GSMA

Toolkit Guidance
Version 2
April 2023

Version 1 published January 2021

Humanitarian Connectivity Needs and Usage Assessment

Guidance for implementing the Toolkit

REACH Informing more effective humanitarian action

etc

GSMA

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at www.gsma.com

Follow the GSMA on Twitter: @GSMA

GSMA Mobile for Humanitarian Innovation

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

Learn more at www.gsma.com/m4h or contact us at m4h@gsma.com

Follow GSMA Mobile for Development on Twitter: @GSMAm4d

REACH Informing more effective humanitarian action

REACH is a joint initiative of two international non-governmental organizations - ACTED and IMPACT Initiatives - and the UN Operational Satellite Applications Programme (UNOSAT). REACH's mission is to strengthen evidence based decision making by aid actors through efficient data collection, management and analysis before, during and after an emergency. By doing so, REACH contributes to ensuring that communities affected by emergencies receive the support they need. All REACH activities are conducted in support to and within the framework of interagency aid coordination mechanisms.

For more information please visit our website: www.reach-initiative.org.

You can contact us directly at: geneva@reach-initiative.org and follow us on Twitter @REACH_info

etc

In accordance with its mandate, the Emergency Telecommunications Cluster (ETC) provides services to enable populations affected by crises to access life-saving information and communicate through technology.

UKaid from the British people

This initiative has been funded by UK Aid from the UK Government and is supported by the GSMA and its members. The views expressed do not necessarily reflect the UK Government's official policies.

GSMA Contributors:
Belinda Baah – former Insights Manager
Matthew Downer – Senior Insights Manager

REACH Contributors:
Łukasz Kruk – Assessment Specialist

Acknowledgements:
The GSMA would like to thank all the research participants who gave their time and input to help with field testing for this Toolkit.

We are also grateful to the many colleagues from a range of organisations who contributed their expertise and time during this work: American Red Cross, BBC Media Action, CARE, CDAC Network, CALP Network, Danish Refugee Council, Emergency Telecommunications Cluster (ETC), Grameen Foundation, Ground Truth Solutions, ICRC, IOM, International Rescue Committee, Internews, Joint IDP Profiling Service, Jangala, Mercy Corps, Norwegian Refugee Council, Overseas Development Institute, People in Need, Solidarités International, The Research People, Translators Without Borders, United Healthcare Distributors, ULEARN, UNHCR, WFP.

Contents

Humanitarian Connectivity Needs and Usage Assessment

Guidance for implementing the Toolkit

Version 2 published April 2023
Version 1 published January 2021

Notes

This document provides guidance on how to implement the Connectivity, Needs and Usage Assessment (CoNUA) Toolkit in the field. The full Toolkit, along with detailed guidance documentation, are available at **www.gsma.com/mobilefordevelopment/conua.**

This is the second iteration of the Toolkit, building on the beta version which was published in January 2021. Since that first version was published, the Toolkit has been piloted, tested and deployed in a number of humanitarian settings by a number of partner organisations. This revised version has been adapted based on lessons from those deployments.

Throughout the Toolkit, the phrase "Toolkit user" refers to the agency or organisation using the CoNUA Toolkit to conduct an assessment. An "end-user" is an "end user of a mobile phone and related services" and refers to an individual affected by a humanitarian crisis. The closest humanitarian term is "beneficiary".

If you have questions regarding the Toolkit, have used any of the tools or intend to do so then we would love to hear from you. You can contact the GSMA team at **conua@gsma.com.**

List of acronyms

AAP Accountability to Affected Populations

AP Affected Populations

CoNUA Connectivity Needs & Usage Assessment

CVA Cash & Voucher Assistance

CWC Communication with Communities

ETC Emergency Telecommunications Cluster

FGD Focus Group Discussion

HNO Humanitarian Needs Overview

HPC Humanitarian Programme Cycle

HRP Humanitarian Response Plan

ICT Information and Communications Technology

IDI In-depth Interview

IM Instant Messaging

IMWG Information Management Working Group

KYC Know Your Customer

MISTT Mobile Internet Skills Training Toolkit

MNO Mobile Network Operator

OCHA Office for Coordination of Humanitarian Affairs

ODK OpenDataKit

PLWD People Living with Disabilities

SIM Subscriber Identification Module

SDR Secondary Data Review

UNDAF United Nations Development Assistance Framework

01

Introduction

1.1
Rationale, background

More evidence is needed to understand how people affected by crisis access and use mobile technology, and to understand the barriers they encounter. Humanitarian assistance is increasingly digital and it is vital that the sector makes decisions based on high quality evidence related to digital access and inclusion of communities, moving away from anecdotal understandings of how people interact with technology.

Over the past few years there has been a steady increase in the volume of pieces of evidence which aims to fill this gap. Joint GSMA and UNHCR projects, The Digital Lives of Refugees and, The Digital Worlds of Displacement-Affected Communities are among the most in-depth studies looking at how mobile technology is used in humanitarian settings and quantifying key access gaps.

GSMA, in partnership with REACH and supported by the Emergency Telecommunications Cluster (ETC), produced the Connectivity, Needs and Usage Assessment (CoNUA) Toolkit to enable actors to replicate similar data. The CoNUA Toolkit addresses the prevailing evidence gap by providing tools for humanitarians and their key stakeholders to measure mobile phone access and usage, and the preferences and skills of populations of concern, in a robust and standardised manner.

1.2
This document

This guidance document provides guidance on how to implement the CoNUA Toolkit in the field. The first four sections outline key considerations and elements of deploying an assessment fit for purpose in a given context. The fifth section provides some guidance on how to analyse collected data and develop outputs. The final section provides detail on deploying each of the eight tools in the Toolkit.

Recommended background reading:

- The Digital Lives of Refugees
- Apping and resilience: How smartphones help Syrian refugees in Lebanon negotiate the precarity of displacement
- Connecting Refugees
- Digital lives in Ghana, Kenya, and Uganda
- Displaced and Disconnected
- Refugee Connectivity: A Survey of Mobile Phones, Mental Health, and Privacy at a Syrian Refugee Camp in Greece
- ICT4Refugees. A report on the emerging landscape of digital responses to the refugee crisis.
- Internet governance in displacement
- The untapped resource: Protecting and leveraging refugee social capital in protracted displacement

02

Key considerations

2.1
When and why to use the Toolkit

The Toolkit provides a range of tools to examine multiple aspects of mobile phone use for humanitarian purposes.

The tools can be used (as the title suggests) to conduct detailed assessments when organisations are designing connectivity-related or mobile-enabled interventions. When the tools are used together, they form a comprehensive picture and understanding of mobile phone use and its context in a particular crisis. Ultimately, the Toolkit supports organisations to make decisions on implementing aid projects aimed at improving connectivity and access to mobile technology, or delivering products and services that rely on this.

The Toolkit can also be used as part of an evaluation to help understand the impact of a connectivity-related or mobile-enabled intervention. If the data is collected using a standard tool before and after the intervention (in an experimental or quasi-experimental manner), the two datasets can be compared to help show the difference the intervention has made.

Because connectivity-related or mobile-enabled interventions can take various forms (e.g. establishing a new service, using connectivity to deliver an already available service more effectively or efficiently, or providing digital literacy training), the Toolkit does not provide dedicated tools for any specific intervention impact measurement. However, all tools can be tweaked to make their scope more specific. For example, if your intervention's objective is to provide digital literacy workshops, the End-user Survey questions on digital literacy should demonstrate the increase in skills of the interviewees. Additionally, a question on the usefulness of the workshops could be added to FGD 1.

