



# HARNESSING DIGITAL TECHNOLOGY FOR CASH TRANSFER PROGRAMMING IN THE EBOLA RESPONSE

Lessons Learned from USAID/Office of Food for Peace Partners' West Africa Ebola Responses (2015–2016)



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## GLOSSARY<sup>1</sup>

**Delivery mechanism:** Means of delivering a cash or voucher transfer (e.g. smart card, mobile money transfers, cash in envelopes, etc.).

**Direct cash/cash in hand:** Physical cash/currency is directly given to the beneficiary by hand. This might be by the implementing agency or by a contracted service provider.

**E-transfer:** A digital transfer of money or vouchers from an implementing agency to a program participant. E-transfers provide access to cash, goods and/or services through mobile devices, electronic vouchers or cards (e.g. prepaid, ATM, credit or debit cards). E-transfer is an umbrella term for e-cash and e-vouchers.

**E-wallet:** Software that resides on a smart card or mobile phone SIM card, and holds or can receive electronic cash and a digital signature.

**Mobile money:** Mobile money uses mobile phones to access financial services such as payments, transfers, insurance, savings, and credit. It is a paperless version of a national currency that can be used to provide humanitarian e-cash payments.

**Digital technology:** refers to the use of an array of devices used to facilitate CTP, including SIM cards and mobile phones for e-transfers; and tablets, mobile phones or computers for data collection.

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<sup>1</sup> Definitions are from the Glossary of Cash Transfer Programming, available at: <http://www.cashlearning.org/resources/glossary>



## ACRONYMS

<b>ACDI/VOCA</b>	Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance
<b>CaLP</b>	Cash Learning Partnership
<b>CFW</b>	Cash for Work
<b>CRS</b>	Catholic Relief Services
<b>CTP</b>	Cash Transfer Programming
<b>CWG</b>	Cash Working Group
<b>EU</b>	European Union
<b>EVD</b>	Ebola Virus Disease
<b>ICT</b>	Information and Communication Technology
<b>LTA</b>	Liberian Telecommunications Authority
<b>NaCSA</b>	National Commission for Social Action (Sierra Leone)
<b>NGO</b>	Non-governmental Organization
<b>PCI</b>	Project Concern International
<b>SOP</b>	Standard Operating Procedure
<b>UCT</b>	Unconditional Cash Transfer
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>US</b>	United States
<b>USAID/FFP</b>	United States Agency for International Development Office of Food for Peace
<b>WFP</b>	World Food Programme

Unless otherwise stated, dollar amounts are in US dollars.

## EXECUTIVE SUMMARY

Globally, the adoption of digital technology has grown alongside the increase in cash transfer programming (CTP), often through the use of e-transfers, in part because of the potential gains in accountability, efficiency (cost and time) and effectiveness. The 2015 High Level Panel on Cash Transfers recommended delivering cash digitally where possible.<sup>2</sup> However, evidence from some challenging contexts suggests that where service providers are inexperienced and infrastructure is weak, e-transfers may not be the best option.<sup>3</sup> This is confirmed by the experience of United States Agency for International Development/Office of Food for Peace (USAID/FFP) partners in Sierra Leone and Liberia in using CTP in the response to the Ebola crisis of 2014–2015. Nevertheless, this case study shows that even where e-transfers are not the best option, digital technology can be an advantageous tool to track payments, confirm beneficiary identity and improve monitoring systems.

## OBJECTIVE AND METHODOLOGY

This case study explores the use of digital technology by USAID/FFP partners to deliver unconditional cash transfers (UCT) in Sierra Leone and Liberia to address food insecurity in the wake of the 2014–2015 Ebola crisis. After a brief overview of the context and the use of digital technology in the responses outside of CTP in Section 1, Sections 2 and 3 provide a critical review of the USAID/FFP partners' experience with digital technology in Liberia and Sierra Leone before and during the Ebola crisis. Section 4 sets out the key lessons learned and the recommendations arising from the experiences across both countries. Section 5 assesses the changes in e-transfer capacity in each country as a result of the crisis, and is followed by conclusions in Section 6.

This Case Study is limited to FFP-funded projects with a cash transfer component implemented during 2015–16. It does not include FFP-funded projects without a CTP component, CTP projects funded by other actors during the same period,<sup>4</sup> or activities conducted by FFP partners after the end of 2016.

The findings are based on field research conducted by the Cash Learning Partnership (CaLP) in 2016; this included 20 focus group discussions, 35 interviews with USAID/FFP partners and other key informants, and 4 learning events.

## LESSONS LEARNED AND RECOMMENDATIONS

Although e-transfers were not achieved at scale in the USAID/FFP Ebola recovery program, the use of digital technology in CTP did positively contribute to what was an ambitious humanitarian response. The lessons learned are as follows:

- **Ensure response design accommodates local realities and has sufficient flexibility to allow for further adaptation.**
  - All CTP actors should invest in a thorough understanding of digital technologies, especially e-transfer.
  - NGOs should prioritize the use of offline digital platforms to mitigate gaps in network coverage in the country of the response.
  - Anticipate challenges posed by local infrastructure weakness, and incorporate adequate mitigation measures early in project planning.
- **Lead complete and robust assessment of service providers' capacity**
  - NGOs should develop standardized assessment tools to assess service providers' capacities.

<sup>2</sup> High Level Panel on Humanitarian Cash Transfers (2015) *Doing Cash Differently: How cash transfers can transform humanitarian aid* (ODI: London): 25.

<sup>3</sup> Sara Murray and Fidelis Hove (2014) *Cheaper, Faster, Better? A case study of new technologies in cash transfer from the Democratic Republic of Congo* (Mercy Corps: Portland, Oregon): 29.

<sup>4</sup> Twelve other organizations in Liberia and four in Sierra Leone implemented CTP at varying scales and durations. This includes an additional project by WFP, which was funded by USAID/FFP in the first phase of the response.



- **Ensure strong coordination with service providers**
  - CWG (Cash Working Group) should involve service providers at the earliest stage of the response.
  - CWG members should undertake collective bargaining with service providers.
- **Build beneficiary digital literacy through sensitization and awareness-raising**
  - Design awareness-raising sessions on digital technologies that are relevant to all stakeholders and are dynamically updated.
- **Ensure sufficient monitoring of service providers**
  - NGOs should ensure that robust distribution monitoring processes are put in place where direct cash-style payments are outsourced to private sector agents.

## I INTRODUCTION

The global growth of cash transfer programming (CTP) to provide humanitarian assistance has been characterized by an increase in the use of digital technology at various stages of project implementation, including beneficiary registration and transfer delivery. The 2015 High Level Panel on Cash Transfers highlighted the need to capitalize on the private sector's experience in digital payments, and recommended that agencies should 'where possible deliver digitally'.<sup>5</sup> This was reinforced in 2016 by the Barcelona Principles for Digital Payments in Humanitarian Response which set out eight principles to guide the implementation and design of digital payments programs.<sup>6</sup> The push to incorporate digital technology into the delivery of CTP is often underpinned by the aim to increase efficiency (time and cost) and effectiveness. This is balanced against the need to protect beneficiary data and reduce exposure to risk across the board.

However, there is evidence showing that the incorporation of digital technologies in challenging environments can in fact increase CTP implementation times, and can be more expensive and potentially less reliable.<sup>7</sup> The relative benefits of using digital technology are often dependent on contextual and project design factors however, their inclusion should never come at the cost of compromising the humanitarian imperative. Experience and learning to date have frequently resulted from the willingness of humanitarian actors (implementing agencies, donors and financial service providers) to take some risks and innovate to determine what works, where and how.

