



MINISTRY OF PUBLIC ADMINISTRATION AND COMMUNICATIONS
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Level 7, Corner Hart & Abercromby Streets, Port of Spain, Trinidad, W.I.
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REQUEST FOR PROPOSAL

**Engagement of a Qualified Vendor to Supply, Install, Configure and
Commission an IT Infrastructure Storage Solution**

JULY 2017

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Definitions

- (a) “Client” means the agency with which the selected Vendor signs the Contract for the Services, in this case the Ministry of Public Administration and Communications.
- (b) The “Bidder “ also referred to as the “Vendor” or “Contractor” means any entity or person, including a Joint Venture, Consortium or Association that may provide or provides the Good, Services or Consultancy to the Client under the Contract.
- (c) “Firm” means an unincorporated body of two or more individuals, or one or more individuals and one or more corporations, or two or more corporations, who have entered into partnership with one another with a view to carrying on business for profit;
- (d) “Contract” means the Contract signed by the Parties and all the attached documents listed in said contract.
- (e) “Day” means calendar day.
- (f) “Government” means the government of the Republic of Trinidad and Tobago.
- (g) “Instructions to Bidders” (Section 1 of the RFP) means the document which provides Bidders with all information needed to prepare their Proposals.
- (h) “Ministry” refers to the Ministry of Public Administration and Communications.
- (i) “Proposal” means the Technical Proposal and the Price/Financial Proposal.
- (j) “RFP” means the Request for Proposal prepared by the Ministry for the selection of a Vendor or Contractor.
- (k) “Services” means the work to be performed by the Vendor/Contractor pursuant to the Contract.
- (l) “Terms of Reference” (TOR) means the document included in the RFP which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Ministry and the Vendor/Contractor, and expected results and deliverables of the assignment.

SECTION 1.0 INSTRUCTIONS TO BIDDERS

1.0 Introduction

- 1.1 The Client (Ministry of Public Administration and Communications (MPAC)) will select a qualified firm/organization (the Vendor) from those whose proposals are deemed eligible and which satisfy the evaluation criteria indicated in Section 11.6.
- 1.2 Bidders are invited to submit a Technical Proposal and a Price/Financial Proposal, for the **Supply, Installation, Configuration and Commissioning of an IT Infrastructure Storage Solution for MPAC**. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract between the Ministry of Public Administration Communications and the selected Bidder.
- 1.3 Upon release of this Request for Proposal (RFP), a pre-bid conference will be held at the Ministry of Public Administration and Communications level 7 board room, National Library building, corner Hart and Abercromby Streets, Port of Spain on **Wednesday 19th July 2017 at 10:00 AM**. Interested bidders are required to assemble in the lobby level 7 National Library Building, Ministry of Public Administration and Communications, Port of Spain. All questions arising out of the RFP document must be submitted in writing via email **on or before 4:00 PM Wednesday 26th July 2017**, to:

Mr. Dave Alves

Programme Management Division
Ministry of Public Administration and Communications,
Level 5, NALIS Building,
Corner Hart and Abercromby Streets,
Port of Spain
Republic of Trinidad and Tobago
West Indies
Telephone Nos: 1(868) 623-4724,
1(868) 625-6724 Ext. 2004 OR 2002
Facsimile: 1(868) 623-8636,
Email: alvesd@mpa.gov.tt

- 1.4 Bidder's should familiarize themselves with local conditions and take them into account in preparing their proposals. Bidder's who do not attend the pre-bid conference will not be precluded from submitting a bid. However, bidder's are encouraged to attend the pre-bid conference. Bidder's should contact **Mrs. Anika Herbert at 625-6724 Ext. 2231 or Mr. Dave**

Alves to register for this solicitation and obtain additional information on the pre-bid conference.

- 1.5 Answers to all questions and queries will be forwarded to all bidder's who register for this solicitation **no later than August 04th 2017**.
- 1.6 Bidders shall bear all costs associated with the preparation and submission of their proposals and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the Bidders.
- 1.7 By submitting a Proposal, the Bidder represents and warrants that it has studied and is thoroughly familiar with the requirements and specifications of the Services. This includes familiarity with the Contractual Terms and Conditions as per the draft contract attached to this RFP, with all current labour and market conditions, and with applicable laws, such that the Bidder accepts responsibility for and is prepared to execute and shall completely fulfil all obligations under the proposed Contract. Likewise, the Bidders shall warrant the accuracy and reliability of all information they submit in this process.

2.0 Conflict of Interest

- 2.1 The Client requires that Bidders all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work.
- 2.2 Without limitation on the generality of the foregoing, Bidders, and any of their affiliates, shall be considered to have a conflict of interest and shall not be recruited, under any of the circumstances set forth below:

3.0 Conflicting Relationships

- 3.1 A Bidder (including its Personnel and Sub- Contractors) that has a business or family relationship with a member of the Client's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the assignment, (ii) the selection process for such assignment, or (iii) supervision of the Contract, may not be awarded a Contract, unless the conflict stemming from this relationship has been resolved in a manner acceptable to the Client throughout the selection process and the execution of the Contract.

- 3.2 Bidders have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Bidder or the termination of its Contract.
- 3.3 Recruiting former government employees of the Client to work for their former ministries, departments or agencies is acceptable provided no conflict of interest exists. When the Bidder nominates any government employee as Personnel in their technical proposal, such Personnel must have written certification from their government or employer confirming that they are on leave without pay from their official position and allowed to work full-time outside of their previous official position. Such certification shall be provided to the Client by the Bidder as part of his technical proposal.

4.0 PROPOSAL DOCUMENTS

4.1. *Set of Proposal Documents*

- 4.1.1 This Request for Proposal document issued for the purpose of inviting proposals includes:
- Instructions to Bidders
 - Terms of Reference
 - Response Forms
 - Evaluation Criteria
- 4.1.2 The Bidder is expected to examine carefully all instructions, conditions, forms and terms. Failure to comply with the requirements of the tendering procedures will be at the Bidder's own risk.
- 4.1.3 All proposals would be considered the property of the Bidder, unless the proposal has been selected

4.2 *Language of the Proposal*

- 4.2.1 All documents, correspondence, and any other formatted communications shall be written in the English Language.

4.3 *Communications Regarding the RFP*

- 4.3.1. Bidders are required to submit written questions on matters in which clarification is needed as indicated in section 1.3. These questions must be submitted on or before the defined date for query submission.
- 4.3.2. All communications should be in writing via email to the persons identified in 1.3 above. Any oral communications shall be considered unofficial and non-binding.
- 4.3.3. All responses shall be made in writing. Such responses may constitute an amendment to the RFP. Only written responses to written communications shall be considered official and binding upon, the Government of the Republic of Trinidad and Tobago. The Ministry of Public Administration and Communication reserves the right, at its sole discretion, to determine appropriate and adequate responses to written comments, questions, and requests for clarification.
- 4.3.4 Written copies of the responses will be sent to all prospective Bidders that attends the pre-bid conference and name and particulars appear on the register.

5.0 PREPARATION OF PROPOSALS

- 5.1 The Bidder is expected to examine all terms and instructions included in the proposal documents. All information requested must be provided.
- 5.2 Bidders must provide the following in their Proposal:
 - (i) The full name, signature, office and business address of the Bidder
 - (ii) The signature of the person making the offer, or in the case of a company, partnership or business firm, by a duly authorised officer or employee of such company, partnership or business firm.
- 5.3 The initials of the person making the offer must be inserted next to any alterations or erasures made in the case of a company, partnership or business firm, the initial of a duly authorised officer or employee of such company, partnership or business firm

5.4 In the case of any discrepancy between the copies of the proposals, the original will govern. The original and each copy of the proposal must be prepared in indelible ink and must be signed by the authorised representative of the Bidder.

5.5 *Mandatory Submissions*

5.5.1 Failure to submit the following will result in the proposal not being considered:

1. Valid Tax Clearance Certificate;
2. Valid Value Added Tax (VAT) Certificate;
3. Valid National Insurance (NIS) Certificate; and
4. 120 day bid validity period.

Bidders must provide valid exemption certificates if not qualified for any of the above.

6.0 COSTING OF PROPOSALS

6.1 The Bidder shall bear all costs associated with the preparation and submission of the proposals. The Ministry of Public Administration and Communications shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the tendering process.

6.2 By submitting a Proposal, the Bidder accepts that it shall bear any and all costs due to the Bidder's misinterpretation or misunderstanding of the Contract requirements, or because of any information which is known or should have been known to the Bidder, such as the Bidder's labour costs.

7.0 INCOME TAX AND VALUE ADDED TAX (VAT)

7.1 The laws of the Republic of Trinidad and Tobago prescribe that all firms **must** submit the following with their proposals:

- Valid Income Tax Certificate
- Valid Value Added Tax Clearance Certificate as issued by the Board of Inland Revenue and dated not more than six (6) months prior to the closing date of proposals; and

- Valid National Insurance Certificate of Compliance (issued in accordance with the National Insurance Act).

8.0 PROPOSAL VALIDITY

- 8.1 Bidders MUST provide in their proposal an assurance that their proposal will remain valid for an initial minimum period of one hundred and twenty (120) days from the closing date of the proposal or as stated otherwise, during which time the Bidders will undertake to maintain, without change, the proposal staffing (including named personnel).
- 8.2 In exceptional circumstances, prior to the expiry of the original offer validity period, the Ministry may ask the Bidder for a specified extension in the period of validity. The request and responses thereto shall be made in writing.

9.0 AMENDMENT OF PROPOSAL PACKAGE

- 9.1 If it becomes necessary to revise or amend any part of the proposal package prior to the submission deadline, addenda will be provided to the Bidder.
- 9.2 No oral statement of any individual will in any manner modify or affect the terms and conditions of the bid package or any amendment hereto.
- 9.3 Any amendment to this package will be forwarded to you prior to the hour and date specified for receipt of the proposal.
- 9.4 Any Addendum will be sent in writing by letter, facsimile or email to Bidders and will be binding upon the Bidder. Receipt of any Addendum must be promptly acknowledged, by letter or facsimile to the Ministry of Public Administration and Communications.

10.0 SUBMISSION OF PROPOSALS

- 10.1 Bidders may only submit one proposal. If a Bidder submits or participates in more than one proposal all such proposals shall be disqualified.
- 10.2 The system to be utilised for submitting the proposals is that of the two sealed envelope system consisting of the Technical Proposal and the Financial Proposal.

10.3 **TECHNICAL PROPOSAL**

10.3.1 Bidders are required to utilize the forms outlined in **Section 3.0 Technical Proposal Form** as part of their technical proposal which must include the following:

1. A brief description of the Bidder's Organization including :
 - A copy of the Bidder's bylaws
 - A copy of the Bidder's Articles of Incorporation
 - A list of the directors of the Company
 - A disclosure statement of conflict of interest, where applicable
 - Certificate of Insurance Coverage.
2. Comments on the Terms of Reference (TOR).
3. The Bidder's understanding of the services required.
4. The Bidder's professional/technical approach to the initiative relative to the development and implementation websites.
5. A detailed Project Plan of the activities, human resource and other needs, and timelines that are proposed to meet the deliverables and objectives as outlined in the TOR. There should be a clear indication of the duration and milestones.
6. Work of recent experience of a similar nature in the subject area of the initiative. The information to be provided on each assignment should indicate, inter alia, the nature of the contract. Further, at least three (3) client organisations for which similar services have been performed within the last eight (8) years should be included and an official of each organisation to whom inquiries may be addressed.
7. Detailed Curriculum Vitae of all employees that will be committed to this project and any conditions and/or restrictions on their availability. **All Curricula Vitae must be signed and dated by the person named. Failure to submit signed and dated Curriculum Vitae shall result in the loss of points during the Evaluation.**
8. Information on financial capacity of the Bidder:
 - I. Copies of Auditor's report together with audited statements made in accordance with approved standards for the last three (3) years, (if not required by law to have audited financials, please submit unaudited statements and legal proof that audited financials are not required;

- II. Provide a Letter of Comfort i.e. a letter from your Bank certifying you are in good financial standing; and
- 9. Statement Re: legal claims (previous and pending)
- 10. Valid Income Tax Certificate, Value Added TAX (VAT) Clearance Certificate **and** valid National Insurance Certificate of Compliance.
- 11. Acknowledgement of any Addenda issued by the Ministry of Public Administration and Communications, in response to any queries received by Bidders or for any other reason.

