ATTACHMENT 1

Public Works Authority (ASHGHAL)

Information Systems Department

Prequalification Documents

Part 2 - Scope of Services

Project: Disaster Recovery for Site Development for Assets Affairs

Project ID: ISD/2021/SY/19/GTC

Confidential & Proprietary

1   Contents

Statement of Services

1 Introduction

1.1 Project Background

The Asset Affairs is responsible for the maintenance and upgrade of all existing roads and drainage networks across Qatar. It supervises the construction and maintenance of roads and sewage networks through approved contractors to improve road and drainage condition and connectivity.

It consists of two departments:
- Drainage Networks Operation & Maintenance Department (DNOM)
- Road Operations and Maintenance Department (ROMD)

It is necessary that there should be a back-up Asset Affairs (DNOM and ROMD) Data Centers to minimize service disruption in the event of a disaster at the main Drainage and Roads Networks Management Centers.

In the current scenario, in the event of a disaster at the main Drainage and Roads Networks Management Centers, there may be significant and sustained disruption of service to the citizens and residents of Qatar.

1.2 Legal Statements

This is to state that this RFP does not represent a final statement of requirements, that it is subject to change and that the ASHGHAL
reserves the right to make changes, with the caveat that all bidders will be informed of any such changes.

All the bidders are required to comply with ASHGHAL's confidentiality and nondisclosure policy along with ASHGHAL's procurement and legal guidelines.

1.3 Project Objective

The anticipated outcome of this project is to have the following:

- The Disaster Recovery sites for Drainage and Roads Networks Management Centers shall enable all critical functions and communications of the main Networks Management Centers to be operational in case of a disaster.

- Once activated, the IT disaster recovery plan for Drainage and Roads Networks Management Centers shall provide the performance requirements that meets the needs of our evolving business
- Ashghal DR shall operate in alignment with its corporate strategy that outlines its direction and the operational procedures which need to be followed in order to achieve the organization's mission and vision.
- The Overall objective for this RFP is completion of Phase 1 identified below. The required outcome is a delivered Disaster Recovery plan that satisfies the requirements identified in Phase 1 discovery & assessment.

1.4 Project Description

This project is all about develop IT disaster recovery plan in two phases and implementing a Disaster recovery solution as per the required business needs. The project will have to be executed as follows:

- Phase 1 - Discovery & Assessment: Consultancy service to develop the Business Continuity Disaster Recovery Roadmap that will include discovery, DR assessment, DR Design, Operation model, BOQ/BOM, Implementation Strategy & Plan.
- Phase 2 Implementation: Contractor to perform as per the implementation & execution plan defined in Phase 1. Findings from Phase1 will be used to create the RFP for Phase 2
- Implementation can be done as follows:
    - o Release 1 – Implementation of the DR for DNOM DC
    - o Release 2 – Implementation of the DR for ROMD DC

A Business Impact Analysis (BIA) has been developed already as part of the Business Continuity planning process for both DNOM and ROMD.

The purpose of the BIA was to identify and prioritize system components by correlating them to the mission critical business processes the system supports and using this information to characterize the impact on the processes if the system were unavailable.

The BIA composed of the following three steps:
- **Determination mission critical business processes and recovery criticality.** Mission critical business processes supported by the system are identified and the impact of a system disruption to those processes is determined along with outage impacts and estimated downtime. The downtime should reflect the maximum that an organization can tolerate while still maintaining the mission.
- **Identification of resource requirements.** Realistic recovery efforts require a thorough evaluation of the resources required to resume mission critical business processes and related interdependencies as quickly as possible. Examples of resources that should be identified include facilities, personnel, equipment, software, data files, system components, and vital records.
- **Identify recovery priorities for system resources.** Based upon the results from the previous activities, system resources can more clearly be linked to critical mission critical business processes. Priority levels can be established for sequencing recovery activities and resources.

1.5 Partial Award

The ASHGHAL reserves the right to award the whole tender or part of it to one or more bidders if it is deemed by the ASHGHAL that such action will serve their interests in obtaining the optimum quality service at the most economically viable contract price.

ASHGHAL intends to seek proposal(s) from only potential supplier(s) based on the standards and requirements set forth in this document. Each proposal will be evaluated against these compliance, standards, and requirements.

2 Project Requirements

2.1 General Requirements

- Bidders will be invited to provide their best prices and submit a record of previous experience, current resources, reference sites and local support structure.
- Bidders must be locally based in Qatar with presence of at least 5 years and above in the local market.
- ASHGHAL may contact the companies or organizations either via phone or in writing that Supplier has worked in the past for the feedback.
- Adherence to the requested response format is critical. If the respondent should fail to comply, ASHGHAL reserves the right to reject the respondent's proposal.
- ASHGHAL will not be liable to any Supplier to explain the reason of their disqualification, bid rejection, failure.
- ASHGHAL shall request sample material, additional information, demonstrations or presentations during the course of the proposal evaluation and the Supplier shall provide the same. ASHGHAL will not be liable for the cost, if any, incurrent by the Supplier for providing the same
- To the extent applicable, all Suppliers bidding for this project shall ensure compliance with ASHGHAL IT security policies and standards. Further, they will also ensure compliance with the relevant Qatari laws that may be in force at the time of submitting their bids.
- Technical Design should be aligned to ASHGHAL Enterprise Architecture Principles for all the domains.
- Bidders to provide complete documentation and knowledge transfer to ASHGHAL.