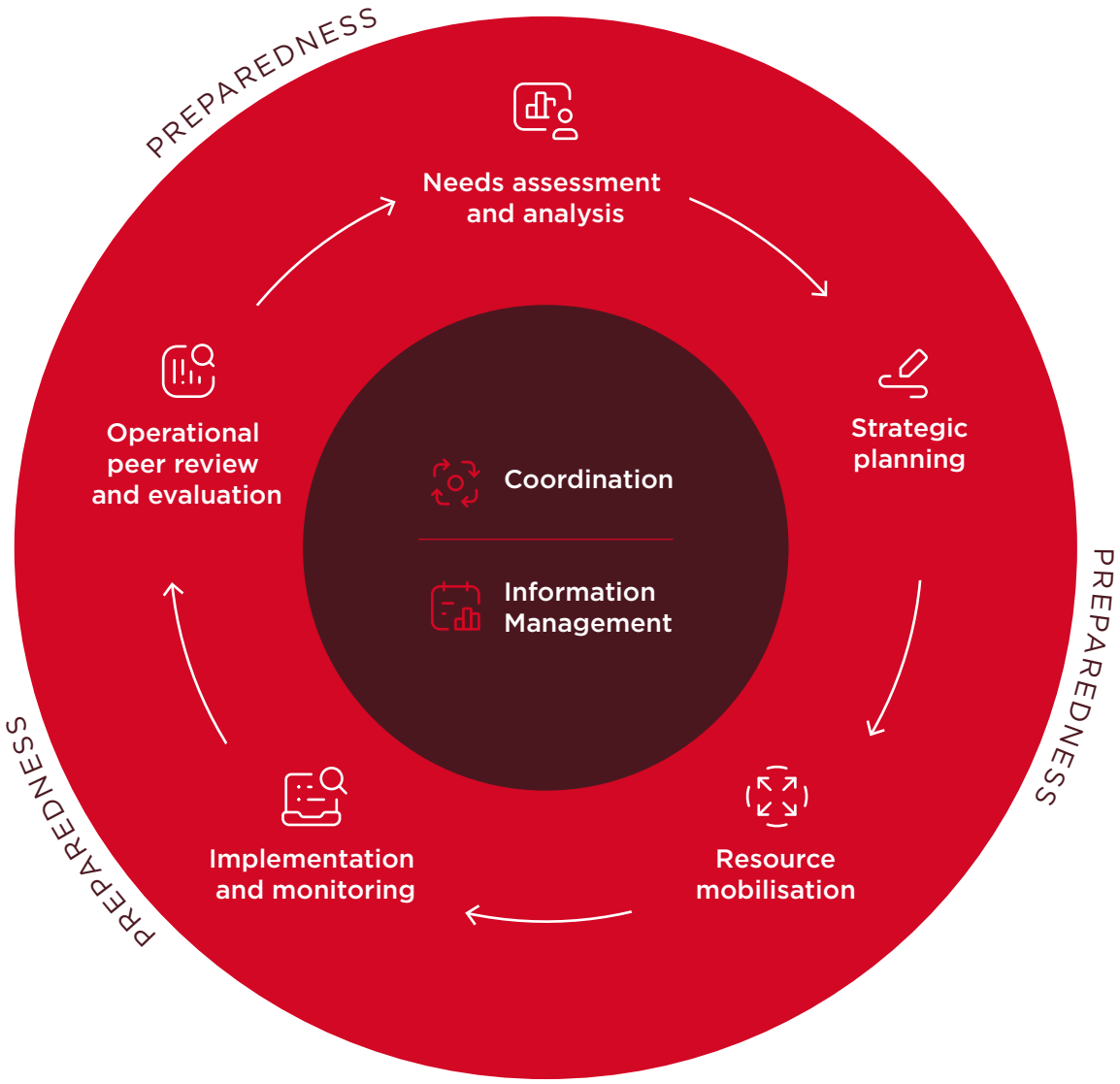
Recommended reading

Assessment planning

- Needs Assessment Handbook
- Humanitarian Needs Assessment. The Good Enough Guide
- Handbook on Data Collection
- Operational Guidance on Coordinated Assessments in Humanitarian Crises
- humanitarianresponse.info – Assessment Registry

To avoid duplicating efforts or causing assessment fatigue, be sure to check if there are any current or recent assessments on the same topic. The GSMA will link to known outputs from CoNUA deployments on our website, whilst relevant coordinating bodies typically include OCHA, the local Information Management Working Group (IMWG), and the ETC.

Humanitarian Programme Cycle (HPC)



While the name of the Toolkit emphasises its assessment role, it was built to be used throughout the Humanitarian Programme Cycle (HPC).

The Humanitarian Programme Cycle:

A In the **assessment** phase of the HPC, the Toolkit enables standardised data to be collected about the use of mobile technology in humanitarian contexts. It helps provide an understanding of the context and quantifies the needs of certain populations.

B In the **planning** phase, the Toolkit data informs specific intervention design and contributes to broader strategic documents, such as the Humanitarian Needs Overview and Humanitarian Response Plan (HNO and HRP.

C In the **resource mobilisation** phase, the collected data enables advocacy and fundraising, both through regular channels such as HRP or UNDAF, as well as flash appeals.

D In the **implementation and monitoring** phase, the programme or HRP goals are tracked to understand if desired outcomes are being achieved, which supports reporting and allows organisations to change course if needed.

E In the **evaluation** phase, the Toolkit offers perception and data restitution questions to help understand if the programme met its goals.

2.2
Protection concerns and risks when using the Toolkit

Because each humanitarian context has unique factors at play, anyone who is preparing to implement this Toolkit should be confident beforehand that there will not be any protection issues linked to the well-being of assessed communities. It may be a good idea to discuss this issue with protection colleagues in your organisation or speak to specialists responsible for the area or population where you are planning the assessment (such as colleagues within the Cluster or UNHCR Protection).

We have outlined some protection aspects that may be linked to this Toolkit below, which cover key protection concerns such as informed consent and data collection and protection guidance. However, be aware that there may be further considerations based on the community or context in which the Toolkit is intended to be deployed.

Recommended reading

Protection

- Protection Mainstreaming Toolkit
- Do No Harm
- Data Collection in Humanitarian Response Protection
- Handbook on data protection in humanitarian action

2.2.1
Informed consent

It is essential that you obtain genuine informed consent from every participant for each and every data collection exercise. Informed consent is rooted in ethical standards and ensures that respect for participants as autonomous agents is embedded into any assessment activity.

We have included a suggested introductory statement aimed at gaining genuinely informed consent with the majority of the tools within the Toolkit. When deploying tools, users should ensure that they have refined this introductory statement to ensure it is suitable for their context and that is easily understood by the intended respondents.

Users must also ensure that they are completely honest about the intended use of the data that is being collected, because failure to do so will invalidate any consent that has been given by users. It is better to highlight potential future uses up front (such as if it will be included in published research materials) to ensure that you have the correct level of consent.

2.2.2
SIM registration and Know-Your-Customer (KYC) regulation

Overarching regulations for registering SIM cards or meeting Know-Your-Customer (KYC) requirements for financial services vary from country to country. This means that refugees and other groups affected by crisis may be unable to register for mobile services and financial services in their own names. Because of this, Toolkit users should be mindful that they do not inadvertently collect data that implicates end users, Mobile Network Operators (MNOs), agents or shopkeepers in unlawful practices. We suggest that this Toolkit only be deployed within communities that have the legal right to access the services that you are interested in. If this is not the case, you may still use the Secondary Data Review (SDR) guidance, signal strength mapping, and market assessment tools, but end users should not be asked questions about their phone use.

Because of these sensitivities, the Toolkit does not explicitly ask end users about their ID documentation or what they used to sign up for specific services. However, there is the question "Whose name is registered with your main phone number?", which can serve as a proxy without explicitly pointing out illegal practice. In some contexts, however, even this should be avoided, and Toolkit users will need to apply their judgement. The UNHCR Displaced and Disconnected series of reports is a good starting point for understanding the regulation in your context.

2.2.3
End users' legal status

As a general policy, it is best not to collect any data that you don't need – especially personal data. In practice, this means you should only ask about individuals' ethnicity or legal status if you need to compare responses across different groups. Otherwise, we suggest leaving such questions out.

Do not ask about legal status at all if having categories such as 'refugee' or 'undocumented' could flag the presence of people who could be later targeted by the authorities or anyone else.

2.2.4
Safety

In the Toolkit, you will find questions about walking to achieve specific objectives, such as finding network coverage or charging a phone battery. These questions should be carefully considered in every context and about whether the activity may present a danger to interviewees, such as women having to walk through unlit locations at night, as an example. You may want to consult with protection specialists and then add additional questions to identify this issue. Example questions could be "Do you feel safe when walking to get network coverage?" or "Do you feel safe when walking to charge your phone battery?"

