Harnessing Technology to Prevent, Mitigate and Respond to Gender-Based Violence in Emergencies

Developments, Good Practices and Lessons Learnt
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Background

This paper is part of series of knowledge products produced by the Gender-Based Violence Area of Responsibility (GBV AoR) Helpdesk. The Helpdesk is a technical research, analysis, and advice service for humanitarian practitioners working on GBV prevention and response in emergencies at the global, regional and country level. GBV AoR Helpdesk services are provided by a roster of GBViE experts, with oversight from Social Development Direct.

This paper focusses on the issue of technology in GBV prevention, mitigation and response in emergencies and aims to improve knowledge and understanding of good practices and lessons learned in harnessing technology to improve efforts to address GBV in humanitarian action. The information and analysis were developed through review of recent literature and evidence on the use of technology-related innovations in GBV programming in humanitarian and non-humanitarian contexts, semi-structured interviews and correspondence with technology, GBViE and other specialists, and analysis of case studies collated based on a framework for enquiry.

The paper synthesizes available evidence, learning and insights based on emerging examples, practices and challenges in using technology to address GBV in emergencies, to identify how technology is currently being integrated in programming to address GBV in emergencies. Lessons learned about challenges and safety-related risks are discussed, as are methodological and other considerations for scaling up use of technology to improve GBV prevention and response in emergency contexts. The paper concludes with some recommendations for the GBV community to support investment and efforts in adapting and trialling emerging technologies to address GBV moving forward.
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<th>Definitions</th>
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<td><strong>Audio computer-assisted self-interviewing (ACASI)</strong></td>
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<td><strong>Big data</strong></td>
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<td><strong>Biometrics</strong></td>
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¹ [https://syrp.org/images/ACASI_Insert_Singles.pdf](https://syrp.org/images/ACASI_Insert_Singles.pdf)
³ Ibid
⁴ Ibid
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<tr>
<th>Geospatial technology</th>
<th>Geospatial technology refers to equipment used to measure and analyse Earth’s land and features. Systems such as Global Positioning System (GPS) and Geographical Information System (GIS) are used in geospatial work.⁸</th>
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<tr>
<td>Information and communications technology (ICT)</td>
<td>A set of technological tools and resources used to communicate, create, disseminate, store, and manage information. These can include video, radio, television, Internet programmes, social media platforms, and mobile phones. Distinctions are emerging between “old” and “new” forms of media and technology—that is, between the use of television, radio, and other forms of traditional media that have been employed for decades and newer forms of media, including social media and the mobile phone.⁹</td>
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<tr>
<td>Interactive Voice Response (IVR)</td>
<td>A combination of pre-recorded messages with touch-tone technology that allows a direct participant response and collects meta data like the date, time, duration of calls and linguistic preferences.</td>
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<tr>
<td>Mobile money</td>
<td>The use of a mobile phone in order to transfer funds between banks or accounts, deposit or withdraw funds, or pay bills.¹⁰</td>
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⁸ [https://articles.extension.org/pages/72985/what-is-geospatial-technology](https://articles.extension.org/pages/72985/what-is-geospatial-technology)


¹⁰ [http://www.businessdictionary.com/definition/mobile-money.html](http://www.businessdictionary.com/definition/mobile-money.html)
Introduction

In line with global developments, technology is playing a growing role in efforts to respond to humanitarian crises, transforming how humanitarian organisations deliver assistance and interact with the people they serve. From preparedness through crisis and ongoing response, humanitarian agencies are adopting a variety of technologies to improve understanding of humanitarian needs, increase and measure the number of people reached, enhance the efficiency and effectiveness of humanitarian interventions, and facilitate greater accountability to affected populations and donors. Examples include the use of unmanned aerial vehicles and geospatial technology to detect and monitor humanitarian crises and population movements; mapping applications to enhance humanitarian needs assessment and coordination; biometrics and other digital identity tools to register affected people; and information and communication technologies (ICTs) to communicate, collect data and deliver services, with mobile money and blockchain replacing traditional forms of humanitarian assistance in some contexts. At the same time, more than ever, people impacted by crises have access to ICTs, transforming the interaction between those providing and those receiving humanitarian assistance and catalysing greater transparency and accountability of humanitarian agencies to affected populations.

Figure 1: Examples of technology being adopted across the humanitarian response cycle

Globally, technology is also being harnessed in efforts to address GBV. Around the world, different actors are using ICTs and other digital technologies to bolster GBV prevention, mitigation and response efforts. Governments and non-governmental actors are innovating

11 Capgemini Consulting, 2019
12 For example, the mobile Vulnerability Analysis and Mapping (mVAM) project uses voice technology to periodically collect, analyse and map household food security information from the same cohort of respondents, enabling more effective and efficient data collection while reducing security risks for staff.
13 For example, IFRC and Haitian Red Cross have used mobile technology to disseminate information and gather feedback about its services to facilitate communities to have a voice in disaster response efforts. Similarly, Danish Refugee Council developed an SMS-based Feedback and Accountability System using Ushidi mapping capabilities to assess and respond to feedback from affected communities. For more information on these and other technology-related projects, see Obrecht et al, 2017.
14 Capgemini Consulting, 2019
with technology to strengthen GBV programming and systems, improve reach and access of GBV services, educate communities and empower women and girls through digital financial, health and education services. Over one and a half billion women now own a mobile phone in low- and middle-income countries, and over a billion use mobile Internet,\(^\text{15}\) enabling GBV survivors and other women and girls unprecedented access to digital tools and platforms where they can access and share information, and seek assistance and support from professionals and from peers. Women and girls at risk of GBV are using online and smartphone-based applications to feel safer in public and domestic spaces. And GBV and women’s rights advocates and activists are using online tools to campaign, lobby and mobilise for gender equality and for action on GBV.

In the humanitarian space, the GBV community has long innovated with technology to address GBV. Notable examples include the application of cooking and energy technologies to reduce women and girls’ exposure to GBV risks.\(^\text{16}\) More recently, humanitarian and other actors – including the technology community and the private sector - are exploring ways to harness the transformative power of new technologies in GBV programming among populations impacted by conflict, disaster and displacement. New technologies are being applied to improve the collection, analysis and management of information about GBV and GBV services, as well as to enable agencies to better train and support staff and extend the reach of their services to GBV survivors. Importantly there is emerging evidence of the potential for new technologies to create greater accountability of services by giving affected women and girls an opportunity to voice their concerns, perspectives and needs related to services. While yet to be widely used in humanitarian contexts, biometrics and mobile phone payment systems may also be a method for supporting greater support to women and girl survivors and those at risk of GBV, by providing new opportunities for women to control resources that enhance their safety, protection and empowerment.\(^\text{17}\)

While technological innovation has the potential to enhance the reach, quality and accountability of humanitarian assistance, including in relation to GBV prevention, mitigation and response, there remain challenges, not least of which is the lack of an evidence base regarding the benefits, risks and impacts of new technologies in GBV programming in humanitarian contexts. Further, technology is not gender neutral.\(^\text{18}\) There is a serious risk that women and girls might not benefit from these developments, despite their being disproportionately impacted by crises and their heightened vulnerability to many forms of GBV during and following humanitarian emergencies. While increased connectivity among populations affected by crises could serve to enhance security, protection, health, livelihood, and self-reliance,\(^\text{19}\) there are significant barriers that hinder women and girls’ awareness of, access to, and ability to use technology. Whether one is a male or female, as well as age, ethnicity, religion, social class and geographical location can impact awareness of and ability to access, own and use a mobile phone and the Internet. Inattention to the fact that females are less likely to be able to access technologies has the potential to exacerbate women’s and

\(^{15}\) GSMA, 2019  
\(^{16}\) See Global Alliance for Clean Cookstoves, 2016 for examples of projects.  
\(^{17}\) Crabtree and Geara, 2018  
\(^{18}\) O’Donnell and Sweetman, 2018  
\(^{19}\) UNHCR, 2016
The purpose of this paper is to help build knowledge and understanding about how technology is currently being adapted and used in GBV programming in humanitarian settings and to identify emerging good practices, lessons and challenges in the uptake of technology in GBV prevention, mitigation and response. It also makes recommendations for the GBV community in harnessing technology to bolster efforts to prevent, mitigate and respond to GBV in humanitarian settings. Information is shared according to the following sections:

- **Part 1: Global Advances in Harnessing Technology to Help Prevent and Respond to GBV** covers different ways that technology is being used in GBV programming in humanitarian and development settings, and gives examples of technology being adapted to: strengthen GBV programming, systems and capacity; facilitate GBV survivor support; help mitigate GBV risks; and prevent GBV through education, campaigning and empowerment initiatives.

- **Part 2: Summary of Good Practices** overviews emerging good practices in using technology in GBV programming, which are drawn from literature, case studies and insights from those with experience and expertise in this area. Good practices are illustrated with lessons from relevant case studies.

- **Part 3: Lessons Learned and Key Challenges** draws on case studies, literature, and interviews with GBV and information specialists to identify lessons and challenges pertaining to the application of technology in humanitarian settings to women and girls’ safety, protection and empowerment.

- **Part 4: Methodological and Other Considerations for Scaling Up Use of Technology to Improve GBV Prevention and Response in Humanitarian Action** highlights key considerations for scaling up the use of technology to improve GBV prevention, mitigation and response in humanitarian contexts.

