GSMA

Digital Financial Services in Humanitarian Settings: Lessons from the GSMA Mobile for Humanitarian Innovation programme

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GSMA Mobile for Humanitarian Innovation

The GSMA Mobile for Humanitarian Innovation programme works to accelerate the delivery and impact of digital humanitarian assistance. This is achieved by building a learning and research agenda to inform the future of digital humanitarian response, catalysing partnerships and innovation for new digital humanitarian services, advocating for enabling policy environments, monitoring and evaluating performance, disseminating insights and profiling achievements. The programme is funded by the UK Foreign, Commonwealth & Development Office, and is supported by the GSMA and its members.

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This initiative has been funded by UK Aid from the UK Government and is supported by the GSMA and its members.

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Introduction

Digital financial services (DFS) have become a fixture in modern humanitarian assistance and increasingly play a role in the day-to-day lives of people affected by crisis. It is unlikely that this will change soon. The GSMA Mobile for Humanitarian Innovation programme (M4H) and its predecessor, the Disaster Response programme, have been monitoring this trend for more than five years, generating research and evidence to understand its implications and supporting stakeholders to ensure DFS use for and by crisis affected people and communities is effective and dignified.

This paper captures key evidence and lessons generated through GSMA activity over the last five years in relation to the use of DFS in humanitarian settings. The hope is that this synthesis will be useful for GSMA partners and stakeholders, it is also part of the M4H team's ongoing commitment to share best practices and advise humanitarian organisations and mobile money providers (MMPs) on how they can effectively work together.

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Why are digital financial services important?

Digital financial services cover a range of financial services that can be accessed via mobile phones. Some examples include mobile money, e-vouchers and mobile banking, which are used for a range of purposes, such as peer-to-peer (P2P) transfers, payments and savings.

DFS have become much more prevalent in humanitarian settings in recent years as humanitarian organisations have moved towards greater digitalisation. Notably, uptake of DFS has been accompanied by a shift from in-kind aid to cash and voucher assistance (CVA), a leading example of digitalisation within the sector.

Mobile money has been a key focus of the M4H programme's work in this space, as it has had a transformational impact on the delivery of humanitarian assistance.

Box 1: Understanding key terms

Digital financial services (DFS)

DFS encompass a broad range of financial services enabled by mobile technology. These range from mobile money and mobile banking, which enable broad participation in financial ecosystems to closed loop systems such as e-vouchers.

Mobile money

Mobile money was designed specifically with unserved and underserved people in low- and middle-income countries (LMICs) in mind. Providing affordable, and often free, access to tailored financial services, it has been vital in driving financial inclusion, bringing financial services to millions of customers around the world.

With a mobile money service, a user can transfer money and make payments using a mobile phone. While service availability varies from country to country, a mobile money account can enable customers to send P2P payments, top up airtime, save money and pay bills. Importantly, this service can be used without opening a formal bank account, making it available, by design, to low-income segments of the population. For more than a decade, mobile money has been opening access to digital transactions and giving people the tools to better manage their finances.

Digital financial inclusion

The GSMA does not use a strict definition for digital financial inclusion, as financial inclusion itself is perceived as a catalyst for other impacts rather than a goal in itself. Other organisations, such as the World Bank's Consultative Group to Assist the Poor (CGAP), define digital financial inclusion as "digital access to and use of formal financial services by excluded and underserved populations. Such services should be suited to the customers' needs and delivered responsibly, at a cost both affordable to customers and sustainable for providers".[1]

1 CGAP. (2015). Digital Financial Inclusion: Implications for Customers, Regulators, Supervisors, and Standard-Setting Bodies.

