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United Kingdom Humanitarian Innovation Hub

Human-Centred Technology Design in Humanitarian Action

A deep dive into the fundamentals of co-creating digital tools with crisis-affected people

Created by
CLEAR Global
For United Kingdom Humanitarian Innovation Hub
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Preface

This guide is part of an initiative funded by the UK Humanitarian Innovation Hub (UKHIH) to establish participatory ways of developing digital technology with a range of people in crisis-affected communities, so that it can be used easily and effectively as a humanitarian tool. A human-centred and language-inclusive design process makes partners of people that humanitarians serve. Making people partners in developing technology is even more important when funding is restricted, to ensure that humanitarian interventions are effective and sustainable.

This guide should be used in conjunction with Human-Centred Technology Design in Humanitarian Action: A guide to co-creating digital tools with crisis-affected people that introduces the principles and processes of Human-Centred Design, while this document dives deeper into community perspectives.

The research to inform both guides took place between January and March 2025, including a desk review of literature and stakeholder mapping. CLEAR Global conducted remote interviews with key staff in large international NGOs, UN agencies, local non-profit organisations, international non-profit organisations; subject matter experts such as technology providers focused on delivering solutions in development aid and humanitarian contexts; human-centred design practitioners with a social impact focus, and relevant research agencies. The key staff provided a deeper understanding of their organisations' experience in using digital technology in humanitarian settings, their approach to community engagement, what processes they apply when delivering digital tools, and to what extent these processes are participatory. They described challenges and gaps their organisations face when designing and using new tools for humanitarian action.

CLEAR Global spoke with 159 people in Borno and Adamawa States in northeast Nigeria in focus group discussions and ideation workshops. In these participatory sessions crisis-affected people shared their perspectives and concerns regarding the use of new digital technology in northeast Nigeria and whether and how they want to participate in the choice, design, deployment and evaluation of humanitarian technology applications and platforms.

While this guide features research from Nigeria, its core approaches can be used worldwide with adaptations for local circumstances and infrastructure and offer a framework for designing ethical, effective, and human-centred technology in all humanitarian responses.

Introduction

Digital technology has the potential to enhance humanitarian responses by improving service delivery and empowering people in crisis-affected communities. Yet the effectiveness of any technology depends on how well it aligns with the realities, needs, and concerns of the people it is meant to serve. Too often, digital tools are designed without considering the diverse needs and constraints of crisis-affected people, exacerbating the risk of exclusion. Exclusionary technology deepens vulnerabilities, and poorly designed solutions may create unintended harm, such as data security risks, surveillance concerns, or a lack of trust among users.

For technology tools to be effective, inclusive, and sustainable, they must be co-created with the people they intend to serve. One-off consultations are not enough. Meaningful engagement requires ongoing dialogue, flexible and adaptive processes, and an understanding that technology is just one component of a broader humanitarian ecosystem. To support humanitarian practitioners, programme implementers, decision makers and technology developers in meaningfully engaging affected people in the design, implementation, and evaluation of technology solutions, we developed Human-Centred Technology Design in Humanitarian Action: A guide to co-creating digital tools with crisis-affected people. This guide can support practitioners in integrating participatory approaches into humanitarian technology deployment, and in adapting human-centred design to the needs of humanitarian settings.

Throughout the process, a number of core considerations will affect the success and sustainability of humanitarian deployments of digital technology. Whether crisis-affected people accept and use digital tools will depend in large part on how far the design process builds trust, invests in meaningful two-way communication, supports people's digital skills and knowledge, and provides for data protection and informed consent, and how inclusive it is.

This guide offers practical insights on these five fundamental aspects of human-centred design, which cut across all phases of technology development and use. Each section focuses on a core issue, outlining:

- ✓ **Why it is important for humanitarian technology development**
- ✓ **Good practice recommendations for its humanitarian application**
- ✓ **Community perspectives drawn from our research with crisis-affected people in northeast Nigeria**
- ✓ **Questions to guide your discussions with communities**

The sections contain findings from the research and ideation workshops in northeast Nigeria in January 2025. At the time northeast Nigeria had endured 14 years of armed conflict and remained one of the world's most severe humanitarian emergencies, affecting millions of people across Borno, Adamawa, and Yobe States. An estimated 2.2 million people were displaced as a result of insecurity and climate-related disasters. The experiences, challenges, and perspectives described by the people CLEAR Global worked with in northeast Nigeria are represented in fictional "personas" that protect real people's identities, enabling them to speak freely. People's insights as expressed through the personas ground the methodology in this guide in people's experience and illustrate the vital connection between abstract principles and people's tangible realities and needs.

Core considerations

Trust

Trust is the foundation of any successful humanitarian deployment of digital technology. If people do not trust the tools, platforms, organisations and staff involved, they will not use the technology, however well-intentioned and well-designed it is. Trust is built through transparency, accountability to affected people, and people feeling their lived expertise and involvement in developing the technology are valued and acted on. Organisations must ensure that digital technology serves the interests of affected people, avoids harm, and aligns with local needs and expectations.