2.2.5
Data protection

Any activity that results in sensitive data or information being produced, stored, analysed and shared – particularly Personally Identifiable Information (PII) – should place the highest priority on protecting this data. Remember that:

- only data that is strictly needed should be collected
- data that may be used against vulnerable individuals should never be collected
- individuals having access to data should be as few as possible
- all data should be anonymised before sharing

2.2.6
Minors

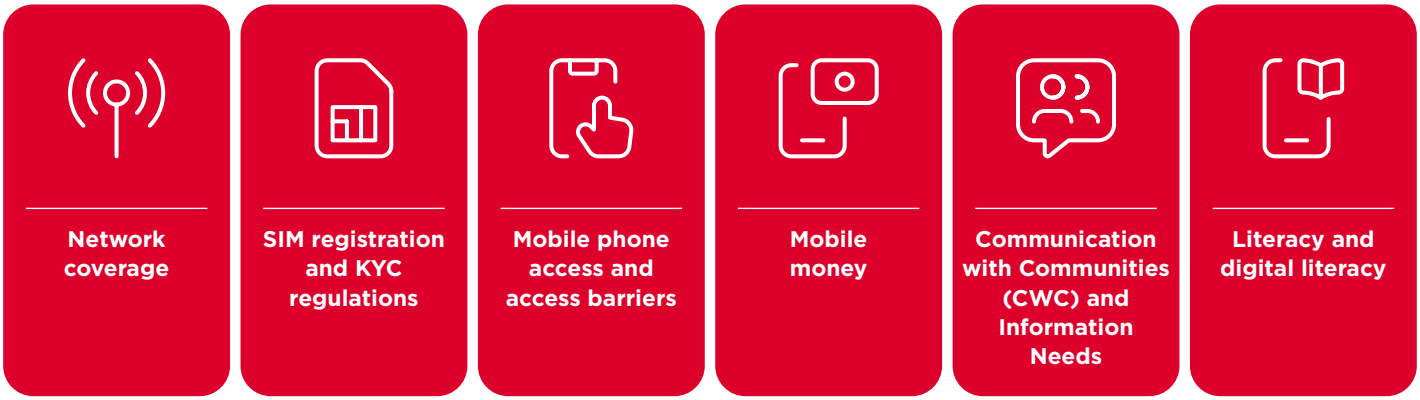
The Toolkit is not designed to be used to collect data about minors. While a lot of questions may make as much sense for minors as they do for adults, the data protection considerations are much stricter when working with data concerning children.

03

Key topics covered by the Toolkit

For ease of use, we have organised the tools in this Toolkit by data collection method. However, a number of topics appear in more than one tool because they are best investigated with more than one method in parallel. For example, the frequency of SMS use is best assessed using the quantitative End-user survey tool, whereas the purposes and reasons for use are investigated using a qualitative End-user focus group discussion, and the exact methods of use may be best observed with an End-user exercise.

We recommend that you review all the tools in the Toolkit before choosing which ones to use for any given assessment. We have outlined some of the key topics that span multiple tools below, along with key considerations.



3.1 Network coverage

Network coverage is required to access most mobile-enabled services. Information about network coverage can be accessed as secondary data, or can be manually collected in the field. A proxy can also be gained by asking individuals about their experience with accessing coverage. Data disaggregated by mobile network operator will likely be more useful for project design and operations, given that Toolkit users would want to understand which mobile networks are operating in the intervention location. Therefore, assessments should not only ask "Is there mobile network coverage here?" but also "Which mobile networks have coverage here?"

GSMA provides a number of resources that map network coverage, and there are also third-party tools to measure signal strength and quality of service. Some of these tools display the collected data on a map, which effectively provides a platform for coverage mapping.

Where possible and appropriate, discuss and agree your plans of testing coverage with partner MNOs, and be careful when sharing the results. Coverage data may be considered sensitive information, particularly in conflict zones, and publishing results that are inconsistent with official information may not be the best way to disseminate your findings. Consider using qualifying statements about coverage, such as "reported by users", or say that it was not possible to use certain services in an area, instead of saying that there is no coverage.

Recommended reading

Network coverage

- GSMA Network Coverage Maps
- GSMA Mobile Coverage Maps
- Opensignal
- nPerf
- Speedtest by Ookla
- Cell audit app
- Facebook Data for Good includes Network Coverage Maps

3.2
SIM registration and KYC regulations

For protection reasons, it is important not to collect information that could implicate individuals in unlawful practices, such as registering for SIM cards or mobile money accounts without the correct identification documents. When it is appropriate to collect this data, it may be useful to compare various perspectives. For example, regulations in a certain country may allow refugees to legally register SIM cards, but if the majority do not have the required documents, they are effectively prevented from doing so. For this reason, it is useful to look at the question of the legality of service access from the standpoints of:

1) MNOs (through a secondary data review (SDR) or interview if all other avenues have been exhausted and the data is critical[1])
2) merchants (through the Merchant In-depth Interview tool)
3) end users themselves (through the Survey and FGDs 0, 1 and 4)

Recommended reading

SIM registration and KYC

- Displaced and Disconnected
- Enabling Access to Mobile Services for the Forcibly Displaced
- Proportionate regulation in Uganda: A gateway for refugees accessing mobile services in their own name
- ELAN Humanitarian KYC Case Studies

3.3
Mobile phone access and access barriers

There are multiple kinds of barriers to accessing mobile-enabled services:

- physical (if the service is not available in a given location)
- economic (if the service is too expensive)
- cultural (if the service is not commonly used by certain groups)
- educational (if the service requires a higher level of literacy or digital literacy), and more

You can quantify these barriers with the End-user survey tool (by demographic group if that is useful), but they will be better understood by using qualitative tools such as the End-user FGD 1 and the End-user Exercises. You can obtain further details, (particularly about the physical and economic barriers) through the Merchant, Market Assessment, and Signal Strength Mapping tools.

Recommended reading

Barriers

- GSMA Mobile Connectivity Index: 2020
- The humanitarian 'digital divide'
- The Digital Lives of Refugees

1 Tool users should only reach out to MNOs if SDR and other means of collecting required data has been exhausted (including reaching out to other organisations that may already collect the data required)

3.4
Mobile money

To be considered a mobile money service, mobile-based financial services must meet the following criteria, all of which are included in the GSMA Mobile Money Deployment Tracker:

- A mobile money service includes using the mobile phone to transfer money and make and receive payments.
- The service must be available to the unbanked, i.e. people who do not have access to a formal account at a financial institution.
- The service must offer a network of physical transactional points (which can include agents, outside-of-bank branches and ATMs) that make the service widely accessible to everyone.
- Mobile banking or payment services (such as Apple Pay and Google Wallet) that offer the mobile phone as simply just another channel to access a traditional banking product are not included.

It is critical to understand how mobile money services are used and the maturity of the mobile money ecosystem in your specific context when considering it as a potential distribution mechanism for cash and voucher assistance (CVA). A mobile money-enabled CVA programme will have a higher chance of success when it builds on existing infrastructure and practices, so your first step when planning such a programme must be to gain a good understanding of the context of operations from multiple points of view. Access, use, and barriers to mobile money are included in all the tools, and are colour-coded in green for easier identification so that they can either be removed when not needed or kept in as a priority for assessments focusing on mobile money.

The aim of this Toolkit is to be succinct and widely applicable, so there are no in-depth questions to assess recipients' level of financial literacy. The question "What is your highest achieved level of education?" is meant as a proxy for this topic, but if financial literacy is a priority in your assessment, consider other tools to obtain more detailed data.

The mobile money questions can also be made more specific. For example, in the question "What do you use the mobile money account for?" the response "Receive cash aid" could be replaced with more detailed responses, such as "Receive cash aid from <name of a humanitarian organisation>," "Receive cash aid from other humanitarian organisations", and "Receive cash aid from the local or national authorities."

In some locations, there may be multiple mobile money services. Due to space constraints, the questions about their usage are mentioned once in the Toolkit, which effectively combines the responses about each individual system. However, if a granular level of detail is needed – for example, to compare the popularity of each of the systems – each question can be asked separately for each mobile money service.

Please note that the mobile money components of this Toolkit do not aim to be a comprehensive tool to assess the suitability of mobile money as an aid delivery mechanism. Questions beyond the scope of the Toolkit, such as those linked to traditional assessments for cash assistance programming, must be answered with other assessment tools.

Recommended reading

Mobile money

- Cash Delivery Mechanism Assessment Tool
- Cash in Emergencies Toolkit
- Programme Quality Toolbox
- Mobile money enabled cash aid delivery: Essential considerations for humanitarian practitioners
- GSMA Mobile Money Metrics
- Mobile money assessment and contracting guide and Question Guide: Assessing Your Operator
- Seeking Solutions: New Roles For Technology In Cash And Voucher Programs

3.5
Communication with Communities (CWC) & Information Needs

Communication is an obvious topic of interest and a frequent reason for considering a connectivity assessment. The Toolkit does not aim to replace dedicated CWC or Information Needs assessments, but can complement them by providing more detailed information on mobile phone use as one specific communication channel.

You can find explicit references to communication in questions on phone use in all of the End-user tools. They provide detail on the exact channel, purpose and frequency.