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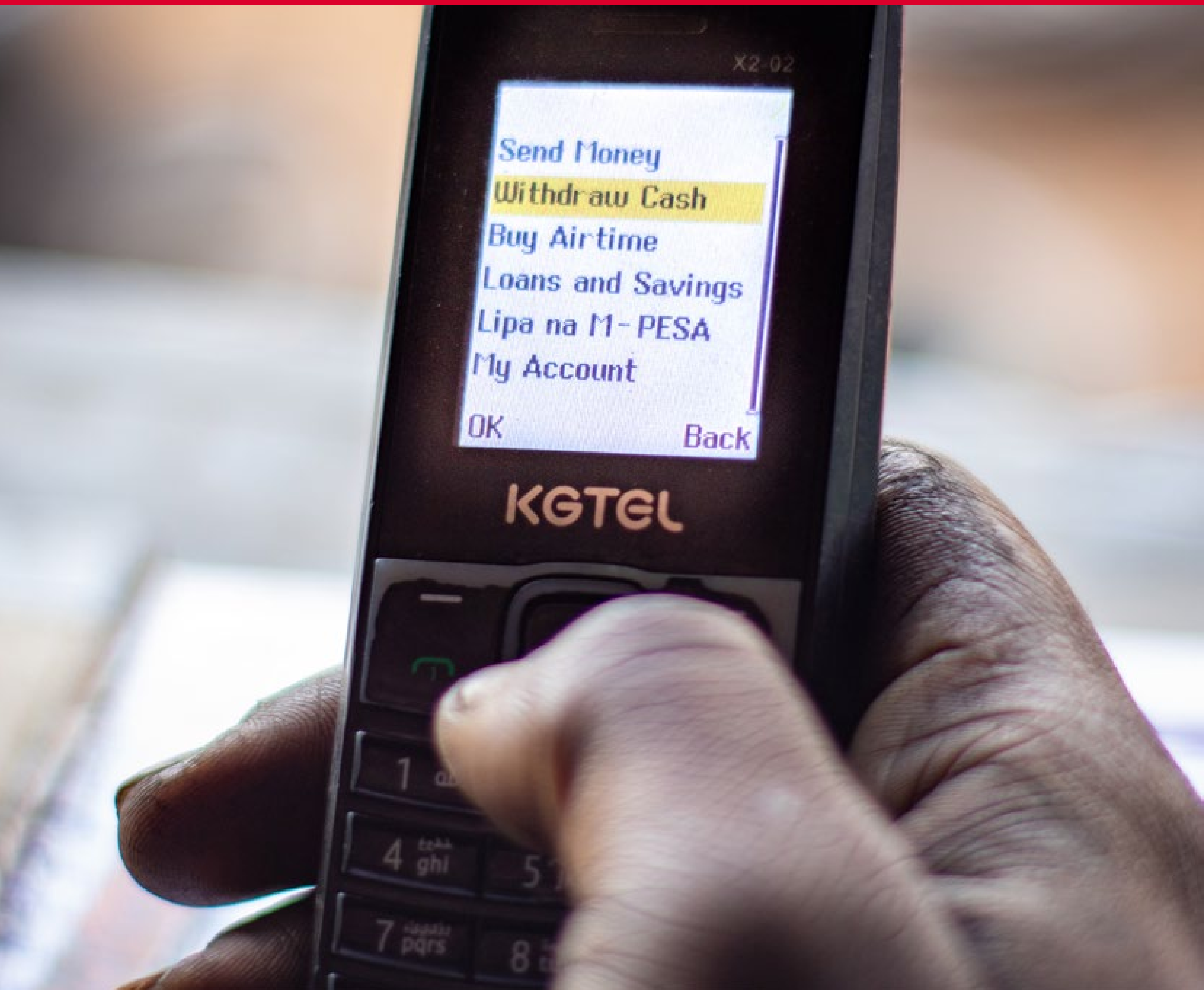
Key lessons in humanitarian digital financial services

