GUJARAT STATE DISASTER MANAGEMENT AUTHORITY (GSDMA)
EARLY WARNING DISSEMINATION SYSTEM (EWDS)
NATIONAL CYCLONE RISK MITIGATION PROJECT II (NCRMP-II)
Bid Number: IN-GSDMA-115480-RFB N Procure Tender ID: 373193

Date: 07/10/2019

Corrigendum-V

Name of Work: Selection of System Integrator (SI) for supply, installation, testing and commissioning of Early Warning Dissemination System (EWDS) and Emergency Operations Centers as well as Operation and Maintenance and Annual Maintenance Contract Services under NCRMP-II Project.

With reference to the captioned subject matter, GSDMA has issued Corrigendum/Addendum to the Bid document, details as under: -

Sr No	Clause No.	Existing Clause	Addendum dated 31/08/2019
1	BDS ITB 23.1	The deadline for uploading the bids: Date: **10/10/2019** Time: 1500 hours	The deadline for uploading the bids: Date: **14/10/2019** Time: 1200 hours
2	Corrigendum III- Appendix B- Clarifications to queries raised by the prospective bidders. Query Number – 35 ,39 and 144	The link should be asymmetrical with outward link from SEOC to Hub will be 75kbps and hub to SEOC will be 250kbps. Refer query number 36.	There is a typing mistake – The response is modified as The link should be asymmetrical with outward link from SEOC to Hub will be **750kbps** and hub to SEOC will be 250kbps. Refer query number 35.
3	Corrigendum III -Note to Bidder -Page 136	15.2 Location Based Alert System – Note to Bidder- 04- The Bidder shall integrate the System at SEOC at Bhubaneshwar, Gujarat.	There is a typing mistake – the address of SEOC is in **Gandhinagar, Gujarat**. As mentioned in rest of the bid documents.

3	Corrigendum III -Point 7 - Addition in section VI	Location based alert system is added in the scope of bidder to implement and bidder is advised to consider associated software hardware and integrations to be supplied. Changes/Additions for LBAS and related requirements are provided in the Annexure 3 and Annexure 7 to 15. Modifications regarding VSAT Network requirements are provided in Annexure 11.	Prebid Query responses to extended scope related to LBAS in Annexure 1.