- **Part 6: Conclusions and Recommendations** summarises key issues and messages, and makes some recommendations regarding the integration of technology in GBV programming for practitioners, agencies and GBV specialists and policy-makers.

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20 Research has consistently found that connectivity is not evenly distributed to all refugees and that gender imbalance for mobile phone ownership can exacerbate situations for the most vulnerable refugees. See for example UNHCR, 2016 and GSMA, 2019.

21 O’Donnell and Sweetman, 2018
Global Advances in Harnessing Technology to Help Prevent and Respond to GBV

Globally, new technologies are being harnessed in a variety of ways to bolster efforts to address GBV. From crowd-sourced mapping applications used to identify locations where GBV is occurring and catalyse action to address it, to wearable technology and smart-phone applications that seek to increase women and girls’ individual safety, technology is an emerging and potentially powerful tool in GBV prevention, mitigation and response. While most technology-based innovations have to-date focussed on reducing GBV risks and responding to survivors to ensure they have access to assistance and care after experiencing GBV, there is evidence of the emerging use of technology to strengthen GBV prevention programming in humanitarian and development contexts. This section covers different ways that technology is being used in GBV programming in humanitarian and development settings, and give examples of technology being adapted to: 1) strengthen GBV programming, systems and capacity; 2) facilitate GBV survivor support; 3) help mitigate GBV risks; and 4) prevent GBV through education, campaigning and empowerment initiatives.

Please note, the purpose of this section is simply to highlight how technology is being used in GBV programming. Information on issues such as safety concerns are addressed in subsequent sections on good practices, lessons and challenges, and methodological considerations for scaling up.

Harnessing technology to strengthen GBV programming, systems and capacity

GBV data collection and analysis

Mobile digital technologies - smart phones and computer tablets in particular – and new research software applications are being used to collect data for GBV assessments and for monitoring and evaluating GBV programmes in humanitarian settings. Digital research tools can enable faster and more cost-effective GBV data collection and analysis, improve data quality and data safety. For example, in Somalia and South Sudan, Johns Hopkins University used computer tablets to administer a social norms survey among conflict-affected populations, enabling researchers to upload the survey response data to a secure server and delete it from the tablets daily, maximising data safety and protection. Digital research tools have the capacity to yield different data about GBV than traditional research methods, especially in contexts where there are low literacy levels, and to put women and girls' voice and perspective at the centre of research and programming. As an example, in the Democratic Republic of Congo and Ethiopia, the IRC/Columbia University COMPASS project used Audio-Computer Assisted Self-Interview (ACASI) software on computer tablets to collect information on GBV experiences of displaced adolescent girls. ACASI is a data collection method in which participants listen to pre-recorded questions through headphones and respond by selecting their answers on a touch screen or keypad. The ACASI method was found to elicit more

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22 The Global Women’s Institute, 2017
23 Glass et al, 2018
24 Falb et al, 2017
information about GBV perpetrated within the family and household from girls than that disclosed through face-to-face research methods, which focused on GBV in the wider community, indicating that the anonymity, privacy and confidentiality afforded by self-administered digital research methods enables participants to share sensitive information they might not otherwise disclose through traditional research methods.25

In another example, in Lebanon, researchers from Queen’s University partnered with GBV service providers to trial the application of Cognitive Edge’s SenseMaker® software to GBV service monitoring and evaluation (M&E). SenseMaker® is a mixed qualitative and quantitative data collection tool that enables individuals to anonymously record and interpret their own stories about their experiences of accessing a GBV service using computer tablets (see the case study in Part 2 for more information on this initiative). Similar to the ACASI example, the anonymity and privacy afforded by the use of technology in this way elicited more revealing responses than traditional M&E data collection methods, better capturing women and girls’ perspectives and needs, and therefore providing GBV programmes with an improved understanding of how their services are perceived and might be improved.26

**GBV information and case management systems**

The GBV sector turned to technology to respond to the need to systematise GBV information management a decade ago, rolling out the GBVIMS database to collect and store standardised GBV incident data.27 Recent advances in software and mobile technology are currently being harnessed to further enhance GBVIMS capabilities and functionality. The new generation of the GBVIMS, the GBVIMS+/Primero, an open source software platform to safely collect, store, manage and share incident and case management data, has enhanced capabilities for both on- and offline GBV data collection, can be used on tablets, computers and mobile phones and accommodates different languages, for client case management processes.

In addition to the humanitarian community, national development actors are trialling technology-based approaches to GBV reporting, referral and coordination systems in different countries, including those prone to disasters. For example, in Nepal, the national integrated GBV helpline and online case management system (CMS) uses mobile phone and online technology to enable reporting, registration, referral and management of GBV cases.28 The integrated system enables streamlined referral of survivors to services for shelter, healthcare, counselling, child support, and legal aid, and aims to eliminate the need for survivors to recount the incident and their circumstances to different service providers, reducing the risk of re-victimization and further trauma to the survivor. Similarly, the digital Afghanistan Electronic Case Management System (CMS) has been rolled out to support case management of GBV within the justice system. The CMS records information from civil and criminal cases, from the point of detection through investigation, trial and incarceration, with the objective of facilitating transparency, accountability and accessibility. The system records

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25 Stark et al, 2017  
26 Bartels et al, 2018  
27 The GBVIMS uses an excel-based database to support GBV actors to effectively and safely collect, store, analyse and share data reported by GBV survivors. For more information see: [http://www.gbvims.com/](http://www.gbvims.com/)  
identity, date of the incident, location of the incident, case registration date and number, decision of the agency and the date the case is referred to the next authority.  

**Workforce capacity development**

Technology-enabled workforce capacity development modalities can significantly increase the reach, flexibility, accessibility and affordability of staff training, development and supervision. The GBV sector has leveraged e-learning and other web-based technologies to build workforce capacity for many years, and there are numerous examples of online platforms and web-based collaboration and learning tools that aim to build GBV practitioner knowledge, skills and competencies to improve the quality and reach of GBV programming and service delivery in humanitarian contexts. Examples include:

- UNFPA’s online *Managing Gender-Based Violence in Emergencies Course* and ABAAD’s *Gender-Based Violence Case Management in Emergency Settings Online Learning Course* are both examples of online training platforms targeting new or emerging GBV specialists and others who want to increase their knowledge around GBV prevention and response in emergencies.
- The **GBV AoR Community of Practice** is a structured virtual space that combines an electronic mailing list and a threaded Internet forum, with webinars and online mentoring to provide ongoing, field-centred, experiential learning for GBV practitioners, and to enable learners and experienced GBV specialists to discuss challenges and troubleshoot solutions to their work in the field.
- The **GBV AoR Helpdesk** is a remote technical support service which uses email and other telecommunications applications to support field based GBV practitioners.

GBV and other humanitarian actors are increasingly looking to rapidly advancing smartphone capabilities to facilitate real-time, field-based mobile staff training, guidance and supervision, even in low-connectivity settings. The IRC’s Remote Offered Skill Building application (ROSA) is a leading example. ROSA is an interactive smart-phone application and web-based portal that provides staff access to key GBV response-related knowledge and skills; enables self or supervisor-administered skills assessments; and hosts a community space for users to expand their learning through facilitated remote discussions. The GBV AoR and GBV Guidelines Implementation Support Team have developed a smartphone application called the GBV Pocket Guide, which provides step-by-step guidance and tools to build capacity of humanitarian practitioners across all sectors to support GBV survivors in contexts where there are no GBV services, referral pathways or focal points. It uses global standards on providing basic support and information to survivors of GBV without doing further harm. A final example of a smart phone application aimed at building staff capacity in GBV is the Protection Cluster’s Protection Mainstreaming Mobile Application (ProM), a smart phone-based companion to the Global Protection Cluster Protection Mainstreaming training. ProM provides field-based guidance on key protection issues, including GBV risk mitigation in line

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29 UN Women, 2019  
31 [http://gbvcm-course.abaadmena.org](http://gbvcm-course.abaadmena.org)  
32 [https://gbvresponders.org/rosa-skill-building-application/](https://gbvresponders.org/rosa-skill-building-application/)  
with the IASC Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action.\textsuperscript{35} Podcasting is another smartphone-enabled technology being used to increase access to relevant information about GBV programming for humanitarian staff. The GBV IMS podcast series in one example, and includes episodes on using the GBVIMS, safe collection and use of GBV data and on case management.\textsuperscript{36}

**Harnessing technology within GBV response**

Around the world, advances in telecommunications and digital technology are empowering GBV survivors with unprecedented access to information, support and assistance, including in low-resource settings. GBV survivors who have access to the Internet can seek information about GBV, its consequences and their rights, and seek support from service providers and from peers. Survivors can increasingly use mobile phones to confidentially report GBV incidents, receive psychosocial support, and link with available services.

