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Humanitarian Technology Adoption Case Study

Technology-enabled Cash and Voucher Assistance

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Abbreviations

CALP	Cash Learning Partnership
CVA	Cash and Voucher Assistance
GDPR	European Union's General Data Protection Regulation
GSMA	Global System for Mobile Communications Association
ICRC	International Committee of the Red Cross
IFRC	International Federation of the Red Cross and Red Crescent
KYC	Know Your Customer
OCHA	Office for the Coordination of Humanitarian Affairs
UKHIH	United Kingdom Humanitarian Innovation Hub
UN	United Nations
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WFP	World Food Programme

Introduction

This case study explores the history of technology-enabled Cash and Voucher Assistance (CVA) programmes within humanitarian contexts, and draws lessons relevant to the future adoption of such technologies by humanitarian organisations. CVA programmes can be delivered in the form of cash (money) or vouchers (tokens that correspond to a fixed value or amount of commodities) that can be used to purchase goods or services, delivered in physical or digital form.[1] This case study focuses specifically on the technologies used to enable money transfers to communities and individuals in areas affected by humanitarian crises.

The insights in this document are grounded in the experiences of humanitarians working in CVA programmes who were convened in an online workshop led by RAND Europe on behalf of the UK Humanitarian Innovation Hub (UKHIH) in May 2024. Accordingly, this case study does not claim to represent the full diversity of the humanitarian sector's views on CVA, nor to present a comprehensive overview of all the historical events that contributed to its development. Rather, it is an exploration of the views of a smaller number of humanitarians with direct experiences of implementing CVA programmes, and the contextual factors that have shaped these experiences and related events. These insights speak to issues of governance, community trust, organisational culture and resources, and the benefits, risks and unintended consequences of technology – all areas that offer lessons for humanitarians considering how, or whether, to adopt wider technologies to support their work. Insights from this workshop are presented in two sections:

- A selected history of cash and voucher assistance. This gives a partial view of important events in the history of CVA adoption.
- Key factors supporting the adoption of technology-enabled cash and voucher assistance in the humanitarian sector. This explores the preconditions that shaped notable CVA development events and discusses learnings that these contextual factors imply for wider responsible technology adoption in the humanitarian sector.

1 CALP Network (2024).

Perspectives on the history of Cash and Voucher Assistance adoption

Figure 1 outlines workshop participants' views on notable events that shaped the historical development of CVA programmes, and the technologies that supported them.

Figure 1 Cash and Voucher Assistance adoption timeline

2005
The United Nations Children's Fund (UNICEF), in partnership with other UN partners, charities, governments and development agencies, leads the implementation of a pilot cash transfer programme in response to the Indian Ocean tsunami, including in Indonesia and Sri Lanka.

2009
The Cash Learning Partnership (CALP) (now known as the CALP Network) is launched, with the aim of making CVA more people-centred and widely deployed.

2012
Noble House launches a paper-based cash assistance programme in Turkey and Syria, setting a precedent for its use in humanitarian crisis settings.

2012-13
The International Federation of Red Cross (IFRC) establishes a regional framework for cross-border pre-paid cards via the Pan-American disaster response unit.

2014
Humanitarian actors including the British Red Cross explore new payment-provider solutions in Turkey, including Near Field Communication (NFC) functionality for the offline use of CVA.

Humanitarian actors including the World Food Programme (WFP) develop new CVA products and approaches in response to Typhoon Hagupit.

Give Directly, **Segovia** and **Mastercard Foundation** launch open and closed loop platforms for CVA.

2015
The United Nations High Commissioner for Refugees (UNHCR) uses an identity registration system employed for deduplicating aid payments in Greece, following refugee migration in the wake of the Syrian and Afghan conflicts.

The World Humanitarian Forum brings together actors in support of new collaborations and approaches to CVA.

2016
The **Collaborative Cash Delivery Network (CCD)**, a network of NGOs working to improve cash delivery in humanitarian crises, is launched.