### I.1 STUDY OBJECTIVE AND METHODOLOGY

This case study documents the use of digital technology in the CTP implemented by seven partner organizations of the United States Agency for International Development / Food for Peace (USAID/FFP) in Liberia and Sierra Leone, in response to the food crisis connected to the Ebola outbreak of 2014-15. The study aims to highlight how digital technology was used during the response: it documents the type of technology employed, analyzes its use, and identifies factors that contributed to its successes and challenges. The case study also draws recommendations for the use of digital technology in future interventions in West Africa and beyond.<sup>8</sup>

The findings are based on field research conducted by the Cash Learning Partnership (CaLP) in July and August 2016; this included 20 focus group discussions (13 in Liberia; 7 in Sierra Leone) with 367 people (70 percent women). CaLP also led 29 interviews with USAID/FFP partners and other key informants (representatives from NGOs, government agencies, service providers and USAID/FFP) in July and August 2016. An external consultant conducted another round of in-person interviews in October 2016 with six key stakeholders, mainly service providers. As part of the research process, learning events were held in Monrovia, Liberia in July and October 2016, and in Freetown, Sierra Leone in August and October 2016, each attended by between 15 and 25 people.<sup>9</sup>

<sup>5</sup> [www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9828.pdf](http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9828.pdf)

<sup>6</sup> The Barcelona Principles, February 2016, [https://static.globalinnovationexchange.org/s3fs-public/asset/document/Digital-Payments-Humanitarian-Principles\\_0.pdf?BvMH5s\\_7H6psd5btsC7ZIS3v8KBx4Xdj](https://static.globalinnovationexchange.org/s3fs-public/asset/document/Digital-Payments-Humanitarian-Principles_0.pdf?BvMH5s_7H6psd5btsC7ZIS3v8KBx4Xdj)

<sup>7</sup> Murray and Hove (2014).

<sup>8</sup> CaLP, with support from USAID/FFP, has also produced other materials related to the response, including Cash Transfers for Food Security in epidemics: *A review of Food for Peace Response to the EVD crisis* (Sierra Leone, Liberia), a video on those projects and a CTP outcomes analysis.

<sup>9</sup> Attendees included staff from NGOs, USAID/FFP, service providers and UN agencies.

## I.2 DEFINING DIGITAL TECHNOLOGY IN THE CTP RESPONSE

- Digital technology in this report refers to the use of an array of platforms, systems and devices to facilitate CTP at different stages in the project cycle, including: SIM cards for cash transfer delivery, information management and beneficiary identification.
- Mobile phones for delivering e-transfers.
- Tablets, phones or computers for data collection (e.g. project monitoring data).

While the initial intention of nearly all the partners was to use mobile money,<sup>10</sup> in practice only seven percent of all transfers were ultimately delivered through this mechanism.<sup>11</sup> However, all the partners used digital technology to enhance CTP implementation, information management, beneficiary tracking, data collection and some e-transfers.

## I.3 CONTEXT OF THE PROJECTS

The Ebola outbreak in West Africa started in Guinea in December 2013, and cases were confirmed in Liberia and Sierra Leone in March and May 2014 respectively. Sierra Leone was declared Ebola-free on 7 November 2015<sup>12</sup> and Liberia on 9 June the following year.<sup>13</sup> By then, an estimated 28,000 people had been infected and over 11,000 had died in the two countries. The Ebola outbreak not only left death and devastation in its wake; it also had severe social and economic consequences.

To stem the spread of the disease, international travel and trade bans were imposed and airlines stopped servicing the countries. At the local level, restrictions on movement, quarantines and fear exacerbated the impact of the epidemic on food production, market functionality and livelihoods. Ebola struck Liberia and Sierra Leone at a critical point during the rice planting season. In that context, while some households were able to plant, most were unable to reach their farms to tend their crops due to quarantines and other travel restrictions and eventually lost them.

In countries where most of the population are smallholder farmers who are heavily dependent on agricultural production for their livelihoods, the consequences were severe. Food prices spiked, and household incomes dropped. By September 2014, prices of cassava and palm oil were up by 30 and 29 percent respectively.<sup>14</sup> Households were forced into debt to buy food and resorted to skipping meals. Although the trade and travel bans were, for the most part, lifted by the end of January 2015, market functionality improved more slowly as local movement restrictions, reduced purchasing power and fear of the epidemic continued to inhibit recovery.<sup>15</sup>

<sup>10</sup> According to the applications to USAID/FFP, all partners with the exception of Project Concern International (PCI) and ACDI/VOCA Liberia intended to use this delivery mechanism for the cash transfers.

<sup>11</sup> Radice (In press).

<sup>12</sup> Reliefweb (n.d.). <https://reliefweb.int/disaster/ep-2014-000041-gin>

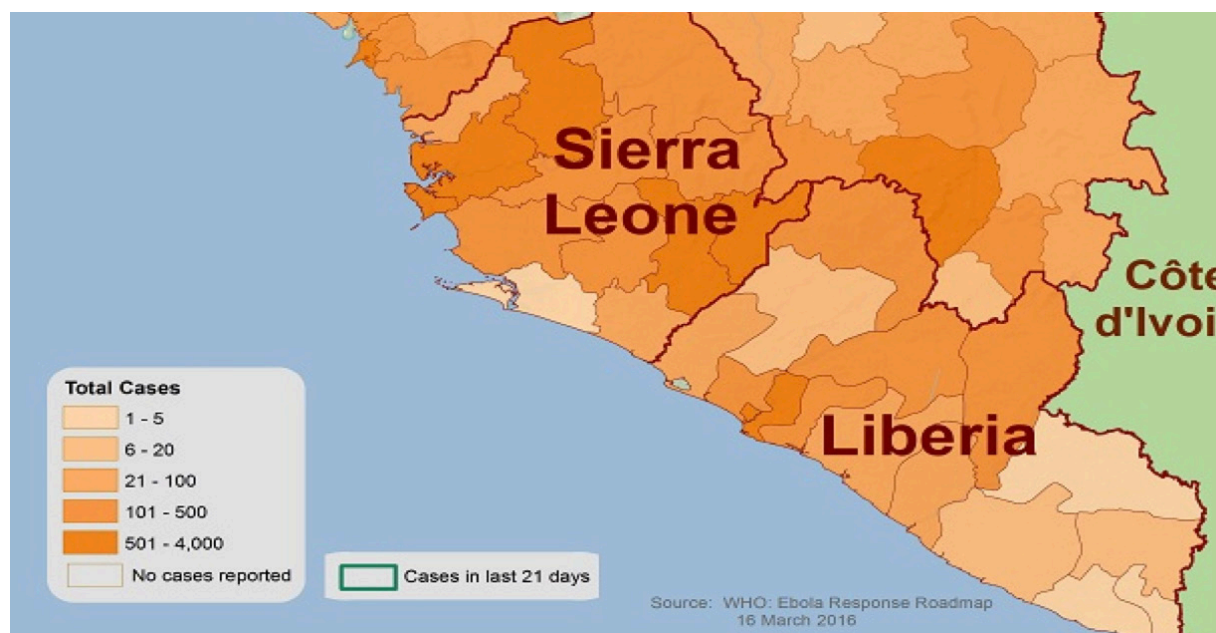
<sup>13</sup> J.H. Giahuye (2017).

<sup>14</sup> World Food Programme (2014).

<sup>15</sup> FEWS NET (2015).



Map 1: Total number of Ebola cases in Liberia and Sierra Leone by county/district



## I.4 USE OF DIGITAL TECHNOLOGY OUTSIDE OF CTP IN THE EBOLA RESPONSE

Early in the Ebola crisis, digital technology was explored for its potential to assist efforts to contain, analyze and address the critical needs that followed the emergency. It was seen as an essential tool to tackle an unforeseen crisis that was advancing at a rapid rate. It is understood that the countries' very basic level of digital technology use, along with weak infrastructure (e.g. gaps in reliable electricity and/or digital connectivity; lack of baseline data, including commonly used 'unique citizen identifiers', and comprehensive and accessible geographic maps; and the predominance of non-machine-readable data) slowed the capacity of actors to respond to the crisis.<sup>16</sup> Despite these challenges, those in the front line of the Ebola response were able to incorporate digital technology by using various digital platforms at health centers, mobile phones for community mobilizers, and internet-based technologies such as Skype and WhatsApp for communication.<sup>17</sup>

NetHope<sup>18</sup> and the US Global Development Lab completed an extensive desk review on the use of information and communication technology (ICT) in the Liberia Ebola response in October 2014.<sup>19</sup> The study took a comprehensive look at the feasibility of digital cash transfers. Recommendations were categorized into emergency response, mitigation and recovery. They suggested that digital payments needed detailed diagnostics and coordination at a regional level across the affected areas. In the mitigation and recovery phase, they recommended investment in card-based payment systems to pay health workers. When the report was written in 2014, the priority for cash transfer payments was to ensure health workers were paid and health centers were staffed. While the focus of the study was on Liberia, it clearly laid out many of the ICT-related challenges facing in both Liberia and Sierra Leone.

During this crisis, digital technology was used to pay health workers in Liberia and Sierra Leone, supported by the United Nations Development Programme (UNDP) (see Section 3). This experience served as the basis of analysis for USAID/FFP and its partners in planning their CTP response (see Section 2.1).<sup>20</sup> It is notable that many of these payments were made in larger urban areas, which had better ICT infrastructure and support than the remote, rural communities later targeted by USAID/FFP partners with CTP.