While they have been around for some years and are available in fragile countries, such as Palestine, Afghanistan, Somalia,\textsuperscript{37} and Rwanda,\textsuperscript{38} helplines are also being used by humanitarian agencies where both access (to populations by humanitarian agencies and to services by women), and a lack of infrastructure pose challenges to service delivery. For example, in Myanmar, Burundi and Iraq, IRC piloted a hotline for GBV survivors using phone, chat and SMS options as a component of a remote and mobile GBV service delivery model.\textsuperscript{39}

There is also a proliferation of smart-phone applications that aim to inform survivors about their rights and connect them with locally available support services, facilitate safety planning, and give direct access to trained professionals. Some apps include a safe virtual space for survivors to share their stories and access peer support. Examples of smartphone apps targeting GBV survivors include:

- The Nokaneng app in Lesotho which enables women to watch, read or listen to information about different forms of and consequences of GBV, services available in Lesotho and the laws that protect women and girls against violence. Users can also connect with professional counsellors for advice and use the virtual safe space to share their story and support other users.\textsuperscript{40}

- The Toranj app in Iran is designed to connect survivors of intimate partner violence with the resources and support they need to be safe in crisis situations and in the longer term. Toranj connects users to a group of trusted contacts during emergencies, and users can choose from various pre-written text messages to ask their contacts to intervene, call the

\textsuperscript{35} https://gbvguidelines.org/en/
\textsuperscript{36} https://podcasts.apple.com/us/podcast/gbvims/id1121802132
\textsuperscript{37} Hotline 5555, nicknamed Ceebla meaning ‘no shame’ in Somali, is managed by the Somali Women’s Development Centre.
\textsuperscript{38} This project is a partnership between Viamo and Legal Aid Forum Rwanda to provide legal information and advice via mobile to vulnerable populations. Content on legal rights and how to access legal services was developed and added to a toll-free mobile service in Rwanda. Callers can dial 845 and listen to free information on their legal rights and are also given the option to access a legal aid hotline for a personal consultation, staffed by call centre operators from the Legal Aid Forum: https://viamo.io/newsletter-archives/accessing-justice-legal-aid-via-mobile/
\textsuperscript{39} International Rescue Committee, 2018
\textsuperscript{40} https://genderlinks.org.za/casestudies/lesotho-new-app-to-prevent-gbv/
police, or take other steps to assist them. The app also offers social and legal tools for helping women protect themselves, including made-for-mobile educational resources, a legal support handbook, tools for self-assessing relationships, and a database of free counselling centres and pro-bono law firms. 

- The myPlan app, a safety-decision and safety planning tool for IPV, originally developed and robustly evaluated in the US, has been adapted and tested in Kenya and is currently being adapted to other contexts. The app and website are designed to help survivors assess the risks they face, provide useful information and resources, and enable survivors to facilitate safety planning.

Technology is also providing GBV service providers with new opportunities and useful resources to increase the reach, accessibility and quality of GBV services. Technology is enabling remote service delivery, with services provided via mobile phones including through chat and SMS functions. Remote service delivery models can be particularly effective to meet the needs of marginalized or at-risk populations. Mobile health technologies and telecommunication are rapidly being integrated into health care delivery in developing and low-resource settings, including humanitarian contexts. While there appears to be as yet limited uptake of mHealth services for GBV survivors in humanitarian settings, there are examples of digital technologies being used to support health workers in the identification, documentation and management of GBV survivors, including in the context of collating and documenting medical evidence in cases of conflict-related sexual violence. In DRC, Physicians for Human Rights has trialled MediCapt, a smartphone application for health care providers to use during a forensic examination to compile medical evidence, photograph survivors’ injuries, and securely transmit the data to police, lawyers, and judges involved in prosecuting sexual violence crimes. The app converts a standardized medical intake form for forensic documentation of sexual violence and includes a secure mobile camera to facilitate forensic photography (see the case study in Part 2 for more information on this initiative).

In India, Mobilise! is a smartphone application to support government health workers in IPV screening and response. Mobilise! offers three mHealth products: mTrainer, mSoukhya, and mShakti. mTrainer is an interactive training to increase health care providers knowledge and skills to address IPV. mSoukhya provides health workers with standardized guidelines, protocols, and job aids, while mShakti provides education to women about IPV and available services.

There is also evidence of the emergence of technology-assisted approaches to psychosocial support for populations in humanitarian settings. There are mobile tools for facilitating diagnosis and detection of mental health problems, and for providing online, SMS and telephone-based delivery of psychosocial support, including self-help programmes for individuals. While no specific technology-enabled intervention targeting psychosocial support for GBV survivors was found apart from crisis support offered through helplines, there are

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43 Perakslis, 2018
44 Naimer et al, 2019
45 https://www.prb.org/domestic-violence-india-mobile/
numerous examples of interventions targeting mental health and psychosocial well-being of women and children in humanitarian contexts to assist with management of depression, psychological stress and coping with adversity, all of which can be outcomes of GBV. For example, the WHO Self-Help Plus (SH+) programme, a multimedia intervention package that aims to provide skills for managing psychological stress and coping with adversity, was piloted with South Sudanese women refugees. The programme is group-based and delivers a guided self-help multimedia course that can be implemented in areas with limited humanitarian access. SH+ uses pre-recorded audio to deliver an evidenced-based psychological intervention, instead of information being provided by a facilitator or therapist. The use of pre-recorded audio increases intervention fidelity and expands the reach of services in humanitarian settings.46

Harnessing technology for GBV risk mitigation

Tools for reducing risk and building safety

There are many examples of digital technologies being harnessed in initiatives seeking to reduce GBV risks and improve women and girls’ safety. Mapping software and applications are being used in many countries to document, map and publicise GBV incidents and patterns. HarassMap is perhaps the best-known example. Originating in Egypt in 2010, HarassMap uses an interactive online map, social media and mobile phones to map and publicise incidents of sexual harassment and mobilise community members to take action to address it locally and nationally.47 Similar examples have evolved elsewhere, including Safeciti in India,48 Harasstracker in Lebanon,49 Bijoya in Bangladesh,50 and Akshara/HarassMap India.51 Plan International recently developed a similar platform targeting adolescent girls and young women’s safety which has been piloted in Sydney, Delhi, Kampala, Lima and Madrid. Free to Be is a crowd-mapping tool for girls and young women to identify and share public spaces that make them feel uneasy, scared or happy and safe.52

There are also examples of digital mapping and mobile phone technology being used to reduce GBV risks in humanitarian and fragile settings. In Mexico, Geochicas, an international community of feminist cartographers, used OpenStreetMap software in the aftermath of earthquakes in 2017 and 2018 to map and share data on women’s safety in informal shelters. They also created a database about women’s safety issues and GBV reports to help improve safety measures and shelter provision for future disasters.53 In Turkey, the Women and Health Alliance (WAHA) piloted a project to develop and test an SMS-based tool to disseminate information about GBV risks and available resources for adolescents.54 The project found that using an SMS messaging tool to inform the community about GBV risks, as well as safe and

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46 https://www.elrha.org/project-blog/building-capacity-research-piloting-self-help-plus-south-sudanese-refugees/
47 https://www.wikigender.org/wiki/harrassmap/
48 https://safecity.in/
49 http://harasstracker.org/
50 https://www.ushahidi.com/blog/2012/04/25/bijoya-crowdsourcing-a-harrassmap-for-bangladesh
51 https://en.reset.org/blog/harrassmap-mumbai-mapping-unsafe-zones-mumbai
52 https://www.plan.org.au/freetobe
53 https://wiki.openstreetmap.org/wiki/GeoChicas
54 https://www.elrha.org/project/mobile-tech-gbv-syrian-adolescent/
danger zones, is feasible and that mobile phones are appropriate tools for disseminating essential information and reaching technologically literate populations.

There is a proliferation of smartphone applications that aim to improve individual women and girls’ safety by providing information about GBV and enabling users to alert others and seek assistance when they feel unsafe or in imminent danger, for example, Watch Over Me,\textsuperscript{55} Circle of 6,\textsuperscript{56} and SaftiPin.\textsuperscript{57} Launched in India in 2013, the SaftiPin app enables users to both view and conduct safety audits of the areas they are passing through, which are marked safe or unsafe on a visual map. Safety audits cover parameters such as lighting, visibility, security, transport, population density and gender diversity. When a user does a safety audit using the app, this information is immediately visible and made public for other SaftiPin users to see.

Wearable technologies, such as panic buttons and bracelets, have similarly been developed with the objective of enabling users to alert others when they are in unsafe situations. For example, ROAR For Good’s\textsuperscript{58} wearable devices function as a rape alarm linked to a mobile app, allowing the user to activate a loud alarm and flashing lights, and trigger an alert to authorities and chosen contacts. The Safelet,\textsuperscript{59} which looks like a bracelet, is a similar example. No examples of wearable technology were identified in humanitarian settings. However, for displaced women and girls, even having a basic mobile phone can increase their sense of safety, as they can use it to call for help in an emergency. For some, simply having access to a torch on a mobile handset is enough to make them feel safer moving around a camp at night.\textsuperscript{60}

**Technology for GBV risk mitigation in emergencies**

Humanitarian agencies have been innovating with technology-based solutions to GBV-related risks in humanitarian settings for many years. Two examples are the use of cooking technologies that reduce women and girls’ need to move in unsafe areas to collect fuel, and energy technologies such as solar lighting that make the physical environment and public facilities safer for women and girls to move around.\textsuperscript{61} More recently, humanitarian actors have been assessing how mobile money and other assistance might be used to mitigate GBV risks, including those related to travelling long distances to collect payments. For example, in Jordan, Mercy Corps has been trialling a mobile wallet as a component of its cash programming to mitigate GBV risks for women\textsuperscript{62} (see the case study in Part 2 for more information on this initiative).