Meaningful two-way communication

Effective humanitarian assistance requires dialogue between communities and aid providers, not just one-way information dissemination. Digital technology can strengthen accountability and responsiveness by enabling communities to express their needs, provide feedback, and engage with decision making.

Support for digital skills and understanding

To engage meaningfully with digital technology, crisis-affected people don't only need to know how to operate a smartphone or app. They also need to understand the risks of sharing personal data and be able to recognise misinformation and navigate digital platforms safely.

Data protection and security

Humanitarian platforms often collect highly sensitive data, including personal details, biometric information, and location data. Without strong data protection measures, this information can be misused and expose already vulnerable people to risks such as surveillance, discrimination, and exploitation. Informed consent is critical. Aid organisations and their technology partners have an obligation to inform people what data is being collected, how it will be used, where it could end up, and what control the individual has over it. Ethical and transparent data practices not only protect individuals but also reinforce trust in digital services.

Inclusiveness

Technology should be a bridge, not a barrier. Yet many digital tools unintentionally exclude marginalised groups like people with disabilities, those with low or no literacy skills, and residents of remote areas where connectivity is limited. Inclusive design ensures that digital tools are accessible to everyone, regardless of their physical, linguistic or socioeconomic characteristics. That includes offering multilingual interfaces, offline functionality, and alternative formats such as audio for low-literacy or visually impaired users.

Meet the community: the personas

Community personas

Personas are fictional but research-based representations of real people, designed to capture the diverse experiences, needs, and challenges of those interacting with technology tools. In humanitarian settings, using personas can help bridge the gap between technological design and real-world application by ensuring that solutions are developed with a deep understanding of users' contexts.

The use of personas serves several key purposes:

- **Enhancing empathy and understanding:** Personas bring the voices of affected people into the design process, ensuring that digital tools are developed with a user-first mindset.
- **Highlighting barriers and needs:** Different groups face distinct challenges related to knowledge of digital technology, trust, accessibility, and data protection. Personas illustrate these differences and help identify potential roadblocks.
- **Facilitating inclusive design:** By representing a range of users, including those who may be marginalised, personas encourage solutions that are accessible, culturally appropriate, and responsive to diverse needs.
- **Encouraging meaningful engagement:** Personas help shift the focus from technology-driven to community-driven approaches, fostering deeper engagement with the intended users.

Maimuna

About me

I'm Maimuna, aged 53, I'm married and have five children. I speak Kanuri and Hausa, but I don't know how to read or write. I rely on my husband, the community leader, and the women's leader for information on the help that may be available to us.

How I use and perceive technology

I don't use technology in my daily life and I don't have a phone. But I own a SIM card, which I put in my neighbour's phone when I need to make calls, but most of the time I don't have the money to buy phone credit. Our family uses one of those chip cards the humanitarians gave us to receive aid, but my husband is in charge of this. When they introduced the chip cards a few years ago, I was very sceptical because people said it was evil. Some people also say that women shouldn't use technology and the Internet because of the risk of fraud and because there is dangerous content. I wouldn't know how to protect myself from that.

Should humanitarians deploy technology?

It depends. Technology used by humanitarians, for example when we register for help, has made it much faster for us to receive aid, so that's a good thing! And smartphone owners use voice-based applications that also could help me. But if humanitarians use more technology, what will happen to people like me who can't afford a device and don't know how to use technology? Will we be excluded? I'm worried!

Fatima

About me

I'm Fatima, aged 24. I graduated secondary school and do not have a job now. I speak Fulani and Hausa, and read and write English. I prefer written information in English as I'm not used to reading or writing in Fulani or Hausa. I get information on our situation from my parents and friends.

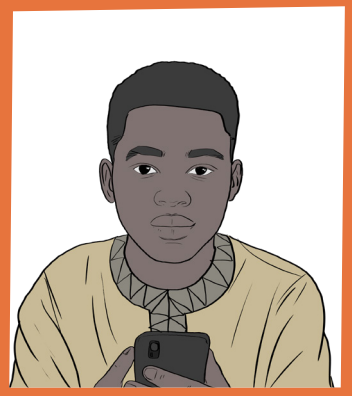
How I use and perceive technology

I have a small phone for making calls. I would really like to have a smartphone, but I can't afford it. Some of my friends own smartphones and I ask them to look up information for me on the Internet. We also watch TikTok and other social media, or use the phone to listen to the radio. I don't use any other technology apart from my phone, and I haven't heard of humanitarians making any technology available for us to use.

Should humanitarians deploy technology?

Yes, if it helps us. Technology is a good thing and we need more of it. If they use technology, humanitarians should also teach us how to use it safely so that it makes our lives better. We really need that! When it comes to new technology like this artificial intelligence everyone is talking about, I'm not sure because I don't know anything about it. If it helps us and is in line with our religion then yes, but if you know there is a risk, then don't ask us to use it. Whatever tools you come up with, I'd only use them if our *bulama* (leader) approves of them. I'm curious!

