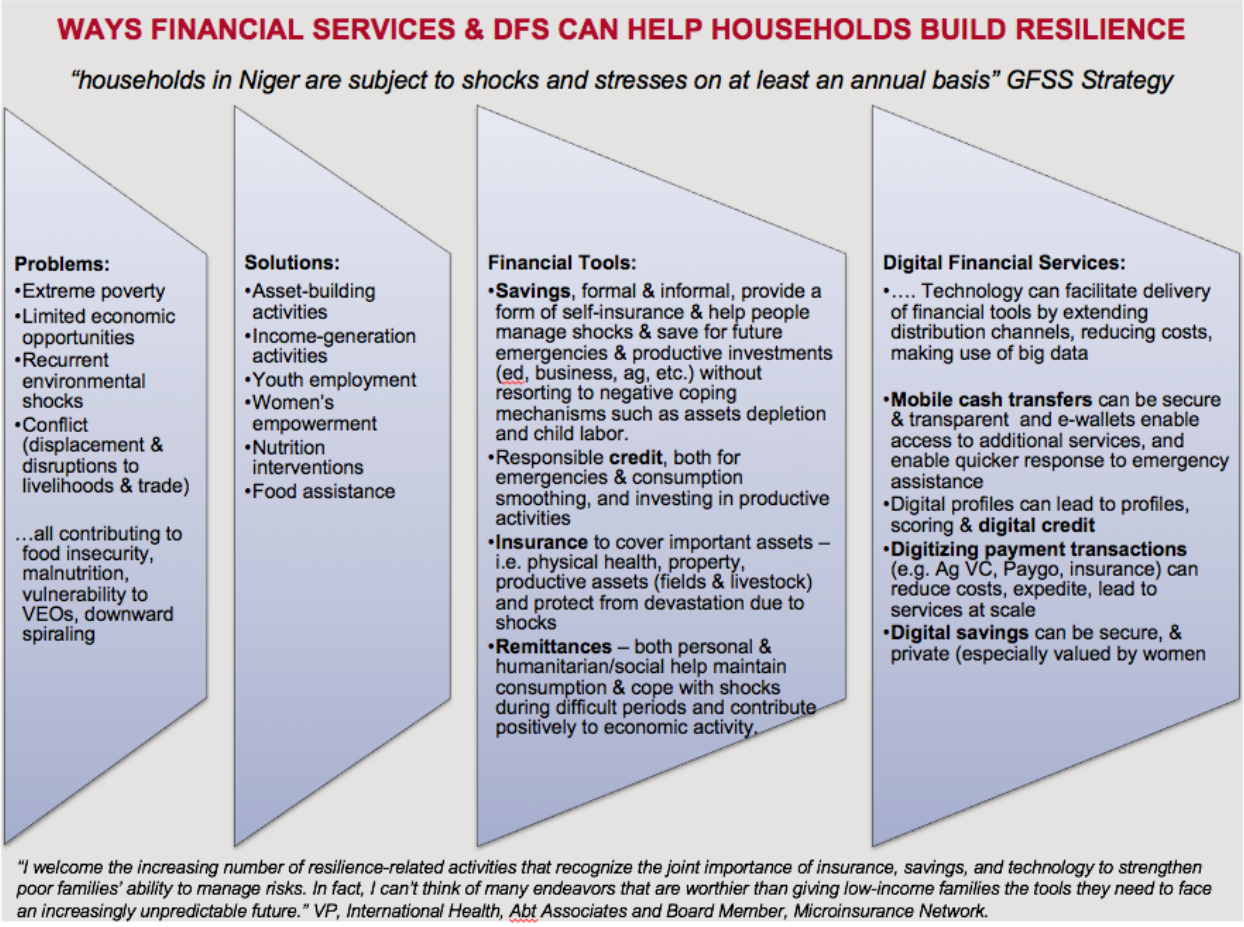
Though benefits for the recipient are important, the primary motivations of organizations wanting to disburse MCTs seems to be motivated by gaining benefits for the organization (i.e. security, transparency, efficiency) rather than about the potential benefits for their end recipients to access and use a mobile money account. Ideally, attention should be paid to the end recipients' needs, preferences, and abilities, and then demonstrate how a transactional account like a mobile money wallet can glean benefits beyond the CT when recipients are properly trained on how to use it. **Financial services are essential tools for people to build resilience**, and IPs delivering CTs via a transactional account can help drive adoption of DFS. Using a transactional account not only helps facilitate receipt of the CTs, but also enables people to use their accounts for personal remittances during a crisis. When more diverse financial services become available through this channel, it provides valuable tools for people to better manage risk and shocks in the future[56] (see Figure 5). Recent research also demonstrates that financial inclusion improves women's food security.[57]

[55] https://cgdev.org/publication/zap-it-me-short-term-impacts-mobile-cash-transfer-program-working-paper-268

[56] Financial Services Primer for Humanitarians: http://www.cashlearning.org/downloads/financial-serv-prem-hum.pdf

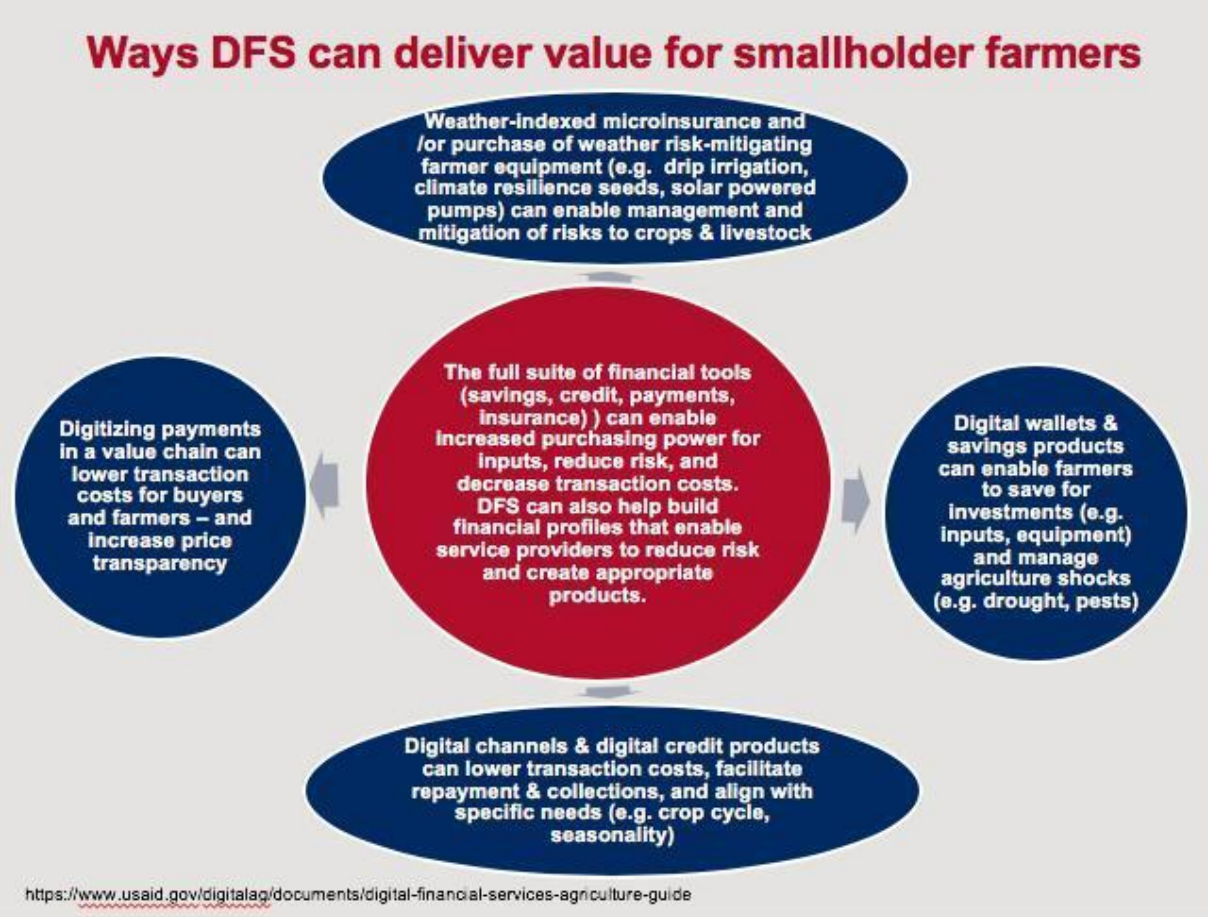
[57] https://www.cgap.org/blog/3-ways-financial-inclusion-improves-womens-food-security

Figure 5



Aside from unconditional and humanitarian MCTs, there was considerably less use of digital payments for other purposes like operational payments (per diems), extending access to finance, or for agribusiness, despite the many **ways that DFS can deliver value for smallholder farmers** (see Figure 6).