**Harnessing technology for GBV prevention**

\textsuperscript{55} http://watchovermeapp.com/
\textsuperscript{56} https://www.circleof6app.com
\textsuperscript{57} Women and Health Alliance International, 2016
\textsuperscript{58} https://www.roarforgood.com/
\textsuperscript{59} https://safelet.com/
\textsuperscript{60} GSMA, 2019
\textsuperscript{61} Reed et al, 2018
\textsuperscript{62} Mercy Corps, 2018
New technologies have tremendous potential for preventing GBV through enabling public and community education and mobilisation; providing a platform to lobby and advocate for legal changes and for policies that will end violence and promote equality; and helping catalyse greater social and economic empowerment of women and girls.

**Raising awareness, campaigning and educating**

Women’s rights organisations, activists, governments and others are using social media, such as Facebook and Twitter, and other online platforms to educate, spark debate, mobilise and campaign against GBV, with some initiatives, such as #MeToo, catalysing viral conversations nationally and internationally. New technologies provide a way of reaching millions of people with new information, and raising awareness and promoting dialogue and debate about GBV and the rights of women and girls. For example, a number of initiatives have harnessed this potential to stimulate awareness and debate about early and forced marriage and women and girls’ rights, such as the UNICEF-supported multi-media campaign on ending child marriage in Bangladesh. In Lebanon, as part of the 16 Days of Activism, activists launched an online campaign ‘Undress 522 – A white dress does not cover the rape’, including a video which reached an estimated 20.8 million people online. Across Africa, young people are mobilising online and using social media to end FGM. Whilst not yet widespread, there is evidence of the use of analysis of big data generated by social media to collect information to better understand and analyse attitudes towards GBV, in order to design better communications strategies to prevent it.

Older ICTs, such as radio and video, have long been used to build awareness about GBV and educate communities as part of GBV prevention in humanitarian settings. For example, in 2005 the American Refugee Committee and Communication for Change launched a community-based participatory video project to raise awareness of and help prevent GBV in conflict-affected communities. Newer ICTs are now being similarly employed to engage communities in participatory development of content to spark dialogue and debate about GBV and challenge attitudes and social norms that underpin it. In Ethiopia, a collaboration between researchers at Harvard T.H. Chan School of Public Health, Harvard Medical School, Addis Ababa University School of Public Health and Women and Health Alliance International Ethiopia with technical support from Fondation Hirondelle, is trialling a series of podcasts to prevent IPV among Somali refugees. The researchers are training men and women in refugee camps in digital storytelling and podcasting, who are then developing podcast content based on an existing validated community education curriculum and aimed at transforming gender norms and behaviours in their community (see the case study in Part 2 for more information on this initiative).

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63 O’Donnell and Sweetman, 2018
64 Bell, 2014
67 [https://iwillendfgm.org/](https://iwillendfgm.org/)
68 MEASURE Evaluation, 2018
69 [https://www.fmreview.org/sexualviolence/molony-konie-goodsmith](https://www.fmreview.org/sexualviolence/molony-konie-goodsmith)
70 Sharma et al, 2019
**Women and girls' social and economic empowerment**

In terms of women’s economic and social empowerment, there is evidence of ICTs being used to provide women and girls with greater access to information, education, skills and services in remote regions and during humanitarian crises. ICTs have the potential to reach even the most marginalized women and girls with information about services - and in some instances, services themselves that would otherwise be unavailable. Innovative digital communications can help bring awareness and education to women and girls in very rural areas where most are illiterate and with limited connectivity to information technology. In Sierra Leone and DRC, Media Matters for Women is linking special radio broadcasting programmes with mobile phones to distribute critical news and information to rural women about their rights and available services to reduce their marginalisation and empower them.\(^{71}\) In Lebanon and Iraq, the Women’s Refugee Commission is piloting virtual safe spaces to better reach adolescent girls with sexual and reproductive health information and services.\(^{72}\)

In development contexts, ICTs have facilitated women’s access to credit, markets, business information and networks, and provided income-earning opportunities - in some contexts directly improved women’s economic well-being.\(^{73}\) In displaced settings, cash assistance delivered to women using mobile money and blockchain is being tried in efforts to support women’s financial inclusion and agency, by increasing their access to financial services and control over their assets. UN Women and WFP have recently partnered to leverage blockchain technology to assist Syrian refugee women to receive and transfer financial assets securely on a blockchain network (see the case study in Part 2 for more information on this initiative).\(^{74}\)

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\(^{71}\) [https://www.mediamattersforwomen.org/](https://www.mediamattersforwomen.org/)

\(^{72}\) Women’s Refugee Commission, 2019

\(^{73}\) OECD, 2018

\(^{74}\) Thylin and Duarte, 2019
Summary of Good Practices

There are currently no evidence-based best practices to guide the use of technology in GBV programming in humanitarian settings. While there are efforts to generate evidence, most interventions are still at feasibility or trial stages. There are, however, emerging good practices to support GBV actors and other stakeholders embarking on initiatives that involve the introduction of technology into GBV prevention, mitigation and response programming in humanitarian contexts. This section overviews emerging good practices, which are drawn from lessons and experiences and informed by practice literature and insights from those with relevant experience and expertise in this area.

Prioritise and plan for safety

Ethical and safety considerations are paramount when introducing and using technology in GBV prevention, mitigation and response in humanitarian contexts. The potential harmful impacts of technology on women and girls, on wider communities impacted by humanitarian crises, and on humanitarian staff and agencies must be prioritised throughout assessment, design, implementation and monitoring phases.\(^75\) Prioritising and planning for safety involves:

- Engaging with and learning from women and girls about GBV, safety problems they face and the ways in which technology may compromise their safety or expose them to GBV.
- Applying survivor-centred principles to all aspects of programming using technology, including for the ownership, storage, use and sharing of GBV-related data generated through technology-related tools.
- Assessing and addressing safety and security issues associated with women and girls and staff possessing and using ICT devices, for example, ensuring that having devices does not put women, girls and staff at risk of physical assault.
- Assessing and addressing safety, privacy and confidentiality issues related to data generated about and by women and girls in humanitarian settings, including GBV survivors. This requires having protocols in place to address issues of informed consent, safe data collection and storage, safe access to and use of data, and safe data disposal.
- Ensuring organisations have capacity to safely protect sensitive data about GBV.
- Being alert to safety concerns and risks associated with the use of technology throughout assessment, implementation and follow-up phases and monitoring for harmful unintended consequences over time.

Box 1 Case Study: Safety features built into Technology Enabled Girl Ambassador (TEGA)

Girl Effect’s Technology Enabled Girl Ambassadors (TEGA)\(^76\) is a digital research tool developed in Northern Nigeria to learn about issues facing marginalised girls. TEGA is a mobile phone-based peer-to-peer research application that enables adolescent girls to conduct research about issues relevant to their lives and communities. Young women are trained to use the app to collect interview data in the form of photos, video and audio files and upload this data to a central content hub. Key safety features built into TEGA include:\(^77\)

\(^{75}\) Crabtree and Geara, 2018
\(^{76}\) https://www.girleffect.org/what-we-do/mobile-platforms/tega/
\(^{77}\) Scanlon, 2016
• Using the Snapchat model of automatically erasing data once it has been sent;
• Using banking security methods to protect interviewees' identities;
• Including an SMS panic button to allow a TEGA-trained interviewer to alert nearby community members if she feels endangered.

Understand and design for the context
Good practice in introducing technology into GBV programming involves designing approaches that are context-sensitive, based on existing infrastructure and systems, and address the circumstances, experiences, realities and needs of women and girls regarding their access and use of technology. Understanding and designing for the context involves:

• Adopting a participatory approach to assessment, analysis and intervention design to ensure that interventions using technology are based on the social, cultural and economic context. A participatory approach will also foster community buy-in and ownership of initiatives.
• Engaging local service providers and partners, such as women’s organisations, from the outset to ensure that any technology introduced is appropriate, acceptable and useable by women and girls and staff.
• Examining and assessing the gender, age and other dimensions of technology access and use in the context, such as ethnicity and disability. This includes recognising that not everyone has access to technology and being careful to not further entrench gender and other inequalities by introducing services or interventions in a manner that further marginalises or disadvantages particular groups of women and girls.

Box 2 Case study: Leveraging Blockchain Technology for Women and Girls
Women’s lack of access and control over resources, including money is both a risk factor for GBV, and a factor in structural gender inequality that is a driver of GBV. A major challenge facing women affected by crises is their financial exclusion, which renders them vulnerable to GBV risks. Many women struggle to access banking and other financial systems, which are necessary for them to receive, transfer and save financial assets. One of the most common reasons for women’s financial exclusion is that often they do not possess the necessary identity documentation to register for financial services. This problem is particularly acute in cases of displacement when women have often had to flee their homes and leave behind their belongings. If women cannot receive, transfer and save financial assets, then this has a significant and detrimental impact on their wellbeing, hindering their ability to engage in certain forms of activity, limiting their financial autonomy, and increasing the risk that they may engage in negative coping mechanisms which further increase their vulnerability to GBV. As more and more humanitarian actors move towards cash-based transfer interventions, there is a risk that women will not benefit equally when programmes do not address existing disadvantages for women in terms of their access to financial services.

