WFP EVALUATION

Strategic Evaluation of WFP's Use of Technology in Constrained Environments

Centralized Evaluation Report – Volume II Annexes

OEV/2020/002
Office of Evaluation

January 2022

WFP
World Food Programme
SAVING LIVES
CHANGING LIVES

Acknowledgements

This report was written by an evaluation team coordinated by ADE (Aide à la Décision Économique), a private consulting company providing independent monitoring and evaluation services. The evaluation was conducted under the technical guidance and oversight of the WFP Office of Evaluation.

The evaluation team is grateful for the time, support, and thoughtful comments and insights received from a wide range of stakeholders within and outside WFP. We are especially grateful for the contribution of key stakeholders working in the various WFP country offices and across regional and central divisions and departments. We are also grateful for the support of the WFP Office of Evaluation, which provided essential access to stakeholders and documents, as well as valuable feedback throughout the evaluation. We are similarly thankful for the input from the External Reference Group. Finally, we are grateful for the input provided directly by over 1,500 people served by WFP and their partners. We hope that this evaluation contributes to improved services and greater accountability to affected populations.

Disclaimer

Photo credit

Cover photo: WFP/Ismail Taxta

Key personnel for the evaluation

Office of Evaluation

Andrea Cook	Director of Evaluation
Michael Carbon	Senior Evaluation Officer (Evaluation Manager)
Arianna Spacca	Research Analyst

External Evaluation Team

Patrick Vinck	Evaluation Team Leader
Emmanuel Letouzé	Evaluation Deputy Team Leader
Tatiana Goetghebuer	Senior Evaluator
Maria Antonia Bravo	Research Analyst
Romain Fourmy	Research Analyst
Kevin Henkens	Research Analyst
Jeroen Peers	Research Analyst
Stephen Mathew	Research Analyst

With additional input from

Nancy Mock	Strategic Advisor
Steff Deprez	Senior Evaluator (Global Survey)
Teresa Hanley	Senior Evaluator (Bangladesh)
Nick Maunder	Senior Evaluator (South Sudan, Iraq)
Hisham Koghali	Senior Evaluator (Jordan)
Samuel Niki-Niki	Senior Evaluator (DRC)

Contents

Annex I. Summary Terms of Reference

Evaluation

Summary Terms of Reference

Strategic Evaluation of the WFP's Use of Technology in Constrained Environments

Strategic Evaluations (SEs) commissioned by the Office of Evaluation (OEV) are forward-looking and focus on strategies, systemic or emerging corporate issues and/or programmes and initiatives with global or regional coverage.

Subject and Focus of the Evaluation

Technology and technological innovation have become a key strategic factor to enable the rapid expansion of WFP's operations; to improve the time- and cost-efficiency and quality of assistance to people in need; to adapt and increase operational resilience to changing conditions, constraints and risks; to take advantage of new opportunities; and to meet donor expectations, including greater accountability.

Yet, there is limited evidence to inform decision making related to the deployment of new technologies in constrained environments in terms of what benefits technology brings to WFP's work and its target populations, how well WFP identifies and manages risks related to technology, how effectively WFP promotes demand-driven, inclusive ICT innovation, and what conditions need to be in place to ensure appropriate and effective use of technologies in constrained environments.

This evaluation will be an opportunity to take stock and assess whether WFP uses, and is equipped to use, the most appropriate technologies to achieve its objectives under constrained conditions. At the same time, it is urgent to assess to what extent WFP manages the increasing risks in relation to the technologies that it chooses to deploy.

Objectives and Users of the Evaluation

With the aim to serve accountability and learning purposes, the objectives of the evaluation are the following:

- Assess the extent to which WFP effectively and efficiently deploys the most appropriate information and communication technology to achieve its objectives in constrained environments.
- Assess how, why and under which conditions the use of ICTs and data has helped increase WFP's management and programmatic performance in constrained environments.
- Look at how WFP has taken advantage of technological opportunities, and at good practices in adapting ICT applications to evolving constraints.
- Assess whether effective measures are in place to mitigate and manage risks to operations and populations resulting from the use of ICTs and data in constrained environments.

The main users of the evaluation include WFP management and staff at country, regional and HQ level. The engagement with WFP management and staff during the evaluation will contribute to reflections on the WFP Strategic Plan 2022-2026. The evaluation will also provide insights to support WFP's digital transformation agenda and help updating norms, standards and guidelines on the implementation of WFP policies related to digital technology and data.

WFP target population groups in constrained environments are also an important stakeholder of the evaluation as they can be greatly affected by WFP's use of technologies. The evaluation will make particular efforts to hear their voices, in particular those of women and marginalised groups. Furthermore, the evaluation will engage with WFP's full range of partners (governments, civil society, private sector, UN agencies and donors). Secondary users of the evaluation are other actors in the humanitarian and development field, such as other UN agencies and INGOs, academia/think tanks and networks (e.g. ALNAP) to whom the findings of this evaluation might also be of interest.

Key Evaluation Questions

The evaluation will address the following four key questions:

Question 1: Technology - How does the use of technologies help WFP increase the effectiveness and efficiency of its operations in constrained environments?

Question 2: People - How does the use of technologies in constrained environments affect the people served by WFP, and how do people affect this use?

Question 3: Policies and processes - How appropriate are WFP policies and processes in place to enable strategic use, promote innovation and manage risks in relation to the use of technologies in constrained environments?

Question 4: Partnerships - How well does WFP manage its partnerships in relation to the provision and use of technologies in constrained environments?

Scope and Methodology

The evaluation will cover WFP's use of technologies in constrained environments from January 2014, to June 2021.

The use of technology in WFP can be analysed through a systems perspective composed of multiple components interacting with each other. The evaluation will be centred on the four key components of this system: Technology; People; Policies and processes, and; Partnerships. The evaluation questions are clustered around each component of the "technology use system", but the evaluation will also analyse linkages and dependencies between the four key components and reflect how these interact in constrained environments to contribute to organisational management and operational objectives.

The methodology will adopt a mixed approach combining a review of secondary sources, interviews, direct field observation and surveys. Data collection methods will include:

a) An extensive literature review of relevant WFP and external documents;
b) Key informants' interviews;
c) Two WFP technology users' surveys (online survey of WFP and partners' personnel and mobile phone survey of affected populations);
d) Focus group discussions with affected populations, in particular those who are not digitally well connected.

While having a strategic global outlook, the evaluation will zoom into seven countries to learn from different contexts, from which logical generalizations could be drawn. Seven brief country case study reports will be prepared to support internal learning within WFP. The evaluation will also conduct a benchmarking exercise to compare WFP with other organisations working in similar sectors and environments as WFP, in all dimensions covered by the evaluation.

Data triangulation across different sources and methods will be carried out to validate findings and avoid bias in the evaluative judgement. The evaluation will make a special effort to use technology, as appropriate, to enhance data access, strengthen data analysis and improve communication of evaluation results with evaluation stakeholders.

Roles and Responsibilities

Evaluation Team: The evaluation will be conducted by a team of external consultants with capacity in conducting complex strategic evaluations using a dynamic systems approach. The team will be required to have a strong multidisciplinary expertise in WFP programming and management; information and communication technology equipment and applications used in the humanitarian and development sector; innovation development, implementation and upscaling; protection and ethical issues around information technology and data; the "digital divide"; data generation, analysis, management and governance; power relationships and politics around information; ICT governance; and partnerships.

OEV Evaluation Manager: The evaluation is managed by the WFP Office of Evaluation with Mr. Michael Carbon as Evaluation Manager. He is responsible for the evaluation preparation and design, and first level quality assurance throughout the process. The Director of Evaluation will exercise second level quality assurance and will approve the evaluation products.

Governance

Two groups will be consulted throughout the evaluation process to review and provide feedback on evaluation products:

- An **Internal Reference Group** of a cross-section of WFP stakeholders from relevant business areas at different WFP levels.
- An **External Advisory Panel** composed of external experts in the fields of humanitarian technology and protection.

Communications

Preliminary findings will be shared with WFP stakeholders in the Country Offices, Regional Bureaus and Headquarters during debriefing sessions at the end of the fieldwork and through short country case study reports. A stakeholders' workshop will be held to ensure a transparent evaluation process and promote ownership of the findings and preliminary recommendations. The draft Evaluation Report will be shared with both the Internal Reference Group and the External Advisory Panel for review and comments. A Summary Evaluation Report (SER) will be presented to the Executive Board.

Findings will be actively disseminated, and the final evaluation report will be publicly available on WFP's website. Key evaluation products will be in English with tailored communications products in other UN languages.

Timing and Key Milestones

Inception Phase: July – December 2020

Fieldwork: February – April 2021

Debriefing: May 2021

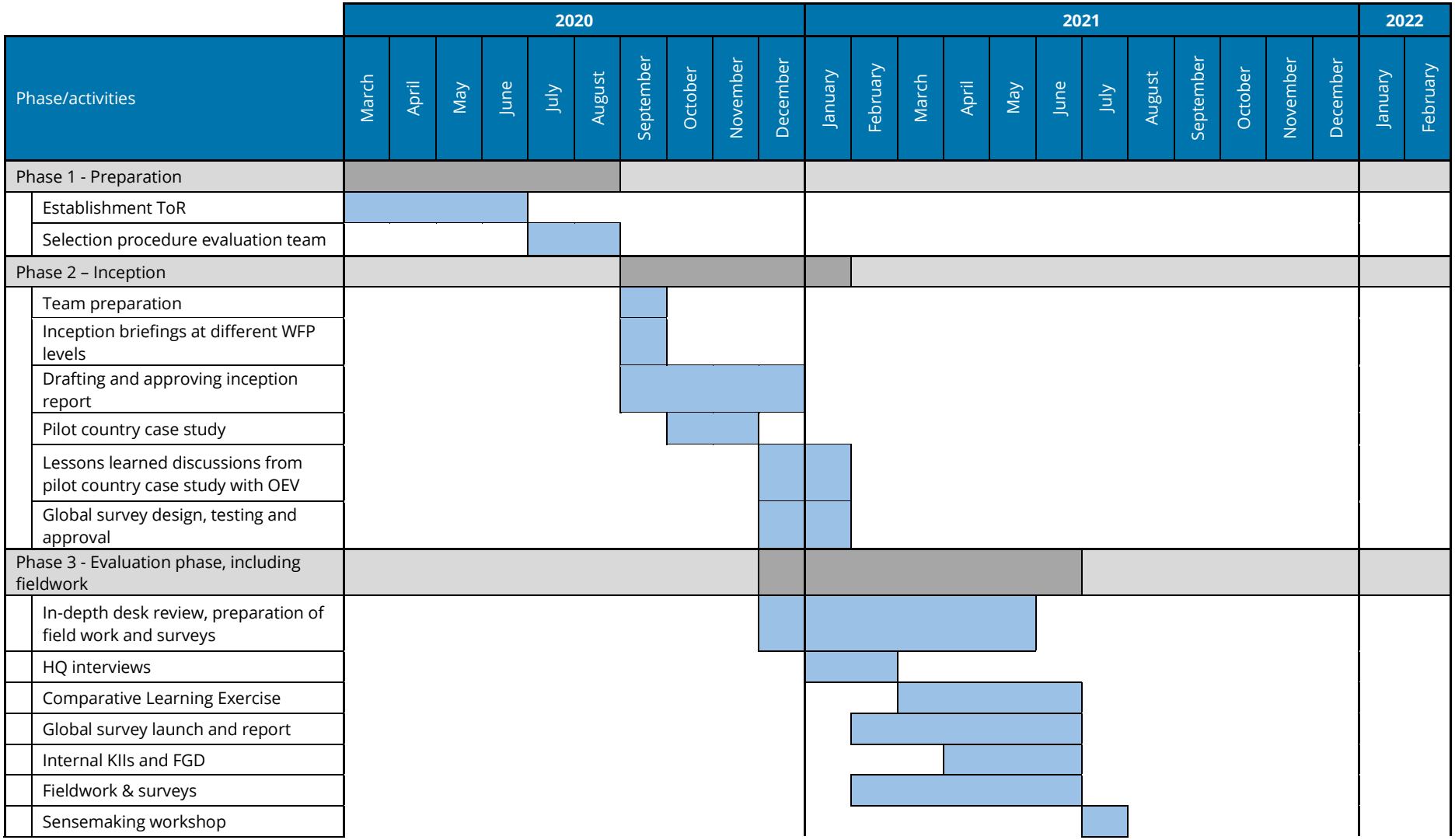
Reporting: June – November 2021

Stakeholders' Workshop: September 2021

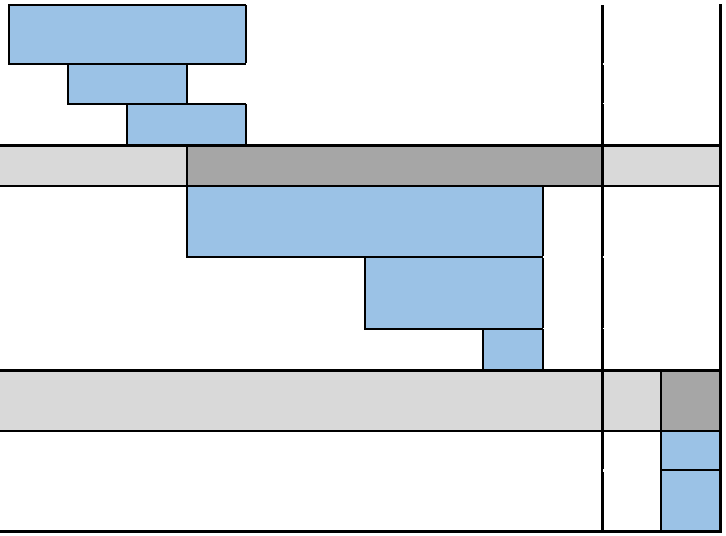
Executive Board presentation: February 2022

Findings will be actively disseminated and the final evaluation report will be publicly available on WFP's website.
Full Terms of Reference are available at http://newgo.wfp.org/topics/evaluation
For more information please contact the WFP Office of Evaluation at: WFP.evaluation@wfp.org

Annex II. Evaluation Timeline



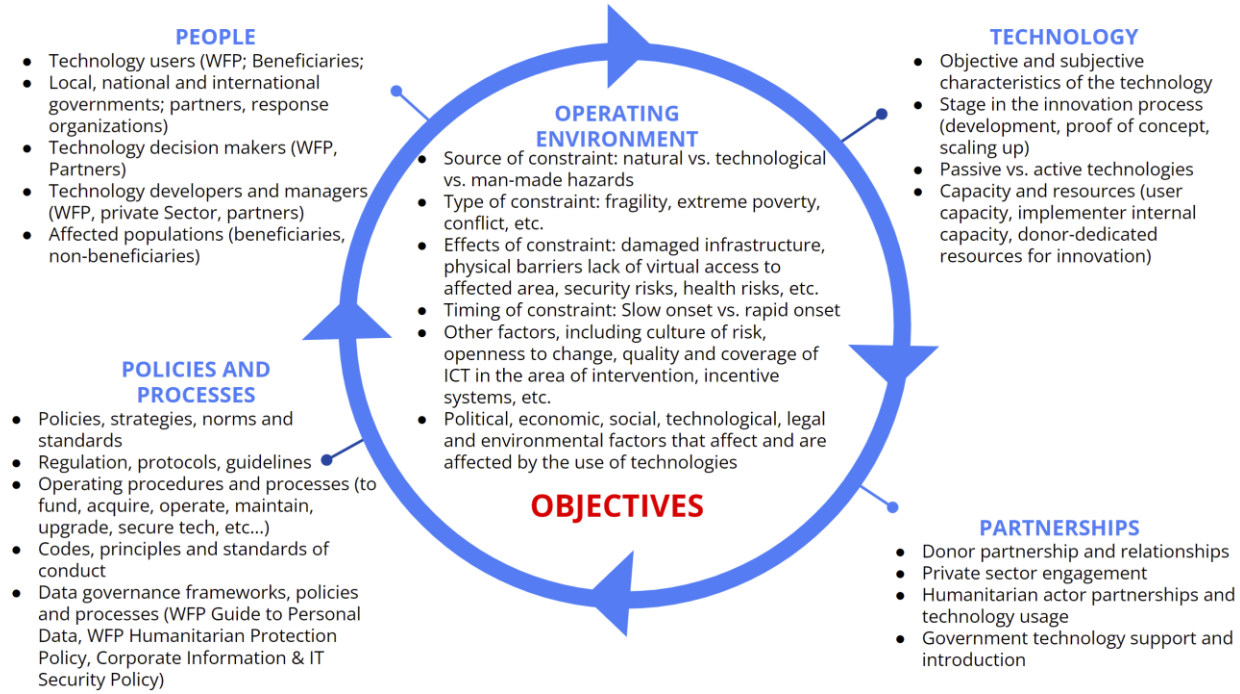
	Country reports drafting and approval	
	OEV quality assurance and feedback	
	Overall debriefings	
Phase 4 - Reporting		
	Drafting, quality assurance and approval evaluation report	
	Drafting, quality assurance and approval summary evaluation report	
	Submission SER to the EB Secretariat	
Phase 5 - Executive Board (EB) and follow-up		
	Informal consultations with EB	
	Presentation of summary evaluation report to the EB	



Annex III. Conceptual Framework

The systems approach used for this evaluation places technology within a wider framework of dynamic and interacting components: technology, people, policies and processes, and partnerships (see Figure 1). These four dimensions interact with each other and the operating environment to attain operational, management and strategic objectives. This allows for a holistic analysis of the interrelationships between the different dimensions of the system and how their interactions explain the dynamics of technology development, implementation and use within WFP and its partners' operations.

Figure 1: Technology Use System



Source: ADE/ evaluation team

A range of people (both within and outside WFP) utilize ICTs and digital data to achieve their objectives, with such uses being subject to certain policies and processes. These applications of technology affect a diversity of people in different ways (directly and indirectly), whereas people also affect the use of technology. Policies and processes further guide the ways in which technology is used (or not used). These dynamics interact with partnerships, which affect technology use, processes, and people. These interrelationships operate in the context of the operating environment ,which either enables or constrains the use of technology and how this relates to overarching objectives.

Objectives refer to the WFP strategic plan, the corporate results framework, and the country strategic plans. These relate to improved food security, nutrition, resilience of target populations, capacity strengthening of governments, improved coordination and capabilities of the humanitarian sector and other cross-cutting matters of gender, environmental concerns, and accountability to affected populations. The component also refers to management objectives under the various functional areas of WFP.

The **technology** component encompasses ICT applications, digital data and their underlying infrastructures and resources (funding) leveraged to support the achievement of the objectives of WFP, its partners and target population groups. It also includes matters of digital data generation, management, use and governance. The conceptual model further accounts for the specific nature of each technology regarding their objective and subjectively perceived characteristics, their passive and active nature, and the stage in the innovation process and programme lifecycle.

The **people** component includes technology users both within the organization (WFP staff) and external to the organization: beneficiaries, governments, partners, and other humanitarian actors. It also encompasses technology decision makers (within WFP and partners), technology developers and managers (within WFP, the private sector, and other partners) and affected populations. These various actors either affect the adoption and use of technologies or are themselves affected – either directly or indirectly – by the use of technologies. In addition, certain people-related factors are considered due to their interaction with the use of technologies and their moderating roles in determining the effects of these technologies. These include elements such as skills, capacities (both user and internal capacities), knowledge, attitudes, risk awareness and socio-political and cultural worldviews.

The **policies and processes** dimension focuses on various policies, strategies, norms, standards, regulations, protocols, operating procedures, guidelines, investment decision processes, resource mobilization mechanisms and governance arrangements established to guide and support the development, adoption, implementation, management, funding and governance related to the use of ICTs and digital data and their respective risks.

The **partnerships** component includes WFP engagements with: humanitarian actors that WFP provide technological and telecommunication services in constrained environments; United Nations agencies and other cooperating partners that receive WFP support regarding the use of technology and provision of digital data; the private sector that provides ICT and digital data services and resources to WFP; donors that fund the development and implementation of technologies; and local or national governments that may receive WFP support in the development, adoption and implementation of technologies in public service operations such as beneficiary management and food assistance.

The **operating environment** provides the contextual background in which each component of the system operates and interacts in achieving objectives. It covers political, economic social, technological, legal and environmental factors that affect, or are affected, by the development, adoption and use of technology.[1] These factors may therefore offer opportunities or act as constraints on technology, people, processes and partnerships dynamics and relationships. The sources of such factors may arise from natural, technological, or other mand-made phenomena. The interaction of technologies, people, partnerships, and processes may further be leveraged to either exploit such opportunities in advancing objectives or overcome the constraints they pose.

1 Other factors include cultures of risk, openness to change, quality and coverage of ICT in the area of intervention and incentive systems amongst others.

Annex IV. Methodology

The methodology for this evaluation builds on the Technology Use System proposed in the terms of reference and described in Annex II Evaluation Timeline and adapted by the evaluation team, as well as on the four main evaluation questions. It acknowledges the complex nature of the interactions between the components of the system. It also makes note of the evolving nature of the use of technology, including the rapid changes on the types of use, the evolution of needs and objectives, the changes in users of technologies, and the continuous updating and introduction of new policies and guidance, as well as the changing nature of constrained environments. The scope of this evaluation is summative and formative, going back to 2014 and covering the period until 30 June 2021. The rapidly evolving nature of technology and associated innovations requires the methodology to also consider developments occurring during the evaluation process.

4.1 EVALUABILITY ASSESSMENT

The overall evaluability of WFP's use of technology in constrained environments is affected by the highly diverse, complex, dynamic, cross-cutting and rather novel nature of the theme. Rather than having an explicit theory of change underpinning WFP's use of technologies, ICTs and digital data are often viewed as drivers (accelerators, facilitators, enabling condition etc.) that interact with WFP core activities and contribute to their efficiency and effectiveness in reaching intended outcomes. ICTs and digital data are not at the core of WFP theories of change but are expected to enable intended changes along the results chains (from WFP activities to outputs and to strategic outcomes) to happen more effectively and efficiently. This "driver" nature of technology helps explain the absence of theories of change or logical frameworks where the use of technology is at the centre. The lack of such a framework poses challenges when trying to establish causal pathways between the organization's various applications of technology and intended outputs, outcomes and overarching goals. A consequence of this is the increased difficulty in defining clear results-oriented progress indicators to assess effectiveness, efficiency, relevance and appropriateness of the various applications of ICT and digital data, as well as in identifying the underpinning logic of WFP's use of technology.

Thus, to assess how digital technology and data help increase effectiveness and efficiency of WFP interventions towards achievement of outputs and strategic outcomes, we look at technology as a driver – an enabling or contributing factor – that is present in almost all results chains that link WFP interventions to their intended outputs and outcomes. It makes little sense to attempt to attribute actual results to technology, but we can assess to what extent technology "drives" the achievement of results in a better targeted way that is faster and cheaper, more relevant to needs, of better quality and better monitored and reported upon. This strategic assessment therefore largely relies on already existing evidence documented by WFP and stakeholders' perceptions of contribution, triangulating information from multiple sources and collected through multiple methods to reduce bias. It does not evaluate individual, specific technologies against benchmarks and performance indicators.

Taking this into account, an alternative conceptual framework was developed, building on the proposed systems approach described in the terms of reference. Such a systems approach is flexible enough to suit the dynamic and complex nature of the evaluation by allowing for the analysis of each component in detail as well as their interdependencies to explain how these interact to either enable or hinder the achievement of WFP's operational and management objectives within specific contexts. In other words, it is more useful to place the use of technology in a broader systems framework to assess the various interacting dimensions that affect the use of technology, that are affected by the use of technology, and how such dynamics affect the achievement of intended outcomes. This systems approach serves as the foundation for the evaluation questions, which are structured around the four key components of the framework. Thus, these four overarching evaluation questions and their subquestions form the basis upon which the indicators and lines of inquiry were built.

The "driver" nature of technology can also partly explain the lack of a comprehensive monitoring and evaluation system related to WFP's identification, development, implementation, and scaling up of ICTs and digital data: there is currently a paucity of indicators, metrics and measures of progress collected by WFP. Despite the provision of certain indicators (such as end-user satisfaction, system owner satisfaction and IT staff engagement amongst others) in the Corporate Information Technology Strategy (2016-2020), these metrics are not systematically measured by WFP. Most importantly, these indicators are not comprehensive of the four evaluation questions and components of the conceptual framework. Moreover, annual performance reports have only tracked one indicator since 2018: the percentage of compliance with information technology security standards. These indicators do not adequately cover measurements needed to substantiate each evaluation question and subquestion. Nonetheless, they do provide useful indicator ideas which were used as a starting point to guide the design of the global and phone surveys and of key informant interviews (KIIs).

To further assess evidence and indicators gaps, the evaluation team conducted a scoping of past evaluation and audit findings. Indicators and lines of inquiry formulated at the inception phase in the evaluation matrix (Annex V. Evaluation Matrix) make use of the existing material while suggesting additional data through global and phone surveys, key informant interviews and focus group discussions. The quantitative data derived from these surveys contribute towards addressing the lack of data on key metrics when triangulated with the collected qualitative data. Thus, the evaluation builds upon the data and information that do exist and integrates these with the data collected through primary data collection with the aim of filling the data, indicator, and evidence gaps.

Nonetheless, measuring changes in effectiveness and efficiency within the context of this strategic evaluation remains challenging. These dimensions are often measured using baselines measures or counterfactual approaches. Given the complex and rapidly changing nature of WFP technology use, it is highly challenging to use traditional approaches of measuring effectiveness and efficiency. Moreover, attribution of outputs, outcomes, and impacts (such as food security gains and reduced malnutrition) to the use of certain technologies are very hard to establish. Instead, the evaluation focuses on perceived effectiveness and efficiency as triangulated through diverse data collection methodsas well as the identification of barriers and enablers to efficiency and effectiveness gains through the applications of ICTs and digital data.

The evaluation also faces the absence of disaggregated data related to technology use and its effects on marginalized groups and gender equality and women's empowerment (GEWE) matters. Evidence on these matters is scant and further exacerbated by the scarcity of data on subgroups' views on these issues. To overcome this, the evaluation team developed specific survey questions and focus group discussion topics addressing these points. This produced both quantitative and qualitative data on the reported effects of WFP's technology use on marginalized groups and on GEWE considerations. Additionally, the purposeful direct involvement of marginalized groups (including women, persons with disabilities (PWDs), the elderly, migrants and refugees) in the technology user's phone survey and focus group discussions yielded these groups' views on the perceived effects of WFP technology applications on them. Nevertheless, certain marginalized groups were impossible to reach, especially in the types of constrained environments under study (these difficulties being exacerbated by the restrictions imposed by COVID-19). Therefore, for such unreachable groups, the evaluation had to rely on triangulated evidence of the perceived effects of technology use on these groups stemming from the various data collection methods.

Certain aspects related to the evaluation of WFP's effectiveness and sustainability in transferring ICTs to partners (evaluation subquestion 4.2) are also difficult to assess. This is because the assessment of issues of sustainability and capacity building or strengthening require a certain lapse of time to adequately capture the effectiveness and sustainability of these transfers. In particular, the recent development of Business to Government (B2G) and WFP services of capacity building offered to government - and other partners - mean that the time frame of the evaluation did not allow a sufficient time lapse for these ICT transfers to be adequately internalized. The evaluation focused on perceived sustainability as triangulated through the diverse data collection as well on the likelihood of sustainability by assessing the existence of

factors necessary for sustainability, such as political factors, institutional capacities and financial factors, amongst others.

Another challenge relates to the breadth of the WFP ICT and digital data portfolio. A balance had to be achieved between the need to assess specific technologies, which by nature evolve rapidly, and broader strategic considerations around aspects of relevance, effectiveness, efficiency, and sustainability for the various technologies used within WFP. In other words, the evaluation had to be granular enough to investigate specific aspects of specific technologies but at the same time it was not an impact evaluation of all the different technologies used in WFP. The country case studies selection and approach sought to ensure that, while specific technologies serve to ground the discussion around the use of ICTs and digital data, the focus of this evaluation is on the strategic dimensions outlined in the evaluation framework. The case study approach was leveraged to offer more in-depth insights into the different types of ICT and digital data applications within different contexts whilst the global survey and the comparative learning exercise allow a more high-level strategic analysis.

Despite these challenges, this evaluation yielded credible and objective findings across the different evaluation questions as a result of careful triangulation across data collection methods. The evaluation considered existing quantitative and qualitative data and evidence, including baseline and performance indicators, documentation on logical frameworks when available and reliable, and other types of data and documents as primary sources in the triangulation process. Where these are non-existent or do not offer enough reliability or quality, emphasis was placed on the perceived contributions of technology to effectiveness and efficiency by a variety of stakeholders. Furthermore, findings were triangulated by different investigators and across data collection processes – including interviews, surveys, and document and data analysis. This combination of data sources, methodologies and perspectives increase the reliability of the findings and overcome some of the specific challenges mentioned above.

4.2 METHODOLOGICAL APPROACH

Overall approach

The methodology consists of a mixed methods non-experimental design that leverages conventional and participatory quantitative and qualitative methods in a sequential explanatory design. In the inception phase, through inception meetings and a review of WFP strategy and audit reports, the evaluation team got a better understanding of the context of the evaluation in order to further define the scope of the evaluation in such a way as to ensure that the resulting report has added value for the development of future WFP strategies on the use of technologies in constrained environments. In the evaluation phase, two levels of analysis were covered to get input from all identified stakeholders: a global level study and country case studies. Additionally, a comparative learning exercise allowed the evaluation team to determine WFP's position in the field of technology compared to its peers. In addition, local consultants in each of the case study countries provided additional insights into the technological and institutional landscape of each country. In the reporting phase, the findings were carefully compiled in the evaluation report, relying on the structure of the evaluation matrix to form a comprehensive document. During the entire evaluation process, the evaluation team was in regular contact with the evaluation manager and fostered appropriate stakeholders' engagement and sense-making events to ensure that each step met WFP expectations.

Inception phase

The initial weeks of the inception phase consisted of a series of meetings and interviews with internal stakeholders at different levels of the organization (headquarters, regional bureau, and country office level). A total of 56 interviews were conducted. The main goal was to engage with these stakeholders to get their own expectations and advice on how to conduct such a study. These meetings helped to further define the scope of the evaluation and gather information for the country selection strategy and stakeholder analysis. The meetings revolved around a set of questions prepared by the evaluation team, based on the terms of reference. These include general questions about the scope and success factors or constraints of the use of

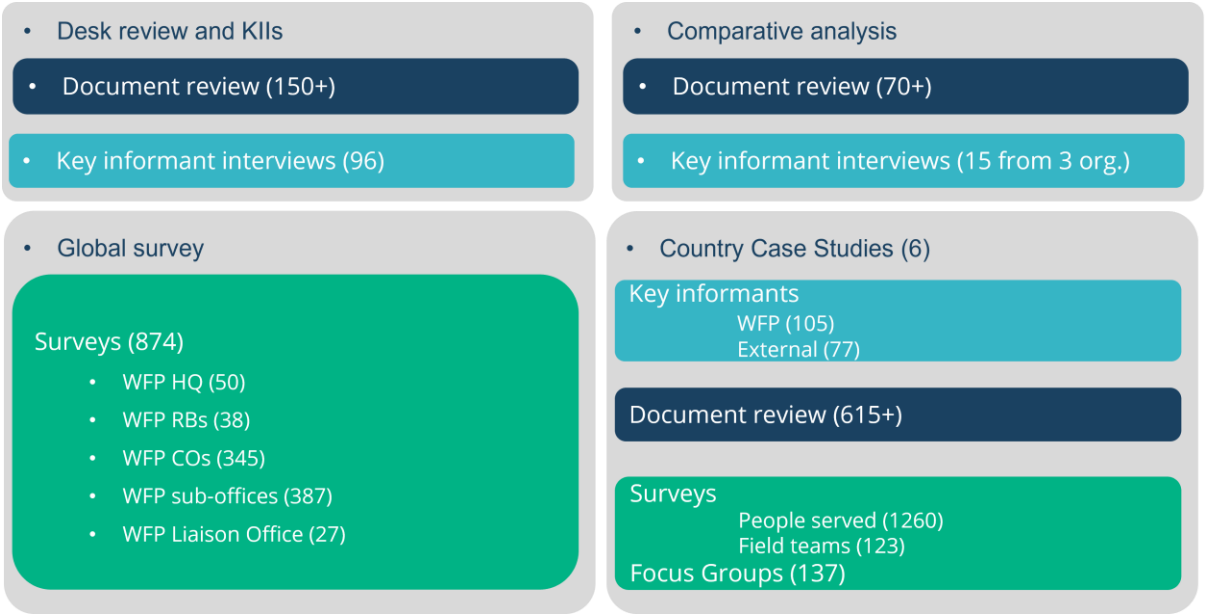
technology at WFP on the one hand, and practical questions considering the inclusion of specific technologies, countries, or stakeholders in the analysis on the other hand.

In-depth review of the documentation was the second critical step during the inception period. It aimed to better identify what the evaluation could add to the findings of recent evaluations and audits as well as the overall context of the use of technology at WFP. Specifically, the evaluation team wanted to have a view of the current state of ICTs and digital data-related processes within WFP by compiling the findings of recent evaluations and audits in this field. More than 100 documents were reviewed in the inception phase. Based on these results, the team has identified structural and recurring obstacles to the use of technology, which were further investigated through the global survey and key informant interveiws.

Evaluation phase

As the evaluation uses a systems perspective, four parallel analyses were performed during the evaluation phase to combine information from different levels and entities inside and outside of WFP into one sense-making process:(i) a comparative learning exercise; (ii) a global survey; (iii) six country case studies; and (iv) an extensive analysis of WFP corporate documentation and engagement with key informant interviews. Through these different activities more than 800 documents were reviewed and 293 people were interviewed. Furthermore, the evaluation team managed to collect and analyse data from 2400 people through different types of surveys (see Figure 2)

Figure 2. Information and data collected and analysed per activity



Source: ADE/evaluation team.

The **desk review and key informant intervews** were crucial as they helped to explain the organization's trajectory and current technology use, and also helped to map and analyse the portfolio of technologies, policies, processes and partners across WFP organizational levels. WFP centralized and decentralized evaluations and audits were also crucial to build the body of existing evaluative evidence applicable to technology use in constrained environments. The key informant interviews built upon an initial understanding of the trends, opportunities and challenges identified in the documentation. The key informants were critical to gather diverse in-depth qualitative data about WFP staff experiences with technology across programmatic and organizational levels.

The **comparative learning** exercise allowed the evaluation team to put the results of this strategic evaluation into perspective regarding developments and trends in the humanitarian technology space. By comparing WFP's use of ITCs and digital data in constrained environments to that of other humanitarian and development organizations, the evaluation team was able to gather information regarding best practices, missed opportunities and possibilities for synergies. The main topics of this study include staff attitudes and capacity, ICT and data governance, processes, and policies, innovation and partnerships, as well as, in general, the readiness of the organizations to integrate and actively use technology in constrained environments. The comparative learning exercise was not intended to be a performance type of benchmarking, but rather a best practice and landscape analysis focused on learning from other organizations on how they are experiencing and dealing with similar technology-related challenges to WFP. However, to ensure alignment and consistency with the rest of the evaluation, it considers the same key dimensions (technology, people, processes and partnerships) described in the terms of reference.