Idris



About me

I'm Idris, aged 19. I'm a student. My first language is Marghi, but in my daily life I speak Hausa. I read and write very well in English. I regularly attend the meetings with the *bulama* to get information on our situation; I also read information shared in WhatsApp groups, and I search the Internet as well.

How I use and perceive technology

I own a smartphone and browse the Internet daily for my studies. I also use artificial intelligence applications like ChatGPT. I use WhatsApp a lot with friends and I'm a member of several WhatsApp groups. When I install new apps, I try to check the source to make sure the app is not a fake. Technology is great, it's everywhere in the world today, and the Internet connects me to things happening elsewhere. Unfortunately, some people use technology and the Internet for fraud and other bad purposes, or to look at inappropriate content.

Should humanitarians deploy technology?

Yes, absolutely! It will help our community to advance and it will make humanitarian aid more efficient. I personally won't face any issues using technology, and if it's something new, you can show us how to use it. I'm excited!

Zainab

About me

I'm Zainab, aged 39. I'm married with two children. I speak Shuwa Arabic, Hausa and English. I used to volunteer for a humanitarian organisation, helping mostly with data collection. I now work for the organisation as a community engagement support officer. I get information directly from humanitarians, the Internet and the media.

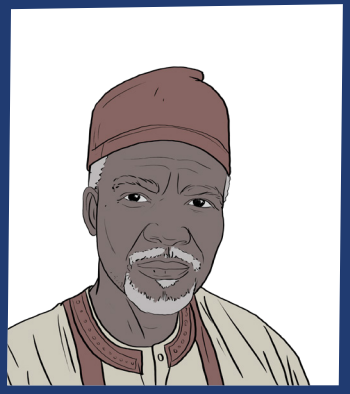
How I use and perceive technology

I own a smartphone that I also used for data collection as a volunteer (Kobo and ODK Collect). I have basic knowledge of how to use a computer, but I don't need it very often. Technology is a game changer. Even if someone can't read or write, if you show them how, they can use a device.

Should humanitarians deploy technology?

Yes, especially for women. We're not tech-savvy, but we want women to be enlightened and build their knowledge and be included. We currently have "old" knowledge; we need more knowledge and we need to be engaged. Anything that is progressive for us and that will help our community is accepted. I'm supportive!

Adamu



About me

I'm Adamu, aged 50. I'm married to two wives and have eight children. I'm the *bulama*, the elected leader of this community. I speak Shuwa Arabic, Hausa and Kanuri, and I know some Gamargu and English. I feel most confident reading and writing in Hausa. I get information on our situation from the humanitarians on an almost daily basis, and I act as the link between them and community members. I also support humanitarians of all organisations to implement their projects in our community.

How I use and perceive technology

I recently bought a smartphone, but I haven't mastered it fully yet. I mostly use it for making calls and using WhatsApp. Lately I have joined some video calls. I also use my smartphone to browse the Internet if I'm looking for information. Technology has its advantages and disadvantages, but the advantages prevail. You can trace thieves; you can retrieve information that was stored 10 years ago and have it shown to you live. Technology is good, it's transparent. Technology is better than text in books, because books can decay. The disadvantage, especially with AI, is that it takes away jobs, and that will make it difficult for the younger generation to build a livelihood. However, some technology is gradually reaching us. We want to have it here rapidly to use and benefit from it.

Should humanitarians deploy technology?

Yes, we're ready for it and our community has the capacity to support it. We trust the organisations we've been working with over the last decade, so let's sit down and discuss what you have to propose, the benefits and risks, and the impact it will have on our community. I'm attentive!

Brief digital context of northeast Nigeria

At the time of the research, in January 2025, there had been recent efforts to introduce digital technology in northeast Nigeria to directly engage affected people, including electronic cash/food voucher systems and multilingual chatbots. Generally, however, the humanitarian response was relatively low-tech, primarily due to significant connectivity and access challenges. Historically, mobile networks were restricted in the region to prevent misuse by insurgent groups, which limited the use of high-tech solutions. With mobile connectivity expanding again, more than two-thirds of the population in northeast Nigeria were estimated to have active mobile voice subscriptions (69%), and just over half had an Internet connection (53%).[1] Language barriers and network gaps further restricted Internet access. Mobile phones were widely used but not for accessing humanitarian information. Men were more likely than women to own and use phones. Men, especially leaders, were more familiar with smartphones than women. And young people, especially young men, were more likely to own smartphones than older people.[2]

[1] Percentages calculated on the basis of the 2024 subscription data of the Nigerian National Bureau of Statistics (NBS) and population estimates based on the 2006 census data and an annual population growth estimate of 2.7% (national estimate 2.5 - 3.2 %). Estimated percentages per state are as follows: Adamawa voice 77.20% internet 62.42%, Borno voice 60.42% internet 46.43%, Yobe voice 72.70% internet 52.55%.