Recommended reading

CWC and information needs

- CDAC A Quick and Easy Guide for Those Working in Humanitarian Response and Common Needs Assessment Tools
- Information and Communication Needs Assessment Tool
- Why Information Matters
- Signpost
- Finding a Voice Through Humanitarian Technologies? Communication Technologies and Participation in Disaster Recovery
- Regional Information And Communication Needs Assessment
- Study on Sources and Circulation of Information in North-Kivu, DRC

3.6
Literacy and digital literacy

Literacy and digital literacy are intrinsically linked with how mobile technology is used or not used. If people have a pervasive lack of the skills required to use a specific technologies effectively and safely, that can mean that humanitarian programmes attempting to use unfamiliar mobile technologies are likely to fail. For example, if not enough people are familiar with mobile money services and they are not provided with the required digital literacy training, the services' effectiveness as a mechanism for the delivery of assistance and longer-term financial inclusion benefits will be limited.

The Toolkit approaches this subject in multiple ways:

- There are dedicated sections on literacy and digital literacy in the end-user questionnaire. The first asks about languages known and writing ability, and the second about specific skills and knowledge related to the use of mobile phones. These questions are critical to ask if the Toolkit user wants to, for example, disaggregate their target population's phone use by their writing ability.
- Lack of skills (i.e. "I do not know how to use a mobile phone/the internet by myself") is one of the responses to the questions about barriers to using a phone and the Internet.
- The Exercises tool proposes that Toolkit users hold practical sessions so they can see exactly where end users may not know how to complete certain activities on their phone.

The subject becomes more complex in places where multiple languages are used. In some scenarios, it may be useful to ask which languages are known by the individual – both spoken and written. In contexts where the whole assessed population uses only one language, the questions "What is the main language you speak at home?" and "What other languages do you know?" are unlikely to be needed.

Recommended reading

Literacy and digital literacy

- Mobile Internet Skills Training Toolkit
- How to Design a Mobile Internet Skills Training Toolkit
- Applied Digital Skills: Teach & Learn Practical Digital Skills
- Toolkit | Education Cluster

04

Preparing to use the Toolkit

The Toolkit is designed to be modular and adaptable. All of its tools can be used in full, or some can be chosen for deployment while others are skipped. Specific questions can also be taken out of the Toolkit and added to another assessment to complement it. While it should be possible to use some questions without modification in any crisis, others – particularly those referring to specific services – will need to be tailored to a given context. For example, users may need to include locally relevant websites and/or social media applications in the question in the end-user survey: 'Do you currently own a phone and use mobile internet (social media, apps and websites like WhatsApp, Facebook, etc.).

The Toolkit can be deployed for various purposes and scenarios, and it should be possible to adapt it to almost any context. We have outlined the most likely examples below.

4.1 Secondary Data Review and context information

Before embarking on an assessment, it is important to establish if any similar assessments have already been conducted in the area of interest. In order to avoid 'assessment fatigue' amongst affected communities, existing assessments should be utilised as much as possible. Additional data collection should only be conducted if it will produce new and important evidence.

Existing assessments

The below is a list of repositories where you may find assessments that have already been conducted. It is important to also check with local colleagues and partners who may be aware of further resources.

- BBC Media Action
- CDAC Network
- CaLP
- ETC
- Humanitarian Data Exchange
- Humanitarian Response
- Internews
- Red Cross Cash Hub
- Relief Web

Preliminary information about phone use and access to phones and connectivity can be obtained before running field data collection operations. It would be a good start to review regulations regarding SIM registration, collate information on mobile network operator services (including associated cost implications) and approach other aid agencies. If a SDR does not provide you with critical information required from MNOs, you should first coordinate with other actors in your context to see if they have already answered key questions. If you have outstanding questions, you should approach local MNOs together to avoid duplicating efforts. Questions that should be considered include:

Recommended reading

SDR and context information

- Displaced and Disconnected
- GSMA Mobile Money Deployment Tracker
- Secondary Data Review
- Language Data Infographic
- Access to Mobile Services and Proof of Identity, pages 22–27 contain country-level details
- Mobile Money Regulatory Index

Legal access

- What documents does a customer need to register a SIM card?
- Are these requirements a barrier for crisis-affected populations?
- What documents does a customer need to open a mobile money account (the Know-Your-Customer (KYC) requirements)?
- Are these requirements a barrier for crisis-affected populations?

MNOs' products and services specific to crisis-affected populations

- Have local MNOs implemented projects with/for humanitarian agencies in the past?
- If yes, what were these projects?
- Do the MNOs have specific products or services for crisis-affected populations (e.g. SMS bundles)?
- If yes, how do they differ from the MNOs' other products and services? How successful/popular are they?

Information that an MNO might be able to share for humanitarian purposes

- Network coverage and mobile money agent coverage: number, density, locations of agents, services they provide.
- Would the MNOs object to collecting data in the field from network representatives, mobile money agents, merchants who sell phones and SIM cards, etc?

4.2
Contextualising the tools

Some questions will be more relevant in certain contexts. For example, questions about needing to walk to charge phone batteries may be more suitable to a refugee camp in East Africa than an urban setting in the Middle East, where questions about electricity service outages may be more relevant instead. There are also a number of tools and questions about mobile money, which is not available in all markets.

Other questions may be suitable for any context, but will be more easily understood if their wording is tweaked for a specific context by using locally relevant phrasing or an example name of a local service. Wording that is likely to need to be adjusted is surrounded by angle brackets ("<" and ">"). For example, if you're working in Iraq, replace "<local currency>" with "Iraqi dinars."

Some modifications may also be required that are not specifically flagged in the tools. For example, you may need a specific question about what source of electricity is used to charge phone batteries, or you may want to add additional answer options to the "What is your gender?" question.

Overall, while care was taken to make the questions applicable to various scenarios, local realities should always be prioritised to make sure the assessment is relevant. We suggest two main approaches to contextualise the tools before beginning main data collection: conduct a Secondary Data Review (SDR) to collate useful information from existing resources, and run Focus Group Discussion Zero (FGD 0) to gather useful information from end users themselves.

4.3
Focus Group Discussion Zero (FGD 0)

FGD 0 is made up of general questions aimed at getting a better high-level understanding of what services are used by end users so that the tools can be appropriately adapted. It is not so much meant to deliver final data, but provide context from the perspective of end users.

For example, for an end user with mobile internet access, the FGD 0 asks, "What instant messengers are the most popular?" because some apps (such as WhatsApp) are popular globally, while others (like Viber) may be common in certain contexts.

Depending on responses to this question, you would replace "<locally used Instant Messenger>" in the End-user Survey tool with "WhatsApp and Viber" or just "WhatsApp".

Apart from networks and mobile money services used <here>, there are also questions about services used in the area from which displaced people arrived, which ask if they might want to continue using their SIM card from abroad, send mobile money back home, and so on.

4.4
Translations

All respondent-facing tools need to be translated into the language(s) that end users and Toolkit users are comfortable with. This can become complex in certain contexts where many languages are used. Care is needed to ensure that the data collection tools themselves are translated, and that complete response selection lists are provided for questions such as "What is the main language you speak at home?" and "What other languages do you know?"

This beta Toolkit version includes an Arabic version developed in Lebanon, and an initial French translation will be made available in early 2021 (though this will not have had any field testing).

4.5
Deployment scenarios

Scenarios in which the Toolkit can be used will vary in terms of context, location, and purpose. When localising the tools, always consider your main objective in collecting data.

Below, we have outlined a few common scenarios in which a humanitarian agency might want to conduct a mobile phone-related assessment, along with the main research topics. Table 1 suggests the most suitable Toolkit components for specific research topics (though users should use their own judgement in selecting tools).

- **Broad assessment:** research topics include basic understanding of network coverage mapping and network signal strength measurement; mobile phone use and access; mobile phone and mobile-enabled service access barriers, mobile phone and mobile-enabled service use, literacy and digital literacy and ability to use mobile-enabled services, mobile phone and internet use risk awareness.
  - A more concise version of this can be used in an emergency for a rapid assessment of **network connectivity and access to services** – this scenario is the last row in the table below.
- **Cash and Voucher Assistance (CVA):** research topics include usage of mobile money services, availability of mobile money services in the market, broader mobile phone and service access, literacy, mobile phones use for businesses and livelihoods.
- **Communication:** research topics include mobile phone and service access, mobile phones for communication with affected populations, literacy and digital literacy and ability to utilise services.
- **Mobile-enabled products and services:** research topics include usage of services like mobile money or mobile-enabled energy products. It can also be used to assess the availability of such services in the market.

Table 1
Main research topics – suggested tools and tool sections

Research topic	Suggested tools and sections of tools	Guidance
Basic understanding of mobile phone landscape	**End users – FGDs** – FGD 0 **Market Assessment** – Services available, connectivity options – Availability of mobile phones and other mobile related products	Use these tools as the starting point for Toolkit deployment.
Coverage mapping and signal strength measurement	**Signal Strength Mapping**	Provides georeferenced metrics of coverage quality. It can be run in multiple locations to create a map of coverage.