2.2 Assumptions/Dependencies

- Bidders shall provide qualified/certified consultants to perform the activities.
- Bidders shall take sole responsibilities for the solution which they are proposing.
- Bidders shall designate a focal point to be responsible for the communication with ASHGHAL.
- Bidders shall show a motivation to develop a long-term working relationship with ASHGHAL in order to meet the future growing needs of the business.
- Bidders shall show an ability to meet all of the requirements mentioned herein this document.
- Bidders should allow its resources to work onsite at Ashghal premises during the course of the project. While at premises, Bidders staff will be required to strictly follow Ashghal code of conduct.
- The development design should adhere to Ashghal Acquisition Development and Maintenance Policy.
- The project should follow ICT Project governance process
- The proposed solution shall be from the leading industry brands or well-known reputed brands recognized in the Leader category in either of the Gartner or Forrester report or similar reputed researchers

3 Technical Requirements

3.1 Current situation

Asset Affairs has multiple datacenters for both DNOM and ROMD as a primary data centers located in Doha City in Qatar. These Datacenters hosts part of the IT infrastructure and business applications. The remaining application are hosted in ISD DC which is out of the RFP Scope.

The Platform comprises of Blade Servers, Storages, virtualization software, full security, and network infrastructure. The Platform also is protected with Multi Layered security.

3.2 Application and Services

A Business Impact Analysis (BIA) is developed as part of the contingency planning process for both DNOM and ROMD.

ASHGHAL will Share More Details regarding the applications as well as its existing infrastructure in the Primary datacenters as a reference after the bidders, who are willing to proceed with the bid, sign a non-disclosure agreement (NDA) – Appendix E.

3.3 Desired Solution

ASHGHAL is looking for a comprehensive solution comprising of:
- Implement Agile (adapt faster, delivering regularly) IT DR Datacenter platform for Both DNOM and ROMD separately.
- DR Platform with full orchestration functionality.
- Orchestration DR tool should monitor the replication and report live RTO and RPO metrics with CxO dashboard and preferably with a mobile-ready application.
- IT Security Solution.
- Develop DR Procedures and SOP's
- DR operation model and monitoring tools

The Proposal should provide the following to be considered for evaluation:
- Detailed design for each proposed solution component
- Full proposed solution architecture with proper strategy and clear roadmap
- Capacity planning framework and expansion toolkit for the provided solution.
- The proposed solution should cover all critical functions and communications of the primary datacenters for both DNOM and ROMD separately to match the same availability, resilience, and responsiveness.
- Detailed specs of each component of the design identifying limitation if any, expansion, and upgrade alternative.
- Detailed operation model to manage and monitor all the DR infrastructure components

3.4 Scope Summary

ASHGHAL seeks BCM and DRM consulting services for
- Drainage Networks Operation & Maintenance Department (DNOM)
- Road Operations and Maintenance Department (ROMD)

3.4.1 Assess ASHGHAL existing BCM and DRM capabilities:
- Determine the viability of ASHGHAL crisis management program.
- Determine ASHGHAL ability to recover critical systems and processes from significant business disruptions.

- Identify areas of strength, gaps and opportunities related to ASHGHAL existing BCM and DRM capabilities.
- Compare ASHGHAL BCM and DRM programs to leading practices, and to pertinent regulatory requirements and industry standards, SUCH AS:
  - Qatar's National Industrial control systems security standard.
  - ISO 22301, NFPA 1600 (or other BCM related standards).
  - ISO 27001:2013, NIA, MOTC Security policies, and Ashghal Security policies
  - Future national Laws
- Conduct a review of our supply chain availability risk management capability.

3.4.2. Identify critical systems and processes — Based on BIA and risk assessment (RA) provided:
- Identify the potential impact over time resulting from an interruption in each of ASHGHAL functions.
- Identify the information technology systems that provide essential support for ASHGHAL critical business operation functions.
- Establish recovery time objectives (RTOs) for each of ASHGHAL operation functions.
- Establish RTOs and recovery point objectives (RPOs) for each of ASHGHAL IT systems.
- Assess the risks at each of ASHGHAL critical facilities, and make recommendations to avoid or mitigate risks that could manifest themselves into an interruption of critical business functions.
- Align the BIA report with the structure and terminology contained in a recognized international BCM standard, such as ISO 22301 and ISO 27001:2013.
- All security standards of NIA, MOTC Security policies, and Ashghal Security policies shall be adhered to.