The **online global WFP staff survey** provided an overarching analysis on the agency's use of ICTs and digital data in constrained environments, informed by the range of technologies, people, processes, and partners involved throughout the different levels of the organization. The online survey included a participatory narrative enquiry component using SenseMaker software[2]. The survey prompted participants to share a narrative or story to frame their perspectives and experience with WFP's use and development of digital technology and data in constrained environments. The SenseMaker platform relies on the capture of these micro-narratives rather than evaluative statements, whilst providing a lens and signification framework to make sense of individuals' experiences and perceptions. The survey also included additional quantitative and qualitative questions, part of which aim at making the respondents self-analyse the experience they described and part of which concern their broader experience with technology use in WFP. Respondents were invited to complete the survey by the Office of Evaluation through their managers. The questionnaire was formulated in accordance with the evaluation matrix provided in Annex V. Evaluation Matrix). Information collected at global level further supported triangulation of the information collected at country case study level and vice-versa.

The **case studies** covered in-depth insights around country office processes and allowed the evaluation team to dive deeper into how technologies, including ICTs and digital data are used in operations by technology end-users, including WFP staff and affected populations. Additionally, they allowed the drawing of conclusions across WFP regions on the different approaches, uses, barriers and challenges arising from the use of technology in different constrained environments.

The countries were carefully selected based on the criteria proposed in the terms of reference, meaning they ought to be a good representation of WFP regions, the constraints to humanitarian access encountered by WFP and its partners, the main areas of intervention and the technologies deployed along the programme cycle. The size of the country interventions and some feasibility criteria (considering evaluation fatigue of country office staff caused by audits, country strategic plan evaluations (CSPEs) and other evaluations, accessibility to affected population by evaluation experts, and willingness of country offices) were considered. The selected countries include Bangladesh, the Democratic Republic of the Congo (DRC), Iraq, Jordan, Niger, and South Sudan.

This selection includes four countries that have very high humanitarian access constraints (Bangladesh, the Democratic Republic of the Congo, Iraq, and South Sudan), one country with high humanitarian access constraint (Niger) and one country with moderate humanitarian access constraints (Jordan). With regards to technological development, one country ranks in the second highest quartile of the ICT development index (Jordan), while two rank in the lowest quartile (Bangladesh and the Democratic Republic of the Congo). There is no ranking available for Niger, Iraq, and South Sudan. The selected countries enabled the

[2] SenseMaker is a learning-oriented monitoring and evaluation method rooted on people's stories and experiences and their self-signification. It combines quantitative data insights with the explanatory power of narrative.

evaluation team to cover all the ICTs and digital data mentioned in the terms of reference, with some being under study in more than one country.

During the second phase of the inception period, one pilot case study was performed in Jordan. This experience served to test and improve the proposed country case approach. Given the circumstances presented by the COVID-19 pandemic, it took place remotely, with the help of national consultants on the ground. The evaluation team chose a country without travel restrictions resulting from the COVID-19 crisis at the time, so that the local expert could conduct focus group discussions with affected communities, and where the evaluation team has previous field experience, thereby facilitating a remote case study.

The proposed approach for case studies depended on the level of restrictions due to COVID-19 pandemic during the evaluation phase. Since the "do not harm" principle prevails, three scenarios were suggested (see Table 1 below). Based on a feasibility assessment for each selected country, the evaluation team decided to move forward with Scenario 2 in agreement with the evaluation manager.

Table 1. Initial case study scenarios

	Scenario 1: No COVID-19 restrictions	**Scenario 2:** **No international travel**	Scenario 3: No internal travel allowed
1. Literature review	Remotely	**Remotely**	Remotely
2. Preliminary interviews	Remotely	**Remotely**	Remotely
3. Phone survey	Local partner in the field supporting local firm for training and supervision, in close collaboration with TL	**Local partner in the field supporting local firm for training and supervision, in close collaboration with TL**	Local partner in the field supporting local firm for training and supervision, in close collaboration with TL
4a. Field mission: key stakeholder interviews	Face-to-face	**Face-to-face with local expert and remotely with international expert**	Remotely with local and international expert
4b. Field mission: individual / focus group discussion with hard-to-reach affected population	Face-to-face individually or in group, by evaluation team	**Face-to-face individually or in group, by local expert only**	Remotely with local expert through phone calls with close persons connected to the hard-to-reach population

Source: ADE/evaluation team.

Each case study was supported by a reliable local expert and consisted of four components. First, the evaluation team conducted a country-specific literature review. Second, key stakeholder interviews were conducted at the regional bureau and country office to fine tune the phone survey content. Third, a phone survey of a representative beneficiary sample was implemented by a local partner under the evaluation team's close supervision. Fourth, the local expert travelled the country with the results of the phone survey in order to substantiate the findings and gather additional information by conducting additional interviews with staff and partners (including key implementing partners) and focus group discussions with affected communities. The focus group discussions oversampled individuals from population subgroups who may have a lower probability of being reached through the phone survey - such as households or individuals without access to a mobile phone or who are part of certain marginalized or particularly vulnerable groups. In case of group gathering restrictions, a limited ability to establish safe distance between participants or the existence of serious risks of COVID-19 transmission, focus group discussions were replaced by several face-to-face interviews between the local expert and hard-to-reach beneficiaries. The lessons learned from

the pilot case study showed that collecting information from hard-to-reach population through intermediaries can be a valid alternative.

Each case study began and ended with a meeting (briefing; debriefing), as part of the participatory approach and as an opportunity to validate, nuance, discuss and triangulate findings through dialogue with key stakeholders.

The evaluation team ensured the quality of data (validity, consistency, and accuracy) throughout the field, analytical and reporting phases. Information was drawn from a diverse range of data sources and stakeholders to enhance accuracy and reliability of data. The stakeholders sample represents true key informants thanks to the stakeholder analysis, evaluation team connection to the field through local experts, and regular contacts with the evaluation manager and WFP staff on the field. The evaluation team has relevant expertise to design high quality data collection tools such as interview or focus group discussion guides and survey questionnaires, ensuring that emphasis was put on interviewees' areas of expertise and respondent's knowledge, and that question formulation and guidance given to the experts in charge of data collection were appropriate in terms of language (local language and understandable for non/low educated population if applicable) and to avoid leading questions and different biases.

The data analysis (for global survey and phone survey) was conducted by skilled research analysts and supervised by the team leader ensuring its high quality and adequacy with the evaluation questions, and ensuring that analyses were disaggregated by stakeholder types and gender. The relevance of the findings was supported through triangulation of results from multiple data sources (document review, key informant interviews disaggregated by stakeholder type, phone surveys with affected population, and online survey with WFP staff and partners). Finally, the interpretation of findings was supported and validated through a sense-making process and stakeholders engagement.

Reporting phase

To produce the final evaluation report, the evaluation team ensured that each country case study report followed the same template, structured around the evaluation matrix, and that each finding was directly traceable to the corresponding evidence. Inputs from the global survey,the benchmark analysis, desk review, and key informant interviews at WFP corporate level were also used for the relevant evaluation questions. Before drafting the final report, all team members participated in a workshop to brainstorm on the main messages to extract from each input in order to answer each of the evaluation questions, and the team leader assigned a team member to draft each section under his close supervision. Once a first draft was available, another evaluation team internal workshop was organized to summarize conclusions and derive lessons learned and recommendations. Inputs that were then drafted by the team leader. The evaluation manager was invited to internal meetings where relevant. To foster appropriation of findings and recommendations, the evaluation team organized a recommendation workshop with relevant stakeholders (the internal reference group (IRG) and the external advisory panel (EAP) among others), to make sure recommendations had first been brainstormed and discussed with the most concerned individuals, before being drafted by the evaluation team.

4.3 EVALUATION MATRIX

Per the terms of reference, this evaluation is centred around four main evaluation questions and a total of 18 subquestions. The evaluation questions are clustered around the Technology Use System framework that is guiding this evaluation. Annex V. Evaluation Matrix) outlines the relevant lines of inquiry for the evaluation as well as the data sources and data collection techniques that were used to collect and triangulate data.

The proposed lines of inquiry reflect the broad set of evaluation questions on the organization's use of ICTs and digital data in constrained environments and the management of risks in relation to the technologies being deployed. The evaluation matrix also considers linkages and dependencies between the components

of the Technology Use System. Importantly, "people" are the focus of a specific evaluation question (question 2). This component is also reflected across all evaluation questions and lines of enquiries as a key factor that may affect WFP performances and ability to leverage ICTs and digital data. While recognizing the integrity of the four components of the Technology Use System, "people" was a key focus of country case studies.

4.4 DATA COLLECTION METHODS

The evaluation draws on six main sources of evidence, including:

- Document review of internal documents during the inception and evaluation phases
- Document review of external documentation during the inception and evaluation phases
- Key informant interviews during the inception phase and evaluation phase
- A global online survey of WFP staff and cooperating partners
- A mobile phone survey targeting the affected populations
- Focus group discussions with hard-to-reach affected populations.

The different approaches and instruments used for collecting data are briefly discussed below. In Annex VI. Data Collection Tools), the data collection instruments are further elaborated on. All data collection methods and tools integrate gender and protection dimensions, and to the extent possible, ensure that the views and experiences of men and women of various ages and backgrounds are adequately captured and considered throughout the evaluation process. This includes surveys, key informant interviews and focus group discussions. Gender-sensitive data collection and analysis was a significant challenge, mostly due to access constraints and patterns of ownership of ICTs, including mobile phones. Clear guidance was given to the partner implementing the phone survey and to the experts conducting the focus group discussions to pay specific attention to the need to collect gender-specific information and have a gender balanced sample. Phone surveys took place prior to the field mission, this allowed the evaluation team to ensure that the sample was more balanced for focus group discussions if the desired stratification was not reached for the phone survey.

To ease data analysis and aggregation of findings across the different case studies, data collection tools and process were harmonized. Document reading was executed following a specific grid (Excel document) in line with the evaluation matrix. This allowed different readers to structure their findings so as to be directly used either in the evaluation questions or to feed the data collection tools design. Generic interview guides for interviews and focus group discussion as well as generic phone survey questionnaire were designed based on the evaluation matrix by the core evaluation team. Each of these tools was adapted to each country language, context and technology specificities by the country case study leader supported by the local expert and informed by the results of the global survey, the document review, and preliminary interviews. Specific guidance to the country case study leader was developed by the core evaluation team. During country field missions, support as well as supervision was provided by the team leader, deputy team leader, project director and research analysts. In each country a reliable partner (either a local firm or WFP country office) was chosen to conduct a phone survey, yet, the country case study leader, with members of the core evaluation team took part in enumerators' training and supervised the data collection. Research analysts also developed code to ease data cleaning and analysis across the different country phone surveys and facilitate a clear presentation of the findings. Notes from key informant interviews and focus group discussions were digitalized and analysed by identifying and coding themes to enable systematic review of content. All notes from the interviews were recorded in a response matrix (coding sheet) and all responses for an evaluation matrix question were analysed in combination at the end of the field phase in order to determine emergent themes and patterns across the responses. All guidance, probes and tips were tested during the pilot case study and improved thereafter.

WFP document review: the evaluation draws heavily from the range of WFP documentary evidence on strategic documents, policies, guidelines, evaluations, and audits relevant to the components of the Technology Use System. A comprehensive e-library was constructed by WFP, to support the identification of key documentation. Importantly, the evaluation team gathered main findings and recommendations from

recent evaluation and audit reports that already looked at topics and processes relevant to the scope of this evaluation in order to ensure the added value of this study.

External document review: the desk review covered a wide variety of background material information, including documents and reports on patterns and trends on the use of technology in the humanitarian sector. It also included looking at documents relevant to gauging the use of technologies in constrained environments by WFP comparator organizations, including United Nations agencies. This was crucial to identify best practices and unexploited opportunities, as well as to understand how the technological choices made by WFP compare to that of other relevant stakeholders in the humanitarian sphere (comparative learning exercise). Additionally, the review focused on each country selected for a case study individually to provide the evaluation team with the necessary context. The evaluation team started from a selection of relevant documents and followed a snowballing approach to get additional relevant documentation for the comparative learning exercise and for country case studies.

Key informant interviews: The evaluation team held semi-structured interviews on a rolling basis with WFP stakeholders (including staff (at headquarters, regional bureaux and country offices) and partners (cooperating partners, United Nations agencies and national governments), as well as with external stakeholders (including international and local non-governmental organizations, private sector actors, and donors) throughout the evaluation phase, building on those already conducted during the inception phase. In contrast to the surveys, these interviews provided more in-depth qualitative data about respondents' experiences with the topic under evaluation, adding valuable insight in the sense-making process. To set up key informant interviews with key partners at the county level, the evaluation team relied on country offices and the local expert. Key informant interviews were conducted for the country case studies as well as for the comparative learning exercise. A generic interview guide is included in Annex VI. Data Collection Tools).

Online global survey: This survey took place in parallel with the country case studies and aimed to collect information about first-hand experience and satisfaction with the use of digital technologies and data in constrained environments. The survey was therefore primarily aimed at WFP personnel at different levels of the organization. The global survey was based on a participatory narrative enquiry methodology. The electronic questionnaire consisted of a prompting question that triggers the description of an experience – the story - by the respondent related to the use of technology in a constrained environment. This was followed by a set of close-ended questions framed around that experience and narrowly connected to selected lines of enquiry in the evaluation matrix. The responses to those questions helped to categorize and reveal patterns and trends in the narrated experiences of people with ICTs and digital data using SenseMaker software. The questionnaire also included a set of questions of a more general nature around the respondent's experience with the use of digital technology and data in constrained environments in WFP. The global survey targeted all WFP staff. The invitation to participate went out from the Office of Evaluation through the internal communications unit and with targeted emails to selected country offices operating in constrained settings. The survey ran for five weeks, several with targeted reminders to ensure sufficient representation across regions, constrained environments and gender. To stimulate participation, the global survey was also announced on the front page of the WFP intranet.

Results from the survey, including selected anonymized self-reported stories, were then used to facilitate group discussions with the internal reference group to help interpret the stories, patterns and trends in a participatory manner.

The initial design of the global survey was elaborated through two online sessions with the evaluation team, after which the scope and the focus of the global survey was fine-tuned to decide on the core dimensions to be covered by the participatory narrative enquiry approach and to formulate the prompt question and additional questions. A review session was organized with the evaluation manager. Once ready, the draft instrument was tested and reviewed with a sample of WFP respondents.

Phone survey: The phone surveys were conducted in four country case studies (Bangladesh, the Democratic Republic of the Congo, Iraq, Jordan) and targeted a WFP beneficiary sample size of around 250 successfully reached respondents. The ownership of ICTs, including mobile phones, is an important

component of the data collection process. Extra attention was therefore given in order to be as inclusive as possible and to reach respondents of different genders, ages, and backgrounds. In coordination with the WFP country offices and local firms, a gender-balanced sample was reached. Furthermore, special attention was devoted to sample selection with the country office and the survey implementing partner. A generic questionnaire (valid for all countries) was designed by the core evaluation team based on the evaluation matrix and was then adapted for each country/technology specificities by the country leader with the support of the local expert. Practically, the phone surveys were implemented by an experienced local firm, advised by the WFP. However, the evaluation team participated in the enumerators' training and closely supervised the data collection process to ensure highly reliable data. Each phone survey lasted for two weeks and took place before the field mission. Due to COVID-19-induced limitations, the phone surveys in Niger and South Sudan were replaced by an online survey. More information about the differences between and limitations of these modifications are discussed in the corresponding section of Annex VI. Data Collection Tools). Data analyses of all surveys were performed by the research analysts to ensure coherence and efficiency in terms of the data analysis process, and the way to present the findings. Findings of the phone survey were presented to country office staff at the beginning of the field mission as an opportunity to substantiate findings, and to validate and nuance some of the results. Phone survey results were also discussed, validated, and nuanced during focus group discussion.

Focus groups: Focus group discussions specifically aimed at including the most vulnerable and hard-to-reach beneficiaries of WFP into the data collection process. The sample of individuals includes respondents who do not have access to mobile phones (hence those most certainly excluded from the phone survey) and is well balanced (in terms of gender) so as to understand, among other things, how to improve the capacity of WFP to meet the most vulnerable beneficiaries' needs through the use of technology. The evaluation team received active support from the country office to identify and invite those individuals to these focus group sessions. A generic guide to conduct these focus group discussions was established and adapted to develop specific lines of enquiry based on preliminary phone survey findings. Guidance was provided to the country leader and local expert to conduct the focus group discussions in a way that ensured that all participants had a chance to express themselves.

The impact of the ongoing COVID-19 pandemic throughout the evaluation phase remained unpredictable. Therefore, the evaluation team remained flexible and anticipated potential changes in the evaluation approach that had to be overcome. Further, the evaluation team strictly adhered to the principles of do-no-harm by minimizing the risks of transmitting COVID-19. To this extent, suitable precautionary measures were undertaken for all in-person interactions (focus group discussions and interviews), through providing personal protective equipment (PPE) for all participants and observing social distancing protocols, among other efforts. Finally, the reduced ability to interact in person with different stakeholders posed challenges by, for example, reducing the ability of the evaluation team to read body language and expressions, lower levels of interpersonal trust and "Zoom fatigue". The evaluation team, however, has deep experience with using online tools in remote field missions, and sought to reduce the online burden for the WFP staff and adopted best practices for online interactions.

The pilot case study implemented during the second phase of the inception period served to validate the data collection strategy and overall methodological approach and identify any potential data gaps. The team of experts carefully monitored the pilot case study to identify any changes needed to the protocol and communicate any proposed change to the Office of Evaluation.

4.5 ETHICS

The evaluation team sought to maintain the highest ethical standards in the collection, processing, analysis and use of the data gathered during this evaluation. The evaluation team abided by the principles and guidelines laid out in the UNEG Code of Conduct for Evaluation in the United Nations System (2008) and in particular the UNEG Ethical Guidelines for Evaluation in the United Nations System (2008).

Honesty and integrity

The evaluation team members adhered to the UNEG Code of Conduct for evaluators in the United Nations system. The team confirmed its commitment to accurately presenting procedures, data and findings, and notes that the evaluation findings presented in the report have been transparently generated and unbiased. The team did not encounter any major ethical concern and/or issue when conducting this evaluation.

Rights of participants

Prospective interviewees, survey respondents and focus group participants were given the time and information to decide whether they wished to participate. Informed consent was sought in all cases. Efforts were made to ensure that marginalized or otherwise excluded groups were represented.

Anonymity and confidentiality

All participants were given a consent form prior to interviews, outlining the goals of the evaluation and the voluntary and confidential nature of interviews, presenting the team and discussing the potential risks and benefits from participating in the interview. Verbal or written consent was digitally recorded via password protected tablets. All those providing information for this evaluation – whether beneficiaries or internal and external stakeholders – were informed how the information they provide would be used and that evaluation team members were commited to respecting people's right to provide information in confidence.

Data protection

For data collection on people served by WFP, no personal identifiable information (PII) was collected; any data in the interview that inadvertently mentions a specific person's name or place names, which are determined to be an identifier, were removed at the point of transcription.

All key informant interviews and focus groups were conducted in the most private location possible. Locations of focus groups and interviews were private and were not disclosed to anyone outside of the immediate participants. Focus group participants were asked not to share any information discussed in the discussion with anyone outside of the focus group.

Among WFP, partners and government informants, personal identifiable information - notably name, title/role, and work location - was collected, but the data was closely guarded through each phase of the data collection in order to avoid disclosure. When possible, digital consent signatures, rather than written consent signatures, were collected. All key informant interviews were conducted in the most private location possible .

For all survey respondents, data was collected either through an online platform or via password protected tablets, uploaded to a secure server and was only accessible via a password protected account. Data was deleted from the tablet upon transmission and then stored on encrypted laptops. Only authorized members of the evaluation team had access to the raw data. If handwritten notes were taken, these were immediately digitalized with the physical support being disposed of in a safe manner.

4.6 GENDER AND EQUITY-FOCUS

Throughout this evaluation particular attention was paid to vulnerable populations and gender dimensions across the WFP use of technologies in constrained environments. Across the different phases, gender and equity analyses were carried out to assess the existence and extent of imbalances and inequalities in the access to, and use and management of ICTs and digital data amongst WFP, partners and beneficiaries. The evaluation also analysed gender roles, dynamics and practices to understand whether and how gender equality and women's empowerment are considered in the design and implementation of technologies by

WFP, as well as to scope and understand efforts to bridge the gender digital divide in innovation and technology.

During the data collection phase, specific gender questions were prioritized in the questionnaires used, including in the phone survey and key informant interview guides. These were aimed at understanding differences in the access to technologies based on gender, age, disability and other characteristics amongst WFP personnel, cooperating partner personnel and beneficiaries. Efforts were also made to ensure a strong representation of women among key informants, including WFP informants in case study interviews and women beneficiaries in focus group discussions and in the phone survey. In the latter, the evaluation team sought to achieve an equal number of responses from women and men respondents. Where focus groups were carried out, specific discussions were held with women beneficiaries only. Similarly, the evaluation purposefully gathered gender- and age-specific data and prioritized gathering gender, age and region-specific attitudes towards access and use of ICTs – whenever available – to inform the different evaluation questions, including EQ 2.2.

The evaluation team followed the provisions of the Office of Evaluation's Technical Note for Gender Integration in WFP Evaluations, as well as the United Nations System-Wide Action Plan (UN-SWAP) 2.0 on Mainstreaming Gender Equality and Empowerment of Women

4.7 QUALITY ASSURANCE

WFP has developed an Evaluation Quality Assurance System (EQAS) based on the UNEG norms and standards and the good practice of the international evaluation community (the Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) and the Development Assistance Committee (DAC)). It sets out process maps with in-built steps for quality assurance and templates for evaluation products. It also includes checklists for feedback on quality for each of the evaluation products. EQAS has been applied systematically during the course of this evaluation and relevant documents have been provided to the evaluation team. The evaluation team has made sure that the evaluation process and deliverables comply with the provisions of the Office fo Evaluation's EQAS.

All deliverables from the evaluation team were subject to a thorough quality assurance review by ADE in line with the WFP evaluation quality assurance system and ADE standards prior to submission of the deliverables to the Office of Evaluation by the team leader. This was the specific role of the quality controller for this study. This included reviewing the quality of the evaluation design (for instance approach, methods, tools) and the deliverables (for example validity, consistency and accuracy of data, facts and findings, editing, and proofreading) as well as ensuring that all Office of Evaluation comments to the draft reports were duly addressed. An ADE director supervised the implementation of the study as project director, which included ensuring timeliness, proper implementation of the quality system, and adequate responses to major challenges arising.

There was no potential for conflict of interest in the performance of this evaluation. None of the evaluation team members have been involved in the development or roll-out of technology in WFP nor in the preparation or implementation of the WFP operations under review.

4.8 RISKS AND ASSUMPTIONS

Several challenges and risks related to evaluability have been discussed above in Section 4.1 Evaluability Assessment, related in particular to the absence of an explicit results framework and constraints on availability of and access to relevant indicators and statistics. This section focuses on four additional classes of risks that were identified and referred to as "contextual (mostly COVID-19 related) risks", "security risks", "technological risks" and "institutional risks".

The first class of risks pertains to the implications and unpredictability of the COVID-19 pandemic. The biggest immediate consequence for the strategic evaluation is of course that international travels were all

but stalled globally, while domestic travel was also severely disrupted. It was impossible to assess whether, when and where international travels would be re-allowed or deemed safe. To cope with this uncertainty, as mentioned above, the team considered three 'travel' scenarios (see Table 2) that could have been applicable to various countries at different points in time:

- Scenario 1 where all travel is possible
- Scenario 2 where only domestic travel is possible
- Scenario 3 where no travel is possible.

The evaluation team assumed Scenario 2 to be the baseline scenario for most countries at most times during the strategic evaluation, and this largely proved to be the case in practice. Hence, local experts were able to travel domestically and conducted face-to-face interviews and group discussions. All face-to-face interviews abided by the recommendations of WFP, the World Health Organization (WHO) and local official guidelines. This included wearing face masks, social distancing at all times, avoiding handshakes, sanitizing hands, avoiding high-touch surfaces, meeting in open air settings when possible, etc. Similarly, training and supervision for the phone survey was done remotely.

As bandwidth was low and the cost of internet data high in some case study countries, the team assessed the best modalities to conduct interviews. To increase efficiency the evaluation team sent, for example, key informant interview questions in advance by email.

Another risk posed or enhanced by the COVID-19 crisis was that of further severe socio-economic and political disruptions. These made travel and all activities (even) riskier in some countries, while increasing the burden on local stakeholders and WFP operations and staff. These rapidly changing circumstances were also factored in during the case study roll out, including via regular monitoring of local conditions from the news, local contacts, and WFP staff. The team also aimed to develop highly focused and targeted questionnaires to make data collection as efficient as possible given the high opportunity cost of time in such contexts.

A second source of risks are specific "security risks" that could have emerged during the evaluation period in some of the field locations planned for the case studies. These included risks from heightened violence and terrorism, as well as other types of health risks not covered under the purview of COVID-19. Mitigation measures for these risks were centred on close communication with WFP security officers in-country, abiding by UNDSS guidelines for the country, and taking the compulsory UNDSS security training course.

A third source of risks were "technology risks" that stem from the highly dynamic nature of technological progress, policies, and processes. This risk was even higher in the case of an evaluation spanning over 18 months, during which the technology landscape and related regulatory landscape (for example, data privacy regulation) was expected to change.

In response, the evaluation team ensured that each case study and the final report considered these changing dynamics locally and globally, especially when making recommendations, whilst focusing on the conditions prevailing prior to and during the evaluation. Attention was also paid to the extent to which such shifts are considered and monitored by WFP and consideration was also given to WFP policies, guidelines and other technology and data governance related measures and events up to 30 June 2021, that is to say, exceptionally going a few months beyond the data collection phase.

The fourth and last class of risks are "institutional risks", which were present in different forms. One is the unwillingness or reservations of some staff to be fully open about potential shortcomings of the organization or some of its parts, processes, and policies to external observers. In addition to common "institutional (and personal) protection" motives, the fact that WFP was awarded the Nobel Peace Prize might further strengthen such resistance, to avoid any risk of hurting the organization's image. This risk was expected to be more salient in the case of this evaluation given the partnerships existing between WFP and large technology firms. Another form of institutional risk might, on the contrary, come from the evaluation

being used by interviewees and other stakeholders as an opportunity to criticize any given part or policy of the organization to further an agenda. The team assumed this risk to be low for WFP.

Institutional risks are likely to also have affected the organizations included in the comparative learning exercise, regarding their resistance to freely express their views about their own organizations' technology use and development. Mitigation strategies included prior communication between the WFP Office of Evaluation and the organization, and approval to participate in the exercise. However, this is not foreseen as a significant risk given that the lines of inquiry for the benchmarking focus on industry-wide standards and practices, as well as the identification of common challenges, with an emphasis on data collection via documentary review. If a conflict of interest would have been identified at an individual level, the evidence from specific interviews would have been discarded. However this issue did not present itself during the analysis.

In response, we sought to ensure, in coordination with the evaluation manager, that the objectives and features of the evaluation were well communicated to WFP personnel, especially on matters of confidentiality, strategic importance, and the overarching goal of helping WFP to better deliver on its mandate. The evaluation team also aimed to build trust with all stakeholders by abiding to the highest professional and ethical standards during the work and assumed the same of all WFP staff.

During the evaluation, the evaluation team benefited from the continued support of the evaluation manager and evaluation analyst assigned to the strategic evaluation, relevant WFP senior staff, and WFP country office during the field phase. Support was required for: (i) accessing country office datasets; (ii) transportation for field site visits; and (iii) setting up interviews.

Table 2. Evaluation risks and mitigation measures

Class of risk or challenge	Specific risk or challenge	Likelihood of occurrence	Magnitude of potential impact	Key mitigation measures
Contextual	Scenario 1 No COVID-19 restrictions (but pandemic remains active)	Low	Medium	• Face-to-face interviews conducted following WHO guidelines • Training and supervision for the phone survey done remotely • Compliance with local and international regulations around social distancing and quarantines tied to travel
	Scenario 2 No international travel	High	Medium	• Case-by-case decisions on modalities • Face-to-face with local expert following WHO guidelines and remotely with international staff • Training and supervision for the phone survey done remotely • Field mission focus group discussion with hard-to-reach affected population conducted by local expert only
	Scenario 3 No internal travel	Low to Medium	Medium to High	• Remote targeted interviews only • Training and supervision for the phone survey done remotely • No field mission: focus group discussions with hard-to-reach affected population conducted through alternative means to be defined, which may include phone interviews assisted by trusted third parties
Security	Severe socio-economic and	Medium	High	• Remote / virtual targeted interviews only if needed • Focused, targeted interviews to save time

Class of risk or challenge	Specific risk or challenge	Likelihood of occurrence	Magnitude of potential impact	Key mitigation measures
	political disruptions affecting security conditions and WFP operations			• Close communication with WFP security officer in-country, abiding to UNDSS guidelines for the country, and taking the compulsory UNDSS security training course
	Other security risks (terrorism, heightened violence, non-COVID-19 health risks)	Medium	High	• Close communication with WFP security officer in-country • Abiding by UNDSS guidelines for the country • Taking the compulsory UNDSS security training course
Technological	Fast changing technology landscape	Low to Medium	Medium	• Contextualization of assessments (i.e., focus on technological landscape in given context in relation to local needs) • Team considered WFP policies, guidelines and other technology and data governance related measures and events up to 30 June 2021, i.e., exceptionally going a few months beyond the data collection phase • Also, non-mitigation measure but implication: Insertion of interview questions to assess extent to which such dynamics feed into WFP's use of technology
Institutional	Resistance / hesitancy from staff to be fully open with external observers	Low to Medium	High	• Communication on features and objectives of strategic evaluation • Trust building • Confidentiality assurances
	Attempt to use strategic evaluation for internal / personal agendas	Low	High	• Communication on features and objectives of strategic evaluation • Trust building • Confidentiality assurances

Source: ADE/evaluation team

Annex V. Evaluation Matrix

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
1. Technologies - How does the use of technologies help WFP increase the effectiveness and efficiency of its operations in constrained environments?				
1.1 How does the use of ICTs and digital data contribute to the effectiveness of WFP operations and its partners in constrained environments? *Effectiveness*				
1.1.1 Extent and nature of ICT and digital data use in WFP	Level of use and diversity of products (changes in the products or services) Processes and changes in how products or services are created or delivered Perceived characteristics or attributes of the technology (including compatibility, complexity, 'trialability', 'observability', and factors driving development) in relation to effectiveness of operations	WFP documentation: centralized evaluation reports, IT governance arrangements, audit reports, annual performance reports (APRs), technology guidelines, Executive Director (ED) circulars, country strategic plan evaluations (CSPEs), TEC and INK factsheets and reviews WFP staff (HQ, RBs and COs) WFP partners (national partners)	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	High reliance on KIIs with staff across all levels of WFP and on TEC documentation Existing documentation on technology products – excluding those pertaining to CBT, SCOPE and CFM – is limited.
1.1.2 Barriers and enablers for the contribution of ICTs and digital data to the effectiveness of WFP operations	Identification of barriers and enablers to ICTs and digital data contribution to WFP effectiveness Perceived impact of barriers and enablers on the effectiveness of WFP operations Perceived extent to which planned contribution of technologies to management objectives has been achieved to date (including unintended results) Extent to which planned contribution of technologies to programme objectives has been achieved to date	WFP documentation: annual country reports (ACRs), APRs, strategic plans, corporate results framework (CRF), management plans, centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs WFP staff (HQ, RBs and COs) WFP partners (national partners)	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	High reliance on case studies and KIIs, especially on individual's perceptions Corporate Information Strategy lays out objectives that can be confirmed in interviews in the absence of panel measurement of indicators. Key aggregate indicators found in Corporate Results Framework and annual performance results

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
	Extent to which the use of ICTs and digital data has helped deliver effectiveness gains Ability to support the use of technology in existing and new operations			In depth evaluative evidence on the contributions of technology to programme and managements objectives is not available
1.2 How does the use of ICTs and digital data affect timeliness and cost of operations in constrained environments? *Efficiency*				
1.2.1 Improvement in timeliness of operations enabled by ICTs and digital data	Perceived ability of WFP to deploy technologies in support of operations in a timely manner Perceived ability to improve the timeliness of assistance using ICTs and digital data Enablers and barriers to the timeliness of WFP operations arising from the use of ICTs and digital data	WFP documentation: ACRs, APRs, CSPEs, WFP strategic plans, centralized evaluation reports, audit reports, TEC and INK factsheets and reviews, TEC business process documentation WFP staff (HQ and COs) WFP partners (national partners)	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	Uncertainty on extent of granular information from emergency response documentation and risk registers. Reliance on responses from KII at all levels of the organization
1.2.2 Improvement in cost of operations enabled by ICTs and digital data	Perceived ability of WFP to deploy technologies in support of operations in a cost-efficient manner Changes in cost efficiency of operations arising from the use of ICTs and digital data Enablers and barriers to the cost-efficiency of WFP operations arising from the use of ICT and digital data	WFP documentation: ACRs, APRs, CSPEs, WFP strategic plans, centralized evaluation reports, audit reports, TEC and INK factsheets and reviews, TEC business process documentation WFP staff (HQ and COs) WFP partners	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	Aggregate financial information is available. No cost-breakdown per technology deployed is available. Reliance on perceptions from stakeholders, mainly at the CO level, and documentation (for example, reductions in costs of monitoring brought on by MoDA)
1.3 How appropriate are the ICT applications and infrastructure used by WFP at corporate and local level in light of the constraints of the environments in which they are being (or expected to be) deployed and to what extent are these properly used, resilient and adaptable to local and evolving constraints? *Relevance, appropriateness*				
1.3.1 Alignment between ICT	Extent to which ICT applications and infrastructure are relevant,	WFP documentation: business process documentation, TEC	WFP document review	Documentary evidence includes scant information