<sup>16</sup> Larissa Fast and Adele Waugaman (2016).

<sup>17</sup> Ibid. WhatsApp is a smartphone application that transmits text, voice and images through a phone, via the Internet.

<sup>18</sup> NetHope is an American consortium of NGOs that specializes in improving IT connectivity among humanitarian organizations in developing countries and areas affected by disaster.

<sup>19</sup> NetHope Global Broadband and Innovations Alliance (GBI) (2014) *Information and Communications Technology Response to the Liberia Ebola Crisis: Desk Review and Recommendations for Private Sector Engagement*. Available at [www.cashlearning.org/downloads/usaiddliberiaictdeskreviewfinalnov414.pdf](http://www.cashlearning.org/downloads/usaiddliberiaictdeskreviewfinalnov414.pdf)

<sup>20</sup> FFP partners interviews - July/August 16

## 2 CASH TRANSFER PROGRAMMING IN THE EBOLA RESPONSE

### 2.1 USAID/FFP IN LIBERIA AND SIERRA LEONE

The US government's Ebola response strategy had four pillars: controlling the epidemic, managing the secondary consequences of the outbreak, building coherent leadership and operations, and ensuring global health security.<sup>21</sup> In line with the second pillar, managing the secondary consequences of the outbreak, USAID/FFP funded a set of projects which sought to 'address the food security impacts of the Ebola crisis in ways that supported and promoted recovery'.<sup>22</sup> Response analyses done by USAID/FFP partners and other stakeholders in the wake of the crisis indicated that CTP was an appropriate and feasible modality to respond to the food security crisis; as a result, nine of those projects (four in Liberia and five in Sierra Leone) included a cash transfer component (see Table 1).

By the end of 2016, over \$27 million had been distributed through some form of CTP to a total of 95,081 households (56,667 households in Liberia and 38,414 in Sierra Leone). USAID/FFP partners employed a range of CTP modalities to tackle the food security crisis, including unconditional cash transfers (UCT), agricultural input vouchers, cash for work (CFW), and conditional cash transfers (CCT). All seven partners utilized UCTs as their primary form of CTP. Out of the total \$27 million transferred to beneficiaries, around \$26.6 million was transferred through UCTs (\$14,737,304 in Liberia and \$11,925,390 in Sierra Leone) during 2015 and 2016.

**Table 1: USAID/FFP partners by country**

Liberia	Sierra Leone
ACDI/VOCA	ACDI/VOCA
Mercy Corps	CARE
Project Concern International (PCI)	Catholic Relief Services (CRS)
Save the Children	Save the Children
	World Vision

Initially, nearly all USAID/FFP partners intended to use mobile money to deliver cash transfers to beneficiaries.<sup>23</sup> In the end, for reasons explored below, e-transfers were not a viable mechanism for reaching most beneficiaries, and direct cash was used as the delivery mechanism for 93 percent of UCT across both countries. Only Save the Children Liberia was able to reach all of its beneficiaries, for the duration of the project, using e-transfers.<sup>24</sup> Other partners relied exclusively on direct cash transfers or employed a mix of delivery mechanisms. See Table 2 for details of UCT distributions by partner and country.

<sup>21</sup> Documentation Report 'Cash Transfer for Food Security in Epidemics: A review of the USAID Food For Peace Response to the Ebola crisis in Liberia and Sierra Leone', Holly Radice, June 2017

<sup>22</sup> Communication with Mette Karlsen of USAID/FFP, 31 March 2017.

<sup>23</sup> According to the applications to USAID/FFP, all partners with the exception of PCI and ACDI/VOCA Liberia intended to use this delivery mechanism for the cash transfers.

<sup>24</sup> Based on partners' reports (annual, quarterly and other reports).

Table 2: Unconditional cash transfer distributions by partner and country

	No. Of Households	No. Of Transfers	Amount (USD)	Delivery Mechanism	Service Provider	Geographic Areas
<b>Liberia</b>						
<b>ACDI/VOCA</b>	9,895	6	\$50	Direct cash E-transfer <sup>25</sup>	Ecobank Lonestar MTN	Bong Nimba
<b>Mercy Corps</b>	30,077	6	\$42	Direct cash <sup>26</sup> Financial institution <sup>27</sup> E-transfer <sup>28</sup>	Ecobank Cellcom Lonestar	Lofa Margibi Montserrado
<b>PCI</b>	6,918	6	\$50	Direct cash	N/A	Bomi Grand Cape Mount
<b>Save the Children</b>	5,000	7	\$50	E-transfer	Lonestar MTN	Bong Margibi
<b>Total HH</b>	<b>51,890</b>					
<b>Sierra Leone</b>						
<b>ACDI/VOCA</b>	13,584	11	\$30	Direct cash	Splash	Bombali Kailahun Tonkolili
<b>Care</b>	5,000 <sup>29</sup>	11	\$30 <sup>30</sup> \$65 <sup>31</sup>	E-transfer Direct cash	Airtel <sup>32</sup> Splash	Bombali Tonkolili
<b>CRS</b>	4,437	5	\$30	Direct cash	Splash	Kenema
<b>Save the Children</b>	7,937	17 for 6,455 HH 7 for 1,492 HH	\$30	Direct cash	Splash	Kailahun
<b>World Vision</b>	5,324	10	\$30	E-transfer Direct cash	Airtel <sup>33</sup> Splash	Porto Loko
<b>Total HH</b>	<b>36,282</b>					

<sup>25</sup> Between 1,188-1,083 households<sup>26</sup> Three times<sup>27</sup> Three times for 18,000 households<sup>28</sup> For 640 households in West Point, Monrovia<sup>29</sup> Six households received only eight transfers<sup>30</sup> For 10 months<sup>31</sup> For one month; as the 11th transfer was for \$15<sup>32</sup> Two transfers for 1,920 households<sup>33</sup> One transfer for 2,575 households

## 3 IMPLEMENTATION CONTEXT AND RATIONALE FOR USING DIGITAL TECHNOLOGY

### 3.1 GENERAL OPERATIONAL CONTEXT FOR DIGITAL TECHNOLOGY AND CTP

At first glance, it is surprising that e-transfers were used in only seven percent of UCT made by USAID/FFP partners in Liberia and Sierra Leone during the Ebola response. Grant proposals and awards indicate that USAID/FFP and nearly all of its partners were committed to using e-transfers from the outset. Furthermore, the continued presence of Ebola virus disease until November 2015 in Sierra Leone and June 2016 in Liberia should have provided overwhelming incentives for the use of e-transfers relative to direct cash distribution. Ultimately, however, weak infrastructure, lack of awareness among beneficiaries and operational challenges prevented the use of e-transfers at scale.

The implementing environment for CTP was very challenging. USAID/FFP partners had no previous CTP experience in the countries and had limited capacity in Liberia and Sierra Leone, requiring steep learning curves. Even though six of the FFP partners are CaLP members with CTP capacity within their organizations, most of the country offices lacked SOPs and staff with relevant skills; relying on their regional offices or global headquarters to strengthen their capacity through deployments and/or remote support.<sup>34</sup>

In both countries, there were logistical and structural problems related to basic infrastructure, systems and services (e.g. liquidity for service providers, poor roads, weak mobile network coverage, and fragmented banking services and national financial regulations). The potential impact of the high illiteracy rate, the lack of digital literacy and familiarity with mobile money on the project's roll-out was underestimated. Even more importantly perhaps, was the shadow Ebola cast on the countries during the height of the outbreak, creating an environment of great fear beset by rumor and uncertainty.

Given the modest relevant experience, inadequate facilities and limited number of service providers, the potential for e-transfers was in fact very limited, meaning USAID/FFP partners had to be flexible in their choice of delivery mechanisms. Nevertheless, USAID/FFP partners embraced the use of digital technology as a key aspect of their interventions throughout the project cycle. Service providers, government agencies and NGOs worked together to find the most appropriate technology to best serve beneficiaries. Innovation and adaptability were at the core of project design, and both Liberia and Sierra Leone offered different opportunities to scale up this ambitious response. Five service providers were contracted to support the implementation of CTP at various stages – verification of beneficiaries' identification, cashing-out, monitoring and reporting. These service providers were Ecobank, MTN Lonestar and Cellcom in Liberia; and Splash and Airtel in Sierra Leone (see Annex 3).