Figure 6



Three interviewed IPs described more varied use cases of DFS, which could provide valuable test cases and lessons for others:

- Lutheran World Relief (LWR): in partnership with Airtel, is working through their producer enterprise agents (PEAs) to onboard them as mobile money agents, open 17,000 farmer mobile wallets, and set up merchants to accept mobile payments. LWR's PEAs also provide an additional role with smartphones showing educational videos on how to use mobile money, as well as topics like animal raising and agriculture techniques. (These activities are part of LWR's work with the Taroworks software platform described above.) Both LWR and Airtel expressed interest in digitizing value chain payments, building farmer credit profiles through digital transactions, and using mobile money payments in other ways such as making cooperative loan repayments.
- In their previous project, Mercy Corps was in the process of developing a mobile savings product with Orange and ASUSU when it became evident that ASUSU was experiencing institutional problems, and the partnership was dropped despite having already developed the technical platform. This could be used in a future partnership. They also reported that they had developed and delivered a suite of financial education materials through IVR audio and radio vignettes with Orange on their Viamo 3-2-1 mobile platform, which was very popular.

- With up to 800,000 women in their savings groups (MMDs), CARE wants to facilitate access to additional sources of credit for their groups, but having reportedly found that FSPs are too risk averse, they are now discussing a partnership with CARE Denmark, Capital Finance[58] (MFI), and HIVEONLINE[59] (a Dutch technology company) to digitize their savings groups' transactions with an objective of creating member financial profiles that can demonstrate credit worthiness and reduce the MFI's risk aversion to lend to them.

Many IPs, and even Mooriben, one of the largest farmers' unions (approximately 58,000 members[60]), expressed interest in learning more about how DFS could be incorporated into agriculture or other types of programming to promote food security and resilience, but the assessment team found that basic awareness and knowledge about DFS was quite low.

In terms of **digitizing value chains** (i.e. purchasing inputs and/or paying for produce and livestock), which can be a driver for adoption and usage of digital financial services, there are two initiatives to note. The United Nations Capital Development Fund (UNCDF) manages the Mobile Money for the Poor (MM4P) initiative, and has extensive experience working with a wide range of stakeholders to digitize value chains in countries such as Uganda.[61] They currently have a regional hub in Dakar and are expanding to Niger this year to work on the MCTs with WFP, as well as on another project to support youth employment in agriculture in Zinder, Niger, financed by the Belgium Cooperation. This will work with youth at "farm schools" and incorporate financial education and potentially DFS. Though they have this expertise, it is not certain that they will work on digitizing value chain payments in this project.

The World Bank has a large project called First Initiative[62] to improve financial inclusion countrywide and will implement activities related to agriculture finance (AgFin). They are planning to work with CAIMA,[63] the largest agriculture input supplier, to accept payments with mobile money and raise awareness in 700 villages with farmers to pay for inputs with mobile money, as well as work with local buyers to pay farmers with mobile money. Though much planning is still underway, they are collaborating with the GoN and ANSI through their Niger 2.0 smart villages initiative, and reported that they aim to use these smart village digital centers as cash in/out points.

Though there is little experience to date digitizing value chains, it could be one area of opportunity for future activities focused on agriculture.[64] When done responsibly, this can enable creation of smallholder

[58] http://www.capitalfinance-ne.com/

[59] https://www.hivenetwork.online/

[60] http://www.mooriben-niger.org/

[61] See http://ield.uncdf.org/lmftf/financialinclusioninnovation

[62] https://www.firstinitiative.org/projects/improving-access-financial-services-niger

[63] La Centrale d'Approvisionnement en Intrants et Matériels Agricoles *Central Supply of Inputs and Agricultural Materials*

[64] Useful resources on digitizing agribusiness payments include: USAID's Guide to the Use of DFS in Agriculture https://www.usaid.gov/sites/default/files/documents/15396/Guide_Digital_Financial_Services_Agriculture.pdf and UNCDF's Learnings from the Field: Digitizing Payments in Agricultural Value Chains in Uganda http://www.uncdf.org/article/4000/learnings-from-the-field-digitizing-payments-in-agricultural-value-chains-in-uganda, and GSMA's How to Prioritize Ag VCs for Digital Interventions https://www.gsma.com/mobilefordevelopment/resources/magri-webinar-how-to-prioritise-agricultural-value-chains-for-digital-interventions/

transactional/financial profiles that could be used by service providers for credit scoring to extend financing.[65]

> "As agriculture and financial services move into the digital age, new technologies are emerging with the potential to extend the reach and product diversity of value chain finance to smallholders. From commitment savings accounts for inputs to receivables financing and warehouse receipts, the increasing prevalence of mobile devices is helping to unlock a range of new financial products and services that go beyond the traditional offerings available to participants in value chains… there are three broad use cases for digital tools in value chain finance for smallholders:
>
> - Improving the efficiency of financial transactions.
> - Overcoming barriers to providing financial services.
> - Improving market opportunities."[66]

Given that usage of financial services is a priority in the GFSS, and that there are many potential opportunities to incorporate DFS into programming on resilience, food security, and agriculture, it is unclear exactly why more IPs are not piloting and/or using it. Based on interviews and the IP survey, some critical **barriers and challenges to using DFS** (Table 6) are outlined below that would require explicit attention when designing and implementing programs, and would ideally have some in-house technical expertise in managing them, especially if programs are to be able to scale and reap benefits for their program participants. In reality, institutionalizing digital payments within an organization that is accustomed to using physical cash requires change management. And for program participants to relinquish physical cash in exchange for digital solutions that are conceptually new, especially when income and savings are very small, requires building trust and achieving behavior change. The challenges outlined in Table 6 formulate the basis for many of the recommendations related to DFS provided in the next section (4c).

Table 6: Barriers for IPs to Adopt DFS

BARRIERS	DESCRIPTION
Consumer/ Program Participant Ability	Though some IPs claimed their program participants are using mobile money, many also expressed the need for digital and financial education. The use of mobile money was even limited amongst the IP staff themselves – and these are well-educated consumers with smartphones. It is expected that with low literacy (30 percent), low trust in FSPs, low phone subscription (32 percent), low awareness of mobile money, and other challenges to using basic phones for manipulating a mobile money menu, that this is a key barrier to driving adoption and usage of DFS. When considering the typical customer journey (see Figure 4) for mobile money usage, it appears that Nigeriens are still at the very beginning. A robust foundation of basic usage is necessary for layering on second-generation products and services (e.g. digital credit, dedicated savings, Paygo solar, etc.) This requires behavior change, and transfer of knowledge and skills, which IPs are well positioned to promote in their programs.
Gender Gap	IPs had mixed feedback on their work with female program participants and their access to and use of mobile technology. This may be determined by where they are working, as some areas may be more socially conservative and hold greater barriers to women's agency to use financial services, DFS, and mobile phones. Some IPs claimed their female program participants have phones and are able to use them, while others noted the specific social and economic barriers for women, including lower literacy rates and restrictions of mobility in

[65] https://www.mckinsey.com/business-functions/risk/our-insights/new-credit-risk-models-for-the-unbanked and http://www.digitalcreditobservatory.org/uploads/8/2/2/7/82274768/dco_landscape_analysis.pdf

[66] https://www.cgap.org/sites/default/files/Focus-Note-Digitizing-Value-Chain-Finance-Apr-2017.pdf