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
applications and infrastructures and the environment	appropriate, and usable within their intended environment of use (how is this ensured, how can this be improved) Level of analysis and understanding of the environment of deployment within ICT and digital data activities and processes established to ensure relevance Reported robustness and resilience of applications and infrastructure to be used in the field. Demonstrated ability to adapt ICT applications and infrastructures in response to the environment	Division annual reports, CSPEs, technology guidelines and protocols, centralized evaluation reports, audit reports WFP staff (RBs and COs) WFP partners (national and international partners) Affected populations	WFP KIIs External KIIs Technology User's Phone Survey (affected populations) Focus group discussions (FGDs) with affected population	on relevance of ICTs applications, except in the case of CFM and CBT. TEC and INKA documentation Prioritization for Technology Users Phone Survey
1.3.2 Extent to which ICT applications and infrastructures are used	Usage of selected ICT applications and infrastructure for their intended purpose	WFP documentation: business process documentation, TEC Division annual reports, CSPEs, technology guidelines and protocols, centralized evaluation reports, audit reports WFP staff (RBs and COs) WFP partners (national partners) Affected populations	WFP document review WFP KIIs External KIIs Technology User's Phone Survey (affected populations) FGDs	Reliance on key informant interviews and the global survey and evaluative evidence from CSPEs and others
1.4 Are there unexploited opportunities for use of ICTs and digital data in constrained environments, for instance technologies successfully deployed by other actors? *Appropriateness, innovation*				
1.4.1 Alignment and gaps between WFP ICT applications and infrastructures and	Extent to which WFP range of ICT applications and solutions differs from industry-wide solution and approaches (based on benchmarking)	WFP documentation: centralized evaluation reports, IT governance arrangements, audit reports, APRs,	WFP document review WFP KIIs	Evidence exists to characterize industry wide solutions and approaches. KIIs with external

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
sector-wide solutions (and beyond)	Emerging trends and new approaches to ICT applications and infrastructure in the humanitarian sector	technology guidelines, ED circulars, TEC and INK factsheets and reviews External documents WFP staff (HQ and COs) WFP partners (international and resource partners) External actors in humanitarian technology sphere (comparator organizations through benchmarking)	External KIIs Technology User's Online Survey (WFP staff)	stakeholders filled information gaps and identified best practices
1.5 During the global COVID-19 crisis, to what extent has ICT helped WFP to adapt and safely continue operations despite the constraints imposed by the crisis? *Effectiveness, risks, protection, duty of care*				
1.5.1 Relationship between ICT applications and infrastructures and continued WFP operations during the COVID-19 pandemic	Extent to which ICT has enabled or hindered the continuation of operations considering constraints imposed by the COVID-19 crisis Demonstrated capacity to adapt to the rapidly changing context of operations	WFP documentation related to COVID-19 response WFP staff (COVID-19 coordination, RBs and COs)	WFP document review WFP KIIs	Evidence available in most recent documentation, plus documentation expected to be published within the next year. Important synergy with COVID-19 evaluation
2. People - How does the use of technologies in constrained environments affect the people served by WFP, and how do people affect this use?				
2.1 What are the effects (positive, negative, intended, unintended) of the use of ICTs and digital data on the lives of the different target population groups and others? How does the use of ICTs and digital data affect the assessment of needs, targeting and coverage of interventions in constrained environments? What effect does it have on access and the inclusion of the most marginalised groups? *Relevance, effectiveness, coverage, protection*				
2.1.1 Targeting, coverage, and delivery of assistance to the most food insecure	Contribution of ICTs and digital data to needs assessments, targeting strategy and delivery	WFP documentation: ACRs, APRs, strategic plans, centralized evaluation reports, audit reports, CSPEs, guidelines WFP staff (RBs and COs)	WFP document review WFP KIIs	Data available on the use of digital technologies for targeting and delivery, including coverage Emphasis on key informant interviews, global survey and

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
	Contribution of ICTs and digital data to enhanced coverage of the most food insecure Perceived effects of the use of ICTs for target population groups, including coverage	WFP partners (national partners) Affected populations	Technology User's Online Survey (WFP staff) Technology User's Phone Survey (affected populations) FGDs	mobile survey to guage perceived effects
2.1.2 Inclusion of marginalized groups	Level of analysis and understanding of the needs of marginalized groups within ICT and digital data activities Addressing access and the needs of marginalized groups in the design of ICT and digital data activities Perceived effects of the use of ICTs for marginalized groups	WFP documentation: ACRs, APRs, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, Gender Policy, gender action plans, protection guidelines, WFP Protection Policy WFP staff (HQ, RBs and COs) Affected populations (national partners)	WFP document review WFP KIIs Technology User's Phone Survey (affected populations) FGDs	Limited secondary evidence on the differential use of technologies by marginalized groups. Opportunity to examine technology development process in depth to assess extent to which groups are considered.
2.2 How does the use of ICTs and digital data affect gender equality and women's empowerment (GEWE) in constrained environments? *Gender equality*				
2.2.1 Inclusion of GEWE in the use of ICTs and digital data	Gender balance and differences in access and use of technology for women and men at WFP, its partners, and people served by WFP Level of analysis and understanding of GEWE within ICT and digital data activities Extent to which barriers to GEWE are addressed in the design of ICT and digital data activities	WFP documentation: ACRs, APRs, centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, Gender Policy, gender action plans, guidelines WFP staff (HQ, RBs and COs) WFP partners (national partners partners)	WFP document review WFP KIIs	Data on CFM, CBT, PDM and mVAM contains some insights disaggregated by gender

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
		Affected populations		
2.2.2 Extent to which ICT and digital data efforts at WFP contributed to GEWE	Perceived effects of the use of ICTs and digital data for GEWE Extent to which effects of ICTs and digital data on GEWE (positive and negative) have been systematically assessed and monitored Procedures to address gender imbalances in relation to the use of ICTs and digital data	WFP documentation: ACRs, APRs, centralized evaluation reports, audit reports, technology guidelines, ED Circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, Gender Policy, gender action plans, Guidelines WFP staff (HQ, RBs and COs) WFP partners (national partners) Affected populations	WFP document review WFP KIIs FGDs	Reliance on qualitative data collection, including focus group discussions targeting women and vulnerable populations
2.3 How effectively are ICTs and digital data used by WFP in constrained environments to promote accountability to affected populations (AAP)?				
2.3.1 Integration of principles of accountability to affected populations	Level of analysis and understanding of humanitarian principles of accountability to affected populations within ICT and digital data activities Extent to which the use of ICTs and digital data enables (or hinders) accountability to affected populations	WFP documentation: ACRs, APRs, centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, WFP Protection Policy WFP staff (COs) External documentation Data on WFP ICT and digital data assets (SugarCRM Data)	WFP document review External document review WFP KIIs Technology User's Online Survey (WFP staff)	Reliance on qualitative data collection on compliance with WFP policies via KII interviews
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data	Perceptions on the relative effectiveness of mechanisms for accountability to affected populations enabled by ICTs and digital data compared to previous system	WFP documentation: ACRs, APRs, centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC	WFP document review External document review WFP KIIs	Evaluative data available on beneficiary perceptions on CFM and CBT

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
	Beneficiary satisfaction with innovations enabled by ICTs and digital data for accountability Coverage of CFM mechanisms enabled by ICTs and digital data across all beneficiary groups	business process documentation, WFP Protection Policy WFP staff (COs) with a focus on feedback mechanisms and other accountability initiatives External documentation Affected populations	Technology User's Online Survey (WFP staff) FGDs	Reliance on secondary data collection for other technologies
2.4 What are the contributions and risks to protection and security of affected populations and humanitarian personnel from the use of ICTs and digital data in constrained environments and how well does WFP identify and manage those risks? *Protection, risks, duty of care*				
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations	Identification of risks and opportunities for protection from the use of ICT and digital data in WFP operations Awareness and importance of issues of protection and security resulting from ICT applications and digital data among WFP staff and partners Extent to which WFP is able to identify and monitor risks to protection and security Demonstrated ability to adapt to identified risks and opportunities	WFP documentation: centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, WFP Protection Policy, WFP Knowledge Management Policy, Corporate Risk Management Register, emergency preparedness and response package (EPRP) documentation WFP staff (RBs and COs) Affected populations	WFP document review Global survey WFP KIIs FGDs	Corporate risk register provides information on data governance and data protection.
2.4.2 Alignment between risk and opportunity and identification and management practices	Existence and appropriateness of risk and security protocols relating to ICT development, management, and transfer Perceived usability and efficacy of risk and security management protocols relating to ICTs	WFP documentation: audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation WFP staff (RBs and COs) WFP partners (national and international partners)	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	Existing documentation available to the team was limited regarding security protocols and safe use of ICTs beyond audit reports and information on risk registers

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
	Extent to which WFP staff and partners understand and apply safe use of ICTs and digital data Existence and effectiveness of reporting mechanisms for potential risk and security issues resulting from adverse events Demonstrated capacity to adapt in response to risk and security events			
2.5 Are staff capacities in WFP and its partners adequate for an effective and safe use of ICTs and handling of digital data in constrained environments? *Effectiveness, protection*				
2.5.1 Alignment of ICT capacity needs with WFP and partners capacities and capacity gaps	Extent to which the development and use of ICTs and digital data aligns with country-level capacities (staff and partners) and capacity gaps Extent to which WFP integrates capacity strengthening for its staff and partners in its ICT activities Extent to which WFP staff and partners understand and apply safe practices for the use of ICTs and digital data Ability to recruit and retain adequate specialist staff and/or specialist outsourcing	WFP documentation: TEC business process documentation, protocols, guidelines and training materials, WFP Knowledge Management Policy WFP staff (RBs and COs)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Reliance on KIIs conducted at all levels of the organization, as well as external KIIs
2.6 How well does WFP use ICTs and digital data to improve monitoring, risk management, reporting and evaluation, and to support training and knowledge management in constrained environments? *Risks, knowledge management*				
2.6.1 Comprehensiveness and quality of ICTs and digital data	ICTs and digital data activities are explicitly designed to facilitate monitoring, risk management and evaluation	WFP documentation: ACRs, APRs, strategic plans, CRF, management plans, centralized evaluation reports, audit reports, technology	WFP document review WFP KIIs	CFM data available in all case study countries. However, persistent weaknesses were identified in evaluative

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
used in monitoring, risk management and evaluation	ICTs and digital data tools are effectively used by WFP for monitoring and evaluation Existence of appropriate indicators to report contributions of ICTs and digital data	guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, WFP Knowledge Management Policy WFP staff (HQ and CO)		reports on the quality of indicator data.
2.6.2 Role of ICTs and digital data in monitoring, risk assessment, and monitoring and evaluation	Extent to which ICTs is used to generate and enhance the availability of data Perceived adaptation as a result of enhanced availability of information as a result of ICTs and digital data activities Opportunities to strengthen ICTs and digital data for monitoring and evaluation and risk management	WFP documentation: ACRs, APRs, strategic plans, CRF, management plans, centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, WFP Knowledge Management Policy WFP staff (HQ, RB, and CO) WFP partners (national partners)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Little information available on latest endeavours to integrate data across systems and facilitate data collection, including on DOTS , MoDA or Scope Insights
3. Policies and processes - How appropriate are WFP policies and processes in place to enable strategic use, promote innovation and manage risks in relation to the use of technologies in constrained environments?				
3.1 Does WFP have, at the different levels of the organization (HQ, RBs, COs), appropriate policies and processes in place and well-defined roles and responsibilities for the development, management and strategic use of ICTs and digital data in constrained environments? *Relevance*				
3.1.1 Extent to which WFP has established and uses appropriate policies and processes for the development, management and strategic use of ICTs and digital data	Analysis of the evolution of policies and processes Perceived appropriateness of policies and processes Perceived compliance with policies and processes in place Alignment of WFP policies and process with sector-wide practices and industry standards	WFP documentation: strategic plans, CRF, management plans, Integrated Road Map documents, policy evaluations, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, division annual reports WFP staff (HQ, RB, and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff) External document review	Reliance on qualitative data collection during the evaluation, including the global survey

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
		WFP partners (national, international and resource partners) External documentation		
3.1.2 Extent to which policies and processes enable or hinder the development, management and strategic use of ICTs and digital data	Identification of policy and processes that act as barriers and enablers for the strategic use of ICTs and digital data at the CO, RB, and HQ level	WFP documentation: strategic plans, CRF, management plans, integrated Road Map documents, policy evaluations, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, division annual reports WFP staff (HQ, RB and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with WFP stakeholders
3.1.3 Extent to which the appropriate roles and responsibilities exist and are defined	Analysis of key roles and responsibilities Reported knowledge and appropriateness of key roles and responsibilities, including aspects of power dynamics Perceived compliance with hierarchical structure and respective roles and responsibilities	WFP documentation: technology guidelines, ED circulars, TEC and INK factsheets and reviews, TEC business process Ddocumentation WFP staff (HQ, RB and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Organigrams and organizational process documents are available. Secondary data collection assisted in gathering data on the appropriateness of these roles and responsibilities
3.2 Does WFP have appropriate policies, governance arrangements, structures, frameworks, and guidelines in place to manage risks to operations in relation to the use of ICTs and digital data in constrained environments? *Risks*				
3.2.1 Extent to which WFP has established and uses appropriate policies, governance arrangements,	Analysis of the evolution of policies, governance arrangements, structures, frameworks, and guidelines Perceived appropriateness of policies, governance arrangements, structures,	WFP documentation: audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, division annual reports	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Documentary evidence was available and allowed the team to build a timeline of key developments and policies published

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
structures, frameworks, and guidelines to manage risks to operations in relation to the use of ICTs and digital data	frameworks, and guidelines across contexts Perceived compliance with policies, governance arrangements, structures, frameworks, and guidelines in place Alignment of WFP policies, governance arrangements, structures, frameworks and guidelines with sector-wide practices and industry standards	External documentation WFP staff (HQ, RB and CO)	External document review	
3.2.2 Extent to which policies, governance arrangements, structures, frameworks, and guidelines enable or hinder the management of risks to operations in relation to the use of ICTs and digital data	Identification of policies, governance arrangements, structures, frameworks, and guideline that act as barriers and enablers for the management of risks to operations in relation to the use of ICTs and digital data at the CO, RB, and HQ level	WFP documentation: audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, division annual reports WFP staff (HQ, RB and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with WFP stakeholders
3.3 How effective is WFP monitoring, reporting and knowledge management around its use of ICTs and digital data in constrained environments? *Knowledge management*				
3.3.1 Extent to which WFP effectively monitors, reports and shares knowledge around its use of ICTs	Characterization of WFP monitoring, reporting and knowledge management efforts around the use of ICTs Perceived enablers and barriers to knowledge sharing Demonstrated ability to adapt the use of ICT in response to monitoring, reporting and lessons learned	WFP documentation: APRs, CSPEs, strategic evaluations, division annual reports, TEC and INK factsheets and reviews. WFP staff (HQ, RB and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff)	Some documentary evidence was available that was complemented by country office documentation.

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
3.4 How appropriate and effective are WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations for use in constrained environments? *Relevance, appropriateness, innovation risks*				
3.4.1 Extent to which WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations are appropriate	Characterization of WFP strategies, mechanisms and funding at CO, RB, and HQ level Perceived appropriateness of policies, mechanisms, and funding (including drivers for development) Enablers and barriers to identifying, testing, approving and upscaling ICTs	WFP documentation: division annual reports, TEC and INK factsheets and reviews, country portfolio evaluations, CSPEs, decentralized evaluations, audits, Knowledge Management Strategy, ED circulars, INK and TEC guidelines External documentation (including Principles for Digital Development) WFP staff (HQ, RB and CO)	WFP document review External document review WFP KIIs Technology User's Online Survey (WFP staff)	Documentation available for INKA and TEC processes, but rather limited for COs. The GLASS database on WFP solutions provided an important overview of existing technologies, including date of creation, status, owner and type. KIIs and the survey provided information on appropriateness, barriers and enablers
3.4.2 Alignment between WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations with sector-wide efforts and donor community	Extent to which WFP's model for identifying, testing, approaching and upscaling ICT innovations is consistent with sector-wide approaches and best practices	WFP documentation: division annual reports, TEC and INK factsheets and reviews, country portfolio evaluations, CSPEs, decentralized evaluations, audits, Knowledge Management Strategy, ED circulars, INK and TEC guidelines External documentation WFP staff (HQ, RB and CO)	WFP document review WFP KIIs Technology User's Online Survey (WFP staff) External document review	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with external stakeholders as well as literature reviews focused on best practices and characterizing sector-wide approaches
4. Partnerships - How well does WFP manage its partnerships in relation to the provision and use of technologies in constrained environments?				
4.1 How well is the use of ICTs and digital data in constrained environments by WFP coordinated with other humanitarian and development actors, and how consistent is it with the technology choices made by other actors? *Coherence, coordination*				

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
4.1.1 Extent to which WFP has engaged in partnerships and collaborations for the coordinated use of ICTs and digital data	Existence of coordination efforts and collaborations (formal and informal) Perception of WFP's coordination / collaborative efforts Factors enabling / hindering partnership and collaborations	WFP documentation: centralized evaluation reports, audits, technology guidelines, ED circulars, TEC and INK factsheets and reviews WFP staff (HQ, RB, and CO) External documents WFP partners (national, international and resource partners) External actors in humanitarian technology sphere (comparator organizations through benchmarking)	WFP document review WFP KIIs External KIIs External document review Technology User's Online Survey (WFP staff)	Some data on partnerships was available, including indicators on shared services. Important emphasis of KIIs with local partners during the case studies
4.1.2 Technological alignment in the humanitarian sector	Extent to which WFP ICT and digital data choices align or compete with sector-wide efforts and agency-specific activities Transparency and extent to which WFP shares knowledge and experience with other humanitarian and development actors	WFP staff (HQ, RB, and CO) External documents WFP partners (national, international and resource partners) External actors in humanitarian technology sphere (comparator organizations through benchmarking)	WFP KIIs External KIIs External document review Technology User's Online Survey (WFP staff)	Reliance on documentary review of comparator organizations, including efforts to characterize these organizations' technology use KIIs with external stakeholders, including implementing partners were crucial to determine alignment with sector-wide efforts
4.2 How successful is WFP in transferring ICTs to partners (national governments, other UN agencies, cooperating partners) in constrained environments? *Effectiveness, sustainability*				
4.2.1 Capacity and needs alignment and gaps	Extent to which WFP integrates and delivers ICT and digital data capacity strengthening for its staff and partners Extent to which ICT and digital data solutions align with needs or demands from partners	WFP documentation: division annual reports, country portfolio evaluation, CSPEs, decentralized evaluations, audits, Knowledge Management Strategy, division reports	WFP document review WFP KIIs External KIIs	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with WFP stakeholders

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
		WFP staff (CO) WFP partners (international and national partners)	Technology User's Online Survey (WFP stafff)	
4.2.2 Extent to which the benefits of ICT and digital data activities are sustained in terms of continued use of technology	Ability of partners to sustain the use of ICTs and digital data efforts initiated by WFP Appropriateness of transfer processes and protocols Perceived sustainability of WFP ICT transfer efforts Sustainability of funding and investment in technology maintenance	WFP documentation: ED circulars, INK and TEC guidelines, transfer processes and protocols, division reports, CSPEs WFP staff (CO) WFP partners (international and national partners)	WFP document review WFP KIIs External KIIs Technology User's Online Survey (WFP staff)	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with implementing partners and country level documentation on transfer efforts
4.3 How appropriate are WFP partnerships for the development, uptake and management of ICTs and digital data used in constrained environments? *Relevance, partnerships*				
4.3.1 Extent to which WFP has engaged in partnerships and collaborations for the development, uptake and management of ICTs and digital data	Existence of development partnerships and collaborations (formal and informal) Perceived quality and benefits of partnerships Factors enabling / hindering partnership and collaborations	WFP documentation: ED circulars, INK and TEC guidelines, transfer processes and protocols, division reports, CSPEs, partnership policies WFP staff (HQ and CO) WFP partners (international, national and resource partners) External documentation	WFP document review WFP KIIs External KIIs External document review	Data available on quantity of partnerships by type of collaboration.
4.3.2. Contribution of partnerships around development, uptake, and management to the	Extent to which development, uptake and management partnerships influence sector wide use of ICTs and digital data	WFP documentation: ED circulars, INK and TEC guidelines, transfer processes and protocols, division reports, CSPEs, partnership policies WFP partners (international, national and resource partners)	WFP document review WFP KIIs External KIIs External document review	Focus on stakeholder perceptions. Limited documentation available

Dimension of analysis	Lines of inquiry / indicators	Data sources	Data collection technique	Limitations and state of evidence
use of ICTs and digital data across the humanitarian sector		External documentation	Technology User's Online Survey (WFP staff)	
4.4 How well does WFP ensure data privacy and protection towards outside parties? Is the way WFP shares digital data with government, cooperating partners, other UN agencies, donors, local/de facto authorities having effective control over WFP areas of operations etc. secure and appropriate? *Protection, risks*				
4.4.1 Extent to which WFP has established and uses appropriate data privacy and protection protocols for data sharing with outside parties, including government	Existence and appropriateness of safe data sharing protocols Perceived usability and efficacy of data safety and protection protocols Extent to which WFP staff and partners understand and apply safe data sharing practices Existence and effectiveness of reporting mechanisms for potential privacy or protection issues resulting from adverse events Demonstrated capacity to adapt in response to data privacy and protection in relation to outside parties	WFP documentation: centralized evaluation reports, audit reports, technology guidelines, ED circulars, CSPEs, TEC and INK factsheets and reviews, TEC business process documentation, WFP Knowledge Management Policy, Corporate Risk Management Register, EPRP documentation WFP staff (HQ and CO) WFP partners (national, international and resource partners) External documentation	WFP document review WFP KIIs External KIIs External document review Technology User's Online Survey (WFP staff)	Reliance on secondary data collection efforts during the evaluation, mainly KIIs with implementing partners and country level documentation on data sharing practices and information transfer efforts
4.4.2 Alignment between WFP data privacy and protection and national and international (sector-wide) requirements and standards	Extent to which existing safe data sharing protocols and practices align with emerging international standards and/or national requirements. Extent to which ICTs are deployed with a clear understanding of national regulatory requirements, including aspects of data sharing	WFP documentation: audit reports, technology guidelines, ED circulars, TEC and INK factsheets and reviews, TEC business process documentation External documentation WFP partners (national, international and resource partners	WFP document review WFP External KIIs External document review	Focus on document review to determine alignment with international standards and national regulatory requirements

Annex VI. Data Collection Tools

KEY INFORMANT INTERVIEWS

Key informant interviews were conducted using semi-structured interview guides, a format in which the interviewers use open-ended questions allowing for a discussion with the interviewee rather than a straightforward question and answer format. A list of questions was provided to guide the discussion but may not have been followed sequentially nor be read word by word.

All notes from the interviews were recorded in a response matrix (coding sheet). Interview notes and responses against the evaluation matrix questions were combined and analysed at the end of the field phase to determine emerging themes and patterns across the responses. Individual interviews averaged 45-60 minutes and were conducted remotely.

The list of topics covered through the key informant interviews in relation to the evaluation matrix is provided below. Specific questions were developed and targeted to specific respondents based on their experience and position. The general discussion guide for key informant interviews is available in the last section of this annex, as well as a selection of questions tailored to specific key informants.

Dimension of analysis	WFP Internal KII	External KII
1.1.1 Extent and nature of ICT and digital data use in WFP	X	X
1.1.2 Barriers and enablers for the contribution of ICTs and digital data to the effectiveness of WFP operations	X	X
1.2.1 Improvement in timeliness of operations enabled by ICTs and digital data	X	X
1.2.2 Improvement in cost of operations enabled by ICTs and digital data	X	X
1.3.1 Alignment between ICT applications and infrastructures and the environment	X	X
1.3.2 Extent to which ICT applications and infrastructures are used	X	X
1.4.1 Alignment and gaps between WFP ICT applications and infrastructures and sector-wide solutions (and beyond)	X	X
1.5.1 Relationship between ICT applications and infrastructures and continued WFP operations during the COVID-19 pandemic	X	
2.1.1 Targeting, coverage, and delivery of assistance to the most food insecure	X	
2.1.2 Inclusion of marginalised groups	X	
2.2.1 Inclusion of GEWE in the use of ICTs and digital data	X	
2.2.2 Extent to which ICT and digital data efforts at WFP contributed to GEWE	X	
2.3.1 Integration of principles of accountability to affected populations	X	
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data	X	
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations	X	

Dimension of analysis	WFP Internal KII	External KII
2.4.2 Alignment between risk and opportunity and identification and management practices	X	X
2.5.1 Alignment of ICT capacity needs with WFP and partners capacities and capacity gaps	X	
2.6.1 Comprehensiveness and quality of ICTs and digital data used in monitoring, risk management and evaluation	X	
2.6.2 Role of ICTs and digital data in monitoring, risk assessment, and monitoring and evaluation	X	
3.1.1 Extent to which WFP has established and uses appropriate policies and processes for the development, management and strategic use of ICTs and digital data	X	
3.1.2 Extent to which policies and processes enable or hinder the development, management and strategic use of ICTs and digital data	X	
3.1.3 Extent to which the appropriate roles and responsibilities exist and are defined	X	
3.1.1 Extent to which WFP has established and uses appropriate policies, governance arrangements, structures, frameworks, and guidelines to manage risks to operations in relation to the use of ICTs and digital data	X	
3.1.2 Extent to which policies, governance arrangements, structures, frameworks, and guidelines enable or hinder the management of risks to operations in relation to the use of ICTs and digital data	X	
3.3.1 Extent to which WFP effectively monitors, reports and shares knowledge around its use of ICTs	X	
3.4.1 Extent to which WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations are appropriate	X	
3.4.2 Alignment between WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations with sector-wide efforts and donor community	X	
4.1.1 Extent to which WFP has engaged in partnerships and collaborations for the coordinated use of ICTs and digital data	X	X
4.1.2 Technological alignment in the humanitarian sector	X	X
4.2.1 Capacity and needs alignment and gaps	X	X
4.2.2 Extent to which the benefits of ICT and digital data activities are sustained in terms of continued use of technology	X	X
4.3.1 Extent to which WFP has engaged in partnerships and collaborations for the development, uptake and management of ICTs and digital data	X	X
4.3.2. Contribution of partnerships around development, uptake, and management to the use of ICTs and digital data across the humanitarian sector	X	X
4.4.1 Extent to which WFP has established and uses appropriate data privacy and protection protocols for data sharing with outside parties, including government	X	X
4.4.2 Alignment between WFP data privacy and protection and national and international (sector-wide) requirements and standards	X	X

General Discussion Guide

The_discussion guide_is meant to guide interviews with internal key informants and can be adapted for external key informants. Facilitators should exert their best judgment in navigating the guide and address only the appropriate questions. Probes are provided to help stir the conversation but may not be used. Explain the

purpose of the evaluation, the timeline and why it is important to interview him/her. Obtain verbal informed consent to voluntarily participate in the interview and ask permission to record the interview.

ALIGNMENT

- Can you tell us about your experience with WFP's use of technology?
- More generally, what technologies have *[you, WFP, your division]* implemented to provide assistance to WFP's target population in the last 3 years?
- Has it changed over time?
- If so, how?
- How did you / your division determine the most useful technology for the target population?
- Did you base that decision on any data or assessments?
- Are there any reports on which you based this decision?
- Is the appropriateness of technology choices re-assessed often?
- Do you think often enough?
- Why?
- *if involved in technology development / scale-up:* In which way could the development of technology be better?
- What support do you get and what support do you wish you would get?
- Are the appropriate structures, policies, people, in pace to support rational investments in technology development or selection?
- What prompted you to develop your own (local) solution?
- How do local efforts like this get scale-up elsewhere? How can that process be improved?

EFFECTIVENESS

- In which way do you think technologies are benefiting WFP target populations?
- Do you feel WFP's use of technology has supported its food assistance objectives?
- Where there gains in cost or timeliness of action?
- Do you think the populations' needs are better met because of WFP's use of technology?
- How, or why not?
- Are there technologies that WFP is currently implementing that are particularly relevant to the needs of the population?
- How sufficient / efficient do you think that WFP's use of technology is in relation to the needs of the population?
- What about technologies that are not being used, but that you think would be relevant? Are there any?
- Are there technologies that WFP is currently implementing that are less relevant to the needs of the population?
- What could be improved?
- What constraints (external and internal) have prevented WFP from more actively developing or deploying technologies to achieve its food assistance objectives
- Do you believe WFP is doing enough in this area? Too much?
- Can you please indicate any important outcomes achieved thanks to the use of technology?
- In which ways are corporate technologies making your work easier?
- In which ways do they make it more complicated?

INCLUSIVITY / GEWE

- For the next question, please consider persons at risk and/or with specific needs, including separated or unaccompanied children, indigenous communities, elderly people, pregnant and lactating women, LGBTI, people with disabilities, people living with HIV, among others.
- In the context of the work within your purview, please share if and how the needs of persons at risk and/or with specific needs were considered and acted upon in the use of technology by WFP?
- Can you provide a specific example of a technology implemented and how persons at risk were considered?
- Has this improved over time?
- What strategies has WFP implemented to ensure the inclusion and or empowerment of women and other groups in its use of technology? Is it effective?
- Are there areas where you wish WFP would do more to assess and/or address the needs of persons at risk or with specific needs when developing or deploying technologies?

RISKS / PROTECTION

- Are these instances where concerns about the use of technology and its implications for the population have been raised?
- If yes, please explain.
- Have these concerns been addressed?
- More generally, how are the risks associated with specific technologies assessed?
- How are populations empowered to manage their digital existence, if at all?
- Does WFP support populations in understanding risks and building digital literacy? If yes, how? Is it effective?
- To what extent has WFP established and uses appropriate data privacy and protection protocols for data sharing with outside parties, including government?

PATNERSHIPS / B2G

- What strategies has WFP implemented to develop government capacity to use technology? How are they implemented?
- Is it effective?
- How does WFP assess the risk of such partnerships?
- How does WFP consider the sustainability of such partnerships?
- What kind of collaboration/partners has WFP established in the use of technology (at your level / experience)?
- How does it work?
- Is it effective?
- How does WFP share lessons learned on the use of technologies?
- How does WFP coordinate development with other humanitarian actors / UN agencies?
- Is it effective?

CONCLUSION

- What else could WFP do to better use technologies to achieve its food security objectives?
- What factors constraint or enable WFP from contributing on this front?

Discussion Guide (Example – Regional IT Officers)

During the interview we would like to discuss a range of topics – as outlined below. However, please take this as a guide only. We will adapt the conversation to fit with your specific knowledge and interests – so not all questions may be relevant. Please also note that any information you provide is anonymised and you will not be quoted in the report.

1. We've heard in our interviews of different tensions that emerge between locally (CO) initiated technology development and centrally-led (HQ) governance / management. We are also aware of the series of processes and guidelines published in the past year to try and harmonize the development and scaling of technology. Do you think a balance has been achieved between local development and global governance? Do these tensions persist? What is needed / could be improved to harmonize these dynamics?
2. Some of the barriers we've come across in our case studies is the absence of systematic quantitative data on the benefits of technology to operations and generally, absence of monitoring and evaluation data on the performance of technologies. Would you agree with stating that systematic processes to measure, analyse and report on these are absent? Conversely, do you have good examples of these being in place?
3. We've found that knowledge sharing and management across COs sometimes depends on specific staff that bridge across units and countries to discuss technology. Given your position as intermediaries and conveners across HQ and COs, do you think sufficient spaces to discuss technological innovations exist? Is WFP effectively sharing knowledge, best-practices, and data/technologies across countries? The RBs play a critical support role for certain technologies (for example SCOPE) and processes tied to technologies, including partaking in the procurement and maintenance of specific hardware / software or providing technical support on specific solutions. Some countries have expressed interest in internalising these expertise and functions for rapid and contextualised responses. Would you share this opinion? What role do you think RBs can continue to play in the use of technology, and which new roles do you think it should lead?
4. From our case studies, we've seen that an enabler to the effective use of technology in constrained environments is country leadership and their respective comfort level and proficiency with new technologies. Have you noticed this on your side as well? What are other enabling factors for the effective use of technologies you've noticed across country offices?
5. In your opinion, are there clear chains of accountability (i.e., knowledge of which unit at which level is accountable for X decision or process) for data protection and privacy between CO and HQ?
6. Are there technologies that WFP is planning to implement or currently implementing that you are impressed with? Conversely, are there technologies that you are worried about?
7. Based on your experience, do you think the needs of persons at risk and/or with specific needs are sufficiently considered, addressed or acted upon in the design or implementation of technologies used by WFP? Specifically given changing and diverse contexts?
8. Would you say there is a good balance on the requirements for technology use (maintenance, scaling, monitoring, etc) for country offices by HQ vis-à-vis the reporting, registration, revisions expected by HQ from the COs? Would you say these processes are onerous or would you say they are necessary?
9. If you would make a single recommendation to WFP decision-makers on the use of technology in constrained environments, what would it be and why?

GLOBAL SURVEY

The global WFP staff survey was conducted using a participatory narrative enquiry approach. All WFP personnel worldwide, including fixed term staff and consultants, were invited to respond to the survey. Respondents were asked to provide a narrated experience of using ICTs and digital data and subsequently, through a close-ended questionnaire, to provide their own interpretation and analysis of that experience. The instrument was self-administered by participants, using an online platform. As for other data collection approaches, participants provided informed consent based on a standardized information sheet covering key elements (scope, confidentiality etc.).

Because of the breadth of the evaluation and the nature of the enquiry, the instrument was designed to ensure multiple topics are covered, given that it was not possible for every respondent to cover every relevant element of the evaluation matrix. In addition, a limited number of survey-like questions were included to ensure answers on specific topics that could not otherwise be covered trough sensemaking. These mainly relate to assessments of skills and capacities. The instrument was designed through a series of participatory sessions, including the Office of Evaluation (evaluation manager and internal reference group).

The targeted sample size was about 1050 respondents, however, only 874 people were successfully reached. The questionnaire was developed by the evaluation team with input from WFP. It was made available in English, Spanish and French for a period covering 9 February to 16 March, 2021.

The topics explored by the global survey in relation to the evaluation matrix are outlined below. This is a comprehensive list that was shortened and refined during the design phase of the global survey instrument. The survey was tested with a sub-sample of WFP staff, focused on refining the prompting question, assessing the range of answers received and refining the length and language of the survey.