Annexure 1 – Queries related to extended Scope related to Location based Alert System.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
274	Page 190, 9.4 Group Messaging	The web-based application Software shall be hosted centrally on a redundant server system at SEOC (with option for installation of redundant system at another secure location)	From your corrigendum, we understand that SEOC setup needs to have redundant servers. Can you please confirm if the DEOC setup also needs to be redundant, or would a single server suffice?	It is confirmed that set-up at DEOC will be 100% back-up for SEOC, hence redundant server is to be provided at back-up DEOC site also.
275	15.1 Group Messaging (SMS) System, pt. 5 Alerts over voice channels, Page 212	It must now be possible to automatically send alerts over voice channel to mobile phones and fixed phones.	In Corrigendum 3, you clarified that telephone lines will be provided by the employer as per final design of selected system. A voice sending engine will also require hardware connected to these telephone lines. In order to correctly estimate this hardware costs, can you provide an indicative figure on number of PRI lines expected? Alternatively, can we assume 2 PRI x 30 channels for SEOC and 1 PRI x 30 channels at DEOC (Disaster Recovery site), for sizing purposes?	We have indicated total number of recipients below 7,000 (Please refer to Sr. No 152 page 64). As the number recipients/ first responders are not significantly high in number, PRI requirements can be estimated by the SI. For sizing purpose bidder's estimation is reasonable.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
276	Corrigendum Annexure 9	The updated corrigendum requirement clauses around Location Based Alerting System suggest that the architecture will have 3 main components a. Front End, b. Messaging system and c. LBAS	For LBAS there will be two components: - One installed at SEOC with backup at one DEOC and second LBAS inside Telecom Operator premises. The requirements also specify that bidder is responsible for integrating with the operator side component which can fulfil tender requirement. For providing end to end functionality as a bidder we would be required to submit a techno-commercials for all the components which includes Front End, Messaging system and LBAS component at SEOC (backup at one DEOC) and LBAS at the TSP side (3 in quantity). Please confirm if our understanding is correct and Bidder's proposal need to include LBAS component at the TSP side also.	The bidder is expected to provide complete solution with all the integrations/(sub)components/layers at SEOC-DEOC and TSP side both.
277	Corrigendum Annexure 4	Addition in Section IV - Appendix to Financial Part Schedule No 2 - Schedule No. 2. Infrastructure and Mandatory Spare Parts if any. Messaging System, 18 & 18.1. The Financial Part includes 2 separate rates to be quoted for Group Messaging System and Location based Alert System.	Does it mean you are looking at 2 separate system for Messaging? One, for Group Messaging and Second, for Location based Messaging? If above is yes, the same would be defeating the very purpose of automation if you have to switch between two system to send different kinds of messages / alerts. We, therefore, request you to kindly have seamless and automatic system to send all kinds of Alerts i.e. SMS, Location based SMS, Social Media Alerts, CAP Alerts, Emails, etc. from one system.	We are looking for Group Messaging (GM) as well as LBAS capability. GM functionality will be required on regular basis for activities related to planning, preparedness, conducting training and mock drills, dissemination of disaster updates etc. Whereas LBAS capability will be required mainly during response (rescue), rehabilitation activities. It is left to SI to offer either independent systems or integrated system for both functionalities.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
278	Experience Qualification	For all other sub-components, eligibility criteria have been published for bidders. However, for Messaging System, eligibility criteria have not been published / asked for.	We recommend that you add appropriate eligibility criteria for Messaging sub-system so that experienced and competent vendors are only selected for participation in the tender. We suggest adding the following: Pre-qualifications: The Bidder / OEM for proposed Messaging System should have prior implementing experience in the field of multi- channel alert dissemination Geolocation SMS system and have minimum 3 national or state level Public Alerting systems sold to the Government commercially in the last 10 years.	Clause remains unchanged

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
279	Page 128 of corrigendum Clause - 9.4.2	Location Based Alert System (LBAS) allows for sending text messages (SMS) to all mobile subscribers and covers both national subscribers and international roamers whosoever present in the vulnerable area to be affected by Cyclone or any other Disaster. In LBAS, the operator is able to draw a polygon of a particular area through GIS map and send alerts to all people who are present at the time inside the polygon. Location based method sends alert to people based on their real-time location at the time of sending the alert.	1) Please clarify 'all mobile subscribers' i.e. is the LBAS system expected to send messages only to the CUG/first responders, or to ALL the subscribers in the given polygon, which could be significant. We assume it is ALL subscribers in an impacted area, since you have explicitly included national and international roamers. Please clarify though. 2) You have asked for location-based messages to be sent based on the real time location of the individuals at the time of sending the alert. There are very complex mechanisms in SMS technology that provides for dissemination of alerts based on the real time location of mass recipients, but there are also alternate technologies that provide this functional capability. Kindly clarify if the intended recipients are members of the CUG/first responders whose numbers are known in advance, or would be ALL citizens in an area of impact and also if alternate technologies that provide this functional capability can be considered. A specific use case would certainly help	1) It is once again clarified that offered system should have capability of sending SMS to all mobile subscribers within vulnerable area, however in the present case location-based messages will be sent only to responsible government / non-government organisations and identified stake holders. GSDMA will provided cell phone numbers of all persons who will be covered under this system. 2) As per our understanding of LBAS the system will send SMS to only those persons who are within the polygon of interest as determined by vulnerability status at the time of generation of alert message. This can be achieved only when present location of recipient is known. However, we expect only reasonable accuracy of present location (for example location data within last 5 minutes). All cell phone numbers of first responders / stake holders will be provided in advance to SI for inclusion in system data bank. It is once again confirmed that as per present plan, there is no intention of alerting all citizens in the disaster area.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
280	Page 128 of corrigendum Clause - 9.4.2	As said earlier, SMS technology can be used to send alerts in this method. Typically, choice of channel in this context can be determined by time to impact of the event. This can help in saving lives in the event of a natural or man-made disasters / emergency. The system has been designed to ensure effective communication before, during and after an emergency.	We assume that when it is mentioned that 'SMS can be used', GSDMA is open to SMS-CB as well, as long as functional compliance can be met. Kindly clarify.	The sentence quoted by the bidder only describes the capability of SMS technology for delivery of alert message to intended recipients and doesn't suggest choice of any other technology or method of message delivery. There is no objection in case SMS-CB technology is offered subject to following conditions: a) There will be no price advantage even in case the offered alternative has more capabilities than specified in the RFB and only lower cost system in both Capex and Opex which meets RFB specifications, among all alternatives will be selected b) The system has capability to send alerts only to predetermined groups of people and not to all persons within the selected polygon

