

ENABLING DIGNIFIED
HUMANITARIAN ASSISTANCE
THROUGH SAFE DATA SHARING
LANDSCAPE MAPPING

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Cover photo: A woman from Bukedea District in Uganda participating in the Dignified Identity in Cash Assistance (DIGID) implementation displays a QR code referring to her humanitarian functional digital identity to access cash assistance. (Photo Credit: Uganda Red Cross)

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EXECUTIVE SUMMARY

This landscape mapping study was commissioned by the Interoperability Initiative led by the International Federation of Red Cross and Red Crescent Societies (IFRC), Norwegian Red Cross, Norwegian Refugee Council and Save the Children Norway.

The landscape mapping is divided into five separate reports. This overview report covers high-level drivers and challenges, opportunities for improving the interoperability of systems and data sharing in the context of cash and voucher assistance (CVA). Then four separate 'use case' reports relate to 'pain points' in the overall CVA business process:¹

- 1. **Deduplication** of people, families or households
- 2. **Organizational referral** Sharing data on which organisations can provide what kind of support to whom
- 3. **Individual referral** Sharing data on a person with a partner, donor or government for follow-up services
- 4. **Vertical integration** Sharing data on a person with a payments or messaging provider to extend services

Drivers identified include the continued adoption of cash as a modality across different sectors of the humanitarian response. This increases the complexity of determining what constitutes duplicate assistance. Interoperability is also a key component for moving towards a more peoplecentred approach to humanitarian assistance. If implemented well it can increase responsiveness, reduce risks and facilitate greater choice among affected populations. Among CVA practitioners an important driver (in which many situate interoperability) is improving the efficiency, effectiveness and quality of programming.

Three challenges emerge across the use cases. First, the lack of clarity around which structures are responsible for coordinating efforts to improve interoperability. This is both globally and at the national level. Second, the short-term imperative of humanitarian crisis is at odds with the long-term perspective needed to improve interoperability. This results in challenges securing expertise and resourcing to develop or advance interoperability roadmaps. Third, there is debate among organizations subject to data protection legislation as to the appropriateness of consent as a legal basis for collecting and processing data.

Two opportunities are explored. First, the potential for greater cooperation with social protection programmes. Both social protection and CVA programmes are converging on the use of cash. Social protection programmes are also increasingly focusing on becoming more 'adaptive' and 'shock-responsive'. There are opportunities for both sectors to learn from each other as they work to improve interoperability. There is also value in increasing interoperability in countries where CVA and social protection programming overlap. Finally, the report discusses the emergence of decentralized and 'peer-to-peer' approaches to improve interoperability. These include zero proof approaches that can confirm if another organization holds data on the same person without the need to share their personal data. Alongside this are emerging approaches to data governance that could give more agency to affected populations in relation to how their data is processed and used.

^{1 &#}x27;Pain points' refer to areas that are time-consuming, introduce risk, are expensive or affect the dignity of affected populations.

LIST OF ABBREVIATIONS

API	Application programming interface
CCD	Collaborative Cash Delivery Network
CCF	Common Cash Facility
CVA	Cash and voucher assistance
DIGID	Dignified Identities in Cash Assistance
ECHO	European Commission Directorate-General for European Civil Protection and Humanitarian Aid Operations
FAO	UN Food and Agriculture Organization
FSP	Financial service provider
GDPR	General Data Protection Regulation of the European Union
GSMA	GSM Association
ID	Identity
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International non-governmental organization
IOM	UN International Organization for Migration
KYC	Know your customer
LMMS	Last Mile Mobile Solutions
NGO	Non-governmental organization
OCHA	UN Office for the Coordination of Humanitarian Affairs
PGP	Pretty Good Privacy
UNHCR	UN High Commissioner for Refugees
WFP	UN World Food Programme



NRC and its longstanding partner, Stabilization Support Services (SSS), register and transfer cash payments to displaced households in the city of Ternopil in western Ukraine. (Photo Credit: NRC)

This landscape mapping study is part of the Interoperability Initiative led by a consortium of humanitarian organizations comprising the International Federation of Red Cross and Red Crescent Societies (IFRC), Norwegian Red Cross, Norwegian Refugee Council and Save the Children Norway. The initiative is funded by the European Commission Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) and IFRC leads the technical implementation. In 2019, the consortium initiated the Dignified Identities in Cash Assistance (DIGID) project aiming at assisting people affected by crisis who do not own an official identity (ID) document and addressing the challenges arising from not having official digital identities.

Digital identities and data sharing are acknowledged to play a key role in CVA and contribute to overcoming challenges for affected people. Different data protection regimes, disparate systems, lack of common data models and risks to data protection and security, however, complicate the sharing of personal and non-personal data between humanitarian organizations and systems. The consortium, thus, initiated the Interoperability Initiative to identify a technology solution that allows data systems to communicate with each other. The solution aims at enabling different humanitarian organizations to share CVA data for better coordinated and improved assistance.

This landscape mapping is a first step to better understand the problem space and define the technology solution. The objective of the exercise is to map common data sharing and interoperability scenarios, alongside relevant data points with a particular focus on CVA, and to identify relevant tools and/or systems in use today as well as blockages and challenges to sharing data between different types of humanitarian organizations. The priority of data points is based on levels of sensitivity and needs for sharing.

The landscape mapping is divided into five separate reports. This report provides background on the study and the methodology used. It summarizes high-level drivers and challenges related to interoperability and data sharing. It then profiles opportunities for improving the interoperability of systems and data sharing among organizations and with affected people.

Four accompanying reports focus in depth on specific use cases. These relate to 'pain points' in the overall CVA business process and cover:

- 1. **Deduplication** of people, families or households
- 2. **Organizational referral** Sharing data on which organisations can provide what kind of support to whom
- 3. **Individual referral** Sharing data on a person with a partner, donor or government for follow-up services
- 4. **Vertical integration** Sharing data on a person with a payments or messaging provider to extend services

While implementing this project, DIGID continues to coordinate closely with the Collaborative Cash Delivery (CCD) Network and its 'data portability' project, also funded by ECHO. The CCD-led project is exploring how to address issues around affected people's digital literacy, organizational politics, governance and culture which are barriers to data sharing, to lay the groundwork for data portability.

Jointly, the projects will create a roadmap for the recommended way forward.

