GSMA

REQUEST FOR QUOTATION

Japan’s Early Warning System: A Case Study

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Requested Services and Deliverables

1. GSMA overview

The GSMA Mobile for Development Foundation, Inc. ("GSMA M4D") is a U.S. 501(c)(3) charitable organisation that seeks to relieve poverty and improve living conditions throughout the world through identifying opportunities for social, economic and environmental impact and to stimulate the development of scalable, life-enhancing mobile services. GSMA M4D is a wholly owned subsidiary of the GSM Association ("GSMA").

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences. For more information, please visit the GSMA corporate website at www.gsma.com.

For this project, the successful Respondent will contract with The GSMA Mobile for Development Foundation.

2. Project overview

Background

The GSMA Mobile for Humanitarian Innovation (M4H) programme envisions an inclusive digital humanitarian future, where mobile and digital solutions can offer affected populations improved access to and use of life-enhancing mobile-enabled services for preparedness, response and recovery. To build an inclusive and sustainable digital humanitarian future, the M4H programme acts as the convenor between mobile network operator members and humanitarian partners.

Climate change has dramatically increased the frequency and intensity of natural hazards. Over the last 50 years, the number of disasters has increased by a factor of 5.[1] Early warning systems (EWS) save lives by helping people to take appropriate action or evacuate ahead of a crisis. However, they take investment of capacity and resource alongside complex multi-sectoral collaboration to be effective - not everyone is covered by an EWS. To address this, In March 2022 the UN Secretary General announced the Early Warnings for All (EW4All) initiative with the goal of ensuring everyone on earth is covered by an EWS by 2027. The GSMA Mobile for Humanitarian programme is involved in both the strategic and operational aspects of the initiative, in particular Pillar 3 (warning dissemination and communication), ensuring the power of mobile is full harnessed to develop and implement lifesaving EWS. However, MNOs can and have played a role across all 4 pillars of the initiative,[2] leveraging their capacities to map risks, monitor and forecast hazards, and respond to crises as well. At the country level, the GSMA seeks

[1] WMO. (2021). WMO Atlas of Mortality and Economic Losses from Weather, Climate, and Water Extremes 1970–2019.

[2] The four pillars are: *1. Disaster risk knowledge,*
2. Detection, observation, monitoring, analysis, and forecasting
3. Warning dissemination and communication and
4. Preparedness and response capabilities.

to ensure the local mobile network operators (MNOs) are actively involved in EW4All design and implementation.

So far, the EW4All Initiative has focused on the development of EWS in over 30 countries. As many countries consider how to create and implement their own systems, suited to local hazards and population needs, it's important to understand best practices and learn from countries that have demonstrated leadership in the implementation of effective EWS.

Given that 96% of the world is now covered by mobile networks, mobile technology provides a critical channel to disseminate lifesaving warnings quickly and at scale.[3] Mobile Network Operators, therefore, play a critical role in supporting EWS, and have long worked with Disaster Management Agencies and humanitarian organisations to effectively leveraging their capacities and networks for EWS. MNOs have been actively supporting and enabling EWS for decades. However, in some markets, MNOs have yet to engage, despite being crucial stakeholders.

The question of how best to engage MNOs in EWS has been raised by stakeholders on multiple occasions. This case study will examine Japan's EWS, highlighting the role of MNOs and showcasing their leadership in their system. It aims to surface lessons and best practices that can be replicated or adapted in other contexts.

Project objectives

1. Understand ways in which MNOs have supported or engaged with EWS, and what makes for an enabling environment for MNO engagement in Japan.
2. Identify and analyse the challenges and successes faced by MNOs in engaging with Japan's EWS.
3. Provide case studies of models of engagement in Japan, highlighting examples where MNOs have successfully supported EWS and where they have faced difficulties.
4. Offer strategic insights and lessons learned for MNOs and other EWS stakeholders to enhance their participation in EWS.