10.4 FINANCIAL PROPOSAL

- 10.4.1 Bidders Financial Proposal must include the following:
 - i. A general Price Summary, preferably based on the completion of deliverables as outlined in the Terms of Reference
 - ii. All hardware and software components should be itemised.
 - iii. All fees and service cost should be clearly stated.
 - iv. All activities should be costed out separately, and in the case of those for which no costing information is provided, it will be assumed that they are included in the overall amount cited in the Financial Proposal.
 - v. The Financial Proposal must take into account all tax liability.
- 10.4.2 The Value Added Tax must be shown in the proposal price in the Financial Proposal. Failure to do so will result in the proposal not being considered.
- 10.4.3 All quoted prices are to be expressed in Trinidad and Tobago Dollars (TTD)

10.5 ENVELOPE PREPARATION

- 10.5.1 Bidders are to submit one (1) original and five (5) copies each of the Technical and Financial Proposals, and mark "ORIGINAL" or "COPY" as appropriate.
- 10.5.2 The original and all copies of the Technical Proposals should be placed in a sealed envelope clearly marked:-

a. Envelope A – Technical Proposal

“The Supply, Installation, Configuration and Commissioning of an IT Infrastructure Storage Solution for the Ministry of Public Administration and Communications”

The original and all copies of the Financial Proposals should be placed in a sealed envelope that is clearly marked:-

b. Envelope B – Financial Proposal

“The Supply, Installation, Configuration and Commissioning of an IT Infrastructure Storage Solution for the Ministry of Public Administration and Communications”

The Bidder’s name and address must be included on each envelope.

- 10.5.3 The envelopes containing the Technical Proposals and the Financial Proposals are **to be placed together in a larger envelope, which is also to be sealed**. This larger envelope is to bear the tender number **MPAC ITD/17/00001**, the title and address of the location where the proposals are to be submitted as follows:

“The Supply, Installation, Configuration and Commissioning of an IT Infrastructure Storage Solution for the Ministry of Public Administration and Communications”

**Permanent Secretary,
Ministry of Public Administration and Communications
Level 5, NALIS Building,
Corner Hart and Abercromby Streets,
Republic of Trinidad and Tobago
West Indies”**

- 10.5.4 The proposals must be deposited in the Wooden Tender Box located in the Level 5 Lobby of the Ministry of Public Administration and Communications, National Library Building, Port of Spain no later than the time and date indicated in the Proposal Notice. Please note that:
- a) The Tender Box’s slot has the dimensions of 37.5 cm (length) x 9 cm (width). Proposals should be packaged to fit into this slot.
 - b) Late submissions will not be accepted.

- c) Faxed / emailed proposals will not be considered.
- d) All proposals will be publicly opened. The Bidder or his authorised representatives may be present at the opening.
- e) Only technical proposals will be opened after the closing date for submissions on **Wednesday 16th August at 10:00 AM.**

10.5.5 **Deadline date for submission is Tuesday 15th August 2017 at 4:00 pm**

11.0 EVALUATION OF THE TECHNICAL PROPOSAL

- 11.1 An Evaluation Committee will review the proposal for responsiveness to the Ministry of Public Administration and Communications' requirements. Proposal evaluation will be based on a set of evaluation criteria that reflect the relative importance of the various aspects of the proposal and the bidder's submission in relation to the Ministry of Public Administration and Communications' requirements.
- 11.2 The technical evaluation of the proposals shall be undertaken using the criteria indicated in 11.6 below.
- 11.3 The Evaluation Committee reserves the right to check references submitted by any bidder. If applicable, a site visit may be undertaken to a location where a previous project of a similar nature was completed by the bidder. The purpose of this visit is to determine aspects of the previous project that might factor into the bidder's evaluation scoring. Additional information may also be requested from a bidder about a previous project in order to prepare for the site visit. The Committee also reserves the right to require responses to questions generated by observations at the site visit.
- 11.4 Bidders must attain a minimum of 70 points in the Technical Evaluation in order to qualify for the Financial evaluation, with the minimum points for each criterion indicated in the table at 11.6, before negotiations on the financial aspect of the proposal could be addressed.
- 11.5 The Ministry of Public Administration and Communications reserves the right to **reject any offers which are not signed, or are in unsealed envelopes, or contain alterations or erasures which are not initialed by the tenderer, without incurring any liability whatsoever.**

11.6

Evaluation Criteria (Technical Proposal)

#	Criteria	Maximum Points
1	Proposal demonstrates understanding of RFP and TOR Minimum score required: 15 points	20
2	Meets Specifications Minimum score required: 20 points	25
3	Manageability of the SAN solution Minimum score required: 10 points	15
4	Hardware and Software Maintenance and Support Minimum score required: 5 points	10
5	Experience of implementation staff Minimum score required: 10 points	15
6	Financial Capacity Minimum score required: 10 points	15
	TOTAL	100

12.0 CONTRACT NEGOTIATION

- 12.1 Based on the results of the technical evaluation, the envelope containing the Financial Proposal of the Bidder with the highest ranked Technical Proposal will then be opened and this Bidder will be invited to enter into contract negotiations with the negotiating team. All the remaining envelopes presented by the other Bidders will remain sealed and if an agreement is reached with the first Bidder, the envelopes will be returned to the respective Bidders unopened. If an agreement on the terms of the contract is not reached with the first Bidder, negotiations will be initiated with the second Bidder, and so on until a satisfactory agreement is reached.
- 12.2 The inability to agree on detailed costs or compensation for services, or a judgment on the part of the negotiating team that such costs or compensation are inappropriate or excessive, shall be sufficient cause for notifying the Bidder of the rejection of its proposal and for initiating negotiations with the Bidder which follows in order of merit. Once a Bidder has been rejected, it will not be recalled for further negotiations on the contract.
- 12.3 The Ministry will notify all unsuccessful bidders of the outcome of the evaluation process, including the name of the successful bidder, if any.
- 12.4 Where negotiation with the bidder is successful, the Ministry will enter into formal contract with the bidder, on terms and conditions contained in the standard contract.

13.0 AWARD AND AGREEMENT

- 13.1 Once the negotiations have been concluded, the Ministry of Public Administration and Communications will award the contract to the selected Bidder and will promptly notify the other Bidders that have submitted proposals.
- 13.2 The contract will be awarded to a Bidder if its proposal conforms to the requirements in terms of the technical capability and other considered factors. If successful, the Bidder will be required to enter into a formal contract with the Permanent Secretary, Ministry of Public Administration and Communications.

14.0 CHANGES TO THE BIDDER AFFECTING PERFORMANCE

- 14.1 Any changes in the financial or legal aspects of the Bidder or its partnership which may affect the execution of the project and which occurred from date of proposal to the award date must be reported to the Ministry of Public Administration and Communications. Failure to provide such data could result in the refusal of the Bidder's proposal.

15.0 COMMENCEMENT OF CONTRACT

- 15.1 The commencement of work or service shall be by agreement of the Permanent Secretary, Ministry of Public Administration and Communications and the successful Bidder in accordance with the terms of the contract.

16.0 TERMS OF PAYMENT

- 16.1 The Bidder must provide in its financial proposal any Terms relating to payment schedule. These terms are subject to negotiations with the Ministry of Public Administration and Communications.
- Payment will only be made if the deliverables have been completed to the full satisfaction and acceptance of the Government of the Republic of Trinidad and Tobago.

17.0 RIGHT TO ACCEPT OR REJECT ANY OR ALL PROPOSAL(S)

- 17.1 The Ministry of Public Administration and Communications is not bound to accept any proposal.

18.0 CANCELLATION OF PROPOSALS

- 18.1 The Ministry of Public Administration and Communications reserves the right to cancel the proposal process in its entirety or even partially without defraying any costs incurred by any Bidder.

19.0 DISCLAIMERS

- 19.1 **Conflict of Interest:** Bidders must immediately inform the Ministry should a conflict of interest arise during the procurement process. A material conflict of interest may result in a bidder being disqualified from participating further in the procurement process.
- 19.2 **Confidential Information:** The Ministry will take reasonable steps to protect confidential information and subject to applicable law, will not disclose confidential information to a third party without the bidder's prior written consent.
- 19.3 **Intellectual Property Rights:** The RFP and its contents remain the property of the Ministry and all documents forming the bidder's proposal shall, once submitted, become the property of the Ministry. Proposals will not be returned to bidders at the end of the procurement process.
- 19.4 **Bid-rigging and Anti-collusion:** Bidders will be disqualified from participating further in the procurement process if they:
- i. Engage in collusive, deceptive or improper conduct in the preparation and submission of their proposals;
 - ii. Engage in collusive, deceptive or improper conduct in discussions with the Ministry or while negotiating with the Ministry.

In submitting a proposal, a bidder warrants that its proposal has not been prepared in collusion with the competitor.

The Ministry reserves the right, at its discretion to report suspected collusion or anti-competitive conduct by bidders to the appropriate authority and to provide that authority with all relevant information including the bidder's proposal.

- 19.5 **Ethics:** Bidders who attempt to influence or provide any form of personal inducement, reward or benefit to any of the Ministry's representatives will be disqualified from participating further in the procurement process.

Section 2 Terms of Reference

Engagement of a Qualified Vendor to Supply, Install, Configure and Commission an IT Infrastructure Storage Solution

Terms of Reference

1.0 Background

The Ministry of Public Administration and Communications (MPAC) intends to implement an IT Infrastructure Storage Solution to improve the service delivery, robustness and reliability of its SharePoint and Microsoft Exchange platform. As a part of its existing IT infrastructure, MPAC has been utilizing a Storage Area Network (SAN) solution as a central repository for its core ICT services. Among the core services there is a Microsoft SharePoint solution for intranet services and document management services, inclusive of document imaging through Kofax (version 10.0.2.1).

MPAC intends on expanding this solution to provide additional services and work flows to support the Ministry's Units and Divisions. The SharePoint solution currently host sites that are not only accessible to Ministry and its Divisions but also cross functional groups which comprise persons across government as well as outside of government.

Additionally given the age of the existing SAN the Ministry intends for the proposed Storage Solution to accommodate for the transfer of the existing Microsoft Exchange Server (version 2010) solution to the proposed solution.

2.0 Objectives

2.1 *Business Objectives*

In view of the widespread efficiencies enabled via easily accessible electronic file storage, a highly available storage solution is essential to satisfy both the current and future electronic storage needs of the Ministry. The aim of this project is to reduce online costs, to improve reliability of delivered IT services and to increase storage capacity.