Definitions

Interoperability, as per its ECHO definition², is "the ability of organizations to interact towards mutually beneficial goals, involving the (secured & safe) sharing of information and knowledge between organizations, through the business processes they support, by means of exchanging data with other systems using common standards. Interoperability is different from data portability in that interoperability tends to focus on systems sharing data and working together, while portability puts the person at the centre of the sharing."

Methodology

The landscape mapping focused on three overall research questions that relate to data sharing and interoperability in the context of CVA in humanitarian emergencies.

It explored these through identifying and scoping use cases that relate to problems and/or pain points at different stages in the CVA project cycle and business process.

- 1. Which use cases should the Interoperability Initiative focus on to provide the greatest benefit to people receiving CVA and practitioners rendering that assistance?
- 2. Which technology solutions and drivers should the Interoperability Initiative investigate further to tackle the use cases?
- 3. What are the blockages and challenges that must be overcome to improve data sharing and interoperability in relation to the use cases?

The mapping aims to inform priorities that subsequent work streams will focus on.

The study collected data between January and March 2023 using 2 roundtable discussions at global level (following Chatham House Rules), 29 key informant interviews representing different stakeholders (4 UN agencies, 5 international non-governmental organization (INGOs), 4 networks, 3 National Red Cross and Red Crescent Societies and 2 others) and a literature review. Efforts were made to sample respondents to ensure diversity by gender and functional geographic representation³, as well as coverage of each use case.

- $2. \quad \text{IFRC. Interoperability.} \ \underline{\text{https://interoperability.ifrc.org/about}}$
- 3. Functional geographic representation refers to people who are focused on a geographic area in their work, but may not be based in that geography.

Limitations

Time and resources did not allow direct engagement with affected people and recipients of CVA. As such the study was not able to collect primary data for one of the research questions (Which use cases should the Interoperability Initiative focus on to provide the greatest benefit to people receiving CVA and practitioners rendering that assistance?).

Our literature review also found limited research that gave voice to affected people and recipients of CVA. Interviewees, however, were asked to judge and respond to this question based on their assumptions. Nevertheless, this gap limits our understanding as to which use case to prioritize to bring the greatest benefit to recipients of CVA.

In addition, interoperability is a complex and technical subject. Many respondents interviewed appeared to conceptualize it more broadly as part of a package of measures to improve the effectiveness and efficiency of the humanitarian response. This framing may bias the responses given to our questions.



Haneen is a 25 years old Jordanian student who attends Aydoon community based centre in Irbid, north of Jordan, where the Norwegian Refugee Council (NRC) runs many activities and trainings. (Photo Credit: NRC)

The following sections discuss some broader themes emerging that could drive or incentivize improved interoperability and better data sharing. These are discussed in more depth in relevant use case reports as well.

Improving coordination across sectors

CVA has doubled from 2016 to 2019. Of the 5.6 billion US dollars in CVA programmed in 2019, 3.5 billion was delivered by the UN, 1.1 billion by National Red Cross and Red Crescent Societies and 1.0 billion by NGOs⁴. This is a trend for an ever-increasing volume of CVA being delivered by a relatively small group of organizations.

The rapid increase in the use of multipurpose cash as a modality presents a challenge to the sectoral approach to coordination. For example, UNICEF (nutrition lead), UN High Commissioner for Refugees (UNHCR, protection lead), World Food Programme (WFP) and UN Food and Agriculture Organization (FAO) (food security co-leads) and IFRC and UNHCR (shelter co-leads) have all introduced cash as an additional modality to complement existing forms of support.

Improving coordination across sectors will require greater sharing of data, which in turn is a driver for improving interoperability.

Enabling a more people-centred approach

The Cash Barometer provides insights into the preferences and challenges of CVA recipients in the Central African Republic, Nigeria and Somalia. A common theme emerging from this feedback is

the need for better communication around programming. Specifically, on the type of support and modalities available, the eligibility criteria, the duration, and mechanisms to provide feedback or update the data that recipients have provided.

As CVA is increasingly used across sectors, responding to people's needs will require investments in interoperability to enable better data sharing among implementers. This is particularly relevant for the larger implementers that provide the majority of CVA.

Use case two (Organizational referral – Sharing data on which organisations can provide what kind of support to whom) explores one initiative that could help CVA implementers publish data in a format that creates discoverable directories with information on the type of support they can provide. This type of approach could help provide more choice and control to people in need of assistance. It would also enable greater collective focus on improved communication with those in need of assistance.

However, while improved data sharing and interoperability can bring important benefits for recipients of CVA, it also brings risks.

Deduplication is one example. Efforts to reduce duplicate registrations may start from an assumption that there is a deliberate attempt by recipients to defraud the programme. We found no CVA related research to assess the scale of duplicate registrations made, nor to determine if duplicates were the result of recipient error (due to unclear eligibility criteria for example), programme error (data entry mistakes for example) or deliberate fraud.

Anecdotal evidence from respondents pointed to recipient error as the primary cause of duplicate registrations. Two underlying causes for this were common. First, the complexity of defining, understanding and communicating 'eligibility' when multipurpose cash is used as a modality for several sectors. Second, lack of mechanisms to update their eligibility profile if their circumstances change. This was common with self-registration apps used in the Ukraine response which were reported to lack a way to change some of the information provided. As a result many people registered again if – for example – their household details had changed.

If not well implemented, efforts to deduplicate can cause delays to participants and increase the risks they face (if their data is not shared securely). This is most likely to affect the people that are most vulnerable. Conversely, if implemented well it ensures that finite resources are distributed as effectively as possible to those in need.

Work on interoperability must therefore have accountability to people as a core principle for data sharing. This will require greater investments in grounded work with people in need of assistance to ensure that it responds to their needs and respects their rights.

Efficiency, effectiveness and quality programming

Many of the CVA practitioners interviewed framed investments in interoperability and data sharing in terms of improving the quality of programming and/or improving the efficiency and effectiveness of their organization's work. In larger organizations the case for interoperability and data sharing often starts with the need for better internal data management across programmes and teams. This is an important entry point to consider when developing the business case for investments in this area.

Interviews exploring the processes followed to deduplicate registrations, manage protection referrals and process payments via financial service providers (FSPs) made clear the time-consuming nature of these tasks. Interoperability is a necessary first step in automating such repetitive and time-consuming tasks. This could take the form of an application programming interface integration between systems (backed by workflow) to automate parts of the deduplication process.