Research questions

Key research questions largely fall into 5 categories:

1. Coordination mechanisms (operational model)
2. Policy and regulatory frameworks
3. Technological and infrastructure requirements
4. Financial models
5. Other MNO engagement

[3] https://www.gsma.com/mobileeconomy/wp-content/uploads/2023/03/270223-The-Mobile-Economy-2023.pdf

Coordination mechanisms	Policy and regulatory frameworks	Technological and infrastructure requirements	Financial models	Other MNO engagement
1. What is the current EWS state of play? 2. Who are the key stakeholders? 3. What is the flow of information in EWS? Who is responsible for what? 4. What are the coordination structures for EWS? (E.g. working groups, control rooms etc.) 5. How do regulatory agencies, MNOs, and humanitarian actors collaborate? 6. Who is involved in SIMEX? How often do they take place?	1. What laws and policies govern MNO involvement in DRM and EWS? 2. Are there mandatory obligations for telecom operators in emergency alerting? - Alert dissemination - Network sharing, roaming 3. What interoperability standards exist for integrating MNO systems with government disaster management platforms? 4. What are the challenges/successes? 5. What is the MNO perception of any regulations and how does this affect their participation? (willingness to engage vs. bare minimum etc.)	1. What technological infrastructure (e.g., establishment of CBCs, CAP intergration, tower upgrades) is required for MNO engagement EWS? 2. What did the set up process/requirements look like? 3. Is the current system a centralised or decentralised model? What are the advantages and disadvantages of this? 4. What agreements or mechanisms exist between MNOs for emergency infrastructure and service sharing (e.g., free local roaming, tower or network resource sharing)? - if not mandatory policy, how established? 5. Are current network capabilities (e.g., 4G/5G coverage, system redundancy, network resilience) sufficient for reliable EWS dissemination? 6. What technological barriers (e.g., bandwidth limitations, outdated infrastructure) hinder MNO participation in EWS? 7. What user requirements are there for effective dissemination of alerts? (device type/penetration etc.)	1. What is the funding model for implementing CB/LB-SMS? (e.g. capital investment vs rental service, tenders, CAPEX vs. OPEX etc. - who pays for what and who owns what) 2. Are MNOs compensated for their role in EWS, or is participation pro bono? 3. What funding mechanisms (e.g., Universal Service Funds, tax reliefs) exist to support MNO engagement? 4. How sustainable are current business models for EWS-related telecom services? 5. In the cases where MNOs have had to incur costs in relation to supporting a national EWS, or emergency telecom services, how is this provisioned for? (e.g. are customer prices raised?)	1. How have MNOs engaged across the other four EWS pillars? 2. What other projects and collaborations with DM agencies and other stakeholders (formal or informal) are in place and what learnings can be generated from these? 3. What is the incentive/business model for these engagements? 4. How can MNOs support sensitisation campaigns and SIMEX? 5. Are MNOs engaged in post event reviews/evaluations? How is success measured?

Scope

In Scope

- Looking across the four pillars of EWS to understand how MNOs have engaged in EWS.
- Particular focus on pillar 3 (communication and dissemination) - how do MNOs support?
- Ongoing versus startup role of MNOs – how are MNOs engaged across the lifecycle of an EWS?
- Coordination mechanisms
- Policy enablers and barriers
- Technological requirements and infrastructure
- Financial models
- Any recent uses of the system (recent hazards etc.)

Out of scope

- Primary research among end users
- Non-natural hazards or EWS (e.g. health or conflict related EWS)
- Other non-EWS related MNO engagements with governments

3. Methodology and high-level services and deliverables requirements

This research will primarily be a combination of a desk review and key informant interviews (KIIs). The supplier will review up-to-date materials on Japan's early warning system (J-Alert) to understand the overall structure, regulatory environment and the integration of cell broadcast technology.

Additionally, the supplier will engage key stakeholders to understand the EWS architecture in Japan and explore the strengths, challenges and lessons learned, particularly in relation to MNO involvement in the design, implementation and delivery of early warning messages. This will include interviews with MNOs in Japan as well as relevant government agencies, for example the Fire and Disaster Management Agency (FDMA), the Japan Meteorological Agency (JMA) and the Ministry of Internal Affairs and Communications (MIC). Humanitarian organisations and other stakeholders involved in supporting or coordinating EWS should also be consulted where relevant. Ideally, this would include approximately 15–20 stakeholders. Some of these KIIs will be virtual, pre-positioning a week's fieldwork which will consist of further KIIs, a site visit and validation workshop with key stakeholders. A member of the M4H team will join the supplier for this fieldwork. M4H will help to select relevant interviewees and provide introductions, where possible.

Work plan

1. Kick off call

A session should be scheduled within the first week of the project to align research objectives, questions 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 team will be scheduled to monitor progress and discuss any changes that may need to be made.

Deliverable 1: Kick-off deck submitted and session completed

2. Desk review and inception phase

As part of the inception phase, the supplier will organise and conduct virtual engagement sessions with each participating MNOs. These sessions will be used to introduce the project, conduct early stakeholder mapping—both within the MNOs (internal departments) and across external partners and begin planning for the country visit. Insights from these sessions should inform the stakeholder list, interview guides and the fieldwork plan.