2.2 *Project Objectives*

The successful award of a contract to supply and implement a cost-effective Storage Area Network system, inclusive of a mutually agreed scope of work and post implementation services:

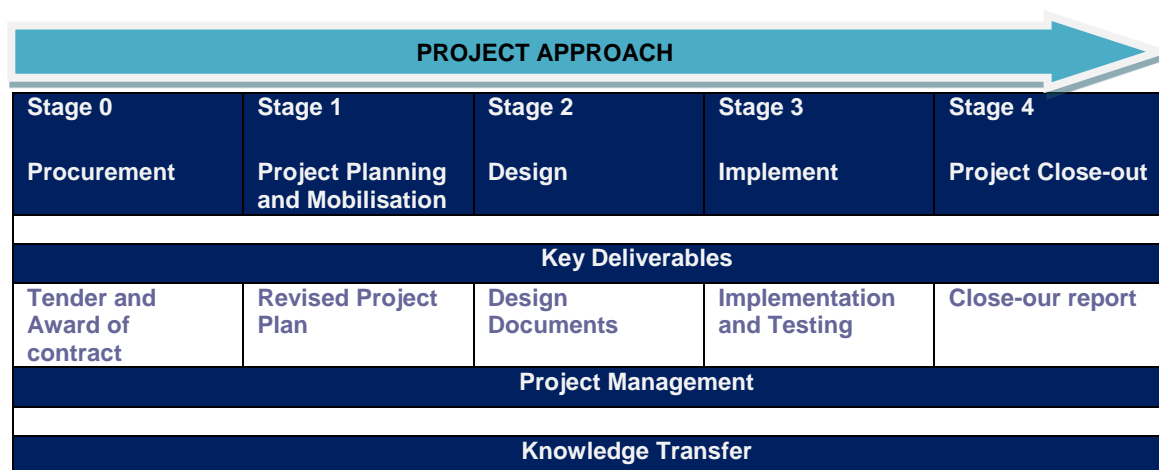
- 2.2.1 To conduct detail analysis of current-state integrated storage, server and network infrastructure to enhance project proposal.
- 2.2.2 To conduct stakeholder analysis to identify people and systems affected by the project; analyze their needs, and decide on involvement level.
- 2.2.3 To undertake a preliminary risk assessment to identify expected risks and threats affecting the project.
- 2.2.4 To finalise submitted proposed implementation plan and ensure increased commitment of resources.
- 2.2.5 To convert the approved project plan into reality and to achieve the project objectives.
- 2.2.6 To implement an integrated infrastructure storage solution that provides higher network availability, data accessibility, and system manageability than is provided by today's infrastructure.
- 2.2.7 To implement a storage system consisting of disks and corresponding enclosures, redundant controllers, redundant SAN switches and redundant host adapters.
- 2.2.8 To train Networks and IT Infrastructure Staff to operate and provide at least Level-1 type support.

3.0 Approach and Major Deliverables

3.1 Approach:

The award of contract for the supply and implementation of the SAN following contract negotiations would entail the Vendor's presentation of their submitted proposal. The Proposal, inclusive of narrative and schedule detailing the project, would, describe fully the proposed design (current state validation), the acquisition, installation, configuration (configuration to be determined through consultation with provider) of the new IT Infrastructure storage solution including switch fabric components, migration of services from the existing servers and commissioning.

The Vendor is expected to submit their approach (a description of the methodology that is to be used in order to achieve the deliverables) of the project.



3.2 Deliverables:

The project deliverables following award of a contract includes services and products which the vendor is contracted to deliver and include hardware, licences, additional functionality, installation, documentation, support, training, etc.:

- DEL 1. A revised project proposal document submitted for review and approval;
- DEL 2. A revised project organization document submit it for review and approval;
- DEL 3. A revised project schedule based in activity duration estimates;
- DEL 4. A revised risk management plan based on the risk assessment;
- DEL 5. A communications plan;
- DEL 6. Revised documented details of the controls including tracking procedures, reporting rules, change management process, issue/risk logging;
- DEL 7. A quality management plan;
- DEL 8. A revised project plan;
- DEL 9. Report performance through status reports and meetings;
- DEL 10. Revised documentation on the Proposed New Solution
- DEL 11. Report indicating successful Power and Self-Test
- DEL 12. Report of all start-up and initializing tests being successful
- DEL 13. Backup and Restore Test Plan.
- DEL 14. Backup and Restore Test Report.
- DEL 15. Install, configure and commission the new storage solution to be the primary production storage system.
- DEL 16. Configure the storage solution to support the Ministry's existing SharePoint, Kofax and Microsoft Exchange server infrastructure environment.
- DEL 17. Configure point-in-time snapshots for the purpose of in-array backups of Ministry's critical data such as Exchange.
- DEL 18. Upgraded support documentation, including details of new system configuration, a fully documented layout on rack of the New Solution, Cabling documentation;
- DEL 19. A handover report;
- DEL 20. A report on lessons-learned;
- DEL 21. A project completion/close-out;
- DEL 22. Licences installed and configured to carry out an automated backup process;
- DEL 23. Delivery of all Certificates and any other related documents
- DEL 24. All Username and Passwords for online accounts

- DEL 25. A new SAN comprised of disks and corresponding enclosures integrated into the existing Network and IT Infrastructure to provide sufficient capability and throughput,
- DEL 26. Initial/purchase cost for all management software and licenses and Annual/recurrent fees/subscriptions
- DEL 27. Training to designated MPAC IT staff to effectively manage the SAN Solution. Bidder must include: (i) Training Schedule; (ii) Course Content; and, (iii) Pre-requisites for training
- DEL 28. Provision of certification level training for two (2) MPAC staff

4.0 Scope

4.1 *The SAN project does NOT include:*

- 4.1.1 Provision of Servers or Server Operating Systems
- 4.1.2 Provision and installation of horizontal network cables

4.2 *The procurement of the SAN Solution and Services includes:*

- 4.2.1 Assess the current environment to be migrated to the new storage solution
- 4.2.2 Lead the MPAC Resources in the Installation of Storage Solution
- 4.2.3 Lead the MPAC Resources in the Configuration and Commissioning of SAN
- 4.2.4 Knowledge Transfer and Training of MPAC IT Staff to Configure and Operate
- 4.2.5 Define work to be completed and set project time lines
- 4.2.6 Install and configure the proposed New Solution; including all mounting and racking activities
- 4.2.7 Conduct Power on Self-Test of equipment
- 4.2.8 Initial setup and testing of hardware
- 4.2.9 Setup of Multi-Path Cabling for the Storage Solution.
- 4.2.10 Configure the storage systems in a HA cluster
- 4.2.11 Activation of and confirmation of all storage licenses

- 4.2.12 System registration and activation of support account with vendor
- 4.2.13 Maintain a clean work space and ensure all packaging is disposed of appropriately
- 4.2.14 Design and implement required configuration to the data switches.
- 4.2.15 Migration of SharePoint, SQL and Kofax virtual servers to the new storage solution
- 4.2.16 Migration of Exchange 2010 server storage to new storage solution
- 4.2.17 Work alongside Ministry ICT staff to perform acceptance testing activities
- 4.2.18 All bidders must be certified to perform professional services
- 4.2.19 All work requiring system(s) and/or services to be offline must be stated during the 'definition of work' period and the time to have these tasks completed agreed to by the Ministry. Such activities may have to take place outside normal working hours to prevent disruption of service to the Ministry.

5.0 Requirements

The new SAN is intended to provide an expanded and updated centralized storage environment that lowers the total cost of ownership of both physical and virtual server Data Storage in a high-speed, shared storage environment. The new SAN must offer intuitive administration, flexible storage capacity and performance, robust fault tolerance and must be compatible with existing and future virtualization technologies from Microsoft. The SAN must minimize disruptions during software system upgrades or implementation and must be flexible enough to adapt to MPAC's current and future infrastructure environment such as hybrid cloud services.

These requirements features are complementary and cumulative; that is the SAN design can use all these features, or can start with a simple SAN design then can change, add, remove or re-assign any feature we want in the future.

5.1 *SAN Capacity and Disk*

For the purpose of this tender, the term “usable capacity” implies the amount of space available to MPAC after the array/ arrays are fully configured. MPAC requires a minimum of 15 TB of usable capacity. This does not factor in capacity used for snapshots/clones/replication of data-sets. The proposed solution should be able to grow to a capacity of 25 TB without the need to replace the proposed Storage Solution equipment.

The storage solution should include a minimum of 15TB of usable capacity and the flexibility to increase writeable disk capacity to 25TB without having to replace the storage solution with the exception being the addition of disk drives as needed. Expansion of the proposed solution should not include replacement of disk shelf. Should the hard drive technology change any replacement disk, the proposed solution should be backward compatible with the proposed hardware.

5.2 *SAN Technology Platform / Architecture*

- 5.2.1 The Storage Solution must support iSCSI and Fibre Channel connectivity types.
- 5.2.2 The Storage Solution must be able to improve storage utilization by providing thin/virtual provisioning across the array.
- 5.2.3 The Storage Solution must be able to support quality of service (QoS) per Ministry requirement.
- 5.2.4 The Storage Solution must support data volumes larger than 2TB.
- 5.2.5 The storage solution must perform deduplication.
- 5.2.6 The ability to create snapshot backups of Microsoft SQL Server and Exchange data files to allow quick recovery upon failure.

- 5.2.7 The storage solution must be able to provide multi-path capability to the storage array, and individual hardware components must be fully redundant and hot-swappable to ensure maximum data availability.
- 5.2.8 The storages solution must provide appropriate cache memory to facilitate optimal system performance.
- 5.2.9 Servers must be allowed to boot from the storage solution, eliminating the need for internal storage on server appliance.
- 5.2.10 Efficiency is provided by SAN storage by supporting a large number of operating systems and servers.
- 5.2.11 Microsoft Server 2008 and Microsoft Server 2012 servers to auto-reconnect to storage solution volume upon server reboot.
- 5.2.12 Support allocation of different LUNs from a RAID set(s)

5.3 *Storage System*

The storage system will consist of disks and corresponding enclosures, redundant controllers, redundant SAN switches and redundant host adapters. The system will allow the four servers specified (above/below), plus up to four more existing servers to be attached to storage in a fully redundant way, so that no single failure of a host adapter, SAN Switch, SAN controller or disk will cause any disruption of service.

5.3.1 Tiers and capacity

Proposed solutions must provide tiered storage based on different disk types / drive speeds (e.g., SSD →fast disk→near-line disk).

For the purpose of this tender, MPAC defines the following storage tiers and required capacities. Capacity figures are to be understood as net usable capacity assuming RAID-6 redundancy with extra Hot Spares and are expressed in TB where 1TB – 10¹² bytes:

Tier Definition	Delivered Capacity Installed	Estimated Future Capacity Costs <u>should be included separately</u>
Tier 1 – Solid State Disk	None	2TB
Tier 2 – Fast Magnetic (15,000 RPM)	>8TB	6TB
Tier 3 – Near-line Magnetic (>7,000 RPM)	>6TB	12TB

Proposed solutions must support mixing of drive technologies (SSD, SAS/FC, SATA) and tier/speeds. Solutions that allow mixing of different drive technologies/size/speeds within the same enclosure are preferred over disk enclosures that support only one drive technology/interface type per enclosure.

Storage systems that provide automatic migration of data between tiers based on usage are preferred over systems where data has to be manually migrated between tiers by and administrator.

Systems that provide migration between tiers on the block level are preferred over systems that only allow migration between tiers on the volume level.

NB: Prices must be specified individually per tier and year.

5.3.2 Interfaces

5.3.2.1 8 Gbit/s Fibre Channel

5.3.2.2 10 Gbit/s Fibre Channel over Ethernet (FCoE)

5.3.2.3 Any interface(s) needed to meet design specification, as well as, an out of band interface for management.

MPAC is not able to provide specifications such as SAPS and IOPS.