[2] CLEAR Global 2022: Improving access and trust in humanitarian complaints and feedback systems in northeast Nigeria;
CLEAR Global 2023: Communicating for trust

Trust

Trust

Trust is not automatic – it must be built, earned, and maintained through transparency, engagement, and accountability.

Trust is one of the most critical factors in the successful deployment and adoption of digital technology in humanitarian settings.Trust must be built and maintained through consistent engagement, transparency, and ethical practices. Trust is not static: it is continuously shaped by humanitarian organisations' actions, interactions and decisions, and by a changing environment. Without trust, even the most well-designed technological solutions risk rejection or limited adoption.

By embedding trust-building efforts into every stage of technology deployment, humanitarian actors can increase community acceptance, ensure ethical technology use, and ultimately improve the effectiveness of humanitarian interventions.

Community perspectives

- The crisis-affected people we talked to in northeast Nigeria told us they trust humanitarian organisations that they know, that have supported communities over the last decade and have established a trusting relationship. People also emphasised that they would not trust organisations or private corporations that they don't know.
- Despite the general trust in humanitarian organisations, people were very keen to be consulted and included in the decision-making process, including being provided with information on the risks and benefits of a potential digital solution.
- They stressed that to feel comfortable using a digital tool, they would need to know that community leaders and other influential people they trust approve of it.

Maimuna

"For me to trust a digital tool, even if I can't use it myself, I'd need to see the positive impact and benefits it has on the community. I'd also feel more comfortable about it if I know there are alternative solutions provided for people like me."

Fatima

"If the humanitarian organisations that come here meet with the community leaders' approval, that's fine. We trust our leaders' judgement. I like to ask our leaders about a particular technology before I use it."

Idris

"I'd want to understand how the digital tool works, what the risks and benefits are, and how the organisation plans to reduce those risks. The more information you can give us on the tool and how it will be developed and deployed, the more comfortable I'll feel using it."

Zainab

"I'll trust the digital tool and the organisation if humanitarians engage us, listen to us, and incorporate our specific needs and preferences, especially those of women with varying degrees of familiarity with digital technology."

Adamu

"We know the organisations and they know us. We've seen how they work and how they act within the community. Before they start a new project, such as deploying digital technology, they will come to me and the other leaders to discuss it. We will then decide if the proposed solution is appropriate for our context."

Good practices

Building trust

Engage in early, active, and ongoing dialogue

- Engage a diverse range of community members, including people in marginalised or overlooked groups, through public discussions and private conversations to fully understand their perspectives and get their suggestions.
- Clearly explain:
  - What the problem is that technology could help to solve;
  - Technology options that could be used to address the problem;
  - How each technology option could work and the impact it could have;
  - How community feedback will shape decisions about what technology is used and how it is developed.
- Don't hoard knowledge: the principles of localisation and accountability to affected people imply giving crisis-affected people the information they need to have a say in decision making.
- Maintain open and ongoing communication, updating communities about challenges as well as successes to reinforce transparency and credibility.

Expand community participation by expanding conversations and clear and transparent processes

- Work with communities to:
  - Refine the purpose of the tool and the development process;
  - Identify potential risks and limitations;
  - Discuss who benefits and why, and arrive together at realistic expectations;
  - Discuss who might not yet be included and how they could be involved in developing, and possibly using, the tool.
- Acknowledge that no digital tool can fully meet everyone's needs.
- Be open about stakeholder roles and responsibilities. Explain which organisations, companies or agencies are or might be involved in the process.
- Listen to community concerns and address fears with honesty and humility, even if you cannot fully resolve every challenge.

Foster community leadership and local engagement

- Actively involve local leaders, both formal and informal.
- Seek guidance from local organisations and grassroots groups, as they often best understand the cultural, social, and political context.
- Engage trusted community figures like elders, religious leaders, media personalities, or respected advocates to help communicate the purpose and benefits of the digital tool.
- Use familiar channels like call-in radio programmes to engage community members, answer their questions and correct rumours or misinformation.
- Work toward shared ownership of the technology solution, ensuring that communities feel they are part of the process, not just passive recipients.

Questions relevant to trust
to discuss with crisis-affected people

- ✓ What hopes and concerns do you have about technology, or about this particular tool?
- ✓ What information, practice or other resource do you need to feel comfortable using a digital tool?
- ✓ Under which circumstances would you decide not to use a digital tool?
- ✓ Who in your community needs technology the most, but is least seen or heard because of a marginalising characteristic?
- ✓ Who from the community needs to be involved and consulted in the process of designing and implementing technology?
- ✓ Who is trusted to make decisions on behalf of the community?
- ✓ Do you want updates on the progress of developing new digital tools? If so, how often would you want to be updated?
- ✓ What further information do you need from us?
- ✓ Which communication channels do your household and people in your community trust?

Meaningful two-way communication

Meaningful two-way communication

Clear and transparent communication in languages that people feel comfortable with ensures that communities understand the purpose of any new tool, how it works, and how they can engage with it.