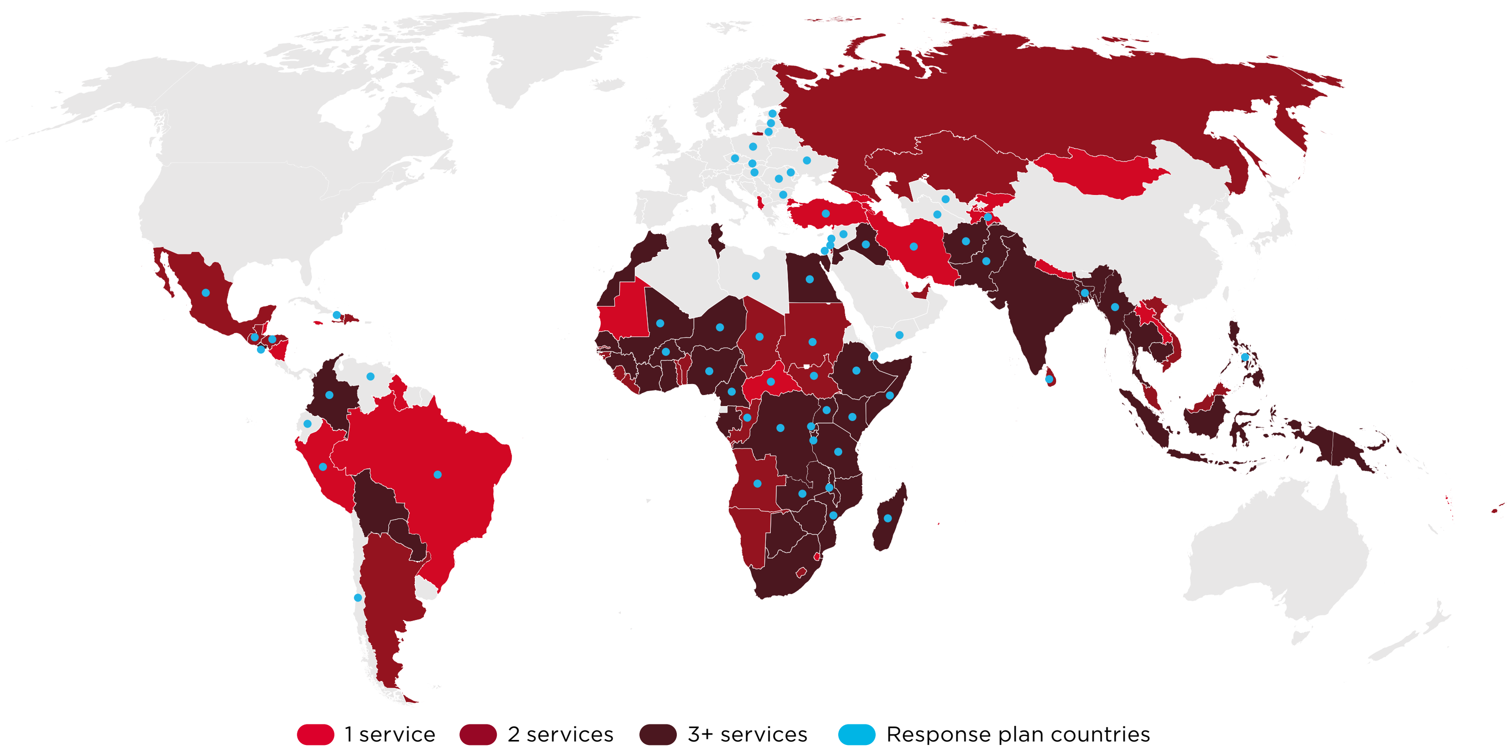


Mobile money is widely used in humanitarian settings

In 2022 there were more than 1.6 billion registered mobile money accounts across 315 deployments in 102 countries worldwide.[2] Across LMICs, people are living increasingly digital lives thanks to mobile money, transacting more often and for more reasons than ever before.

Mobile money services are widely used in humanitarian settings, too. For countries with a 2022 humanitarian response plan (HRPs), 30 of 36 had a live mobile money deployment; also including countries listed in regional response plans, there were live deployments in 44 of 65 countries (Figure 1). Six of these countries had more than one mobile money provider and 25 scored "medium" or higher on the GSMA Mobile Money Prevalence Index, indicating there is adequate adoption, activity and accessibility of mobile money services.[3]

Figure 1: Mobile money prevalence in LMICs



Mobile money usage in crisis settings, such as displacement or acute food insecurity, tends to reflect usage levels in the broader population. The 2019 M4H report, The Digital Lives of Refugees, found high mobile money penetration in refugee camps in Uganda and Rwanda (markets with comparatively high rates of mobile money use in the general population) and low usage among refugees surveyed in Jordan (a market with very low mobile money usage in the broader population).[4] However, these findings were more nuanced. The research found that in the Rwandan refugee camp, 23% more respondents reported using mobile money than the host community. There are often context-specific explanations for such differences.