3.4.3. Identify implementation requirements and methods:
- Identify gaps between recovery requirements outlined in the BIA and ASHGHAL's existing recovery capabilities.
- Identify activities required to implement the BCM and DRM programs, and to meet the recovery requirements identified in the BIA.
- Produce two or more alternative implementation approaches to implementing the BCM and DRM capabilities, based on alternative levels of resources, risk tolerance and implementation methods.

3.4.4. Develop BCM, DRM and operation policies and standards:
- Define program objectives, program structure and responsibilities for the BCM and DRM programs.
- Identify critical success factors and key performance indicators for the BCM and DRM programs.
- Define governance and oversight structure for the BCM and DRM programs.
- Prepare the list of technical deliverables required to implement the DR Site for ROMD & DNOM
- Define processes and standards for key business BCM, DRM and operation functions.

3.4.5. Initiate training and awareness:
- Develop a training and awareness plan to build knowledge and awareness of key participants and stakeholders around the BCM and DRM programs.
- Construct training and awareness materials to be used by ASHGHAL and the vendor, consistent with the training and awareness plan, and the policies and standards.

- Deliver live training sessions to key ASHGHAL participants and stakeholders of the BCM and DRM programs.
- The training and the awareness will be provided by the bidders in stage two.

3.4.6. Conduct an exercise of ASHGHAL BCM or DRM plan:
- Develop an exercise plan that will test the viability of business process's recovery plan.
- Construct exercise materials to be used by ASHGHAL for this exercise.
- Facilitate the exercise.
- Deliver an after-exercise report highlighting all successes and known gaps and inconsistencies with the plan, based on the results of the exercise.
- Give a presentation to executive management on the exercise results and suggestions for improving ASHGHAL recovery posture.

3.4.7. Identify implementation requirements and methods for Control Room and Emergency Control Room:

- Consultant has to prepare the requirement of Control room/Emergency command center for both (ROMD & DNOM) after discussion with business on the basis of BIA and other critical services.

3.4.8. Governance

- All the deliverables/documents provided by the consultants as a part this project, shall be verified by a third party governing body which is approved by Ashghal.

3.5   Selection Criteria

ASHGHAL will select the supplier that provides the proposal that most closely meets its needs. ASHGHAL will not be bound to accept the lowest-priced proposal, or any of the proposals received.

- ASHGHAL will make its selection based on the following criteria, which will be weighted based on the factors considered to be most important. However, ASHGHAL reserves the right to change these criteria at its discretion, without notification:
- An assessment of the consulting firm's ability to address ASHGHAL BCM and DRM needs
- Professional backgrounds and related experience of the consultants assigned to the ASHGHAL project
- Clarity and completeness of key project milestones and deliverables
- Costs over the full contract term
- Flexibility of contract terms and conditions
- Transparency of the cost implications of midcontract changes, such as additional locations, increased capacity or platform changes, and the extent to which the proposal addresses
- ASHGHAL risks associated with changes during the course of the contract
- Speed with which required consulting resources can be made available to ASHGHAL to begin the project
- Ability of bidder to meet future needs of ASHGHAL during the term of any ensuing contract
- Size/viability of the firm and Experience of the firm's consultants in BCM or DRM
- Professional background and relevant industry experience of the consulting team specifically assigned to this project
- Personal certification of the firm's consultants
- Whether the firm has obtained certification to conduct BCM framework audits, such as ISO 22301.

- Scenario-specific knowledge, Regulatory knowledge support Frameworks/standards support
- Practice management methodologies: marketing, program deliverables, quality metrics
- Guarantee for services performed
- Company Capabilities and relevant Experience, the Contractors capacity to deliver the proposed solutions, services as per PWA's requirement and based on references that provide proof of relevant previous experience.
- References in the region who have availed similar services

4. Deliverables

SL #	Deliverables
1	Project Initiation & Kick off
2	Project Plan
3	Assessment with Business (ROMD & DNOM)
4	Business Requirements Document (BRD) Document – Ashghal Format
5	High Level Design (HLD) Document – Ashghal Format
6	Low Level Design Document
7	BCM & DRM plan, DR Response plan, DR Strategy & DR Security Plan & Design
8	Complete BOQ (separately for ROMD & DNOM) 1. DR Hardware Requirement 2. DR Virtual Environment requirement 3. DR Network & Communication requirement 4. DR Application requirement 5. DR data backup & mirroring requirement 6. DR security requirement (Threat modelling, Tools, architecture & design requirement) 7. Any other software, licenses, tool, device/equipment require 8. Control room/Emergency command center requirement
9	Infrastructure required (Rack space, AC, Heat consumption etc…)
10	Control room/Emergency command center detail document
11	Acceptance criteria & Check list of DR after implementation
12	Training and awareness plan
13	RACI matrix - Responsible, Accountable, Consult and Inform
14	Validate and obtain sign-off for all documents and deliverables from the concerned Technical stakeholders from ISD.
15	Validate and obtain sign-off from the Business – on all Documents
16	SOW for Stage 2 – Call of Order