Meaningful two-way communication is a critical component in the successful deployment of digital technology in humanitarian action. Ensuring that communities are well-informed and engaged at every stage of a project and can voice their preferences, needs, and concerns builds trust, manages expectations, and enhances the likelihood of adoption and sustainability. Clear, transparent, and inclusive communication strategies can prevent misunderstandings and foster community ownership of digital solutions.

Dialogue is key throughout the process to ensure that the perspectives of different sections of the population are taken on board. This is particularly important in the early stages of identifying needs, selecting the appropriate digital tool, and scoping how it will be developed and deployed.

Community perspectives

- The crisis-affected people we talked with in northeast Nigeria stressed the need for clear and easily understandable communication on digital tools, in local languages and without technological or humanitarian jargon.
- People often prefer to use different languages for spoken and written communication.
- People with less access to and experience of digital technology emphasised the need for detailed communication on the tool that is developed. They called for explanations not only on risks and benefits, but also on each step of the process of deciding, designing, developing and deploying the tool, who would be involved and how, and the purpose and objectives.
- Most people would prefer face-to-face communication in their local languages so they are better able to ask questions.

Maimuna

"I'd like to receive all information through our community leaders. They speak my language and can explain to me in a way that I understand. I would also not feel comfortable asking questions of a stranger."

Fatima

"It would be good if you can give us information about possible technology tools before they are developed. That would be important for us to support the technology and to be aware of it. When the first version of the technology tool is ready, the developer should leave his phone number to ask me about certain things, or for me to give feedback or complaints. There should be an established channel of communication."

Idris

"It would be better if humanitarians and the technology developers come and meet us regularly to explain the process. We could give feedback using an app."

Zainab

"We need to be able to ask questions, so regular communication is important. Feedback should be gathered through a monthly meeting with everyone, including the leaders and stakeholders, and another meeting with the users of the tool."

Adamu

"Regular communication is important, because community members will ask me a lot of questions that I need to be able to answer. Face-to-face communication usually works best, but it could also be oral communication channels, such as the radio."

Good practices

Establishing meaningful two-way communication

Communicate in ways that are easy to understand

- Use local languages, not just the dominant language, when communicating with crisis-affected people to ensure that people in marginalised groups are included and have ways to get updates, give feedback and ask questions.
- Use audio, video, and pictorial formats to share information that can be understood by a broad audience with varying literacy levels.
- Use plain language to break down complex technical concepts. Avoid jargon and ensure that messages are easy to understand, particularly for communities with varying literacy levels.
- Share simple examples that resonate with the local context to make the technology more accessible and understandable.

Communicate through trusted channels

- Identify and use communication methods and channels that are already trusted within the community.
- Partner with local influencers, community leaders, and respected organisations to disseminate information.
- Use multiple communication channels that people say they prefer, such as radio, community meetings, social media, and face-to-face interactions, to reach different sections of the population.
- Use storytelling, testimonials, and case studies from successful interventions to illustrate the potential uses and benefits of the technology.

Encourage and enable continuous feedback

- Create opportunities for communities to ask questions, voice concerns, and provide feedback. Actively listen and respond to community concerns, even if they fall outside the project's scope, to foster trust and credibility.
- Make it clear that this is an ongoing process. Share progress, challenges, and setbacks to keep people informed and expectations realistic.
- Encourage continuous feedback from all community members, whether they are enthusiastic or sceptical, so that the tool can be improved and adapted to better suit their needs. Close the feedback loop by letting individuals and communities know how their feedback was incorporated, or why it wasn't.

Questions relevant for meaningful two-way communication to discuss with crisis-affected people

- ✓ What is the main language you and other members of your community speak at home in your household and in your community? What other languages do you and people in your community speak?
- ✓ Which languages do you prefer for written and spoken communication?
- ✓ Who in your community has specific needs and might need more outreach to be able to contribute to the development of a digital tool?
- ✓ Through which channels would you prefer to communicate with us?
- ✓ Do you own a phone? Is it a smartphone? If you do not own a phone, would you have access to one so this project could send you updates via text messages or call you to ask a question or invite you to an activity to develop technology tools?
- ✓ Have you ever given feedback on humanitarian action? If not, what has stopped you from doing so?

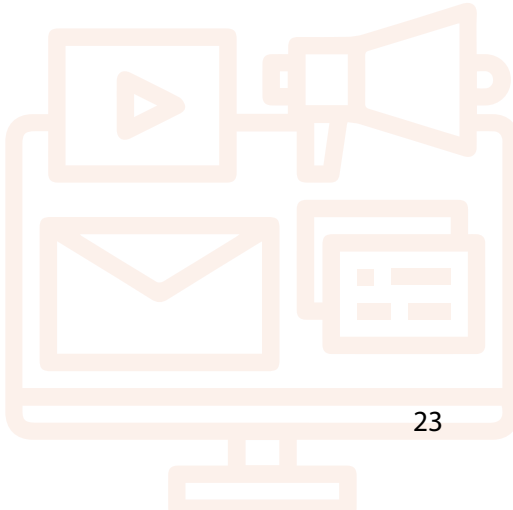
Digital skills and understanding

Digital skills and understanding

Crisis-affected people need an understanding of digital technology to be able to meaningfully engage in communication and make informed decisions about digital tools, especially those that could directly impact their lives.