In 2018, UN Women and the WFP partnered to leverage blockchain technology to assist Syrian refugee women in Za’atari and Azraq refugee camps in Jordan to receive and transfer

79 Thylin and Duarte, 2019.
financial assets. Previously, Syrian refugee women participating in UN Women’s cash-for-work scheme would receive a monthly entitlement in the form of cash on a set date. Now, their money is stored securely on a blockchain network. The blockchain network provides a record of the amount of money owed to the women refugees by UN Women. Whenever a refugee woman would like to make a cash withdrawal, she visits a WFP-contracted supermarket where her identity will be verified using an iris scanner. Once a withdrawal is made, the blockchain then records the amount of money UN Women owes the supermarket. This way, the formal banking system, from which many refugee women are excluded, is only used to settle UN Women’s debts with supermarkets. As part of this programme, UN Women is also seeking to enhance the financial and digital literacy of the women refugee beneficiaries by providing participants with training so they can view their account history online, and budget and track their expenses. A key learning from the project is that prior to introducing such initiatives, there is need to assess gendered access to smartphones, electricity and the Internet, as women tend to be disadvantaged in terms of access. One of the strengths of this intervention is the fact that it targets women and girls affected by crises with a solution that does not require the ownership of a smartphone, or access to electricity and the Internet. Women can access the funds by simply visiting a WFP-contracted supermarket.

Note: Initiatives such as these that involve stored client data must consider data privacy concerns, discussed in greater detail below under ‘Lessons Learned and Key Challenges.’

Use evidence-based approaches
Technology is a tool to improve or enable an intervention, not an intervention itself. Any intervention using technology must use evidence-based, good-practice approaches to GBV prevention, mitigation and response. Using evidence-based approaches involves:

- Adhering to existing principles, guidance and standards for GBV research and programming.
- Ensuring that interventions using technology are based on good practice in programme design, for example have a theory of change detailing outcomes and mechanisms for intended impacts.
- Ensuring that any content made available through ICTs to increase knowledge and skills and educate or transform beliefs and norms uses evidence-based curriculums and approaches.

Box 3 Case study: Using evidence-based approaches to podcasting to prevent IPV in Somali refugee contexts

In Ethiopia, researchers at Harvard T.H. Chan School of Public Health, Harvard Medical School, Addis Ababa University School of Public Health and Women and Health Alliance International Ethiopia, with technical support from Fondation Hirondelle, are collaborating to trial podcasts to prevent IPV among Somali refugees. The team has carefully used an evidence-based approach throughout the assessment, design and implementation phases, undertaking formative research to understand IPV and its drivers in the local context, and to understand the main channels of information sharing and communication in the Somali

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80 Sharma et al, 2019
refugee setting where the approach is being trialled. The team worked closely with the Somali refugee community to create a series of podcasts on IPV using an existing evidence-based curriculum, designed and tested in the Ethiopian context and adapted for use in the Somali refugee context. The approach has involved engaging men and women in the camps familiar with the curriculum, training them in digital storytelling and podcasting to creatively adapt the curriculum content to their context, culture and language. The podcasts will be first broadcast in safe spaces and carefully evaluated to generate evidence about their impact and to monitor for unintended consequences prior to being made more widely available for download and peer-to-peer sharing.

**Adopt human and user-centred approaches to design**

In addition to understanding and designing for the context as described above, it is important to adopt a human and user-centred approach to design. Designing for context typically examines broader contextual issues such as the cultural, social, political and economic context, while human-centred design is an approach to creating solutions for problems and opportunities through a focus on the specific needs, contexts, behaviours, and emotions of the people that the solutions will serve. Adopting human-centred design and involving end-users, including women, girls and staff, improves the likelihood that any technology introduced is appropriate, acceptable and user-friendly for women and girls and staff who use it, and avoids the development of tools and content that do not address users’ experiences, realities or needs. Human-centred design entails:

- Recognising that technology is an enabler for human activities, a tool that can enhance strategies to address GBV – it is not in and of itself an intervention or a solution.
- Involving end-users, including women, girls and staff, from the outset of identifying the problem, to co-designing the technology intervention in order to ensure it is tailored to user circumstances.
- Assessing digital and technological literacy, skills and confidence of both women and girls and programme staff and building in strategies to improve their digital and technological literacy, skills and confidence.

**Box 4 Case study: Mitigating Protection Risks of Cash Assistance for Women Through Mobile Wallets**

To mitigate some of the protection risks of cash distributions to female refugees, which include increased tension and conflict in both the household and the community, and placing women at risk of violence, exploitation and abuse, Mercy Corps Jordan piloted cash assistance to female Syrian refugees through mobile wallets as an alternative to traditional cash distribution modalities. The aim of the pilot was to test and evaluate women’s use of the new electronic cash modality. In partnership with Dinarak, a private company providing e-financial services, Mercy Corps developed a mobile wallet system, identified 50 Syrian female refugees with protection risks and trained them on the system, distributed them a one-time unconditional cash transfer through the electron wallets and

81 Crabtree and Geara, 2018; GSMA, 2019

https://static1.squarespace.com/static/5715100cf8baf3c79d443859/t/57278d9a8a65e2945ad67678/1462209948161/MadPow_HCD_Overview.pdf

82 A mobile wallet is a virtual wallet that stores payment card information on a mobile device.
conducted two rounds of post-distribution monitoring interviews (three days and two weeks after the distribution) to assess the impact of the mobile cash wallet distribution.

While feedback from beneficiaries and usage data indicates that mobile wallets may have successfully mitigated some protection risks and have the potential to provide the most vulnerable populations in Jordan with the opportunity to access formalized financial tools, significant challenges were identified related to women’s understanding and use of technology. Many beneficiaries did not fully understand the purpose of receiving cash via a mobile wallet and the mobile wallet’s functionality. Mercy Corps Jordan has identified the need for co-design of future iterations of the mobile wallet with end-users at the earliest opportunity to ensure that users understand the purpose and benefits of the technology and that it meets as many of their needs as possible and is easy for them to use.

**Test and learn**
Adapting, testing and learning about the feasibility, value-add, and usefulness of introducing new technologies in each context is important — just because an application or software works and is useful in one context, does not mean it is appropriate and should be used elsewhere. The needs and capacities of women, girls and staff will differ from context to context; infrastructure such as electricity and Internet speed can make technologies redundant in some settings; and content from one place may be irrelevant in another. Testing is, therefore, essential.84 Testing and learning involves:

- Undertaking feasibility assessments, even if small-scale, and making sure to consider issues of sustainability.
- Allocating adequate time and resources to test and learn through pilots or trials.
- Being prepared for a technology-based intervention to fail or to not be considered feasible or appropriate.

**Box 5 Case study: Assessing feasibility of using SenseMaker to monitor and evaluate GBV services in Lebanon**85
Monitoring and evaluation of GBV services in emergencies has in the past focussed on output data concerning numbers of women and girls accessing available services. Information on the quality of services and their short-, medium- and long-term impact on women and girls who use them is often lacking. There is an assumption that women and girls who access GBV services benefit from them, but there is little information and data that provides evidence of this. In response to these issues, in 2017 Elrha and partners conducted a pilot study to evaluate the feasibility and added value of using SenseMaker as a monitoring and evaluation tool for GBV services. SenseMaker is a mixed quantitative and qualitative data collection tool, developed by Cognitive Edge, that empowers users to record and interpret their own experiences. SenseMaker can be downloaded as a software application on a smartphone or tablet or as an in-browser link. SenseMaker enables individuals to record their own story anonymously and then interpret their stories using a series of questions. The study had four aims:

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84 Crabtree and Gera, 2018
85 Bartels et al, 2018
1. Engage with GBV service providers to identify M&E gaps that SenseMaker could address;
2. Test the feasibility of different channels of SenseMaker data collection;
3. Develop and test a SenseMaker M&E survey for GBV services in Lebanon; and
4. Document and reflect on the process of integrating SenseMaker into an organisation’s M&E process and whether SenseMaker could offer additional insights not provided through current M&E approaches.

The feasibility study involved collaboration between ABAAD Resource Centre for Gender Equality, IRC, UNFPA and Queen’s University. Six GBV service providers across five sites in Lebanon invited women and girls to complete the survey. Over 10 weeks, 198 self-interpreted stories were collected. At the end of the trial a workshop was held with partners to discuss the study findings and the feasibility and added value of using SenseMaker as a monitoring and evaluation tool for GBV programmes. The study found the use of SenseMaker to monitor and evaluate GBV services in emergencies is both feasible and can add value. It also generated important lessons to inform future implementation and scale-up. For example, some of the users misunderstood the questions due to both language and cultural barriers, others had limited literacy and technological skills, meaning surveys had to be administered by staff, which reduced the comfort and ability of these users to convey negative feedback. In turn, staff reportedly felt uneasy about how to collect and use SenseMaker data due to a lack of dedicated training. Costs associated with individual agencies purchasing the SenseMaker was found to be prohibitive to its use.

Monitor and evaluate

It is vitally important that innovations involving the use of technology to address GBV in humanitarian settings are carefully monitored and rigorously evaluated to, firstly, assess their benefits, impacts and risks prior to being scaled up or introduced in other contexts, and secondly, contribute to the development of an evidence base about what works, where, why and how.

Box 6 Case study: The MediCapt app and the impact of mobile collection of forensic evidence of sexual violence in Kenya and the Democratic Republic of Congo

In the DRC and Kenya, most cases of GBV do not go to court and perpetrators are rarely held to account for their crimes. One of the reasons for this is a lack of evidence. Often, clinicians who examine survivors collect incomplete information that cannot be used as evidence to prosecute the cases. Furthermore, due to a lack of secure storage, most health and police facilities keep private medical files on desks or floors where they risk being damaged, lost or stolen. As a result, police often do not get the evidence they need from clinics to support investigations.