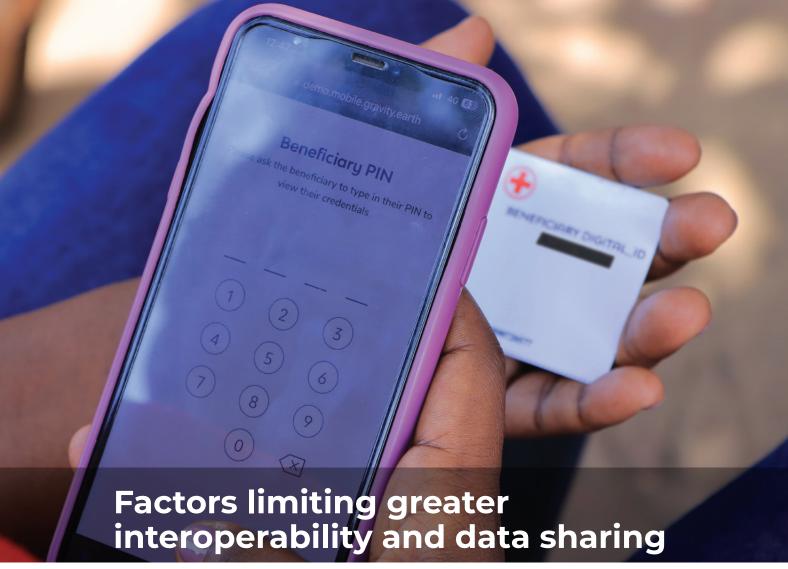
While this will require an up-front investment in time and money, evidence from digital transformation projects in other sectors suggest that there would be a quick return on this investment.

We should also consider the cost of creating, maintaining and running parallel systems that perform similar functions. In use case three (Individual referral – Sharing data on a person with a partner, donor or government for follow-up services) we draw on research from the social protection sector to better understand these costs.

Finally, in use case four (Vertical integration – Sharing data on a person with a payments or messaging provider to extend services) we explore the potential cost savings achieved from bulk procurement of financial services. Data from Jordan found that this reduced transfer fees from 2.5 to 1.67 per cent⁵.



In a collective reception center for newly arrived refugees from Ukraine in Lublin, Poland, NRC is doing cash distribution in cooperation with local partner, Polish Center for International Aid. (Photo Credit: Polish Center for International Aid)



A staff from the Uganda Red Cross scans a QR code referring to the eligibility criteria of a participant in the Dignified Identity in Cash Assistance (DIGID) implementation in Bukedea District, in Uganda. (Photo Credit: Uganda Red Cross)

Each use case report includes a detailed discussion of specific challenges related to the use case. In this section we focus on governance level challenges that affect all the use cases.

Who coordinates work on interoperability?

Two-thirds of practitioners interviewed for the 'State of the World's Cash 2020' report ranked coordination of multipurpose cash in a sector based system as the greatest challenge for effective CVA in a humanitarian response. This same challenge hinders efforts to improve interoperability and data sharing.

Global data sharing agreements – where they exist – are often confidential. This makes it difficult to determine the extent to which they cover the main CVA implementers. We found few global multi-agency data sharing agreement⁶, with the majority being bilateral.

Agreeing a new data sharing agreement often takes several months, with more time then needed to operationalize it in a particular country. Respondents reported that – while some UN systems are interoperable with each other to an extent (e.g. proGres and SCOPE, and SCOPE and BRaVe) – there is much more work to be done. This increases the time, risks and complexity of sharing data.

Work and expertise is needed to create the political will to overcome barriers associated with cost, legal liability and risk of harm to individuals. However, interoperability is a complex topic that cuts across many specialist areas and functions. There is a need for more people in the sector that combine this specialist background with operational experience in CVA.

Our review of the literature demonstrated clear roadmaps towards greater interoperability in several countries. However, when speaking to respondents it was evident that little progress had been made towards this. Lack of capacity and funding was commonly cited as a challenge.

A global 'interoperability cluster' might be one way to bring together the expertise needed to provide leadership, coordination and support. This could in turn develop a business case for interoperability that responds to the political economy realities of donors, UN and other implementers.

Combining a long-term agenda with a short term focus on humanitarian crises

We found in several cases Cash Working Groups and Cash Consortia have already developed clear roadmaps to improve interoperability and data sharing. However, lack of long-term funding and capacity limited progress with implementation.

Work on improving interoperability takes time. It requires expertise in a variety of areas, consensus building and trust. This is at odds with the short term, crisis-driven priorities of the humanitarian sector. As at the global level, consideration is needed as to which structures are best placed to coordinate the careful, long-term work needed to advance interoperability and data sharing.

For example, this might mean coordinating a process to agree on a functional ID that can be adopted by all CVA implementers. Or coordinating the agreement of data sharing agreements with implementers.

Respondents suggested Cash Working Groups, Donor Cash Working Groups, Cash Consortia and the Humanitarian Coordinators Office as potentially appropriate structures.

Can consent be used as a legal basis for sharing data?

Many organizations use consent as their main legal basis to collect people's personal data for humanitarian purposes. However, considering the context where humanitarian organizations operate, collecting people's consent comes with a number of ethical and technical questions.

Consent requires that people be informed in an easy-to-understand, timely and clear manner of the reasons for collecting their data, what it will be used for, who it will be shared with and how they can access and rectify their data. In principle, people should also be informed of potential harms and risks, and how organizations take responsibility to protect people's data.

Based on this information, people can then be requested to provide their 'informed consent'. However, power asymmetries and digital literacy levels influence affected people's decision to share or not to share their personal data in return for assistance, which is often referred to as 'data for aid'.

As a result, consent is usually collected for compliance reasons. For consent to become meaningful, knowledge transfer and capacity strengthening is needed to enable people to make informed decisions.

Second, even if consent is collected it must be reflected in data sharing workflows. These must ensure that data shared only includes people who have actually consented for this to take place.



A man receives cash assistance distributed by the Zimbabwe Red Cross to people affected by drought in Muzurabani province, Zimbabwe. (Photo Credit: IFRC)

The use case reports highlight many examples of good practice, as well as some promising new solutions being developed and piloted. Here we discuss a few opportunities that cut across several use cases.