BARRIERS	DESCRIPTION
	more conservative areas. This is a critical barrier that should be explicitly analyzed, as research shows that "affordability, literacy and digital skills, a perceived lack of relevance, and safety and security concerns are the most important barriers [for women's adoption of mobile money].[67]"
Limited IP Expertise	Based on interviews and the IP survey, the knowledge, skills, and experience of IPs to understand and deliver DFS seemed mixed, yet all expressed interest to know more and to learn from each other. (Annex A IP Survey)
MNO Capacity	The distribution or agent network for all MNOs was reportedly limited in the rural areas, although there is no data on the specific number of agents.[68] Based on interviews with the MNOs, there should be more than 7,000, though it is unclear how many are active, and how many are urban/rural. However, several IPs that have used mobile bulk cash transfers said that the agent network was the primary challenge – i.e. the lack of agents, and their capability to ensure sufficient liquidity to cash out. Liquidity management with bulk payments is especially challenging as the spike in need for cash can be very difficult to manage, yet the MNOs may have little experience with bulk payments, a reluctance to reveal internal operations, and express overconfidence in their ability to manage this. It is critical to build collaborative partnerships and take a pilot approach – a strategy that has been successful in other countries.[69]
Financial Service Providers	It appears that there are few FSPs serving the low-income segment, and those that do provide agriculture finance appear to view it as risky and will only lend when there are partner subsidies and loan guarantees. In terms of digital credit, there is interest and discussion to launch it in future. VSLAs appear to be the main form of savings and credit available to IP program participants, and these are valued and widespread, yet it is unclear if they are meeting all their financial needs. There are opportunities for IPs to incorporate digital technologies, ranging from digital record-keeping to electronic transactions,[70] and the potential to create financial profiles through digital transactions can be a key to developing and extending DFS.
Lack of Market Data	There is almost no market data on consumers, women, youth, or farmers to be able to know exactly how these segments are using mobile money and financial services, what might be valuable use cases for them, and/or what are the enablers and barriers to adopt and use DFS and other mobile services. This type of market information is critical for encouraging service providers to design appropriate products and services, and for enabling IPs to plan and design successful programming that can incorporate tools like DFS to improve the lives of their program participants. Examples of research in neighboring Côte d'Ivoire and Sierra Leone[71] highlight the type of market information that is essential for smart decision-making.
Inadequate Infrastructure	Though the GSMA indicators show a 55 percent coverage of 3G telecommunications, several IPs noted that the lack of network coverage and electricity in rural areas where they work are barriers to use DFS. Collaboration among IPs to aggregate their experiences and map their access to such infrastructure in the rural areas where they work could be useful to encourage build out of infrastructure.

[67] https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/The-Mobile-Gender-Gap-Report-2019.pdf?platform=hootsuite

[68] For comparison, some online reports state that Ghana had approximately150,000 active agents in 2018, and Côte d'Ivoire already had 12,000 agents in 2013.

[69] https://www.acdivoca.org/2016/06/usaid-advance-scales-up-mobile-financial-services-for-farmers/

[70] https://www.mangotree.org/Technology-Gallery

[71] https://www.cgap.org/research/slide-deck/financial-inclusion-insights-2018 and https://www.uncdf.org/article/3879/dfs-ecosystem-assessment-for-smallholder-farmers-in-sierra-leone

4. RECOMMENDATIONS

Based on discussions with USAID/BFS and the SRO teams, the assessment team has honed its recommendations to the three described below.[72]

1. Provide technical assistance to priority RISE partners.
2. Facilitate action-oriented digital user working group.
3. Provide technical assistance to promote adoption and use of digital payments and DFS.

Mobile money and DFS topics could be addressed in all three recommendations depending on demand.

4A. CONCRETE TECHNICAL ASSISTANCE TO PRIORITY RISE PARTNERS

Provide tailored technical assistance (TA) to IPs as they assess ways to take advantage of digital devices and digitally enabled services to increase their reach and impact. TA could be provided to one or more strongly interested and priority IPs either individually or together to help them improve digital interventions they are now using or figure out if, where, and how digital tools can help address key constraints to scale and success.

SRO can consider options for providing any TA, drawing upon BFS's digital expertise. Other donors may be interested in funding or co-funding such TA depending on its focus. The TA could involve teleconferences, emails, or field visits, or a mix of the three. If SRO funds the TA, it should require a short proposal, including a statement of work.

TA would be tailored to digitally related efforts that the Mission or an IP identifies that help it achieve its goals, whether these efforts are already underway or are ones that an IP would like to try. An IP might choose to facilitate farmers' use of phones for a variety of purposes from receiving more information (i.e., extension information); managing inputs (e.g., group purchases) or to access services such as transportation; improving links to markets or specific buyers; or managing themselves with simple applications like WhatsApp.

Any TA would be outlined in a short statement of work and would tap local digital service providers and, to the extent possible, others' (e.g., other NGOs or donors) efforts to offer information to farmers in digital form. The TA could likely take two forms: 1) expert TA from an outside advisor to provide guidance at the outset and interim reviews or 2) TA provided by a local (from Burkina Faso or Niger) digitally savvy company (which may or may not be the same company that provides the digitally enabled information service). Key tasks could include:

1. The statement of work would be drafted and finalized by the IP (with or without help from an expert advisor), defining tasks, roles, timing, assumptions, and expected outcomes.
2. The IP (again, with or without help) would select a local digitally savvy company to provide the TA by using a short, competitive process. Both countries have a handful of firms that appeared capable to provide such assistance, i.e., help conducting a competitive selection process and

[72] For reference, additional recommendations that were initially drafted are included in Appendix E in case they become relevant in the future.

providing the TA itself. An IP may opt to use its own staff to manage the process and so may choose to avoid this task.

3. Conduct quick market research regarding what digitally enabled services or information are now or will soon be available in the country.
4. Conduct additional quick market research to learn the farmers' (or intended service users) priorities regarding how they (and their households) are already using phones or digitally enabled services; what information or applications they want and why, ranked by priority (drawing on what was learned in step 3 but allowing other information or application needs to be identified as well); their literacy levels; willingness to pay for information services (or candidate organizations that would be willing to pay); and constraints they have regarding using the phones (e.g., paying for airtime, having a cell phone signal).
5. Based on the results of the above tasks, define an information service to be piloted; one or more business models (i.e., how the service will be delivered organizationally and financially); steps for setting up the service(s), testing, and rolling it out; how to get feedback from the farmers regarding the service(s); and adjusting it based on feedback.
6. Share results with SRO's IP consortia and provide recommendations for next steps for the service, e.g., how to scale or adapt it and what organization(s) will do the work.

TA might cover topics such as:

- How to improve a service now being used but that had not reached scale or does not have a viable business model to sustain it.
- Figure out together what are key constraints to success in a specific area of work and if digital tools could help address one of these. If so, figure out how this might work and devise a plan for moving forward.
- Help to assess the impact of a current digital service.
- Ways to take better advantage of farmer profiles to motivate farmers.
- Figuring out possible local partners for a service.
- How to use digitally enabled extension services to extend the reach and impact of training.
- How geodata can be used more cost effectively.
- How to use data to empower farmers, households, or groups.

All TA would reflect the following key guidelines principles:

- Include a local service provider in some way, e.g., as a member of the TA team.
- Follow the digital design principles; global experience and good practices; and USAID's toolkits and experts.
- Have no long written deliverables but be time limited and end with an action plan for the IP to progress and monitor progress.
- Be monitored regularly for progress and terminated if the TA is not being delivered well or no longer needed.

4B. FACILITATE ACTION-ORIENTED DIGITAL USER WORKING GROUP

Provide expert TA (not full-time but intermittent) for up to one year to set up and facilitate a Digital User Working Group of USAID IPs and others with goals aligned with SRO. It might be managed by a CLA contractor, if SRO has one. The group would meet at least bimonthly in themed meetings to:

- Share experience with digital service providers and tools.
- Figure out if it makes sense to aggregate demand for such services (e.g., having all partners provide digital content to an IVR service, making it more popular with target users and more cost effective).
- Meet key service providers, giving them chances serially or in groups to explain their services.
- Have members share and compare their challenges and successes with digital service.
- Have "fail" sessions where members say what did not work and how they figured that out.
- Have speakers working on related topics, such as someone from Niger 2.0, IPs addressing behavior change approaches, innovative digital service providers (there are several strong candidates in both countries), or Johns Hopkins' Breakthrough ACTION team.
- Address topics of mutual interest such as the use of drones, e-extension, weather service, or how to address the gender gap.