In 2011, Physicians for Human Rights (PHR) launched its Programme on Sexual Violence in Conflict Zones, an initiative to enhance collaboration between medical and legal professionals to help capture, preserve and transmit forensic evidence of acts of sexual violence, in order to increase the likelihood of successful investigations and prosecutions

86 Naimer et al, 2019
and improve access to justice for survivors. As part of the programme, PHR developed MediCapt, a mobile phone application to help compile medical evidence, photograph survivors’ injuries, and securely transmit the data to police, lawyers, and judges involved in prosecuting sexual violence crimes. The app’s data mapping feature can also help reveal patterns of prevalence of violence, including the widespread or systematic nature of offences critical to demonstrating crimes against humanity. The tool can accommodate the various languages and literacy levels of its users. In 2019, a team of researchers were awarded a Development Marketplace Award from the World Bank and the Sexual Violence Research Initiative to evaluate whether the use of the MediCapt application affects the ability of clinicians to collect, document, and preserve medical evidence of sexual violence during medical exams. The evaluation also aims to explore the role of MediCapt in facilitating a survivor-centred approach to forensic medical examination of sexual violence.

To conduct the study, researchers will compare the documentation of forensic medical evidence of sexual violence between control sites in both the DRC and Kenya, which will include hospitals that use paper forms and intervention sites using digitized forms via MediCapt. The choice of control sites will also allow for comparison between DRC, a country with no standardized national form for clinicians to use for forensic documentation of sexual violence, and Kenya, a slightly higher-income country with national medical and legal guidelines for addressing gender-based violence and a standardized documentation form for cases of sexual violence. Using a mixed method approach, the study will evaluate the following outcomes:

- The quality of evidence collected, defined as the completeness of the form.
- Access to the form.
- Preservation of the evidence collected.
- The ability of the clinician to conduct a survivor-centred evidence collection process, defined as time to complete the form.
- The hospital’s ability to participate in national surveillance and health reporting, defined as the time to aggregate data.
Lessons Learned and Key Challenges

While new technologies are increasingly being introduced into humanitarian contexts and have the potential to enhance GBV prevention, mitigation and response, there are some important lessons and challenges that need to be considered in order that technology benefits women and girls, maximises their safety and empowerment, and does not magnify the risks, vulnerabilities and disadvantages they face or expose them to harm. This section draws on case studies, literature, and interviews with GBV and information specialists to identify lessons and challenges pertaining to the application of technology in humanitarian settings to women and girls’ safety, protection and empowerment.

A lack of evidence on benefits, impacts and risks
Digital technologies have potential to provide populations in humanitarian settings with unprecedented access to information and services and to transform how humanitarian agencies operate, however, there is very limited evidence at this time on the actual impact of technology as a transformative tool for both people in need and those providing humanitarian relief.\(^87\) Although some literature argues that ICTs are transforming refugees’ lives and can be leveraged to improve security, protection and access to information and services, there is a dearth of actual evidence on the positive and negative impacts of new technologies on women and girls’ safety, their GBV risks, and their economic and social empowerment.\(^88\) As well as opportunities, technology can bring risks for women and girls, yet these are not well-understood. For example, even though the use of technology in the delivery of cash has the potential to improve protection and empowerment outcomes for women, it is largely under-researched, and there remain concerns, such as whether the use of technology for payments may exclude specific groups of women and girls.\(^89\)

Addressing this challenge will require a commitment by humanitarian agencies and other stakeholders, including donors and private sector actors, to undertake and disseminate robust evaluations of GBV interventions introducing technology. Even when technological innovations in humanitarian programming do not directly target GBV prevention and response, it is critical that evidence is generated about benefits and risks of such innovations, including unintended consequences for women and girls’ safety and empowerment. An evidence base will support the GBV community to develop and disseminate policies, guidance and tools to ensure the potential that technologies present may be realised whilst also safeguarding women and girl’s safety and rights.

Data privacy and protection
As humanitarian and other actors collect more and different types of digital data about affected populations in humanitarian contexts, issues of data privacy and protection inevitably arise, as does the issue of the rights of people in humanitarian settings regarding the use of data generated by and about them.\(^90\) The issue of digital data privacy is challenging

\(^{87}\) Naslund et al, 2017; Latonero et al, 2018
\(^{88}\) Latonero et al, 2018
\(^{89}\) Crabtree and Geara, 2018
\(^{90}\) Maitland, 2019
the traditional concept of humanitarian protection, and researchers have noted that getting data privacy wrong in humanitarian contexts can have serious and even life-threatening consequences.91

Ethics, safety and security regarding GBV data in humanitarian contexts has long been prioritised by GBV researchers and practitioners, yet there continues to be challenges in ensuring data security, including appropriate and ethical sharing and use of GBV data.92 These challenges are likely to be amplified by the collection of unprecedented amounts and types of sensitive digital data about women and girls’ health, safety and well-being in humanitarian contexts. Moving forward, it will be critical for the GBV community to continue to prioritise and address ethical, safety and security dimensions of digital data privacy and protection regarding sensitive data generated about women and girls by both traditional and non-traditional actors within humanitarian response, such as private sector technology and mobile phone companies.

**Gendered access, control and use of technology**

Technology such as mobile phones and the Internet may be widespread in some humanitarian contexts, but as with other resources, access, control and use of technology is “affected by intersecting spectrums of exclusion including gender, ethnicity, age, social class, geography, and disability.”93 Research and programme experience across humanitarian settings consistently highlights how gender limits and shapes women and girls’ access to, control over and use of technology. Even in settings where women have parity with men in mobile phone ownership, gender inequalities exist based on access to smartphones, with men more likely to own a smartphone, while women are more likely to have a basic phone.94 Particular groups of women and girls have even less access to technology. For example, in Lebanon, married adolescent girls reported more restrictions on their use of technology, with very few owning their own mobile phones, and many requiring permission from their husband to use his phone. In Iraq, internally displaced adolescent girls are less likely than Syrian refugee adolescent girls to have access to a mobile phone or the Internet.95 Among refugee women in Uganda, women with disabilities were less likely to own or to have recently used a mobile phone.96 Gender-based barriers to women and girls’ access to and use of technology include costs associated with purchasing, maintaining and using devices such as mobile phones; attitudes and social norms that shape and limit women and girls’ use of mobile phones and the Internet;97 and the intersection of gender with other vulnerabilities such as age, marital status and disability.98 Unless the gender gap in access and use of technology is addressed, women and girls in humanitarian contexts may be left behind in an increasingly digitised world, and structural inequalities may be reinforced rather than alleviated.99

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91 Harvard Humanitarian Initiative, 2018
92 Behnam and Crabtree, 2019
93 O’Donnell and Sweetman, 2018
94 Samual Hall, 2018
95 Women’s Refugee Commission, 2019
96 GSMA, 2019
97 Crabtree and Geara, 2018
98 GSMA, 2019
99 Ibid
**Technology-related GBV**

While technology may be changing responses to GBV, it is also changing women and girls’ experiences of violence. For example, technology facilitated GBV is an emerging challenge globally. Abusive intimate partners use technology to track, monitor and control women and girls’ mobility and communications. Women and girls who use technology to access information or support for GBV may face repercussions from perpetrators if discovered. Technology is also being used to intimidate, harass, stalk, blackmail, and threaten women online, including women’s rights defenders and activists drawing attention to and mobilising against GBV.

While having a mobile phone can make women feel safer, mobile phones also generate safety concerns, such as theft and harassment at point of sale or top up; IPV triggered by a spouse’s suspicions of ‘inappropriate’ contact with other men through voice and SMS, such as unwanted calls or messages; and online harassment via social media. It will be critical moving forward that humanitarian actors and other stakeholders engage with those who have expertise in this area (see Box 7) and develop strategies for preventing technology-facilitated GBV; strengthen the capacity of local women’s organizations to respond to digital GBV; and educate and support GBV survivors and women and girls to understand the risks of GBV presented by technology.

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**Box 7 The Association for Progressive Communications (APC)**

APC has been working since 2005 to document, report, monitor and analyse technology-related violence against women. The most common cases they have documented are cyberstalking, sexual harassment, surveillance and the unauthorised use and manipulation of personal information including images and videos. The organisation found that women and girls who fall victim do not know what to do to stop the abuse, who they should report to or what help they can get. In many national laws and policies, provisions for regulations or services that respond to these new forms of violence do not exist or are inadequate. APC has designed a range of tools to support women to respond to technology-related violence, including country maps for reporting cases, a digital security first aid kit for human rights defenders and a set of feminist principles of the Internet to inform work on gender and technology and influence policy-making on Internet governance.

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100 Hayes, 2014
102 Croxon and Wilson, 2018
104 [https://www.apc.org/](https://www.apc.org/)
Key Considerations for Scaling Up Use of Technology to Improve GBV Prevention, Mitigation and Response in Humanitarian Action

This section highlights key considerations for scaling up the use of technology to improve GBV prevention, mitigation and response in humanitarian contexts.