Increasingly, mobile money is becoming a way to access other products and services in humanitarian settings. For example, the M4H programme has supported projects where mobile money has improved the delivery of clean energy and water, savings and insurance.[5]

2 GSMA. (2023). State of the Industry Report on Mobile Money 2023.
3 The Mobile Money Prevalence Index is a composite index that considers mobile money adoption, activity and accessibility at the country level to facilitate comparisons between markets. The purpose of the index is to enable third parties to gauge whether engagement would lead to expected impact. The index is meant to support decision-making for public, private and NGO stakeholders alike.
4 GSMA. (2019). The Digital Lives of Refugees: How Displaced Populations use Mobile Phones and What Gets in the Way.
5 Mobile for Humanitarian Innovation Fund website.

Understanding the enablers and barriers to mobile money usage in humanitarian settings can help make it more effective

Several factors can act as enablers or barriers to the effective use of mobile money in humanitarian settings. Barriers tend to be similar to those faced in non-crisis settings, but people in need of humanitarian assistance often experience them differently. Barriers and enablers can be divided into demand side (users) and supply side (the market).

Demand side: user requirements

Mobile phone access and ownership

For mobile money to be used effectively in humanitarian settings, people need to have mobile phones. While some may borrow a mobile phone from friends and family or rely on a mobile money agent to conduct transactions for them, they will miss out on some of the key features of mobile money, such as being able to access their balance information or make a transfer whenever they want.

The same challenges arise when mobile money is used to deliver humanitarian assistance. GSMA research in Burundi, which followed cash recipients who did not have a mobile phone and who were discouraged from using their SIM cards, found that they missed out on important opportunities for digital and financial inclusion.[6]

Mobile phone ownership and access are fundamentally inclusion issues. Who does and does not own a mobile phone will also determine who has access to mobile money. Mobile money services can therefore exacerbate inequality because if marginalised groups such as women or persons with disabilities do not have access to a handset, they will also be excluded from the benefits of mobile money.

Digital literacy and skills

Digital literacy is another factor determining mobile money usage in humanitarian settings. When people do not have requisite levels of digital literacy they are, at best, unable to use a product. At worst, they are put in harm's way, vulnerable to scams and theft of their personal data.

There are multiple ways that stakeholders can address this barrier, both in humanitarian programming and more generally. One successful intervention was a project led by Grameen Foundation, which required newly recruited mobile money agents in Ugandan refugee camps to train 100 members of their community in digital financial skills before they could receive other dedicated support in setting up businesses.

It is important to remember, however, that digital skills training should take a holistic approach and that teaching just a few skills will leave new mobile money customers unaware of other digital risks and vulnerable to harm.[7]

Literacy

It is important that potential customers have some form of functional literacy to use DFS effectively, although informal workarounds are common.

6 Hamilton, Z. (11 February 2021). "User Journeys in Burundi: A Conversation with Ground Truth Solutions". Mobile for Development Blog. GSMA.
7 Jacobs, L. (2021). Developing Mobile Digital Skills in Low- and Middle-Income Countries. GSMA.

Trust

Often linked to digital literacy, trust in mobile money services is a key driver of potential use. Research has identified misconceptions people have about the security of their funds, what will happen if they lose their SIM card and feeling vulnerable to fraud. All this can have a detrimental impact on a community's trust in mobile money and levels of uptake and use.

Cultural norms

As with any new service, the uptake of mobile money is heavily influenced by the cultural norms of a community, such as those related to household finance dynamics, savings approaches and the use of technology by women and other marginalised groups. Cultural norms can be closely linked to trust in services.

Supply side: market requirements

Network coverage

For mobile money to be successful in a humanitarian setting, there must be adequate mobile network coverage for transactions to be processed smoothly. Without coverage, it is also unlikely there will be an adequate agent network in place to facilitate these transactions.