As humanitarian use of digital tools increases, including for registration and communication, it is important that people receiving assistance can access those tools safely and effectively. However, familiarity with digital technology varies widely, and many people affected by crises face challenges learning about and using technology.

Comprehensive digital skills training is not always feasible in an emergency, particularly in natural disasters. But humanitarians can still be accountable to affected people by telling them how technology is supposed to be used in a humanitarian response.



Community perspectives

- While most of the crisis-affected people we talked to had limited experience of using digital technology, digital access is a deeply gendered issue in northeast Nigeria. Women often use only simple feature phones, if they use any phone at all, and have little experience using smartphones or accessing the Internet.
- People's lack of digital experience and knowledge resulted in two different reactions. Some voiced a fear of digital technology and were not confident about asking questions and learning how to use digital tools. Others were enthusiastic about digital technology, but unaware of its potential risks and harms.
- Women especially emphasised the need for digital skills training, both to understand the potential risks and benefits of using a digital tool and to know how to do so. They also stressed the importance of training to enable them to give meaningful consent.

Maimuna

"I have never used technology before. If you want me to use any digital tool, you will have to show me step by step how to use it. Trainers should be people from the community so that I can go to them whenever I have a question or problem with the tool."

Fatima

"We're not tech-savvy, but you the developers know better – so you tell us. But then most importantly, after telling us, you need to ask us for consent. We will decide if this is acceptable or not."

Idris

"Some people in the community should be selected and trained. We would like to see and understand the technology before it is used. We first need to verify it and confirm it's not harmful to the community."

Zainab

"It's the responsibility of the organisation, the developers, to let us know how we can best protect our data and ourselves. Sensitise us, educate us about that. We should be gathered together for a workshop, for example, and those who have been taught how to use the tool can teach others in the community."

Adamu

"There are educated and capable individuals in the larger community who have the skills and expertise to manage and maintain a digital tool. They should be included throughout the process to ensure that the tool is appropriate for our community, and that it stays functional."

Good practices

Promoting digital skills and understanding

Explain the implications of humanitarian digital solutions that are not used directly by affected people

- Communicate how digital tools such as algorithmic decision making impact aid access and delivery, including their potential for bias and automated exclusion.
- Explain what personal identifiable data is, what personal data is collected, why, and how it is used. Educate communities on their rights regarding digital consent, privacy, and opting out. Explain the role of third-party technology providers in data handling and the potential associated risks.
- Use visual guides, audio resources, and community meetings to explain technology in ways that are easy and convenient for affected people.

Provide guidance on how to use the digital tool

- Train crisis-affected people on using the tool. Ensure wide access to the tool by providing training in a range of formats, including audio and video tutorials with sign language, visual guides and interactive workshops. Ensure training includes practical exercises so people gain hands-on experience.
- Promote gender equality in digital skills. Women and girls in many communities face additional challenges when it comes to accessing and using digital technology. Co-designing gender-sensitive programmes and initiatives with women and girls can help bridge this gap and empower them to participate in the digital world.
- Provide cybersecurity guidance, including:
  - Recognising online fraud and how and where to report it.
  - Using strong passwords and two-factor authentication where possible, and securing personal devices.
  - Adjusting privacy settings on mobile devices and online platforms to limit unnecessary data exposure.

Transfer knowledge

- Encourage local ownership of digital tools by training community members to become trainers themselves. Peer learning among adolescents could be effective. Once a number of adolescent trainers is prepared, they can then work with older relatives, friends and neighbours in an intergenerational "each one teach one" process.
- Partner with local organisations and educational institutions to integrate digital training into broader knowledge and skill building initiatives.

Questions relevant to digital skills and understanding to discuss with crisis-affected people

- ✓ What (if any) technology have you used before?
- ✓ Are there barriers to accessing technology? Which ones and for whom?
- ✓ Are there members of the community who have less access to technology than others? (Probe for gendered and other social access constraints)
- ✓ What (if any) risks do you see related to this and other possible digital solutions?
- ✓ What (if any) ethical concerns do you have regarding emerging technologies?
- ✓ What (if any) risks do you see in sharing your information that identifies you personally?

