ARUBA'S RISK REDUCTION and PUBLIC SAFETY INITIATIVE

Terms of References

Multi Hazard Early Warning System Aruba

Conducting of EWS Needs Assessment for the island of Aruba and drafting of optimization Study for the integrating Voice Alarm & Public Address (VA/PA) System

Ref:23-SB0600/RESEMBID/EXPERTISE FRANCE

EWS ARUBA

BRA Bureau Rampenbestrijding ARUBA

resembid

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TERMS OF REFERENCE

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I Overview

The Ministry of General Affairs of the Government of Aruba, represented by the Crisis Management Office and the RESEMBID/EXPERTISE FRANCE, is implementing the Multi Hazard Early Warning System Aruba.

Aruba is a small island nation in the Caribbean Sea, located approximately 20 miles north off the coast of Venezuela. The island's area is 70 square miles (180 square kilometers) and the terrain is mostly flat with a few hills.

The island has a population of 112,000 people. According to the latest statistics (2nd quarter 2022 Central Bureau of Statistics) 54% of the population are natives (born on the island) while the rest are from different nationalities. In addition to the local population, tourism is the most important economic pilar. Yearly, the island receives between 800,000 to 1 million visitors. This means that at any given point in time on the island there would be between 180,000 to 200,000 people on the island (population and visitors). The most popular languages spoken in Aruba are Papiamento (local creole language), Dutch, English and Spanish.

Aruba is at risk of multiple hazards such as hurricanes, floods, earthquakes and tsunami, oil spills, and aircraft or marine incidents. Aruba is classified at medium risk to tsunamis and as such, the impact of tsunamis should be considered for any activities located near the coast. Approximately 60% of Aruba's population lives in the coastal zone, and tourism accommodations and activities are concentrated on the southwest side of the island. While Hurricane Irma in 2017 did not hit Aruba directly, it caused large storm surges on the island and devastated nearby territories. Climate change may result in the increase in number or intensity of hurricanes and may also change their tracks.

The objective of the Phase 1 of the EWS Aruba Project is to address the risk and exposure of Aruba by providing a network infrastructure, programs, policies and protocols to strengthen the capacity to predict and prepare for natural hazards, thus improving resilience and reducing risk and subsequent loss. It is foreseen that Aruba Incident Management System would be empowered to progress from its current operational level to a more capable operational level. The Capability Levels, scaled from Level 0 to Level 3, will be defined in the Phase 1-EWS project as follows:

Capability Level	Characteristics
0. No all-hazard public warning system	Limited or undetermined administrative or technical program for all-hazard public warning. May have warning policy for particular hazards and/or audiences.
1. Administrative Capability	Legal and policy framework for all-hazard public warning in place, but limited or no technical facilities for all-hazard origination, aggregation and dissemination. May have technical capabilities for specific hazards and/or audiences.
2. Initial Operational Capability	Functioning capability to originate alerts for all hazards and to disseminate them to at least limited audiences via at least one delivery means.
3. Effective Operational Capability	Functioning capability to originate alerts for all hazards, to disseminate alerts to the public via multiple delivery means, and to share alert information with other organizations and governments.

Before the outset in 2019, Aruba is considered to be at Level 0 or Level 1.

The EWS Aruba (Outcome 1.2 and 1.3) will be based on use of CAP, designated as International Telecommunications Union (ITU) Recommendation. CAP is the internationally agreed content standard for the format of alerts, applicable to all hazards and all media. Accordingly, reaching EWS Level 3 (Effective Operational Capability) implies that Aruba is able to Pull and Push alerts in CAP format for any kind of hazard, disseminate alerts in CAP format to the public via multiple delivery means, and share alert information in CAP format with other organizations and governments.

II Objectives

Overall objective

The main objective of the Aruba EWS project is to improve Aruba's technological and human resource capacity to support Comprehensive Disaster Management through the implementation of a Public Safety and Multi-hazard Early Warning System to ensure there is minimal loss of life and property in a disaster or crisis.