Dimension of analysis
1.1.1 Extent and nature of ICT and digital data used in WFP
1.1.2 Barriers and enablers for the contribution of ICTs and digital data to the effectiveness of WFP operations
1.2.1 Improvement in timeliness of operations enabled by ICTs and digital data
1.2.2 Improvement in cost of operations enabled by ICTs and digital data
1.4.1 Alignment and gaps between WFP ICT applications and infrastructures and sector-wide solutions (and beyond)
2.1.1 Targeting, coverage, and delivery of assistance to the most food insecure
2.3.1 Integration of principles of accountability to affected populations
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations
2.4.2 Alignment between risk and opportunity and identification and management practices
2.5.1 Alignment of ICT capacity needs with WFP and partners capacities and capacity gaps
2.6.2 Role of ICTs and digital data in monitoring, risk assessment, and monitoring and evaluation
3.1.1 Extent to which WFP has established and uses appropriate policies and processes for the development, management and strategic use of ICTs and digital data
3.1.2 Extent to which policies and processes enable or hinder the development, management and strategic use of ICTs and digital data

Dimension of analysis
3.1.3 Extent to which the appropriate roles and responsibilities exist and are defined
3.1.1 Extent to which WFP has established and uses appropriate policies, governance arrangements, structures, frameworks, and guidelines to manage risks to operations in relation to the use of ICTs and digital data
3.1.2 Extent to which policies, governance arrangements, structures, frameworks, and guidelines enable or hinder the management of risks to operations in relation to the use of ICTs and digital data
3.3.1 Extent to which WFP effectively monitors, reports and shares knowledge around its use of ICTs
3.4.1 Extent to which WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations are appropriate
3.4.2 Alignment between WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations with sector-wide efforts and donor community
4.1.1 Extent to which WFP has engaged in partnerships and collaborations for the coordinated use of ICTs and digital data
4.1.2 Technological alignment in the humanitarian sector
4.2.1 Capacity and needs alignment and gaps
4.2.2 Extent to which the benefits of ICT and digital data activities are sustained in terms of continued use of technology
4.3.2 Contribution of partnerships around development, uptake, and management to the use of ICTs and digital data across the humanitarian sector
4.4.1 Extent to which WFP has established and uses appropriate data privacy and protection protocols for data sharing with outside parties, including government

GLOBAL SURVEY INSTRUMENT

The final design of the global survey can be found below and was initiated on February 8, 2021.

This online survey is part of a Strategic Evaluation commissioned by the Office of Evaluation on WFP's use of technology in constrained environments.

Definition of technology for this evaluation

Technology is understood as the ICT hardware and applications used to help achieve the objectives of WFP. It includes the range of digital technologies used throughout WFP's programme cycle, including technologies used in WFP operations by WFP, its partners and affected populations and technologies for internal management and communication.

Definition of constrained environments for this evaluation

Constraints can be related to severe access constraints to affected populations due to poor infrastructure, insecurity and other factors, where technology may help improve access. They can also relate to factors that impede the use of ICTs and digital data such as connectivity constraints, low digital technology penetration, political restrictions or protection concerns.

About the survey

The survey uses a story-based sensemaking methodology. You will be asked to describe a specific experience (to tell a story) related to the use of digital technologies in a constrained environment. After you have described this experience in some detail, we will ask a set of follow-up questions to further understand (the context of) your story. The story you share with us is central in answering the follow-up questions.

The survey will take about 20 minutes to complete. Your contribution is very valuable to ensure that a wide range of voices within WFP are heard. Your participation is completely voluntary and anonymous. We will not collect or store any personal data. As you share your experience, please refrain from disclosing information that would compromise your or someone else's identity. Please provide your consent that your responses are made available to the evaluators.

Please share your experience

Reflecting on your work with WFP, please share a positive or negative experience about the use of digital technology in operations in a constrained environment. Please take a few minutes to reflect and describe in some detail what happened. Please also explain how the use of technology improved or hindered achieving WFP's objectives.

The experience you describe below is central to the survey. Do not skip this part as the follow-up questions will relate to (the context of) your story. Note that you can share an experience that you were directly or indirectly involved in or that you are aware of.

Text Box

Please give a short title to your story:

Text Box

Please answer the following questions in relation to your story

1. What is the name of the most important digital technology or data you referred to in your story? (Name of tool, software, application, …)

Text Box

2. In your story, what was the main purposes of the use of digital technology or data? (max. 3 answers)

- ☐ Assessment
- ☐ Forecasting
- ☐ Planning
- ☐ Targeting
- ☐ Resource management
- ☐ Monitoring and evaluation
- ☐ Communications

- ☐ Reporting
- ☐ Delivery of assistance
- ☐ Learning and knowledge management
- ☐ Risk management, protection and security
- ☐ Accountability to affected populations
- ☐ Case management
- ☐ Money transfers
- ☐ Beneficiary registration
- ☐ Other

3. The digital technology or data in your story was mainly used in which stage of the programme lifecycle?
- ○ Needs assessment
- ○ Resource mobilization
- ○ Planning
- ○ Implementation
- ○ Reporting
- ○ Other

4. How would you rate the overall user experience with the digital technology or data mentioned in your story?
- ○ Very positive
- ○ Positive
- ○ Neutral
- ○ Negative
- ○ Very negative
- ○ I don’t know

5. Is the use of the digital technology or data in your story specifically related to the Covid 19 crisis?
- ○ Yes, its use was related to the Covid 19 crisis
- ○ No, its use was not related to the Covid 19 crisis

6. At what organizational level was the digital technology or data used in your story?
- Global
- Regional
- National
- Sub-national

7. Your story took place in …

Text Box

8. The digital technology used in your story makes use of …
- existing third-party software / technology
- existing third-party software / technology customised for WFP
- software/technology developed by WFP
- I don't know

9. The digital technology or data appearing in your story …
- is in pilot or testing phase
- has recently been adopted by WFP (<1 year)
- has been around for some time in WFP (1 to 5 years)
- has been for a long time in WFP (over 5 years)
- I don't know

Below you find slider questions with two extreme answer options. You can move the ball to the position of your choice. Moving the ball closer to one side means that you give more weight to that answer (and less weight to the other answer). If you position the ball in the middle, you give equal weight to both answers. If the question does not apply to your story, you can tick 'Not applicable' (N/A).

10. The digital technology or data used in your story is …

difficult to use — easy to use

□N/A

11. In your story, how appropriate was the digital technology or data in the specific context?

It was not appropriate for the specific context (mismatch)

It was very appropriate for the specific context

□ N/A

12. How would you rate the physical & security constraints in which the digital technology or data was used in your story?

There were no physical & security constraints

There were extreme physical & security constraints

□ N/A

13. How would you rate the social & political constraints in which the digital technology or data was used in your story?

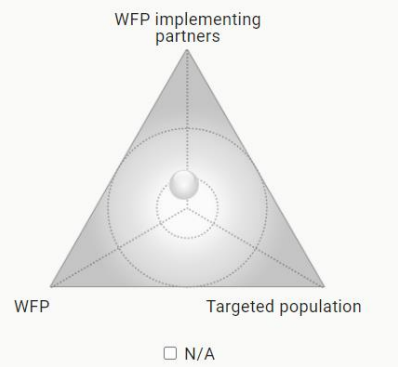
There were no social & political constraints

There were extreme social & political constraints

□ N/A

Below you can find triad questions. A triad question presents three answer options. You can answer by moving the 'ball' anywhere in the triad. Moving the ball closer to one corner point means that you give more weight to that answer compared to the two other answers. If you place the ball in the middle of the triad, the three answers are equally important to you.

14. Who benefited most from the use of the digital technology or data in your story?



15a. In which areas lay the positive impact (if any) of the use of the digital technology or data in your story? (max 3 answers)

- Planning and targeting
- Delivery of WFP assistance
- Coverage and inclusion of marginalized groups
- Compliance with policies and processes
- Staff capacities, training and knowledge
- Cost and time efficiency of programmes
- Risks to security and protection
- Accountability to affected populations
- Other
- No positive impact

15b. In which areas lay the negative impact (if any) of the use of the digital technology or data in your story? (max 3 answers)

- □ Planning and targeting
- □ Delivery of WFP assistance
- □ Coverage and inclusion of marginalized groups
- □ Compliance with policies and processes
- □ Staff capacities, training and knowledge
- □ Cost and time efficiency of programmes
- □ Risks to security and protection
- □ Accountability to affected populations
- □ Other
- □ No negative impact

16. Overall the impact of the use of the digital technology or data was …

- ○ positive
- ○ negative
- ○ neither positive nor negative
- ○ both positive and negative
- ○ I don't know

17. If applicable, as a result of the digital technology or data in your story, the targeted population was …

worse served

better served

□ N/A

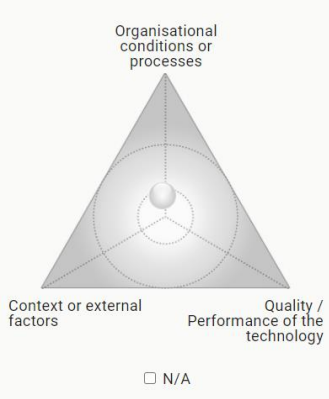
18. If applicable, digital technology or data created …

no risk for targeted population

a high risk for targeted population

□ N/A

19. What were the main challenges in the use of the technology?



1. Rate the extent to which the following criteria were sufficiently present for the use of digital technologies or data in your story:

a. Technical usability (functional and/or technical completeness, correctness and appropriateness)
- Not sufficient
- Sufficient
- I don't know

b. User acceptability (accessibility and extent to which users recognize it is appropriate for their needs)
- Not sufficient
- Sufficient
- I don't know

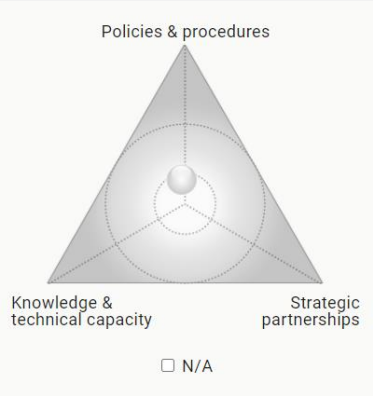
c. Suitability to purpose (fit for end-purpose)
- Not sufficient
- Sufficient
- I don't know

d. Funding (appropriate funding to ensure implementation and maintenance)
- Not sufficient
- Sufficient
- I don't know

e. Clear policies and process (existing guidelines outlining management and use)
- Not sufficient
- Sufficient
- I don't know

Apart from your story, we have some additional questions

1. In your view, what needs to be improved to make more effective use of digital technologies or data in WFP operations?



2. Overall, how do you rate ...

a. WFP's strategy for development and use of ICT technology

Poor

Excellent

□ N/A

b. WFP's provision of finances & resources for the use of ICT technology

Poor

Excellent

□ N/A

c. WFP's provision of technical assistance for the use of ICT technology

Poor

Excellent

□ N/A

d. WFP's responsiveness to the ICT technology needs of the staff and partners

Poor

Excellent

□ N/A

e. WFP's strategic partnerships to develop and use ICT technology

Poor

Excellent

□ N/A

f. WFP's use of appropriate privacy and protection protocols in relation to the use of technology and data (ethical considerations)

Poor

Excellent

□ N/A

g. WFP's coordination between national, regional and global levels on the role and use of digital technology

Poor

Excellent

□ N/A

3. Do you have any concrete recommendations or unexploited uses of ICT / digital technology in WFP?

About you?

4. I am a …

- Woman
- Man
- prefer not to tell
- other

5. My age:

- 18 to 35 years old
- 36 to 50 years old
- Over 50 years old

6. Country where you are based?

Text Box

7. You are mainly working in …

- management
- programmes
- supply chain
- budget and programming
- human resources

- administration
- finance
- information technology
- security
- resource mobilization, communications and reporting
- research and assessments
- monitoring & evaluation
- other

8. I am working for ...
- WFP HQ
- WFP Regional Bureau
- WFP Country Office
- WFP sub-office
- WFP Liaison office

9. I consider myself ...
- not tech savvy at all
- less than average tech savvy
- average tech savvy
- more than average tech savvy
- very tech savvy

PHONE SURVEY

Short phone surveys were implemented as part of the case studies, whenever possible. For each survey, a limited number of questions were asked to people who WFP serves over a 25-minute-long interview. The sample for each survey was drawn from the WFP beneficiary database, using a stratified random sampling approach. The final design of each survey was validated for each country through engagement with WFP country offices and through piloting of the survey by the local expert and contracted phone survey service provider. Different stratification criteria were drawn based on the type of beneficiaries who could be reached in each case study. While each iteration of the phone survey is largely based on the instrument included below, each case study amended and revised the instrument to ensure its fitness for the context of the country office, in light of the technologies used.

The survey design follows computer-assisted telephone interviewing (CATI) best practices, using a human operator for the surveys. This mode of surveying was chosen over short message service (SMS) surveys, in order to reduce the exclusion of participants with low levels of literacy, and over interactive voice response (IVR), in order to reduce errors from tone dialling and also given that CATI usually has a lower levels of attrition in some contexts compared to SMS and IVR. [3] The survey questionnaire was designed to cover the following dimensions of analysis:

Dimension of analysis
1.3.1 Alignment between ICT applications and infrastructures and the environment
1.3.2 Extent to which ICT applications and infrastructures are used
1.5.1 Relationship between ICT applications and infrastructures and continued WFP operations during the COVID-19 pandemic
2.1.1 Targeting, coverage, and delivery of assistance to the most food insecure
2.1.2 Inclusion of marginalized groups
2.2.2 Extent to which ICT and digital data efforts at WFP contribute to GEWE
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations
1.5.1 Relationship between ICT applications and infrastructures and continued WFP operations during the COVID-19 pandemic
2.2.2 Extent to which ICT and digital data efforts at WFP contributed to GEWE
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations

The instrument was refined through an iterative review process involving the country office to ensure alignment with WFP operations, and to ensure that the questionnaire covered topics and areas representative of the population served by WFP. While the instrument prioritizes structured close-ended questions, a small number of open-ended questions were included. The survey was designed to measure individual perceptions on their use of technology, not household-level perceptions. It used skipping patterns and targeting questions to ensure that relevant questions were asked to beneficiaries with proven experience using different

3 Himelein, K., Echkman, S., Lau, C. & McKensive, D. 2020. *Mobile Phone Surveys for Understanding COVID-19 Impacts: Part II Response, Quality and Questions*. World Bank.

types of technologies. The evaluation team constructed a detailed enumerator guide with embedded code to be used in data collection software.[4] Enumerators were asked to make no more than nine attempts (max three per day, three hours apart) to respondents, with one day in between in order to maximize the response rates. The enumerator script was tailored to the context in consultation with the local expert as well as the firm hired to conduct the phone surveys. The initial part of the survey ensured respondent verification – confirming that the enumerator had reached the correct person – and covered the introduction to the survey, including the purpose of the phone survey and ensuring participants consented to participate in the survey. Once the enumerator confirmed consent and informed the respondent of the objective and length of the survey, the enumerator covered the questions listed below - subject to tailoring to local languages,[5] idioms, cultural norms and country operations and technology portfolio.

Case study reports note the different limitations of each phone survey, including biases and underrepresentation of certain beneficiary groups. It is worth noting however, that important efforts were made in concert with the firms conducting the survey to target rural women, who have been found difficult to reach via mobile phone surveys in the past. Depending on the bias resulting from the absence of this important population group from the mobile survey, the focus group discussions or interviews carried out during the case studies aimed to fill in some of the information coverage gaps from the mobile phone survey.

		Question		Options
C00	group	**CONSENT**		
C01	*note*	We are an independent team working on behalf of the World Food Programme to help improve operations. Specifically, we are interested in the use of technologies and its effect on humanitarian assistance. The interview should take about **20 minutes** There are no direct benefits to you and your response in no way affects your ability to receive assistance. There are no "correct" or "wrong" answers to our questions. We simply ask for your honest opinion. Your participation is voluntary, and you can stop this interview at any time. You may also refuse to answer any question. We do not foresee any risk from participating in this interview. The information collected will be completely anonymous. Do you have any question for me?		
C02	*single select*	Do you agree to participate?		
			0	no
			1	yes
D00	group	**DEMOGRAPHICS**		

4 The software selected for data collection was decided alongside the firms chosen to conduct the survey. If possible and to maximize synergies, the team recommended using Kobo Toolbox to collect data during the phone surveys, leveraging existing functionalities to facilitate the work of the enumerators and data analysis down the line.

5 The survey was made available in the most common local languages pending confirmation from the firm in their ability to cover these languages.

		Question		Options
D01	*note*	I would like to first confirm some basic demographic information		
D02	*integer*	What is your age		
			...	[number]
D03	*single select*	What gender do you identify as?		
			0	Female
			1	Male
D04	*single select*	What is your current location?		
			1	Ajloun
			2	Amman
			3	Aqaba
			4	Balqa
			5	Irbid
			6	Jerash
			7	Karak
			8	Ma'an
			9	Madaba
			10	Mafraq
			11	Tafilah
			12	Zarqa
D05	*single select*	What type of settlement do you live in?		
			1	Camp
			2	Community
D06	*single select*	What is the highest level of formal education that you have attained?		
			1	No formal education
			2	Some primary education
			3	Completed primary education

		Question		Options
			4	Some secondary education
			5	Completed secondary education
			6	Education beyond secondary
			88	Don't know
			99	No response
D07	*single select*	What is your marital status?		
			1	Single/Never married
			2	Married
			3	Divorced
			4	Separated
			5	Widowed
			6	Living together/Cohabiting
			88	Don't know
			99	No response
A00	group	**ASSISTANCE (GENERAL)**		
A01	*note*	I would like to start by asking you about the humanitarian assistance you or your household may have received in the past.		
A02	*multi select*	In the last year, what assistance have you received from the World Food Programme, if any		
			0	none
			1	Vouchers (cash-based transfer)
			2	Unrestricted cash transfers
			3	Direct food distribution
			77	Other, specify
			88	Don't know
			99	No response

		Question		Options
A03	*multi select*	How do you most commonly pay for purchases when using assistance provided by the World Food Programme?		
			1	Direct purchases with a debit card
			2	Money withdrawn at ATM with debit card
			3	An iris scan
			4	Other forms of biometric authentication
			77	Other, specify
			88	Don't know
			99	No response
A04	*multi select*	How does the World Food Programme verify your identity when receiving assistance?		
			1	Biometrics - fingerprint
			2	Biometrics - Iris scan
			3	Government issued ID
			4	Ration cards
			5	Third party issue ID
			77	Other, specify
			88	Don't know
			99	No response
A05	*single select*	Overall, how satisfied are you with the support you have received from the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know

		Question		Options
			99	No response
A06	*single select*	Do you feel informed about the kind of assistance WFP provides?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
A07	*single select*	Do you think support from the World Food Programme is easy to access?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
A08	*single select*	How able are you to make suggestions or complaints to the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response

		Question		Options
TG00	***group***	**TECHNOLOGY USE (GENERAL)**		
T01	*note*	Before I ask you about the use of technology by the World Food Programme, I wanted to ask about your own use and familiarity with technology		
TG02	*multi select*	In the last week, have you used your cell phone to access the following? (read responses, check if used)		
			1	To transfer a payment
			2	To receive cash assistance
			3	Read the news
			4	WhatsApp
			5	Facebook
			6	Camera
			7	Phone calls
			8	Text messages
			9	Twitter
			10	Other social media
			88	Don't know
			99	No response
TG03	*single select*	Generally, how comfortable would you say you are using new technologies like Apps, mobile phone, the Internet...		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW00	***group***	**TECHNOLOGY USE (WFP)**		

		Question		Options
TW01	*note*	As you know, the World Food Programme relies on technologies for operations like cash transfer or to verify identities. I would like to ask you a series of general questions about how you perceive the use of technology by the World Food Programme. Remember, there are no correct or wrong answers.		
TW02	*multi select*	If you know them, can you specify which technologies used by the World Food Programme you have used or been involved with?		
			0	nothing
			1	Iris scan
			2	Hotline / WFP call centre
			3	e-Card/Mastercard
			4	Iris Validation Stations
			5	e-Card Distribution app
			6	Mobile survey
			77	Other, specify
			88	Don't know
			99	No response
	note	*In the following questions, when the term **'technology'** is used, it is referring to WFP's use of:*		
		*1. the **Iris scans** for commodity purchases in shops*		
		*2. the **iris validation stations** for validating your credentials in using the iris scan*		
		*3. the **e-cards/Mastercard's** provided to access cash assistance at ATMs and making e-card payments*		
		*4. the **e-card distribution app** used to register the e-card*		
		*5. the **WFP hotline** for assistance, information requests, complaints & feedback on WFP assistance*		
		*6. **mobile phone surveys** to collect information to improve WFP's assistance*		
TW03	*single select*	Generally, how easy has it been for you to use technology to receive or access assistance through the iris scan or cash transfers/e-cards from the World Food Programme?		

		Question		Options
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW05	*single select*	How much do you think the use of technology has improved the ability of the World Food Programme to meet your needs?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW06	*single select*	How much has the use of technology improved your ability to use assistance in whichever way you want?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW07	*single select*	How much do you think the use of technology has helped you save money when receiving assistance from the World Food Programme		

		Question		Options
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW08	*single select*	How much do you think the use of technology has helped you save time when receiving assistance from the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW09a	*single select*	How much do you think the use of technology has improved the ability of the World Food Programme to reach those who need it most?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW09b	*single select*	How much do you think the use of technology has improved the ability of the World Food Programme to reach marginalised groups?		

		Question		Options
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW10	*single select*	How much do you think technology has simplified processes like registration or identity verification?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW10	*single select*	How useful and effective are SMS notifications of assistance reloads and transfers?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response

		Question		Options
TW11	*single select*	How much have you been able to use technology provided by the World Food Programme for other purposes and do you feel that interacting with these technologies has improved other daily life skills?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW12	*multi select*	Please explain how		
			0	nothing
			1	ATMs
			2	Financial management/ planning
			3	Use of electronic cards
			77	Other, specify
			88	Don't know
			99	No response
TW13	*note*	Some issues can affect your ability to receive assistance as intended by the World Food Programme. How much of an issue have the following been in your own experience?		
TW14	*single select*	Crowding at identity verification posts		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time

		Question		Options
			88	Don't know
			99	No response
			999	Inapplicable
TW15	*single select*	Inability to access identity verification posts		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
			999	Inapplicable
TW16	*single select*	Inability to make it to identity verification posts within expected timeframes		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
			999	Inapplicable
TW17	*single select*	Lack of connectivity / systems failure at identity verification posts		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often

		Question		Options
			4	All of the time
			88	Don't know
			99	No response
TW18	*single select*	Failure to verify identity for unknown reasons		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
TW19	*single select*	Computer / machine doesn't work (systems failure) when trying to make purchase using assistance		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
TW20	*single select*	No electricity when trying to make purchase using assistance		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time

		Question		Options
			88	Don't know
			99	No response
TW21	*single select*	No internet when trying to make purchase using assistance		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
TW22	*single select*	Failure to verify identity for other reasons when trying to make purchases using assistance		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
TW23	*single select*	Vendor doesn't accept the payment method when trying to make purchase using assistance		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know

		Question		Options
			99	No response
TW26	*multi select*	What other challenges, if any, have you faced when using technology to access assistance from the World Food Programme?		
			0	Nothing
			1	Other Issues using e-cards at POS
			2	Pin code issues
			3	Non-inclusion in assistance
			4	Checking balance
			5	Difficulties using ATM / e-cards at ATMs
			6	ATM swallowed card
			7	e-card activation
			8	Damaged e-card/ need replacement/ e-card issues
			9	Issues using cards at ATM
			10	Shop keeps e-card
			11	Pending/long waiting transactions
			12	Reloading issues
			13	Insufficient funds
			14	Loading amount
			15	Missed distribution
			16	Wrong amount deduced at shops/ POS
			17	Double transaction
			18	Wallet connecting/enabling
			19	Lost/stolen e-card
			20	Validation issues
			21	Protection issues
			22	Other shop/vendor issues

		Question		Options
			23	Issues with cooperating partners (UNHCR, FAO etc.)
			24	Shop/vendor locations
			25	ATM locations
			26	Other issues using IRIS
			27	Other issues using e-cards
			28	No help from WFP staff
			77	Other, specify
			88	Don't know
			99	No response
TW27	*multi select*	What could the World Food Programme do to improve getting assistance to those who need it most?		
			0	nothing
			1	Improve/change voucher modality
			2	Improve/change cash modality
			3	Improve/change to OTHER modalities
			4	Increase coverage / inclusion
			5	Better targeting
			6	Reduce prices of contracted / partnered vendors & shops
			7	Increase shops/vendors/locations; in better locations
			8	Increase ATM spots; in better locations
			77	Other, specify
			88	Don't know
			99	No response
TW28	*multi select*	And considering technologies specifically, what could the World Food Programme do to improve its use of technology to provide assistance more effectively?		

		Question		Options
			0	nothing
			1	Mobile/e-wallet transfers
			2	Reduce issues using e-cards at shops/POS
			3	Reduce other e-card issues
			4	Better balance checking
			5	Reduce ATM difficulties
			6	Reducing transaction time
			7	Reduce reloading time/issues
			9	Increase assistance / reloading
			10	Assistance time
			11	Allow wallet connecting/enabling
			12	Reduce validation issues
			13	Reduce protection issues
			14	Reduce Other shop/vendor issues
			15	Reduce issues with cooperating partners (UNHCR, FAO etc.) / Greater coordination between partners
			16	Improve IRIS
			17	Improve e-cards
			18	More help from WFP staff
			19	Increase assistance value
			20	Improve/change voucher modality
			21	Improve/change cash modality
			22	Improve/change to OTHER modalities
			77	Other, specify
			88	Don't know

		Question		Options
			99	No response
TW	*multi select*	Which technology or technologies are you referring to?		
			0	nothing
			1	Iris scan
			2	Hotline / WFP call centre
			3	e-Card/Mastercard
			4	Iris Validation Stations
			5	e-Card Distribution app
			6	Mobile survey
			77	Other, specify
			88	Don't know
			99	No response
TW29	*multi select*	Which groups, if any, are at a disadvantage to access World Food Programme assistance because of the use of technology?		
			0	nothing
			1	Women/girls
			2	Elderly
			3	Persons with disabilities
			4	Persons with mental illness
			5	Children
			6	Ethnic/cultural minorities
			7	Refugees
			8	Migrants
			9	LGBTI
			10	People in poverty
			11	Digitally illiterate

		Question		Options
			77	Other, specify
			88	Don't know
			99	No response
TW	*multi select*	Which technology or technologies are you referring to?		
			0	nothing
			1	Iris scan
			2	Hotline / WFP call centre
			3	e-Card/Mastercard
			4	Iris Validation Stations
			5	e-Card Distribution app
			6	Mobile survey
			77	Other, specify
			88	Don't know
			99	No response
TW30	*single select*	How much would you say that the use of technology provided by the World Food Programme contributes to fair and equal results for women and men of diverse backgrounds?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
TW	*multi select*	Which technology or technologies are you referring to?		
			0	nothing

		Question		Options
			1	Iris scan
			2	Hotline / WFP call centre
			3	e-Card/Mastercard
			4	Iris Validation Stations
			5	e-Card Distribution app
			6	Mobile survey
			77	Other, specify
			88	Don't know
			99	No response
IN00	***group***	**INFORMATION**		
IN01	*single select*	In the last year, have you been contacted by the World Food Programme to provide information on food market-related trends		
			0	No
			1	Yes
			88	Don't know
			99	No response
IN02	*single select*	In the last year, have you been contacted by the World Food Programme to provide information on your access, use and satisfaction with assistance as part of monitoring efforts		
			0	No
			1	Yes
			88	Don't know
			99	No response
IN03	*single select*	In the last year, have you been contacted by the World Food Programme to provide information on other topics, or example through surveys like this one?		
			0	No
			1	Yes

		Question		Options
			88	Don't know
			99	No response
IN04	*single select*	How informed are you about how the World Food Programme uses the information you provided?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
IN05	*single select*	And how much do you think the information you provided helped improve assistance to those who need it most?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
IN06	*single select*	In the last year, have you ever contacted WFP through a feedback and complaint mechanism		
			0	No
			1	Yes
			88	Don't know
			99	No response
IN07	*multi select*	If yes, through which mechanism?		

		Question		Options
			1	Hotline
			2	In person
			3	Help desks
			77	Other, specify
			88	Don't know
			99	No response
IN08	*single select*	In your opinion, has the use of hotlines or helpdesks improved your ability to make suggestions or complaints to the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
IN09	*single select*	In your opinion, has the use of hotlines or helpdesks improved your ability to get information about assistance from the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
IN10	*single select*	In your opinion, has the use of hotlines or helpdesks improved how the World Food Programme considers your views in making decisions about the support you receive?		

		Question		Options
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
RP00	***group***	**RISK AND PROTECTION**		
RP01	*single select*	Thinking about information that the World Food Programme may have collected, have you been asked to provide information about yourself that you would rather not have given		
			0	Never
			1	Rarely
			2	Sometimes
			3	Often
			4	All of the time
			88	Don't know
			99	No response
RP02	*single select*	How comfortable are you about sharing personal information (including biometrics) with the World Food Programme		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response

		Question		Options
RP03	*single select*	More generally, how informed are you about the type and amount of personal information that the World Food Programme has about you?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
RP04	*single select*	How informed are you about how the World Food Programme protects your privacy and personal information		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
RP05	*single select*	How much are you able to discuss with the World Food Programme concerns or questions regarding your privacy and personal information		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response

		Question		Options
RP06	*single select*	In your opinion, how much has the use of technology by the World Food Programme created risks for your privacy and protection, if at all?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
RP06b	*multi select*	Which technology or technologies are you referring to?		
			0	nothing
			1	Iris scan
			2	Hotline / WFP call centre
			3	e-Card/Mastercard
			4	Iris Validation Stations
			5	e-Card Distribution app
			6	Mobile survey
			77	Other, specify
			88	Don't know
			99	No response
RP07	*multi select*	What (if any) are, in your view, the main risks related to the use of digital technologies by the World Food Programme to provide you with assistance?		
			0	none (no risk)
			1	Malfunctions/ systems failure / loss of benefits etc.
			2	Breach of personal information
			3	Personal security & confidentiality breaches

		Question		Options
			4	Hacking & other breaches
			5	Misuse of personal / biometric information
			6	No control over own information/data
			7	Undue modification of personal information/data
			77	Other, specify
			88	Don't know
			99	No response
CV00	***group***	**COVID**		
CV01	*note*	To conclude, I would like to ask you three question about the effects of the current epidemic of COVID-19		
CV02	*single select*	How much has COVID-19 affected your ability to receive assistance from the World Food Programme through the current technological modalities		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
CV03	*single select*	How much has the way you receive assistance changed because of COVID-19		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know

		Question		Options
			99	No response
CV04	*single select*	How has the use of technology by the World Food Programme contributed to your ability to continue to receive assistance during the epidemic?		
			0	Not at all
			1	Slightly
			2	Moderately
			3	Very
			4	Extremely
			88	Don't know
			99	No response
CV05	*single select*	Are there any other modalities through which you want to receive assistance?		
			0	No
			1	Yes
			88	Don't know
CV05b		If so, which one(s)?		
			0	nothing
				In-kind
				Paper commodity / value vouchers
				Electronic commodity / value vouchers
				Physical cash transfer
				Electronic cash transfer
				Mobile money
				Combination
			77	Other, specify
			88	Don't know
			99	No response

		Question		Options
		Thank the respondent for their cooperation and time and wish them a good day.		
		END		

Source: ADE/ Evaluation Team

FOCUS GROUPS WITH THE AFFECTED POPULATION

The format for the focus group with affected population followed the same overall dynamic as the key informant interviews, including the use of a semi-structured instrument and consent form prior to interview. All notes from the focus groups were recorded in a response matrix and all responses for an evaluation matrix question were analysed in combination at the end of the field phase to determine emergent themes and patterns across the responses. Focus groups lasted an average of 60 minutes.

The list of topics covered through focus groups in relation to the evaluation matrix is provided below. Specific questions were developed and targeted to specific groups as needed, for example women and marginalized groups. A version of the broad discussion guide for focus group discussion is available in the last section of this annex.

Dimension of analysis
1.3.1 Alignment between ICT applications and infrastructures and the environment
1.3.2 Extent to which ICT applications and infrastructures are used
1.5.1 Relationship between ICT applications and infrastructures and continued WFP operations during the COVID-19 pandemic
2.1.1 Targeting, coverage, and delivery of assistance to the most food insecure
2.1.2 Inclusion of marginalized groups
2.2.2 Extent to which ICT and digital data efforts at WFP contributed to GEWE
2.3.2 Perceived level of accountability and progress enabled by ICTs and digital data
2.4.1 Extent to which risks and opportunities for protection and security from the use of ICTs and digital data are considered in WFP operations

Gender	Adolescents	Adults	Elderly (+50)	Persons with disabilities	Indigenous people	Total # per gender
Bangladesh						
Woman	0	29	1	4	0	34
Man	0	34	8	7	0	49
Unspecified	8	0	0	0	0	8
Total # of participants	8	63	9	11	0	91
The Democratic Republic of the Congo						
Woman	16	19	16	9	6	66
Man	9	30	7	3	5	54
Total # of participants	25	49	23	12	11	120
Iraq						
Woman	7	8	0	1	0	16
Man	5	12	4	3	0	24

Total # of participants	12	20	4	4	0	40
Jordan						
Resulting from restrictions brought on by the COVID-19 pandemic, no focus group discussions were carried out. Instead, they were replaced by remote key informant interviews with target pre-identified groups composed of women, persons with disabilities and the elderly.						
Niger						
Gender	**Host population**		**Refugees**		**Total # per gender**	
Woman	24		26		50	
Man	40		30		70	
Total # of participants	64		56		120	
South Sudan						
Focus group discussions were not possible during the evaluation period due to government restrictions put in place in light of the COVID-19 situation in the country.						

ALIGNMENT / USE / EFFECTIVENESS

- Can you tell us about your experience with WFP's use of technology?
- In which way do you think technologies are benefiting you / WFP target populations?
- Do you feel WFP's use of technology has supported its food assistance objectives / has helped meet your needs?

INCLUSION

- And how much has technology helped WFP reach others in need of assistance, including minorities or women for example?
- Are some people /groups left out?
- Are women equally engaged?

ALIGNMENT INFRASTRUCTURE / ENVIRONMENT

- Can you tell us more about the assistance you receive through technology?
- How easy was it?
- Is it more time consuming?
- Have you experienced problems/issues?

COVID

- Over the last [6 months], the epidemic known as COVID-19 has created new challenges for organizations like WFP. Throughout this period, how has assistance from WFP changed for you, if at all?
- How much has technology helped or hindered assistance during covid-19? How / Why?

RISK / ACCOUNTABILITY

- Thinking about WFP's use of technology, how informed are you about what information WFP collects and how it uses it?
- Have you ever had any concerns about this?
- And if you had questions regarding WFP's use of technology and the information it has about you, do you know who to contact to raise questions / issues?
- What about feedback and/or complaint? How well are you able to share these? What is your preferred means to share such feedback and /or complaints?
- How responsive is WFP to your concerns or issues when using technologies?

CONCLUSION

- How else would you like to be able to use technology in relation to what WFP does, or more generally to meet your needs?
- What opportunities or challenges do you see for the use of technologies in response to your needs?
- Is it important?
- Is it useful?