The group would set priorities based on members' interests and poll users regularly to ensure the group is valuable for members. The group would have a dynamic, shared resource list including USAID's Gender and ICT Toolkit, Low Cost Video Toolkit, and digitally oriented case studies.

4C. TECHNICAL ASSISTANCE TO PROMOTE ADOPTION AND USE OF DIGITAL PAYMENTS AND DFS

There are several activities that could be implemented in a bundled approach to deliver technical guidance to USAID implementing partners, supporting them to incorporate digital payments and DFS in their programming for resilience, food security, and agriculture. This approach will promote coordination of implementing partners for sharing lessons across the sector as well as aggregating demand to incentivize service providers to create appropriate solutions and deliver better services. It would facilitate learning on how to adopt digital payments within their own organizations and enable their program to participate, adopt, and use DFS. With improved knowledge and expertise, implementing partners would be better informed and positioned to engage with service providers and test solutions through planned pilots, and to engage with broad digital initiatives by the GoN and key donor programs like the World Bank First Initiative to become critical actors leading the use of DFS in rural areas. Activities are outlined below as specific and discreet activities, or as an interconnected bundle of technical support that could be provided.

Sector-wide technical guidance for coordination, capacity building, and creation of public goods:

- Contribute **expertise to the sector-wide cash working group** by providing guidance on MCTs, explore aggregation of demand, and create business linkages with service providers to deliver humanitarian and social MCTs. Specific activities could include mapping of volume, values, number of recipients, and geographic location of cash transfers. The aggregated data could be the basis for pitching to MNOs to improve services in specific locations.
- **Establish a working group on DFS** that could be sub-group of a broader digital solutions working group (see 4b), or stand-alone similar to the work of the USAID-funded mSTAR program in Bangladesh, Liberia, and Malawi, which organized IPs interested in using DFS. Similarly, UNCDF has facilitated DFS working groups also in Bangladesh, Liberia, Senegal, and Sierra Leone, with a slightly different target group of participants that included private sector

services providers and government regulators. Both models have provided valuable forums for sharing lessons, collaboration, and delivery of technical training.

Smart use of technology can also support achievement of financial education outcomes by:

- improving access to financial information, advice and training (e.g. through websites, massive open online courses);
- developing competencies, confidence, and experiences with finance (e.g. through gamification);
- enhancing money management skills and control over finances (e.g. through mobile applications, budgeting tools); and
- addressing consumers' biases (e.g. through self-commitment devices, automated alerts).[73]

- Facilitate a basic training **workshop with IPs to incorporate digital payments** into their own operations and programs similar to the Digital Payments training that was previously funded through the Lab's DFS team, and delivered in five markets for groups of implementing partners. This would provide basic knowledge of the concepts and benefits, and guidance to implement practical tools to begin the transition from using cash to digital payments based on the ten steps outlined in the USAID sponsored Toolkit for IPs.[74]
- Facilitate a **digital technology exhibition and fair** together with local service providers to the digital sector and/or ANSI's Niger 2.0 team as a starting point to introduce IPs to the range of services and service providers (SPs) available in the market (MNOs, FSPs, technology firms). This would require preparation with SPs so they understand the type of solutions that are relevant for IPs in their programs (e.g. not paying TV bills with mobile money or creating expensive savings account with high maintenance fees). This would involve facilitated sessions and interactions so IPs would get the most out of it, and so service providers may be inspired to create new products and services.
- Provide technical guidance to develop an **education package on digital literacy and DFS** (e.g. practical digital education modules, videos, radio, telenovelas, apps, etc.) for program participants, which could also incorporate a focus on gender-specific education. Rather than encourage each IP to develop their own basic digital literacy training, it would provide a foundational package, and with coordination, could be promoted to all IPs for adoption in their programs. The technical expert would coordinate with IPs and service providers to develop and identify delivery channels. There are potential service providers in Niger as well as others that have relevant products but may not yet be working in Niger.[75]
- Support **market research** as a public good on program participants' behaviors, abilities, needs, preferences for financial and DFS, including segmentation by gender and youth so implementing

[73] http://www.gpfi.org/sites/default/files/documents/09 G20-OECD-INFE-Report-Financial-Education-Consumer-Protection-Digital-Age.pdf

[74] https://bit.ly/2UhTMzN

[75] E.g., engageSPARK voice and SMS campaign for building financial resilience: https://solutionscenter.nethope.org/webinars/view/engagespark-and-mercycorps-tabangko-program-in-the-philippines)

partners know how to promote adoption and usage of relevant financial tools, and to encourage service providers to design and develop relevant products and services.

- As an example, use the recently commissioned MIT/CITE research on the DFS gender gap; similar research might be possible for Niger. The Gender and ICT Survey Toolkit, designed by the USAID Global Development Lab, may also be a useful resource to obtain data on women's access and usage of mobile phones and other connected devices: https://www.usaid.gov/documents/15396/gender-and-ict-toolkit
- Assess what market research may have been done already by individual IPs, and create a shared library of research that IPs may have already gathered on their program participants' needs, preferences, and behaviors if it could be made anonymous in respect to participant privacy.
- Package market research in an appropriate way to present to service providers so they may begin to consider how to deliver appropriate financial services.

Technical assistance targeted to individual IPs to facilitate partnerships with service providers and engagement with the GoN Smart Villages:

- Based on participation in the workshop and/or working group, determine which IPs are most interested in more complex activities to incorporate DFS into their programming and provide **targeted, direct technical assistance** for a specified amount of time to plan and launch activities.
- Following on from the initial trade fair, explore opportunities to **cultivate specific partnerships between IPs and SPs** to pilot different types of activities such as:
  - digitization of value chain payments
  - creating financial profiles with VSLAs and farmers
  - aggregation of mobile money bulk transfers
- Provide technical coordination to identify opportunities for **engagement with the GoN's Smart Villages and the World Bank First Initiative** (sector-wide financial inclusion program in collaboration with the Smart Villages). Both initiatives are exploring ways to increase use of DFS and improve digital literacy, but appear not to have implementing partners on the ground in rural areas. IPs could leverage these opportunities, but mapping out opportunities, establishing relationships, and identifying potential pilots with interested and relevant IPs could be expedited with support from a designated facilitator to initiate and guide the process.

5. CONCLUSION AND NEXT STEPS

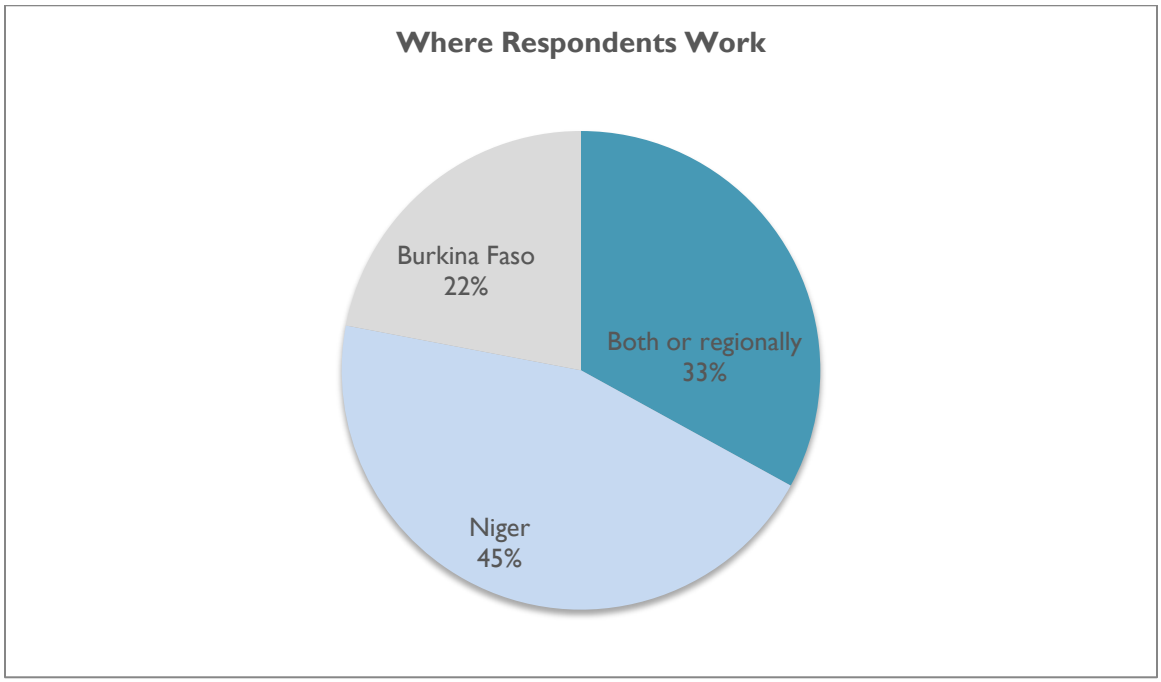
This assessment revealed an ecosystem with great potential to advance and opportunity for digital uptake to occur among existing and planned activities. Despite extreme poverty, low literacy, and less than robust telecom services, the amount of digital activity and opportunity in Niger was promising to the assessment team.