The World Economic Forum brings together 18 global private-sector and humanitarian organisations to develop principles on public–private cooperation in humanitarian payments on digital delivery of humanitarian aid.

The Grand Bargain agreement, initially between large UN agencies and humanitarian donors, commits signatories to transform their approach to humanitarian aid, placing a renewed focus on CVA.

The European Union's General Data Protection Regulation (GDPR) comes into force, impacting data practices across CVA.

2017
The WFP launches its **Building Blocks for Refugees pilot** in Pakistan.

2018
The United Nations Office for the Coordination of Humanitarian Affairs (OCHA), UNICEF, UNHCR and WFP publish the UN Common Cash Statement, a commitment to develop shared CVA practices and systems.

The IFRC and the Kenya Red Cross launch a blockchain open-loop cash transfer pilot in Isiolo County, Kenya.

2019
Oxfam, **Sempo** and **Consensys's** UnBlocked Cash pilot in Vanuatu investigates the potential for blockchain to accelerate CVA programmes.

2021
The WFP's Building Blocks programme is scaled to provide US$325 million of cash transfers to 1 million refugees in Bangladesh and Jordan.

2022
The Donor Cash Forum publishes its 'Statement and Guiding Principles on Interoperability of Data Systems in Humanitarian Cash Programming' to promote common approaches and collaboration in CVA.

2023
CVA accounts for 21% of the value of all humanitarian aid, an increase of 7% relative to 2017[2]

2025
The IFRC makes a commitment to deliver 50% of humanitarian assistance through CVA by 2025.[3]

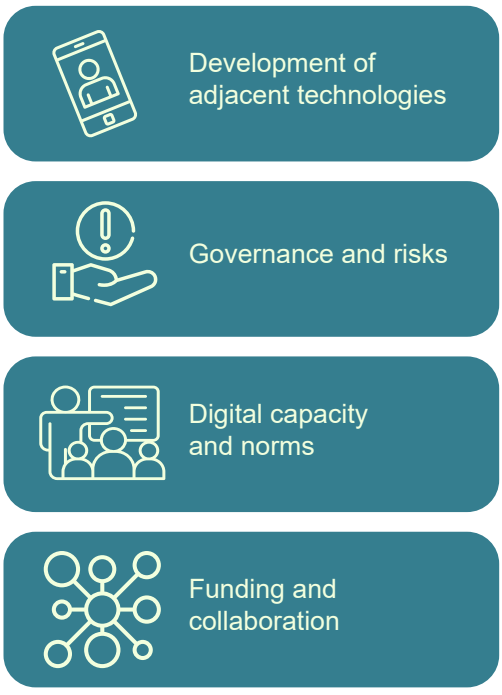
2 See CALP Network (2023).

3 See IFRC (2024).

Key factors and learnings for responsible technology adoption

Using the notable events described in the previous section as a common basis for discussions, workshop participants reflected on the preconditions that influenced these events. These preconditions cover a range of contextual social, political, economic, organisational and legal factors that impacted the development of technology-supported CVA. Across these preconditions, key themes relating to the development of adjacent technologies, digital capacity and norms, governance and risks, and funding and collaboration were discussed.

Figure 2 Key precondition areas discussed by workshop participants



Reflecting on these contextual factors, workshop participants also offered several recommendations for humanitarians exploring the adoption of future technologies in the sector. This section presents an overview of the preconditions discussed, including of associated enablers and barriers, and subsequently highlight 'key lessons' identified in relation to these precondition areas.

Development of adjacent technologies

A range of technological innovations have enabled humanitarian actors to substantially expand their use of CVA programmes. The development of 'closed-loop systems', in payments can only be used to access services by the institutions that issue or participate in them, have mitigated the risk of hyper-inflation (e.g., by linking to stable currencies, such as the US dollar) and enabled bank transfers that do not require adherence to financial services' Know Your Customer (KYC) regulations.[4] Crucially, these developments also enabled offline CVA systems that could be used in hard-to-reach settings where internet infrastructure is lacking, supporting localisation and mitigating regional access challenges, which had previously been barriers to CVA.