When and how to collaborate with social protection programmes?

While the scope of this report is limited to CVA, we also consider the case for interoperability and two-way data sharing with government social protection programmes. Both areas are converging on the use of cash. Social protection programmes are also increasingly focusing on becoming more 'adaptive' and 'shock responsive'.

However, there are numerous challenges to overcome. Governments may be reluctant to take on the financial responsibility for delivering humanitarian assistance. Priorities may also differ. Humanitarian agencies responding to a crisis may determine that higher transfer values are needed to meet basic needs. They may also be wary of working with government due to concerns about corruption, neutrality, independence or alignment with the humanitarian principles.

However, as discussed earlier there are also cost implications to creating, maintaining and running parallel systems that serve a similar purpose. While it may be easier for CVA implementers to do things their own way, a government led approach may be more sustainable.

There is no one answer to this question. The World Bank⁷ proposes instead a "progressive transition from a parallel humanitarian delivery system, to one including features that are compatible with the national system until they are completely with the national system, if institutionally separate".

⁷ World Bank. 2019 Unbundled: A framework for connecting safety nets and humanitarian assistance in refugee settings. https://documents1.worldbank.org/curated/en/970701569569181651/pdf/Unbundled-A-Framework-for-Connecting-Safety-Nets-and-Humanitarian-Assistance-in-Refugee-Settings.pdf

This is a key consideration for work on interoperability. There are opportunities to explore this agenda further with the Digital Convergence Initiative⁸, which is leading work on interoperability in the social protection sector.

Should we look instead to decentralized approaches?

This report has discussed many governance level challenges that limit progress on data sharing. However, are there technical approaches that could be used to improve bilateral data sharing? And could these be adopted organically without the need for central leadership and coordination? Most importantly are there clear incentives that would encourage adoption of these approaches?

Use case one (Deduplication of people, families or households) summarizes 'zero proof approaches' that have been piloted. In cases where there is agreement on an identifier for a person, family or household these approaches enable one organization to confirm if the other has already registered that person or not. While data must be shared to achieve this, it can be minimized to an encrypted string of data that cannot be linked back to the person that it relates to.

This approach avoids the need for a single registry and could be integrated with existing systems to enable data sharing on a bilateral basis.

Use case two (Organizational referral – Sharing data on which organisations can provide what kind of support to whom) describes an approach used by local government in the UK. This enables service providers to 'self-publish' information on the type of services they offer (including location, eligibility and funding limitations). This enables the creation of dynamic service directories that draw on this data. The end result is a patient-centric experience where people have greater choice over the services available to them.

APPENDICES

List of tools and systems

Following is a selection of systems, solutions and platforms currently used in the humanitarian sector.

PRIMES

UNHCR uses the term 'Population Registration and Identity Management

EcoSystem' (PRIMES) to encompass all the interoperable registration, ID management and caseload management tools and applications it uses.

It includes the following tools:

- Profile Global Registration System (proGres): This is a beneficiary case management tool
 which provides a common source of information about individuals to facilitate protection
 of persons of concern.
- Rapid Application (RApp): This enables offline data collection of case data that can then be uploaded to progress.
- · Biometric Identity Management System (BIMS): This captures biometrics.
- · CashAssist: This enables registered refugees to receive cash assistance.
- Global Distribution Tool (GDT): This allows registered refugees to receive in-kind assistance (such as food and non-food items).

Capabilities – ID management, case management, CVA, analytics, biometrics.

Owner - UNHCR

Notes: proGres has the capability to register each member of a family or household separately.

More information:

www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-03-16-PRIMES-Flyer.pdf

www.unhcr.org/registration-guidance/chapter3/registration-tools

www.unhcr.org/registration.html

 $\frac{\text{https://wfp-unhcr-hub.org/wp-content/uploads/2021/01/ProGres-UNHCRs-Registration-and-Case-}{\underline{\text{Management-System.pdf}}}$

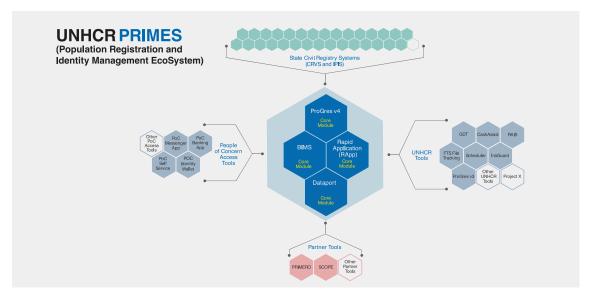


Figure 1. UNHCR PRIMES: Population Registration and Identity Management EcoSystem

SCOPE

SCOPE is WFP's beneficiary and transfer management platform that supports the WFP programme intervention cycle from beginning to end. The SCOPE platform is a web-based application used for beneficiary registrations, intervention set-ups, distribution planning, transfers and distribution reporting. SCOPE supports all WFP transfer modalities – in-kind, voucher and cash – for a variety of project activities. The platform can be used in many ways depending on the specific needs of the country and the type of delivery mechanism required.

SCOPE can be used to support:

- registration and importing of people's identities that can be grouped as households
- · deduplication and management of the personal data of eligible beneficiaries
- beneficiary management, including beneficiary lists creation and transfer values
- transfer of assistance, including cash-based and in-kind interventions
- assignment of identifiers to eligible beneficiaries and authentication of beneficiaries before assistance delivery
- · assistance delivery tracking
- storage and management of operational data
- · capabilities ID, cash and voucher transfer management, biometrics.

Capabilities – ID management, case management, CVA, analytics, biometrics.

Owner - WFP

More information:

https://documents.wfp.org/stellent/groups/public/documents/communications/wfp272586.pdf

https://usermanual.scope.wfp.org/cash-accounts/content/common_topics/introduction/1_introduction.htm

Biometrics' Registration and Verification System (BRaVe)

BRaVe is a biometric beneficiary data management system used by the International Organization for Migration (IOM). We found limited information to describe its scope and capabilities.