<sup>34</sup> Documentation Report 'Cash Transfer for Food Security in Epidemics: A review of the USAID Food For Peace Response to the Ebola crisis in Liberia and Sierra Leone', Holly Radice, June 2017

### 3.2 EXPERIENCE WITH E-TRANSFERS IN LIBERIA BEFORE AND DURING THE EBOLA CRISIS

Before the 2014-2015 Ebola crisis, financial service providers' experience with e-transfers in Liberia was very limited. The country's first e-transfer service was launched by Lonestar MTN, in partnership with Ecobank, in 2012.<sup>35</sup> In 2016, Cellcom (another mobile service provider) launched its own mobile money service.

At the time of the 2014-2015 Ebola crisis, the use of Lonestar MTN's e-transfer service and its capacity are best described as nascent.<sup>36</sup> The Government of Liberia partnered with Lonestar MTN in 2014 to pilot the use of mobile money to deliver payments under the Social Cash Transfer scheme, which is implemented by Liberia's Ministry of Gender, Children and Social Protection. As part of the pilot, beneficiaries in Tubmanburg City, Harper and Pleebo were paid using mobile money.<sup>37</sup> During the Ebola crisis, UNDP digitized 58 percent of its payments in Liberia through its 'Payments Programme for Ebola Response Workers,' through bank payments. However, no payments were made using mobile money.<sup>38</sup> The International Committee of the Red Cross in Liberia did use mobile money to make payments to 622 Ebola survivors on discharge from treatment centers.<sup>39</sup>

Despite the relative youth of mobile money services in Liberia, partners' initial assessments found suppliers' capacity, in terms of agents and cash flow capacity, sufficient to meet program demands. Ultimately, however, the viability of pure e-transfers using mobile money were limited by inadequate mobile phone network coverage in project areas and the small number of suppliers' agents in targeted communities. In response to these challenges, partners in Liberia worked with service providers to develop an alternative to pure e-transfers while still garnering some of benefits offered by digital technology. Save the Children and ACDI/VOCA used a 'clustering' approach: establishing a series of pay points, each within 5 km of beneficiary communities. Save the Children was able to reach over 100 communities through 44 pay points. On appointed days, beneficiaries would gather at the pay point and present their SIM card to an agent. The agent would insert the card into a phone to process the electronic transfer and provide the beneficiary with a direct cash payment.

While this approach cannot be classified as a 'pure' e-transfer, because beneficiaries were not able to withdraw the money wherever and whenever they wanted, it did provide some benefits. It ensured privacy of beneficiary information, improved data protection and instantly transferred payment data to the service providers' digital platform, reducing the risk of some forms of fraud and enabling the quick production of a reconciliation report for the partner. The risks associated with transporting large amounts of cash (including theft and loss) were transferred to the service providers. Overall, beneficiaries appreciated the clustering approach, although in some cases the distance they had to travel to pay points caused problems for elderly recipients.

In 2016, Mercy Corps started online e-transfers for 640 beneficiaries in West Point, Monrovia, using both Lonestar MTN and Cellcom. Agents in charge of delivering the cash were from the area, so they did not need to travel long distances with cash to conduct the transfers. Mercy Corps found Cellcom's e-transfer fees to be lower than those of Lonestar MTN, at 95 Liberian dollars (\$1.05) and 150 Liberian dollars (\$1.66) respectively per transfer. This 'standard' e-transfer was seen as a way to maximize the potential of CTP in terms of increasing speed, privacy and transparency. It also reduced exposure to the risks associated with direct cash and clustering approaches, such as theft or loss.

<sup>35</sup> Telegraphy (2013), <https://www.telegeography.com/products/commsupdate/articles/2013/06/21/lonestar-cell-launches-mobile-money-service-in-liberia/>

<sup>36</sup> NetHope and U.S. Global Development Lab (2014).

<sup>37</sup> C. Cirillo and R. Tebaldi (2016).

<sup>38</sup> Data as of March 2015. UNDP (2015).

<sup>39</sup> CaLP (2015), data available up to the end of December 2014.

**Table 3: E-transfer service providers in Liberia**

Service provider	Operating since	Main partners	Estimated total transferred	Estimated total beneficiaries	No. of agents involved
Lonestar MTN	2012	<b>USAID/FFP projects:</b> Save the Children, ACDI/VOCA, Mercy Corps <b>Non-USAID/FFP projects:</b> Equip Liberia, Welthungerhilfe, World Food Program, Partners in Health, Riders for Health, Action Against Hunger, Norwegian Refugee Council	\$3m	10,000 <sup>40</sup>	100
Cellcom	2015 <sup>41</sup>	<b>USAID/FFP projects:</b> Mercy Corps	\$105,840 <sup>42</sup>	420	10

### 3.3 EXPERIENCE WITH E-TRANSFERS IN SIERRA LEONE BEFORE AND DURING THE EBOLA CRISIS

Compared to their Liberian counterparts, Sierra Leonean service providers had more experience with e-transfers prior to the Ebola crisis. Before 2014, two e-transfer service providers were already operating in Sierra Leone's main cities of Freetown, Makeni, Kenema and Bo: Splash<sup>43</sup> and Airtel started to offer this service in 2010 and 2013 respectively. During the outbreak, Africell worked with UNDP to test e-transfers for Ebola survivors, and went on to officially launch its e-transfer service in 2016. E-transfers were also used to pay health workers in the field during the Ebola crisis. In March 2015, 100 percent of the 21,000-plus payments to health workers were digitized, with 78 percent of payments made through e-transfers via mobile money.<sup>44</sup> Airtel also undertook e-transfers for the Ministry of Health during this period. See Table 4 for details.

**Table 4: E-transfer service providers in Sierra Leone**

Service provider	Operating since	Main partners
Splash	2010	<b>USAID/FFP projects:</b> ACDI/VOCA, CARE, CRS, Save the Children, World Vision <b>Non-USAID/FFP projects:</b> (not exhaustive): National Commission for Social Action (NaCSA)
Airtel	2013	<b>USAID/FFP projects:</b> CARE, World Vision for one transfer <b>Non-USAID/FFP projects:</b> Ministry of Health, Plan International, Global Fund International (not exhaustive)
Africell	2016	<b>Non-USAID/FFP projects:</b> UNDP
GT Bank	2016	Data not available
Ecobank	2016	Data not available

<sup>40</sup> This number is based on the total number of households served with e-transfers by Save the Children, ACDI/VOCA, Mercy Corps, Equip Liberia, World Hungerlife, WFP, Partners in Health, Riders for Health, Action Against Hunger and Norwegian Refugee Council.

<sup>41</sup> Bought by Orange in 2016.

<sup>42</sup> Six transfers of \$42 to 420 households.

<sup>43</sup> Splash is an e-transfer provider that connects customers with mobile service providers.

<sup>44</sup> UNDP (2015).

Despite the relative maturity of e-transfer services in Sierra Leone and strong government support for e-transfers,<sup>45</sup> lack of network coverage and service provider capacity in program areas limited the use of e-transfers at scale in Sierra Leone, as it had in Liberia. E-transfer service providers adapted their services to facilitate offline payments to beneficiaries in rural areas at a series of pay points, similar to the clustering approach used in Liberia.

Splash used its offline platform so the cash transfers did not need to go through a mobile money operator; instead, the transfers followed a similar process to direct cash distribution. Its agents used smartphones to preload beneficiary data such as photographs, names and unique codes onto SIM cards, which were distributed to beneficiaries and then used as identification. Financial transfer information was entered and checked by the agent, who provided beneficiaries with a cash payment, and then uploaded transaction data to the Splash platform when mobile network coverage became available. Splash also completed the actual transfer of cash; the cash was usually carried by its staff, travelling by motorbike. No theft or security incidents were reported, but such a solution for getting cash to remote areas is extremely risky and unlikely to be sustainable. This risk was outsourced to Splash as the service provider. Insurance companies were not able to give Splash a quote to cover the risk taken by its agents.

While again, these cannot be considered 'pure' e-transfers, the use of digital technology to deliver cash payments provided clear benefits. USAID/FFP's partners highlighted in interviews that the application of digital technology sped up the transfer process as a whole, by simplifying the checking of beneficiary information. Once familiar with the new approach, this system allowed one Splash agent to pay 50 beneficiaries in one hour.<sup>46</sup> Moreover, the use of smartphones enabled Splash agents to take pictures of beneficiaries with the cash, as proof of distribution. These photos were then later uploaded onto the Splash platform and cross-checked by partners. All USAID/FFP partners distributed cash assistance through Splash. This required a high level of coordination and harmonization at field level. At the same time working with a single platform facilitated the exchange of data and information among partners.