The M4H Innovation Fund has supported projects in which grantees wanted to use mobile money to deliver a service (energy and water), but either struggled to or could not do it at all due to insufficient network coverage. In such instances, other approaches or workarounds are needed and will limit mobile money use. This challenge can be exacerbated in humanitarian settings, especially in displacement settings, which are often in remote parts of a country with comparatively weaker coverage.

Humanitarian actors can address the coverage challenge, however. One way is by de-risking capital investment in network expansions to humanitarian settings where the business case is not evident. For example, the United Nations Capital Development Fund and Airtel in northern Uganda did this to help connect newly displaced people from South Sudan and enable them to use mobile money for cash transfers.[8]

Agent network

Without a well-developed and effectively functioning network of mobile money agents, it is highly unlikely that mobile money will work in humanitarian settings. Agents facilitate the cash-in/cash-out of physical cash into the ecosystem and provide important troubleshooting and training functions for new customers.

Humanitarian organisations can support the development of agent networks. For example, Grameen Foundation is working with MTN Uganda to recruit agents in displacement-affected areas where agent presence is low. They are working to remove barriers to entry, such as start-up capital and business skills, to ensure refugees and the host communities can easily access a mobile money agent.

Agent networks should also be attuned to the needs of the communities they serve. In Rwanda and Uganda, the GSMA has supported the training of mobile money agents in the Humanitarian Code of Conduct, among other topics, to encourage fair treatment of refugee customers.[9]

8 Casswell, J. and Frydrych, J. (2017). Humanitarian Payment Digitisation: Focus On Uganda's Bidi Bidi Refugee Settlement. GSMA.

9 GSMA (2019). Mobile money agent training on the humanitarian code of conduct.

Regulatory environment

Multiple regulatory factors can determine the success of mobile money in humanitarian settings. First, know-your-customer (KYC) regulation and the identity documents required for account registration are key, especially in refugee settings where individuals are unlikely to have access to the same IDs as nationals.

In Uganda, the GSMA, in partnership with the United Nations High Commissioner for Refugees (UNHCR) and member MNOs, has successfully advocated for refugee attestation letters to be accepted as valid KYC documentation. This led to nearly 600,000 refugees accessing services in their own name for the first time.[10]

> *"If [the mobile money account] is not in your name, you can't withdraw your money. You have to find the person who is registered and they have to come and withdraw the money – he may be very far. For example, if it's your child they may be at school. If it's not someone you know well they may charge you for that. The challenge is that the owner of the ID may lose their ID and then you can't use the account and withdraw money. It can take years to replace a lost or expired ID."*
>
> **Refugee in Rwanda, male**

Uptake of DFS is enhanced by building an ecosystem of use cases

To galvanise uptake of DFS, users should have access to compelling use cases that meet their needs. This should go beyond simply sending money to friends and family, although this can be an important initial use case. For example, GSMA research has found that the ability to pay for school fees or energy services through mobile money can be key drivers of uptake.

Humanitarian organisations can play a role here. Increasingly, mobile money is being used to provide humanitarian assistance or access to other services. By connecting programming such as CVA and energy services to mobile money ecosystems, humanitarian organisations can expand local use cases and encourage more people to use DFS.

10 Okong'o, K. (10 March 2020). "Uganda: a progressive regulatory directive eases refugees' access to mobile services". Mobile for Development Blog. GSMA.

Focus:
Digital financial services for cash and voucher assistance

Over the past decade, the humanitarian sector has rapidly increased the amount of cash assistance it provides, with cash (and vouchers) representing 19% of global humanitarian assistance in 2020. There has also been a shift towards delivering cash assistance via digital payment systems, such as mobile money and e-vouchers instead of physical cash in envelopes.