Capabilities – Biometrics

Owner - IOM

More information:

www.iom.int/news/iom-wfp-conduct-first-beneficiary-data-exchange-south-sudan

www.iom.int/sites/g/files/tmzbdl486/files/our_work/DMM/IBM/iom_and_biometrics_external_info_sheet_november_2018.pdf

RedRose

RedRose is a data management platform that integrates with data collection tools such as ODK/ KoboToolbox to manage data (e.g. beneficiary details, market price monitoring, post-distribution surveys). It also integrates with payment mechanisms (e.g. mobile money, remittances, e-vouchers) to distribute cash assistance and enable automated reconciliation in a secured and auditable manner. The platform provides monitoring and reporting capabilities and can also be used for other assistance types such as in-kind and services.

It covers several areas.

Beneficiary management:

- Registering beneficiaries
- · Verifying and targeting beneficiaries
- Tracking changes over time

Assistance delivery:

- Managing multiple funds from multiple donors
- E-cash, vouchers and in-kind deliveries simultaneously

Surveys and feedback:

- · Post-distribution monitoring
- Market surveys
- Complaints and feedback
- Baseline and end line

Capabilities – Personal identifiable information, biometrics, CVA, payments, surveys

Owner – RedRose

More information:

www.redrose.io

https://cash-hub.org/resources/cash-technology/redrose/redrose-introduction

Humanitarian cash Operation and Programme Ecosystem (HOPE)

HOPE is UNICEF's humanitarian cash transfer management information system. HOPE can (1) collect beneficiary data, (2) associate data with cash programmes, (3) create a target population (4) manage payment lists (5) send them to FSPs, (6) reconcile payments, (7) triangulate payment verification information directly from beneficiaries, (8) handle grievances and feedback, as well as (9) reporting.

HOPE development was led by UNICEF's Office of Emergency Programmes with technical support from its Information and Communication Technology Division and Division of Administration, Finance and Management.

UNICEF's objective is to deploy HOPE in 5 countries in 2021 and up to 30 countries in the 5 years to come. HOPE enhances the quality of programmes implementing humanitarian cash transfers by increasing compliance with UNICEF guidance and tools and ensuring accountability and traceability of the information managed.

The HOPE platform results in better cash assistance programming, data security and reporting. It mitigates the associated data protection and fiduciary risks that come with the increasing use of cash assistance in global emergency response.

Capabilities - Personal identifiable information, biometrics, CVA data

Owner - UNICEF

More information:

www.tivix.com/case-studies/unicef-hope

Last Mile Mobile Solution (LMMS)

LMMS is a technology solution designed to strengthen efficiency, effectiveness and accountability in humanitarian aid service delivery. LMMS improves remote data collection, promotes better management of aid recipients, and enables faster and fairer aid distributions, delivering rapid reporting functionality to aid workers.

LMMS is a standalone technology solution developed by World Vision in collaboration with the IT industry. It combines software applications with custom hardware to digitize (and simplify) the process. These applications include beneficiary registration, verification, distribution planning and management, monitoring and reporting, with the ability to integrate with third-party applications.

Capabilities – Digital ID, CVA, activity tracking, analytics

Owner - World Vision

More information:

https://lmms.org

GLOSSARY OF KEY TERMS

Accountability

The concept of accountability in the humanitarian sector includes three components: (1) to take account refers to listening, communication, participation and participatory approaches, (2) to give account concerns transparency, and (3) being held to account by different stakeholders, which accounts for being responsible, having obligations to act in ways that are consistent with accepted standards and taking ownership for actions and non-actions to accept credit and blame.⁹

Anonymization

The process by which personal data is irreversibly altered, either by removing or modifying the identifying variables, in such a way that a data subject can no longer be identified directly or indirectly.¹⁰

Appraisal

Appraisal refers to an assessment of what is being delivered and whether it matches up to what was promised.¹¹

Artificial intelligence (AI)

Artificial intelligence (AI) is a broad term encompassing a set of sciences, theories and techniques that seek to reproduce by a machine the cognitive abilities of a human being. As a category, AI indicates a system that automates an analytical process, such as identifying and classifying data.¹²

Big data

Big data are large datasets which are computationally readable and manipulable. 13

Biometrics

Biometrics or biometric recognition means the automated recognition of individuals based on their biological and behavioural characteristics.¹⁴

Blockchain

Blockchain is "in essence an append-only decentralized database that is maintained by a consensus algorithm and stored on multiple nodes (computers)". 15

Cloud services

Cloud services most commonly refers to "a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction".¹⁶

- 9 Hilhorst, Dorothea, Samantha Melis, Rodrigo Mena et al. 2021. 'Accountability in Humanitarian Action'. Refugee Survey Quarterly 40 (4): 363–89. https://doi.org/10.1093/rsq/hdab015; Hilhorst, Dorothea. 2018. 'Classical Humanitarianism and Resilience Humanitarianism: Making Sense of Two Brands of Humanitarian Action'. Journal of International Humanitarian Action 3 (1): 15. https://doi.org/10.1186/s41018-018-0043-6; CHS Alliance, The Sphere Project and Groupe URD. 2015. CHS Guidance Notes and Indicators' Guidance. https://corehumanitarianstandard.org
- 10 Inter-Agency Standing Committee (IASC). 2021. IASC Operational Guidance on Data Responsibility in Humanitarian Action. https://interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action
- 11 Derek, Thorne. 2022. Feedback and Appraisal: Why Both Facts and Feelings Matter When Citizens Demand Their Rights (blog). 27 June 2022. https://integrityaction.org/what-we-are-learning/blog/feedback-and-appraisal-why-both-facts-and-feelings-matter-when-citizens-demand-their-rights
- 12 ICRC and Brussels Privacy Hub. 2020. Handbook on Data Protection in Humanitarian Action. 2nd Ed. Edited by Christopher Kuner and Massimo Marelli. www.icrc.org/en/data-protection-humanitarian-action-handbook; Pizzi, Michael, Mila Romanoff and Tim Engelhardt. 2020. 'Al for Humanitarian Action: Human Rights and Ethics'. International Review of the Red Cross 102(913): 145–80. https://doi.org/10.1017/S1816383121000011
- 13 Madianou, Mirca. 2019. 'Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises'. Social Media + Society 5(3): 205630511986314. https://doi.org/10.1177/2056305119863146
- 14 ICRC and Brussels Privacy Hub. 2020 (see above).
- 15 Finck. 2010. Blockchains and Data Protection in the European Union, 4(1) European Data Protection Law Review, p. 17: https://doi.org/10.21552/edpl/2018/1/6 Cited in ICRC and Brussels Privacy Hub. 2020.
- 16 US National Institute of Standards and Technology. 2011. Special Publication 800-145. The NIST Definition of Cloud Computing, http://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf Cited in ICRC and Brussels Privacy Hub. 2020.