<sup>45</sup> The Government of Sierra Leone issued a standard operating procedure (SOP) proposing that delivery mechanisms for CTP should focus on the most efficient transfer method. At the same time, NaCSA strongly encouraged the use of e-transfers for payments to beneficiaries.

<sup>46</sup> Interview in August 2016 with CARE project manager, Morie Amadu, in Sierra Leone.



## 4 LESSONS LEARNED AND RECOMMENDATIONS FROM CTP IN THE EBOLA RESPONSE

Although e-transfers were not achieved at scale in the USAID/FFP response in the Ebola recovery, the use of digital technology in the CTP did positively contribute to what was an ambitious humanitarian response. Despite a host of challenges – few e-transfer companies and low capacity, limited mobile network coverage in remote areas, and weak banking systems – digital technology was used to solve other operational difficulties, such as beneficiary identification and record-keeping. Based on the analysis presented in this report, some lessons were learned; these experiences and the recommendations arising from them are outlined below.

### 4.1 ENSURE RESPONSE DESIGN ACCOMMODATES LOCAL REALITIES AND HAS SUFFICIENT FLEXIBILITY TO ALLOW FOR FURTHER ADAPTATION

#### **Experiences:**

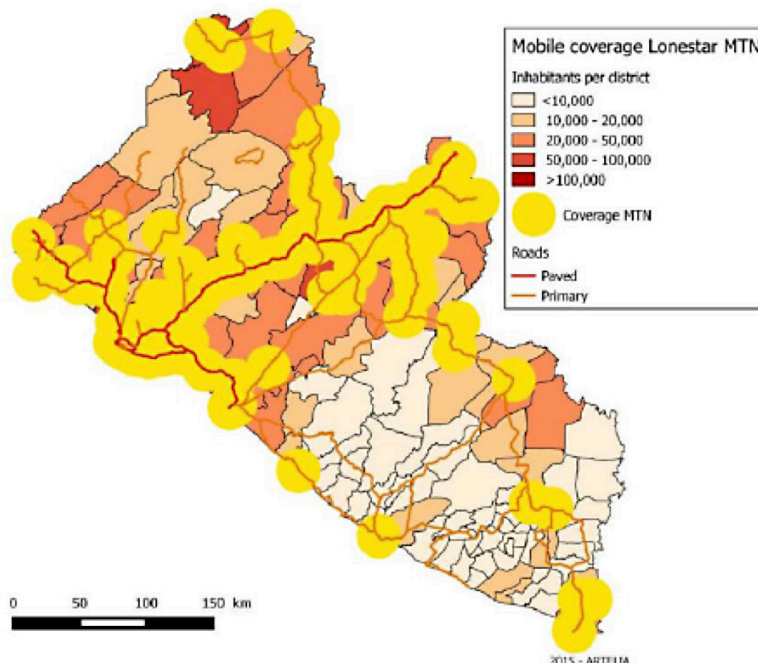
The use of digital technology for CTP in Liberia and Sierra Leone was almost unheard of before the Ebola crisis. While some of the USAID/FFP partners had extensive e-transfer experience in other contexts, there was little capacity in the country to roll out such programming in a rapid manner. While a good response was mounted in the end, mobile network coverage and local e-transfer capacity were not properly assessed at the outset. As a result, the particularities of the many remote, rural communities (e.g. network access, agent availability) were not captured, and service provider coverage and capacity were overestimated by implementing partners. The inadequate assessment of local infrastructure and service provider capacity left NGOs continuously troubleshooting to ensure the integrity of their programming.

In Liberia, the Liberian Telecommunications Authority (LTA) estimated that approximately 60 percent of the population had access to a mobile phone network in 2014.<sup>47</sup> However, in practice, LTA and USAID/FFP's partners noted significant variations between geographic areas, with network coverage primarily limited to highly populated areas. This proved to be a major stumbling block to using e-transfers in rural areas.

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<sup>47</sup> Information gathered at a learning event in October 2016.

Map 2: Lonestar MTN mobile network coverage in Liberia, 2015<sup>48</sup>



In Sierra Leone, no official estimate of mobile network coverage was available, but according to USAID/FFP's partners most of their targeted districts had no or very limited mobile network coverage.

The lack of other infrastructure in rural areas further hindered program implementation. In both countries, most beneficiaries were living in rural areas with no access to electricity. A power supply is, at some point, necessary for e-transfer distribution through either the clustering approach or offline, as agents use smartphones to process transfers. As a result, agents had to bring extra batteries to ensure they had enough power to process all transfers. Physically delivering cash to remote communities was no more convenient because of the poor state of the roads, especially during the rainy season in 2015, at the peak of the cash transfer activities.

### Recommendations:

**All CTP actors should invest in a thorough understanding of digital technologies, especially e-transfers.** With the changes to the digital ecosystem in Liberia and Sierra Leone, and the limited but successful digital experiences of some of the USAID/FFP partners as well as improvements in service provider capacity as a result of their engagement in the response, there is some potential for greater use of digital technologies in future CTP. However, decisions on which digital technologies to use need to be made of basis of accurate, context-specific information. To best prepare, NGOs should continue to engage with private sector actors to understand their capacities and services. Together, service providers and NGOs should field-test digital technologies in selected geographic areas, and with different types of users, to test feasibility and adaptability. NGOs should also actively engage with central banks and telecommunication authorities to ensure that all parties understand precisely what the potential, limitations and opportunities are in each country, including on essential topics such as cash availability.

<sup>48</sup> Map from an internal document provided by Kolubahzizi T. Howard, Director of Strategy for LTA.

**NGOs should leverage the use of offline digital platforms to mitigate gaps in network coverage in the country of the response.** All implementing partners used some form of digital platform to collect and store project data, but there are private sector products that may have improved efficiency. These platforms have been developed to work both online and offline, and designed to optimize beneficiary identification and program management, monitoring and evaluation, as well as the actual interaction between beneficiaries and agents. Such platforms ensure data security, and upload information to the system once connected. World Vision's Last Mile Mobile Solutions (LMMS)<sup>49</sup> is one example, which the NGO later used in its CTP in Sierra Leone. The system aims to address registration and monitoring challenges during cash transfers, and is reported to have been used by 13 other organizations to register and track 4.5 million beneficiaries.<sup>50</sup> The software works on Android-based devices and is designed to register beneficiaries, generate identification cards for which no SIM is required, monitor transfers and produce reports. Integrating this 'ready to use' software with service providers' platforms could reduce the procedural burden in instances where e-transfers cannot be implemented. Moreover, MasterCard is a technical partner in LMMS, bringing a wealth of expertise in e-transfers in different humanitarian and development contexts.

**Anticipate challenges posed by local infrastructure weakness, and incorporate adequate mitigation measures (including potential alternative delivery mechanisms) early in project planning.** While all USAID/FFP partners were well established in the response countries and project areas, knowledge of local infrastructure weakness (network coverage, electricity shortages and poor road networks) were not taken into account during the project design phase. As a result, these had to be addressed during the project implementation phase, causing potentially avoidable delays. In the future, these challenges should be identified and addressed during project design.

## 4.2 LEAD COMPLETE AND ROBUST ASSESSMENTS OF SERVICE PROVIDERS' CAPACITY

### Experiences:

Service providers in both countries had no prior experience with large-scale cash transfers for humanitarian purposes in dispersed geographic areas. The service providers and NGOs encountered many obstacles regarding service layout, administrative arrangements and procedures. It was found that service providers and NGOs were often 'speaking different languages', which made finding solutions more difficult.

In Liberia, Lonestar MTN was ill-prepared to deal with e-transfers for 10,000 beneficiaries, who were mostly in remote locations. Some of the company's key staff in its headquarters left during the peak of the outbreak, which further reduced capacity. As a result of the company's limited capacity, its digital platform froze for several days, blocking all transfers during this period. Finally, its agents' network capacity was not sufficient to handle the demand, especially in rural areas.

Specific problems occurred with Lonestar MTN regarding SIM card management (e.g. additional costs, delays in activation, recycling numbers, and deactivation). Some of the inefficiencies can be traced to the company's internal structure, which separated data management, SIM card activation, mobile money and e-wallets. These departments did not coordinate; each acted as independent service providers, even though only one contract had been signed.