The assessment team and BFS can work with SRO to determine which recommendations make sense for its context, and create a plan to phase in by geographic sub-area, sector (e.g., poultry first) or some other breakdown to limit focus.

APPENDICES

APPENDIX A: PARTNERS SURVEY RESULTS

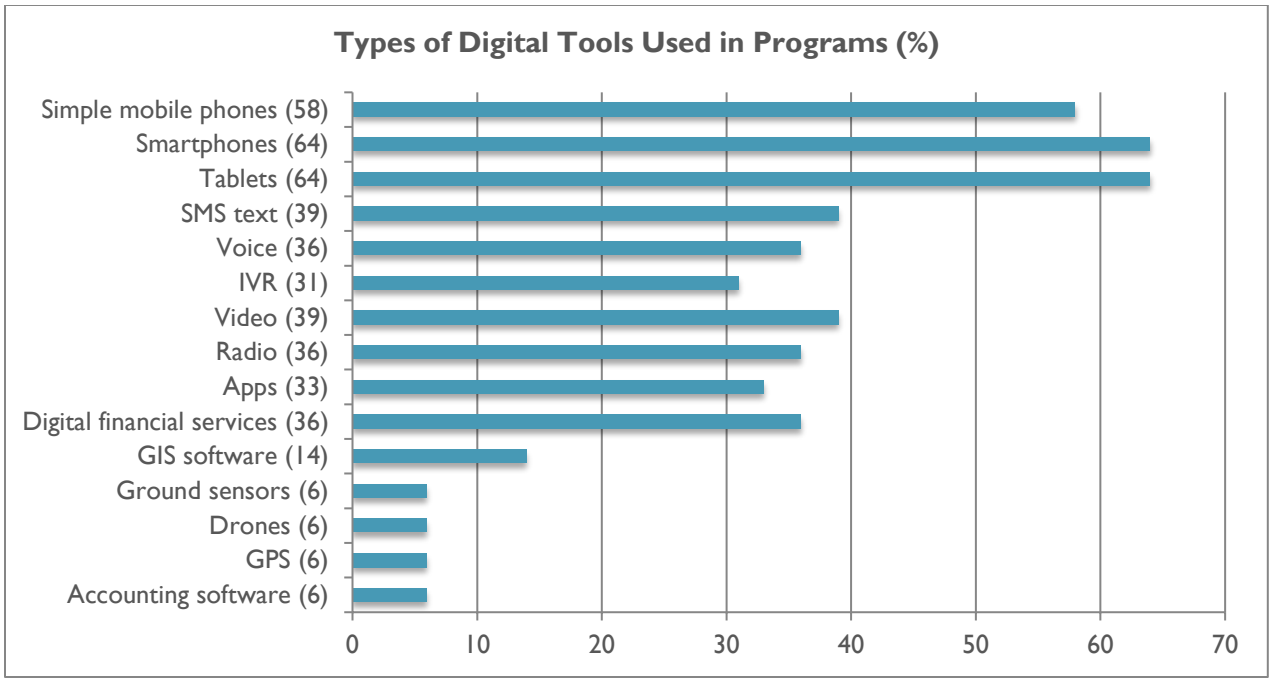
A survey was conducted among USAID partners ahead of this TDY in order to assess the current and intended use of digital solutions and tools. The survey was distributed to Feed the Future, government, private, and institutional partners. Despite receiving only 36 responses, the information gained from respondents was insightful. While this survey is not representative of all Feed the Future partners, it illuminates a few key takeaways.



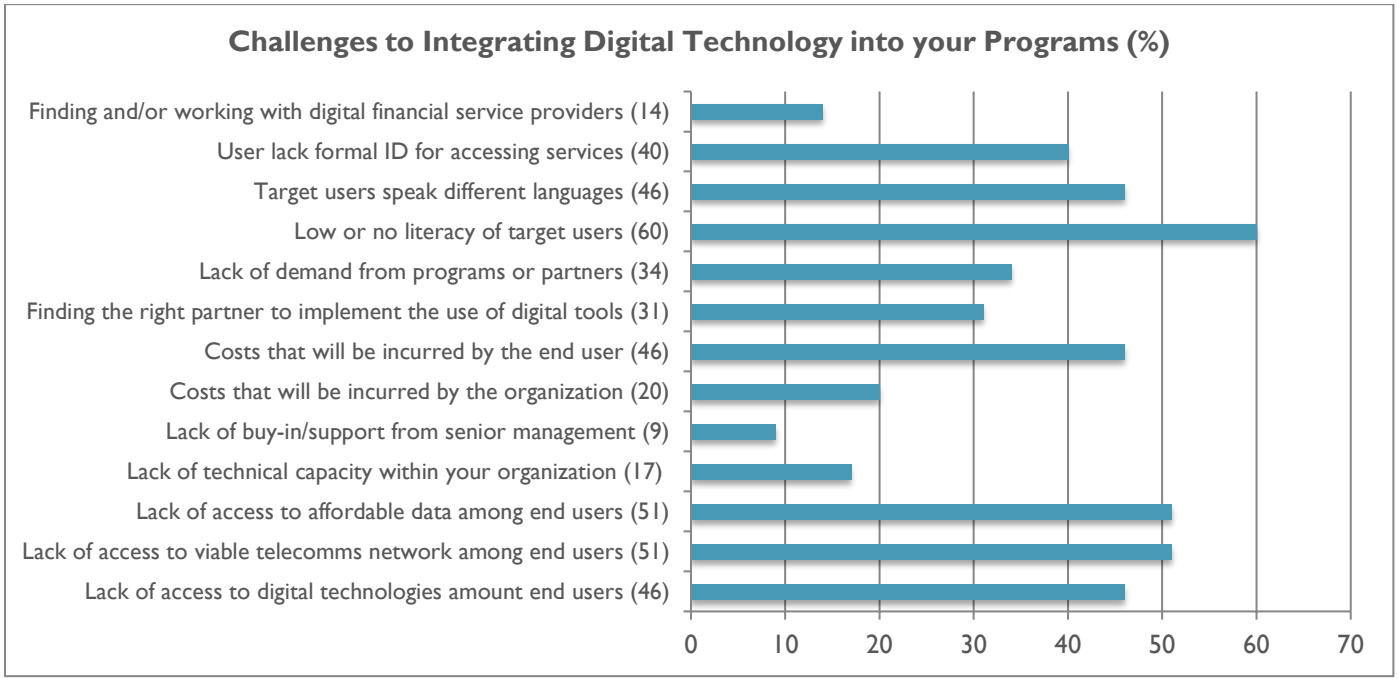
The majority (75%) of respondents are using some digital tools in their organization or program. This percentage goes up when you include respondents that work in both countries or regionally.

	% OF RESPONDENTS USING DIGITAL TOOLS PER COUNTRY	% OF RESPONDENTS INCLUDING THOSE WORKING IN BOTH COUNTRIES/REGIONALLY USING DIGITAL TOOLS
Burkina Faso	75	85
Niger	75	82

The most common digital tools used include smartphones, tablets, and simple mobile phones, and GIS tools. Ground sensors, drones, GPS, and accounting software were the tools partners recorded using the least.