M4H research has mapped how different types of cash transfers interact with digital technologies (Figure 2).[11]

Figure 2: Cash transfers and digital technologies

	Cash in envelope	Paper voucher	Punch card	Remittance transfer	QR code on a token/ voucher	Electronic voucher	Prepaid cards	Mobile voucher/token (OTC cash-out)	E-wallet transfer
FACTOR 1 Payment status and transaction details are reported digitally to the IRC (digital backend)	✗	✗	✗	✓	✓	✓	✓	✓	✓
FACTOR 2 Clients receive, store and use money digitally without having to make payments directly and do not need to collect physical cash (digital payment instrument)	✗	✗	✗	✗	✗	✗ ✓	✗ ✓	✗ ✓	✓
	NON-DIGITAL			**DIGITAL**					
	Paper-based transfers paper-based backend + paper-based payment instument			**Stage 1: Digital** digital backend + paper-based payment instument		**Stage 2: Digital** digital backend + digital payment instrument with cashless transaction options			

Physical → **Cashless**

11 Caswell, J. (4 December 2019). "The IRC's shift to digital humanitarian assistance". Mobile for Development Blog. GSMA.

M4H research has also looked at three mobile-enabled technologies that can deliver CVA (Figure 3).[12]

Figure 3: Mobile-enabled technologies to deliver CVA

Mobile money

Key characteristics
Assistance received via mobile money account

Provider: MMP

Beneficiary is able to transfer cash digitally (e.g. P2P) converts digital money to cash by cashing out at an agent and has access to other services (e.g. bill pay). Restrictions to specific stores where cash can be spent can also be applied.

Pro: Link to wider digital ecosystem; cheaper recurring payments; high beneficiary choice when unrestricted. Transfers restricted to be spent in certain stores can target specific programme objectives (e.g. nutrition-based goals).
Con: Expensive set-up costs, KYC requirements.

E-voucher

Key characteristics
Assistance received as voucher to mobile phone or to a card

Provider: MNO or other financial institution such as a bank

E-cash voucher:
Beneficiary withdraws cash assistance at pre-approved locations.

Pro: Limited or no KYC requirements; medium beneficiary choice.
Con: Expensive, limited beneficiary choice in terms of where cash can be withdrawn.

E-goods voucher:
Beneficiary redeems voucher at a pre-approved merchant for prescribed good (e.g. food).

Pro: Can target specific programme objectives (e.g. nutrition-based goals); truly digital system (no movement of cash), limited/no KYC requirements.
Con: Expensive, very limited beneficiary choice.

Card-based system

Key characteristics
Assistance received to card distributed to beneficiaries

Provider: Usually a financial institution such a a bank but also MMPs

Cash transfer:
Beneficiary withdraws cash using cards at ATMs, prepared merchants, mobile or bank agents.

Pro: Medium to high beneficiary choice.
Con: Potentially limited options to cash-out assistance.

Good to transfer:
Beneficially redeems goods using card at pre-approved locations/merchants.

Pro: Can target specific programme objectives (e.g. nutrition-based goals)
Con: Very limited / limited beneficiary choice.

12 GSMA. (2021). Mobile Money Policy and Regulatory Handbook.

Benefits of mobile money CVA

M4H research and engagement have identified several benefits of mobile money CVA for recipients, humanitarian organisations and MMPs, which are detailed in this section.

Benefits of mobile money CVA for recipients

Speed and convenience

Mobile money can be faster and more convenient than cash in envelopes. This is because recipients receive the balance onto their SIM card and can choose to cash out on specific cash-out days, to cash out on another day or to keep the value in their mobile wallet without cashing it out. This means they do not necessarily need to travel to distribution points or wait in long queues. It also gives them more agency over when and where they receive physical cash (if they choose to at all).

There can be drawbacks to mobile money CVA, however. For example, if agents do not have sufficient liquidity, if too many people cash out at the same time or if there are not enough agents operating in the area. Long lines may form or cash may simply be unavailable. However, these challenges can be addressed if humanitarian organisations and MMPs forge effective partnerships.

"I once travelled to Amman and back to give cash (to family). It took most of the day. With mobile (money) I can transfer whenever I like."

Syrian refugee in Jordan, male

"It was convenient to get the money. It was nearby. We did not have to go far away."