5.3.3 Controller and Redundancy

- 5.3.3.1 The SAN must be redundant in terms of storage paths and open for future upgrades, especially in terms of disk space and bandwidth,
- 5.3.3.2 All connections between storage controllers and disk enclosures must be redundant.
- 5.3.3.3 Proposed solutions must be open for the implementation of more than one link per storage path between storage controller(s) and disk enclosure(s).
- 5.3.3.4 Storage Controllers must be redundant and hot swappable.
- 5.3.4 LUN Security: Proposed solutions must support LUN security / masking to prohibit access to volumes from hosts that do not need access to these volumes.
- 5.3.5 Cluster Support: Proposed solutions must support Microsoft Cluster
- 5.3.6 Storage Virtualization: Proposed solutions must support Storage/LUN virtualizations
- 5.3.7 RAID levels: Proposed solutions must support RAID Levels 0, 1, 5, 6 and 10.
- 5.3.8 Maintainability: Field Replaceable Units (disks, power supplies) must be Hot Swappable (no service interruption).
- 5.3.9 SAN Scalability: It must be a robust, centralized, flexible data storage solution that easily be scaled to meet growing storage demands and supports redefinition of configurations as needs change.
- 5.3.10 SAN High Availability:
 - 5.3.10.1 A properly designed SAN storage is always available, which make it possible for many servers to access the same data pool with the same availability.
 - 5.3.10.2 Can be easily reconfigured as required to facilitate the assignment of appropriate storage to its inventory of conventionally configured MS Windows servers Hyper V virtualized servers and Kofax.
 - 5.3.10.3 Minimises loss of data content and loss of access to data required to achieve “5-9’s” (99.999%) availability

5.3.11 Hot Spares: Proposed solutions must provide hot spare drives with automatic failover / disk rebuild.

5.3.12 Non-disruptive Expandability: Proposed solutions must support online, non-disruptive expansion of disk enclosures and live volumes.

5.3.13 Thin Provisioning: Systems that allow thin provisioning (physical disk space is allocated when space is allocated on volumes) are preferred over systems that only provide fixed space allocation during volume creation.

5.3.14 SAN Disaster Recovery: The solution must provide robust backup and restore capabilities with highly effective Disaster Recovery (DR) features, for example mirroring, for restoring access to Ministry's data with minimal downtime.

5.3.15 The storage solution must support connections to the following equipment:

8 Dell R820 Servers with HBA Card

341-9096 : QLogic 2562, Dual Port 8Gb Optical Fibre Channel HBA

F660C

MODULE, CARD (CIRCUIT), CONTROLLER, FC8HBA, DUAL CHANNEL, QLE2562,

6T94G

CARD (CIRCUIT), CONTROLLER, FC8, HOST BUS ADAPTER, DUAL CHANNEL LITE, QLE2562,V2

2WT5R

SERVICE CHARGE, SOFTWARE, NETWORK, QLOGIC, V3.0.

One Dell Power vault TI2000 Tape Drive (PowerVault ML6000)

IBM SAN Solution (Please state compability and intergration that can be accomplished with the proposed solution a solution that can mange or virtualise the exiting solution would be perefered)

1 Dell Power Edge 2950 : Qlogic 2462 Dual Channel 4GB Optical Fiber Channel HBA PCI-E Card

5.3.16 Snapshots

Proposed solutions must support snapshots for volumes.

5.3.17 Data Migration:

Proposed solutions must support the migration of data / volumes between disk enclosures.

5.3.18 Redundant power supplies:

Redundant, hot-swappable power supplies for all storage controllers and disk enclosures are mandatory.

5.3.19 SAN Management - Simple deployment and administration

5.3.19.1 The SAN must be simple to deploy and maintain.

5.3.19.2 The storage solution must be manageable from, any point in the network or outside, a web-based single, secure interface without requirements for a separate management device or server.

5.3.19.3 The storage solution must include the capability to report the overall and detailed views of current and historical utilization.

5.3.19.4 The storages solution must include the capabilities to report storage resource objects and generate a data usage report that can lead to a charge-back report.

5.3.19.5 The management system must include comprehensive online and remote monitoring abilities.

5.3.20 Monitoring and Alerts

5.3.20.1 Storage Management software must provide state-of-health monitoring and alerts by email, through a dedicated out-of-band Ethernet Interface to both vendor and the Ministry's storage administrators . Storage Management software should provide long-term usage statistics and trend analysis.

5.3.21 Online maintenance and upgrades:

Systems that allow online, non-disruptive upgrades of software/firmware are preferred over systems that must be taken offline before such updates can be applied.

5.3.22 Remote Replication:

Proposed solutions must allow the implementation of remote replication in the future. Hardware and licences required for remote replication are not part of this procurement and should not be proposed. Proposals should only declare readiness for Remote Replication.

5.3.23 NAS Readiness: Proposed solutions should be ready for the implementation of NAS functionality in the future. Hardware, software and licences required for NAS functionality are not part of this procurement and should not be proposed. Proposals should only declare readiness for NAS functionality.

5.4 ***SAN Infrastructure***

5.4.1 Switch Infrastructure

5.4.1.1 Proposal must include fully redundant SAN Switch infrastructure.

5.4.1.2 The solution must include the necessary switch fabric hardware to support the implementation of the storage solution. The cost of this hardware should be clearly itemised in the financial proposal

5.4.2 Switch Interfaces / SAN technology (FC/FCoE/iSCSI): Switch interfaces must match the technology of the storage system and should be at least forty eight ports each to support future expandability .

5.4.3 Power Supplies: SAN Switches with redundant power supplies are preferred over switches with a single power supply. In case of significant difference in cost between non-redundant and redundant power supplies bidders are encouraged to quote redundant models as an option.

5.4.4 Rack Space:

Bidders are requested to include a 42 U rack suitable for the proposed equipment in their proposals as an option or any suitable replacement . In addition to storage equipment, Proposed rack must include all internal power distribution panels that provide enough redundant power connections for the proposed storage solution as well as provide some level of scalability the Vendor must state the quantity and type of connections needed to power the rack .

5.5 *Host Components*

5.5.1 The vendor must review and provide, configure and commission any component(s) licences need to connect the equipment specified above redantly to the San solution .

5.6 *Licences*

5.6.1 Storage Management Software

Proposals must contain all required licences to operate the proposed solution with the proposed capacity.

5.6.2 SAN Switches

Proposals must contain all required licences to operate the proposed solution with the proposed capacity.

5.7 *Installation and Maintenance*

5.7.1 Installation

Proposals must include estimated time and maximum price for hardware and software installation for the proposed solution.

5.7.2 Hardware Maintenance and Support

Proposals must include hardware maintenance and support with an SLA for one year with an option to renew on an annual basis.

5.7.3 Software Maintenance and Support

Proposals must include software maintenance and support with an SLA for one year with the option to renew on an annual basis.

5.8 *Miscellaneous*

5.8.1 Proof of Vendor-Manufacturer Relationship

Bidders must supply evidence of a Vendor-Manufacturer relationship together with their proposals.

5.8.2 Proof of Experience

Bidders must supply evidence as part of their proposal to document they have successfully implemented solutions of comparable capacity and functionality in the past three (3) years.

5.8.3 Reference Implementations

5.8.3.1 All proposals must identify at least three reference implementations for the proposed hardware and software with at least comparable capacity and functionality.

5.8.3.2 Bidders must supply documentation that describes the principal architecture of the SAN, including schematic drawings, together with explanations and justifications why certain decisions were made together with their proposals.

5.8.3.3 Bidders are encouraged to submit alternative proposals based on a different SAN technology than the main proposal where such alternative proposals can provide comparable functionality at significantly lower cost.

5.9 **Warranty**

The Solution and all of its componets must be convered by a onsite Hardware and Software warranty for a period of atleast one year .

6.0 **Existing Infrastructure and Software**

The Ministry currently operates a single IBM SAN Storage Server DS3400 that was installed in 2009. The SAN and its four host servers are interconnected by way of two 16 port IBM 2005:16 Brocade SAN fibre switches. Of the 21.5 TB of usable SAN space, 19.9TB has been carved out and presented to the Hyper V Host .The IBM SAN has Two (2) controllers, Four (4) Disk enclosures and Forty Eight (48) SAS and SATA drives.

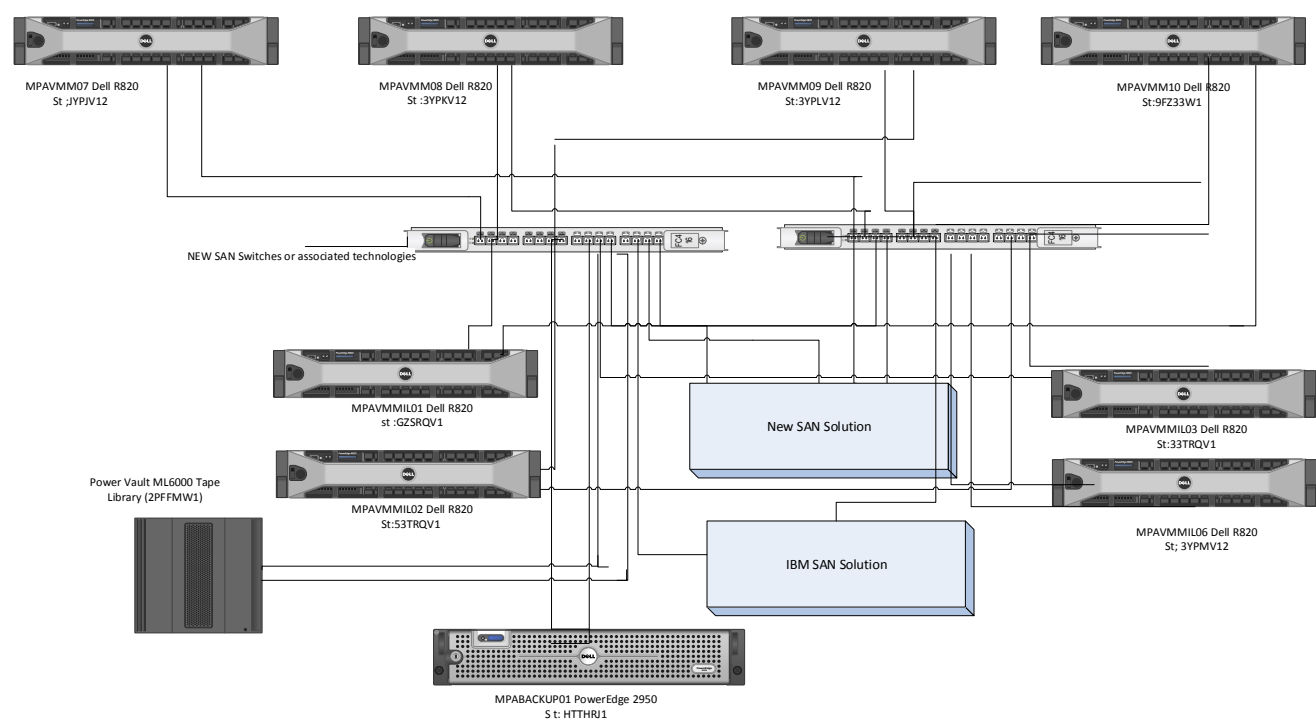
Currently there are Two (2) storage partitions; Seven (7) Raid arrays; Eleven (11) logical drives; and, Twelve (12) Hosts to Logical Drive Mappings. All connections are via redundant fibre.

Please refer to below

Server	Type (Physical / Virtual)	Current Specifications
MS SQL (Version)	Virtual	5.3TB
SharePoint (2013 SP1 Version)	Virtual	1 TB
Kofax (10.0.2.1 Version)	Virtual	1 TB

Exchange (2010 version)	Virtual	1.7 TB

7.0 Conceptual Design of New Storage Solution



8.0 Storage Solution Characteristics

The Ministry is seeking a proposal that best addresses its current needs and offers the ability to expand the capacity and capabilities of the storage solution to meet changing needs over the lifespan of the proposed solution.