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
281	Page 128 of corrigendum Clause - 9.4.2	The system should provide delivery reports. Also, this system should be able to maintain the privacy of unlisted receivers.	Privacy of unlisted receivers clearly implies that their MSISDN / location should not be made available without their consent. This goes against the requirement of the tender that the numbers of the recipients should be known so that messages can be resent in the event delivery confirmation has not been received. Please clarify this dichotomy. It is our submission, that one of the reasons for SMS-CB to have been chosen by most countries globally, including US, Israel, Australia, New Zealand, several countries in EU, Philippines, Taiwan, Sri Lanka etc., is its inherent ability to maintain privacy sanctity.	Privacy is to be maintained only in case of unlisted receivers, if there are any. As per present plans the alert messages are to be sent only to listed recipients. The clause is introduced to safeguard GSDMA from any future complications, due to privacy issues of unlisted recipients. GSDMA will ensure that there will be no privacy issues in respect of listed recipients in the planned system.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
282	Page 128 of corrigendum Clause - 9.4.2 (f)	For the Location Based Alert System to work, integration is necessary with minimum of 3 Telecom Operators (e.g. BSNL, AIRTEL, VODAFONE, IDEA, RELIANCE etc.) in the country. There is no violation of privacy, as all information stays inside the operators' networks. After an area is demarcated through GIS in the application, it will be sent to the Location Based Component (for SMS) installed at the mobile operator's site. The Location component (for SMS) calculates cells cover the area through their BTS's installed at that particular areas, finds the subscribers connected to the cells and makes sure the messages are sent with the highest possible capacity without causing network overload or congestion.	1) Is the proof of integration with a minimum of 3 operators supposed to be provided at the time of bid submission or within the 270 days post awarding of the contract. There have been instances in the past where successful bidders have not been able to integrate with private operators due to various reasons, jeopardizing the most critical element of last mile dissemination and the overall project as well. It is our submission therefore, that proposed bidders for LBAS submit proof of integration or an LOI on behalf of 3 operators, at the time of bid submission 2) With regards to delivery mechanism that does not cause network overload or congestion, unlike conventional SMS, SMS-CB is the only mechanism that does not cause network overload or congestion. Conversely, SMS-CB does not suffer from delays in dissemination even during severe network congestion. Accordingly, one can dissemination real time, location information to 5 million or 50million people within a max of 180 seconds	1) Bidder needs to provide complete solution with Manufacture's Authorization and Subcontractor Agreement. Reference ITB 11, (a) Manufacturer's Authorization; and (b) Subcontractor Agreement or a letter of intent between the parties to enter into a Subcontractor Agreement are to be submitted along with the bid for major items of supply and services. 2) Specification regarding network overload is to ensure that the system design takes care of maximum message handling capacity of networks under severe loading conditions. Please refer to response to clause 9.4.2 above