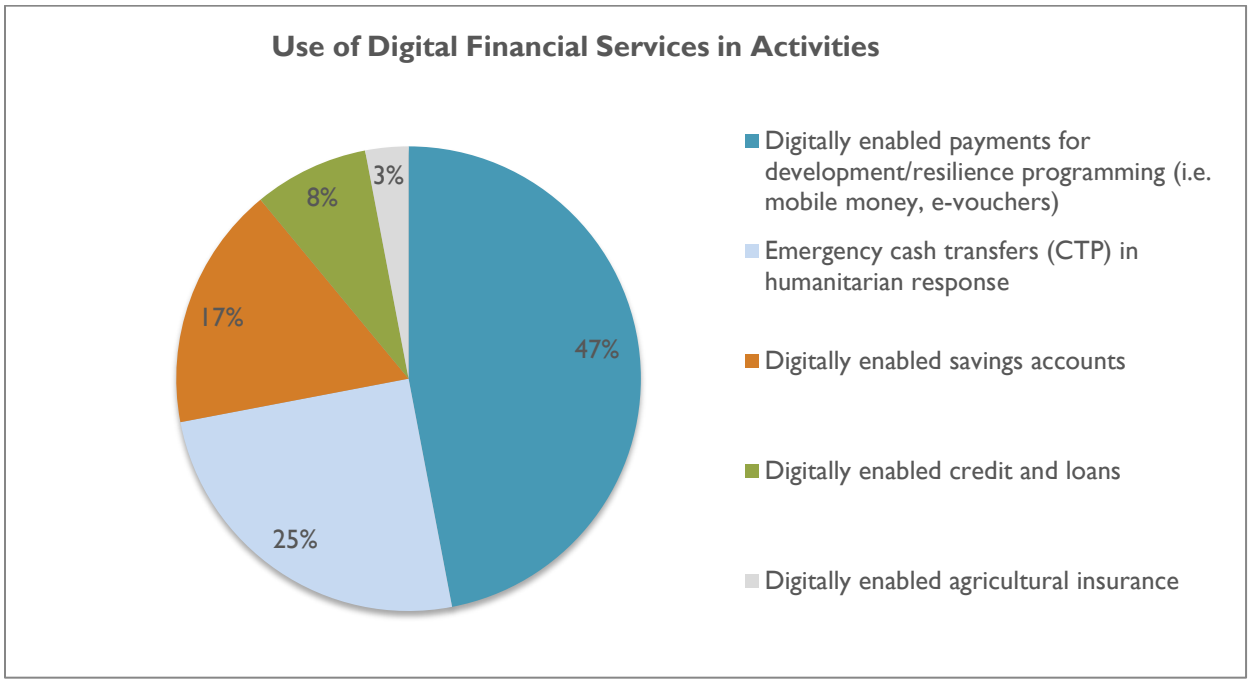


The most prominent challenge respondents face in the implementation of digital tools is low or no literacy of target users; 60 percent of respondents considered this a challenge or very challenging. This was followed by lack of access to viable telecommunications network among end users and lack of access to affordable data among end users.



Digital tools are largely used among respondents for the purpose of data collection (78 percent reported using digital tools for this purpose).

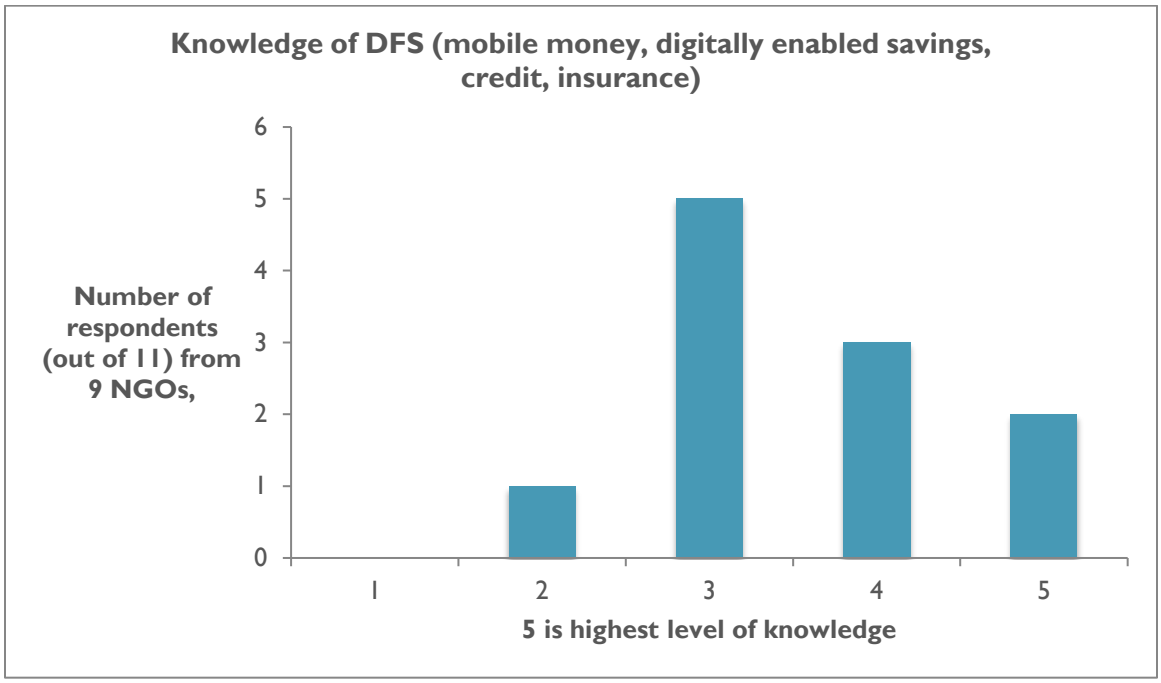
When it comes to digital financial services, 47 percent of respondents reported incorporating digitally enabled payments for development or resilience programming.



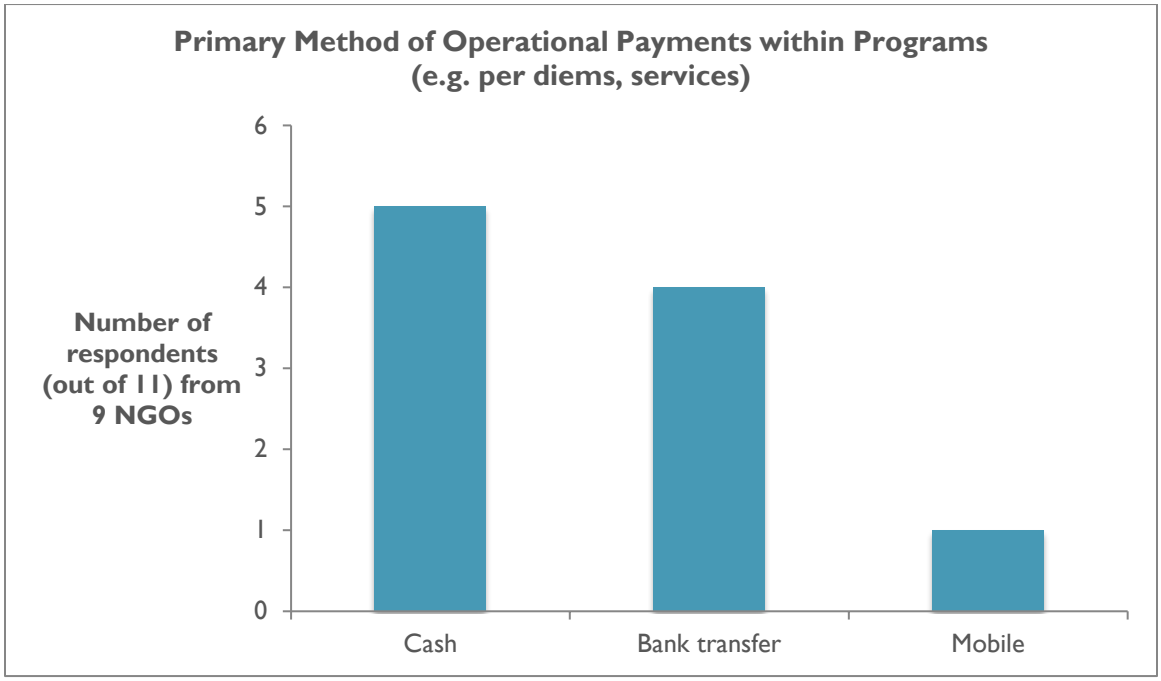
When asked why respondents moved from cash to mobile money in their operations or activities, the majority (50 percent), cited transaction traceability, followed by 40 percent who cited security precautions.