The specific research topics below should be informed by obtaining context information through SDR, FGD 0, and (where relevant) Market Assessment and Signal Strength Mapping.

Research topic	Suggested tools and sections of tools	Guidance
Mobile phone and mobile-enabled service access (by demographic groups)	**End users – Survey** – Demographics & disability status – Phone, SIM, coverage access **End users – FGDs** – FGD 1 **Merchants – Survey** – Basic information – Documentation	Core part of the Toolkit, assesses mobile phone penetration and other aspects of technology access. Helps to understand which groups may be unserved or underserved, by quantifying mobile gender or disability gaps, for example.
Mobile phone and mobile-enabled service access barriers (by demographic groups)	**End users – Survey** – Demographics & disability status – Phone, SIM, coverage access – Barriers to mobile phone use **End users – FGDs** – FGD 1 **End users – Exercises and Participatory Mapping** **Merchants – In-depth Interview**	Core part of the Toolkit, assesses various barriers to mobile phone technology. Helpful to identify potential issues when planning an intervention. Helps to understand where certain groups are facing unique or enhanced barriers to accessing mobile services.
Mobile phone use and access (by demographic groups)	**End users – Survey** – Demographics & disability status – Phone use **End users – FGDs** – FGD 1	Core part of the Toolkit, assesses in what ways the technology is actually used. Helps to identify usage gaps within certain groups.
Literacy and Digital Literacy, ability to utilise mobile-enabled services (by demographic groups)	**End users – Survey** – Demographics & disability status – Literacy – Digital Literacy **End users – FGDs** – FGD 1, particularly the problem-solving questions **End users – Exercises**	Helps understand levels of functional literacy and digital literacy to see if certain mobile enabled products or interventions are appropriate. Helps to identify if certain groups might be inadvertently excluded.
Mobile phone use for businesses and livelihoods	**End users – FGDs** – FGD 2	Assesses the role that mobile phones play in the affected populations' livelihoods and economic activities.

Research topic	Suggested tools and sections of tools	Guidance
Mobile phones for Communication with Communities (CWC)	**End users – FGDs** – FGD 1 – FGD 3 **End users Exercises**	Helps to understand practices around information sharing using mobile technology.
Usage of mobile money services (by demographic groups)	**End users – Survey** – Demographics & disability status – Literacy – Digital literacy – Mobile money **End-users – FGDs** FGD 4	Gauges the extent to which mobile money services are present and used among the affected populations, and what the associated challenges are from the recipients' perspective.
Availability of mobile money services in the market	**End users – FGDs** – FGD 4 **Merchants – Survey** **Merchants – In-depth Interview** **Merchants – Mapping** **Market Assessment** – Mobile money	Maps out the mobile money agent network and market capacity. Helps Toolkit users understand mobile money agent capabilities to manage an increase in transactions if mobile-money was selected as the disbursement mechanism for a CVA programme.
Mobile phone and internet use risk awareness	**End users – Survey** – Privacy and safety **End users – FGDs** – FGD 1	Gauges the level of awareness of privacy and safety risks associated with using mobile phones.
Rapid assessment of network connectivity and population's access to services in emergencies	**Signal Strength Mapping** **End users – Survey** – Demographics & disability status – Phone, SIM, coverage access – Barriers to mobile phone use **End users – Survey** – FGD 1	Not specifically targeting volatile/emergency contexts, but the same tools (trimmed down for speed of use if needed) can be used in rapid-onset crises.

4.6
Preparing the Toolkit – a hypothetical example

'Agency X' would like to understand if mobile money is a suitable channel to deliver cash assistance in a refugee camp, and decides that it should investigate research topics such as mobile phone and service access, literacy and digital literacy, usage of mobile money, and availability of mobile money services in the market.

Prepared with basic context knowledge, such as demographic statistics of the camp population, Agency X could start by conducting a desk review to establish the service providers and services available to end users. It could also try to establish what the local regulations are for SIM registration and Know-Your-Customer (KYC) for mobile money account registration for their intended cash recipients. They could follow this by asking camp management what service providers (including MNOs and others) operate in the camp. The camp management (or where relevant, MNOs) might also be able to share information on what mobile-enabled products and services have been implemented in the past, and what lessons were learned from them. A review of available products and services, including SMS, voice, internet bundles, and mobile money transaction costs would follow. The FGD 0 would complete the picture, with refugees themselves reporting what services are available to them.

With this background information, the remaining Toolkit elements can be localised. Tools such as End-user Survey with the mobile money section, End-user FGDs 1 and 4, Merchants Survey, In-depth Interview, and Mapping tools, as well as the Market Assessment tool, are selected, translated into the locally relevant language – or languages – and the text in <angle brackets> is customised to use specific service names.

4.7
ODK/Kobo Toolbox

The survey tools are formatted using the ODK-based Kobo Toolbox (though it will be possible to code questions using other software if necessary). It is beyond the scope of this document to present Kobo and provide usage instructions, but full documentation and guidance are available online. To get started, useful resources include, setup of KoboCollect and downloading data from the server. xlsform can be used to edit the tools to adapt them to a particular context. A comprehensive KoBo Toolbox training course is also available.

Further information (for example, translations of training materials) can be found at Kobo Support. You can also download the full handbook, which has an extensive description of all core and many of the additional tools from the ODK ecosystem, as a PDF here.

05

Analysis and reporting

As the Toolkit is modular and adaptable, each assessment is likely to be unique in size, content, respondent profile and intended activities based on the findings. This means that there is no one way to analyse assessment data or produce reports or other outputs for public or internal consumption. This chapter provides some high-level guidance that Toolkit users might consider when approaching the analysis and dissemination of their assessment results. This is not exhaustive and assumes that users are already familiar with basic data analysis and report writing.

5.1 Data cleaning and processing

For each assessment, Toolkit users will need to clean and process data coming from the field. This acts as a quality assurance exercise as well as simplifying analysis and reporting. Some guidance for what this stage might look like can be found on the REACH website[2].

At this point, Toolkit users should format data in a way which allows them to use software and approaches which are familiar to them. Historical analysis of CoNUA data has been done using Excel, R, SPSS, MaxQDA and Dovetail, amongst others.

It may also be necessary to weight quantitative data to ensure that it is representative of the groups included in the study and to allow for comparative analysis between groups which may have been sampled independently.

5.2 Data analysis

Depending on the breadth of the assessment, data analysis will most likely be easiest when structured around the research questions or topics linked to the overall objectives of the activity. For example, assessments related to mobile money could consider structuring analysis around access to handsets, use of financial services and levels of financial literacy respectively.

This will allow the analysis to address evidence needs and to draw from the various data collection tools utilised and, ideally through a mix of quantitative and qualitative data, triangulate and validate findings to allow for confidence in conclusions. Such triangulation might be done by combining data collected in end-user surveys, focus group discussions and key informant interviews, creating a fuller picture of a specific finding.

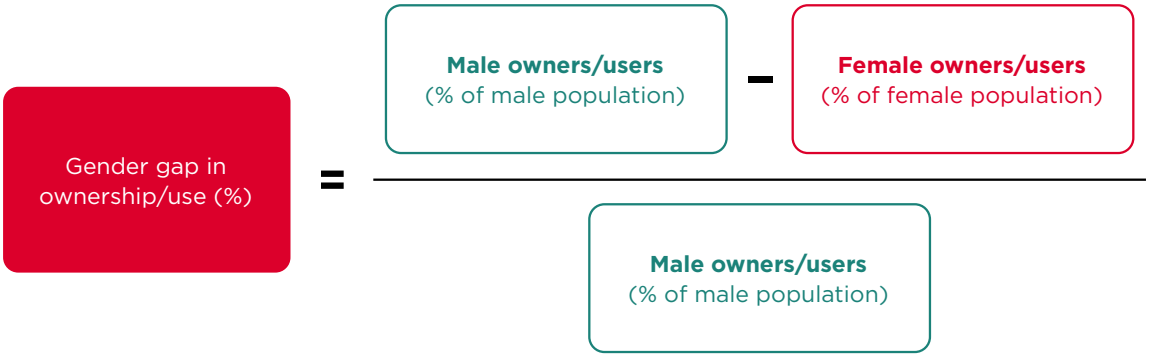
Another approach you may take, is to analyse data from your primary tool first, likely to be the end-user survey if being used. Data from other tools can then be used to investigate and support interesting or unexpected findings.