The project would therefore support island-wide awareness and capacity enhancement for preparing and responding to crises by enabling the timely creation and dissemination of risk alerts and warnings.

Specific objectives

The objective of this service contract is to provide baseline for further development of the Aruba EWS, taking into consideration the current state of play and all the previous engagements in the field, by drafting Early Warning System Needs Assessment and optimization Study for integrating Voice Alarm & Public Address (VA/PA) System.

Expected **outcomes and outputs:**

Outcome 1: To conduct EWS Needs Assessment for the island of Aruba that will serve as a baseline for all the further developments.
Outcome 2: To draft Optimization Study for the integrating Voice Alarm & Public Address (VA/PA) System.

Outputs for Outcome 1:

01.1: Detailed report on the desk research conducted on the already existing documentation related to Aruba EWS and interviews with the stakeholders, including the expert opinion on the potential threats and opportunities related to interoperability with the existing infrastructure.

01.2: Detailed Needs Assessment for the island of Aruba that will serve as a baseline for all the further developments, based on the approved desk research.

Outputs for Outcome 2:

02.1: Drafted Terms of Reference for the software part of the software part of the Voice Alarm & Public Address (VA/PA) System.

02.2: Drafted Technical Specifications for the hardware part of the software part of the Voice Alarm & Public Address (VA/PA) System.

02.3: Drafted Optimization Study for the integrating Voice Alarm & Public Address (VA/PA) System.

III Personnel

For the purposes of this contract, it is foreseen that a team of two experts will be engaged.

Key Expert 1 – Team Leader – Category I (total of 20 workdays)

Key Expert 1 – Team Leader will be in charge of overall management of the contract, making sure that all the requirements of the Terms of Reference are met in full. In addition, Key Expert 1 – Team Leader will provide expertise in the fields covered by the expected outputs, including drafting Terms of Reference and Technical Specifications for the Voice Alarm & Public Address (VA/PA) System.

Education and work experience

Education

At least a master's degree in the field covered by this contract (telecommunications, disaster response, crisis management or similar relevant field). In the absence of master's degree, an additional 2 years to the general experience are required.

General experience

At least 10 years of work in the field of interest of this contract (early warning systems, disaster relief, etc.).

Specific experience

Work on at least 2 projects related to design of early warning systems; work on at least one set of technical specifications for a design of early warning system; fluency in written and spoken English is mandatory.

Key Expert 2 – IT/Telecommunications Specialist – Category II (total of 40 workdays)

Key Expert 2 - IT/Telecommunications Specialist will make sure that all the relevant information is included in the desk research. IT/Telecommunication Specialist will support the Team Leader in the development of the Terms of Reference and Technical Specifications for the Voice Alarm & Public Address (VA/PA) System

Education and work experience

Education

At least a master's degree in the field covered by this contract (telecommunications, IT, disaster response, crisis management, telecommunications, or similar relevant field). In the absence of master's degree, an additional 2 years to the general experience are required.

General experience

At least 6 years of work in the field of interest of this contract (early warning systems, disaster relief, interoperability of systems, telecommunications, etc.).

Specific experience

Knowledge of local IT and telecommunications sector of Aruba is highly desirable; experience in design of networks; fluency in written and spoken English is mandatory; knowledge of Dutch and Papiamento is highly desirable.

IV Additional information

Duration of the contract

It is foreseen that the contract will be fully implemented in 3 calendar months.

Place of work

It is expected that 90 per cent of all the activities of the contract will take place in Aruba. For this purpose, selected experts who are not residents of Aruba will obtain per diem in line with the official EU per diem rates.

Deliverables

It is expected that the selected candidate will submit the drafted documents for BRA's approval with the following dynamics:

- Draft Needs Assessment – within 45 days from the start of the contract,
- Draft optimization Study – within 90 days from the start of the contract.

Start of the contract
Estimated start of the contract is in April 2023.