Annex VII. Fieldwork Agenda

Case Study Country	Field Work Agenda													
Jordan	**Nov 2**	**Nov 9**	**Nov 16**	**Nov 23**	**Nov 30**	**Dec 1**	**Dec 7**	**Dec 14**	**Jan 4**	**Jan 11**	**Jan 18**	**Jan 25**	**[...]**	**Apr 12**
Kickoff Meeting														
(Phone) Survey														
Desk Review														
Internal Kis														
External Kis														
Focus Group Discussions														
CO Debrief														
Reporting														
Final Report														
Bangladesh	**Feb 1**	**Feb 8**	**Feb 15**	**Feb 22**	**Mar 1**	**Mar 8**	**Mar 15**	**Mar 22**	**Mar 29**	**Apr 5**	**Apr 12**	**Apr 19**	**[...]**	**June 14**
Kickoff Meeting														
Phone Survey														
Desk Review														
Internal KIs														
External Kis														
Focus Group Discussions														
CO Debrief														
Reporting														
Final Report														
South Sudan	**Mar 1**	**Mar 8**	**Mar 15**	**Mar 22**	**Mar 29**	**Apr 5**	**Apr 12**	**Apr 19**	**Apr 26**	**[...]**	**[...]**	**[...]**	**[...]**	**July 12**
Kickoff Meeting														

Field Monitor Survey															
Desk Review															
Internal KIs															
External Kis															
CP Survey															
CO Debrief															
Reporting															
Final Report															
Iraq	**Mar 1**	**Mar 8**	**Mar 15**	**Mar 22**	**Mar 29**	**Apr 5**	**Apr 12**	**Apr 19**	**Apr 26**	**May 3**	**[...]**	**[...]**	**[...]**	**July 12**	
Kickoff Meeting															
Phone Survey															
Desk Review															
Internal KIs															
External Kis															
Focus Group Discussions															
CO Debrief															
Reporting															
Final Report															
The Democratic Republic of the Congo	**Feb 1**	**Feb 8**	**Feb 15**	**Feb 22**	**[...]**	**Apr 26**	**May 3**	**[...]**	**May 31**	**Jun 7**	**[...]**	**[...]**	**Jul 12**	**Jul 19**	
Kickoff Meeting															
Phone Survey															
Desk Review															
Internal KIs															
External Kis															
Focus Group Discussions															
CO Debrief															

	Reporting														
	Final Report														
Niger		**Feb 8**	**Feb 15**	**Feb 22**	**Mar 1**	**[...]**	**Apr 19**	**Apr 26**	**[...]**	**May 17**	**May 24**	**May 31**	**[...]**	**Sep 20**	**Dec 6**
	Kickoff Meeting														
	Field Monitor Survey														
	Desk Review														
	Internal KIs														
	External Kis														
	Focus Group Discussions														
	CO Debrief														
	Reporting														
	Final Report														

Annex VIII. Comparative Learning Exercise

The comparative learning exercise (CLE) was conducted with the objective of understanding how other humanitarian organizations with similar technology landscapes to WFP are tackling challenges and constraints on technology and digital data in similar contexts and constrained environments. The comparative learning exercise was conducted over a three-month period and aimed at learning about other organizations' approaches, best practices, and missed opportunities. The evaluation team studied a mix of United Nations agencies and international non-governmental organizations, mainly UNHCR, UNICEF, the International Federation of Red Cross and Red Crescent Societies (IFRC), and Mercy Corps. Emphasis was placed on mapping these organizations' technology landscape, on analysing similarities and differences in technology uptake and development, and on the identification of practices that address similar challenges to those faced by WFP at the different levels of the organizations.

The comparative learning exercise engaged a total of four organizations, and although originally the evaluation team intended to carry out key informant interviews at both "global" and 'local" levels following the sequential approach of the strategic evaluation, this was only fully possible for one of the organizations, UNICEF. The evaluation team was unable to conduct global and local interviews at Mercy Corps due to a lack of response on the organization's part. Additionally, given the lack of overlap in the organization's geographic reach and convergence in the case study countries on matters of relevance to this evaluation, the team only engaged with IFRC stakeholders at a global level. Lastly, the team was unable to conduct local interviews with UNHCR stakeholders in case study countries, although it was able to speak with various stakeholders at the global level. Challenges in reaching all relevant stakeholder presented a series of limitations, including incomplete triangulation of approaches and processes detailed in organizational documents and lack of country- and operations-specific insight for IFRC, UNHCR and Mercy Corps. However, with the vast amount of public literature available regarding these organizations' approaches to the use of technology in constrained environments, the evaluation team was able to understand these organizations' broad approaches, challenges and patterns. It is important to note that given a more limited engagement with these organizations, some of the findings in the literature were not triangulated through virtual interviews with key representatives. In total 18 people were interviewed, including three members of the external advisory panel (EAP), three individuals from UNHCR, ten individuals from UNICEF and two individuals from IFRC.

Rather than producing evaluative findings, the comparative learning exercise honed in on learning from other organizations' approaches, including ways in which these institutions operate that resemble, or differ from, WFP. Key emerging themes from the exercise include:

Similarities (in practices used or barriers faced):

- Broadly, all organizations are leveraging technologies to streamline gathering, visualizing and making decisions based on programme data, with a heavy focus on information management systems. Separately, another focus of the organizations' technology use is to enhance the efficiency and effectiveness of cash-based transfers and other programmes, including solutions for beneficiary registration, verification and management of caseloads.
- Several organizations noted as barriers to effectiveness the fact that there was often an absence of streamlined processes to structure innovation - which often leads to ad hoc efforts in the use of innovation and technology - as well as decentralized organizational structures acting as barriers to knowledge management and standardization. This tends to be the case for larger United Nations agencies. Furthermore, these agencies also recognize data integration across systems as being a barrier, hinting at the need for more effective data governance structures that work well across decentralized organizations. The stakeholders interviewed and documents reviewed largely pointed to existing efforts to continue centralizing processes to produce innovation.

- A common theme across some of the organizations studied is the premium placed on inclusion, overcoming marginalization, ensuring that the impacts on people are carefully considered and weighed, and two-way communication (and participation) with regards to the use of technologies. This includes various guidance and policies that strive to ensure proper assessments for the inclusivity of, protection of and implications for people arising from the use of technologies, both prior to, and following the deployment of technologies. Various digital tools and technology-related processes were also developed across the organizations to enable more effective, efficient and accountable communication with populations served, with the aim of enhancing more meaningful participation and accountability to affected populations. UNICEF also invests in research into the potential risks and negative impacts of technology for children. This higher focus on accountability to served populations, inclusion and protection concerning technology use is likely related to the clearer protection mandates of organizations like UNICEF and UNHCR. Such people-centred approaches are also more clearly articulated in the high-level technology, innovation and ICT strategies and policies of organizations like UNICEF and UNHCR.
- Staffing and achieving enabling levels of knowledge management are key challenges for the organizations studied, including when it comes to ensuring that field-level staff are equipped with the right set of skills and tools to leverage innovation and technology effectively.
- There is general alignment on the principles that underpin personal data protection policies and guidance. Yet, it was not possible to assess a general level of compliance or ways in which such guidance are being operationalized in practice. Recent evaluations from UNICEF and UNHCR do note the existence of risks regarding data privacy and protection. Besides this general alignment, the United Nations agencies studied, including WFP, all have developed an inventory of their technology and innovation tools and have developed privacy impact assessments and tools to understand contextual elements with regards to data protection, a good practice recognized by "A Data Starter Kit (For Humanitarian Field Staff)" from the Electronic Cash Transfer Learning Action Network (2016). While all organizations' guidance is based on similar principles, the depth of the guidance with regards to specific data types - such as biometric data - or risks presented to personal data from the use of different technologies - including blockchain or drones - is not prominent in the WFP guidance portfolio.
- For UNICEF, like WFP, understanding actual levels of budgeted and actual expenditure on innovation was implausible given the lack of complete data on technology and innovation spending. For UNHCR, it was also difficult to evaluate and monitor the cost-effectiveness of solutions that had been previously implemented.

Difference (in approaches, barriers faced):

- Some of the organizations consulted have defined a specific interest in open-source technologies and, in the case of UNICEF, in promoting digital public goods. The evaluation team is not aware of WFP having an expressed priority for replicable and open solutions or in spearheading similar large-scale collaborative efforts in the humanitarian technology space. However, this may be due to these organizations' focus on more development-oriented work. Furthermore, some of these organizations' platforms are mostly focused on third-party use (i.e, RapidPro, U-Report).
- From the technology and digital data portfolio assessed, a large portion of the comparative learning exercise organization's portfolios are dedicated to research agendas to define their normative position regarding the use of technology for the organization. Three of the four organizations have in-depth guidance and practical tools applicable to the broad humanitarian sector for the use of technology in humanitarian settings.
- According to some of the people interviewed from two of the organizations, as well as members of the external advisory panel, WFP does not have a strong localization agenda, given that its approach to the use of technology has been mostly "top-down", with little involvement and engagement of the communities and population groups that interact with and use WFP technologies. UNHCR, from the organizations studied, has in its documentary evidence the most explicit focus on ensuring that refugees and host communities have a stake in the design and implementation of the humanitarian response, including implicitly in its technological choices. Yet, it is also evident that for the organizations studied, the process to engage communities was still ongoing.
- From the organizations studied, it was clear that their strategic use of technology was rooted less on efficiency gains and organizational business capabilities.

Perceptions about WFP use of technology

- Across the comparative learning exercise, it was clear that organizations see WFP as a pioneer in the field, having rolled out technologies prior to most humanitarian organizations. Stakeholders perceive WFP as having sufficient funding and capacities, as well as more private sector partnerships, to enable its development and implementation of technologies. This positions WFP as an organization that can quickly and modularly deploy technologies for emergencies and that can rapidly scale up depending on local needs. A United Nations agency stakeholder described WFP as an "accordion" that can quickly mobilize a lot of resources to deploy technologies. There is consensus from the organizations interviewed that WFP has greatly invested and achieved standardization in technology deployments, allowing it to scale rapidly.
- Several of the stakeholders consulted note that WFP was an organization willing to take risk to innovate, continuously investing in finding ways to leverage technology in constrained environments. While for some this risk was not seen from a positive point of view, they did acknowledge that their organizations started from a more risk adverse space.
- In line with the above, there is also consensus that WFP is leveraging technology in a great extent to enable cash-based transfers, which does meet the preference of many people in need of humanitarian assistance.

TECHNOLOGY	
Characterization of organization's technology landscape	UNICEF The use of technology in UNICEF spans across its programmes around the world to address children's health, nutrition, education, protection, access to water, sanitation and hygiene, and inclusion needs. Overall, the four areas of the organization's interventions regarding technology lay in digital innovations, physical product innovations, innovative financing and programme innovations. Besides the specific solutions detailed below, UNICEF is also focused on promoting digital public goods[6] through the Digital Public Goods Alliance, which is a "multi-stakeholder initiative with a mission to accelerate the attainment of the sustainable development goals in low- and middle-income countries by facilitating the discovery, development, use of, and investment in digital public goods." The Alliance is incubated by The Government of Norway and UNICEF.[7] Per the key informants consulted, UNICEF is driving its whole workforce onto the operationalization of digital public goods and shifting from a portfolio mostly focused on IT architecture, to overall enterprise architecture. Additionally, an important priority of UNICEF use of technology is the use of open-source software. UNICEF positions its use of technology as ICT for development (ICT4D). Some of the technologies used by the organization include: • School Mapping (digital tool): a tool that uses high-resolution satellite imagery and deep learning techniques to generate and visualize maps of schools in the world, to identify gaps and information needs regarding connectivity • Primero (open-source case management software): an application for the collection, storage and sharing of data, including incident monitoring and family reunification services (available in 30+ countries)

6 Defined by the UN Secretary-General's Roadmap for Digital Cooperation as "open-source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices, do no harm, and help attain the SDGs."

7 Digital Public Goods Alliance. 2021. Who We Are.

- RapidPro (opensource platform of applications): a real-time information platform used to gather accurate and timely data and to design, pilot and scale mobile outreach services. It is also used for programme management and monitoring
- mHero (mobile phone-based communication system): a two-way communication, planning and management tool to connect health workers with ministries of health for the exchange of health information
- District Health Information Software (DHIS2) (open-source health information management software): software that helps health professionals monitor patient status, improve disease surveillance and pinpoint outbreaks. It is being used in 100 countries.
- U-Report (mobile application): a social messaging and data collection tool that enables the gathering of opinions and information from respondents on polls, to report issues and text in opinions and ideas
- Internet of Good Things (IoGT): a mobile platform and communication tool for low-end devices used to capture feedback and best practices through polls and surveys
- Yumnn (information management system): a system built to contain and secure the data of the 9 million beneficiaries of UNICEF Yemen. It integrates several technology solutions – including real-time monitoring tools and a mobile application for grievance collection in offline areas[8]
- Other uses of technology include data for real-time monitoring, working with government partners to develop information systems to support real-time decision making in emergencies and the use of drone technologies and drone-based services as a way to improve its work in global health and community resilience (for example, commercial vaccine deliveries by drone in remote settings).

It is important to note that UNICEF has launched an Innovation Inventory Platform (INVENT), "a global registry of technology for development (T4D) and innovation interventions supported by UNICEF and spearheaded by T4D". Yet this inventory is not public. The report "Accelerating Results for Children with Technology and Digital Innovation" notes that to date, more than 1,400 T4D and innovation initiatives have been included in the inventory. It also notes that "a third of all initiatives are currently at proof of concept (33 percent) and scaling up (33 percent) stages".[9]

UNHCR

The UNHCR goal, as outlined in its Data Transformation Strategy (2020-2025)[10], is to become a leader on data and information related to refugees and other affected populations and to leverage such information to fulfil its mandate of protection and therefore, develop solutions for the people it serves.

Technology and innovation are used to help enhance efficiencies and effectiveness of assistance operations. The Global Distribution Tool (GDT), biometrics, beneficiary data management systems and other digital systems are utilized to ensure efficient and accurate registration, authentication, data collection, data storage, data management, monitoring and assistance delivery to beneficiaries. Technology's role in registration and identity management is crucial. Underlying this are the organization's main beneficiary data systems and tools, namely:

8 UNICEF. 2020. Accelerating Results for Children with Technology and Digital Innovation.
9 Ibid.
10 UNHCR. 2019. Data Transformation Strategy (2020-2025).

- Population Registration and Identity Management Eco-System (PRIMES): this encompasses all UNHCR registration and identity management digital solutions such as ProGres, BIMS, the GDT, the Rapid Application (RApp), IrisGuard and RAIS
- Profile Global Registration System (ProGres) version: this is the UNHCR corporate registration and case management system
- Biometrics Identity Management System (BIMS): this is UNHCR's main biometric identity management system and it contributes to biometric registration, identification and verification activities which underly the organization's assistance operations
- Rapid Application (RApp): this is an application that collects household or individual level data, which can then be synchronized with ProGres, BIMS and other case management tools
- The Global Distribution Tool (GDT): this is a digital system that helps the verification and identification of beneficiaries for assistance using biometrics
- Digital tools are also used for data collection, such as ODK-based systems such as KOBO toolbox.

Technologies have also been used to enhance the reach and efficiency of cash-based interventions, such as the use of digital cash transfers during COVID-19 in various contexts.

Mercy Corps

Mercy Corps work is organized across 16 different focus areas of interventions that range from cash and voucher assistance, food security and nutrition, to emergency response.[11] For many years, the use of humanitarian technology has been present in all focus areas taking on different roles at different stages of the project and programme cycle, thereby complementing traditional (and analogue) tools used in humanitarian interventions. For example, the use of technology for monitoring and creating early warning systems has been key for its climate and environment adaptation interventions.[12] Leveraging mobile technologies, Mercy Corps has been able to provide better financial services to farmers and implement e-transfer programmes as part of their cash assistance, too.[13] More recently, however, Mercy Corps has taken a more strategic approach to humanitarian technology with the aim of increasing scale, efficiency and programme quality of its work.[14] In cooperation with the Cisco Fund, Mercy Corps has created a specific focus area dedicated to technology anchored in the following pillars of work:[15,16]

- Communication security and data protection and privacy: exploring potential security gaps in the organization's communication and data protection models, tools and policies
- Data-driven decision making and analytics: integrating diverse data sources into programme management and crisis analytics too in order to foster evidence-based decision-making
- Beneficiary identity and information management: improving beneficiary registration and information management systems by complementing processes with relevant technologies

11 Mercy Corps. 2021. What we do.
12 Mercy Corps. 2020. Climate and Disaster Resilience: Mercy Corps' Approach.
13 Mercy Corps. 2021. AgriFin.
14 Mercy Corps. 2021. Technology. What we do.
15 Mercy Corps. 2019. Technology For Impact: Annual Impact Report.
16 Mercy Corps. 2020. The power of partnerships: Cisco and Mercy Corps' unique way of working.

- Digital communities: improving the access to actionable and reliable information to communities to enable better engagement
- Field technology testing programme: funding trials and pilots to foster innovative solutions for Mercy Corps interventions
- Solution dissemination and replication: building awareness about a technological solution and enabling exchange of knowledge with other actors in the humanitarian sector
- Field networking infrastructure: improving and deploying new connectivity hardware across field offices and field locations.

Furthermore, as a result of this partnership, Mercy Corps has grown its "Technology for Development" team that works as a central resource for the Mercy Corps global organization, supporting teams with a wide range of expertise and tech savvy. This team is also thought to be an innovation hub and support the digitalization process of remote offices and teams.

As part of this strategic reorientation in their use of technology, Mercy Corps has implemented different digital and data-driven tools, among those worth noticing are:[17,18]

- Simprints: a biometrics tool for beneficiary verification and identification (face and fingerprints recognition). The technology works with encrypted data and is linked to other platforms like the CommCare app
- CommCare mobile case management platform: an open-source platform used to build Android-based mobile applications for low-resource settings. The mobile applications can be used as case management tool for tracking beneficiaries through a lifecycle of services, in addition to streamlining data collection
- Open APIture: a platform/app that allows setting the services of different vendors under the same layer
- 3D-Printing solutions: for prosthetics and other types of practical tools - virtual reality: for guided meditation as psychological support
- Cryptocurrency: Mercy Corps is a founder member of the Libra Association (now renamed to the Diem Association), which tries to unite different actors to develop the currency Libra, a stable, global and open-source cryptocurrency directed to unbanked populations
- Drone imagery to monitor locust Infestation in Kenya.

It is important to notice that Mercy Corps sees digital technology as both a channel of assistance and aid in itself. Mercy Corps argues that in an era of digitalization, access to digital technologies and especially the internet is part of treating beneficiaries with dignity and ensuring their human rights.[19]

IFRC

- The IFRC approach to technology use in constrained environments is mostly centred on the provision of guidance and resources, including practical tools, rather than a focus on specific solutions and applications given the organization's decentralized structure,. Technology is one of the core focus areas for IFRC (as identified by the Solferino Academy, a branch of the organization focused on enabling more

17 Mercy Corps. 2019. Technology For Impact: Annual Impact Report.
18 Mercy Corps. 2019. The Libra opportunity for smallholder farmers.
19 Mercy Corps. 2021. Connectivity Research.

	innovative, agile and future national societies) according to their Strategy S2030.[20] IFRC sees digital transformation as a pivotal prerequisite to "harness the collective intelligence of the network and democratize access to information".[21] Their recognition of the potential of emerging technologies and information sources also point out the emerging risks that IFRC may face, including risks regarding "digital ethics, data protection, information security, data access and rights, digital poverty, digital isolation, cyberwarfare, inherent biases in technological tools and the reality of the digital divide". Per a key informant from the organization, IFRC has prioritized its efforts regarding technology in developing tools that put the opportunity and ownership of solutions at the hands of national societies and volunteers. • The guidance and framework documents published by IFRC include the Data Playbook Toolkit, a prototype of social learning to improve digital literacy. It is described by IFRC as a "recipe book or exercise book with examples, best practices, how to's, session plans, training materials, matrices, scenarios, and resources." [22] The toolkit is designed for members of the humanitarian sector with the goal of localizing humanitarian response while supporting data literacy. • IFRC has also published the "Handbook on Data Protection in Humanitarian Action" (2020), which is a compendium of guidelines, procedures and best practices for data protection in the humanitarian setting. • Another key document published by IFRC is the "Cash in Emergencies Toolkit" (2017), which aims to "make cash transfer programming tools, practical guidance, minimum standards and good practice easily accessible to field staff and volunteers". It includes guidance on rapid market assessments, service providers, feasibility, modality and mechanisms selection amongst others. While there is no specific technology focus in the document, it highlights some key processes where technology choice is affected or affects the delivery of cash in emergencies. Besides this guidance, there is evidence of national societies using forecast-based financing to facilitate anticipatory action in different locations with a high likelihood of serious shocks and leveraging cash based transfers for their programming.[23] IFRC prioritizes the use of open-source technologies.
Barriers and enablers to efficiency and effectiveness gains from the use of technology	UNICEF Enablers: • Transforming the ICT Division into an external-facing and field-focused function • Co-development of technology with national counterparts, seeking to build on and align with existing national systems rather than seeking to disrupt[24] • Ability to form strong partnerships with country actors[25]

20 Asian Development Bank. 2018. Strategy S2030.
21 IFRC Solferino Academy. 2021. Transformation 6: Undergoing a Digital Transformation.
22 Global Disaster Preparedness Center. 2020. Data Playbook (Beta).
23 OCHA. 2021. From Digital Promise to Frontline Practice: New and Emerging Technologies in Humanitarian Action.
24 UNICEF. 2020. Accelerating Results for Children with Technology and Digital Innovation.
25 UNICEF. 2019. Evaluation of Innovation in UNICEF work.

	• Arrival of cloud computing has removed the need to purely have IT engineers in the field. Instead, UNICEF has invested in shifting IT mainly from a functional technology role, to a more holistic and analytical role Barriers:[26] • Some risk aversion to innovation and acceptance of failure • Different understandings of what innovation entails across the organization (digital innovation versus product innovation) • Decentralized organization structure has hindered knowledge management and innovation • Availability of funds to see through a project over its lifecycle not always in place • Ad hoc efforts to innovation, not benefitting from a "portfolio management approach to innovation".
	UNHCR Enablers: • Investments in data management, governance and information systems • Investment and strengthening capacity in data and information management, including staff capacity • Using biometric and automated beneficiary data systems (for registration and authentication) strengthens the accuracy and efficiency of operations by enhancing the speed and reducing the costs of identification and verification/authentication of those most vulnerable while providing them with assistance more expeditiously and accurately. Such systems also save time for staff to manage assistance distribution and delivery and reduce duplication issues, the potential for fraud and other mistakes/errors. Barriers: • Siloed data systems. Data is collected and stored in silos with limited integration across systems. UNHCR is thus data rich but does not fully exploit this data by integrating the different types of data and making deeper sense out of it for enhanced decision making • Lack of standardization of data. Data shared with or held by UNHCR are not always standardized making it difficult to aggregate information for deeper analyses for enhanced decision making • Decentralization of data and information management. UNHCR recognizes that it does not have a data governance structure or policy that can adequately guide staff and partners in ensuring coherence across its decentralized landscape. The consequences are occasional overlapping or duplicating efforts, inefficient and poor data management practices, and lack of systematic cross-learning or a standard set of tools/practices across the decentralized landscape. As a result, enforcement of data management guidelines can be difficult • No central system exists to store and communicate data for monitoring and assessment purposes • Data are inconsistent and of variable quality • There is room for improvement in terms of the efficiency of processes involving data collection, storage and sharing at the operational level (for example, automation of such processes) • There is room for improvement in harnessing data products to inform decision making • Internal capacities and information management capacities need to be strengthened to achieve the organization's data strategy goals • Connectivity and other ICT infrastructure related issues.
	Mercy Corps

26 Ibid.

	Enablers: [27,28,29] • Investing in connectivity infrastructure • Ability to build strong partnerships and networks with key stakeholders of the technology landscape • Meeting the demand for data, especially when working with underrepresented communities • Fostering internal innovation by investment in pilot and trial projects • Careful mapping of technology and infrastructural landscape at the intervention location • Creating systems and/or platforms to integrate data sets from a variety of sources • Training local staff on IT systems, especially in disaster-prone areas where the possibility of mobilizing external IT experts may be limited • Implementing digitized and automated cash and voucher assistance to streamline targeting and enrolment, delivering transfers at scale, or securely sharing data with peers • Automation of recordkeeping to expedite payments and participating shopkeepers in cash and voucher assistance programmes. Barriers: • Connectivity and infrastructural issues, including the monopoly of government over internet supply • Insufficient mapping of the technology and infrastructural landscape at the intervention location • Lack of interoperability between systems and platforms of implemented technologies • Reliance on private sector tools not originally developed to meet the specific and complex challenges of constrained environments.
	IFRC Enablers: • Stakeholders perceive IFRC to work extensively on the rigour of its strategies and cohesiveness of its technology and data choices.
Alignment and gaps between organization's ICT applications and infrastructures and sector-wide solutions	UNICEF • Broad perception that both WFP and UNICEF share similar tools, although UNICEF is more focused on implementing digital public goods • Stakeholders perceive that WFP does not focus as much on exploring the synergies and focusing on capacity building activities with government counterparts to the same extent as UNICEF • UNICEF is a partner and data provider for WFP in the field, per the country and regional staff consulted • The UNICEF portfolio of digital technologies is broadly aligned with sector-wide applications of technology in the humanitarian sector, including for disaster response, to better understand the risk to communities and to enable data collection and analysis for different programmes. UNICEF also invests in research and understanding the risks and potential harms to children from the use of digital technologies.
	UNHCR

27 Mercy Corps. 2017. Annual Impact Report. Technology for Impact.
28 Ibid.
29 Ibid.

- UNHCR identity and case management systems are increasingly being aligned (although there is still ample room for improvement) with partners' systems through the development of interoperability solutions between PRIMES and the WFP SCOPE system (and other systems like PRIMERO). There are also memorandums of understanding (MoU)s for data sharing and application programming interfaces to link PRIMES' digital tool to partners' systems (such as the linkages across SCOPE, Building Blocks and ProGres and BIMs). The Global Distribution Tool (GDT) is also jointly used for food distribution for refugees with WFP through interfacing with the WFP SCOPE system.

Mercy Corps

- Digital tools implemented by Mercy Corps for cash and voucher assistance widely resemble the tools implemented by WFP. The current focus of Mercy Corps particularly lies on using tools to automate processes that enable streamlining targeting and enrolment of beneficiaries like those aimed by the SCOPE system[30]
- Mercy Corps has an innovation-driven and collaborative approach to the use of humanitarian technology. This approach is shaped by the ongoing piloting of new technologies, leveraging current developments by other actors in the sector and advocating towards collaborations on common innovative solutions. The last two aspects have particularly led to the alignment of the organization's new technologies and digital tools (for example Distributed Ledger Technology (DLT)) to emerging sector-wide standards[31]
- However, Mercy Corps has reported failed experiences working with WFP on data-sharing partnerships due to gaps in compliance with national and international data sharing regulation, lack of governance systems in place for this type of partnership, and concerns about data protection from both sides, implying significant differences in the way both institutions process sensitive data[32]
- It is also worth noticing that Mercy Corps reports creating/using systems for biometric identification of beneficiaries based on sector-wide standards. This has allowed it, for instance, to have systems that talk to the systems of UNHRC, enabling interoperability within the sector.[33]

IFRC

- Work between WFP and IFRC is limited and at the moment, there are no shared technologies or resources between the two organizations
- However, given the IFRC focus on practical guidance and overall work on the operationalization of data protection principles, the organization itself has scoped and built its approach on existing guidelines, procedures and practices in consultation and partnership with humanitarian organizations, data protection authorities, non-governmental organizations and academia, amongst others.

30 Mercy Corps. 2019. Annual Impact Report. Technology for Impact.
31 Hiveoline and Mercy Corps. 2020. The Next Generation Humanitarian Distributed Platform.
32 Mercy Corps. 2018. Annual Impact Report. Technology for Impact.
33 Mercy Corps. 2018. How can technology transform the refugee crisis?.

PEOPLE	
Targeting, coverage and delivery of assistance to the most vulnerable, including inclusion of marginalized groups	UNICEF • Given the UNICEF mandate and areas of work, an important area of its innovation and technology portfolio is investing in research to understand and reduce the risk of digital technologies to children. Through initiatives such as the UNICEF Office of Research – Innocenti, the organization coordinates and facilitates research on children's use of digital technologies, including on digital learning, digital civic engagement, and the impact of artificial intelligence (AI) on children and their rights.[34] These efforts include leading research papers, holding workshops, and drafting policy guidance and tools to operationalize policies on these topics • Stakeholders consulted did not detail the extent to which the organization's own use of technology impacts or affects targeting, coverage or delivery. However, secondary evidence and reports note, amongst other details, that: ○ "In October 2018, more than 37 million children received measles vaccination during a 12-day supplementary immunization campaign, thanks in part to the use of real-time monitoring powered by RapidPro, according to government reports."[35]
	UNHCR • The use of technology for targeting, coverage and delivery has improved service delivery for UNHCR beneficiaries. Digital systems can enable efficiency gains for beneficiaries in terms of time saved and reduction of errors, including ensuring assistance gets to the right people more expeditiously • Digital technologies are also recognized as leading to better information management (monitoring), which can also lead to better decision making, which in turn can indirectly benefit people served • UNHCR Innovation's Digital Access, Inclusion and Participation Programme "aims to ensure that refugees and the communities that host them have the right, and the choice, to be included in a connected society, and can have their voices heard in the design and implementation of humanitarian response."[36] In line with the purpose of the programme, UNHCR has launched the "Connectivity for Refugees Initiative", which aims to ensure access to digital channels and connectivity. It has also launched "Communicating with Communities" (CwC), which aims to use digital channels to improve participation of served populations in UNHCR programming. These initiatives have the specific aim of inclusion for marginalized groups in UNHCR programming. Such examples of people-centred innovation and technological initiatives are part of the UNHCR Strategy on Digital Identity and Inclusion and its Data Transformation Strategy ,which place a high emphasis on the principle of being people-centred.
	Mercy Corps • Since the start of its Technology for Impact programme funded by the Cisco Fund in 2017, Mercy Corps reports reaching over 7 million people, through 52 technology-driven programmes and in 39 countries.[37] One of the most important achievements of this programme has been the creation of 67 community WiFi hubs, which has enabled access to the internet to 670,000 users. Additionally, a recent study conducted by Mercy Corps and Harvard Humanitarian Initiative revealed that increased access to the internet in refugee camps is

34 UNICEF Office of Global Insight and Policy. 2020. Tools to Operationalize the UNICEF Policy Guidance on AI for children.; UNICEF Office of Research – Innocenti. 2020. Encryption, Privacy and Children's Right to Protection from Harm.; UNICEF. AI For Children – Exploring how to embed child rights in the governing polices of artificial intelligence.

35 IFRC. 2018. Minimum Standards for Protection, Gender and Inclusion in Emergencies.

36 UNHCR. 2021. Digital Access, Inclusion and Participation Programme.

37 Mercy Corps. 2019. Annual Impact Report.

	correlated to the well-being of people on the move as it enables access to relevant information and exchanges with community members thereby decreasing anxiety and depression[38] • The use of technology for cash and voucher assistance has allowed Mercy Corps to digitize and automate cash and voucher assistance (CVA) programming, streamlining targeting, enrolment, and delivery of assistance in different countries around the world. The automation of cash and voucher assistance programming has allowed Mercy Corps to increase the coverage of its assistance, reaching over 100,000 beneficiaries in Colombia. The same approach in now being replicated in Gaza, Nepal and Syria • Mercy Corps has also evaluated the impact of e-transfers on the assistance provided specifically to women as it is thought to: 1) create a more accessible and sustainable cash modality system; 2) increase Mercy Corps' knowledge and understanding of its potential for future programmes; and 3) harness the use of technological components for development. However, the evaluation did not deem there to be significant results on the extent to which e-transfers affects targeting, coverage, and delivery of assistance to women.[39]
	IFRC • Stakeholders consulted did not provide applied examples of ways in which technology aids IFRC targeting and coverage of vulnerable populations. However, the "minimum standards for protection, gender and inclusion in emergencies" guidance document for IFRC operations underpins the need to understand the constraints or barriers faced by persons in accessing the delivery mechanisms of assistance, including mobile phone technologies. Guidance emphasizes the need for gender and diversity analysis when selecting or prioritizing the use of cash-based initiatives.[40]

Effectiveness of ICT and digital data use for accountability to affected populations, protection and security	**UNICEF**
	• Digital technologies are widely used by UNICEF to gather feedback from the people UNICEF serves, allowing it to strengthen its accountability to beneficiaries. This includes two of the core technologies used, RapidPro and U-Report, as well as additional platforms such as DHIS2, which collect feedback for programme management and improvement:
	  ○ U-Report allows for two-way communication and allows for real-time beneficiary feedback. It also has allowed for citizen feedback for programmes at national and local levels in West and Central Africa
	  ○ Rapid Pro for example, has been used in Zimbabwe to enable communities to report changes in WASH infrastructure, allowing the government to improve response times for corrective measures.[41] According to UNICEF, "As of December 2019, 1.8 million children have been reached via community real-time feedback on WASH service functionality and delivery through the use of mobile open-source technology"
	  ○ In Yemen, RapidPro has enabled direct communication between UNICEF and beneficiaries, allowing UNICEF to provide immediate feedback to beneficiaries who submit a grievance.
	• Per a 2019 Evaluation of UNICEF Innovation, the organization has recognized the need to pay more attention to issues of ownership, including increasing awareness of processes, resources and time required for planning and implementation of innovations with programme country partners.

38 Mercy Corps. 2020. Connecting People on the Move: The Humanitarian's Duty of Care.
39 Mercy Corps. 2018. Mobile Wallet Pilot Report – Jordan (Increased Accessibility & Reduced Visibility).
40 IFRC. 2018. Minimum Standards for protection, gender and inclusion in emergencies.
41 Digital UNICEF. 2020. Accelerating results for children with technology and digital innovation.

	UNHCR • The UNHCR Operational Guidance on Accountability to Affected People[42] outlines conditions to be complied with in practice, emphasizing the use of a range of accountability to affected population mechanisms in complement to each other (technology and non-technology based to ensure appropriate mechanisms for appropriate contexts) such as hotlines, SMS, radio, TV, social media, but also face-to-face accountability to affected population mechanisms. In fact, the guidance notes that "other means of communication with people of concern cannot replace face-to-face dialogue " • Taking into account served populations' preferences is also highly emphasized in UNHCR Data Transformation Strategy (2020-2025), Policy on Age, Gender and Diversity (2018) and Operational Guidance on Accountability to Affected Populations (2020), with the recognition that digital tools may risk exacerbating the digital divide and lead to the marginalization of certain groups. Guidelines to operationalize UNHCR policies require the scoping of affected populations' preferences for engagement, participation and feedback mechanisms • Emphasis is placed on proper engagement and participation and reporting on how decision-making and programming takes into account served populations' inputs, views, and feedback (Operational Guidance on Accountability to Affected Population 2020). The degree to which this is achieved in practice is unclear. However, it seems that UNHCR faces the same issue as WFP where its accountability to affected population mechanisms seem to mainly focus on notification purposes and fixing issues rather than input in decision making[43] • The UNHCR Innovation service has a separate thematic of work/unit focusing specifically on accountability to affected population ("Communication with Communities" (CwC)) as part of its Strategy on Digital Identity and Inclusion • According to several reports, UNHCR is aware that some of the populations it serves often have little real choice on whether to register their personal identifiable information (including biometrics) or to consent to share their data given that it may be believed it is a condition to receive UNHCR assistance.[44] There are calls for UNHCR to better inform served populations about issues surrounding data protection, privacy and security and how their data will be used and for what purpose and to allow them to withdraw consent at any stage. This would ensure greater and more meaningful accountability to affected populations as well as greater due diligence in terms of protection and security by getting truly informed consent through full disclosure of risks involved.
	Mercy Corps • Digital technologies are a relevant tool for ensuring accountability to the affected populations Mercy Corps assists. Besides several analogue channels for community feedback, Mercy Corps offers beneficiaries the possibility to provide feedback over anonymous online forms, via their phones and by email. Once feedback has been provided, Mercy Corps staff make use of automated feedback forms to redirect the information to the right areas within the organization

42 UNHCR. 2020. Operational Guidance On Accountability to Affected People (AAP).

43 Camealeon & CaLP. 2019. Research Report on AAP in the World Food Programme's multi-purpose cash programme.; IOM, UNHCR & UNICEF. 2019. Synthesis of Rohingya Response Evaluations of IOM, UNICEF and UNHCR.