2 Impact Initiative (2020) Data Cleaning Guidelines for Structured Data. Geneva.

5.2.1
Analysis of inter-group difference

When using representative quantitative data to look at differences between demographics such as gender, age, or disability status, it is recommend providing proportional as opposed to gross difference. This allows to create figures for 'gaps', such as the 'mobile gender gap', which is a common analysis conducted when looking at issues related to digital or financial inclusion[3].

The figure below shows how to calculate the mobile gender gap in ownership. The analysis can be repeated for any variable or demographic of interest. Both the indicator and the demographic must be binary for the analysis to work.



Analysis Example:

Barriers to phone access in Sudan

GSMA partnered with NRC Sudan to conduct an assessment of digital access and barriers for displacement affected communities in Sudan[4]. One key element of this assessment was an analysis of phone access amongst refugees and the communities who host them in White Nile state, including barriers face.

When looking at issues specifically faced by women, the analysis was able to triangulate analysis of the end-user survey data, with information shared by respondents in focus groups to conclude that:

"Refugee women are 18 per cent less likely to own a mobile phone than men and 70 per cent less likely to own a smartphone. Focus group participants suggested this may be because women find it more challenging to afford a handset and that household dynamics, such as the disapproval of husbands and partners, may act as a deterrent."

3 Shanahan. M (2022) The Mobile Gender Gap Report 2022. GSMA. London.
4 GSMA and NRC (2022) Digital Access and Barriers in Displacement-affected Communities in Sudan. London.

Analysis Example:

Digital skills in Uganda

In 2022, U-Learn[5] combined data collected using the end-user survey tool and an analysis of respondent capability based on the end-user exercise tool to understand the level of digital literacy amongst refugees in several camps across Uganda. They used the exercise data to triangulate the self-reported survey data, allowing them to conclude that:

"Tasks which require not only basic literacy and numeracy but also complex digital literacy skills (i.e. the ability to use an internet-enabled phone) are reported to be above the skill level of most respondents. [...] Respondents believe that training on basic and digital literacy will result in increased demand for digital financial services and could be scaled through common cultural practices of knowledge-sharing within communities."

Whilst the end-user exercise tool is designed with qualitative analysis in mind, the U-Learn team took a quantitative approach to help them to interpret it, by using Excel pivot tables, disaggregated by gender and age, to identify the proportion of end users observed able to independently or semi-independently send an e-mail. Though the team did acknowledge that the sampling in these exercises is not representative, and hence the figures are indicative only.

Gender	Capable With Support	Fully Capable	No Internet Available	Not Capable	Total
Female	15.38%	15.38%	0.00%	69.23%	100.00%
Male	11.11%	22.22%	3.70%	62.96%	100.00%
Total	**13.21%**	**18.87%**	**1.89%**	**66.04%**	**100.00%**

5.3 Output formats and audiences

As with all research and assessments, it will be important to consider the type of output you wish to create, including the types of data visualisation that will help readers interpret your analysis. Whilst we strongly encourage the publication of assessment findings wherever possible, even if your assessment data is only going to be used internally to your organisation it will be important to consider this.

A key question to consider is the audience for your assessment, as well as the influence you hope to have. Whilst a full report will allow stakeholders to access the specific information they need; you may want to consider publishing a summary or fact-sheet for decision makers or key influencers.

If you are looking for inspiration as to how you might present and share the findings of your assessment, links to several reports and factsheets using CoNUA data are available at www.gsma.com/mobilefordevelopment/conua.

5 U-Learn (2022) Financial Services in the Uganda Refugee Response – An Assessment of User Perspectives. Kampala.

06

Tool-specific guidance

Each of the tools in the Toolkit has dedicated guidance for use. This can be found in the following section, as well as in basic files in the Toolkit.zip. This guidance builds on the general guidance and provides details relevant for each data collection method. Guidance includes practical steps on how to deploy each stage of data collection. It is not linked to the thematic content of the tools (which is covered in both general guidance and the overview report).

6.1

Tool 1
End-user Survey

The survey is designed as an individual-level survey (as opposed to household-level) and should be delivered face to face. Whilst it is possible to collect data over the phone, doing so will inevitably introduce sample bias, as the tool is entirely about phone access and usage. If you do collect data over the phone, you should think through the implications this will have on the outputs (such as making it near impossible to establish the proportion of your respondents who do not use a phone, as one example).

The Survey introduction and the informed consent question should be customised by including your organisation name and the purpose of the data collection activity. You should ensure that your description is both accurate and easily understood by respondents so you can gather genuinely informed consent.

For multiple selection questions, the response options should not be prompted unless otherwise noted. Enumerators should match the interviewees' responses to the selection lists. If the interviewee requests prompts, all of them should be read out before a response is recorded.

The Survey avoids qualitative questions as much as possible, as the FGDs are a more suitable method of collecting this type of data. There are a few open-ended questions, but the majority are close-ended.

It is important to bear in mind that even the most robustly conducted surveys do not always pick up the concerns of all individuals in a community, but produce averages. Consider qualitative approaches (such as the FGD tool) for capturing detail about specific groups, especially if they represent a small subset of the larger community being assessed.

Depending on how the questionnaire is delivered (ODK/Kobo-based data collection system or paper questionnaire), it may be helpful to clearly communicate which questions are single-select and which ones are multiple-select. In the ODK/Kobo version of the form, this is the difference between radio buttons and checkboxes visible to the enumerators, but for times when the questionnaire is delivered through another channel, this distinction may not be obvious.

Quickly deploying the survey using Kobo Toolbox

1. Confirm that your assessment will be done in a language already available, otherwise translate into the desired language and test comprehension
2. Edit "1.1 - Tool 1 - End user survey" in the survey Excel file to include only your selected questions and customise all the cells with <angle brackets> for context.

   For example: If conducting an assessment in Uganda for AgencyX, change cell G2 in survey worksheet from

   "I work for <organisation name>. I am conducting a survey to find how mobile phones are used in <location or area name> so that…"

   to

   "I work for AgencyX. I am conducting a survey to find how mobile phones are used in Uganda so that…"

   If you are conducting an assessment in Niger, replace row 56 in the choices worksheet reading

   "<locally adjusted list - include networks from neighbouring countries, and networks from countries of refugee's origin>"

   with 4 rows reading

   "Sahelcom" "Zamani" "Airtel" "Moov"
3. Go to **https://kobo.humanitarianresponse.info/** and log in.

   Tip: You can use your .org email address to create an account if you don't have one
4. Click "create new project" and select "upload an XLS form"
5. Your data collection tool is ready to go!

6.1.1 Survey format

The Survey is available as:

a) a question bank made up of all the questions developed for the Survey, where both the questions and response options are on the same page for ease of use. The prioritisation column indicates which questions are more likely to be essential, and the comments column indicates logical relationships between questions; and

b) an xlsform survey based on the question bank, made of 'core' and 'recommended' priority questions, with the 'optional' questions omitted. It is designed to be comprehensive and stand on its own, but has only minimal metadata and context information.

Using individual-level questions in household-level questionnaires:

Many humanitarian assessments rely on household-level questionnaires. This is in contrast to the End-user Survey, which asks individual-level questions. For example, the question "What kind of phone do you personally own?" does not apply to an entire household, but only to its individual members. If you would like to use some of the End-user Survey questions in a household-level questionnaire, make sure that you do one of the following:

a) change the wording and sense of the question to apply to a whole household, such as with this example: "What kind of phones do the members of this household personally own?"

b) use these questions by clearly referring to individual household members one by one – this is possible when a household survey asks for details such as age or education level from each individual member; or

c) only ask the question to the respondent or the head of household. This approach risks collecting incomplete information and is not ideal – for example, if a young household member owns a smartphone, but the older head of household does not.

6.1.2 Sampling methodology

Data collection methodology is a complex topic in itself and beyond the scope of this guidance. We have only provided a brief outline.

Choosing the correct sample size for interviews is important to ensure that it is representative. This is necessary to be able to generalise the findings of your sample-based assessment to the population from which the sample was drawn. In short, your sample can be considered representative with high precision if you interview 384 randomly selected individuals. If research-grade data quality is not needed, then 96 interviews will often be sufficient. These sample sizes are calculated assuming unknown (or very large) population sizes, and can therefore be used for most contexts as a rule of thumb. If the population size is known, you can calculate the minimum required sample size precisely using a sample size calculator. Recommended parameters are 95% level of confidence and 5% margin of error (for high data quality) or 10% margin of error (for data quality that is somewhat lower but often still sufficient, but requires far fewer interviews).

It is highly recommended that the sample be created 10% larger than the target sample size provided by the calculator, to mitigate non-responses (e.g. some interviews will likely be impossible to conduct due to absences, refusal to interview, etc.). To ensure a proper random sample, it is best to have a complete and up-to-date sampling frame – for example for a refugee camp assessment, a list of the camp residents – from which to randomly select interviewees.