Communication channel

A communication channel is the way in which a message is shared or how people communicate such as a radio programme, SMS focus group, mobile messaging app or social media.¹⁷

Consent

Consent is the most popular and often preferred legal basis for processing personal data. Alternative legal bases relevant in humanitarian settings include vital interest (of the data subject or another person), public interest, legitimate interest, performance of a contract or compliance with a legal obligation.¹⁸

Data

Re-interpretable representation of information in a formalised manner suitable for communication, interpretation, or processing.¹⁹

Data agency

Data agency refers to the power of having control over personal and/or community data and deciding whether, when and with whom to share it. It means that people have the power to play active roles in data systems and to influence decisions about their data and the ways that data use affects them.²⁰

Data breach

Data breach means the unauthorized modification, copying, unlawful destruction, accidental loss, improper disclosure or undue transfer of, or tampering with, personal data.²¹

Data controller

A data controller is the person or organization who alone or jointly with others determines the purposes and means of the processing of personal data.²²

Datafication

Datafication is often interchangeably used with big data and refers to the ability to quickly process large amounts of information or quantify processes that were previously experienced qualitatively.²³

Data governance

Data governance refers to the framework used to define who has authority and control over data and how that data may be used (e.g. access, security, retention).²⁴

Data literacy

Data literacy includes the skills, knowledge, attitudes and social structures required for different populations to use data.²⁵

- 17 Bugge, Jon. 2017. Rumour Has It: A Practice Guide to Working with Rumours. CDAC Network. www.cdacnetwork. org/tools-guidance/20170610-rumour
- 18 ICRC and Brussels Privacy Hub. 2020 (see above).
- 19 Inter-Agency Standing Committee (IASC). 2021. IASC Operational Guidance on Data Responsibility in Humanitarian Action. https://interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action
- 20 Global Partnership for Sustainable Development Data. 2022. Reimagining Data and Power: A Roadmap for Putting Values at the Heart of Data. White Paper. Data Values Project. www.data4sdgs.org/sites/default/files/2022-07/Final%20White%20Paper%20designed%20%28English%29.pdf; Greenwood, Faine, Caitlin Howarth, Danielle Escudero Poole et al. 2017. The Signal Code: A Human Rights Approach to Information During Crisis. Harvard Humanitarian Initiative. https://hhi.harvard.edu/publications/signal-code-human-rights-approach-information-during-crisis
- 21 ICRC and Brussels Privacy Hub. 2020 (see above).
- 22 Ibid.
- 23 Cieslik, Katarzyna and Dániel Margócsy. 2022. 'Datafication, Power and Control in Development: A Historical Perspective on the Perils and Longevity of Data'. Progress in Development Studies 22(4): 352–73. https://doi.org/10.1177/14649934221076580; Madianou, Mirca. 2019. 'Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises'. Social Media + Society 5(3): 205630511986314. https://doi.org/10.1177/2056305119863146
- 24 Ada Lovelace Institute. 2021. Participatory Data Stewardship. A Framework for Involving People in the Use of Data. Ada Lovelace Institute. www.adalovelaceinstitute.org/report/participatory-data-stewardship
- 25 School of Data, 2016 in IFRC and Solferino Academy. 2022. Data Playbook. IFRC. https://solferinoacademy.com/data-playbook

Data minimization

The objective of ensuring that only the minimum amount of data is processed to achieve the objective and purposes for which the data were collected.²⁶

Data protection impact assessment

Data protection (or privacy) impact assessment or refers to an assessment that identifies, evaluates and addresses the risks to personal data arising from a project, policy, programme or other initiative.²⁷

Data processing

Data processing means any operation or set of operations which is performed on personal data or sets of personal data, whether or not by automated means, such as collection, recording, organization, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment, combination or erasure.²⁸

Data processor

A data processor is the person or organization who processes personal data on behalf of a data controller.²⁹

Data protection

The systematic application of a set of institutional, technical and physical safeguards that preserve the right to privacy with respect to the processing of personal data.³⁰

Data quality

A set of characteristics that make the data fit for the purpose for which it is processed. Data quality includes components such as accuracy, relevance, sufficiency, integrity, completeness, usability, validity, coherence, punctuality, accessibility, comparability and timeliness.³¹

Data responsibility

The safe, ethical and effective management of personal and non-personal data for operational response, in accordance with established frameworks for personal data protection. Data responsibility in humanitarian action is the safe, ethical and effective management of personal and non-personal data for operational response. It is a critical issue for the humanitarian system to address and the stakes are high.³²

Data rights

All people have fundamental rights to access, transmit and benefit from information as a basic humanitarian need, to be protected from harms that may result from the provision of information during crisis, to have a reasonable expectation of privacy and data security, to have agency over how their data is collected and used, and to seek redress and rectification when data pertaining to them causes harm or is inaccurate.³³

Data sharing

International data sharing includes any act of transferring or making personal data accessible outside the country or international organization where it was originally collected or processed, including both to a different entity within the same humanitarian organization or to a third party, via electronic means, the internet or other means.³⁴

- 26 Inter-Agency Standing Committee (IASC). 2021. IASC Operational Guidance on Data Responsibility in Humanitarian Action. https://interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action
- 27 ICRC and Brussels Privacy Hub. 2020 (see above).
- 28 Ibid.
- 29 Ibid.
- 30 Inter-Agency Standing Committee (IASC). 2021. IASC Operational Guidance on Data Responsibility in Humanitarian Action. https://interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action
- 31 Ibid.
- 32 OCHA. 2021. From Digital Promise to Frontline Practice: New and Emerging Technologies in Humanitarian Action. www.unocha.org/sites/unocha/files/OCHA%20Technology%20Report.pdf
- 33 Greenwood, Faine, Caitlin Howarth, Danielle Escudero Poole et al. 2017. The Signal Code: A Human Rights Approach to Information During Crisis. Harvard Humanitarian Initiative. https://hhi.harvard.edu/publications/signal-code-human-rights-approach-information-during-crisis
- 34 ICRC and Brussels Privacy Hub. 2020 (see above).

