

Terms of Reference - Assistive technology for inclusive mobile-enabled Early Warning Systems

1. GSMA overview

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Solutions and Events. For this project, the successful Respondent will contract with the GSMA Mobile for Development Foundation.

The GSMA Mobile for Development Foundation, Inc. ("GSMA") is a U.S. 501(c)(3) charitable organisation. The Mobile for Development team (M4D) operates at the intersection of the mobile ecosystem and the development sector. Our aim is to stimulate digital innovation and deliver both sustainable business and large-scale socio-economic impact. Our research and insights platform, in-market expertise and community of partners push forward digital innovations and implementations that empower underserved populations. To date, we have impacted the lives of over 260 million people.

2. Project Overview

Background

Early Warning Systems (EWS) are most effective when they communicate timely, actionable information accessibly to everyone, including people with disabilities and diverse needs such as limited literacy, cognitive disabilities, or deafness/hard of hearing. As mobile channels play an increasingly central role in emergency alerting, the accessibility of the alert message itself - not just network reach - is a key determinant of whether communications protect as many people as possible. While assistive technologies such as interactive voice response (IVR), text-to-speech, and sign language interpretation already intersect with mobile-enabled alerting, there is limited consolidated evidence on which technologies are in use, what access needs they address, in which hazard contexts, and at what scale. Despite growing recognition of assistive technology's importance within EWS, most national systems do not yet adequately consider these needs. Only a fifth of countries currently regulate assistive technology in emergency preparedness, and assistive technology remains one of the least explored dimensions of the mobile industry's commitment under Early Warnings for All (EW4All) Pillar 3.

This research builds on the [Mobile for Humanitarian Innovation \(M4H\) programme](#)'s existing EWS work. Where previous M4H research explored how different groups experience inclusive risk communications, **this study focuses specifically on the role assistive technologies**

can play in making mobile-enabled EWS delivery more inclusive, accessible, and actionable for persons with disabilities and others with diverse access needs.

3. Research objectives and questions

This research aims to build awareness regarding the role assistive technologies can play in strengthening inclusive mobile-enabled EWS by:

- Mapping the landscape of assistive technologies that intersect with mobile message delivery and setting this against the scale and diversity of access needs among people with disabilities and other diverse access needs.
- Assessing which user groups and access needs are currently best served by existing national EWS message delivery versus under served.
- Exploring how these technologies are currently being implemented in practice, including at national and localised scales.
- Provide a case study of an assistive technology solution highlighting the role of an MNO as a delivery partner.

This study will be led by the following three key research questions:

1. What assistive technologies and accessibility features currently exist that intersect with mobile-enabled EWS (e.g., sign language interpretation, text-to-speech, simplified/pictogram-based alerts etc.)?
 - a. How have these technologies been applied at national and local levels?
2. Which user groups and access needs are currently well served by existing mobile-enabled EWS, and which remain underserved or excluded?
3. What examples of good practice exist for integrating assistive technologies into national EWS?

4. Methodology

This research will involve three phases:

1. Desk-based research – establishing the current evidence base on assistive technologies and EWS and surfacing the gaps the primary research will seek to address.
2. Primary data collection - combining key informant interviews with focus group discussions to capture both expert and lived-experience perspectives on how assistive technologies are being applied in practice.
3. Synthesis and reporting - bringing together the desk-based and primary findings into a consolidated report. The report will be anchored by a single case study country where assistive technologies have been integrated into mobile-enabled EWS and grounded in the experiences of people with diverse access needs.

The case study country will be identified during the desk-based phase. Countries under consideration include but are not limited to:

- Pakistan
- Nepal
- Cambodia
- Bangladesh
- The Philippines
- India

Applicants may suggest refinements or alternative methodological approaches and are welcome to propose alternate countries for consideration if they can demonstrate that it better meets the project objectives.

5. Deliverables and timelines

The initial desk-based phase has been completed internally by the GSMA project lead. The consultant is expected to lead the primary data collection phase and write the final analysis and report. Each activity below corresponds with a specific deliverable to be submitted by the consultant.

The services will be provided from contract execution to no later than 30th November 2026.

Phase	Activities and Deliverables	Indicative Timeline
Project kick off	A kick-off session should be scheduled within the first week of the project to align research objectives and approach with all project stakeholders involved. The chosen supplier will lead this session. Following this, weekly calls between the supplier and the GSMA M4H project lead will be scheduled to monitor progress and discuss any changes that may need to be made. <i>Milestone 1: submit kick-off call deck.</i>	End September 2026
Review desk-based research	The consultant is expected to review and use the findings of the desk-based research (<i>completed by the GSMA project lead prior to the consultancy commencing</i>) to inform primary data collection, the tools developed for this and build directly on identified gaps. <i>Milestone 2: inception report, including plan for data collection and tools submitted</i>	October 2026
Primary data collection	This stage will combine key informant interviews with focus group discussions to gather direct evidence from global and case study country stakeholders, as outlined below.	October 2026