In an effort to help us identify the best solution, describe in the table at TP3 how your proposed solution will meet the interests of the Ministry (additional lines may be used when answering the questions if required). The Ministry invites all bidders to provide any additional information on features and capabilities that distinguish their proposed solution from competing solutions in the following areas:

	REQUEST/QUESTION	YES/NO/NA	DESCRIBE OR REFERENCE HOW YOUR SOLUTION MEETS THE REQUIREMENTS
	CORE STORAGE		
1	Could additional drives be purchased through multiple distribution channels?		
2	How mature is your proposed SAN solution?		
3	What is the product roadmap for the proposed solution?		
4	Can your solution expand beyond the current size and if yes to what size?		
5	What additional hardware (other than drives) will be required for expansion of storage		
6	When extending storage space would existing hard drive need to be formatted and reconfigured?		
7	Describe how failure of hardware components are managed to ensure un-interruptability and prevent the loss of data		

8	Describe how failure of software components are managed to ensure un-interruptability and prevent the loss of data		
9	Describe how data is protected on each node		
10	Does the solution protect the integrity and availability of data during a network outage?		
11	Is data loss minimized or avoided with your solution when an immediate or “non-graceful” shutdown is experienced		
12	Does the solution provide for real time hardware and service monitoring		
13	Does the solution provide asynchronous replication over slower WAN links to cloud-based disaster recovery repositories?		
14	Which components are hot swappable?		
15	What components of the solution have built in redundancy?		
16	Does the solution allow Microsoft Windows Server 2008 R2 and 2012 to auto-reconnect to Storage Solution volume upon reboot		
17	Does the solution allow for the creation of snapshot images		
19	Can the system provide the ability to adjust performance parameters based on changing business requirements?		
20	Does the Storage Solution perform deduplication		
23	Does the system allow for thin provisioning?		
25	Can you dynamically expand volumes (physically, logically, plus re-stripe)?		

26	Is there a limit on number of volumes, and if so, what is it? Is there a volume size limit, and if so, what is it?		
27	Does the proposed product provide LUN based Quality of Service (QOS)?		
28	Can the solution facilitate the creation of a disk and make it available as a NAS?		
29	What RAID levels are available with your solution and can RAID levels be changed on the fly?		
30	Can multiple RAID levels be used?		
31	Does the solution provide for the upgrading to larger capacity disk drives as they become available?		
32	Can your solution mix and match disk drives, both size and type? What types? Are SSD drives available as an option?		
33	Can the proposed system facilitate real-time (no interruption of service) firmware upgrades of disk drives, shelves and associated controllers?		
34	Does your SAN facilitate storage clustering?		
35	Does your SAN provide network RAID?		
36	Does your solution allow for the implementation of different tiers of Storage?		
37	Does your SAN solution allow for real time management?		
	SECURITY		
1	How does your solution ensure data security?		
2	Does the solution create encrypted backups?		
	SYSTEM MANAGEMENT		

1	Does your solution provide a management console for the Storage Solution?		
2	What are the general capabilities of the management console software		
3	Is command line configuration required for installation, configuration or management of your Solution?		
4	Does your solution have data replication capabilities?		
5	Are SAN snapshot creation, retention and rollback capabilities wizard driven?		
6	Does your solution provide de duplication capabilities?		
7	Does your solution supports test, training or development environments (I.E. SQL) without impacting production environments?		
8	Does your solution provide remote administration capabilities built-in?		
9	Does your solution allow for Remote Copy?		
	NETWORK		
1	Does your solution have the ability to use redundant network paths to/from connected servers		
	SUPPORT		
1	Is local hardware support available?		
2	Can repair of parts be available on-site within 4 hours? If not, what options do you offer for spare parts delivery/availability?		
3	What is the warranty period for the hardware and software?		
	POWER		
	Define power requirements		

Section 3 Technical Proposal Forms

[Comments in brackets [] provide guidance to the Consultants for the preparation of their Technical Proposals; they should not appear on the Technical Proposals to be submitted.]

TP-1	cover Letter
TP-2	Storage Solution and Service Proposal
TP-3	Storage Solution Characteristics
TP-4	Bidder's Organization and Experience
	a) Bidder's Organization
	b) Bidder's Experience
TP- 5	Comments or Suggestions on the Terms of Reference and on Counterpart Staff and Facilities to be provided by the Ministry:
	a) On the Terms of Reference
	b) Counterpart Personnel, Services, Facilities
TP-6	Description of the Approach and Methodology
TP-7	Team Composition and Task Assignments
TP-8	Curriculum Vitae (CV) for Employees assigned to this project

FORM TP-1 Cover Letter

[Location, Date]

Permanent Secretary,
Ministry of Public Administration and Communications
Level 7, NALIS Building,
Corner Hart and Abercromby Streets,
Port of Spain
Republic of Trinidad and Tobago
West Indies

Dear Madam:

We, the undersigned, offer to provide services for *[Insert title of assignment]* in accordance with your Request for Proposal dated *[Insert Date]* and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial or Price Proposal sealed under a separate envelope.

We are submitting our Proposal in association with: *[Insert a list with full name and address of each associated Vendor]*

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

The Proposal validity period is () days from the deadline date of submission of proposals. If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We agree, if our proposal is accepted, to execute the services related to the assignment, not later than the date indicated by the Ministry.

We hereby agree that in competing for (and, if the award is made to us, in executing) the Contract, we undertake to observe the laws against fraud and corruption, including bribery, enforced in the Republic of Trinidad and Tobago.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Company Stamp: _____

FORM TP-2 Storage Soltuion and Services Proposal

[Provide a detailed desicription of the product and services being proposed including but not limited to the items listed at Section 1.4]

FORM TP-3 Storage Solution Characteristics

	REQUEST/QUESTION	YES/NO/ NA	DESCRIBE OR REFERENCE HOW YOUR SOLUTION MEETS THE REQUIREMENTS
	CORE STORAGE		
1	Could additional drives be purchased through multiple distribution channels?		
2	How mature is your proposed SAN solution?		
3	What is the product roadmap for the proposed solution?		
4	Can your solution expand beyond the current size and if yes to what size?		

5	What additional hardware (other than drives) will be required for expansion of storage		
6	When extending storage space would existing hard drive need to be formatted and reconfigured?		
7	Describe how failure of hardware components are managed to ensure un-interruptability and prevent the loss of data		
8	Describe how failure of software components are managed to ensure un-interruptability and prevent the loss of data		
9	Describe how data is protected on each node		
10	Does the solution protect the integrity and availability of data during a network outage?		

11	Is data loss minimized or avoided with your solution when an immediate or “non-graceful” shutdown is experienced		
12	Does the solution provide for real time hardware and service monitoring		
13	Does the solution provide asynchronous replication over slower WAN links to cloud-based disaster recovery repositories?		
14	Which components are hot swappable?		
15	What components of the solution have built in redundancy?		
16	Does the solution allow Microsoft Windows Server		

	2008 R2 and 2012 to auto-reconnect to Storage Solution volume upon reboot		
17	Does the solution allow for the creation of snapshot images		
19	Can the system provide the ability to adjust performance parameters based on changing business requirements?		
20	Does the Storage Solution perform deduplication		
23	Does the system allow for thin provisioning?		
25	Can you dynamically expand volumes (physically, logically, plus re-stripe)?		

26	Is there a limit on number of volumes, and if so, what is it? Is there a volume size limit, and if so, what is it?		
27	Does the proposed product provide LUN based Quality of Service (QOS)?		
28	Can the solution facilitate the creation of a disk and make it available as a NAS?		
29	What RAID levels are available with your solution and can RAID levels be changed on the fly?		
30	Can multiple RAID levels be used?		
31	Does the solution provide for the upgrading to larger capacity disk drives as they become available?		

32	Can your solution mix and match disk drives, both size and type? What types? Are SSD drives available as an option?		
33	Can the proposed system facilitate real-time (no interruption of service) firmware upgrades of disk drives, shelves and associated controllers?		
34	Does your SAN facilitate storage clustering?		
35	Does your SAN provide network RAID?		
36	Does your solution allow for the implementation of different tiers of Storage?		
37	Does your SAN solution allow for real time management?		

	SECURITY		
1	How does your solution ensure data security?		
2	Does the solution create encrypted backups?		
	SYSTEM MANAGEMENT		
1	Does your solution provide a management console for the Storage Solution?		
2	What are the general capabilities of the management console software		
3	Is command line configuration required for installation, configuration or management of your Solution?		

4	Does your solution have data replication capabilities?		
5	Are SAN snapshot creation, retention and rollback capabilities wizard driven?		
6	Does your solution provide de duplication capabilities?		
7	Does your solution support test, training or development environments (I.E. SQL) without impacting production environments?		
8	Does your solution provide remote administration capabilities built-in?		
9	Does your solution allow for Remote Copy?		

	NETWORK		
1	Does your solution have the ability to use redundant network paths to/from connected servers		
	SUPPORT		
1	Is local hardware support available?		
2	Can repair of parts be available on-site within 4 hours? If not, what options do you offer for spare parts delivery/availability?		
3	What is the warranty period for the hardware and software?		
	POWER		
	Define power requirements		

FORM TP-4 bidder's Organization and Experience

A - Bidder's Organization

[Provide here a brief (two pages) description of the background and organization of your firm/entity and each associate for this assignment. Also include as an Appendix and make reference to copies of] the Firm's By Laws, Articles of Incorporation, Directors of the Firm/Company, Certificate of Insurance Coverage and Disclosure Statement of Conflict of Interest where applicable)

B - Consultant's Experience

[Provide information about each of the assignments for which your firm has been legally engaged under contract in its own name to deliver services similar to those requested here in the RFQ, during the past five years. It is recommended that you list a maximum of ten (10) such assignments.]

Assignment name:	Approx. value of the contract (in TT \$ currency):
Name of Organization:	Duration of assignment (months)
Address:	Total N° of staff-months of the assignment:
Nature and Scope:	
Organization size:	Start date (month/year): Completion date (month/year):
Name of associated Vendors/Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):
Narrative description of Project	
Description of actual work and services provided by your staff within the assignment:	
Client Reference Name: Contact No: Email:	

Firm's Name: _____

FORM TP-5 Comments and Suggestions on the Terms of Reference

A - On the Terms of Reference

[Please use this space to document and justify any observation or suggestion you have concerning the Terms of Reference (provided that it would not alter the requirements to be met by the Ministry) that would improve contract performance (such as eliminating an activity that you feel is unnecessary, adding one, or proposing that activities include or be divided up into different stages). These suggestions should be concise and specific and should be incorporated into your Proposal.]

B – Counterpart Personnel, Services and Facilities

[Comment here on personnel and facilities that will be supplied by the Ministry, including administrative support, equipment, information, etc.]

FORM TP- 6 Description of Approach and Methodology

The technical approach, methodology and Methodology are key components of the technical proposal. It is recommended that Bidders submit their Technical Proposal (including graphics and diagrams) to reflect the following:

a) Technical Approach and Methodology.

Bidders should explain their understanding of the assignment's objectives, their approach, and the methodology to be used to perform the required tasks and produce the expected work product, explaining such at an adequate level of detail. Bidders should explain the methodology that the firm will use and how that methodology will be adapted to the proposed approach and the specific work being requested in the RFP.

FORM TP-7 TEAM Composition and Task Assignments

Professional Staff				
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned

FORM TP-8 Curriculum Vitae (CV) for Employees Assigned to this Project

1. Proposed Position *[only one candidate shall be nominated for each position]:* _____

2. Name of Firm *[Insert name of firm proposing the staff]:* _____

3. Name of Staff *[Insert full name]:* _____

4. Date of Birth: _____ **Nationality:** _____

5. Education *[Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:* _____

6. Membership of Professional Associations: _____

7. Other related Training *[Indicate significant training since degrees under 5 - Education were obtained, include product certification where applicable]:* _____

8. Countries of Work Experience: *[List countries where staff has worked in the last ten years]:* _____

9. Languages *[For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:* _____

10. Employment Record *[Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:*

From [Year]: _____ To [Year]: _____

Employer: _____

Positions held: _____

<p>11. Detailed Tasks Assigned</p> <p><i>[List all tasks to be</i></p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p><i>[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.]</i></p> <p>Name of assignment or project: _____</p>
---	---

<i>performed under this assignment]</i>	Year: _____
	Location: _____
	Client: _____
	Main project features: _____
	Positions held: _____
	Activities performed: _____

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience.