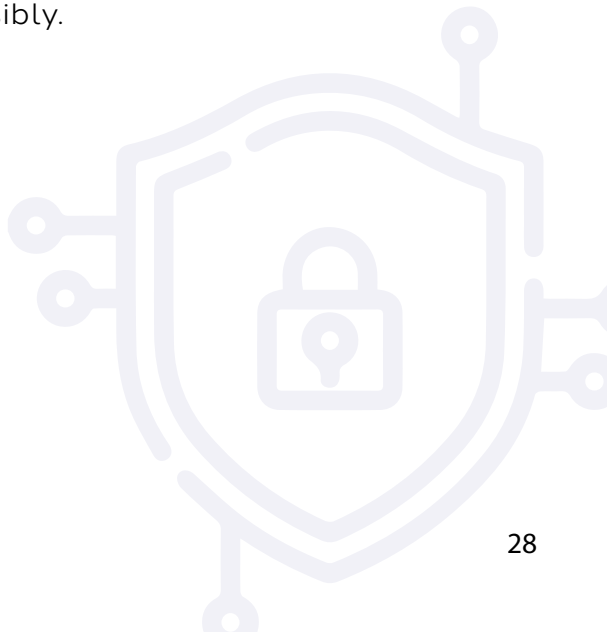
Data protection and security

Data protection and security

Protecting crisis-affected people's data is essential for preventing harm and upholding people's right to privacy in humanitarian settings.

Humanitarian organisations collect and process sensitive personal data – from biometric IDs to mobile cash transfers – so strong data security and protection is essential. Failure to secure data exposes people to privacy violations, identity theft, discrimination, and surveillance by third parties.

By embedding strong data security and protection measures in humanitarian operations, organisations can safeguard the privacy, dignity, and rights of people needing assistance, ensuring that technology serves humanitarian goals ethically and responsibly.



Community perspectives

- The crisis-affected people we talked with in northeast Nigeria all stressed that they should be asked for their consent both when digital tools start to be used and when collecting their personal data.
- While all participants were aware of risks such as fraud and identity theft, most of the people we talked to – men as well as women – were unaware of the potential consequences.
- Everyone we spoke with, including community leaders, said they did not know what questions to ask humanitarians about data protection, data sharing, and data handling before consenting to the deployment of digital tools.

Maimuna

"If you don't explain to us what the risks are, we won't know. Educated people will prefer a written format for the process of giving consent, but for others a pictorial process is better because it's easier to understand by looking at it."

Fatima

"For me personally, I'm not too worried about sharing my data and being identified. It doesn't matter who reads my data. As long as it's nothing bad and as long as I get the value of the digital solution, it serves the purpose."

Idris

"For someone to use your private data to develop something new, that's generally a problem. But if whatever they are developing is useful to us, they should tell us and we won't have an issue consenting to it. Another thing is that whoever has our private data doesn't have permission to use it without our prior knowledge. They have to give us the specific details of what the data is being used for."

Zainab

"I think data security is very important. Previously, I was not aware that someone could steal your identity and use it for other things. But anything that connects to money, like sharing bank account details, is a no-go for us."

Adamu

"The humanitarian organisations preserve confidentiality. Even if they see our secrets, they keep them confidential. There is nothing to worry about. The potential harm that you described to us is a risk, but it is still better than writing our data in a book and keeping it in the car."

Good practices

Data protection and security

Minimise data collection and strengthen data security measures

- ✓ Collect only the minimum necessary information.
- ✓ Establish clear data retention policies to ensure that personal data is deleted when no longer needed.
- ✓ Encrypt personal data both in transit and at rest to prevent unauthorised access.
- ✓ Use multi-factor authentication and restrict access to sensitive information.
- ✓ Regularly review data collection practices to ensure they align with privacy and security standards. Conduct regular security audits to identify and fix vulnerabilities.

Ensure transparent and informed consent

- ✓ Provide clear, accessible explanations of:
  - What data is collected and why.
  - Who has access to it (for example, humanitarian agencies, third-party providers, governments).
  - How long it will be stored and how individuals can request deletion.
- ✓ Offer opt-in and opt-out mechanisms, ensuring people can refuse data collection without losing access to aid.
- ✓ Use alternative formats (audio, video, pictorial guides) to ensure consent is fully understood, especially for people with low literacy.

Protect people from data misuse

- ✓ Prevent unauthorised data-sharing with governments, private companies and third parties. Apply anonymisation and pseudonymisation techniques to reduce data-related risks.
- ✓ Train humanitarian staff in good data security practices to prevent accidental breaches and misuse.
- ✓ Ensure that AI-driven aid systems do not reinforce biases or exclude vulnerable groups.
- ✓ Align data-security practices with national and global legal frameworks, such as:
  - The European Union's GDPR (General Data Protection Regulation) for global data protection principles.
  - Local data protection laws in countries where humanitarian work is conducted.

Questions relevant to data protection and security to discuss with crisis-affected people

- ✓ How do you feel about sharing your personal information with humanitarian organisations?
- ✓ What data are you comfortable sharing? What data are you uncomfortable sharing?
- ✓ Are you aware of how your data will be used and stored?
- ✓ Would you like to be informed if your data is shared with others?
- ✓ What's the best way for organisations to share information with you about data protection?
- ✓ Are you aware of how to protect your data yourself when using your phone, a computer, the Internet or other digital tools?

Inclusiveness

Inclusiveness

Accessibility is key to supporting inclusion. Intentional design, in collaboration with diverse communities, is the best way to address access barriers linked to literacy, disability, connectivity, and socioeconomic factors.