Prioritising and safeguarding women and girls’ safety and rights
While scaling up technological innovations in humanitarian response can offer new opportunities for humanitarian agencies, private sector actors, communities and individual women and girls, understanding and avoiding potential unintended consequences and unforeseen risks for women and girls must be a priority. Safeguarding women and girls’ rights to safety, security and empowerment is a paramount consideration for all actors. When embarking on technological innovation to strengthen GBV prevention, mitigation and response, GBV and other actors must consider:

- Whether the potential benefits for women and girls from the initiative outweigh the potential risks.
- The possible unintended consequences and risks for women and girls, including the risk of increased exposure to GBV, and the differential impacts on marginalised and vulnerable groups of females, such as those with disability, married girls, and GBV survivors.
- Whether the introduction of technology may generate expectations or demand that cannot be met, and what happens when the project or services come to an end.
- Privacy rights of women and girls, and how data generated by and about women and girls will be used, stored and protected.
- How risks of technology facilitated GBV introduced through the intervention will be minimised and addressed.

Committing to and investing in women- and girl-centred design
As one of the few experts working at the intersection between GBV, technology and humanitarian crises points outs, design of technology solutions in humanitarian settings must not only be human-centred, but also be specifically women- and girl-centred and “follow principles that promote safety and respect and understand the systemic impact of patriarchal systems so as not to further obstruct women’s engagement.” Putting women and girls at the centre of design will build understanding of the different barriers that women and girls may face in terms of access and use of technology in each setting, including literacy, disability, discrimination, social and cultural influences, time, age, isolation and remoteness.

Being women and girl-centred will require GBV and other actors seeking to use technology to reach out and listen to women and girls, including the those who are marginalised and harder

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105 GSMA, 2019
106 Harvard Humanitarian Initiative, 2018
107 Crabtree, forthcoming
108 Raftree, 2018
to reach, in order to understand their concerns, safety risks and preferred technology modalities and platforms.\textsuperscript{109}

**Resourcing needs**
The design, introduction and evaluation of technology innovations to strengthen GBV prevention, mitigation and response in humanitarian contexts is resource intensive. Safe technologies that respect and protect human rights and are survivor-centred take time to conceptualize, develop and pilot.\textsuperscript{110} Technological innovation requires considerable experimentation, adaptation and collaboration, all of which requires financial and human resources as well as adequate time. Appropriate resources are needed for assessing the feasibility of introducing technology into a specific context, and for testing and evaluating its benefits, impacts and risks. Resources are also required to purchase and maintain appropriate equipment, tools and infrastructure, build staff capacities, and put in place strategies for monitoring and mitigating risks and unintended negative consequences.

**Developing new capabilities and partnerships**
Technological innovation within humanitarian response requires different ways of working, including with existing partners, and new skills and capabilities. Some humanitarian agencies are investing in building in-house capabilities to design, implement and manage technological innovation, while others are engaging in partnerships with new actors, such as technology developers, telecommunications firms, and multinational financing and credit companies. These new partners bring technology expertise, resources and design and innovation capabilities that GBV actors do not have. They also, however, bring different objectives, principles and ways of working that may not be in line with humanitarian and GBV programming objectives, principles and practices. They may have limited understanding of GBV, and of the gender-based power relationships and inequalities that both underpin GBV and frame the use and uptake of technology.\textsuperscript{111}

While GBV actors should explore new partnerships to foster creative and new ways of working in humanitarian contexts, and to enhance their capabilities to innovate with technology to promote women and girls’ safety and empowerment, they also need to be alert to the realities of engaging with non-traditional actors. Partnerships with non-traditional actors requires investment and time – sometime years - on the part of humanitarian agencies and must be carefully managed to ensure they operate within the ethical principles and values underpinning GBV prevention and response, such as survivor-centred principles and values of promoting women and girls rights and empowerment, and do not inadvertently exploit or cause harm to women and girls.

**Ensuring shared principles and standards**
To safely and effectively address the existing and emerging ethical, privacy and security concerns regarding digital data, and when scaling-up the use of technology in GBV prevention, mitigation and response, there is a need to articulate and operationalise a set of principles to

\textsuperscript{109} Crabtree, forthcoming
\textsuperscript{110} UN Women, 2019
\textsuperscript{111} Hayes, 2016
guide and support innovation by GBV actors and by other sectors and stakeholders. A shared set of principles for GBV actors, donors, research institutions and private sector companies based on existing GBV standards, guidance and lessons on good practice in technology, innovation and design (see annex on Selected Resources for examples) will help to ensure that future investment, innovation and scale-up of technology within GBV programming and within other aspects of humanitarian action is informed not only by women- and girl-centred concepts and practice, but by the GBV survivors themselves.

112 See Resources section at the end for operational principles developed by development, design, and technology experts.
Conclusions and Recommendations

Digital technologies have proliferated over the past decade and are increasingly being adapted to humanitarian contexts to improve humanitarian information, assistance and services. Digital technologies also have great potential to improve accountability of humanitarian actors towards local populations by increasing transparency and providing affected populations, including women and girls, with opportunities to provide feedback on and input into humanitarian assistance and services. New technologies are also bringing new opportunities to strengthen GBV programming in humanitarian contexts, and there are a growing number of promising examples of technologies being trialled to enhance GBV prevention, mitigation and response in diverse contexts.

These new opportunities and applications also bring new challenges and amplify existing ones. These include concerns about the positive and negative impacts that technology may have on populations affected by humanitarian crises and the organisations serving them. Technology is not gender-neutral, and gender-based and other intersections of power and inequality are critical considerations if technology is to reach its full potential as a force for change.\(^{113}\)

A key concern is that technology may inadvertently further entrench inequalities for women and girls, including for those who are most disadvantaged and marginalised. It will be important moving forward that technologies are introduced in ways “that maximise their potential to advance gender equality and the empowerment of women and girls in humanitarian settings, and minimise the risk of doing harm.”\(^{114}\)

As most technology innovations targeting GBV in humanitarian contexts are still at trial or pilot stages, it is not yet clear how and the extent to which technology will amplify efforts to address GBV. What is clear is that humanitarian actors seeking to introduce technology to address GBV must do so carefully and thoughtfully, drawing on emerging lessons and practices, and rigorously monitoring and evaluating interventions to help develop an evidence-base for good practice, and practices to avoid. It is also clear that GBV actors will need to engage in new partnerships with non-traditional actors to leverage the capabilities, resources and skills that these partners bring.

While there is as yet no evidence base to guide interventions, there are lessons and insights from pilot programmes and from GBV and other practitioners who have been at the forefront of innovation with technology in GBV programming. A key message from these experts is that technology is an enabler for human activities, a tool that can enhance strategies to address GBV – it is not in and of itself an intervention or a solution. When developing new technology solutions, first understand who or what the technology is trying to enable and what the needs and barriers are. Another key insight is that technology must build on and add value to existing and evidence-based approaches to addressing GBV.

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\(^{113}\) O'Donnell and Sweetman, 2018

\(^{114}\) Lafreniere et al, 2018
Looking forward, technology will increasingly become part of the humanitarian landscape as the humanitarian community seeks solutions to emerging critical challenges presented by unprecedented numbers of protracted crises and associated human displacement, an increase in the frequency and severity of climate-related disasters and associated resource-scarcity. The GBV community will need to invest in adapting and trialling emerging technologies to address GBV, and at the same time seek to engage with and influence other sectors and actors at the field and global levels to ensure that new technologies they are introducing in humanitarian contexts benefit women and girls practically and strategically and do not inadvertently expose them to GBV or other harms.

**Recommendations for practitioners, researchers and humanitarian agencies**

- **Learn about existing GBV-related technology initiatives** in the region, country and context, and seek information from users and implementers about lessons learned, benefits and challenges.

- **Learn about digital data safety, privacy and protection and put measures in place to address and monitor risks and ethical concerns** prior to introducing new technology. Ensure data safety and privacy and safety protocols address risks associated with data being hacked, shared or disseminated inappropriately.

- **Prioritise, assess and plan for safety** throughout, including making sure GBV survivors and women and girls are aware of and know how to respond to the potential for technology related GBV.

- **Conduct formative research involving women and girls**, including local women’s services and organisations, as well as groups and individual women who may be doubly or triply marginalized, such as women and girls with disabilities to:
  - Assess the context specific GBV situation, including assessing power dynamics and issues facing women and girls,
  - Understand the circumstance, realities and needs of women and girls in terms of technology access, use, literacy and confidence.

- **Co-design technology interventions with women, girls and staff who will use it.** This will ensure user understanding, buy-in, relevance, appropriateness and usability of the technology.

- Ensure that programmes using technology are designed in line with **principles and good practice in GBV research and programming**.

- Ensure that programmes using technology are designed in line with **principles and good practices in technology innovation and design**.
• Ensure that programmes using technology **apply evidence-based approaches and methods**, for example, initiatives targeting community awareness-raising and education should use multi-pronged communication strategies and evidence-based curricula.

• **Invest in building local capacities, capabilities and systems** and foster local ownership of programmes and technology innovations. Wherever possible seek to reduce the gender divide in women and girls’ technology literacy, skills and confidence, including for female staff.

• **Incorporate rigorous evaluations into the design of GBV interventions using technology.** Ensure the methodology can capture unintended consequences such as the risk that technology may introduce less opportunity for staff to engage directly with women and girls and thus identify those who might be experiencing GBV.

• **Make evaluation findings widely available** to contribute to the development of an evidence base on what works (and what does not), the risks and unintended consequences of interventions, and other factors relevant to scaling up technological innovations in humanitarian assistance.