I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

_____ Date: _____

[Signature of staff member or authorized representative of the staff]

Day/Month/Year

Full name of authorized representative: _____

Section 4. Financial Proposal Form

Financial Proposal Form shall be used for the preparation of the Financial Proposal according to the instructions provided under para. 10.4.1 of Section 2.

- PR-1 Financial Proposal Submission Form (VAT must be clearly stated)
- PR-2 Summary of Costs
- PR-3 Breakdown of Cost by item/activity
- PR-4 Breakdown of Other Costs per item/Activity

FORM FP-1 Bid Validity Form

[Date]

Permanent Secretary,
Ministry of Public Administration and Communications
Level 7, NALIS Building,
Corner Hart and Abercromby Streets,
Port of Spain
Republic of Trinidad and Tobago
West Indies

Dear Madam:

We, the undersigned, offer to provide the services for *[Insert title of assignment]* in accordance with your Request for Proposal dated *[Insert Date]* and our Technical and Financial Proposal.

The Proposal validity period is () days from the deadline date of submission of proposals and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature *[In full and initials]*: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Company Stamp: _____

FORM FP-2 SUMMARY of Costs

Description (Item/Activity)	Quantity	Unit Cost	Currency(ies) ¹	Amount(s)
		Subtotal		
		Other Costs		
		Total Amount of Financial Proposal		-----

¹ Local currency and US.

Section 5 Bid Conformance Sheet

Engagement of a Qualified Vendor to Install and Configuration of a Storage Solution

Bidders are requested to complete this checklist for submission of their tender document.

2	120 days bid validity period	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
3	Valid Income Tax Clearance Certificate	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
4	Valid VAT Clearance Certificate	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
5	Valid National Insurance Certificate of Compliance	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>

I/We certify that the above checked items have been included in my/our Proposal. Submission is in accordance with instructions therein.

N.B. Failure to provide all the (documents listed in the above Check List) would deem your bid non-compliant and will lead to the Ministry’s non acceptance of your offer.

Print Name

Date

Authorized Signature

Company Stamp

SAMPLE CONTRACT

GOVERNMENT OF THE REPUBLIC OF TRINIDAD AND TOBAGO

DISCLAIMER:

This sample contract contains the GoRTT's standard terms and conditions of contract. This sample document contains the basic terms and conditions into which GoRTT is willing to enter with a Contractor, PROVIDED HOWEVER that GoRTT reserves the right to amend the terms of this contract prior to execution, and to include additional provisions relative to the installation, configuration and commissioning of the solution.

The final contract between GoRTT and the successful Bidder may be negotiated by the Parties.

Note that all time-frames referenced in this sample document are subject to change depending on the duration of the contract term.

THIS CONTRACT (hereinafter together with all Appendices attached hereto and forming an integral part hereof called ("**the Contract**") is made the day of _____ in the Year Two Thousand and between Permanent Secretary, Ministry of _____ which expression shall mean and include the person or persons for the time being carrying on the duties of Permanent Secretary in the said Ministry acting herein for and on behalf of the Government of the Republic of Trinidad and Tobago (hereinafter called "**GORTT**" of the One Part) and [**Consultant**] or [**Company**] having its registered office at [insert address] (hereinafter called "**the Consultant/Contractor**") of the Other Part.

WHEREAS:

- (a) GORTT is desirous of obtaining Consultancy/Other Services for [insert general description of services] which are more particularly described in the [identify documents] (hereinafter called "**the Services**".)
- (b) The Consultant/Contractor having represented to GORTT that it has the required professional skills, personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract.

NOW IT IS HEREBY AGREED as follows:-

- 1) GORTT **HEREBY APPOINTS** the Consultant/Contractor and the Consultant/Contractor **HEREBY ACCEPTS THE APPOINTMENT** to provide the Services in accordance with the Appendices hereto annexed and the terms and conditions herein contained.
- 2) In consideration of the satisfactory performance and completion of the Services in accordance with this Contract GORTT hereby covenants to pay to the Consultant/Contractor the fixed sum of [insert sum] **DOLLARS (\$ insert figure) in accordance with the Letter of Award dated _____, hereto annexed and marked ""**.
- 3) The Consultant/Contractor for itself and its assigns and GORTT (but not so as to impose any personal liability on the Permanent Secretary, Ministry of _____) mutually covenant that they will respectively perform and observe the several provisions of this Contract to be performed and observed by them respectively hereunder.
- 4) In the event that any of the contract provisions is declared invalid the remaining provisions shall not be affected and shall have full force and effect.

- 5) It is understood that the opinions and recommendations of the Consultant/Contractor obligate neither GORTT nor its representatives who reserve the right to put forward such observations or exceptions as they deem appropriate.
- 6) In this Contract, words and expressions shall have the same meaning as are assigned in the Contract Documents hereinafter referred to.
- 7) The following documents shall comprise the Contract Documents and shall be deemed to form and be read and construed as part of this Contract namely:
[Insert relevant document names in the form of a bulleted list] dated _____ **hereto annexed and marked”**.
- 8) Should there be any conflict between this Contract and any other document hereto before listed this Contract will take precedence.
- 9) Each of the Parties warrants its powers to enter into this Contract and that it has obtained all necessary approvals to do so.
- 10) Each Party acknowledges that this contract contains the whole contract between the Parties and that it has not relied upon any oral or written representation made to it by the other or its employers or agents and has made its own independent investigations into all matters relevant to it.
- 11) The Permanent Secretary in the Ministry of _____ shall not in any way be held personally liable for anything arising out of this Contract.

GENERAL CONDITIONS

1. DEFINITIONS

Unless the context otherwise requires the following terms whenever used in this Contract have the following meanings:

- (a) **"Contract"** means the contract between the GORTT and the Consultant/Contractor together with all the documents listed in Clause (7) hereinabove of such signed Contract;
- (b) **"Contract Price"** means the price to be paid for the performance of the Services, in accordance with Clause 2 of the signed Contract;
- (c) **"Effective Date"** means the date on which this contract comes into force and effect pursuant to Clause 11 hereof;
- (d) **"Executing Agency"** means the Ministry of _____;
- (e) **"Party"** means the GORTT or the Consultant/Contractor, as the case may be, and **"Parties"** means both of them;
- (f) **"Personnel"** means persons hired by the Consultant/Contractor as employees and/or agents and assigned to the performance of the services or any part thereof; **"foreign Personnel"** means such persons who at the time of being so hired had their domicile outside Trinidad and Tobago; and **"local Personnel"** means such persons who at the time of being so hired had their domicile inside Trinidad and Tobago;
- (g) **"Services"** means the *[insert title]* as described in the *[insert name of documents]*, all annexed to this Contract;
- (h) **"Sub Consultant/Contractor"** means any person or entity to whom/which the Consultant/Contractor subcontracts any part of the services in accordance with the provisions herein.

2. RELATION BETWEEN THE PARTIES

Nothing contained herein shall be construed as establishing a relation of master and servant or agent and principal as between GORTT and the Consultant/Contractor. The Consultant/Contractor subject to this Contract has complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf.

3. LAW GOVERNING CONTRACT

- 3.1 This Contract, its meaning and interpretation and the relation between the Parties shall be governed by the laws of the Republic of Trinidad and Tobago for the time being in force or any amendments thereto.
- 3.2 Any proceeding arising out of or in connection with this Contract may be brought in any court of competent jurisdiction in the Republic of Trinidad and Tobago.
- 3.3 The submission by the Parties to such jurisdiction shall not limit the right of GORTT or of the Consultant/Contractor upon mutual agreement to commence any proceedings arising out of this Contract in any other jurisdiction it may consider appropriate.
- 3.4 Any notice of proceedings or other notices in connection with or which would give effect to any such proceedings may without prejudice to any other method of service be served on any party in accordance with clause 6.
- 3.5 In the event that a party to any proceedings arising out of or in connection with this contract is resident outside the Republic of Trinidad and Tobago the address for service in the Republic of Trinidad and Tobago shall be the address for such service nominated in clause 6 of this Contract and any time limits in any proceedings shall not be extended by virtue only of the foreign residence of the party.

4. LANGUAGE

This Contract has been executed in the English Language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

5. HEADING

The headings shall not limit, alter or affect the meaning of this Contract.

6. **NOTICES**

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorised representative of the Party to whom the communication is addressed, or when sent by registered mail or facsimile transmission and confirmed by registered post to the party to which it is required to be given at the following address:

For GORTT –

The Permanent Secretary

Ministry of _____

Insert Address

Port-of-Spain

Trinidad

Attn:

E-mail:

Tel. No. (868)-

Fax No. (868)-

For the Consultant/Contractor -

[Insert name]

Attn:

E-mail

Tel. No.

Fax No.

7. CHANGE OF ADDRESS

Each of the Parties shall give notice to the other of the change or acquisition of any address or telephone facsimile or other number at the earliest opportunity but in any event within forty-eight (48) hours of such acquisition.

8. CALCULATION OF TIME LIMITS

The time limits referred to in this contract shall be calculated as follows except as otherwise stated in these conditions:

- from the day following the date of the act or deed which serves as the point of commencement for this time limit.
- where the time limit is fixed in days, it shall expire at the end of the last day of the time limit laid down in calendar days;
- where the time limit is fixed in months, it shall expire on the day having the same number as the day on which it began;
- in the event of the last month of a time limit fixed in months not having a day with the same number as the date on which it began the time limit shall end on the last day of that month;
- where the time limit is fixed by the week, it shall expire at the end of seven (7) days;
- if the last day of a time limit falls on a Sunday or a public holiday established by law, the time limit shall be extended until the end of the next working day.

9. AUTHORISED REPRESENTATIVES

- 9.1 Any action required or permitted to be taken, and any document required or permitted to be executed under this contract, may be taken or executed on behalf of GORTT by the Permanent Secretary, Ministry of _____ or her designated representative.

9.2 Any action required or permitted to be taken and any document required or permitted to be executed under this contract may be taken or executed on behalf of the Consultant/Contractor by *[insert name]* or his designated representative.

10. **TAXES AND DUTIES**

The Consultant/Contractor and personnel shall pay all taxes, duties, fees, levies and other impositions levied in accordance with the laws of Trinidad and Tobago.

11. **COMMENCEMENT DATE**

This Contract is deemed to have come into force and effect on the *[insert day]* of *[insert month]*, *[insert year]*.

12. **COMPLETION DATE**

12.1 Subject to clause 12.2 the Consultant/Contractor shall complete and deliver the Services within the stipulated time frame, *[state time frame]* or as mutually agreed upon by the parties or as extended and approved by the Ministry of _____.

12.2 Unless terminated earlier pursuant to Clause 18.2 and 18.3 hereof, this Contract shall terminate when pursuant to the provisions herein, the Services have been completed and the payments of remuneration and reimbursable expenditures have been made.

13. **ENTIRE AGREEMENT**

This Contract contains all covenants, stipulations and provisions by the Parties. No agent or representative of either Party has authority to make and the Parties shall not be bound by or be liable for any statement, representation, promise or agreement not set forth herein.

14. **MODIFICATION**

Modification of the terms and conditions of this contract, including any modifications in the scope of the Services may only be made by written agreement between the parties.