In Sierra Leone, CARE and World Vision attempted to use Airtel, but the company could not deliver a reliable, rapid service with its offline transaction system, and payments to its agents suffered significant delays. After one transfer, both CARE and World Vision turned to Splash. As a consequence, Splash covered 100 percent of USAID/FFP cash transfers, in addition to transfers from other implementers (NaCSA, Action Against Hunger and the World Food Programme). It took three to four months for Splash to build a reliable network of travelling agents (60-80 agents were mobilized) who were able to transport cash to remote locations. Splash's internal structure may also have caused delays in decision making and producing reconciliation reports.<sup>51</sup> Indeed, due to the high number of distributions, agents were often in the field without network coverage for days at a time, unable to upload data to Splash's platform.

<sup>49</sup> World Vision International. (n.d.).

<sup>50</sup> Ibid.

<sup>51</sup> Communication in October 2016 with Daniel Osei Antwi, Splash.

## Recommendations:

**NGOs should develop standardized assessment tools to assess service providers' capacities.** The stakeholders in this response can build upon the relationships they have forged to develop tools in preparation for future CTP. Using a standardized assessment tool, NGOs will be able to 'speak the same language' as the private sector, share information and, most importantly, genuinely analyze capacity at the field level. The tool should include an analysis of the effectiveness and user-friendliness of the technology that service providers offer; the cashing-out capacity of their agent networks; their mobile network coverage; and their administrative capacity.<sup>52</sup>

## 4.3 ENSURE STRONG COORDINATION WITH SERVICE PROVIDERS

### Experiences:

In Liberia, several coordination platforms were already in place when these projects started, namely the Food Security Cluster and its cash sub-working group, as well as interagency Ebola response coordination. A Cash Working Group (CWG) led by the Ministry of Gender, Children and Social Protection was set up in April 2015, and was the platform used by partners to capitalize on opportunities to innovate and to exploit technology. By sharing ideas with their peers, for example, Save the Children and ACDI/VOCA were able to exchange ideas and experiences to overcome problems related to SIM card management, the Lonestar MTN agent network, and service providers' administrative limitations. When possible, the CWG also gave organizations such as Mercy Corps the room to exchange with Cellcom and Lonestar MTN in order to refine their e-transfer CTP designs reducing operational hazards such as poor SIM card management, lack of network coverage or cash liquidity issues (problems which were particularly prevalent outside of the capital).

In Sierra Leone, the government's Standard Operating Procedures (SOPs) were extensive and gave clear guidance on the design and implementation of CTP. Before commencing CTP in Sierra Leone, NGOs were requested to sign a memorandum of understanding with the government aligning them to the SOPs and recommending the use of mobile money technology. This process helped to streamline and focus coordination and messaging on CTP. The CWG created a space for discussion between service providers and CTP-related groups, allowing all of them to test and find the most appropriate technology, and to share operating procedures relevant to each NGO or service provider. The three service providers, Airtel, Africell and Splash, came to the CWG to present their e-transfer services, and the CWG also provided recommendations on acceptable fees for cash transfer services to all partners.

Due to the complexity of the crisis as well as the large number of stakeholders, coordination specific to digital technologies was very challenging. This was most acute in negotiating and understanding fees for services. In Sierra Leone, Splash asked all its clients for a four percent transaction fee, while during a test with World Vision and Care, Airtel asked for a seven percent fee. In Liberia, Save the Children paid a three percent fee on each transfer (around \$1.6 per transfer) to the service provider for a clustered e-transfer, while other NGOs paid other rates. The CWG tried to negotiate a common rate with Lonestar MTN for all actors implementing CTP in the country. However, the discussions were fruitless, as service providers were unwilling to reduce their profits by harmonizing fees to the lower rate.

In both countries, bilateral coordination between NGOs and service providers also took place to enable careful planning of cash transfers and ensure liquidity of cash in the geographic areas. This coordination took place both with capital-based staff and with service providers' agents in the field.

<sup>52</sup> Guidance is available on the CaLP and ELAN websites: [www.cashlearning.org/resources/library?keywords=financial+service+provider&region=all&country=all&year=all&organisation=all&sector=all&modality=all&language=all&payment\\_method=all&document\\_type=all&sourced=1](http://www.cashlearning.org/resources/library?keywords=financial+service+provider&region=all&country=all&year=all&organisation=all&sector=all&modality=all&language=all&payment_method=all&document_type=all&sourced=1)  
<https://cashcatalog.org/>

## Recommendations:

**The CWG should involve service providers at the earliest stage of the response.** Different scenarios should be explored relating to caseloads, geographic areas and type of services provided. Service providers must be meaningfully included in discussions from the outset to align understandings of project objectives, expected results and their capacity to deliver.

**CWG members should undertake collective bargaining with service providers.** This is essential to ensure that fees are harmonized and optimized. Instead of taking up precious time during a crisis, these discussions should be held in a preparedness phase, although it is recognized that due to a lack of market competition a limited choice of services providers may still limit the success of these negotiations. NGOs should carry out cost-benefit analysis comparing e-transfers and direct cash payments to ensure that the purported cost savings of e-transfers apply in a given context.

## 4.4 DEVELOP BENEFICIARY DIGITAL LITERACY THROUGH SENSITIZATION AND AWARENESS-RAISING

### Experiences:

CTP was novel in both countries and warranted significant investments in sensitizing the beneficiary communities. Ensuring that beneficiaries understood the proposed technologies and their use was challenging and time-intensive. Indeed, most of the interviewed beneficiaries said that they were not comfortable with the SIM card they received, and that they did not know exactly what they were allowed to do with it. The NGO partners cited high illiteracy rates as a challenge in the use of technology;<sup>53</sup> this point was raised by NGO staff on different occasions.<sup>54</sup> However, another barrier may be the beneficiaries' lack of exposure to mobile phones and digital technology prior to the projects.

In Liberia, Lonestar MTN provided awareness sessions with beneficiaries to explain the process of transferring money through SIM cards. Despite this, the NGOs and beneficiaries still encountered problems with the technology, and it was evident that the awareness sessions were inadequate. Because of these issues, Save the Children's beneficiaries in Bong County said that they preferred direct cash to e-cash.<sup>55</sup> Cellcom claimed that the main challenge in its e-transfer project in Montserrado County, implemented with Mercy Corps, was to manage beneficiaries' expectations. Transfers were split over four days to minimize the amount of money that agents had to cash-out each day. However, beneficiaries tended to come earlier than expected, creating confusion at the pay point as beneficiaries were queuing for the distribution the wrong day.

In Kailahun district, Sierra Leone, beneficiaries in focus group discussions said that they found it difficult to use a SIM card because they had no phones. Also, they claimed that they didn't know if they were allowed to use the SIM cards on personal or community mobile phones. The district has low network coverage and low phone usage in general.<sup>56</sup>

In Sierra Leone, awareness sessions were organized by USAID/FFP's partners before each distribution, in which Splash's agents explained and reminded beneficiaries of the process. Community helpdesks were also set up at the pay points to provide beneficiaries with information about SIM card management and the distribution process.

### Recommendations:

**Design awareness sessions on digital technologies that are relevant to all stakeholders and dynamically updated.** The Ebola response programs in Sierra Leone and Liberia did not devote sufficient time and resources to sensitization and awareness-raising of CTP among the different levels of stakeholders to optimize the use of e-transfer and digital technology— NGO staff in the capital and the field, beneficiaries and private sector actors. Community committees could receive additional training on the use of new technology, which they could then

<sup>53</sup> The literacy rate in both Liberia and Sierra Leone is estimated at 48 percent of the population over 15 years of age at national level. UNESCO Institute for Statistics (2013).

<sup>54</sup> CaLP learning events in Liberia and Sierra Leone in July, August and October 2016.

<sup>55</sup> Focus group discussions.

<sup>56</sup> NetHope (2016).

transfer to their community. One key action is to ensure that service provider agents – both in the capital and the field – participate in workshops on CTP sensitization, to help craft the messaging for beneficiaries and advise on best practices. Such participation will only enhance understanding of CTP, and must be offered to agents even in the most remote areas. These stakeholders should involve representatives of beneficiary populations to discuss how to overcome challenges relating to illiteracy or low technology capacity, and should pre-test new approaches with them. NGOs and service providers can use feedback from these sessions to inform their joint CTP sensitization programs.