Sampling approaches, beyond random selection from an existing list, can be deployed where necessary. Details on alternative approaches, and when to use them, are available in the recommended reading.

Recommended reading

Sampling methodology

- Research Design Guidance: Sampling
- Indikit Resources
- Rapid Guide to Survey Sampling
- Sample Size Calculator
- Also consider resources linked in the Background section of the main Guidance document

6.1.3 Demographics and disabilities

The demographics section is an important part of any survey. In the simplest form, it provides basic population statistics: for example, the proportion of respondents' split by gender. But it can also be used to compare the data between demographic population groups (e.g. differences between men's and women's mobile phone ownership). If you are doing so, ensure that you have a sufficient sample size to draw conclusions representative of subgroups of the population, rather than of the entire population. It is recommended to have datasets representative of male and female users.

The Washington Group Short Set of questions help understand what proportion of people have certain disabilities. This is particularly useful when assessing whether persons living with disabilities (PLWD) have unique or enhanced barriers to accessing mobile products and services. Without a dataset specifically representative of PLWDs, it is not possible to make general claims about the entire demographic subgroup. Indicative results may still point to some patterns.

Depending on the context or your intended survey respondents, you may want to add the "other" option to the "What is your gender?" question where relevant, or include additional context-specific options.

6.1.4
Phone and service access

This section focuses on phone ownership and access. If other types of connected devices (tablets, laptops, wearables) are of interest, they can be added as well. For simplicity, there are no end user-facing questions about SIM cards (to avoid the need to explain what a SIM card is). A distinction is made, however, between 'phones' and 'phone numbers'.

One question in this section is slightly different in that it doesn't ask just about the specific interviewed individual, but about their household. "How many mobile phones does your household own?" may be helpful in some contexts to understand if, for example, the entire household can benefit from access to a phone for emergency use, even if only one household member actually uses the phone on a daily basis.

6.1.5
Sections on physical access and walking

There are five sections on physical access to specific services:

- airtime top-up
- network coverage to make calls or send text messages (SMS)
- mobile internet (data) coverage
- charge phone battery
- mobile money agent (lower down, in the dedicated mobile money section)

These sections are all laid out in a similar way to make it easier to go through, and they focus on physical access, the need to walk, as well as the required time and frequency. These questions may intersect with issues of safety (see main guidance on protection), and you should ensure that you have reflected on this point when framing the questions for your context.

6.1.6
Access barriers are three sets of questions

Depending on the exact reason for data collection, this may be one of the most important topics to investigate. The barriers are divided into three sets:

- for those who do not own a mobile phone
- for those that own a phone but do not use mobile internet
- for those that own a phone and use mobile internet, but not as much as they would like

These sets of barriers are mutually exclusive, so only one set of questions would be asked in one interview, but the responses between them are harmonised as much as possible. In each of the sets, follow-up questions ask which barriers are the most important.

6.1.7
Digital literacy

One of the skills mentioned in this section – "Search for specific information using Google or <locally relevant search engine>" – is designed to help understand if the interviewees use the internet beyond self-contained information ecosystems such as Facebook (by using a web browser to find information).

6.1.8
Privacy and safety

This section aims to better understand what the interviewees' perceptions are of risks associated with phone use and what actions they may take to address these. It is perhaps the section most in need of quantitative data collection through the End-user tool, and qualitative data collection through FGD 1.

6.2

Tool 2
End-user Focus Group Discussions Guidance

The Toolkit is meant to be applicable in various geographic settings. The FGD guides are designed so that they can be used sparingly when the conversations flow easily, but also provide comprehensive prompts for situations when they do not. The prompts are organised into three progressively more specific levels:

- questions,
- general prompts, and
- specific prompts to be used as needed to move the discussion along.

The facilitator should start each topic with the question, and the group's responses would be recorded. When the group has provided all their feedback without exhausting the topic, general prompts should be used to further steer the discussion. If the discussion has touched upon all the relevant topics, the next question can be asked. If not, specific prompts can be used to ask for further details. The goal is that all the topics (relevant to the context) mentioned at all the prompt levels will be addressed –how much actual prompting is needed will depend on each individual group. The specific prompts are quite detailed, and the relatively small groups (we suggest 5–6 participants) should ensure that everyone has a chance to contribute.

Example

A question from FGD 2

Question	**What challenges do you face when using your mobile phone to help run business?**
General prompts	Same challenges as using the mobile phone for personal reasons?
Specific prompts	Problems with coverage?
	Problems with topping up airtime?
	Problems with charging the battery?
General prompts	Challenges specific to mobile phone business use?
Specific prompts	Cost of using phone for business purposes?
	High number of calls, messages, contacts?

The group was asked "What challenges do you face when using your mobile phone to help run business?" and responded that the common problems include network coverage, easy access to airtime top-up, and power outages preventing them from charging batteries. This exhausts the first general prompt under this question, so it is not used. The facilitator follows up with "Do you face challenges specific to mobile phone business use?" and hears that the costs are very high. To cover the last remaining topic, she prompts the group if they face challenges because of "High number of calls, messages, contacts?" and hears that these are not an issue. In this way, all the topics are addressed, the question is fully answered, and the progressively specific prompts were used only when necessary.

FGDs do not use statistical metrics as quantitative data does, but it is still important that the discussion participants represent the broader community. Care should be taken as much as possible to avoid biases in participant selection, particularly to avoid underrepresenting the most marginalised.

The purpose for each FGD is indicated in the red fields in the headers and suggests which participants should be invited for each. If the intention is to conduct comparative analysis between different groups, the same topics should be discussed with representatives of these different groups. Suggestions for such groups are included in lighter red fields.

The questions and prompts are all open-ended to elicit natural responses. Where possible, the wording of the prompts is kept close to the wording of questions in the survey so that both quantitative and qualitative data on the same topic can be compared and synthesised to support conclusions made through data analysis. The qualitative responses and discussions are likely to be closer to a narrative rather than brief statements, and it may be a good idea to record the discussion. You should obtain consent from all the participants for the recording, either as signed consent statements or verbally at the beginning of the recording. It is also recommended to have a designated note-taker in addition to the discussion moderator, who would write down the responses as the discussion progresses.

Determining how many sessions of each FGD should be conducted is best done in a way that achieves data saturation, which means that no additional new responses or insights are recorded. This means that any given FGD would be re-run as long as the participants provide answers not recorded in the previous sessions of that FGD.

Depending on the context where the assessment is taking place, it may be useful to conduct the assessment in multiple languages to get a full understanding of the situation. Because each FGD session should ideally be conducted in one language only, this could cause the number of conducted sessions to grow quickly. Consider the example of FGD 1, which could be broken down into the following sessions: 2 gender categories x 4 languages x 6 sessions to achieve saturation, which would lead to 48 sessions for FGD 1 only. Because of this, consider which demographic dimensions are the most important to represent so that you can control the number of sessions needed.

Recommended reading

Moderating good focus group discussions

- How to … Conduct a Focus Group Discussion (FGD)
- OIRA Assessment Methods/Tools - Conducting Effective Focus Groups
- Focus group data saturation: A new approach to data analysis | Request PDF

6.2.1
Icebreakers

It is recommended that sessions open with icebreakers, which help get the participants to think about the discussion subject and also encourage everyone to speak. There are a few icebreaker topics proposed in the tool that can be used for all of the FGDs. Additionally, there is also a set of icebreakers specific to FGD 3 only, which uses examples relevant to this group.

Experienced moderators may choose to adapt icebreakers that they have used in the past. We would encourage you to share any icebreakers with GSMA that you develop that work particularly well.

6.2.2
FGD 0

This FGD serves to better understand the context and localise all the other data collection tools. This process is described in more detail in the main guidance document.

It also includes a section that provides guidance on how best to communicate the results of the assessment to the community.

6.2.3
FGD 1

This FGD is used to gain in-depth information on:

- what technologies, services, networks, and apps are used, how, and what for;
- identifying problems faced by end users in accessing and using mobile technology;
- understanding differences in usage and barriers between groups;
- identifying user-suggested ways in which problems could be addressed.

The guide contains a long list of questions and prompts. To control the length of the discussion, you should refine these to ensure that only necessary/useful ones are included.

6.2.4
FGD 2

This FGD investigates the role of mobile phones in livelihoods and businesses. The topics include the role of mobile phones in running a business and their use for mobile money transactions. It prompts possible challenges that are specific to business phone use and potential ways to address these.

6.2.5
FGD 3

This FGD investigates trust in communication channels and sources to support decisions on how best to communicate information using mobile technology. It focuses on popular mass-communication services, based on the assumption that a successful communication method should build on systems that intended audiences are already using.