Data subject rights

The right to information should be respected by ensuring that people are informed individually or collectively as to the nature of the programme being provided, what information is being collected, by whom and why, and which data processors are involved. Adequate infrastructure and resources should be put in place to facilitate the rights to access, objection, deletion and rectification.³⁵

Demographically identifiable information

Demographically identifiable information includes data points that enable the identification, classification and tracking of individuals, groups or multiple groups of individuals by demographically defining factors. These may include ethnicity, gender, age, occupation and religion. This may also be referred to as community identifiable information that specifically identifies certain groups or communities 36

Digital transformation

Digital transformation involves integrating digital technologies and solutions into every area of a business. This is as much a cultural change as a technological one and requires fundamental shifts. While overall motives which guide goals and aspirations might not change, digital transformation impacts the way organizations operate, deliver services and engage people.³⁷

Any time something is translated into bits and bytes – for example, scanning a photo or a document that object is being digitized.³⁸

Converting information and documents from analogue to digital formats.³⁹

Digitalization

See Digital transformation.

Disaggregated data

Disaggregated data refers to data that is broken down into one or more dimensions or characteristics such as sex, geographic area and age.⁴⁰

Doing no digital harm

Doing no digital harm is based on the 'do no harm' imperative which refers to humanitarian actions to not have adverse impacts on, or create new risks for, affected people. Adding the digital lenses has become a critical imperative to the way humanitarian organizations and their partners manage data, implement activities and connect with affected people in the digital space. 41

Feedback

Feedback is the way to find out if a service is meeting with people's satisfaction. Where there is sufficient trust, feedback can explain what people really think, and help services improve. 42

- 35 Ibid.
- 36 OCHA 2021
- 37 Souter, David. 2022. 'Inside the Digital Society: What Do You Mean, "Digital Transformation"?' APC Talk (blog). 19 September 2022. www.apc.org/en/blog/inside-digital-society-what-do-you-mean-digital-transformation; SAP. n.d. 'What Is Digital Transformation?' Business Technology Fundamentals (blog). Accessed 30 May 2022. www.sap.com/insights/what-is-digital-transformation.html
- 38 Prause, Jacqueline. 2022. 'Digitization vs Digitalization'. SAP Business Technology Fundamentals (blog). 29 April
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 39 SAP. n.d. 'What Is Digital Transformation?' Business Technology Fundamentals (blog). Accessed 30 May 2022. www.sap.com/insights/what-is-digital-transformation.html
- 40 Global Partnership for Sustainable Development Data. 2022. Reimagining Data and Power: A Roadmap for Putting . Values at the Heart of Data. White Paper. Data Values Project. www.data4sdgs.org/sites/default/files/2022-07 Final%20White%20Paper%20designed%20%28English%29.pdf
- 41 Burton, Jo. 2021. "Doing No Harm" in the Digital Age: What the Digitalization of Cash Means for Humanitarian Action. International Review of the Red Cross 913 (March). https://international-review.icrc.org/articles/doingno-harm-digitalization-of-cash-humanitarian-action-913#footnoteref15_p6ltxx6
- 42 Derek, Thorne. 2022. Feedback and Appraisal: Why Both Facts and Feelings Matter When Citizens Demand Their Rights (blog). 27 June 2022. https://integrityaction.org/what-we-are-learning/blog/feedback-and-appraisalwhy-both-facts-and-feelings-matter-when-citizens-demand-their-rights

Function creep

Function creep refers to the way that data collected for one purpose (e.g. registration) may end up being used for an entirely different purpose (e.g. state surveillance).⁴³

General Data Protection Regulations (GDPR) of the European Union

GDPR refers to the protection of natural persons with regard to the processing of personal data and on the free movement of such data. The regulation entered into force on 24 May 2016 and has applied since 25 May 2018. 44

Harm

Harm is the negative implications of a data processing initiative on the rights of a data subject, or a group of data subjects, including but not limited to physical and psychological harm, discrimination and denial of access to services.⁴⁵

Humanitarian principles

The humanitarian principles of humanity, neutrality, impartiality and independence provide the foundation for humanitarian action. They are central to establishing and maintaining access and delivering humanitarian assistance to affected people, whether in a disaster or a complex emergency, such as armed conflict.⁴⁶

Inclusion

Approaches to inclusion generally focus on ensuring equitable access to assistance and protection, and on taking into account the patterns of marginalization that people may experience. This means being sensitive to the barriers people face when trying to access support, making sure that support is tuned to their diverse needs, and recognizing their capacity to participate in and shape how aid is delivered. Ultimately, it is a way to put the principle of impartiality into practice: a proactive effort to make sure humanitarian action truly reaches the people most in need.⁴⁷

Innovation

Innovation is the result of a mutual shaping of social, political and technological processes which often preserve institutional orders. Innovation and data practices are closely linked as digital innovation projects produce data, while innovation is often aimed at improving the efficiency of data management, and itself often results from complex data modelling.⁴⁸

Know your customer (KYC)

Know your customer (KYC) is a process enabling businesses to check the ID of their customers in order to comply with regulations and legislation on money laundering and corruption.⁴⁹

Legal accountability

Legal accountability requires having legislative and regulatory structures in place to hold those responsible for bad outcomes to account.⁵⁰

- 43 Ajana, Bhitaj. 2013. Governing through biometrics. London: Palgrave. Cited in Madianou, Mirca. 2019. 'Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises'. Social Media + Society 5(3): 205630511986314. https://doi.org/10.1177/2056305119863146
- 44 European Commission n.d.
- 45 IASC. 2021. IASC Operational Guidance on Data Responsibility in Humanitarian Action. https:// interagencystandingcommittee.org/operational-response/iasc-operational-guidance-data-responsibility-humanitarian-action
- 46 OCHA. 2022. Information Management Working Group/Network. In: IM Toolbox. OCHA Information Management Toolbox. https://humanitarian.atlassian.net/wiki/spaces/imtoolbox/pages/217546783/ Information+Management+Working+Group+Network
- 47 Lough, Oliver. 2022. Social Media and Inclusion in Humanitarian Response. Working Paper. HPG Working Paper. London: ODI. https://odi.org/en/publications/social-media-and-inclusion-in-humanitarian-response
- 48 Suchman, Lucy and Libby Bishop, 2000. Problematizing "innovation" as a critical project. Technology Analysis & Strategic Management, 12, 327–333. Cited in Madianou, Mirca. 2019. 'Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises'. Social Media + Society 5(3): 205630511986314. https://doi.org/10.1177/2056305119863146
- 49 PWC. 2016. Know Your Customer: Quick Reference Guide: www.pwc.com/gx/en/financial-services/publications/assets/pwc-anti-money-laundering-2016.pdf Cited in ICRC and Brussels Privacy Hub. 2020 (see above).
- 50 Pizzi, Michael, Mila Romanoff, and Tim Engelhardt. 2020. 'Al for Humanitarian Action: Human Rights and Ethics'. International Review of the Red Cross 102(913): 145–80. https://doi.org/10.1017/S1816383121000011