## 4.5 ENSURE SUFFICIENT MONITORING OF SERVICE PROVIDERS

### Experiences:

Most partners' initial program designs relied heavily on the use of mobile money to deliver cash transfers. However, the reality of network coverage and service provider capacity at field level meant that e-transfers were not possible in the majority of cases (ultimately, only seven percent of transfers were made using an e-transfer mechanism). Despite this, USAID/FFP partners used private sector service providers to deliver cash to beneficiaries. This decision meant that much of the risk involved in transporting cash was transferred to service provider agents. While robust digital monitoring systems were put in place in both countries – either through the immediate uploading of payment confirmation, as in Liberia, or the use of digital photos to confirm payments in Sierra Leone – these did not always provide sufficient safeguards against fraud.

In Liberia, both Lonestar MTN and Cellcom acknowledged that there were a few instances in which their agents demanded additional fees in cash from beneficiaries when cashing out. Some of these abuses were detected thanks to quality controls set up by service providers (involving discussions with clients and agents in the field). Representatives of both companies insisted during interviews that more awareness is needed at the community level to improve transparency and prevent potential abuse by agents. However, awareness-raising is not an adequate substitution for in-person oversight and monitoring of distributions.

### Recommendations:

**NGOs should ensure that robust distribution monitoring processes are put in place where direct cash-style payments are outsourced to private sector agents.** The outsourcing of payments to private sector agents increases rather than decreases the need for on-site monitoring of distributions, particularly for the amount of money received by each beneficiaries and the number of recipients. Unlike e-transfers, agent-led cash-out processes cannot be adequately monitoring through digital technology alone. NGOs should work with service providers to establish robust monitoring systems that include on-site monitoring of distributions by NGO staff.



## 5 CHANGES IN THE MOBILE MONEY ECOSYSTEM IN LIBERIA AND SIERRA LEONE

During the Ebola outbreak and the subsequent recovery phase, the mobile money ecosystem in Liberia and Sierra Leone advanced significantly, as the private sector increased its capacity to offer digital banking services. The crisis shed light on the state of the digital ecosystem, potentially catalyzing its improvement. Furthermore, the scale-up of the use of technology for CTP gave the rural populations of Liberia and Sierra Leone a glimpse of what technology can offer regarding the transfer and storage of money.

### 5.1 INCREASED E-TRANSFER SERVICES

The e-transfer market has improved noticeably since 2015 in both Liberia and Sierra Leone, and is increasingly seen as a strategic opportunity for mobile money companies. During interviews, staff from Cellcom in Liberia and from Airtel, Splash and Africell in Sierra Leone stated that partnering with NGOs for Ebola-recovery cash transfers has pushed them to grow their agent networks and educate more people on the use of digital technology in cash transfers. Companies have a clearer understanding that there is a larger potential client base for mobile money. As a result, more companies are now positioned to offer this service and are strengthening their capacities.

In Liberia, Cellcom entered the mobile market in 2015. In 2016, Cellcom was bought by Orange, which began developing its mobile money strategy for Liberia. In Sierra Leone, Orange also bought Airtel. In 2016, three other stakeholders started to offer e-transfer services in Sierra Leone – GT Bank, Ecobank and Africell, which expanded its mobile money pilot into a publicly provided service. Sierra Leone had no digital money regulation in place before the 2014-15 crisis, but the telecommunication authorities allowed CTP because of its use in supporting the country's recovery. Since then, legal regulations have been drafted and should be passed in the coming years. These regulations aim to create a vibrant environment for the development of e-commerce and to ensure greater protection for mobile money customers.<sup>57</sup> With Orange's investment, experts in e-transfers are now entering the market, and both Cellcom and Airtel expect to benefit from having Orange Mobile Money in West Africa.<sup>58</sup>

### 5.2 IMPROVED AGENT NETWORKS

All service providers increased the number of their local agents in 2015 to deliver humanitarian cash transfers, and have plans to keep expanding their agent networks in communities throughout both countries. In Liberia, Lonestar MTN plans to hire more than 2,300 new agents per year in future. Cellcom (soon to be Orange Money) aims to contract local 'super-agents' who will be charged with finding other, smaller agents and bringing them on board to help expand the company's agent base. The super-agents earn additional commission through this recruitment.<sup>59</sup>

In Sierra Leone, because of the increased competition for e-transfer services, Splash aims to play the role of a universal super-agent in charge of connecting customers with all mobile money companies. This will require agreements with mobile money companies to access their platforms in order to be able to produce reconciliation reports between Splash accounts and others, as well as a comprehensive agent network.<sup>60</sup>

### 5.3 IMPROVED INFRASTRUCTURE AND SERVICES

The 2014-15 Ebola crisis further emphasized the need for better communication networks to achieve timelier delivery of humanitarian assistance through e-transfer in two crisis-prone countries. The crisis probably influenced and accelerated investment in infrastructure that supports and enhances technologies used for e-transfer, by demonstrating to both governments and service providers that mobile network coverage expansion is a social priority as well as a business opportunity. However these advancements should not have to come at the cost of compromising the humanitarian imperative or humanitarian objectives.

<sup>57</sup> Communication in October 2016 with Bakarr Tarawally, Director of Communications, Ministry of Information and Communications in Sierra Leone

<sup>58</sup> Communication in October 2016 with Eric Clarke, Cellcom and with Madeleine Bart-Williams, Airtel.

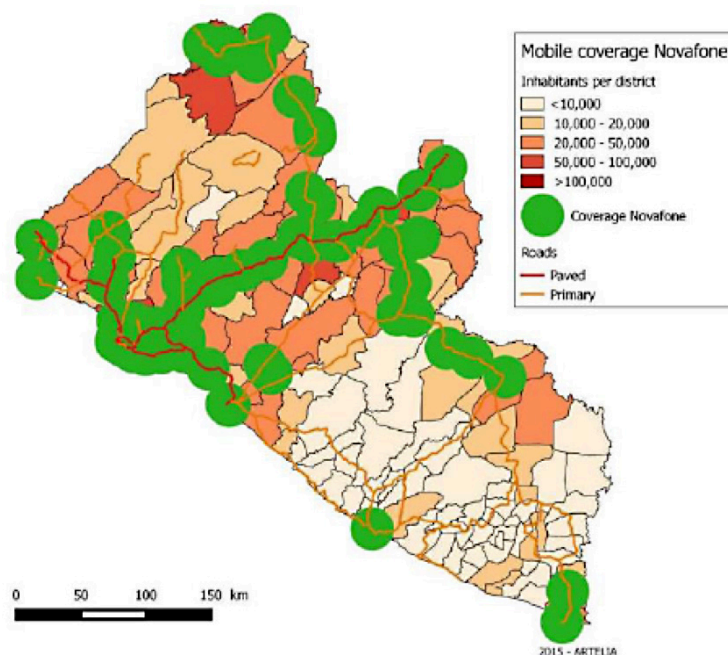
<sup>59</sup> Communication in October 2016 with Eric Clarke, Cellcom.

<sup>60</sup> Communication in October 2016 with Daniel Osei Antwi, Splash.



In Liberia, network coverage has improved since 2015. More network towers have been built, and Cellcom has plans to build more new towers in populated areas in the coming years. In 2016, Lonestar MTN bought mobile company Novafone, significantly increasing its network coverage outside of the capital (see Map 3). In May 2016, Lonestar MTN also invested in a new platform which is expected to support more e-transfer transactions. The new software is intended to track and provide more information about agents' activities than was possible with the former system.

**Map 3: Novafone mobile network coverage Liberia, 2015<sup>61</sup>**



In Sierra Leone, Airtel is developing its platform to propose adequate services to a range of partners, including humanitarian actors. The Ministry of Information and Communication has a plan to decrease operators' costs, to encourage them to improve their coverage at more affordable prices. Projects such as the laying of a submarine telecommunication cable and the deployment of fibre optic cabling are expected to help improve the quality of telecommunications development in Sierra Leone's secondary towns.<sup>62</sup> Smart Mobile, a new mobile phone company, has begun operating in the country's central cities and has already improved network coverage in Koinadugu, Tonkolili and Bombali districts.

<sup>61</sup> Map from an internal document provided by Kolubahzizi T. Howard, Director of Strategy for LTA.

<sup>62</sup> Communication in October 2016 with Kolubahzizi T. Howard, Director of Strategy for LTA.