Other enabling technologies include the scaling of Application Programming Interfaces (APIs) that enable designers to develop

4 These regulations require identity verification and assurance activities that assess the legitimacy of transactions to prevent fraud and money laundering, effectively excluding communities who do not have access to bank accounts and identity systems. Recently, there has also been substantial progress on the part of financial institutions to develop and launch cash services for users without bank accounts, circumventing these barriers.

Box 1 Key learning for responsible adoption of technology-enabled CVA in the humanitarian sector relating to digital capacity and norms

Lesson for responsible adoption of technology-enabled CVA: technologies promoted without genuine use cases and benefits can undermine trust in the humanitarian activities they seek to support

Some stakeholders' trust in wider CVA programmes and agenda has been impacted by the promotion of technologies that weren't ready for deployment. Workshop participants emphasised that, across the humanitarian sector, technologies are often deployed without an assessment of the local capacity required to operate them, and in places a 'technology-first' mindset can be seen. One example is blockchain, which has been promoted for CVA even in contexts where lower-technology approaches may be more appropriate.

user-friendly interfaces for cash management and transparency, and, more recently, the use of forecasting to anticipate demand for CVA programmes (which affords humanitarian organisations more time to scope and plan their CVA programmes).

Maturing identity verification technologies, such as biometrics, have drawn much attention and debate, facilitating deduplication of aid in CVA programmes but attracting criticism from some stakeholders on their privacy implications. Accelerated technology development in regions where the local context means genuine use cases are lacking was also seen as a barrier, as discussed in Box 1 above.

Digital capacity and norms

CVA programmes have been particularly successful in contexts where mobile money solutions are commonly used outside of humanitarian contexts, while regions where physical cash is the cultural norm, such as Latin America, have generally been more challenging to deliver digital CVA programmes in. Whilst the root cultural causes of these challenges are complex, limited digital literacy and infrastructure among CVA beneficiaries, local humanitarian organisations and local economies have likely all played a role. By contrast, the rise of humanitarian crises in Europe in the wake of the Ukraine conflict, increasing refugee migration to countries such as Greece and Italy, has also broadly been an enabler of CVA where affected populations' trust and regular use of digital technologies lend themselves to digital CVA systems. Elsewhere, participants speculated that the widespread development of domestic policies to support communities affected by the Covid-19 pandemic (for example furlough schemes) has normalised and softened sociopolitical opposition to cash aid programmes, which in turn may have indirectly increased support for CVA in humanitarian contexts abroad.

Governance and risks

Data management and infrastructure has played an important role in many aspects of CVA. Since the introduction of GDPR in the European Union in 2026 and the recent implementation of KYC regulations, there has been an increased focus on data protection and accountability. For example, through the development of further reporting mechanisms to donors. Varied regional governance approaches and institutional requirements have, however, historically created complexities for organisations delivering CVA, sometimes

Box 2 Key learning for responsible technology adoption of technology-enabled CVA in the humanitarian sector relating to governance and risks

Lesson for responsible adoption of technology-enabled CVA: considerations of technology-related risks must balance well-established chronic risks with emerging challenges

Increased collaboration to anticipate and address risks stemming from technologies underpinning CVA is likely to be beneficial in the future. This relates to both enduring challenges (such as digital inequalities in access to CVA technologies or respecting the fundamental principle to 'do no harm') and more novel risks that are emerging as the landscape for CVA changes. In the context of the ongoing Ukraine conflict, for example, challenges relating to cyber-phishing and financial scams that exploit CVA programmes were cited by workshop participants.

leading to data breaches and non-compliance with regulations – the risks of this in humanitarian contexts where organisations deliver CVA at pace across rapidly changing contexts are particularly acute. An International Committee of the Red Cross (ICRC) data breach in 2021 also had a chilling effect on CVA approaches as organisations paused to review their governance and in places became more risk averse.[5]

More broadly, participants queried the premise of 'freely given' consent for data processing by CVA technologies in situations where crisis-affected populations are reliant on this processing to receive aid and are therefore likely to feel substantial pressure to consent. Overreliance on consent at the expense of considering wider responsible data practices was seen as both a historical and future barrier to CVA development.