The four charts below highlight specific responses by IPs in Niger regarding mobile money, use of cash, and knowledge of DFSP. There were 11 respondents from 9 international NGOs that completed the survey for Niger.

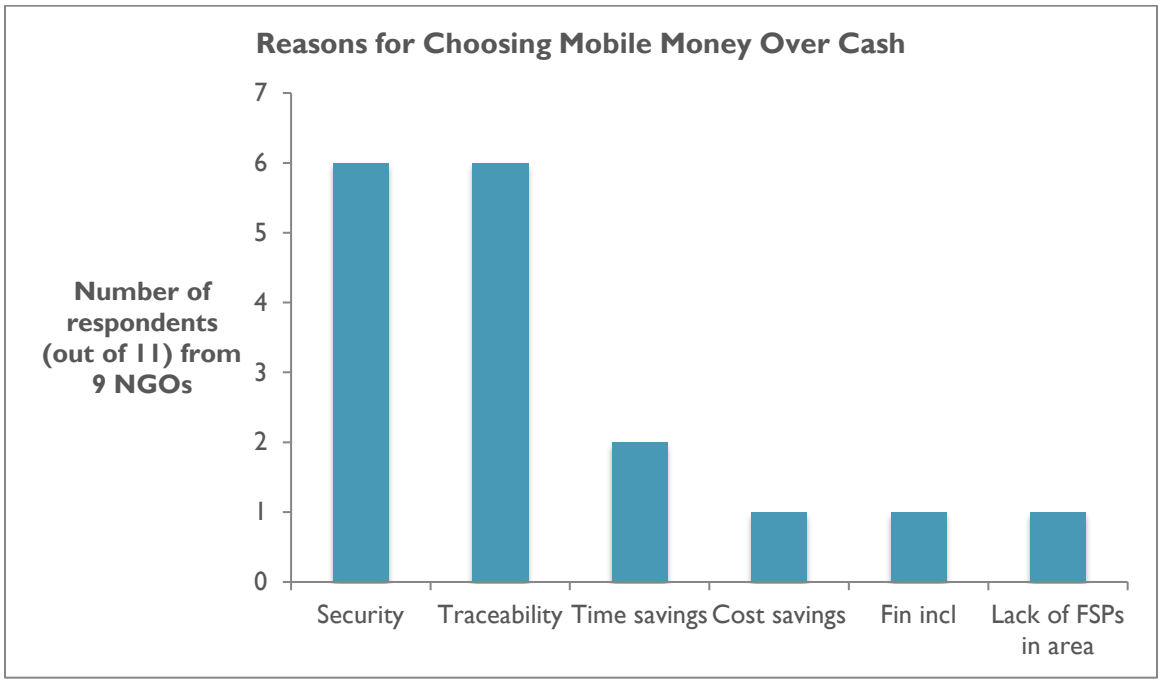
The knowledge of DFS among respondents was mixed, and just under 50 percent fell right in the middle, ranking themselves a 3 out of 5.



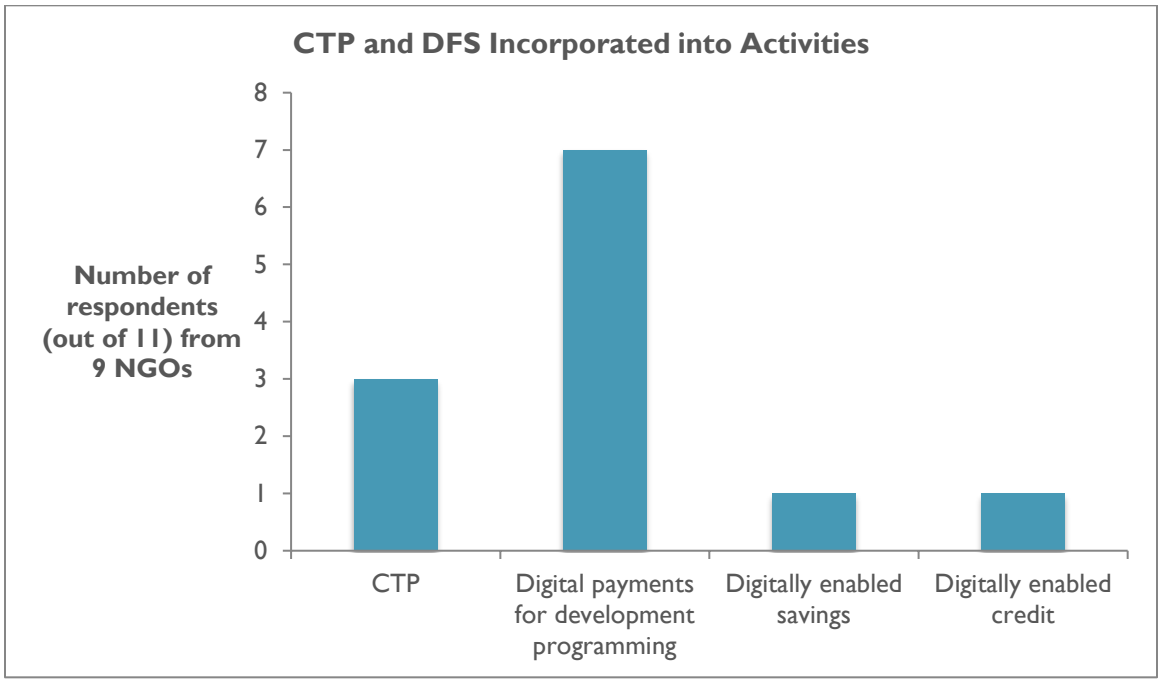
Just under half of respondents primarily use cash for payments in their own operations and programming; only one respondent said mobile was their primary payment method, which leaves quite a lot of room for supporting IPs to try to transition cash payments.



Similar to the combined results with Burkina Faso, most IPs in Niger that transitioned payments from cash to digital did so for reasons of security and traceability.



Despite most IPs primarily using cash in their operations and programming, over 60 percent said they do use digital payments for development programming. This suggests that they may use it but it is not the primary means of payment. Twenty-seven percent are using cash transfers, which suggests more use of cash.



APPENDIX B: ACTIVITIES COMPLETED

Pre-TDY:

- Conducted background research on relevant activities as well as the digital ecosystem in the region and specific to Niger.
- Conducted a pre-TDY survey, asking implementing partners in Burkina Faso and Niger about their current and planned use of digital as well as key challenges to digital usage.

During TDY (in-country):

- Offered to provided in-briefing to USAID/Niger team to share initial findings from background research, to invite team members to participate in scheduled meetings, and to solicit final input and feedback on the TDY. USAID/Niger post declined.
- Held a series of meetings with key stakeholders, including IPs, USAID/Washington, regional, and local Mission staff, donors, private service providers, government representatives, and others as listed in Appendix D. (Interview schedules in Appendix C.)
- Provided summary out-briefing regarding TDY findings and recommendations.

Post TDY:

- Drafted umbrella document summarizing findings and recommendations across both countries, as requested by USAID/BFS.
- Drafted out-briefing for work in Niger (similar document was prepared in December for Burkina Faso).
- Conducted out-briefing with SRO and USAID/Washington as requested.
- Prepared (this) trip report, recommendations, and potential next steps.