Humanitarian action will continue to increase its use of digital technology. Improving accessibility is a fundamental consideration that requires careful planning to avoid excluding those who are most marginalised, among them individuals with low literacy levels, disabilities or limited connectivity, or who speak or read minority languages. Accessibility must be built into consultation, design, implementation, and monitoring and correction processes to ensure equitable access to technology.

Community perspectives

- Crisis-affected people we spoke with in northeast Nigeria described barriers to technology access including literacy levels, language, cost, and cultural restrictions.
- People in northeast Nigeria want to be involved in the design and adaptation of technology to ensure that they can use it easily.
- They prefer solutions linked to existing platforms that they know and can use confidently. Women proposed linking technology solutions to existing platforms where they discuss and get information on livelihood opportunities in order to increase uptake.
- Women emphasised the need for multilingual and audio- and video-based solutions to make technology and knowledge about technology available to people who cannot read.

Maimuna

"We want to be involved in the design process, but most importantly the designer must be someone trustworthy and honest who will not take advantage of us. Information about technology decisions and development must use pictures rather than text because everyone can understand pictures with clear meanings. The picture will be understood."

Fatima

"We want to advise humanitarians on the languages of the technology solution. It should be in multiple languages and it should clearly indicate which language is which, so people can select the language they understand."

Idris

"They should include voice notes, to be honest, because every other person who can talk can use voice notes, especially in their language. If it's an app, it should have a feature for the Hausa and Kanuri languages, but also for Shuwa Arabic and other minority languages. No one should be left behind."

Zainab

"Women need to be included in the design. Pictorial communication is preferable for those who can't read or write. And pictures need to be culturally appropriate. Images should show modestly dressed people. Drawings of humans are better than photos, for example when you show mothers breastfeeding. If people can 'see themselves' in content, they will be more comfortable and more likely to use the new tool."

Adamu

"It is important that technology solutions are designed with reasonable efforts to involve everyone irrespective of their differences. Ideally, work with some of the tech-savvy individuals from our community: they know what people need. Or bring your developer here to meet the community."

Good practices

Inclusiveness

Address diverse needs

- **Literacy levels:** Use visual, audio, pictorial and simplified text-based communication to accommodate varying literacy levels.
- **People with disabilities:** Implement accessibility features such as screen readers, voice commands, and alternative input and alternative caption methods.
- **Language and cultural adaptation:** Test content in every language and visualisations with the people you intend the information for, to check they understand it the way you intended.
- **Age-inclusive design for older adults:** Consider the needs of older adults and individuals unfamiliar with digital technology so the tools are easier to use.
- **Age-inclusive design for younger people:** Remember also to work with adolescents and consider their needs and skills.
- **Easy-to-use and intuitive interfaces:** Design user-friendly tools with intuitive interfaces that can be used with minimal prior knowledge. Conduct usability testing.

Use multiple channels and digital inclusion strategies

- **Blended approach:** Combine no-tech, low-tech, and high-tech solutions to promote broad accessibility. (Examples include posters, community meetings, radio broadcasts, Interactive Voice Response (IVR) systems, SMS, and chatbots.)
- **Offline availability:** Develop digital tools that can function offline for use in areas with poor or patchy connectivity.
- **Overcoming barriers:** Explore options like public technology hubs to address limited smartphone ownership, high data costs, and gendered digital divides.

Localise content and use familiar platforms

- **Community involvement:** Engage crisis-affected people as your partners and co-design, test and modify the technology tool to ensure usability and relevance.
- **Localised content:** Adapt content and features (chatbot personas, content, languages, etc.) to reflect people in the contexts where the tool will be used. Figure out how to follow cultural norms while still including women, girls and members of other marginalised groups in communication content.
- **Familiar platforms:** When possible, engage through popular local channels (social media apps, messaging platforms, etc.) to increase uptake.

Questions relevant to inclusiveness to discuss with crisis-affected people

- ✓ Are there people with disabilities who need screen readers, voice commands, or alternative input methods?
- ✓ Are older adults who are unfamiliar with digital tools able to use them? What challenges do they face?
- ✓ What features would make digital tools easier to use (for example, larger buttons, voice guidance, simpler interfaces)?
- ✓ Is Internet connectivity reliable? Would offline functionality be helpful for you or for people in areas with limited phone reception and Internet connectivity?
- ✓ What barriers exist to using mobile technology (for example, the cost of buying data, device ownership)?
- ✓ Would a shared community technology hub help increase technology use? Where should it be located if so?

How CLEAR Global can help

CLEAR Global's mission is to help people get vital information and be heard, whatever language they speak. We help our partner organisations to listen to and communicate effectively with the communities they serve. We translate messages and documents into local languages, support audio translations and pictorial information, train staff and volunteers, and advise on two-way communication. We also work with partners to field test and revise materials to improve comprehension and impact, and to develop language technology solutions that work for communities. This work is informed by research, language mapping and assessments of target populations' communication needs. We also provide training to support effective humanitarian communication (topics include humanitarian interpreting, communication in emergencies, and plain language). For more information visit our website or contact us at info@clearglobal.org.

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