44 Report of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance 2020 (A/75/50289).; UNHCR. 2016. Privacy Impact Assessment of UNHCR Cash Based Interventions.; HRW. 2021. UN Shared Rohingya Data without Informed Consent.

	• Mercy Corps introduced a default set of requirements and guidelines through its communityaAccountabilityrReporting mechanisms (CARM), intended to safeguard accountability to affected populations and receive, process and address feedback received through all channels. The guidelines are applicable to Mercy Corps Global/Europe/Netherlands, all subsidiaries, affiliate organizations, country representations and partners. CARM comprises specifications about people responsible for managing CARM information, budgets, and standard procedures for the collection of feedback and response, channels of feedback, and documentation[45] • According to Mercy Corps, the introduction of automated CARM in Gaza and Haiti has reduced staff efforts by two hours a day and allowed over 38,000 people to receive vital information during the pandemic. [46]
	IFRC • While guidance on the use of technologies to promote accountability to affected populations is available, there is no evidence of its effectiveness. Such guidance includes tools to use when selecting communication channels for national society projects[47] and "starter kits" for the selection and implementation of feedback mechanisms,[48] amongst other practical tools for planning interventions that may involve technology.
Usability and efficacy of risk and security management protocols related to ICTs	**UNHCR** • UNHCR places a high priority on its data protection approach, which is reflected in its core Data Protection Policy (2015), Data Protection Guidance (2018), the 2019 Data Transformation Strategy and staffing of data protection officers. These strive to achieve the highest international data protection and cyber security standards including the concept of privacy by design and by default. They also include the principle of being "people-centred" ○ These standards, according to stakeholders consulted, translate into rigorous due diligence processes for reviewing data sharing with partner organizations and can sometimes lead to disagreements (for instance with WFP) or non sharing of data with partners • Nevertheless, despite such high standards in theory, in practice there have been reports of non-adherence or unsafe practices, such as sharing data through unsecure mediums (emails etc.).[49] Actual practice of data protection, privacy and security in the field can thus be strengthened to be in line with its strong commitment and robust policy framework on data protection.
State and adequacy of staff capacities for effective and safe use of ICTs	**UNICEF** • Staff awareness of the structures (i.e., institutional architecture) that promote and support innovation across levels of the organization was found to be relatively low, including these structures' ability to support innovative ideas. The 2019 UNICEF Evaluation of Innovation in UNICEF work notes that "far greater investment" is needed in this remit • The Evaluation of Innovation in UNICEF work noted in 2019 that "it was not possible to fully assess whether UNICEF's staffing arrangements provide sufficient capacity for innovations". However, it did highlight the lack of a centralized staff listing or talent pool to enable the identification of staff involved and a lack in its in capacity to support innovation. The evaluation also noted important gaps in access to specialist skills and expertise between country offices and headquarters, some absence of clarity on the role of innovation focal

45 Mercy Corps. 2020. Community Accountability Reporting Mechanism (CARM) Policy.
46 Mercy Corps. 2019. Annual Impact Report. Technology for Impact.
47 IFRC. 2019. Community Engagement and Accountability Toolkit.
48 IFRC. 2019. Tool 15: Feedback Starter Kit.
49 Ladek, S., Abdelkhaliq, Z., Cameron, S., Green, S. & Procter, C. 2019. Evaluation of UNHCR's data use and information management approaches. UNHCR.

	points, and the lack of a balance between specialized technology skills, non-technology related innovation, programme experience and expertise in managing innovation
	UNHCR • A recent evaluation has recognized the need for greater investments and development in UNHCR capacities regarding ICT, technologies and digital data[50] • UNHCR is acting upon a recognized need for stronger digital and technological capacities by developing new units (such as data science teams), engaging in recruitments to bridge the gaps in capacities and pursuing strategies to strengthen data literacy and capacities of staff at all levels of the organization.[51] The organization has also created and distributed guidance materials and is offering services to train and help staff with various digital tools.
	Mercy Corps • Mercy Corps puts great emphasis on in-house capacity building related to the use of ICTs and IT infrastructure. The organization argues that the reliance on external IT or ICT experts creates a liability since the nature of humanitarian work and the volatility of intervention locations may restrict the possibly of external staff arriving to provide technical support or consultancy in person. Therefore, the Technology Development team constantly carries out a series of trainings to ensure Mercy Corps is providing staff and non-staff participants with the right tools and information to implement, use and leverage digital technologies and data in their activities, also to foster internal innovation and the responsible use of data. According to the Technology for Impact Annual Report 2018, more than 2,200 team members learned to improve digital security in their work after completing security training and 40 new proposals that leveraged innovative digital solutions received millions of dollars worth of funding between 2017 and 2018. [52]
	IFRC • Given its decentralized and federated structures, one of the main challenges to IFRC use of technology is disparities and the absence of capacities. One of the main areas of work noted in the Strategy S2030 is the need for a "substantial upgrading of current capacity, particularly for those national societies who have only basic technological infrastructure" (Strategy S2030, 2018). This was confirmed in the key informant interviews, where stakeholders noted that most IFRC national societies around the world are not at a "data ready level".
State and effectiveness of organization's use of ICTs and digital data for monitoring, risk management,	**UNICEF** • As noted in the "Accelerating Results for Children with Technology and Digital Innovation" report, "the launch of key knowledge management channels and processes – including the T4D intranet website, T4D peer to-peer support resources, regional T4D networks, a T4D webinar series for internal and external audiences, programme guidance and research – has vastly improved UNICEF's T4D and digital innovation knowledge base" • The two core UNICEF technologies for monitoring, RapidPro and U-Report, have been rolled out in 53 and 45 countries respectively. Specific project evaluations conducted identified that RapidPro "was generally effective and successful" as part of the measles-rubella

50 Ladek, S., Abdelkhaliq, Z., Cameron, S., Green, S. & Procter, C. 2019. Evaluation of UNHCR's data use and information management approaches. UNHCR.
51 Ibid.
52 Mercy Corps. 2018. Annual Impact Report. Technology for Impact.

reporting and knowledge management in constrained environments	campaign in Indonesia.[53] For example, in Pakistan, UNICEF "supported the government to use real-time monitoring to strengthen immunization services. The use of the opensource technology, RapidPro, enabled service delivery that helped providers vaccinate more than 37 million children against measles in 2018, according to government reports". The use of technology solutions for monitoring is an advanced application of digital technology at UNICEF o Additional technologies used for monitoring include Aurora, a software "to help community professionals from all sectors conduct comprehensive assessments of the vulnerabilities faced by children and families".
	UNHCR • UNCHR developed a Data and Information Management and Analysis unit (DIMA) in 2018 to attempt to overcome data, information and capacity silos across different sectors at the regional level in the Middle East and north Africa (MENA).[54] The aim was to enhance data collection, coherence, quality and analysis and to better make use of all the information stored across different sectors, units and systems • There is a lack of integration of data and room for improvement in terms of optimizing the effective use of all the data held by UNHCR for monitoring, risk management, knowledge management, monitoring and evaluation purposes and programme management and decision making.[55]
	Mercy Corps • According to several documents and project examples, Mercy Corps is leveraging digital data for monitoring and risk management. However, based on the information and documentation available to this evaluation, the extent to which data is directly collected by Mercy Corps is not clear, nor is it clear whether the organization makes use of secondary data sources, platforms or tools provided from other organizations to widely assess risk and manage knowledge about the constrained environments in which they operate • In its annual impact report in 2018, Mercy Corps mentions the development of an analytical dashboard that synthesizes data from multiple sources to unlock insights on looming economic and agricultural crises in East Africa. However, no further information was found on this topic.[56]

POLICIES AND PROCESSES	
Extent to which the organization has established and uses appropriate	**UNICEF** • With regards to recent processes and changes relating to the strategic use of ICTs and digital data, at UNICEF, there is increasing recognition of the critical role that digital innovation and technology for development play in UNICEF programming to accelerate support to the Sustainable Development Goals (SDGs). This has been coupled with a move to transform the Information and Communication Technology Division (ICTD) to an external-facing and field-focused digital programming support function. A new technology for

53 UNICEF. 2020. Accelerating Results for Children with Technology and Digital Innovation, Technology for Development.
54 Ladek, S., Abdelkhaliq, Z., Cameron, S., Green, S. & Procter, C. 2019. Evaluation of UNHCR's data use and information management approaches. UNHCR.
55 Ibid.
56 Mercy Corps. 2018. Annual Impact Report. Technology for Impact.

policies and processes for the development, management and strategic use of ICTs and digital data	development (T4D) function was established in 2017 and plays a pivotal role in the organization's new digital programming environment. "The T4D function within ICTD provides advisory, implementation and quality assurance services to programmes on technology in UNICEF, and leadership on digital innovation"[57] • From a strategic perspective, innovation and digital programming are set as the collective responsibility of everyone in the organization. "The role of T4D is not to innovate on behalf of the organization, but to serve as a resource, facilitator and connector." Furthermore, the strategic orientation on the role of innovation and of the T4D Division is clear: "T4D staff work with programme and planning teams across UNICEF to strengthen national systems and deploy new digital approaches to programming" [58] • Stakeholders consulted noted that in the strategic plan currently being developed, digitalization and ICT are being elevated to "change strategies", which entail a recognition of the pivotal role these are playing for the organization. Four streams of work tied to technology were defined within the strategic plan, including policy and normative work, efficiency and effectiveness, programmes and resource mobilization and partnerships • UNICEF published its Global Innovation Strategy and Framework 2.0: The ABCs of Innovation in 2020. The strategy consists of: "1) Accomplishments: Comparative advantages and demonstrated successes in applying innovation to improve children's lives; 2) Bending the curve: Understanding where to focus innovation to influence and accelerate the arc of progress positively for children, and applying a portfolio approach to do so, and 3) Capability and culture: Purposefully collaborating with partners and contributing to innovation as a catalyst and convener, and in other roles – as well as evolving our organizational capability and becoming more fit for purpose in the context of a learning oriented, risk-taking culture" • Scope of innovation for UNICEF is defined as or consists of: categories of innovation (digital innovations, physical product innovations, innovative financing, programme innovations); frugal innovation (use minimum environmentally sustainable resources needed to develop simple products or services that dramatically cut costs, outperform alternatives and can be scaled up); a portfolio approach (building specialized portfolios based on programme-led analysis to identify problems in most need of acceleration); and innovation aligned with common criteria (scalable, sustainable, "solution-able", measurable, inclusive).
	UNHCR • UNHCR has a Guidance on Registration and Identity Management (2020), which aims to develop good practices and standards for all UNHCR staff as well as partners in relation to registration and case management. It uses the main UNHCR digital tools in this regard. It also sets best practices regarding data protection, privacy and security in registration and identity management • Strategically, the UNHCR data transformation strategy is clearly articulated, and the vision of the organization is clear: becoming a leader in displaced populations' data and leveraging them for protection purposes. Its vision is clearly rooted in a "people centred" approach and clearly spells out "data protection and security" as a priority. However, an audit on ICT governance concluded that a clearer ICT governance strategy is needed as well as ICT governance guidance[59]

57 UNICEF. 2020. Accelerating Results for Children with Technology and Digital Innovation - Technology for Development Report.
58 Ibid.
59 OIOS. 2019. Audit of information and communications technology governance at the Office of the United Nations High Commissioner for Refugees, Report 2019/140.

- UNHCR ICT governance framework aims to guide UNHCFR by assigning roles, responsibilities and accountabilities for the identification, prioritization, implementation, decision making and oversight of ICT projects[60]
- At the central level, ICT governance is under the authority of the ICT Governance Board (ICTGB), which includes the director of the Division of Information Systems and Telecommunications (DIST) who also serves as chief information officer (CIO).[61] On the other hand, DIST and the overall ICT framework have adopted a decentralized approach to ICT governance ("Freedom in Framework") whereby regional bureaux and country offices have increased independence to ICT-related projects, budgets and resources. A recent evaluation found that this structure lacked overview of ICT projects and investments made in the field but encouraged greater oversight and monitoring of local level ICT developments
- UNHCR has a central ICT management tool that records digital solutions used throughout the organization. However, this was often not updated[62]
- UNHCR has room for improvement in terms of monitoring budget execution, financial aspects and cost-effectiveness. It also needs to meet the objectives of its IT projects.[63]

Mercy Corps

- Due to the limited access to institutional information by the evaluation team the extent to which processes are in place for the strategic use and development of ICTs is not clear. However, based on available information and the detailed description in their annual impact reports, articulating technology-related activities under the Technology for Development team since 2017 has significantly increased the potential of humanitarian technology for Mercy Corps. The team creates knowledge exchange mechanisms between different entities within the organization, sets standards for the use of technology and data, and is shaped as an innovation hub that should foster internal innovation and the development of tech-driven solutions to advance the objectives of the organization
- Additionally, based on documentation of cash and voucher assistance, Mercy Corps has tried to streamline best practices for the selection and implementation of tech-based aid modality in their interventions over the last few years. For example, the E-transfer Implementation Guide for Cash Transfer Programming aims to facilitate and ensure that digital technologies are selected only when deemed appropriate and if they can meet the needs and challenges of constrained environments once implemented[64]
- Mercy Corps has recently published its "Mercy Corps' Compass" which describes the organization missions and specifies how technology can be implemented in a strategic way to help them in the process of advancing their objectives.[65] The focus of this strategic implementation lays on scaling innovation and leveraging high-impact ventures.

IFRC

60 Ibid.
61 Ibid.
62 Ibid.
63 Ibid.
64 Mercy Corps. 2018. E-transfer Implementation Guide for Cash Transfer Programming.
65 Mercy Corps. 2021. Mercy Corps' Compass.

	• Given the IFRC focus on practical guidance for its national societies and other humanitarian actors regarding the use of technology, the policies and processes for development, management and strategic use mostly pertain to practical toolkits on choosing appropriate technologies for specific aspects of humanitarian operations, including feedback mechanisms. Besides policies on data protection (described below), the IFRC policy portfolio is characterized by broad guidelines and practical tools. For example, its Data Playbook lays out slides, checklists and exercises amongst other practical tools on topics such as responsible data, information management, data sharing and data quality.[66]

Extent to which the organization has established and uses appropriate policies, governance arrangements, structures, frameworks, and guidelines to manage risks to operations in relation to the use of ICTs and digital data	**UNICEF**
	• UNICEF has a specific mandate to protect, respect and uphold the rights of children and their families globally. This underpins its approach to the use of technology. Existence of practical guidance and structures for risk mitigation to operations in relation to the use of ICTs and digital data includes:
	  ○ Faces, Fingerprints and Feet (2019): guidance on assessing the value of including biometric technologies in UNICEF-supported programmes. It provides practical guidance to evaluate when the use of biometric technology may be appropriate, through consideration of potential benefits and risks. It also lays out the suitability of biometric traits and explores different criteria to assess these (i.e., unique, permanent, universal, measurable, etc.). The guidance notes that although there are many potential benefits, data protection and data privacy are still of concern for the application of biometrics technology. One of the issues is the weak rule of law in many countries or the lack of regulation that ensures the right data processing
	  ○ UNICEF Policy on Personal Data Protection (2020): the policy is well aligned with other United Nations agencies, laying out as key principles legitimate and fair processing, purpose specification, necessity and proportionality, accuracy, security and limited retention. It underscores the need for particular care in processing the personal data of children and of vulnerable data subjects, citing that "in its interpretation and application to the personal data of a child, the best interest of the child shall be a primary consideration, and an interpretation and application that does no harm shall be sought"[67]
	  ○ "The Case for Better Governance of Children's Data: A Manifesto" (2021): this document articulates the UNICEF vision for a better approach to children's data, recognizing that children are more "vulnerable than adults and are less able to understand the long-term implications of consenting to their data collection", therefore children's data ought to be treated differently[68]
	  ○ A 2018 report on governance noted that the Global Innovation Centre had "pioneered a distinct governance and advisory model, convening leading expertise and funding around innovating for children." Bringing people from within and outside UNICEF aids the organization's ability to analyse emerging issues and trends informed by various perspectives.[69]
	• Besides practical guidance, recent evaluation findings highlight that from people interviewed during the assessment, some expressed concern that UNICEF (in this case country offices) may not be adequately prepared to assess risk before moving into issues of data privacy or self-sovereign identity."[70]

66 Global Disaster Preparedness Centre. 2020. Data Playbook (Beta).
67 UNICEF Supply Division. 2020. UNICEF Policy on Personal Data Protection.
68 UNICEF Office of Global Insight and Policy. 2021. The Case for Better Governance of Children's Data: A Manifesto.
69 UNICEF Innovation. 2018. GIC Annual Report 2017-18: Pathways to scale, pathways to results for every child.
70 UNICEF. 2019. UNICEF Evaluation of Innovation in UNICEF work (2019).

UNHCR

- UNHCR places a high priority on its data protection approach, which is reflected in its core Data Protection Policy (2015), Data Protection Guidance (2018), the 2019 Data Transformation Strategy and staffing of data protection officers. These strive to achieve the highest international data protection and cyber security standards including the concept of privacy by design and by default. They also include the principle of being "people-centred"
- These standards translate into rigorous due diligence processes for reviewing data sharing with partner organizations and can sometimes lead to disagreements (for instance with WFP) or non-sharing of data with partners
- Nevertheless, despite such high standards in theory, in practice there have been reports of non-adherence or unsafe practices, such as sharing data through unsecure mediums (emails etc.).[71] Actual practice of data protection, privacy and security in the field can thus be strengthened to be in line with its strong commitment and robust policy framework on data protection.

Mercy Corps

- Mercy Corps has several toolkits, guidance and policy papers aimed to address best practices when managing risks associated with technology and data, including the Privacy Impact Assessment (PIA) Guidance and its Responsible Data Policy[72]
- According to the organization, privacy impact assessments enable organizations to identify and manage data privacy risks associated with the implementation of new technologies. Furthermore, Mercy Corps has created a privacy impact assessment template as guidance for potential risk and mitigation, to ensure standardization across the agency. The template guide constitutes questions and guidance on several areas, including: data type (identifying what will be involved in the project or tech); data access and use (identifying how data will be collected, accessed and used); data risks (identifying the types of potential data risks for this project or technology); risk mitigation (identifying all the risks - individual, compliance, security, access, and how they will be mitigated or resolved); and mitigation outcome (next steps for each option identified)
- On the other hand, Mercy Corps' Responsible Data Policy lays out the principles on which the organization should base their management of sensible data and information. It is based on the following data protection principles:
  - Processed lawfully, fairly and in a transparent manner
  - Collected for specified, explicit and legitimate purposes
  - Adequate, relevant and limited to what is necessary
  - Accurate and, where necessary, kept up to date
  - Kept for no longer than is necessary
  - Processed and stored in a manner that ensures appropriate privacy, security, and accountability.
- It is also worth noticing that Mercy Corps development of internal processes and policies often result from collaborations and partnerships with other actors in the humanitarian sector. For example, their participation and co-creation of the Electronic Cash Transfer Learning Action has led to "A data starter kit", a set of guidance for humanitarian field staff for the safe and adequate use of e-programme data.[73]

71 Ladek, S., Abdelkhaliq, Z., Cameron, S., Green, S. & Procter, C. 2019. Evaluation of UNHCR's data use and information management approaches. UNHCR.
72 Mercy Corps. 2020. Responsible Data Toolkit.
73 ELAN. 2016. A data starter kit for humanitarian field staff.

IFRC

- A large portion of relevant IFRC work within the context of this evaluation is on the creation of guidance and policies for the use of data and technology in the humanitarian sector. Critical guidelines for the development and management of digital data include:
    - Handbook on Data Protection in Humanitarian Action (May 2020): the handbook notes that humanitarian action implies settings where the rule of law may not be fully in force and/or where personal data protection legislation is still underdeveloped. It defines personal data protection as "not an absolute right", but rather as a concept that should be considered in relation to the overall objective of protecting human dignity and should strive to strike a balance between other fundamental rights and freedoms according to the principle of proportionality. The handbook is a detailed resource (312 pages) that, besides laying out the key principles for data protection for IFRC, engages in an in-depth explanation of the legal bases for personal data processing, including: consent (including differences between data subjects), vital interest, important grounds of public interest, legitimate interest and performance of a contract or compliance with a legal obligation. It also touches upon the subject of international data sharing, its legal basis, risks and safeguards. The second part of the document explores specific processing situations and data protection implications for specific technologies, including: data analytics and big data, drones / unmanned aerial vehicles (UAVs) and remote sensing, biometrics, cash-based transfers, cloud services, mobile messaging apps, digital identity, social media, blockchain, "connectivity as aid", and artificial intelligence and machine learning
    - IFRC Policy on the Protection of Personal Data (2020): this policy emphasizes the general principles of personal data protection for IFRC: fairness and legitimacy (i.e., legitimate basis); information (i.e., data subjects must receive transparent information concerning all the steps of data processing); purpose specification (i.e., specific and legitimate purpose); data quality and minimum data requirements (i.e., adequate, relevant, accurate and not excessive data collection); data retention and disposal (i.e., stored and safeguarded only for the strictly necessary time); and confidentiality and security (i.e., security and confidentiality). Besides establishing the guidelines, the policy lays out IFRC commitments and processes to operationalize this guidance, including carrying out data protection impact assessments (DPIA) "when processing operations appear likely to result in a high risk to the rights or freedoms of a data subject)"
    - The Netherlands Red Cross (an IFRC national society) published a Data Responsibility Policy in 2018, which was created for practical use, aimed at helping the process of application and institutionalization of data responsibility principles throughout the institution's work. It defines data responsibility as "the responsible processing of data with respect to ethical standards and principles in the humanitarian context, bearing in mind potential consequences and taking measures to avoid putting individuals or communities at risk". Data responsibility encapsulates both data protection, in the local and humanitarian context, and ethical standards and principles. The policy was structured according to a data life cycle to provide general guidance on common stages and steps within (data-driven) projects. It includes the principles of:
        1) Data protection
        2) Lawful and legitimate data processing
        3) Do no harm
        4) Respect for the rights of the data subjects
        5) Purpose specifications
        6) Minimization (necessity and proportionality)

	7) Data quality
Alignment between WFP strategies, mechanisms, and funding for identifying, testing, approving and upscaling ICT innovations with sector-wide efforts and donor community	**UNICEF** • The UNICEF Technology Division recognizes that "innovative digital solutions are useful only when they add value, accelerate service delivery, and expand reach and results for children". They also note that "scale is reached when the digital innovation, programming approach or solution is owned and led by a national government." By laying down clear definitions on what innovation entails for UNICEF (including non-digital innovations), the organization is setting a clear vision and strategic statement as to the role innovations should play for the organization • The 2019 UNICEF Evaluation of Innovation in UNICEF Work identified that the Office of Innovation "lacked transparency and appeared incongruent with priorities on the ground". As with other organizations in the sector, the decentralized nature of the organization leads to innovation being carried out in a diffused manner outside of formally-recognized innovation structures. UNICEF notes that its "decentralized structure has both benefited and hindered innovative activity in a variety of ways in recent years" citing as benefits of this structure the partnerships built with country actors and in-depth understanding of local contexts and needs. With regards to challenges, the evaluation notes that the decentralized approach to innovation "makes it more difficult to move ideas through the hierarchy" and puts an oversized responsibility on country-level staff to ensure funding, resulting in "projectization or a piecemeal organizational approach to innovation, with small sums of money, short funding cycles, high staff turnover and insufficient knowledge transfer." Obtaining sufficient funding to ensure the sustainability of a local innovation has proven challenging in the past • Yet, similar to WFP, the evaluation notes that "in making resource decisions, the team found that UNICEF's financial management systems provide limited information on budgeted and actual expenditure on innovation. The best available data suggest that spending on innovation has tripled between 2014 and 2017, from USD14 to USD 44 million. However, the system underlying these figures does not allow UNICEF management to readily obtain a comprehensive, forward looking innovation budget, or a comprehensive retrospective financial analysis. As a result, UNICEF management cannot easily obtain a clear global overview of spending on innovation within the organization, let alone a view on the robustness (or otherwise) of innovation budgeting in a given office or unit" • Furthermore, within its recent Innovation Strategy (2020) UNICEF lays out clear criteria to be used to scrutinize and prioritize innovations. This is based on the "3SMI approach", which assesses whether Innovations are sustainable, scalable, "solution-able" (that they solve a problem and do no harm), measurable and inclusive. Furthermore, the strategy also lays out models and processes to scale-up innovations, including through a Venture Fund, the Production Innovation Centre, and other mechanisms.[74] The strategy also lays out the organization's portfolio-approach to innovation, intended as a way of working to ensure all investments made fit the organization's global aim. In its strategy, it has laid out nine innovation (not only digital) portfolios: ▪ Climate Change Portfolio ▪ Gender Equality Portfolio ▪ Humanitarian Portfolio ▪ Learning Portfolio ▪ Maternal & Newborn Health Portfolio

74 UNICEF. Global Innovation Strategy and Framework 2.0: The 'ABCs' of innovation.

	▪ Mental Health & Psychosocial Wellbeing Portfolio ▪ Water & Sanitation Portfolio ▪ Youth Portfolio ▪ Immunization Portfolio. **UNHCR** • Local development of digital solutions are, in principle, discouraged if existing solutions already exist at the corporate level.[75] When local solutions are developed, these have to come with the development of user guidance, standard operating procedures, other documentation and training so as to ensure the sustainability of the digital solution • The UNHCR ICT project management requires a business case and project initiation document (PID), which outline the business need, objectives, scope and assumptions of ICT/technological developments.[76] Such developments must also be subject to tests to determine whether their design and performance: meet the requirements that guided their design and development; are secure; are usable; function in intended contexts; and meet stakeholders' requirements • An audit however found that there was insufficient monitoring as to whether such projects meet their objectives and the cost-effectiveness of them • There was insufficient involvement of stakeholders (especially field or country level UNHCR actors) in the development of tools like ProGres, which meant that such tools sometimes do not meet local needs and require the development of local solutions.[77]

PARTNERSHIPS	
Existence and extent of partnerships and collaborations for the coordinated use of ICTs and digital data (including clusters)	UNICEF • A core focus of the UNICEF approach to digital transformation is its partnerships, given that they are regarded as "essential" to everything that the organization does. "ICT staff identify and support partnerships with the public, private and academic sectors to drive UNICEF programming enabled by T4D and digital innovation. We also work to leverage the comparative advantage, experience and resources of other United Nations agencies, donors and partners through joint planning, coordination, programming and experience sharing of T4D and digital initiatives to achieve results for children."[78] The organization has in the past partnered with United Nations High Commissioner for Refugees (UNHCR), United Nations Population Fund (UNFPA), International Rescue Committee (IRC), Department of Peacekeeping Operations (DPKO), Save the Children, International Medical Corps (IMC), Association on Refugees and Migrants (ARM), Dalberg, University of California Berkeley, the World Economic Forum, and Microsoft, amongst other organization to produce a technology related body of work and digital technology innovations

75 UNHCR. Guidance on Registration and Identity Management. 3.6. Registration tools.
76 OIOS. 2018. Audit of the proGres version 4 registration and case management system at the Office of the United Nations High Commissioner for Refugees, Report 2018/021.
77 Ibid.
78 UNICEF. 2020. Accelerating results for children with technology and digital innovation.

- UNICEF stakeholders noted that it has looked up to WFP to adopt and learn from their ideas. Key informantss noted there had been continuous learning from WFP in the past and close engagement with the organization's chief information officers to align strategy and the use of digital tools throughout several business processes. Feedback coming from the field focal points consulted pointed out that there is overall good coordination with WFP "but the choice of partners can be a source of problems in some cases"
- A country office consulted during this evaluation pointed to several instances of collaboration on the use of technologies and digital data across both organizations, though the extent of engagement was mostly limited to carrying out data collection exercises on behalf and in partnership with WFP. UNICEF is oftentimes a user of WFP systems, as in Niger with the use of SCOPE for non-food items cash transfers.

UNHCR

UNHCR has engaged in numerous partnerships related to technology use, ICTs and digital data:

- UNHCR, WFP and UNICEF are quite connected in many regards, with chief information officers being in close contact with frequent communication. The chief information officers: design the annual IT customer satisfaction service collaboratively; collaborate in the emergency telecommunications cluster (ETC) to ensure continuity of connectivity and digital systems during emergencies; participate in several joint sessions on data governance; use the "One-UN" shared partner portal to piggyback on contracts; and often share reports and evaluations related to technologies
- The UNHCR PRIME system has been developed to be increasingly interoperable with systems like SCOPE and this is a work in progress. Interoperability work with WFP has developed the most. There is nevertheless still some competition between the two organizations' systems[79]
- The use of biometrics and the Global Distribution Tool have been utilized jointly with WFP for both registration and authentication purposes in the distribution of assistance[80]
- A joint programme of excellence and targeting hub has been established between UNHCR and WFP to collaborate on issues such as common targeting standards, assessment and analyses, data and systems interoperability, cross-learning, policy and processes and accountability to affected populations
- A joint data centre on forced displacement has been established with the World Bank, which aims to strengthen data systems and standards related to forced displacement and collaborate on producing data and analyses, enhancing safe and responsible data access and use, and produce evidence and knowledge for cross-learning
- UNHCR relies heavily on outsourcing to managed partner services regarding its technology development and use which is quite different from WFP. This relates to services in relation to tech-infrastructure, development support and maintenance for instance.

IFRC

- Stakeholders consulted noted that WFP and IFRC sit in similar working groups and often share resources and guidance. Specifically, WFP and IFRC work together on several working groups, including the Information Management Working Group, "a forum of HQ information

79 The Grand Bargain. 2020. UNHCR / WFP. 2020 Joint Update on the Use of Innovation and Technology; UNHCR, Guidance on Registration and Identity Management.
80 The Grand Bargain. 2020. UNHCR / WFP. 2020. Joint Update on the Use of Innovation and Technology.

management focal points from humanitarian organizations". The organizations have worked together in the past in a series of projects tied to technology, including an ongoing project funded by ECHO with the Turkey Red Crescent.

- IFRC sees WFP as an organization that has been able to garner a lot of funding and partnerships on the technology front. IFRC does not have the same capacities (staff) or levels of funding as WFP
- IFRC believes the organization's nature and approach to technology and innovation is inherently different to that of WFP. IFRC stakeholders acknowledged that WFP has shown considerable talent and drive for innovation, but that in these processes, WFP has taken on "more risks". Stakeholders acknowledge having learned from WFP, but not being as risk-tolerating as WFP
- For IFRC stakeholders, there is a sense that every humanitarian organization wants "to do its own thing" when it comes to the use of technology, sometimes prioritizing branding over mission. Interviewees expressed the need to find more common spaces specially regarding topics such as data privacy and protection, broadly encompassed into responsible data use. It is thought that everyone has different materials, and that there are opportunities to learn from each other on responsible data, but that not a lot of co-creation is taking place
- With regards to specific partnerships on the use of technology, stakeholders mentioned partnerships with Microsoft for the development and use of technology. Additional documentary evidence suggests the IRC is partnering with Accenture, Microsoft, Visa, Mastercard, Mercy Corps, CARE, Kiva and the Rockefeller Foundation in the ID2020 Alliance, a public-private partnership that promotes ethical digital ID.

Mercy Corps

- One of the key characteristics of Mercy Corps' orientation towards humanitarian technology is the creation of long-term partnerships with key actors of the technology landscape at international, regional and national level. Some examples of these partnerships include:
  - Its five-year partnership with Cisco, which has led to the strengthening of its technology focus area and has allowed the organization to pilot and scale innovations to a number of countries. This partnership has been instrumental to the development of the digital cash and voucher assistance programme (DVAC), which is a key workstream in their partnership to integrate digital payment providers and registration platforms with the ultimate goal of bringing access to secure and effective systems for delivering cash or voucher-based humanitarian assistance within the sector[81]
  - Mercy Corps is a member of the ID2020 alliance, a multi-stakeholder effort focused on user-managed, privacy-protecting, and portable digital ID[82]
  - Regarding cooperation on emerging technologies, Mercy Corps has partnered with the Libra Association (renamed to Diem Association) to develop a Distributed Ledger technology (DLT)-base crypto currency aiming to counteract the digital divide and enabling new forms of financial access for vulnerable populations[83]
  - Mercy Corps is a close partner of Mastercard, which supports the organization in its cash and financial service-related activities, including the AgriFin project, which aims to expand access to finance for one million smallholder farmers through mobile channels[84]

81 Schmidt, Alexa. Mercy Corps Blog. 2020. The power of partnerships: Cisco and Mercy Corps' unique way of working.
82 Identity Systems. 2021. ID2020.
83 Mercy Corps. 2019. Libra: Creating financial opportunity for all. Mercy Corps. 2019.
84 Mercy Corps. 2018. Partnering with Mastercard to provide cash and financial services.