## 6 CONCLUSIONS

The Ebola outbreak in Liberia and Sierra Leone was a humanitarian crisis like no other. USAID/FFP's ambitious support to the resulting food security crisis opened up a unique opportunity to roll out a large-scale CTP in two countries where the approach had rarely been used, and to innovate the usage of digital technologies in the response. While e-transfers ultimately were not feasible in most areas, NGOs developed useful relationships with service providers, who were able to support the NGOs to improve their CTP. In the end, only 7% were pure e-transfer but over 50 percent of the cash transfers to some 95,000 households were supported by digital technologies from private sector providers – in beneficiary identification and verification, reporting, information management and/or e-transfers. The partnerships forged between NGOs, the private sector and the national and local governments opened up a dialogue on how best to address humanitarian needs through the coordination of this group of diverse actors.

The challenges faced in mounting and running a CTP with digital technology were not unique to this response. Some of the main problems faced by NGOs when implementing cash and voucher programs are their ability to assess the capacity of financial service providers, and the need to provide training on new technologies at all levels of an organization: field, capital, regional and headquarters.<sup>63</sup> Now that the gaps around service provider capacity and CTP awareness have been identified, it is up to the CTP stakeholders to find solutions and set the framework for preparedness. The solutions must fit with the reality of the contexts in the country, and in particular of rural populations.

As this case study has shown, the contexts in both Liberia and Sierra Leone are evolving. The CTP supported by USAID/FFP, because of its scale and the number of stakeholders involved, seems to have helped catalyze the growth of e-transfers in both countries. Since the CTP began, the digital market has doubled or tripled regarding private sector offerings. Governments are investing in their telecommunications infrastructure and strengthening their ICT legal frameworks. In the end, all stakeholders have seen benefits from this CTP experience, which might be reaped over the medium to long term.

However, it is not financially viable for telecommunication companies alone to provide the necessary investment in areas with poor coverage, and there are no government plans to support the construction of network towers in areas with low population density. This means that e-transfers through mobile money will not become the default delivery mechanism for CTP in remote areas in the foreseeable future. There is, therefore, a need to rethink how best to incorporate digital technology in CTP in such contexts. Digital technology, without question, can and does increase program efficiency and decrease risks, but this must be balanced with the need for a rapid response, risk mitigation and feasibility. Investment and analysis is therefore required in offline platforms and software, in strengthening private sector capacity to deliver, and in ensuring that the response is in accordance with humanitarian principles.

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<sup>63</sup> ELAN (n.d.).

## ANNEX I: INDIVIDUALS CONSULTED

### BY CONSULTANT AUTHOR

Date of interview	Country	Name	Position	Organization
03/10/2016	Liberia	A. Joseph Scott	Mobile Financial Services Distribution Coordinator	Lonestar MTN
04/10/2016	Liberia	B. Eric Clarke	Corporate Sales Manager, for SMILE Cellcom Mobile Money	Cellcom (Orange)
12/10/2016	Sierra Leone	Madeleine Bart-Williams	Assistant Corporate Manager, Airtel Money	Airtel (Orange)
13/10/2016	Sierra Leone	Daniel Osei Antwi	General Director	Splash
14/10/2016	Sierra Leone	R. Ghoussoub	Not available	Africell
14/10/2016	Sierra Leone	Bakarr Taramally	Director of Communications	Ministry of Information and Communication

### BY CALP PROJECT MANAGER

Date of interview	Country	Name	Position	Organization
19/07/2016	Liberia	Leslie Mhara	Food Security and Livelihoods (FSL) Coordinator	Save the Children
20/07/2016	Liberia	Daniel Mulbah and Quoiqo Dorborson	Project Officer	LCL (for Mercy Corps)
20/07/2016	Liberia	Martin Varnie	Project Manager	Mercy Corps
21/07/2016	Liberia	Josiah Monmia	Monitoring & Evaluation Coordinator	Save the Children
22/07/2016	Liberia	Joejo Zubahyeah	Project Manager	Save the Children
23/07/2016	Liberia	Joseph Varney	Operation Coordinator	ACDI/VOCA
23/07/2016	Liberia	Manjou Konneh	Operation Coordinator	ACDI/VOCA
25/07/2016	Liberia	Matthew Ndote	Project Manager	ACDI/VOCA
26/07/2016	Liberia	Victor Ngorbu	Former Deputy Program Director	ACDI/VOCA
28/07/2016	Liberia	Emmette Freeman	Program Coordinator	YMCA (for Mercy Corps)
28/07/2016	Liberia	James Sumo	Monitoring & Evaluation Officer	Mercy Corps

28/07/2016	Liberia	Darlington N. Talo	Project Manager	PCI
28/07/2016	Liberia	Roosevelt Kaflesh	County Coordinator	PCI
28/07/2016	Liberia	Tefferu Betru	USAID/Liberia Food for Peace Officer	USAID, USAID/FFP
02/08/2016	Sierra Leone	Matebie Fentie	Area Manager	Save the Children
08/08/2016	Sierra Leone	Lawrence Oroma and Lovetta Thomas	USAID Guinea and Sierra Leone/ Food for Peace Officers	USAID, USAID/FFP
08/08/2016	Sierra Leone	Abu Kargbo	Operations Officer	World Bank
09/08/2016	Sierra Leone	Tom Obongo	Cash Expert	World Vision
10/08/2016	Sierra Leone	Kevin Weseni	EFSP Project Manager	World Vision
12/08/2016	Sierra Leone	Morie Amadu	Project Manager	CARE
15/08/2016	Sierra Leone	Idalia Amaya	Head of Program	CRS
16/08/2016	Sierra Leone	Georgia Beans	Chief of Party	ACDI/VOCA
16/08/2016	Sierra Leone	Jordan Hoffman	Head of Management	CARE
24/08/2016	Sierra Leone	Francis Kyobe	Project Manager	CRS
24/08/2016	Sierra Leone	Not available	Five field staff members	CRS
25/08/2016	Sierra Leone	James Flock	Project Manager	ACDI/VOCA
25/08/2016	Sierra Leone	Alessandro Dalle Carbonare	Food Security & Livelihoods Head of Department	ACF
31/08/2016	Liberia	Darlington N. Talo	Project Manager	PCI
07/09/2016	Liberia	Faruque Azam	Former Project Manager	PCI
17/07– 27/07/2016	Liberia and Sierra Leone	20 focus group discussions	367 beneficiaries	All USAID, USAID/FFP partners

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## ANNEX 3: LIST OF SERVICE PROVIDERS

Service provider	NGOs	Description
Liberia		
Ecobank	ACDI/VOCA Mercy Corps	A full-service bank focused on West Africa. It provides wholesale, retail, investment and transactional banking services to governments, financial institutions, multinationals, local companies, small and medium-sized enterprises, and individuals.
Lonestar MTN	Mercy Corps Save the Children ACDI/VOCA	A mobile money operator in Liberia since 2000. Until 2015, Lonestar MTN was the only telecommunications operator in Liberia. The company owns and operates the largest wireless telecommunications network in Liberia.
Cellcom	Mercy Corps	A mobile operator which began operations in Liberia in 2015. Cellcom launched its mobile money platform 'Smile Cellcom Money' at the beginning of 2016.
Sierra Leone		
Splash	ACDI/VOCA Save the Children World Vision CARE CRS	Founded in 2009, Splash is a mobile money provider which connects banking and mobile service providers with people. With its 'MoreMagic' platform, Splash offers transactions for mobile operators, financial institutions, content providers and distributors, enabling consumers to purchase goods and services using a mobile phone or a website. However, for USAID and USAID/FFP projects, Splash only served as a distributor.
Airtel	World Vision CARE	Airtel Money is a mobile commerce service that allows clients to use phones to access various services such as money transfers, bill payment and bank account management.





The Cash Learning Partnership

Globally, the adoption of digital technology has grown alongside the increase in cash transfer programming (CTP), often through the use of e-transfers, in part because of the potential gains in accountability, efficiency (cost and time) and effectiveness. The 2015 High Level Panel on Cash Transfers recommended delivering cash digitally where possible. However, evidence from some challenging contexts suggests that where service providers are inexperienced and infrastructure is weak, e-transfers may not be the best option. This is confirmed by the experience of United States Agency for International Development/Office of Food for Peace (USAID/FFP) partners in Sierra Leone and Liberia in using CTP in the response to the Ebola crisis of 2014-2015. Nevertheless, this case study shows that even where e-transfers are not the best option, digital technology can be an advantageous tool to track payments, confirm beneficiary identity and improve monitoring systems.

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