The supplier will deliver a short inception report (approximately 5–10 pages) as a starting point. This should include:

- A brief literature review outlining the current state of Japan's early warning system, with a particular focus on the role of mobile network operators (MNOs) in alert dissemination.
- A proposed stakeholder list for interviews
- Draft interview guides
- A clear plan for the fieldwork, including a proposed agenda and key meetings.

The report will be reviewed by the GSMA and project partners to validate the proposed approach before fieldwork begins.

Deliverable 2: Decks from kick-off workshops with MNOs and inception report submitted (including literature review, stakeholder list, interview guides and fieldwork plan).

3. Initial key informant interviews (KIIs)

The supplier will conduct virtual interviews with key stakeholders ahead of the country visit to refine understanding of the system, identify any gaps and build relationships and networks ahead of the fieldwork.

After KIIs have been completed, the supplier should provide documentation of the interviews and an updated agenda for the in country visit.

Deliverable 3: Interview transcripts and finalised agenda for fieldwork.

4. Country visit

The supplier will carry out fieldwork in Japan (estimated duration: 1 week). Please note that a member of the GSMA M4H team will accompany the supplier for this week. This will include:

- In-person KIIs/meetings with MNOs, government agencies and humanitarian stakeholders.
- A site visit to observe components of the EWS in practice.
- A validation workshop at the end of the visit to test findings and gather stakeholder feedback. This could also be an opportunity for stakeholders who have been unable to schedule a meeting during the week to feed into the case study.

Following the fieldwork, the supplier should provide interview notes, photographs of the site visit and documentation from the workshop, including an attendance list of stakeholders.

Deliverable 4: Documentation of KIIs, photos of site visit, documentation/deck from the workshop and participant list.

5. Analysis and final report

Upon initial analysis the supplier should submit an outline to indicate the structure of the final report. This will be reviewed and approved by the GSMA. The supplier should deliver a final report of publishable quality (approximately 30-35 pages in length) summarising research findings. A draft should be provided up to 2 weeks prior to the final report to allow for at least two rounds of reviews and comments from the GSMA and any other partners or stakeholders.

Deliverable 5: Final report outline, drafts and final report submitted

4. Additional requirements

The following elements are mandatory service requirements and processes through the research process.

Communication
All communication, both written and verbal to the GSMA, to be conducted in English (including the translation of any documents that are required by local law in the markets that are created in local language). Additionally, this includes any documentation submitted as final deliverables to the GSMA, including transcripts and research materials. Suppliers should also demonstrate their ability (either through direct employment or via partners) to bring on highly skilled bilingual researchers in various contexts to deliver detailed qualitative testing and refinement of tools.

Transparency
GSMA requires the appointed supplier to be fully transparent about local partner / fieldwork agencies they intend to use & GSMA has the power to veto selection.

Safeguarding
As part of our commitment to ensuring all those involved in research and evaluation are safeguarded, the supplier is requested to provide information on their safeguarding approach / mitigating activities to ensure the safety and dignity of any vulnerable persons. A full safeguarding plan will be formulated together once a supplier is selected and integrated into the research tools and fieldwork plan.

Service availability
GSMA M4H requires a named project manager and ideally requires response to emails within two working days. Any delays must be communicated in a timely manner. Any changes to the required services/deliverables must have prior written approval from the GSMA contract manager.

Project management requirements

Regular weekly updates with the M4H project manager either at the GSMA London office or via video conference throughout the project. During the KII phase M4H expects weekly calls.

Ongoing support of deliverables

It is expected that the successful supplier will respond in a timely manner to GSMA for clarification of the project activities and/or deliverables for up to four weeks after the final debrief.

Licenses
The supplier will be responsible for ensuring all data collection is in line with local requirements and that they have all relevant permissions.

5. Request for Quotation

Evaluations of proposals will consider the following elements. It is unlikely the GSMA will consider proposals that do not include all elements listed.

I. **Understanding of the brief:** Suppliers should outline their understanding of the requirements and the value they believe the results will have.

II. **Approach:** Suppliers should outline how they intend to deliver the project as specified above. This should include:

   a) How you intend to meet the requirements of this document;

   b) Suggestions for alternative/supplementary approaches to address the central objectives;

   c) An indicative timeline for delivery and demonstration of capacity to meet this; and

   d) Any dependencies on GSMA staff.