Female, Pakistan

Feelings of safety and security

In GSMA research and M4H-supported projects, people who receive cash transfers through mobile money have reported increased feelings of safety. This has primarily been linked to not having to carry cash and mobile money transfers being more discreet than receiving money in an envelope, as others do not necessarily know that they have received a payment. Recipients who understand mobile money well have acknowledged that funds kept in a mobile wallet are safer from theft than physical cash.

"This system is very, very safe because whenever you go to get this money and you go home, we don't run the risk of getting robbed on the way home."

Congolese refugee in Burundi, female

However, where cash transfer programmes have not been designed effectively or where local market conditions are not conducive to mass transfers, large lines can form at mobile money agents, drawing attention to recipients and reducing their feelings of safety.

"If I lose my wallet, I lose my cash. If I lose my phone, I can get another one. No one knows my (mobile money) password, so I can still access my cash from another phone."

Syrian refugee in Jordan, male

Financial control

In several studies, recipients have highlighted that mobile money gives them greater financial control and provides new opportunities, such as to transfer money to family who live far away or to make school payments.

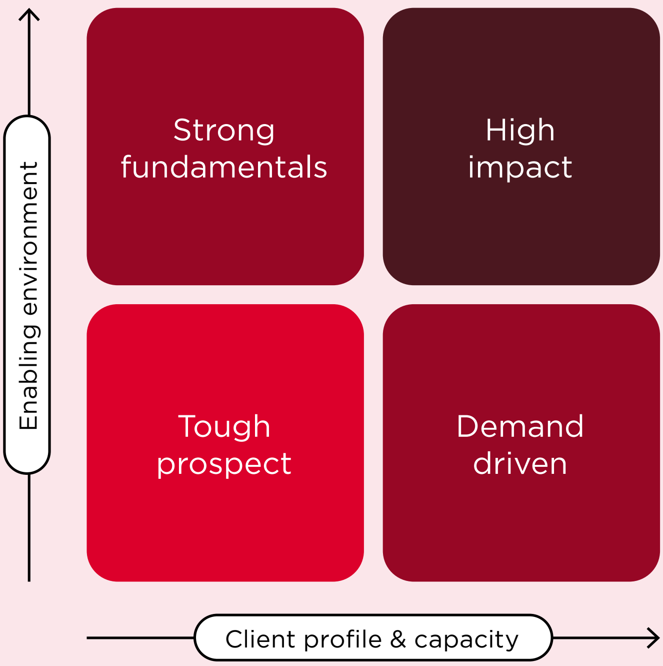
> *"Personally when I got the message I first checked to see how much money I received. Then I relaxed for two days, I need to plan how to use the money. After planning I could go out and buy the tools I'd budgeted for."*
>
> **Congolese refugee in Burundi, male**

> *"Once you receive in this hand, you spend with the other. (Using mobile money) could help me stop spending just because cash is in my hand."*
>
> **Syrian refugee in Jordan, male**

Financial inclusion

A well-designed mobile money cash transfer programme that is implemented in an enabling environment can be a catalyst for digital financial inclusion. CVA programmes are often the first time recipients have interacted with a formal financial service, and can be a launchpad for using DFS in their daily lives. Mercy Corps has created a model for this progression, which they call "cash to financial inclusion", or C2FI (Figure 4).[13]

Figure 4: Mercy Corps' C2FI model



Digital inclusion

Like financial inclusion, a well-designed CVA programme using DFS can also promote digital inclusion. In low-resource settings or where mobile technology has low market penetration, a cash transfer programme may be the first time a person has used a mobile phone.

If individuals are equipped with the skills and knowledge to use a mobile phone safely and there are other compelling use cases, CVA programmes could be a catalyst for longer term mobile phone use. However, humanitarian organisations should consider the risks of connecting people for the first time, such as exposing them to scams or harmful content.

The potential benefit of digital inclusion highlights why it is not advisable to use mobile money for cash transfers if people cannot also be provided with a handset. Giving people a SIM to redeem their payment at an agent, which some cash transfer programmes do, fails to capitalise on this potential benefit.

13 Warmington, M. and Casswell, J. (30 November 2021). "Pathways from Cash Programs to Long Term Financial Inclusion". Mercy Corps.