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
283	Page 130 of corrigendum Clause - 9.4.2 (i)	Reliability and timeliness: 1. The messaging Platform must support transmission of large-scale messages to multiple users in multiple mobile networks. 2. The messaging Platform must give commitment to service levels with guaranteed delivery times	With regards to point 1, we assume 'large scale messages' implies ALL individuals in an area of impact and not merely CUB-based numbers / first responders. Pls clarify With regards to point 2, we assume that the bidder should give a commitment that delivery times should be within 5 minutes. However, it is our submission that the commitment of 5 minutes should encompass both, identification of individuals within a target location as well as dissemination of the alerts to the identified individuals. Please clarify	Refer query number - 279
284	Page 135 of corrigendum Clause - 15.2	The System shall allow geographically localized SMS broadcasts, including those that may be time-critical in nature, to be sent to mobile numbers that need not be pre-registered in the System, but are automatically “polled” from the Telco’s network based on their last known location.	request clarification of the term 'polled', along with a specific use case. Also 'last known location' may not be 'real time' as has been request consistently in the tender. Please clarify whether real time or last known location is required to avoid ambiguity	Refer query number - 279, 280 and 286

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
285	Page 135 of corrigendum Clause - 15.2	The Bidder shall provide required Computer Hardware at Telecom Operators sites for broadcasting the SMS to the targeted areas of population which are demarcated at State emergency Operation Center (SEOC).	Since the term 'population' has been mentioned, we assume this could be a few thousands to even a few million, depending on the impacted area. Please clarify if this understanding is correct	It is once again confirmed that LBAS service is only for limited number of persons, such as first responders and approved stake holders
286	Page 135 of corrigendum Clause - 15.2	The Bidder shall ensure with the Telecom Operators that the targeted SMS's are to be sent on priority bases to avoid the delay/ congestion.	As per 3GPP standards, prioritization of SMS is only by virtue of 'retrying priority' for users who have either switched off their handsets or unavailable. Kindly explain what is the intention behind this clause and a use case expectation.	Prioritization of messages is to be ensured by the telecom operator for which there will be direct connectivity between SEOC / Back-up DEOC and SMSC of concerned TSP. However, delivery time up to 5 minutes will be accepted as within tolerance limits, under overloading conditions.
287	Page 135 of corrigendum Clause - 15.2	It must be possible to retrieve technical status of all SMS deliveries: delivered / not delivered / pending / queued etc.	For SMS, if the delivery report is enabled, it puts an enormous strain on the operator network resources, since each message needs to send a delivery acknowledgement back. During disasters, when the network is expected to be overloaded / congested, enabling of delivery acknowledgement could lead to severe delays / further congestion in disseminating messages, defeating the very purpose of an Early Warning system. Besides, delivery does not imply that the message has been read, further defeating the purpose of this intended functionality.	The requirement states that it should be possible to retrieve technical status of SMS deliveries, however it doesn't mean that this data should be available on real time basis. The status of delivery etc. may be stored at SMSC, which can be subsequently accessed by system at SEOC / DEOC for performance analysis of alert messaging system.

Sr. No.	Section No., Clause No. and Page No.	Description	Query/Suggestion	Response
288	Page 135 of corrigendum Clause - 15.2	Further, the LBA system has the capability to give an overview of the number of subscribers affected (located within a given area), to be able to enhance the rescue and planning process. The system gives an indication of the number and nationality of people in the affected area. The service provider should provide all redundant inter-connection links between the alert software and the telecom service provider's network	Giving details on the number and nationality of individual without their explicit consent, goes against privacy norms, which incidentally is a requirement in another section of this tender. With interactive SMS-CB though, once an interactive broadcast is sent to a specific location and users respond to one of the interactive options which could be 'rescue me' for example, their location / MSISDN/nationality can be given to GSDMA. This does not compromise on privacy since the user has explicitly asked to be rescued. We hope this mechanism is acceptable	The description of the system indicates capability of LBAS. The data on various nationalities of persons in affected in vulnerable areas will only indicate their nationalities and not their individual cell phone details. The data is to be used only for planning and rescue purposes and not to invade privacy of individuals. refer query number 279.