Funding and collaboration

CVA is often described as a success story for effective multi-stakeholder collaboration in the humanitarian sector. Over the past decade, a range of political consensus-building and organisational collaboration efforts have enabled humanitarian CVA programmes. The 2016 Grand Bargain agreement[6] was an early public declaration of large humanitarian agencies' commitment to reform humanitarian financial aid. Workshop participants stressed that the establishment of the 'High-Level Panel' was fundamental to developing this agreement: the panel, who developed the concept for this agreement, was comprised of well-respected and influential figures who were vital for ensuring this process was seen as legitimate. The subsequent evolution of the Grand Bargain agreement (in both scope and number of signatories) has maintained political momentum.

Vibrant and influential multi-stakeholder networks and organisational models such as the IFRC's 510 initiative[7] have helped to promote knowledge sharing around the practical realities of designing and implementing CVA technologies and programmes. Cooperation between

5 ICRC (2022).

6 ISAC (2024).

7 The IFRC 510 initiative aims to 'improve the speed, quality and cost-effectiveness of humanitarian aid by creating products and services using data and digital', acting as an in-house digital support function to national Red Cross societies. See: IFRC (2024).

humanitarian and private-sector actors has also been influential, enabling financial models for CVA technologies that are sustainable beyond the funding of technology pilots. The UNHCR Common Cash Facility (CCF) is one example of this, with a platform that is provided by the private sector but is made available to all partner organisations in order to increase coordination and efficiency in CVA. World Vision, through the Collaborative Cash Delivery Network, were also cited as instrumental in advancing sectoral conversations around better data protection in CVA programmes.

Funders have also been influential, playing a relatively active role in the design and practice of the CVA programmes they support. The 2022 Donor Cash Forum's[8] Statement and Guiding Principles on Interoperability of Data Systems in Humanitarian Cash Programming, for example, was seen as impactful in moving the sector further towards CVA systems that work across institutional services and boundaries. The European Commission's Civil Protection and Humanitarian Aid Operations department (DG ECHO) have placed firm requirements on CVA providers to demonstrate strong data protection compliance to receive funds. Some participants speculated that the predictability of CVA aid – which is easier to accurately budget for relative to restricted funding for humanitarian projects that are likely to overrun or underspend – may be one contributing factor underlying donors' active support for the sector.

Box 3 Key learning for responsible adoption of technology-enabled CVA in the humanitarian sector relating to funding and collaboration

Lesson for responsible adoption of technology-enabled CVA: different forms and levels of collaboration are needed for success

Informal and formal collaboration networks were highlighted as critical to the development of CVA programmes and technologies. Formal networks for funders, humanitarian organisations and civil societies, such as the Donor Cash Forum and CALP Network, act as important spaces for critical policy debates and the development of safety standards. Informal networks support knowledge sharing around the practical development and use of CVA systems (for example, a WhatsApp group for CVA programme leaders). Private-sector involvement, including participation by financial institutions and fintech developers, was also seen as crucial for ensuring both the credibility and long-term financial sustainability of CVA programmes. Vehicles for this have included respected industry bodies, such as the Global System for Mobile Communications Association (GSMA), and bilateral multi-year partnerships between humanitarian organisations and tech companies (e.g., developers of closed-loop systems and mobile payment providers such as Segovia and Red Rose).

8 The CALP Network facilitated the establishment of this forum and was also seen as an influential stakeholder in this space. CALP brings together over 90 local and international NGOs, donors, technology companies, research organisations and financial services. This diversity of representation across the network, technical advisory group and board membership (which changes periodically) is seen as instrumental to its success.

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