	○ The partnership with Mastercard led to the creation of the Electronic Cash Transfer Learning Action Network where Mercy Corps cooperate with actors like Oxfam, USAID and the Norwegian Refugee Council, among other, on harmonizing the way humanitarian actors handle e-transfer programme data[85] ○ Mercy Corps seeks partnerships with important actors of the technological landscape at country level. For example, in Jordan it has partnered with Microsoft Jordan, and other local partners to coordinate and enable access to ICTs for public school students and refugees[86] • Mercy Corps puts also great emphasis on working closely with other actors of the humanitarian sector at intervention locations in order to improve the use of ICT in the delivery of assistance, coordinate emergency relief and assistance on-site, and develop common solutions for humanitarian action For example: ○ In Iraq, Mercy Corps is part of the cash working group, which offers a common technical platform for humanitarian actors (for example, WFP) to coordinate and harmonize the implementation of multi-purpose cash assistance and the corresponding delivery modalities[87] ○ Mercy Corps has cooperated with International Rescue Committee to harmonize and centralize critical information and data on legal rights, accommodation, transportation and medical facilities for refugees in the platform Refugee.info.[88]
Extent to which organization has established and uses appropriate data privacy and protection protocols for data sharing with outside parties, including government	UNHCR • UNHCR has signed a data sharing addendum to the Global Memorandum of Understanding (2018) with WFP to institutionalize data sharing between the organization and WFP and to promote the secure and efficient sharing of data. A trilateral agreement with UNHCR, WFP and UNICEF (2020) has also been signed to strengthen secure and efficient data sharing among the three organizations[89] • The UNHCR Data Protection Policy (2015) mandates that the organization is obliged to carry out data protection impact assessments (DPIA) before concluding data sharing arrangements that may negatively impact the protection and security of personal data of affected populations. There is however evidence that this condition is often not complied with in practice and in the field.[90]
	IFRC • During different times over the years, IFRC has collaborated with WFP on digital ID. There was a period where IFRC actively considered using SCOPE (around 2018). At that time, stakeholders noted that WFP seemed to be ahead by a couple of years on the use and development of technology for their operations. However, when looking at the feasibility of using SCOPE at IFRC, concerns were flagged

85 The Electronic Cash Transfer Learning Action Network.

86 Microsoft News Center. 2018. Microsoft Jordan partners with Mercy Corps, Madrasati and Jordan Education for Employment to teach the basics of computer code to more than 1,300 youth nationwide.

87 OCHA Services: Humanitarian response, Cash Working Group. 2021. Iraq 2021: Humanitarian Response Plan. Accessed on July, 2021.

88 Mercy Corps. 2018. IRC, Mercy Corps, Google, Microsoft, Cisco and TripAdvisor Expand One-Stop Informational Portal for Refugees Under The Newly Formed Global Platform, Signpost.;

UNHCR. 2018. Addendum on Data Sharing to the January 2011 Memorandum of Understanding between UNHCR and WFP; UNHCR, WFP and UNICEF, 2020. Data sharing Agreement among UNHCR, WFP and UNICEF in the context of programmes involving transfers of cash assistance to beneficiaries in humanitarian situations.

90 Human Rights Watch. 2021. UN Shared Rohingya Data without Informed Consent.

	regarding the extent to which data protection was comprehensively considered in the system, specifically concerns over WFP capacity and role as a data processor on behalf of other organizations. There was uncertainty surrounding how well SCOPE was set up to provide sufficient assurances; there was little confidence in WFP as a data processor and its ability to meet the differentiated needs of partners with different internal data protection requirements. The perception is rooted on the complexity of having an approach that is flexible enough to meet both organizations' requirements. From the interviewees' perspective, sharing SCOPE with partners was something that was thought of as a later stage and not necessarily planned for at SCOPE's design stage.
	Mercy Corps • With regards to third party access to data, its Responsible Data Policy notes that Mercy Corps will use due diligence to ensure it does not unwittingly share personal data with unintended third parties, including the implementation of reasonable practices for document and data security. Mercy Corps discloses information to third parties only when required for legitimate governmental or donor oversight purposes, and for legal or contractual reasons. If personal data is disclosed to others, Mercy Corps will share anonymized information whenever possible. The sharing of programme participant personal data in fragile, complex or insecure environments may result in higher risks or sharing exceptions. To ensure participant safety, risk assessment and exceptions are managed by the Enterprise Risk Management Committee.

Annex IX. Mapping of Findings-Conclusions-Recommendations

Recommendation [in numerical order]	Conclusions [by number(s) of Conclusion]	Findings [by number of Finding]
Recommendation 1: Strategy 1. As part of the implementation plan for WFP's strategic plan for 2022–2025 and the new corporate information technology strategy, formulate in consultation with all relevant divisions an overall strategic vision for the use of digital technology and data in which people and protection are central concerns, and constrained environments are taken into account. Translate this vision into clear standards, directives and practical guidance and disseminate them internally and to partners.	1	1, 6, 10, 11, 12, 13, 14, 15, 17, 30, 32, 37, 39, 40, 44, 54, 58, 63, 63, 66, 67, 68
Recommendation 2: Governance 2. Clarify and strengthen the governance arrangements and allocation of resources driving WFP's digital transformation and the use of technologies in constrained environments, as well as the division of roles and responsibilities across all levels of the organization, enhancing the balance between product-driven efforts and business needs.	2	10, 12, 23, 24, 30, 31, 32, 33, 334, 35, 36, 37, 38, 40, 42, 51, 52, 53, 56, 57, 60, 61, 68, 69, 72
Recommendation 3: Risk and Protection 3. Develop strategies and mechanisms for ensuring the effective protection of affected populations and humanitarian personnel and the management of risks associated with the use of technologies, considering constrained environments in particular, building on a strategic position on protection and the rights of and responsibilities to affected communities with regard to the development and use of technologies	3	5, 12, 16, 19, 23, 24, 25, 26, 41, 43, 44, 45, 46, 70, 72, 73
Recommendation 4: Appropriateness, Inclusion and Engagement	4, 5	1, 2, 3, 4, 7, 8, 9, 14, 15, 16, 18, 19, 20,

4. Integrate inclusion, gender equality and women's empowerment in technology development and use and meaningfully engage with diverse community members to inform the development and use of technologies.		21, 22, 23, 25, 26, 40, 57, 60, 72
Recommendation 5: Knowledge Management 5. Develop a knowledge management approach to capturing, storing and disseminating internally and externally relevant information regarding WFP's use of technology, building supportive evidence and maximizing synergies that is appropriate for constrained environments.	6	5, 7, 20, 29, 31, 47, 48, 49, 50, 55, 59, 71
Recommendation 6: Digital Skills 6. Invest in developing and implementing a coherent capacity development and change management strategy with regard to basic digital skills and data literacy for all WFP staff, especially in countries with low digital literacy and skills.	7	27, 28, 29, 51, 64, 65, 66
Recommendation 7: Partnerships 7. Invest in developing and supporting successful technological partnerships in and for operations in constrained environments, focused but not limited to local partners, considering mutual benefits as a key principle for sustainability and including efforts to improve and sustain access to the Internet.	7	26, 40, 58, 59, 60, 62, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73

Mapping of Findings

ID	Finding	Sub-Question
1	There is positive and convergent evidence that the use of ICTs and digital data by WFP has a positive influence on the effectiveness of WFP operations, including the delivery of assistance to beneficiaries, and the tailoring of assistance to better meet beneficiaries' needs.	Effectiveness (1.1)
2	Technology has enhanced the gathering of information about people served by WFP, enabling a more objective and accurate assessment of the level of need in targeted areas.	Effectiveness (1.1)
3	The use of technology is integral to all areas of operations in certain countries (for example, in Jordan and Bangladesh), while in other countries there is more limited use of technologies, especially of beneficiary-facing technologies (for example, in the Democratic Republic of the Congo and Niger) due to barriers such as weak physical infrastructure, human and financial resource constraints, and in some instances, constraints imposed by host governments.	Effectiveness (1.1)
4	There is a perception among end users that WFP corporate technologies are designed to fulfil only a very specific purpose and lack interoperability.	Effectiveness (1.1)
5	There is a lack of systematic efforts to assess and analyse the use and deployment of technologies.	Effectiveness (1.1)
6	There is also generally positive and convergent evidence that the use of digital data and ICTs by WFP improves the efficiency of operations through: savings in staff time; the automation of routine tasks; simplified distribution of assistance to beneficiaries enabled by digital registration; improved supply chain management; and reductions in monitoring costs, among other benefits.	Efficiency (1.2)
7	WFP does not implement systematic processes to rigorously evaluate the cost-benefit of deploying a digital technology, including their overall development and maintenance costs.	Efficiency (1.2)
8	In general, WFP technologies are appropriately suited to their contexts, and relevant to their operations, according to global survey respondents. However, these perceptions appear to be less frequent in highly constrained environments.	Appropriateness (1.3)
9	Among key informants in various country offices, there is a perception that the development of technologies is top-down, with corporate solutions designed to meet a specific need without sufficient consultation with country offices and end users.	Appropriateness (1.3)
10	There are concerns that an increased focus on digitalization and digital transformation will detract from attention on field operations.	Appropriateness (1.3)
11	The main practical opportunity identified in this evaluation relates to the underutilization of existing resources. Complementary investment in filling human resource gaps (see Section 2.2.5) can help to support data-driven decision making and improve the use of WFP technologies.	Opportunities (1.4)
12	Siloed workflows, the lack of interoperability between systems and cumbersome reconciliation processes between data stored in different software were all identified as drains on resources.	Opportunities (1.4)
13	Key informant interviews and the comparative analysis suggest that WFP could better use its unique expertise and experience in the sector to contribute to identifying best practices with partners and influence digital transformation efforts across the	Opportunities (1.4)

	humanitarian sector as well as with government partners, thereby strengthening WFP's position as an essential interlocutor and partner in sector-wide dialogue on digital transformation.	
14	The use of ICTs by WFP for internal work processes and delivery of assistance to beneficiaries meant that the organization was well prepared for the COVID-19 crisis, and better able to adapt to the circumstances imposed by the pandemic and resulting restrictions than other humanitarian actors. In general, there is a sense that, despite difficulties in the initial phases of adjustment, WFP was able to provide a satisfactory degree of continuity of services owing to its use of ICTs.	Covid (1.5)
15	Lack of connectivity, technical issues and other barriers undermine the benefits of technologies for people. While technologies may contribute to greater timeliness and cost efficiency in general, there is a risk that the burden of technological failure is largely carried by the people served by WFP.	Effects for People (2.1)
16	WFP has made significant investment in the use of digital tools and technologies to know beneficiaries better. The resulting timely and granular data enabled by ICTs directly contribute to informed decision making to better target, scale up and meet the needs of populations served, a critical issue in constrained environments. However, as the organization increasingly relies on quantitatively driven and potentially automated processes, it has limited consideration for more qualitative, localized insights and for the potential biases in algorithmic decision making.	Effects for People (2.1)
17	Aside from community feedback mechanisms (see Section 2.2.3), efforts to know people better have been largely driven by extractive, quantitative approaches at the expense of a more qualitatively nuanced, engaged dialogue, and localized understanding of people's experience, needs and perceptions.	Effects for People (2.1)
18	The use of technology by WFP is generally seen as inclusive or neutral, but it potentially falls short of actively seeking to include the most marginalized groups. The potential for the use of technology to exclude some groups is understood, but relatively limited efforts are made to have special measures to accommodate for different needs.	Effects for People (2.1)
19	Overall, there is a sense that the use of technology creates additional responsibility for WFP to ensure that its technology use has built-in inclusivity and does not widen pre-existing inequalities, but that the organization is not sufficiently meeting these responsibilities.	Effects for People (2.1)
20	WFP is strongly committed to cross-cutting gender issues and gender mainstreaming across its operations. With regards to ICTs, however, there is a lack of systematic consideration of gender in the development and use of technologies, as well as a lack of monitoring of gendered impacts of technologies. There is some limited evidence that technology is being used by WFP to proactively empower women, generally in the context of financial inclusion.	GEWE (2.2)
21	Generally, the use of technology-based community feedback mechanisms has broadened the range of ways through which beneficiaries voice their concerns and issues and generally provide feedback to WFP. Technology also helps improve recording the feedback received and tracking of follow-up given to complaints. However, these mechanisms are insufficiently known and focus on technical issues rather than meaningful engagement.	AAP (2.3)

22	Despite this call for more hotlines and digital community feedback mechanisms, there is a general perception that accountability to affected population mechanisms are largely confined to fixing technical issues and for notification purposes rather than for the systematic consideration of affected populations' views and engagement.	AAP (2.3)
23	In fact, there is no evidence of a systematic process mandating stakeholder engagement with the people WFP serves with regards to the relevance, coherence and sustainability of a solution when introducing new technologies to assistance processes.	AAP (2.3)
24	WFP has made rapid and necessary progress in enhancing cyber-security and, increasingly also data protection across the organization, with increased visibility and control mechanisms centrally, and enhanced procedures. However, practice is lagging, resulting in ongoing risks to data protection, security and privacy, among others. Specific input, for example on ethics, appears to be side-lined.	Protection and security (2.4)
25	Additionally, WFP efforts to address some risks and its use of technology appear to shift the risks toward those served by WFP, with limited efforts to monitor and address such risks.	Protection and security (2.4)
26	There is evidence of a lack of information for beneficiaries and limited understanding among beneficiaries of the risks associated with data sharing, data protection and security issues. WFP appears to be insufficiently concerned with the status-quo, despite the implications of there being a low understanding of informed consent.	Protection and security (2.4)
27	WFP does not sufficiently invest in its staff and cooperating partner staff, widening the gap between technological capacities and the rapid pace of increasing technology use within WFP at all levels of the organization. More generally, there are little efforts to manage broader organizational and behavioural changes resulting from the introduction of technologies.	Staff capacities (2.5)
28	One common challenge is that tools used by WFP are increasingly complex to manage, yet training opportunities on the use of these tools are limited.	Staff capacities (2.5)
29	Furthermore, across country stakeholders consulted, there does not seem to be enough staff capacity, both in terms of time and ability, to ensure the quality of the data collected and processed through WFP systems, negatively impacting the organization's ability to learn from its operations.	Staff capacities (2.5)
30	Technologies are generally perceived as helping increase the efficiency, scale and frequency of monitoring and helping overcome monitoring challenges in constrained and emergency settings, but efforts are insufficient and lack coherence and integration.	Use (2.6)
31	Despite major efforts to integrate data to generate deeper insights (for example, DOTS), beneficiary data remains scattered across various inconsistent and non-integrated formats and systems, replicated and/or exclusive, held by partners, often not digitized, with an absence of comprehensive continuous data mapping.	Use (2.6)
32	During the evaluation period, the WFP portfolio of policies and processes regarding the development and management of technologies has evolved, setting a solid base of guidance on the use of technology for different levels of the organization.	Appropriateness (3.1)
33	Policies and processes pertaining to the use of ICTs and digital data have mainly focused on streamlining the criteria and processes to develop technology across the different levels of WFP. Available guidance and directives suggest an increasing centralization of processes and standards with which local developments must comply to ensure alignment with the	Appropriateness (3.1)

	organization's technology portfolio. However, WFP does not have a set of guidance specifically tailored to the use of technology in constrained environments.	
34	Local stakeholders expressed the view that only large country offices with predictable levels of funding are able to locally develop solutions that meet the criteria of TEC, conveying the fact that cost presents a significant challenge to compliance with WFP standards.	Appropriateness (3.1)
35	For corporate solutions, stakeholders perceive that in some cases, the development of centrally led technology solutions has been championed by different units in headquarters, resulting in duplication and poorly integrated corporate systems.	Appropriateness (3.1)
36	On the management of information technology solutions - once solutions become part of the WFP technology portfolio – the existence of central guidance is leaner and more fragmented.	Appropriateness (3.1)
37	Despite despite clear progress on the availability of relevant guidance, frameworks and processes for the management and development of technology, many of the relevant and important guidelines are not compulsory, but rather advisory in nature, leading to their implementation being interpreted as optional.	Appropriateness (3.1)
38	Another barrier to the full implementation of policies and processes is gaps in staff awareness of corporate guidelines and policies.	Appropriateness (3.1)
39	On the strategic front, while some policies and guidelines mention the strategic role that technology has played for WFP, these positions are scattered across documents and fail to paint a complete picture of the specific strategic role technology currently plays or the role it ought to play in the organization, especially in constrained environments. Notably, there is no mention of technology as a strategic enabler or priority in WFP strategic plans covered by the evaluation period.	Appropriateness (3.1)
40	Importantly, stakeholders consulted throughout the evaluation and some evaluative documentary evidence, suggest that there is little visibility on the exact posture of WFP and its strategic direction for the use of technology, specifically for country-level operations.	Appropriateness (3.1)
41	WFP has significantly invested and expanded its focus on risks to operations in relation to the use of ICT. Responsibilities for vulnerability and risk management regarding technologies are spread across several WFP divisions, including several units within TEC (TECI, TECM, Digital Solutions Delivery).	Risks (3.2)
42	Besides these units in headquarters, regional bureaux also have a stake in risk management, as they are expected to provide some assurance on technology matters. Yet, there do not seem to be sufficient processes in place for the regional bureau to play its assurance role effectively or rigorously.	Risks (3.2)
43	The decentralized nature of WFP gives country leadership authority over many technology processes and permits the lack of compliance with recommendations from TEC and other technology experts regarding information technology solutions, even when these are critical to risk mitigation and security.	Risks (3.2)
44	Furthermore, performance checks and risk reviews on information technology solutions along their lifecycle are not systematic across the organization, with costs identified as the main barrier to performing these checks.	Risks (3.2)
45	The case study country offices all agreed they did have some tools to assess and mitigate the risks of using ICT and digital data.	Risks (3.2)

46	WFP risk management or strategic policies and processes insufficiently acknowledge the organization's role in the humanitarian sector as a data processor nor do they acknowledge the consequential responsibility to the people WFP serves from holding such volume of data.	Risks (3.2)
47	There is both interest in and potential for increased sharing and learning across organizational units and across regions. Despite some efforts in knowledge sharing and engagement between country offices and regional bureaux, knowledge management on the use of ICT in constrained environments is not planned or carried out in a systematized way.	Knowledge Management (3.1)
48	The role that regional bureaux play in enabling knowledge sharing and linking country offices with headquarters (or even with regional bureau experts) regarding different ICT-related processes is not consistent across regions and countries studied.	Knowledge Management (3.1)
49	The extent of intentional knowledge sharing with externals is relatively limited.	Knowledge Management (3.1)
50	Critically, there is an absence of guidance and processes for the continuous evaluation of the performance of ICTs and digital data used in constrained environments. There are no systematic processes across the different levels of the organization to monitor solutions and data quality, including whether systems that have been created – including legacy systems – still meet the changing needs of the organization. Overall, the approach to monitoring on the use of technology appears to be ad hoc, with corporate indicators and accountabilities for monitoring not clearly established.	Knowledge Management (3.1)
51	The Innovation Accelerator has established and defined processes for sourcing, selecting, supporting and scaling innovations.	Innovation (3.4)
52	The Innovation Accelerator is considered by some informants as the only group that can afford to fail,	Innovation (3.4)
53	When scaling up decentralized innovations outside of the Innovation Accelerator– or broadly deciding when to continue investments on a given solution – it is understood that solutions survive (or are scaled up) in WFP if they have sponsorship from senior management rather than whether they are based on rigorous and continuous performance assessment.	Innovation (3.4)
54	With regards to financing innovation, while funding continues to be a barrier to increasing support to emerging projects and initiatives, the ability of WFP to raise funds for innovation has sharply increased over time.	Innovation (3.4)
55	Given the decentralized structure for funding information technology solutions and innovations, it is difficult to assess whether current funding levels (or management of such funds) are appropriate to the volume of solutions and work that WFP carries out.	Innovation (3.4)
56	Headquarters-based informants noted that some donors incentivise and sponsor technological innovations at a local level, sometimes promoting duplicative solutions outside of formal processes established for innovation at WFP.	Innovation (3.4)
57	Given the operational necessity to implement tools expediently, the length taken for country offices to receive approval for innovations prompted some country offices to push forward with implementation regardless of processes in place.	Innovation (3.4)
58	On partnerships with technology service providers, WFP has been able to garner a position in the humanitarian technology landscape as a pioneer in working with the private sector to drive innovations for its operations.	Coherence (4.1)
59	Given the extent of the organization's digital solution portfolio, WFP does not commonly adopt or use other humanitarian organizations' solutions. Instead, when it comes to the use of shared systems or collaborations, these are focused on data collection, analysis or sharing including, crucially, sharing of beneficiary registration data. There is a need to strengthen the	Coherence (4.1)

	coordination in terms of ICTs and digital data use in constrained environments, as actors perceive clear and strong advantages in shared approaches.	
60	With significant value to be derived from data sharing, over the years WFP has strengthened mechanisms to establish data sharing partnerships, including achieving interoperability between different organizations' systems. However, several inefficiencies still hinder the full potential of data sharing.	Coherence (4.1)
61	In many cases, WFP is leading the provision of technology services across the sector, making their systems and solutions available for the operations of various international and national organizations.	Coherence (4.1)
62	Recently, WFP has moved into the provision of technology services to governments, as part of its digital assistance to governments portfolio.	Coherence (4.1)
63	Although WFP could be well positioned to further its role in the provision of common technological platforms for the humanitarian community, including at the onset of emergencies, organizations in the sector do not seem to be inclined towards a single service provider.	Coherence (4.1)
64	WFP is well recognized for providing the necessary technologies, as well as transferring skills to partners (national governments, other United Nations agencies, cooperating partners) at both the global and country level. Furthermore, this support was well recognized during the COVID-19 pandemic.	Transfer of ICT (4.2)
65	Lack of resources and skills limit the ability of some partners (cooperating partners and governments) to fully benefit from WFP technologies, although this is less of an issue for United Nations partners.	Transfer of ICT (4.2)
66	WFP has made less progress in building capacities of partners in the use of digital technologies and data, beyond those capacities directly needed to use technologies required to conduct the work with WFP. Thus, limited technology capacities are built that could benefit partners beyond the partnership with WFP. The role and responsibilities of WFP are not well defined with regards to capacity building, although the humanitarian agenda toward localization should focus attention on this activity.	Transfer of ICT (4.2)
67	At the global level, WFP has engaged in different partnerships to develop ICT and digital data solutions, in which the private sector is strongly represented. Although partnerships with the private sector help to strengthen innovation capacities, some have become more controversial than others, with no established consensus on their appropriateness.	Appropriateness (4.3)
68	Although more initiatives are set up to promote appropriate partnerships for the development of technologies, there seems to be a lack of consultation, both at the headquarters level and country level.	Appropriateness (4.3)
69	At the country level there is a strong demand for more partnerships to develop ICTs, but efforts are undermined by a lack of resources, procedures, market competition, and the definition of roles and responsibilities.	Appropriateness (4.3)
70	Over recent years, awareness about data privacy and protection has been rising across the entire organization. Furthermore, country offices have been initiating privacy impact assessments to review current practices in terms of data sharing.	Risk management (4.4)
71	While the levels of guidance and awareness have been rising, it seems that these are more easily translated in practice at the corporate level in the development of new technologies. However, this seems to be lagging at the country level, where data are not always shared through secure and safe channels.	Risk management (4.4)

72	Alarmingly, there is no clarity on whether positive assurance mechanisms exist to ensure that data is being handled by partners as WFP mandates it should be, including in its field-level agreements.	Risk management (4.4)
73	The lack of data sharing agreements impedes the safe and secure sharing of data with partners. Although some agreements are underway, these agreements take a lot of time to negotiate and validate. Furthermore, there seems to be a lack of resources to effectively formulate them as headquarters has limited awareness of national laws with regards to data privacy. One main limitation is the fact that some authorities pressure partner organizations to obtain access to data.	Risk management (4.4)

Annex X. List of People Interviewed

This list contains WFP staff interviewed by the evaluation team at headquarter and regional bureau level. It does not include staff and stakeholders interviewed at the country level, and people interviewed from other agencies for the comparative learning exercise.

Staff Name	Title	Division/ Unit	Location
Amir Abdulla	Deputy Executive Director	DED	Rome
Aida Cruz	Programme Policy Officer	CBT	Rome
Alexandra Lajeunesse-Page	Business Transformation Officer	TECB	Rome
Alexandre Lecuziat	Senior Emergency Preparedness and Response Advisor	Emergency Preparedness and Response Unit	Dakar
Alice Luraghi	CBT Officer	Programme Unit	Bangkok
Ana Urgoiti	Consultant Evaluation	Evaluation Unit	Panama
Andrea Castorina	Regional Programme & Policy Officer, Protection & AAP	Programme Unit	Cairo
Andrea Cook	Director Evaluation	Office of Evaluation	Rome
Andrew Henze	Regional IT Officer	ICT Unit	Bangkok
Anis Nasr	Consultant Information Management & Reporting	EMEG	Rome
Anthea Webb	Deputy Regional Director	Senior Management	Bangkok
Anwen Chung	VAM Consultant	RAMAH	Rome
Arduino Mangoni	Head of Operational Information Management & OPSCEN Unit	EMEG	Rome
Arif Husain	Chief Economist & Director Research, Assessment & Monitoring	RAM	Rome
Balamine Ouattara	Regional IT Officer	ICT Unit	Dakar
Bernhard Kowatsch	Head of Innovation Accelerator	INKA	Munich
Bonnie Green	Director of Ethics	ETO	Rome
Brenda Behan	Deputy Regional Director	Senior Management	Nairobi
Brian Ross	Risk Management Adviser	Risk Management and Compliance Unit	Nairobi
Carlos Hilarion	Regional IT Officer	ICT Unit	Panama
Caroline Bird	Business Engagement Manager	TECE	Rome
Caterina Kireeva	Regional Monitoring Advisor	Monitoring Unit	Johannesburg
Chantanee Ngernpermpoon	Logistics Assistant	Supply Chain Unit	Bangkok
Charles Inwani	Regional CBT Coordinator	CBT Unit	Cairo
Conor Prenderville	Consultant Nutrition	NUT	Rome
Daniel Durango	Senior Internal Auditor	OIGA	Rome
David Kaatrud	PDP Director, Programme, Humanitarian & Development	PRO	Rome
David Ryckembusch	Senior Performance Management Officer	CPPS	Rome
Deborah McWhinney	Senior Evaluation Officer	OEV	Rome
Diana Klein	Info & Communications Tech Officer	TECA	Rome

Staff Name	Title	Division/ Unit	Location
Dominik Heinrich	Director, Innovation & Knowledge Management Division	INK	Rome
Drake Kataaha	Logistics Consultant	Supply Chain Unit	Johannesburg
Edgardo Yu	Chief, IT Beneficiary Service	TECB	Rome
Edoxi Kindane	Regional Evaluation Officer	Evaluation Unit	Dakar
Elena Ganan	Regional Gender Advisor	Gender Unit	Panama
Enrica Porcari	Chief Information Officer & Director	TEC	Rome
Evan Tedeschi	Senior Consultant	TECI	Rome
Fausto Desantis	Regional Protection Advisor	Protection Unit	Bangkok
Filippo Pompili	Regional Evaluation Officer	Evaluation Unit	Dakar
Flavia Scarnecchia	Chief, Talent Acquisition & Deployment Branch	HRMTW	Rome
Gabriela Alvarado	Chief, IT Emergency Preparedness & Response	TEC	Rome
Gabrielle Tremblay	Evaluation Consultant	Evaluation Unit	Nairobi
Gerard Rebello	Senior Supply Chain Officer	SCOLB	Rome
Gianluca Bruni	OIC Head of Regional IT unit	ICT Unit	Cairo
Gina Pattugalan	Chief, Governance & Partnerships	TECG	Rome
Grace Igweta	Regional Evaluation Officer	Evaluation Unit	Johannesburg
Hanna Maier	Disaster Risk Manager & CBT Specialist	Programme Unit	Panama
Harriet Spanos	Chief, Risk Management Branch	ERM	Rome
Helle Falkjakobsen	Beneficiary Management Officer	OSZPH	Rome
Isabele Dia	Programme Officer (Evaluation)	Evaluation Unit	Dakar
Isabell Mballa	Chief Food Quality & Safety Unit	Supply Chain Unit	Dakar
Isobel Leyshon	Data Architect Consultant	TECX	Rome
Jakob Kern	Director OMS and Deputy Chief of Staff	OMS	Rome
Jean Martin Bauer	Senior Advisor on Data and Digital	UN System & Multilateral Engagement Division	New York
Jennifer Rosenzweig	Chief Knowledge Management & Digital Innovation	NUT	Rome
Jesse Wood	Chief, Field Support	OSZPH	Rome
Joanna Saidy	HR Officer	HRMTM	Rome
Jonathan Howitt	Director and Chief Risk Officer, Enterprise Risk Management Division	ERM	Rome
Jonathan Rivers	VAM Officer	RAMAH	Rome
Katherine Gagnon	Chief, Information Security	TEC	Rome
Kenn Crossley	Director, CBT	CBT	Rome
Kirsi Junnila	Logistics Officer	Supply Chain Unit	Bangkok
Koen Peters	Supply Chain Officer, Head of Optimization	SCOO	Rome
Krishna Pahari	Senior VAM Officer	VAM Unit	Nairobi
Kyriacos Koupparis	Head of Frontier Innovations	INKA	Munich
Lara Prades	Head of the GIS Unit, Emergency Operations Division	EMEG	Rome
Laura Lacanale	Special Assistant	SEC	Rome
Lithabel Degonzalez	Supply Chain Officer	Supply Chain Unit	panama
Luca Molinas	Regional Evaluation Officer	Evaluation Unit	Cairo

Staff Name	Title	Division/ Unit	Location
Luis Alvarado	Regional ICT Officer	ICT Unit	Johannesburg
Luna Kim	Regional Monitoring Advisor	M&E Unit	Bangkok
Maria Montalvo	Director Security Division & WFP Security Focal Point	SEC	Rome
Massimo Nasta	ERP Road Map Senior Advisor	TECA	Rome
Matthew Lowe	Supply Chain Consultant	Supply Chain Unit	Johannesburg
Mattia Pinzone	Consultant Information Management & Reporting	EMEG	Rome
Mauricio Burtet	Senior Emergency Preparedness and Response Advisor	Emergency Preparedness and Response Unit	Johanesburg
Maurizio Blasilli	Business Transformation Officer	TEC	Rome
Mehtab Sumar	Head of SCOPE Product Development	TECB	Rome
Michala Assankpon	Evaluation Officer	Evaluation Unit	Panama
Michela Bonsignorio	Consultant Programme Policy	OSZPH	Rome
Michela Cristiani	Biometrics Field Coordinator	CBT Unit	Dakar
Mie Kataoka	Logistics Officer	Supply Chain Unit	Johannesburg
Moussa Sana	Regional ICT Officer	TECH	Nairobi
Muanza Kanda	Regional ICT Officer	RBD	Dakar
Natasha Frosina	Regional CBT Advisor	RBD	Dakar
Nesrin Semen	Regional Monitoring Advisor	RBC	Cairo
Niamh Ogrady	Evaluation Officer (SBP)	SBP	Rome
Nicolas Bidault	Senior VAM Officer	VAM Unit	Bangkok
Nicolas Morin	Regional Security Officer	SEC	Rome
Nikki Zimmerman	Regional Evaluation Officer	Evaluation Unit	Nairobi
Nina van Ettekoven	Supply Chain Officer, Head of Visibility	SCOO	Rome
Nuru Jumaine	Head of Logistics	Supply Chain Unit	Dakar
Patrick Mckenna	Partnership Officer	PPF	Rome
Patrick Mergey	Regional Security Officer	Security Unit	Nairobi
Patrick Mullen	Risk Management Adviser	ERM	Rome
Paul Skoczylas	Deputy Director Division for the UN System & Multilateral Engagement	UN System & Multilateral Engagement Division	New York
Paul Von Kittlitz	Business Transformation Officer	TECB	Rome
Pauline Nguyo	IT Consultant	TECH	Rome
Peter Musoko	Deputy Regional Director	Senior Management	Dakar
Pierreguillaume Wielezynski	Chief, Digital Transformation Services	TEC	Nairobi
Pietro Motta	Data Assurance Project Manager, CBT	CBT	Rome
Qaseem Gahusy	Supply Chain Officer	Supply Chain Unit	Bangkok
Rachida Aouameur	Humanitarian Policy Advisor	Programme Unit	Dakar
Rana Sallam	Evaluation Officer	Evaluation Unit	Cairo
Raul Saenz	Consultant School-Based Programmes	SBP	Rome
Regan Shercliffe	Chief of Staff Counselling	WEL	Rome
Riccardo Coen	Head of IT Governance	TECG	Rome
Ronald Tran Ba Huy	Deputy Director, Field Monitoring Service	RAMM	Rome

Staff Name	Title	Division/ Unit	Location
Rossella Bottone	Regional Monitoring Advisor	RAM Unit	Panama
Ryan Beech	Programme Policy Officer (CBT)	CBT	Rome
Silvia Moreira	Identity & Targeting Consultant	TECG	Rome
Siti Halati	Programme Officer (Nutrition)	NUT	Rome
Stuart Copue	Regional Evaluation Officer	Evaluation Unit	Bangkok
Vladimir Jovcev	Senior Supply Chain Officer	SCOLB	Rome
Yumiko Kanemitsu	Regional Evaluation Officer	Evaluation Unit	Bangkok
Zaira Tarragoni	OIM & Performance Reports Officer	EMEG	Rome
Zarrina Kurbanova	Regional Monitoring Advisor	Monitoring Unit	Nairobi
Zuzana Kazdova	Programme Policy Officer (Gender)	GEN	Rome

Annex XI. Bibliography

ACAPS. 2019. Crisis In Sight: Humanitarian Access Overview. Retrieved from https://www.acaps.org/methodology/access.

Asian Development Bank. 2018. Strategy S2030. Retrieved from https://www.adb.org/sites/default/files/institutional-document/435391/strategy-2030-main-document.pdf.

Belliveau, J. 2016. Humanitarian access and technology: opportunities and applications. *Procedia Engineering,* 159: 300-306.

Bessant, J. & Tidd, J. 2008. Managing Innovation: Integrating Technological, Market, and Organization Change. Fourth edition. London, John Wiley & Sons.

BMC. 2019. Four Dimensions of Service Management in ITIL 4. Service Management Blog.

Camealeon & CaLP. 2019. Research Report on AAP in the World Food Programme's multi-purpose cash programme. Retrieved from https://reliefweb.int/report/lebanon/cash-assistance-lebanon-accountability-affected-populations-aap-research-report-aap.

Chen, C. 2019. Humanitarian Technology: Taking the 'Human' out of Humanitarianism?. *RSIS Commentary,* 154.

Cook, A. & Picucci, E.V. 2017. Humanitarian Technology Survey, May 2017. RSIS. Retrieved from https://think-asia.org/bitstream/handle/11540/7344/RSIS_HUMTech_3rd.pdf?sequence=1.

Coppi, G. & Fast, L. 2019. Blockchain and distributed ledger technologies in the humanitarian sector. London, ODI.

Dabalen, A., Etang, A., Hoogeveen, J., Mushi, E., Schipper, Y. & von Engelhardt, J. 2016. Mobile Phone Panel Surveys in Developing Countries: A Practical Guide for Microdata Collection. World Bank Group.

Development Initiatives. 2020. Global Humanitarian Assistance Report. Retrieved from https://devinit.org/resources/global-humanitarian-assistance-report-2020/.

Devex. 2019. Opinion: The WFP and Palantir Controversy Should be a Wake-up Call for the Humanitarian Community. Retrieved from https://www.devex.com/news/opinion-the-wfp-and-palantir-controversy-should-be-a-wake-up-call-for-humanitarian-community-94307.

Digital Public Goods Alliance. 2021. Who we are. Retrieved from https://digitalpublicgoods.net/who-we-are/.

Easterly, J. 2019. Open Letter to WFP re: Palantir Agreement. Retrieved from https://responsibledata.io/2019/02/08/open-letter-to-wfp-re-palantir-agreement/.