6.2.6
FGD 4

This FGD aims to investigate the usage of mobile money. It can be used in two ways, depending on what the interest is in asking these questions:

- If the objective is to get a general understanding of how and why mobile money is and is not used in the entire population of interest, then one set of FGDs (with a mix of participants representing both mobile money users and non-users) should be used.
- If the objective is to distinguish the situation of individuals who do use mobile money from those who do not – including what the reasons are for using mobile money or barriers to becoming a user – then it is better to hold two separate sets of discussions: one for users, and one for non-users.

6.3

Tool 3
End-user Exercises Guidance

This tool is a combination of a focus group discussion and user observation. The objective is not to test the participants' skills, but more to observe how they accomplish specific tasks. This is done so that specific challenges in using the technology can be identified. If the participants complete the tasks in different ways, discuss the approaches and results. For those that could not complete the tasks, note specific challenges.

To make this possible, the groups should be smaller than a typical FGD – the recommended size is 2–4 individuals. It may be convenient to combine them with the Toolkit's FGDs.

Example

An NGO is considering using mobile money to deliver cash assistance. However, even though a mobile money service is available, it is not certain how accessible or understood it is for prospective recipients. Exercise sessions can reveal that a common pain point is setting up and using separate PIN codes to unlock and access the phone and the mobile money service.

The session facilitator should provide the necessary resources and services for the exercises to go smoothly. Depending on which tasks are selected, these include:

- the facilitator's (possibly temporary) email address and phone number, as well as relevant accounts for the message exercises;
- a WiFi connection;
- network credit or scratch cards (where available), which can also serve as convenient incentives for the participants; and
- in some cases, it may be more useful to ask the participants to use their own devices, while in others, you should provide them.

To keep the session from becoming too long, it may be best to skip tasks that users are unlikely to ever need or are not relevant in the context. For example, sending emails may not be a common practice in certain contexts where messaging apps are more popular. In these cases, you may want to exclude the email exercise.

The exercises may also be a useful opportunity to see which exact channels (e.g. which WhatsApp groups) the participants use to keep themselves informed.

6.3.1
Participatory mapping

A special kind of exercise is participatory mapping. The mapping session can be thought of as a "geographic FGD", where the participants are asked about points of interest and areas that are notable for some reason. The topics to map can be any kind of mobile-related service, including areas of good and poor coverage, battery charging points, merchants who offer phone top-ups, mobile money agents, and access routes to all of them. Additional thematic information, such as merchants' opening times, can also be recorded.

Mapping sessions can be arranged using a wide variety of tools and approaches. In the simplest form, starting from a blank page, it is possible to draw very simplified maps that show only outlines of quartiers/areas and key landmarks and point of interest. You could also use existing maps as a background for reference. Reference maps that can serve as a backdrop on which to draw can be found, among others, at UNHCR, ReliefWeb, HumanitarianResponse, REACH, OpenStreetMap and FieldPapers.

Care should be taken when asking about potentially unsafe spots or routes. For example, a place at the edge of a camp might have the best coverage in the evenings, but if it is badly lit, then it might be a dangerous area to visit.

Recommended reading

Participatory mapping

- Good practices in participatory mapping: a review prepared for the International Fund for Agricultural Development (IFAD)
- Participatory Mapping and Visualization of Local Knowledge: An Example from Eberbach, Germany
- Discover sensitive mapping: a high-potential participatory approach

6.4

Tool 4
Merchant Survey

Tool 5
In-depth Interview Guidance

The word 'merchant' refers to all the sellers, shopkeepers, network representatives, SIM and scratch-card resellers, and mobile money agents who provide mobile phone and mobile money-related products and services. A merchant can be a local grocery store that sells scratch cards to top up airtime for one or more mobile networks, a network-branded point of sale, a mobile money agent who can register customers for new mobile money accounts, and any other similar role.

The two merchant interview tools are very similar in terms of the questions they ask, but they differ in the way in which information is recorded. The Survey tool aims to collect quantitative data, much like the End-user Survey (please refer to the End-user Survey guidance for methodology). It may be useful to deploy this tool in large-scale assessments where there are many merchants. There are selection lists for all the questions and little space for qualitative responses. In contrast, the In-Depth Interview (IDI) tool takes a more conversational approach, asking very similar questions but providing space for unstructured responses. The IDI tool may be better suited for smaller-scale assessments with fewer interviewees. Both merchant tools can be used collectively for one assessment, with the IDI tool complementing the merchant Survey tool, or they can be used as standalone tools.

Both tools aim to support understanding the supply of phones, SIMs, and other services on the market and should be used together with the End-user tools to create a more complete picture. The IDI tool contains a question asking if the merchant "would (...) be able to serve more customers than currently", which can be helpful when, for example, evaluating the potential capacity of the market to cope with a mobile money-based CVA project.

Depending on the exact purpose of deploying the merchant Survey tool, it may be useful to consider a stratified sample – for example, by ensuring that there is good representation of all the mobile network operators among the merchants, so as not to skew the results towards one MNO. Please consult the sampling methodology recommended reading section in the End-user Survey Guidance.

Before rolling out these tools, users should check if interviewing agents is allowed. Depending on context, the MNO and the local authorities may need to be informed. We suggest that the merchants be interviewed individually when they can spare some time away from their businesses.

6.5

Tool 6

Merchant Mapping Guidance

The Merchant Survey and IDI tools do not contain any questions on the location of the merchant. This is done on purpose so that the respondents can remain anonymous and feel that they can freely respond. This tool helps to understand how many merchants offering specific services are in any given location or area. It allows the creation of a density map of merchants, potentially identifying underserved areas.

It is GPS-enabled, and the Kobo Toolbox suite has a built-in way of displaying the data as a map. For a more powerful visualisation, the data can be downloaded and overlaid in a GIS with the Signal Strength mapping tool.

In some contexts, agents may move around to provide services to customers in multiple locations. In these scenarios, it may be worth using the in-depth interviews (as opposed to this mapping exercise) to note the areas that particular agents serve so you can assess whether there are gaps. This approach may need to be tailored based on the context, but should help identify if there are particular areas which are underserved or unserved. Users may need to apply creativity in order to do this effectively.

6.6

Tool 7
Market Assessment Guidance

This tool is a little different from the others in the Toolkit in that it doesn't specify what questions to ask, but, rather, what information to gather. This can be done in more than one way – the choice of the best one will depend on the context, though some suggestions are provided in the tool. The goal is to get an understanding of the local market that goes beyond asking focused questions to the merchants.

The first section contains details of MNO product and services, including call or SMS bundles. This information can be usually obtained from the MNOs' website or through printed promotional materials. The second section looks at mobile-related hardware available at the local market. Some of these questions can be asked through the Merchant IDI tool, but others go a little beyond that in evaluating what the hardware actually is, and what it is capable of. The third section checks how commonly mobile money is accepted in shops other than mobile phone shops, to help understand if mobile money can be used for payments, or if it needs to be cashed out. Finally, the last section focuses on energy access – specifically, for the purpose of keeping mobile phones charged.

Some of these topics (cash circulation, energy access) are potentially worth full assessments by themselves and may need to be expanded depending on the requirements. When using this tool, please refer to the Secondary Data Review section of the main Guidance document.

6.7

Tool 8

Signal Strength Mapping Guidance

This tool provides the most direct way of understanding network coverage, but it is most useful when combined with end users' perceptions obtained through the Survey and Participatory Mapping tools. The checklist of progressively more demanding tasks is as simple as possible, while providing clear information on which mobile services (such as calls or SMS) are accessible by the local network in a given location, and which are not.

Measurements should be typically taken outside unless the purpose is specifically to check network coverage indoors. In any case, it should be consistent throughout the mapping exercise. It is also useful to use a consistent phone make and model and repeat the measurements for greater reliability. In some contexts, the coverage may change over time (e.g. midday versus night, weekday versus weekend). In these cases, it is useful to repeat the measurements to cover all scenarios.

If the purpose of the measurement is to create a map, the measurement points should not be spaced too far apart. If the area of interest is small – for instance, a single camp – then a few points spaced a few hundred meters apart should be sufficient. If you are mapping a larger area, such as a town with surrounding villages, then more points will be needed but they can be further apart. Do not forget about measurement on the roads between settlements, if that is applicable.

Recommended reading

Signal strength mapping

- https://www.missingmaps.org/blog/2017/01/06/opensignal-data/

GSMA Head Office
One Angel Lane
London, U.K.
EC4R 3AB
United Kingdom
Tel: +44 (0)20 7356 0600
Fax: +44 (0)20 7356 0601