15. **ASSIGNMENT AND SUB-CONTRACTING**

The Consultant/Contractor shall not assign the whole or any part of this Contract without the written consent of GORTT, shall not sub-contract the whole or any part of this Contract without the prior written consent of GORTT and such consent if given shall not relieve the Consultant/Contractor of any liabilities or obligations under the terms of this Contract.

16. **FORCE MAJEURE**

16.1 **DEFINITIONS**

- (a) For the purpose of this contract "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts, or other industrial action (except where such strikes, lockouts or other industrial action are within the powers of the Party invoking Force Majeure to prevent), confiscation or any other action by Government agencies.
- (b) Force Majeure shall not include:-
 - i. any event which is caused by the negligence or intentional action of a Party or such Party's agents or employees nor;
 - ii. any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this contract and avoid or overcome in the carrying out of its obligations hereunder;
 - iii. insufficiency of funds or failure to make any payment required hereunder;

16.2 **NO BREACH OF CONTRACT**

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under this contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this contract.

16.3 **MEASURES TO BE TAKEN**

- (a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfil its obligations hereunder with a minimum of delay.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such events as soon as possible, and in any event not later than seven (7) days following the occurrence of such event, providing evidence of the nature and cause of such

event, and shall similarly give notice of the restoration of normal conditions as soon as possible.

- (c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

16.4 EXTENSION OF TIME

Any period within which a Party shall, pursuant to this Contract, complete any action or tasks shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

16.5 PAYMENTS

GORTT shall not be liable to make any payments under the Contract in respect of the period of the Consultant/Contractor's inability to perform the Services herein as a result of an event of Force Majeure and any sum already paid thereunder in respect of that period shall be credited to the period following the resumption of the Services.

16.6 CONSULTATION

Not later than ten (10) days after the Consultant/Contractor, as the result of an event of Force Majeure, has become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

17. SUSPENSION

GORTT may, by written notice of suspension to the Consultant/Contractor, suspend all payments to the Consultant/Contractor hereunder if the Consultant/Contractor fails to perform any of its obligations under this contract, including the carrying out of the Services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) shall request the Consultant/Contractor to remedy such failure within a period not exceeding ten (10) days after receipt by the Consultant/Contractor or of such notice of suspension.

18. ABANDONMENT, CHANGE OF PLAN AND TERMINATION

18.1 ABANDONMENT

- (a) GORTT shall have the absolute right to abandon or amend the Services or to change the general basis for the execution of the Services at any time and such action on its part shall in no event be deemed a breach of contract.
- (b) If GORTT amends the scope of the Services or changes its general basis and the Consultant/Contractor is of the opinion that extra Services are made necessary as a result thereof, the provisions of the Extra Services Clause herein shall apply.

18.2 TERMINATION BY GORTT

GORTT may terminate this Contract immediately after the occurrence of any of the events specified in paragraphs (a) and (b) of this Clause and by not less than twenty-eight (28) days written notice of termination to the Consultant/Contractor after an event referred to in paragraphs (c) through (f) of this Clause:

- (a) if the Consultant/Contractor fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause 17 hereinabove, within twenty-eight (28) days of receipt of such notice of suspension or within such further period as GORTT may have subsequently approved in writing;
- (b) if the Consultant/Contractor becomes insolvent or bankrupt or takes advantage of any law for the benefit of debtors or goes into liquidation or receivership whether compulsory or voluntary.
- (c) if the Consultant/Contractor fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 33 hereof;
- (d) if the Consultant/Contractor submits to GORTT a statement which has a material effect on the rights, obligations or interests of GORTT and which the Consultant/Contractor knows to be false;
- (e) if, as a result of Force Majeure, the Consultant/Contractor is unable to perform a material portion of the Services for a period of not less than thirty (30) days; or
- (f) if GORTT, in its sole discretion and for any reason whatsoever, decides to terminate this contract.

18.3 TERMINATION BY THE CONSULTANT/CONTRACTOR

The Consultant/Contractor may, by not less than twenty-eight (28) days' written notice to GORTT, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this clause terminate this contract:-

- (a) if GORTT fails to pay any money due to the Consultant/Contractor pursuant to this contract and not subject to dispute pursuant to Clause 32 hereof within twenty-eight (28) days after receiving written notice from the Consultant/Contractor that such payment is overdue;
- (b) if GORTT is in material breach of its obligations pursuant to this contract and has not remedied the same within twenty-eight (28) days (or such longer period as the Consultant/Contractor may have subsequently approved in writing) following the receipt by GORTT of the Consultant/Contractor's notice specifying such breach;
- (c) if, as a result of Force Majeure, the Consultant/Contractor is unable to perform a material portion of the Services for a period of not less than forty two (42) days; or
- (d) if GORTT fails to comply with any final decision reached as a result of arbitration pursuant to Clause 33 hereof.

18.4 CESSATION OF RIGHTS AND OBLIGATIONS

Upon termination of this contract pursuant to Clauses 18.1, 18.2, 18.3 or upon completion of this contract pursuant to Clause 12 hereof, all rights and obligations of the Parties hereunder shall cease, except

- (i) such rights and obligations as may have accrued on the date of termination or expiration;
- (ii) the obligation of confidentiality set forth in Clause 20 hereof;
- (iii) the Consultant/ Contractor's obligations to permit inspection, copying and auditing of their accounts and records set forth in Clause 23 hereof, and
- (iv) any right which a party may have under the Laws of the Republic of Trinidad and Tobago.

18.5 CESSATION OF SERVICES

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses 18.2 and 18.3 hereof, the Consultant/Contractor shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditure for this purpose to a minimum. With respect to documents prepared by the Consultant/Contractor and equipment and materials furnished by GORTT the Consultant/Contractor shall proceed as provided respectively by Clauses 24 and 25 hereof.

18.6 PAYMENT UPON TERMINATION

- (a) Upon abandonment of the Services or termination of this contract under Clauses 18.1, 18.2 or 18.3 hereof, and subject to the obligation of the Consultant/Contractor to reduce expenditure to a minimum as contained in

Clause 18.5 the Consultant/Contractor shall be entitled to receive the remuneration due up to the effective date of abandonment or termination and reimbursement in full for such costs as shall have been incurred during the contract period prior to the effective date of such abandonment or termination and which are directly attributable to the incomplete portion of the Services covered by this contract.

- (b) Compensation to the Consultant/Contractor in respect of abandonment or termination shall be agreed between GORTT and the Consultant/Contractor or, failing agreement, shall be referred to arbitration in accordance with Clause 32 of this Agreement.

18.7 DISPUTES ABOUT EVENTS OF TERMINATION

- (a) If either Party disputes whether an event specified in paragraphs (a) through (c) of Clause 18.2 and Clause 18.3 hereof has occurred such Party may, within seven (7) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 33 hereof and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.
- (b) If the Parties do not agree upon the value of the Services performed prior to termination of the contract other than for Services which have been unsatisfactorily performed, the provisions for Arbitration pursuant to Clause 32 hereof shall apply.

19. FAIRNESS AND GOOD FAITH

19.1 GOOD FAITH

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this contract.

19.2 OPERATION OF CONTRACT

The Parties recognize that it is impractical in this contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of the contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this

Clause shall give rise to a dispute subject to arbitration in accordance with Clause 32 hereof.

20. DUTIES OF THE CONSULTANT/CONTRACTOR

20.1 GENERAL OBLIGATIONS

STANDARD OF PERFORMANCE

- (a) The Consultant/Contractor shall exercise all reasonable skill, care and diligence in discharge of its duties under this contract. The Consultant/Contractor, its staff, employees and agents shall respect, comply with and adhere to the laws and customs of the Republic of Trinidad and Tobago and shall carry out all its responsibilities in accordance with the professional standards of its profession.
- (b) The Consultant/Contractor, its staff, employees and agents shall throughout the performance of the Services and following their completion maintain the strictest secrecy vis-a-vis third parties in respect of information data or documents acquired or brought to their notice during the performance of the Services.
- (c) The restriction at Clause (b) above shall continue to apply and after the completion of the Services without any time limit but shall cease to apply to such information or knowledge which has in entirety become public knowledge otherwise than through any unauthorized disclosure or other breach on the part of the Consultant/Contractor of the said restriction.
- (d) In carrying out the Services entrusted to it the Consultant/Contractor shall endeavour to find the technical and economic solutions best suited to the requirements.

- 20.2 The Consultant/Contractor shall perform the Services and carry out its obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices. The Consultant/Contractor shall observe sound management practices and employ appropriate advanced technology and safe methods. The Consultant/Contractor shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to GORTT, and shall at all times support and safeguard the GORTT's legitimate interests in any dealing with Third Parties.

21. CONFLICT OF INTERESTS

21.1 CONSULTANT/CONTRACTOR NOT TO BENEFIT FROM COMMISSIONS DISCOUNTS ETC. AND NOT TO BE OTHERWISE INTERESTED IN THE PROJECT

The remuneration of the Consultant/Contractor pursuant to Clause 2 of this Contract shall constitute the Consultant/Contractor's sole remuneration in connection with this Contract or the Services hereof. The Consultant/Contractor shall not accept for its own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this contract or to the Services or in the discharge of its obligations hereunder, and the Consultant/Contractor shall use its best efforts to ensure that any Personnel and agents shall not receive any such additional remuneration.

The Consultant/Contractor agrees that, during the term of this Contract and after its termination, the Consultant/Contractor and any entity affiliated with the Consultant/Contractor, as well as any Sub-Consultants/Contractors and any entity affiliated with such Sub-Consultants/Contractors, shall be disqualified from providing goods, works or services (other than consulting services) resulting from or directly related to the Consultant/Contractor's Services for the preparation or implementation of the project.

21.2 PROHIBITION OF CONFLICTING ACTIVITIES

Neither the Consultant/Contractor nor its agents or the Personnel of either of them shall engage, either directly or indirectly, in any business or professional activities in the Republic of Trinidad and Tobago which would conflict with the activities assigned to them under this Contract.

21.3 CONSULTANT/ CONTRACTOR'S PERSONNEL

- (a) The Consultant/Contractor shall staff the project as specified in the Key Personnel Clause referred to in the Request for Proposals hereto annexed. Changes in staff shall not be permitted except the Consultant/Contractor can give substantial reasons and can show that the circumstances for requesting such changes are extenuating. No prior changes in staff must be made unless the Consultant/Contractor first obtains in writing the approval of GORTT. Replacement staff shall have the same or superior knowledge and skills as the staff being replaced. Approval so given shall in no way relieve the Consultant/Contractor of its contractual obligations nor shall such approval give rise to claims as Extras. The Consultant/Contractor shall employ duly qualified personnel to perform the Services under this Contract. Preference shall be given to nationals of the Republic of Trinidad and Tobago with regard to Local

Consulting and Support as stated in the Technical Proposals. The qualifications and experience of all personnel shall be furnished to GORTT. The Consultant/Contractor agrees to remove any employee from the works if requested in writing to do so by the GORTT. The Consultant/Contractor shall use its best efforts to ensure that any Sub-consultant/contractor, as well as the personnel and agents of either of them similarly shall not receive any such additional remuneration.

- (b) The Consultant/Contractor shall employ personnel who, in the judgment of the Consultant/Contractor, will be reliable and will most likely perform satisfactorily the terms of their employment agreement with the Consultant/Contractor and will comply fully with applicable laws and in respect of foreign personnel, will comply with GORTT's policy and rules relating to the conduct and behavior of foreign personnel in Trinidad and Tobago.
- (c) In the performance of all duties, the Consultant/Contractor shall be responsible for the professional conduct of its personnel and shall, except in relation to activities contrary to the Laws of the Republic of Trinidad and Tobago, have full authority and responsibility for taking any necessary corrective action.
- (d) The Consultant/Contractor agrees to furnish GORTT with full particulars of all persons employed under this Contract. If required, all such persons shall be subject to security approval prior to assignment to the Services. The Consultant/Contractor further agrees at the written request of GORTT to terminate the employment of any individual if GORTT is of the opinion that for security or other valid reasons termination is required. In the event of such termination, the Consultant/Contractor shall provide replacements and bear all costs associated with such termination and replacement/s.