	Key Informant Interviews - (an estimated 8 in total, led by the consultant) - engage global stakeholders (e.g. assistive technology providers, MNOs, INGOs) alongside case study country-specific stakeholders (e.g. local organisations working with people with disabilities or diverse access needs, government or disaster management agencies) to explore good practice in inclusive message delivery. Focus Group Discussions - (an estimated 2-3 in total, conducted in the case study country and led by the consultant) - facilitate one FGD with people who receive, or should receive, accessible alerts, including individuals with diverse access needs; and 1-2 FGDs, where relevant, with family/carer/community members or organisations working with people with disabilities about receiving mobile-enabled emergency alerts more broadly, to ground findings in lived experience rather than technology provision in the abstract. To deliver the FGD component, the consultant, unless they already have a strong on-the-ground network in the selected case study country, will engage a local partner organisation whose work focuses on individuals with diverse needs, to gain access to the relevant networks and communities. This mixed-methods approach aims to generate a consolidated evidence base on assistive technologies in mobile-enabled EWS, while ensuring findings are grounded in a practical case study and the lived experience of those with diverse access needs. The consultant should ensure that all research activities are conducted in line with appropriate ethical standards for research involving persons with disabilities and other vulnerable populations, including informed consent, confidentiality, and safeguarding considerations. <i>Milestone 3: interview transcripts, emerging findings and analysis alongside a proposed report structure.</i>	
Data analysis and drafting the final report	Led by the consultant - analyse the findings from across the primary and secondary research and write the final report to map the assistive technology landscape and identify good practices. <i>Milestone 4: draft report</i> <i>Milestone 5: final report.</i>	Draft mid-November Final 30 November

6. Firm and proposal requirements

Looking for: *Individual Consultant or small consultancy.* *Given the limited scope of work and small number of interviews anticipated, this assignment may be particularly well suited to an individual consultant or small consultancy, potentially based in the case study country.*

Required experience

Essential:

- *Demonstrable track record of conducting research on early warning systems, telecommunications and/or disaster preparedness.*
- *Direct experience designing and conducting inclusion-focused research, particularly working with people with disabilities and diverse access needs.*
- *Familiarity with established LMIC EWS*
- *A strong network of potential interviewees across the LMIC AT and EWS ecosystem.*
- *Full working proficiency in English, writing to publication quality.*

Desirable:

- *Experience working with or for mobile network operators.*
- *Presence or partnerships in the regions of primary interest: LMICs across South Asia, and Southeast Asia.*

Proposals should include a separate technical and financial proposal:

Technical proposal

- A short (1 page) statement of suitability, highlighting recent relevant experience.
- A discussion of the understanding of the brief and proposed approach (up to 5 pages):
 - Outline their understanding of the requirements and the value they believe the results will have.
 - How you intend to meet the requirements of this document
 - The proposal should clearly outline the locations where the technical partner intends to conduct data collection. Please note that the technical partner is expected to have the relevant language skills for the selected locations.
 - Any proposed changes to the Terms of Reference with justification. This should include suggestions for alternative/supplementary approaches to address the central objectives.
- Details of relevant firm or team project experience, with references where available.
- CVs and location of proposed individual or team members (if applicable) alongside proposed role and responsibilities.
- An indicative Gantt chart/timeline outlining major project phases including demonstration of capacity to successfully deliver to agreed timelines.
- Any dependencies on GSMA staff.
- Potential risks and mitigation strategies.

Financial proposal

1. Level of effort (person-days) by activity and team member.
2. Fee rates (per day in GBP).
3. Estimated travel expenses (where applicable) with assumptions clearly stated.

4. Total project cost (GBP), without VAT¹.
5. The respondent's total price is inclusive of all costs, insurances, fees, costs, expenses, liabilities, obligations, risks, and all financial requirements for the performance of Services and provision of Deliverables.
6. Any charge not stated in this Proposal, which extends above to the Total Price, is not permitted.

Due to GSMA compliance requirements, exact project budgets cannot be provided at this stage. However, applicants should note that this is a modest-budget assignment, and all research is expected to be conducted remotely to keep costs contained. Consultants are welcome to propose in-person elements if they believe these would add value, but any related costs would need to be covered within their proposed budget.

Proposal and all deliverables are required to include a disclosure statement regarding the use of AI in the production of the work. This disclosure statement should identify which tools were used and how, and indicate which parts of the work are based on these results. The GSMA's standard terms and conditions include clauses requiring that suppliers warrant that the deliverables are the original work of this supplier; breach of this, including through the use of AI, is considered grounds for termination.

Proposal assessment and selection Process

The proposal will be scored on the following set of criteria:

Criteria	Importance	Weighting
Cost	Proposal's value for money	20%
Quality	Quality of the research approach outlined in the proposal, including degree to which it addresses the outlined research questions and proposal elements	40%
Bidder's capacity to manage the project on time and on budget	Selection of experienced high-quality consultant (s) and ability to manage the project on time and on budget	25%
Relevant experience	Bidder's experience in successfully conducting similar projects	15%

The ToR timeline below is subject to change at GSMA's sole discretion.

Time and Date	Action
September 9	Clarification questions* to be submitted to GSMA
September 14	Questions and answers circulated back to all respondents
September 21 at 1700hrs (GMT)	Cut off time and date for proposal to be received by GSMA

¹ GSMA Foundation Inc is a US registered 501(c)(3) charity. Please outline separately where VAT is applicable.

September 22-25	Estimated proposal evaluation period. Shortlisted may be contacted for an interview during this period.
September 28	Estimated invitation to contract

Note: Timeline is subject to change

GSMA Contact details

All correspondence including queries and proposal submission in relation to this ToR must be emailed to both:

Rosa Pouakouyou (rpouakouyou@gsma.com) ("GSMA contact")

Angela Nkonu (ankonu@gsma.com). ("GSMA contact")

**Queries are accepted in written form by email, and GSMA's responses will be copied to all respondents, including an anonymous version of the query. No queries will be answered outside of the timeframe specific, except in extraordinary circumstances within GSMA's sole discretion.*