III. **Team and responsibilities:** The proposed individual or team (if applicable) should be included with a short bio alongside proposed roles.

IV. **Relevant experience:** Include examples of previous work which demonstrates experience where possible with:

   a) Telecommunications &/or tech category experience;

   b) Experience of working on early warning systems;

   c) Suppliers that have experience and knowledge of the humanitarian sector; and

   d) Experience working in Japan or with the Japanese government.

V. **Risks and mitigation strategies:** All RFQ responses should include how any potential risks may be mitigated, e.g., security risks, ethical considerations etc.

VI. **Itemised quote**: Suppliers should provide a fully itemised quote. The GSMA default currency requirement for all proposals is ‘UK Pounds Sterling’. It should include at a minimum a price for commissioning the project as described in Sections 2 and 3 of this document. Please note in those sections we have outlined estimated sample sizes and locations of research for costing purposes. If significant changes to budget will occur as a result of the backup locations listed in section 3, please indicate where and how those would impact the budget.

   a) All costs should clearly demonstrate breakdowns in terms of staff time, travel, direct costs and other expenses.

   b) Suppliers are also asked to provide costs for any alternative or supplementary approaches suggested in your proposal.

   c) A template can be found at the bottom of this document.

RFQ timeline

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

Time and Date	Action
April 29	RFQ Issued
May 5	Submit questions to GSMA by this date
May 7	Questions and answers circulated back to all respondents
May 14	Deadline (COB) for proposals to be received by GSMA
May 16	Estimated invitation to contract
May 30	Contract fully executed

Note: Timeline is subject to change

GSMA Contact details

All correspondence and queries in relation to this RFQ must be emailed to:

Susanna Acland (sacland@gsma.com) ("GSMA contact")

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

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.

RFQ submission details

Respondents should submit a full documentation package via email no later than 1700hrs (GMT) 14th June 2024. Electronic submission should not exceed more than 5 MB in size per email and should be sent to: sacland@gsma.com; ankonu@gsma.com. Acknowledgement of receipt of electronic submission will be sent by the next day of receipt before Close of Business. In case the Respondent encounters a problem in its electronic submission, please contact Angela Nkonu by telephone at +44 (0)7855 985 016. If, following submission of the tender, the information contained therein changes, please advise the GSMA Contacts immediately. Where proposals are incomplete or not supplied, they may not be

considered for evaluation. By submitting a response, the respondent agrees to respond to any other questions issued by GSMA in connection with this RFQ within the stated deadlines.

Milestone payment details

For the avoidance of doubt, GSMA's payment terms are contained in the GSMA Standard Terms & Conditions ("T&Cs"), and are thirty days from receipt of an undisputed invoice, which should be raised following acceptance of Services and/or Deliverables.

Please note, GSMA does not make advance payments prior to completion of the Services and Deliverables unless the payment requested is specifically traceable to purchase of items required to perform the Services or provide the Deliverables, which would otherwise be a loss for the Respondent. Any specific payment requirements must be notified as part of the RFQ response.

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. Any charge not stated in this Proposal, which extends above to the Total Price, is not permitted. Total Price is exclusive of VAT but inclusive of all other taxes.

Summary of proposed timeline and payment milestones

Based on expected outputs outlined in Section 3, please find below the summary of proposed payment milestones to be made to the supplier upon delivery of outputs. The following will be amended based on the supplier's proposal.

Proposed payment milestone	**Corresponding deliverable**	**Date**
Milestone 1: Kick off call	Deliverable 1: Kick-off deck submitted and session completed	May 2025
Milestone 2: **Desk review and inception phase**	Deliverable 2: Decks from kick-off workshops with MNOs and inception report submitted (including literature review, stakeholder list, interview guides and country visit plan).	June 2025
Milestone 3: Initial key informant interviews	Deliverable 3: Interview transcripts and finalised agenda for country visit	June 2025

Proposed payment milestone	Corresponding deliverable	Date
Milestone 4: Country visit	Deliverable 4: Documentation of KIIs, photos of site visit, documentation/deck from the workshop and participant list.	July 2025
Milestone 5: Analysis and final report	Deliverable 5: Final report outline, draft and final reports submitted	July/August 2025

Itemised budget template

Please provide the total price and the breakdown by unit cost as per the table below.

Item/Title	Unit/Activity Description	Standard Base Rate	Discount Applied	Discounted Rate	Volume	Total Charge