**Recommendations for the GBV-specialist community and policymakers**

• **Monitor and share information about emerging approaches, evidence and lessons learned** regarding the impacts of interventions using technology on women and girls’ safety and exposure to GBV in humanitarian contexts.

• **Monitor and seek opportunities to influence** how developments in technology in humanitarian action, such as the emerging of digitalised identities and digitalised service delivery, impact on the rights, safety and empowerment of women and girls.

• **Engage in global discussions on digital data privacy and protection in humanitarian contexts, and advocate across the humanitarian system** for the safety, security and rights of GBV survivors, and women and girls more broadly, to be addressed in guidance and standards regarding digital data. For example, make sure women and girls’ safety and rights are considered in programme guidance and tools in settings where biometric identity systems are being rolled out.

• **Find opportunities to convene the GBV and technology communities, including private sector actors, to foster cross-pollination, dialogue and learning** and to identify shared principles and standards to guide the ethical and safe introduction and use of technology in GBV programming in humanitarian settings, including standards for data privacy and protection.
Selected Resources

Safety and privacy guidance and tools

**Safety Planning for Technology: Displaced Women and Girls’ Interactions with Information and Communication Technology in Lebanon and Harm Reduction Considerations for Humanitarian Settings** (K. Crabtree and P. Geara 2018)
This article provides practical recommendations for service providers on how to safely introduce information and communications technology into programming for women and girls.

This guide is aimed at providing guidance on how to protect girls who are using digital tools. It is built on a set of principles that keep the girl and her privacy, security and safety at the centre. It outlines how to approach digital initiatives and programmes involving girls and offers a framework to better protect girls’ personal information and privacy and to ensure that the content generated does not put girls at risk. It lists the kinds of questions to ask partners, sponsors or vendors before engaging in partnership agreements, and helps when considering how to go about collecting, using, storing and disposing of data that is gathered as part of digital tools and platforms, as well as when conducting monitoring, evaluation, learning and research activities.

**Digital Safeguarding Tips and Guidance** (Girl Effect 2018)
This document offers digital safeguarding tips and guidance to Girl Effect staff and partners. It emerges from Girl Effect experiences designing and implementing mobile first platforms and builds on the Girl Effect digital privacy and security principles and guidelines (see above).

**A Framework to Understand Women’s Mobile-Related Safety Concerns in Low- and Middle-Income Countries** (GSMA 2018)
This report explores women’s mobile-related safety concerns, building on previous research by the GSMA and other organisations. It provides a framework to understand mobile-related safety concerns, an overview of initiatives (i.e. products, services, policies, or marketing or distribution approaches) that tackle this issue and actionable recommendations for stakeholders.

Research and assessment guidance and tools

**Gender and Information Communication Technology Survey Toolkit** (USAID 2017)
This Toolkit helps to fill the gap in available, standardized resources for obtaining an overall landscape assessment of gender and ICT for USAID programming. It provides USAID and implementing partners with practical, well-researched tools they can use to obtain data on women’s access and usage of mobile phones and other connected devices. These data can be used to inform project design or create a baseline in order to understand the efficacy of an ICT intervention.
Using Social Media Data to Understand Changes in Gender Norms: Guidance (MEASURE Evaluation 2018)
This document provides guidance on collecting, analysing, and interpreting Twitter data on gender norms. It discusses when social media can be useful in monitoring, evaluation, and research; what data are available; and methodological challenges including generalization, biases, protecting individual privacy, and considering ethical implications.

Toolkit for Researching Women’s Internet Access and Use (GSMA 2018)
This toolkit outlines both core and supplementary research topics to gain insights into women’s Internet access and use and provides example questions for both qualitative and quantitative research. Building on existing indicators and initiatives, these questions are linked to the core list of indicators for ICT access and use produced by the Partnership on Measuring ICT for Development.

Monitoring and Evaluation in a Tech-Enabled World (ITAD 2014)
This paper highlights some of the ways that ICTs are helping overcome common M&E challenges, including “real-world” challenges and methodological and conceptual challenges. The paper also offers ideas on untested areas where ICTs could play a role in evaluation, and an in-depth discussion of some of the new challenges, problems and risks that arise when incorporating ICTs into the M&E process as a whole. Finally, it offers a checklist for thinking through the incorporation of ICTs into M&E.

Gender Evaluation Methodology for Internet and ICTs (No date)
Gender Evaluation Methodology (GEM) is a guide to integrating a gender analysis into evaluations of initiatives that use Information and Communication Technologies (ICTs) for social change. GEM provides a means for determining whether ICTs are really improving women’s lives and gender relations as well as promoting positive change at the individual, institutional, community and broader social levels. The guide provides users with an overview of the evaluation process (including links to general evaluation resources) and outlines suggested strategies and methodologies for incorporating a gender analysis throughout the evaluation process. GEM does not contain step-by-step instructions to conducting evaluations.

Design guidance

Principles for Digital Development
A set of principles, guidance and tools to help practitioners succeed in applying digital technologies to development programmes.

Programming guidance

Guidelines for Mobile and Remote Gender-Based Violence (GBV) Service Delivery (IRC 2018)
This resource provides guidance on establishing GBV mobile and remote services, in order to provide case management, psychosocial support, and referrals to meet the immediate needs of GBV survivors. Such services should be established in settings where traditional services based in static centres with continuous access to trained caseworkers cannot be set up or
consistently accessed due to the nature of displacement and/or ongoing insecurity that hinders both humanitarian access and the displaced population’s movement.

**Cash & Voucher Assistance and Gender-Based Violence Compendium: Practical Guidance for Humanitarian Practitioners** (CARE 2019)
The purpose of this compendium is to assist humanitarian actors and crisis- and conflict-affected communities to integrate GBV risk mitigation into CVA interventions and integrate GBV prevention into multi-sector programming using CVA when appropriate. While not specifically focussed on mobile transfer modalities, it contains useful guidance to consider when using e-transfer.

**Mobile Money-Enabled Cash Aid Delivery: Essential Considerations for Humanitarian Practitioners** (GSMA 2019)
This report offers guidance for humanitarian practitioners considering mobile money enabled CVA programmes. It provides a foundational understanding of the design of mobile money systems for CVA, the benefits they offer relative to other common CVA delivery mechanisms, and essential considerations for selecting mobile money as a CVA distribution method.

**Integrating Information and Communication Technologies into Communication for Development Strategies to Support and Empower Marginalized Adolescent Girls** (UNICEF 2013)
This paper highlights examples of existing C4D programming enhanced by the use of ICT tools and draws on the analysis of case-studies, risks and trends, to offer recommendations for policy and practice for ensuring marginalized adolescent girls are supported to access, own and use ICTs through strategic C4D processes at multiple levels.

**Capacity-building tools**

**Digital Literacy: Empowering Women to Use the Mobile Internet** (GSMA 2015)
This report analyses the challenges women face when accessing mobile internet with low mobile literacy and digital skills, understand how women learn these skills, and identify the barriers women run up against in various learning channels. It makes recommendations for addressing women low digital literacy for relevant stakeholders.

**Data Starter Kit for Humanitarian Field Staff** (ELAN)
This Starter Kit provides concrete tips to help assess, plan and improve data management practices in e-transfer programmes. The seven Tip Sheets align with the project and data management lifecycles.

**Organisations and websites**

**GSMA Connected Women** Programme aims to reduce the gender gap in mobile internet and mobile money services in low- and middle-income countries and unlock commercial and socio-economic opportunities.

**Technology Safety** explores technology in the context of intimate partner violence, sexual assault, and violence against women and has a wide range of technology safety toolkits,
including for safety considerations for survivors when choosing and using apps and for assessing for technology abuse and privacy concerns.

**Take Back the Tech!** is a global, collaborative campaign project that highlights the problem of tech-related violence against women, together with research and solutions from different parts of the world. The campaign offers safety roadmaps and information and provides an avenue for taking action. Take Back the Tech! leads several campaigns at various points in the year. During campaigns, Take Back the Tech! announces actions that combine creative and strategic use of information and communication technology (ICT) with the issue of VAW. Campaigners organise actions that respond to their local priorities, such as workshops on online safety, media monitoring on rape reporting, solidarity actions on the streets and in online spaces and discussions on women’s right to privacy.

**GenderIT.org** is a project of the Women’s Rights Programme of the Association for Progressive Communications and is a think tank of and for women’s rights, sexuality, sexual rights and internet rights activists, academics, journalists and advocates. GenderIT carries articles, news, podcasts, videos, comics and blogs on internet policy and cultures from a feminist and intersectional perspective, privileging voices and expressions from Africa, Asia, Latin America, Arabic-speaking countries and Eastern Europe. GenderIT.org provides a space for reflection, influence and advocacy on internet policy in relation to the rights and demands of women, gender diverse people and issues related to sexuality.

**Women’sNet** is a South African network that works to promote gender equality in the country via the use of ICTs. Work includes capacity development with women’s organisations through ICT training, and the Girls’Net project, which aims to encourage girls in the use of ICTs around issues that are important to them and to support their engagement in social activism.

**CHAYN** is a global volunteer network addressing gender-based violence by creating intersectional survivor-led resources online. The website includes how-to guides that are crowdsourced in multiple languages, country-specific information, and (c) digital services which offers interactive support to women.
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