Legal basis

A legitimate legal basis is required for personal data processing operations (including data sharing) to take place. Humanitarian organizations may rely on the following legal bases to process personal data: vital interest of the data subject or of another person (e.g. in the case of minors), public interest, consent, legitimate interest, performance of a contract, or compliance with a legal obligation. Depending on the context, it can be difficult to fulfil the basic conditions of valid consent, in particular that it is informed and freely given.⁵¹

Non-personal data

Non-personal data does not contain any information that can be used to identify a natural person.

Personal data

Personal data means any information relating to an identified or identifiable natural person.⁵²

Pseudonymisation

Pseudonymisation, as distinct from anonymization, means the processing of personal data in such a manner that it can no longer be attributed to a specific data subject without the use of additional information, provided that such additional information is kept separately and is subject to technical and organizational measures to ensure that the personal data is not attributed to an identified or identifiable natural person.⁵³

Quasi identifiers

Quasi identifiers, in contrast to unique identifiers, are pieces of information that might correlate with other information. When different quasi identifiers are combined, they might reveal personally identifiable information.

Sensitive data

Sensitive data means personal data which, if disclosed, may result in discrimination against or the repression of the individual concerned. Typically, data relating to health, race or ethnicity, and religious/political/armed group affiliation, as well as genetic and biometric data is considered to be sensitive. All sensitive data require augmented protection even though different types of data falling under the scope of sensitive data (e.g. different types of biometric data) may present different levels of sensitivity. Given the specific situations in which humanitarian organizations work and the possibility that some data elements could give rise to discrimination, setting out a definitive list of sensitive data categories in humanitarian action is not meaningful. The sensitivity of data as well as appropriate safeguards (e.g. technical and organizational security measures) have to be considered on a case-by-case basis. ⁵⁴

Social accountability

Social accountability requires that the public have been made aware of the systems and technologies and have adequate digital literacy to understand their impact.⁵⁵

Sub-processor

Sub-processor is a person or organization engaged by a data processor to process personal data on its behalf.⁵⁶

- 51 ICRC and Brussels Privacy Hub. 2020 (see above).
- 52 ICRC. 2021. Harmful information: misinformation, disinformation and hate speech in armed conflict and other situations of violence. ICRC. www.icrc.org/en/publication/4556-harmful-information-misinformation-disinformation-and-hate-speech-armed-conflict
- 53 ICRC and Brussels Privacy Hub. 2020 (see above).
- 54 Ibid.
- 55 Pizzi, Michael, Mila Romanoff, and Tim Engelhardt. 2020. 'Al for Humanitarian Action: Human Rights and Ethics'. International Review of the Red Cross 102(913): 145–80. https://doi.org/10.1017/S1816383121000011
- 56 ICRC and Brussels Privacy Hub. 2020 (see above).
- 57 Hilhorst, Dorothea, Samantha Melis, Rodrigo Mena and Roanne van Voorst. 2021. 'Accountability in Humanitarian Action'. Refugee Survey Quarterly 40 (4): 363–89. https://doi.org/10.1093/rsq/hdab015

System accountability

System accountability means that humanitarian workers hold each other to account in formal and informal ways. It can also mean that agencies work together to provide communities with a common window for forwarding complaints.⁵⁷

Technical accountability

Technical accountability requires auditing of the system/technology itself.⁵⁸

Third party

A third party is any natural or legal person, public authority, agency or any other body other than the data subject, the data controller and the data processor.⁵⁹

⁵⁷ Hilhorst, Dorothea, Samantha Melis, Rodrigo Mena and Roanne van Voorst. 2021. 'Accountability in Humanitarian Action'. Refugee Survey Quarterly 40 (4): 363–89. https://doi.org/10.1093/rsq/hdab015

⁵⁸ Pizzi, Michael, Mila Romanoff, and Tim Engelhardt. 2020. 'Al for Humanitarian Action: Human Rights and Ethics'. International Review of the Red Cross 102(913): 145–80. https://doi.org/10.1017/S1816383121000011

⁵⁹ ICRC and Brussels Privacy Hub. 2020 (see above).

LIST OF ORGANIZATIONS THAT PARTICIPATED IN THE RESEARCH

American Red Cross British Red Cross **CALP Network** European Commission Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO) **Ground Truth Solutions GSM** Association **ICRC** International Organization for Migration (IOM) International Rescue Committee (IRC) Kenya Red Cross Netherlands Red Cross NetHope Norwegian Red Cross Norwegian Refugee Council (NRC) Plan International Red Barnet Save the Children UN High Commissioner for Refugees (UNHCR) **UNICEF** UN Office for the Coordination of Humanitarian Affairs (OCHA) UN World Food Programme (WFP)

Welthungerhilfe

World Vision International

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CASH AND VOUCHER ASSISTANCE BUSINESS PROCESS

The following diagram is adapted from the WFP Cash and Vouchers Manual (Second Edition 2014).

Needs assessment and response analysis Cash and Vouchers Business Process Model Distribution cycle Intervention cycle Intervention closure

https://docustore.wfp.org/stellent/groups/public/documents/staffdev/wfp271375.pdf



THE FUNDAMENTAL PRINCIPLES

OF THE INTERNATIONAL RED CROSS AND RED CRESCENT MOVEMENT

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.



The International Federation of Red Cross and Red Crescent Societies (IFRC)

is the world's largest humanitarian network, with 192 National Red Cross and Red Crescent Societies and around 14 million volunteers. Our volunteers are present in communities before, during and after a crisis or disaster. We work in the most hard to reach and complex settings in the world, saving lives and promoting human dignity. We support communities to become stronger and more resilient places where people can live safe and healthy lives, and have opportunities to thrive.