Benefits and considerations of mobile money CVA for humanitarian agencies

While many of the following benefits can be derived from other types of digital cash transfers, the following are specifically related to mobile money and draw from the experience of the M4H programme.

Scalability

Digital cash transfers can help humanitarian organisations reach more and more people with their programming. Compared to distributing cash in envelopes, digital cash solutions like mobile money require fewer trips to the field and less involvement of humanitarian staff, as much of the work is delegated to the staff and agents of service providers. This can be combined with technological innovations (such as remote verification through Voice-ID) to scale up cash transfers.

Security

Shifting from physical cash distribution to digital can reduce risks for operational staff who no longer need to carry large amounts of cash. However, like most CVA programming, recipients will eventually cash out, putting the risk on others like MNO staff, as well as the recipients themselves.

Accountability

Mobile money can reduce the risk of fraud as it has a much clearer audit trail than the distribution of physical cash.

Speed and efficiency

Once a humanitarian organisation has contracted an MMP, mobile money can enable quick and efficient distribution of cash. Remote payments allow humanitarian staff to reduce the number of field visits, and other innovations (such as Voice-ID)[14] eliminate the need for staff to conduct in-person verification.

Considerations for programming

- **Longer term benefits:** mobile money is most impactful when programming is designed to capitalise on longer term benefits like digital and financial inclusion. Humanitarian organisations should ensure that the choice to use mobile money serves the needs of recipients, not the needs of their organisation.
- **Feedback:** as with any new technology, there will be issues and concerns with using mobile money for CVA. Humanitarian organisations should continue to gather feedback on the mechanism and how it is working.
- **Explanations and training:** there must be ample time and space in programme cycles to explain, in detail where necessary, how the technology and systems work. Users are much less likely to feel comfortable with a solution they do not fully understand.
- **Partnerships:** mobile money will work best when humanitarian organisations engage with MNOs and MMPs as partners, sharing values and working towards a shared vision.

14 Mebur, J. (14 January 2021). "The Voice ID Project: Verifying recipients of mobile money supported humanitarian cash transfers in Somaliland". Mobile for Development Blog. GSMA.

Benefits and considerations of mobile money CVA for MNOs

For MNOs, there are multiple benefits and considerations associated with delivering CVA as an DFS offering. Setting up operations in humanitarian contexts can be challenging and expensive, and the potential revenue generated from CVA programming, relative to other mobile services, may be relatively low. However, coordination between players, creating opportunities to encourage mobile money use beyond cash-outs and linking humanitarian cash transfers to other programmes, such as social safety nets, can all build a persuasive business case.

The business case for CVA mobile money will likely have many aspects:

— **Cost of programming:** where revenues are low, it is important that costs also remain low, particularly in extremely insecure or hard-to-reach areas where operating costs are comparatively higher than an MMP's core business. One example is a partnership between Zain Cash and UNHCR in Iraq. After gleaning insights into user behaviour, they pivoted their CVA model to use agent networks as a distribution point rather than providing recipients with full wallets. While the impact of the transfers was less transformative, overall costs were reduced (making the programming sustainable for the longer term) and the model directly reflected the needs and behaviours of recipients.[15]

— **Potential for cash recipients to become customers of other services:** this is a key consideration. While it is vitally important that the data collected from individuals during a CVA programme is not used for commercial targeting or marketing, exposure to mobile services is likely to increase usage and digital and financial inclusion. This would likely be a key component of a business case for MMPs. Similarly, where cash programming is designed to encourage transactions beyond simply cashing out, it is likely to expand the local digital ecosystem and drive up use cases and the active customer base.

— **Potential for new partnerships:** CVA is a strong entry point to expanding partnerships with key humanitarian partners and development actors. In some host countries, the development sector plays a major role in the economy and has some of the largest corporate accounts and contracts. MNOs may be interested in supporting CVA to build a relationship with the sector and be considered for other, potentially more profitable work.

15 Baah, B. and Downer, M. (2020). Partnering During Crisis: The Shared Value of Partnerships between Mobile Network Operators and Humanitarian Organisations. GSMA.

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