APPENDIX C: MEETING SCHEDULE

DATE	TIME	MEETING
Thu February 21	9:30 - 10:15	Viamo
	11:00 - 12:00	Catholic Relief Services (CRS)
	1:30 - 3:00	VIST: Agricultural Show of Niger
	3:30 - 4:30	Airtel
Fri February 22	9:00 - 10:00	NovaTech
	12:00 - 1:00	World Vision International
	2:30 - 3:30	CIPMEN (Centre Incubateur des PME au Niger)
	4:00 - 5:00	UNHCR (UN Refugee Agency)
Sat February 23	10:30 - 12:00	Mooriben (FUGPN - Federation des Unions de Groupments Paysans du Niger)
	12:00 - 2:00	VIST: Agricultural Show of Niger
Mon February 25	12:30 - 1:30	Equal Access
	1:00 - 2:00	Capital Finance
	2:00 - 3:00	ANSI (National Agency for Information Society)
	3:30 - 4:30	Mercy Corps
	4:30 - 5:30	Réseau des Chambres d'Agriculture (RECA)
Tue February 26	9:00 - 10:00	UN Capital Development Fund (UNCDF)
	11:30 - 12:30	Save the Children (Project: DFSA-WADATA)
	3:30 - 4:30	Orange Money
	5:00 - 6:30	AL IZZA
Wed February 27	9:00 - 10:00	CARE
	10:30 - 11:30	MECREF (Mutuelle d'épargne et de crédit des femmes)
	10:30 - 11:30	MCC (Millennium Challenge Corporation)
	12:00 - 1:00	Women & ICT Network
	3:00 - 4:00	Lutheran World Relief (Project: 12/12 Alliance)
	4:30 - 5:30	World Bank (Project: Climate Smart Agriculture Support)
	4:30 - 5:30	FLOOZ/MOOV
	7:00 - 9:00	CRS (Project: Girma)
Thu February 28	8:00 - 9:00	Tech House/GeoAnalytics Center
	9:00 - 10:00	2mInvest

DATE	TIME	MEETING
	10:30 - 11:30	BAGRI (Banque Agricole du Niger)
	11:00 - 12:00	International Livestock Research Institute (ILRI) (Project: Innovation Lab for Livestock Systems) (phone call)
	1:30 - 2:30	AP/SFD (Association Professionnelle des Systèmes Financiers Décentralisés du Niger/Professional Association of MFIs)
	3:00 - 4:00	NCBA-CLUSA (Project: REGIS-ER)
	3:00 - 4:00	FAO (Food and Agriculture Organization of the UN)
	4:30 - 5:30	City Taps
Fri March 1	9:30 - 10:00	International Media Support
	9:30 - 10:30	UNOCHA (Office for the Coordination of Humanitarian Affairs) (Project: Cash Working Group)
	10:30 - 11:30	Population Services International (PSI)
	12:00 - 1:00	World Food Program
	12:00 - 1:00	Tech-Innov
	1:30 - 2:00	MicroSave
	2:30 - 3:30	CNFA (Project: REGIS-AG)
	4:00 - 5:30	Niger Poste
Sat March 2	11:00 - 12:30	InnovELLE
	12:30 - 2:30	USAID Post Out-Brief Lunch
Wed March 6	11:00 - 12:00	AGRHYMET Regional (remote meeting)
Wed March 6	Via Email	World Bank (Niger Smart Villages for Rural Growth and Digital Inclusion, P167543)
Mon March 11	4:00 - 5:00	World Bank (Project: First Initiative)
Wed March 13	10:00 - 11:00	AFD (French Development Agency)
Fri March 15	9:00 - 10:00	City Taps

APPENDIX D: INTERVIEWEES

Contact names and information have been omitted because this is a public document. If a reader would like this information, please contact Katie Hauser (khauser@usaid.gov) and she will request permission to release it.

Implementing Partner Organizations

CARE
Catholic Relief Services
CNFA (Project: REGIS-AG)
Equal Access
FAO (Food and Agriculture Organization of the UN)
International Livestock Research Institute (ILRI) (Project: Innovation Lab for Livestock Systems)
International Media Support
Lutheran World Relief (Project: 12/12 Alliance)
Mercy Corps
MicroSave
NCBA-CLUSA (Project: REGIS-ER)
Population Services International (PSI)
Save the Children (Project: DFSA-WADATA)
UN Capital Development Fund (UNCDF)
UNHCR (UN High Commission for Refugees)
UNOCHA (Office for the Coordination of Humanitarian Affairs) (Project: CALP)
Viamo
World Food Program
World Vision International

Donor Organizations (not UN)

AFD (French Development Agency)
MCC (Millennium Challenge Corporation)
World Bank (Project: Climate Smart Agriculture Support)
http://projects.worldbank.org/P153420?lang=en
World Bank (Project: First Initiative)
World Bank (Project: Niger Smart Villages for Rural Growth and Digital Inclusion)

Public Sector

AGRHYMET (Regional)
ANSI (National Agency for Information Society)
BAGRI (Banque Agricole du Niger)
Niger Poste (Postal Service)

Private Sector

Airtel
AL IZZA
Capital Finance
CIPMEN (Centre Incubateur des PME au Niger)
City Taps

FLOOZ/MOOV
InnovELLE
MECREF (Mutuelle d'épargne et de crédit des femmes)
NovaTech
Orange Money
Tech House/GeoAnalytics Center
Tech-Innov
Women & ICT Network
2mInvest

Other Non-Governmental Organizations

AP/SFD (Association Professionnelle des Systèmes Financiers Décentralisés du Niger/Professional Association of MFIs)
Mooriben (FUGPN - Federation des Unions de Grupments Paysans du Niger)
Réseau des Chambres d'Agriculture (RECA)

Organizations Unable to Meet With

ABC Ecologie
Airtel (Value Added Services Unit)
Association pour la Redynamisation de l'Elevage au Niger (AREN)
Bank of Africa (BOA) Niger
Chemonics and Tetra Tech (Project: SERVIR)
Direction de la Meteorologie Nationale
Drone Africa Service
Ecobank
Enabel (Belgian Development Agency)
European Union (EU)
FEWS NET (Famine Early Warning Systems Network) Project
GIZ (German Society for International Cooperation)
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
International Fund for Agricultural Development (IFAD)
Orange (VAS)
Oxfam
Système d'Information sur les Marchés Agricoles (SIMA) Market information system
UNICEF (UN Children's Fund)

APPENDIX E: "PARKING LOT RECOMMENDATIONS"

The following five recommendations were proposed by the assessment team in the out-brief for Niger but USAID/Washington and SRO teams recommended not including them in the final report. We include them here for reference.

1. Commission a Digital Action Plan
2. Gender inclusion
3. Market research
4. Strengthen capacity of end users and use data to empower them

1. COMMISSION A DIGITAL ACTION PLAN

Commission a Digital Action Plan for an approach to holistic digital solutions for RISE II to support project goals and ensure that digital is integrated as a tool for long-term empowerment of program participants. It could help guide future program design and IPs' work plans as they start up after awards are made. This could be for all participants together or focused on just one or two.

2. GENDER INCLUSION

Given the wide gender gap in Niger in many aspects of life (including the use of mobile money and most likely digital devices), help IPs address the gap as they design and use digital tools with the help of USAID's Gender and ICT Toolkit (from the USAID Global Development Lab). Niger could also draw on the MIT/CITE research being done in Burkina Faso regarding the DFS gender gap or even commission similar research for Niger.

3. MARKET RESEARCH

Consider commissioning market research as a public good regarding target RISE II users' behaviors, abilities, needs, and preferences regarding current and future use of digital services (including DFS) so IPs can shape such services better and encourage service providers to design and develop relevant products and services.

4. STRENGTHEN CAPACITY OF END USERS AND USER DATA TO EMPOWER THEM

This is a two-part recommendation: the first is general capacity building, the second focuses on using data to empower farmers. First, interviewees reported that a key constraint to success with digital tools (especially DFS and mobile payments) was low functional literacy, and also relatively low *digital literacy and numeracy*. Encourage IPs to integrate practical ways to address this and use creative strategies (e.g. pay-as-you-go or relevant use cases) to improve access and use of digital devices, especially for women.

Second, data in digital form can be used to *empower* farmers individually or in groups. IPs are already collecting farmer profile data for M&E. This data (and more) can be put in farmers' hands to empower them to learn more about how their farming works, how their yields compare with others, and what information they need to increase yields. Start slowly with only a few pieces of data so farmers can gradually master how to use it. USAID has a document to help: Digital Farmer Profiles: Reimagining Smallholder Agriculture.[76] USAID/BFS can help shape this work. See also this case study from Senegal.[77]

[76] https://www.usaid.gov/sites/default/files/documents/15396/Data_Driven_Agriculture_Web.pdf

[77] https://www.usaid.gov/digitalag/naata-mbay-case-study