ELAN. 2016. A data starter kit for humanitarian field staff. Retrieved from https://www.calpnetwork.org/wp-content/uploads/2020/06/DataStarterKitforFieldStaffELAN.pdf.

Emergency Telecommunications Cluster. 2020. A New Strategy for Humanitarian Connections.

European Parliament. 2016. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

European Parliamentary Research Service. 2019. Technological Innovation for Humanitarian Aid and Assistance. Brussels, EPRS.

García, O. & Kotturi, P. 2019. Information and Communication for Technologies for Development Evaluation. *Routledge Studies in Development Economics*.

Global Disaster Preparedness Center. 2020. Data Playbook (Beta). Retrieved from https://preparecenter.org/toolkit/data-playbook-toolkit/.

Himelein, K., Echkman, S., Lau, C. & McKensive, D. 2020. Mobile Phone Surveys for Understanding COVID-19 Impacts: Part II Response, Quality and Questions. World Bank.

Hiveonline & Mercy Corps. 2020. The Next Generation Humanitarian Distributed Platform.

Human Rights Watch. 2021. UN Shared Rohingya Data Without Informed Consent. Retrieved from https://www.hrw.org/news/2021/06/15/un-shared-rohingya-data-without-informed-consent.

IASC. 2021. The Grand Bargain. Retrieved from https://interagencystandingcommittee.org/grand-bargain.

Identity Systems. 2021. ID2021. Retrieved from https://id2020.org/alliance.

IFAD. 2019. Technical Innovations for Rural Poverty Reduction: Evaluation Synthesis.

IFRC. 2019. Community Engagement and Accountability Toolkit.

IFRC. 2013. Improved access to technology can save lives in emergencies says new Red Crescent Report.
IFRC. 2018. Minimum Standards for Protection, Gender and Inclusion in Emergencies. Retrieved from https://www.ifrc.org/document/minimum-standards-pgi-emergencies
IFRC. 2019. Tool 15: Feedback Starter Kit.
IFRC Solferino Academy. 2021. Transformation 6: Undergoing a Digital Transformation. Retrieved from https://solferinoacademy.com/tr6-digital-transformation/.
International Initiative for Impact Evaluation. 2017. Science, Technology, Innovation and Partnerships for Development an Evidence Gap Map.
ITU. 2017. Measuring the Information Society Report 2017: Volume 1.
ITU. 2019. Bridging the gender divide. Retrieved from https://www.itu.int/en/mediacentre/backgrounders/Pages/bridging-the-gender-divide.aspx.
Jones, L. 2019. How Mobile Phones can be Used to Track People's Views on Resilience: Key Findings from Myanmar. Overseas Development Institute.
Kopper, S. & Sautmann, A. 2020. Best practices for conducting phone surveys. J-PAL.
Ladek, S., Abdelkhaliq, Z., Cameron, S., Green, S. & Procter, C. 2019. Evaluation of UNHCR's data use and information management approaches. UNHCR.
Lafreniere, J., Sweetman, C. & Thylin, T. 2019. Introduction: Gender, Humanitarian Action and Crisis Response. *Gender & Development,* 27(2): 187-201.
Latonero, M. 2019. Stop Surveillance Humanitarianism. *The New York Times*, Opinion: The Privacy Project.
Leavitt, H. J. 1965. Applied Organization Change in Industry: Structural, Technical, and Humanistic Approaches. In J. March, ed. *Handbook of Organizations*, p. 1144-1170.
McGee, R., Duncan, E., Anderson, C., Hudson, H. & Feruglio, F. 2018. Appropriating Technology for Accountability: Messages from Making All Voices Count, Institute of Development Studies.
Mercy Corps. 2021. AgriFin. Retrieved from https://www.mercycorpsagrifin.org.
Mercy Corps. 2019. Annual Impact Report: Technology for Impact.
Mercy Corps. 2018. Annual Impact Report: Technology for Impact.
Mercy Corps. 2020. Climate and Disaster Resilience: Mercy Corps' Approach. Retrieved from https://www.mercycorps.org/sites/default/files/2020-11/Mercy-Corps-Climate-Resilience-Approach-2020.pdf.
Mercy Corps. 2020. Community Accountability Reporting (CARM) Policy.
Mercy Corps. 2020. Connecting People on the Move: The Humanitarian's Duty of Care. Retrieved from https://europe.mercycorps.org/sites/default/files/2021-03/03-WhitePaper_FINAL_feb2021.pdf.
Mercy Corps. 2021. Connectivity Research. https://europe.mercycorps.org/en-gb/research-resources/technology-development-connectivity-research**.**
Mercy Corps. 2018. E-transfer Implementation Guide for Cash Transfer Programming. Retrieved from https://www.mercycorps.org/sites/default/files/2020-01/EtransferGuide2018%2C%20Final.pdf.
Mercy Corps. 2018. How can technology transform the refugee crisis? Retrieved from https://www.mercycorps.org/blog/technology-transform-refugee-crisis.
Mercy Corps. 2018. How technology is affecting the refugee crisis. Retrieved from https://europe.mercycorps.org/en-gb/blog/technology-refugee-crisis.
Mercy Corps. 2018. International Rescue Committee, Mercy Corps, Google, Microsoft, Cisco and TripAdvisor Expand One-Stop Informational Portal for Refugees Under the Newly Formed Global Platform, Signpost.
Mercy Corps. 2019. Libra: Creating financial opportunity for all. Retrieved from https://www.mercycorps.org/blog/libra-creating-financial-opportunity-all.
Mercy Corps. 2021. Mercy Corps' Compass.
Mercy Corps. 2018. Mobile Wallet Pilot Report – Jordan: Increased Accessibility & Reduced Visibility. Retrieved from https://www.mercycorps.org/sites/default/files/2019-11/Mobile%20Wallet_Increased%20Accessibility%20Reduced%20Visibility_0.pdf.
Mercy Corps. 2018. Partnering with Mastercard to provide cash and financial services. Retrieved from https://mercycorps.org/blog/mastercard-partnership-cash.
Mercy Corps. 2020. Responsible Data Toolkit. https://www.mercycorps.org/research-resources/responsible-data-toolkit.
Mercy Corps. 2019. Seven Tech Trends that are Transforming Humanitarian Aid.
Mercy Corps. 2019. Technology for Impact – Annual Impact Report.

Mercy Corps. 2021. Technology - What we do. Retrieved from: https://europe.mercycorps.org/en-gb/what-we-do/technology.
Mercy Corps. 2019. The Libra opportunity for smallholder farmers. Retrieved from: https://www.mercycorps.org/blog/libra-for-smallholder-farmers.
Mercy Corps. 2020. The power of partnerships: Cisco and Mercy Corps' unique way of working. Retrieved from https://www.mercycorps.org/blog/partnerships-unique-working.
Mercy Corps. 2021. What we do. Retrieved from: https://europe.mercycorps.org/en-gb/what-we-do.
Metcalfe-Hough, V., Fenton, W., Willitts-King, B. & Spencer, A. 2021. The Grand Bargain at five years: an independent review. Retrieved from https://odi.org/en/publications/the-grand-bargain-at-five-years-an-independent-review/.
Microsoft News Center. 2018. Microsoft Jordan partners with Mercy Corps, Madrasati and Jordan Education for Employment to teach the basics of computer code to more than 1,300 youth nationwide.
Mock, N., **Morrow, N., Papendieck, A., Pendley, S. C. & Hudson, M.** 2015. Review of mVAM programme: novel application of mobile technologies for food security monitoring. WFP.
Multilateral Organization Performance Assessment Network. 2019. MOPAN 2017-18 Assessments: World Food Programme (WFP).
ODI. 2019. The Humanitarian Digital Divide.
OCHA. 2021. From Digital Promise to Frontline Practice: New and Emerging Technologies in Humanitarian Action.
OCHA Services. 2021. Humanitarian response – Cash Working Group. Iraq 2021: Humanitarian Response Plan. Retrieved from https://www.humanitarianresponse.info/en/operations/iraq/cash-working-group. Accessed on July 2021.
OHCR. 2020. Report of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance.
OIOS. 2019. Audit of Information and Communications Technology Governance at the Office of the United Nations High Commissioner for Refugees, Report 2019/140.
OIOS. 2018. Audit of the progress version 4 registration and case management system at the Office of the United Nations High Commissioner for Refugees, Report 2018/021.
Philanthropy Advisors. 2016. Increasing Private Sector Involvement in the Humanitarian Response System and Opportunities.
Principles for Digital Development. 2017. Guidance for Practicing the Principles for Digital Development in a Gender Transformative and Inclusive Way.
Qureshi, S. 2013. What is the role of mobile phones in bringing about growth?. *Information Technology for Development*, 19(1): 1-4.
Rahman, Z., Verhaert, P. & Nyst, C. 2018. Biometrics in the Humanitarian Sector. The Engine Room and Oxfam. Retrieved from https://www.theengineroom.org/biometrics-in-the-humanitarian-sector/.
Ramalingam, B. & Bound, K. 2016. Innovation for International Development: Navigating the Paths and Pitfalls. Nesta.
Responsible Data Forum. 2020. What is Responsible Data? Retrieved from https://responsibledata.io/what-is-responsible-data/.
Rogers, E. 2003. *Diffusion of Innovations*. Fifth edition. New York, Free Press.
S. Rajaratnam School of International Studies. 2018. Roundtable on Humanitarian Technology and Innovation Critical Questions and Implications for Southeast Asia.
Schmidt, A. 2020. Mercy Corps Blog: The power of partnerships – Cisco and Mercy Corps' unique way of working. Retrieved from https://www.mercycorps.org/blog/partnerships-unique-working.
Searle, M. 2017. Humanitarian Technology: New Innovations, Familiar Challenges, and Difficult Balances. RSIS.
Searle, M. 2017. Humanitarian Action & Coordination Humanitarian Technology: Balancing Protection with Flexibility. RSIS Commentary.
The Electronic Cash Transfer Learning Action Network. Retrieved from https://elan.cashlearning.org/.
The Engine Room. 2019. Unpacking 'Informed Consent'. Retrieved from https://www.theengineroom.org/unpacking-informed-consent/.
The New Humanitarian. 2018. Humanitarian Technology: The Promises and Risks of New Technology in Disaster Response.

The New Humanitarian. 2019. Humanitarian Technology: The Promises and Risks of New Technology in Disaster Response.
The New Humanitarian. 2020. Exclusive: The Cyber Attack the UN Tried to Keep Under Wraps.
Thylin, T. & Duarte, M.F.N. 2019. Leveraging Blockchain Technology in Humanitarian Settings – Opportunities and Risks for Women and Girls. *Gender & Development,* 27(2): 317-336.
UN OCHA. 2016. Global Humanitarian Overview: A Consolidated Appeal to Support People Affected by Disaster and Conflict. Retrieved from https://www.humanitarianresponse.info/en/programme-cycle/space/document/global-humanitarian-overview-2016-consolidated-appeal-support-people
UN OCHA. 2019. Global Humanitarian Overview 2020.
UN OCHA. 2021. From digital promise to frontline practice: new and emerging technologies in humanitarian action.
UN Women. 2017. Making Innovation and Technology Work for Women: Un Women's Work In Innovation and Technology.
UN. 2012. The Future We Want: Outcome Document of the United Nations Conference on Sustainable Development.
UN. 2015. Transforming Our World: The 2030 Agenda for Sustainable Development.
UN. 2017. Repositioning the United Nations development system to deliver on the 2030 Agenda: our promise for dignity, prosperity and peace on a healthy planet.
UN. 2018. UN Secretary-General's Strategy on New Technologies.
UN. 2019. Report of the Special Rapporteur on Extreme Poverty and Human Rights.
UN. 2020. Global Humanitarian Overview.
UNHCR. 2018. Addendum on Data Sharing to the January 2011 Memorandum of Understanding between the Office of the United Nations High Commissioner for Refugees (UNHCR) and the World Food Programme (WFP).
UNHCR. 2019. Data Transformation Strategy (2020–2025).
UNHCR. 2021. Digital Access, Inclusion and Participation Programme. Retrieved from https://www.unhcr.org/innovation/digital-inclusion/.
UNHCR. 2020. Global Report 2020. Retrieved from https://www.unhcr.org/flagship-reports/globalreport/.
UNHCR. Guidance on Registration and Identity Management. Retrieved from https://www.unhcr.org/registration-guidance/.
UNHCR. 2020. Operational Guidance on Accountability to Affected People (AAP).
UNHCR. 2015. Privacy Impact Assessment of UNHCR Cash-Based Interventions.
UNHCR, IOM & UNICEF. 2019. Synthesis of Rohingya Response Evaluations of IOM, UNICEF and UNHCR. Retrieved from https://www.unhcr.org/5e453ea64.pdf.
UNHCR & UNICEF. 2020. Data Sharing Agreement among UNHCR, WFP and UNICEF in the context of programmes involving transfers of cash assistance to beneficiaries in humanitarian situations. Retrieved from https://www.unhcr.org/602e24a94.pdf.
UNHCR & WFP. 2020. Joint Update on Use of Innovation and Technology. Retrieved from https://reliefweb.int/report/world/unhcr-wfp-joint-update-use-innovation-and-technology-22-january-2020.
UNICEF. 2021. AI For Children – Exploring how to embed child rights in the governing polices of artificial intelligence. Retrieved from https://unicef.org/globalinsight/featured-projects/ai-children.
UNICEF. 2020. Digital UNICEF – Accelerating the results for children with technology and digital innovation. Retrieved from https://www.unicef.org/media/83011/file/Accelerating-results-for-children-with-technology-and-digital-innovation-2020.pdf.
UNICEF. 2019. Evaluation of Innovation in UNICEF work.
UNICEF. 2020. UNICEF Global Innovation Strategy and Framework 2.0: The 'ABCs' of innovation – Matching today's challenges with tomorrow's solutions. Retrieved from https://www.unicef.org/innovation/media/13521/file/UNICEF%20Global%20Innovation%20Strategy%20and%20Framework%202.0:%20The%20%E2%80%98ABCs%E2%80%99%20of%20innovation.pdf.
UNICEF Innovation. 2018. GIC Annual Report 2017-2018. Pathways to scale, pathways to results for every child.
UNICEF Office of Global Insight and Policy. 2021. The Case for Better Governance of Children's Data: A Manifesto. Retrieved from https://www.unicef.org/globalinsight/media/1741/file/UNICEF%20Global%20Insight%20Data%20Governance%20Manifesto.pdf.

UNICEF Office of Global Insight and Policy. 2020. Tools to Operationalize the UNICEF Policy Guidance on AI for children https://www.unicef.org/globalinsight/media/1166/file/UNICEF-Global-Insight-tools-to-operationalize-AI-policy-guidance-2020.pdf.
UNICEF Office of Research – Innocenti. 2020. Encryption, Privacy and Children's Right to Protection from Harm. https://www.unicef-irc.org/publications/1152-encryption-privacy-and-childrens-right-to-protection-from-harm.html.
UNICEF Supply Division. 2020. UNICEF Policy on Personal Data Protection. Retrieved from https://www.unicef.org/supply/media/5356/file/Policy-on-personal-data-protection-July2020.pdf.
USAID. 2020. Digital Strategy 2020-2024.
Vinck, P, ed. 2013. World Disasters Report: Focus on Technology and the Future of Humanitarian Action. Geneva, International Federation of Red Cross and Red Crescent Societies.
Waugaman, A. 2016. From Principle to Practice: Implementing the Principles for Digital Development. Washington, DC: The Principles for Digital Development Working Group.
WF. 2020. Innovation Accelerator Supported Projects 2015-2019.
WFP. Administration Department. 2001. Executive Director's Circular: Strengthening and Rationalizing WFP's Information Systems and Communications Technology and Information Management.
WFP. 2006. Directive on Records Retention Policy in WFP.
WFP. 2010. Memorandum on Technical Approval for the Procurement of IT Software, Hardware & Services.
WFP. 2012. Information Note: WFP User Account Management Policy.
WFP. 2012. WFP Humanitarian Protection Policy.
WFP. 2013. WFP Strategic Plan (2014-2017).
WFP. 2013. WFP Strategic Results Framework (2014-2017).
WFP. 2014. Operational Evaluations Synthesis Report July 2013/July 2014.
WFP. 2014. Executive Director's Circular: Establishment of the Management Information Systems Steering Committee (MISSC).
WFP. 2014. Executive Director's Circular: WFP Code of Conduct.
WFP. 2014. Executive Director's Circular: WFP Master Data Governance Framework.
WFP. 2014. WFP Corporate Partnership Strategy (2014–2017).
WFP. 2015. Evaluation Policy (2016–2021).
WFP. 2015. Executive Director's Circular: WFP Corporate Information and IT Security Policy.
WFP. 2015. WFP Gender Policy (2015-2020).
WFP. 2016. Corporate Results Framework (2017–2021).
WFP. 2016. Financial Framework Review.
WFP. 2016. Gender Action Plan.
WFP. 2016. Integrated Road Map Narrative.
WFP. 2016. Integrated Road Map Talk Track.
WFP. 2016. Integrated Road Map: Positioning WFP For A Changing World.
WFP. 2016. Operational Evaluations Synthesis Report July 2015-July 2016: Partnerships for the Future
WFP. 2016. Policy on Country Strategic Plans.
WFP. 2016. Protection Guidance Manual Emergencies and Transitions Unit (OSZPH).
WFP. 2016. Understanding the IRM Presentation – Condensed.
WFP. 2016. Understanding the IRM Presentation – Full.
WFP. 2016. Update on the Integrated Road Map for the Strategic Plan (2017–2021), the Country Strategic Planning Approach and the Financial Framework Review.
WFP. 2016. Update on the Integrated Road Map for the Strategic Plan (2017–2021), the Corporate Results Framework, the Policy on Country Strategic Plans and the Financial Framework Review.
WFP. 2016. Use of The Corporate Tool, COMET (Country Office Tool for Managing Effectively) For Programme Design, Implementation, Monitoring and Performance Management.
WFP. 2016. WFP Corporate Information Technology Strategy (2016-2020).
WFP. 2016. WFP Guide to Personal Data Protection and Privacy.
WFP. 2016. WFP Knowledge Management Strategy.
WFP. 2016. WFP Strategic Plan (2017-2021). Retrieved from https://www.wfp.org/publications/wfp-strategic-plan-2017-2021.
WFP. 2017. OEV. Strategic Evaluation Review, Themes and Coverage Levels, Advisory Report – Final.
WFP. 2017. A Guide to Using Computer Assisted Telephone Interviewing (CATI) to Collect Data on Minimum Dietary Diversity for Women (MDD-W) and Minimum Acceptable Diet (MAD).

WFP. 2017. Accountability to Affected Populations Guidance Manual Emergencies and Transitions Unit (OSZPH).
WFP. 2017. AIMS Pilot Project: Monitoring the Physical Impacts of Food Assistance for Assets Programmes with Satellite Imagery.
WFP. 2017. Annual Evaluation Report 2017.
WFP. 2017. Assurance Advisory of Cyber Security in WFP.
WFP. 2017. Conducting Mobile Surveys Responsibly: A Field Book for WFP Staff.
WFP. 2017. CRF Management Performance –detailed structure.
WFP. 2017. Internal Audit of Beneficiary Management.
WFP. 2017. IRM Summary.
WFP. 2017. Mid-Term Review of the WFP Innovation Accelerator.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): Asia and the Pacific Region.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): East and Central Africa Region.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): Latin America and the Caribbean Region.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): Middle East, North Africa, Central Asia and Eastern Europe Region.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): Southern Africa Region.
WFP. 2017. Operation Evaluations Series, Regional Synthesis (2013-2017): West and Central Africa Region.
WFP. 2017. Operational Evaluations Synthesis Report July 2016-July 2017: Optimizing Performance.
WFP. 2017. Policy Evaluation: WFP Corporate Partnership Strategy (2014-2017).
WFP. 2017. SCOPE in Somalia: Cash-Based Transfer Assistance.
WFP. 2017. Technical Note: Evaluation Questions and Criteria.
WFP. 2017. Technical Note: Impact Evaluation.
WFP. 2017. Technical Note: Integrating Gender in WFP Evaluations.
WFP. 2017. The Integrated Road Map in Brief.
WFP. 2017. Update on the Gender Policy.
WFP. 2017. Update on the Integrated Road Map.
WFP. 2017. WFP Management Plan (2018–2020).
WFP. 2018. A Digital Revolution in Malnutrition Treatment: Introducing SCOPE CODA.
WFP. 2018. An evaluation of the effects and a cost benefit analysis of the GFD Cash Modality Scale up (Cash-Based Transfers for PRRO 200737) for refugees and host communities in Kenya.
WFP. 2018. Annual Evaluation Report 2018.
WFP. 2018. Corporate Emergency Evaluation of the WFP Regional Response to the Syrian Crisis (January 2015-March 2018).
WFP. 2018. Energizing School Feeding.
WFP. 2018. Implementation of the Integrated Road Map.
WFP. 2018. Journey of a Beneficiary Towards a Digital Transformation to Better Support Those We Serve.
WFP. 2018. Revised Corporate Results Framework (2017–2021).
WFP. 2018. SCOPE Insight: Reporting and Analysis.
WFP. 2018. Somalia, Humanitarian Cash-Based Response (2017): Joint Evaluation
WFP. 2018. Somalia: An Evaluation of WFP's Portfolio (2012-2017).
WFP. 2018. TEC in 2018. A Year in Review.
WFP. 2018. Update on the Integrated Road Map.
WFP. 2018. WFP's General Food Assistance to Syrian Refugees in Jordan 2015 to mid 2018.
WFP. 2019, A Statement on the WFP-Palantir Partnership.
WFP. 2019. Advisory Report on Data Protection and Privacy: As Informed from Benchmarking to the General Data Protection Regulation (GDPR).
WFP. 2019. Annual Country Report: South Sudan 2019.
WFP. 2019. Annual Evaluation Report 2019.
WFP. 2019. Annual Performance Report for 2018.
WFP. 2019. Annual Report 2019.
WFP. 2019. Audit of Vulnerability Management.
WFP. 2019. CBT Assurance Guidance.
WFP. 2019. Ethiopia: An Evaluation of WFP's Portfolio (2012-2017).

WFP. 2019. Evaluation Décentralisée. Evaluation thématique sur les questions de genre dans les interventions du PAM en République centrafricaine (2014-2018).
WFP. 2019. Evaluation of WFP's Corporate Emergency Response in Northeast Nigeria (2016-2018).
WFP. 2019. Internal Audit of Governance of IT-Enabled Projects in WFP.
WFP. 2019. Internal Audit of Mobile-Based Transfers in West and Central Africa.
WFP. 2019. Internal Audit on ICT Management in Country Offices.
WFP. 2019. OIGA Assurance Work Plan 2020.
WFP. 2019. Private-Sector Partnerships and Fundraising Strategy (2020-2025).
WFP. 2019. TEC Product Journey.
WFP. 2019. TEC Year-in-Review: A Meaningful 2019.
WFP. 2019. The potential of cash-based interventions to promote gender equality and women's empowerment: a multi-country study.
WFP. 2019. WFP Management Plan (2019–2021).
WFP. 2019. WFP Management Plan (2020–2022).
WFP. 2019. WFP Organigram.
WFP. 2019. WFP SCOPE Know them Better, to Serve them Better.
WFP. 2019. WFP Toolkit to Operationalize Beneficiaries Personal Data Protection (Provisional) .
WFP. 2019. WFP's Corporate Emergency Response in Northeast Nigeria (2016–2018) Corporate Emergency Response Evaluation.
WFP. 2020. Advisory Assurance Accountability to Affected Populations (AAP) – A Maturity Framework To Guide And Track Progress Towards Meeting WFP's Commitments.
WFP. 2020. Advisory Assurance Beneficiary Data Mapping Lessons-Learned from Remote Assessments.
WFP. 2020. Advisory Assurance Follow Up Assignment of Cybersecurity in WFP.
WFP. 2020. Annual Performance Report for 2019.
WFP. 2020. Business Division/ Unit Business Roadmap.
WFP. 2020. Closed-Loop Solutions Powered by WFP SCOPE.
WFP. 2020. Corporate Planning and Performance Division Directive: Country Office Tool for Managing (Programme Operations) Effectively (COMET): Purpose, Scope, Roles and Responsibilities.
WFP. 2020. Decision Memorandum: New Master Data Domains and Owners.
WFP. 2020. The Democratic Republic of the Congo: An Evaluation of WFP's Interim Country Strategic Plan 2018-2020.
WFP. 2020. Develop Software within Freedom in a Framework.
WFP. 2020. Digital Presentation Services Presentation to OEV.
WFP. 2020. Digital Transformation – Beyond the Annual Performance Report 2019 Series.
WFP. 2020. DOTS Brief.
WFP. 2020. DOTS FAQ.
WFP. 2020. Evaluation of Cameroon WFP Country Strategic Plan (2018-2020).
WFP. 2020. Evaluation of the Democratic Republic of the Congo Interim Country Strategic Plan.
WFP. 2020. Hunger Map LIVE: WFP's Global Hunger Monitoring System; Tracking and Predicating Hunger in Near Real-Time.
WFP. 2020. Information Technology Division. Executive Director's Circular: Digital Business and Technology Committee (DBTC).
WFP. 2020. Innovation & Knowledge Management Organizational Chart.
WFP. 2020. Internal Audit of Cloud Computing in WFP.
WFP. 2020. Internal Audit of Third-Party Access to WFP's Data and Systems.
WFP. 2020. Internal Audit of WFP Operations in Yemen.
WFP. 2020. IT Solution Development Guidelines.
WFP. 2020. List of L3, L2 and Monitored Countries.
WFP. 2020. Management Review of Significant Risks and Control Issues, 2019.
WFP. 2020. Monthly update on WFP's COVID-19 response.
WFP. 2020. Notice of Internal Audit: Internal Audit of LESS Functionality and Application Controls.
WFP. 2020. Privacy Impact Assessment, Risk Analysis of the Processing of Personally Identifiable Data of Rohingya and Host Community Beneficiary Data in Cox's Bazar, Bangladesh.
WFP. 2020. Register an IT Software Solution.
WFP. 2020. RM Directive: Field Software Development Network.
WFP. 2020. RM Directive: IT Solutions Management.

WFP. 2020. SCOPE CODA: WFP's Innovative Solution for Conditional On-Demand Assistance.
WFP. 2020. SCOPECARD Light Solution Powered by WFP SCOPE.
WFP. 2020. SCOPECARD Solution Powered by WFP SCOPE.
WFP. 2020. Strategic Evaluation of the WFP's Use of Technology in Constrained Environments: Comments on the Draft ToRs (09 June 2020).
WFP. 2020. Strategic Evaluation of WFP's Capacity to Respond to Emergencies.
WFP. 2020. Technology Division Structure.
WFP. 2020. Terms of Reference: Strategic Evaluation of the WFP's Use of Technology in Constrained Environments.
WFP. 2020. WFP Digital Transformation Services: The Product Team.
WFP. 2020. WFP Emergency Response Timeline.
WFP. 2020. WFP Global Presence Map.
WFP. 2020. WFP Global Response to COVID-19.
WFP. 2020. WFP Organigram.
WFP. 2020. WFP SCOPE Overview January-May 2020.
WFP. 2020. WFP SCOPE Technical Considerations for Biometric Registration and Authentication in COVID-19 Affected Operations.
WFP. 2020.Sanitization of IT Assets: TECI SOP.
WFP. 2021. Evaluation of Bangladesh WFP Country Strategic Plan (2016-2019).
WFP. 2021. Internal Audit of SCOPE (draft).
WFP. 2021. Targeting and prioritization (Operational Guidance Note – VAM).
WFP. MDCA: Mobile Data Collection & Analytics. Build, collect, Analyse.
WFP. Standard Operating Procedures for COMET.

Annex XII. Acronyms

AAP	Accountability to Affected Populations
AB	Architectural Board
ACR	Annual Country Reports
ADE	Aide à la Décision Économique
AI	Artificial Intelligence
AIMS	Asset Impact Monitoring System
ALNAP	Active Learning Network for Accountability and Performance in Humanitarian Action
API	Application Programming Interface
APP	Annual Performance Plan
ARM	Association on Refugees and Migrants
BB	Building Blocks
BEM	Business Engagement Manager(s)
BIMS	Biometrics Identity Management System (UNHCR)
CARM	Community Accountability Reporting Mechanisms
CATI	Computer-Assisted Telephone Interviewing
CBT	Cash-Based Transfers
CFM	Community Feedback Mechanisms
CIO	Chief Information Officer
CISO	Chief Information Security Office
CLE	Comparative Learning Exercise
CMAM	Community Management of Acute Malnutrition
CO	Country Office
CODA	Conditional On-Demand Assistance (SCOPE)
COMET	Country Office Tool for Managing Programme Operations Effectively
COVID-19	Coronavirus Disease 2019
CP	Cooperating Partner
CPPS	Corporate Performance Planning Branch
CRF	Corporate Results Framework
CSO	Civil Society Organization(s)
CSP	Country Strategic Plan
CSPE	Country Strategic Plan Evaluation
CTA	Cash Transfer Assistance
CVA	Cash and Voucher Assistance
CwC	Communication with Communities
DAC	Development Assistance Committee
DBTC	Digital Business and Technology Committee
DED	Deputy Executive Director
DIMA	Data and Information Management and Analysis Unit (UNHCR)
DLT	Distributed Ledger Technology
DPKO	Department of Peacekeeping Operations (United Nations)
DRC	The Democratic Republic of the Congo
DVAC	Digital Cash and Voucher Assistance Programme
EAP	External Advisory Panel
ED	Executive Director
ELAN	Electronic Cash Transfer Learning Action Network
EM	Evaluation Manager
EME	Emergency Operations Division
EMEG	Emergencies

EQAS	Evaluation Quality Assurance System
ERM	Enterprise Risk Management Division
ERP	Entreprise Resource Planning
ET	Evaluation Team
ETC	Emergency Telecommunications Cluster
ETO	Ethics Office
ETS	Emergency Telecommunications Sector
FAO	Food and Agriculture Organization
FbF	Forecast-based Financing
FFA	Food Assistance for Assets
FGD	Focus Group Discussion
FLA	Field-Level Agreements
FO	Field Office
FSDN	Field Software Development Network
FSP	Financial Service Provider
GAM	Gender and Age Marker
GDT	Global Distribution Tool
GEN	Gender Office
GEWE	Gender Equality and Women Empowerment
GFA	General Food Assistance
GFD	General Food Distribution
GPO	Global Privacy Office
HQ	Headquarters
HR	Human Resources
HRMTM	Talent Acquisition and Deployment Branch
HRMTW	Workforce Planning and Strategy Branch
IASC	Inter-Agency Standing Committee
ICA	Integrated Context Analysis
ICSP	Interim Country Strategic Plan
ICT	Information and Communication Technology
ICTD	Information and Communication Technology Division
IFAD	International Fund for Agricultural Development
IFI	International Financial Institutions
IFRC	International Federation of Red Cross and Red Crescent Societies
IIC	Iraq Information Centre
IMC	International Medical Corps
INGOs	International Non-Governmental Organizations
INK	Innovation and Knowledge Management Division
INKA	Innovation Accelerator
IOM	International Organization for Migration
IPC	Integrated Phase Classification
IRC	International Rescue Committee
IRG	Internal Reference Group
IRRM	Integrated Rapid Response Mechanism
ISP	Internet Service Point
IT	Information Technology
ITU	International Telecommunications Union
IVR	Interactive Voice Response
KII	Key Informant Interview
KPI	Key Performance Indicator
LDCs	Least Developed Countries
LESS	Logistics Execution Support System

LGBTI	Lesbian, Gay, Bisexual, Trans and Intersex Individuals
M&E	Monitoring and Evaluation
M&E	Monitoring and Evaluation
MENA	The Middle East and North Africa
MIS	Management Information System
MISSC	Management of Information Systems Steering Committee
MMO	Mobile Money Operators
MMT	Mobile Money Transfers
MNO	Mobile Network Operator
MoDA	Mobile Operational Data Acquisition
MoU	Memorandum of Understanding
mPOS	mobile Point of Sale
mVAM	mobile Vulnerability Analysis and Mapping
NGO	Non-Governmental Organization
NUT	Nutrition
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODK	Open Data Kit
OEV	Office of Evaluation
OIGA	Office of the Inspector General and Audit
OMS	Operations Management Support Office
OMS	Operations Management Support Office
OPSCEN	Operational Information Management and Operations Centre Unit
OSE	Emergency Preparedness and Support Response Division
OSZPH	Emergencies and Transitions Unit
PD	Programme and Policy Development Division
PDS	Public Distribution System
PIA	Privacy Impact Assessment
PID	Project Initiation Document
PII	Personal Identifiable Information
PPE	Personal Protective Equipment
PPF	Private Partnerships and Fundraising Division
PRIMES	Population Registration and Identity Management Ecosystem
PRISM	Platform for Real-time Impact and Situation Monitoring
PRO	Programme – Humanitarian and Development Division
ProGres	Profile Global Registration System
PRRO	Protracted Relief and Recovery Operation
PSA	Programme Support and Administrative Budget
PWD	Persons with Disabilities
RAM	Research Assessment and Monitoring
RAM	Research Assessment and Monitoring Division
RAMAH	Hunger Monitoring Unit
RAMM	Field Monitoring Service
RB	Regional Bureau
RBC	Regional Bureau for the Middle East and Northern Africa
RBD	Regional Bureau for Western Africa (Dakar)
RITO	Regional Information Technology Officers
RMP	Performance Management and Monitoring Division
SBP	School-based Programmes
SCO	Supply Chain Operations Division
SCOLB	Logstics Service
SCOO	Supply Chain Planning Service
SDG	Sustainable Development Goal(s)

SE	Strategic Evaluation
SEC	Students (secondary schools)
SMS	Short Message Service
SOC	Social Protection Office
SOP	Standard Operating Procedures
T4D	Technology for Development
TEC	Technology Division
TECA	IT Architecture, Policy and Strategy Branch
TECB	Beneficiary Services Branch
TECE	Business Engagement Branch
TECG	IT Governance and Partnerships
TECI	Information Security Branch
TIC	Technology Investment Committee
TIE	Technology Industry Engagement Group
ToR	Terms of Reference
UN	United Nations
UN WOMEN	United Nations Entity for Gender Equality and the Empowerment of Women
UNDAF	United Nations Development Assistance Framework
UNDSS	United Nations Department for Safety and Security
UNEG	United Nations Evaluation Group
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nation's Children Fund
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
VAM	Vulnerability Analysis and Mapping
VSAT	Very Small Aperture Terminal
WASH	Water Sanitation and Hygiene
WEL	Staff Wellness Division
WFP	World Food Programme
WINGS	WFP Information Network and Global System

Office of Evaluation

World Food Programme

Via Cesare Giulio Viola 68/70
00148 Rome, Italy
T +39 06 65131 wfp.org/independent-evaluation