21.4 LIABILITY OF CONSULTANT/CONTRACTOR

The Consultant/Contractor shall be liable to the GORTT for the performance of the Services in accordance with the provisions of this Contract and for any loss suffered by the GORTT as a result of any default of the Consultant/Contractor, its Sub-Consultant/Contractor or its Personnel in such performance subject to the following limitations:-

- (a) The Consultant/Contractor shall not be liable for any damage or injury caused by or arising out of the act, neglect, default or omission of any persons other than the Consultant/Contractor, its Sub-Consultant/Contractor or the Personnel of either of them; and
- (b) The Consultant/Contractor shall not be liable for any loss or damage caused by or arising out of circumstances over which the Consultant/Contractor had no control.

21.5 INDEMNIFICATION

- 21.5.1 The Consultant/Contractor shall defend, indemnify, protect and save harmless GORTT and its agents, servants and employees from and against any and all suits, claims, demands and damages of whatsoever kind or nature arising out of any negligent act, error or omission of the Consultant/Contractor, its agents, servants, and employees in the performance of professional services under this contract, including but not limited to expenditure for and costs of investigations, hiring of experts, witnesses, court costs, Attorneys' settlements, judgments or otherwise.
- 21.5.2 GORTT shall as soon as practicable after a claim has been made against it give written notice thereof of the claim. If a suit is brought against GORTT, GORTT shall immediately forward to the Consultant/Contractor every demand, complaint, notice, summons, pleading or other process received by it or its representative.
- 21.5.3 The Consultant/Contractor shall reimburse the GORTT for reasonable costs incurred by it to correct, modify or redesign any plans submitted by the Consultant/Contractor that are found to be defective or not in accordance with the provisions of this Contract and all work resulting from and related to such plans submitted by the Consultant/Contractor as are found to be defective or not in accordance with the provisions of this Contract.
- 21.5.4 The Consultant/Contractor shall place with the Client a policy of Insurance or bond for professional negligence, malpractice and/or public liability of the types necessary to protect it from any claims arising under the foregoing provisions (paragraph 21.5.1 above) and specifically providing for coverage of the GORTT as a named insured identical to the terms and requirements of the foregoing provisions (paragraph 21.5.1) above. The said Insurance or bond shall be maintained in force by the Consultant/Contractor from the date of this Contract until a date at least one (1) year following the actual completion and acceptance of the services by the GORTT.
- 21.5.5 The Consultant/Contractor shall provide the GORTT with evidence of the Consultant/Contractor's insurance in accordance with the foregoing provisions.
- 21.5.6 In the event that the Consultant/Contractor provided evidence of insurance in the form of certificates of insurance valid for a period of time less than the period during which Consultant is required by the terms of this Contract to maintain insurance, said certificates shall be acceptable, but the Consultant/Contractor shall be obligated to renew its insurance policies as necessary and to provide new certificates of insurance from time to time, so that the GORTT is continuously in possession of evidence of the Consultant/Contractor's insurance in accordance with the foregoing provisions.
- 21.5.7 The GORTT shall as soon as practicable after a claim has been made against it give written notice thereof to the claim. If suit is brought against the GORTT, the GORTT shall

immediately forward to the Consultant/Contractor every demand, complaint, notice, summons, pleading or other process received by it or its representative

22. REPORTS

- 22.1 Reports shall be submitted in accordance with the Request for Proposals hereto annexed.
- 22.2 The Consultant/Contractor shall submit to GORTT any additional reports that may be reasonably requested in connection with the progress of the Services and/or special problems.
- 22.3 The Consultant/Contractor shall incorporate in the reports any revision or enlargement that GORTT deems necessary within the scope of the Request for Proposals hereto annexed.
- 22.4 The Consultant/Contractor shall not be entitled to any extension of the time limit due to factors which have not been brought to the attention of GORTT. Any extension of the time limits of the Contract shall only be warranted by factors which the Consultant/Contractor could not reasonably foresee when the Contract was signed, which it could not prevent and the consequences of which it was unable to avert despite taking all necessary action to that end.
- 22.5 All reports and technical documents required herein shall be prepared in consultation with the GORTT and all outgoing documents will be channeled through the assigned Ministry.
- 22.6 The Consultant/Contractor shall prepare a Final Close-Out Report summarizing the achievements of the objectives of the consultancy for submission to the Permanent Secretary.

23. ACCOUNTING, INSPECTION AND AUDITING

The Consultant/Contractor shall keep accurate and systematic records and accounts of all Services in such form and detail as will clearly identify all relevant time charges and cost, and the bases thereof and shall make them available for inspection, checking and auditing by duly authorised GORTT representatives. The Consultant/Contractor further agrees that all of the above records shall be kept open for at least five (5) years for post-checking and auditing by duly authorised GORTT representatives.

24. OWNERSHIP OF DATA

All notes, calculations, computer inputs and outputs, design drawings, records, reports, papers and any other technical data and other documents prepared by the Consultant/Contractor or obtained from whatever source in connection with the Services shall become and remain the property of the GORTT and shall be handed over to the GORTT by the Consultant/Contractor together with a detailed inventory thereof, not later than upon the termination or expiration of this Contract. The Consultant/Contractor may retain a copy of such documents but shall not use them for purposes unrelated to this Contract without the prior approval of the GORTT.

25. OWNERSHIP OF INSTRUMENTS AND EQUIPMENT

The Consultant/Contractor agrees to hand over to GORTT in proper working condition and order on substantial completion of the Services, or upon termination of contract, all instruments, machinery, items of furniture, any other non-consumable items and all other consumable items which may have been purchased with funds made available by GORTT for use in the execution of the Services. All such purchases of instruments, machinery and other such items shall be selected in consultation with GORTT and shall be deemed to be the property of GORTT from the date of purchase. The Consultant/Contractor agrees to replace and/or repair any of the above equipment that are damaged or lost while in its possession provided such damage and loss is beyond reasonable wear and tear.

26. EXTRA SERVICES

If the Consultant/Contractor is of the opinion that any Services the Consultant/Contractor had been directed to perform are outside the scope of this contract and constitute extra services the Consultant/Contractor shall promptly notify, in writing, GORTT of that fact. In the event that GORTT determines that such Services do constitute extra services, it shall provide extra compensation to the Consultant/Contractor upon the mutually agreeable fair and equitable basis. In the event that GORTT and the Consultant/Contractor do not reach mutual agreement on what constitutes extra services or fair and equitable compensation, the provisions of the Arbitration Clause of this contract shall apply.

27. ERRORS AND OMISSIONS

The Consultant/Contractor agrees to perform such additional services as may be necessary to correct errors and omissions by the Consultant/Contractor in the Services without undue delay and without additional cost to GORTT. The acceptance of the Services by GORTT shall not relieve the Consultant/Contractor of the responsibility for subsequent correction of such errors. Nothing herein shall be construed to relieve the Consultant/Contractor of the responsibility for subsequent correction of such errors. Nothing herein shall be construed to relieve the Consultant/Contractor of its liability for additional costs resulting from errors or negligence.

28. AVAILABILITY OF DATA

GORTT shall provide to the Consultant/Contractor all available technical data related to the Services, without expense.

29. CONFIDENTIALITY

- 29.1 The Parties agree not at any time during or after the term of this Contract to divulge or allow to be divulged information deemed or discussed as Confidential Information under this Contract to any person except persons in their employ or under their control who have a reasonable need to know such information in order to perform their assigned duties and to each Party's directors, executive officers, Attorneys, accountants, lenders and similar professionals advising on or for the purpose of advancing this Contract.
- 29.2 The stipulation of Confidentiality in this Article shall survive for a period of five (5) years after termination of this Contract howsoever effected. The obligation mentioned hereinabove shall not apply to any information which at the time of it being divulged was in the public domain but not through the action of either Party in breach of this Contract.

30. INSPECTION BY GORTT

Duly authorised GORTT representatives shall have access to all records pertaining to the Services rendered and shall have such inspections as often or as frequently as required. The Consultant/Contractor further agrees to co-operate with GORTT's officers assigned to the Services being performed by the Consultant/Contractor for the purposes of

supervision, checking, observations and reporting directly to GORTT when such need arises. All such reports shall be kept strictly confidential between GORTT's officers and GORTT.

31. APPROVAL BY GORTT OF REPORTS AND DOCUMENTS

- 31.1 Approval by GORTT of the reports and documents drawn up and submitted by the Consultant/Contractor shall be evidence of their conformity with the provisions of this contract.
- 31.2 GORTT shall notify the Consultant/Contractor within twenty-one (21) days as to whether it has approved or rejected all Reports and documents other than the Final Report and documents submitted by the Consultant/Contractor or whether it requests revisions amendments modifications and clarifications of the said reports and documents.
- 31.3 GORTT shall notify the Consultant/Contractor within twenty eight (28) days as to whether it has approved or rejected the Final Report and documents submitted by the Consultant/Contractor or whether it requests revisions amendments modifications and clarifications of the said report and documents.
- 31.4 Where GORTT approves a report or document subject to modification by the Consultant/ Contractor, a time period shall be negotiated by both parties in which to make the requested changes. After such modification the report or document shall be deemed to have received approval if, within twenty-eight (28) days of receipt by GORTT, the latter has not notified the Consultant/Contractor of any breach, comments or observations.

32. PAYMENT

- 32.1 Payment to the Consultant/Contractor for services performed shall be made in accordance with Clause (2) of the signed contract and the Letter of Award both hereto annexed.
- 32.2 The final payment for the Services performed by the Consultant/Contractor shall be contingent upon prior acceptance by GORTT of the final report of the Consultant/Contractor in addition to the satisfactory completion by the Consultant/Contractor of all obligations under this contract.
- 32.3 Payment of reimbursable expenditure shall be based on the actual expenditure incurred by the Consultant/Contractor as evidenced by appropriate supporting documents.

33. SETTLEMENT OF DISPUTES

33.1 AMICABLE SETTLEMENT

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this contract or the interpretation thereof.

33.1.1 In the event of any dispute between the parties in relation to or arising out of this Agreement either of them shall serve notice on the other giving particulars of the dispute and requesting a meeting to attempt reach an amicable resolution of the dispute. The parties shall negotiate in good faith for the resolution of the dispute during a period of seven (7) calendar days from the receipt of such notice (the "Negotiating Period").

33.1.2 If the parties fail to resolve the dispute between them during the Negotiating Period the parties may refer the same to a mutually agreed mediator for non-binding mediation.

33.2 RIGHT TO ARBITRATION

Any dispute between the Parties as to matters arising pursuant to this contract which cannot be settled amicably within twenty-eight (28) days after receipt by one Party of the other Party's request for such amicable settlement, or within such extended time as agreed between the Parties, may be submitted by either party to arbitration in accordance with the provisions of the Arbitration Ordinance of the Republic of Trinidad and Tobago Chapter 5:01 or any statutory modification/s thereof for the time being in force.

IN WITNESS whereof, the PARTIES have caused THIS CONTRACT to be executed in duplicate as of the date first hereinabove written.

SIGNED by)

Permanent Secretary, Ministry of _____)

_____ for and on behalf of the)

Government of the Republic of Trinidad and)

Tobago in the presence of:-)

* **SIGNED** by)
for and on behalf of in)
the presence of:-)

** where the Common Seal is to be affixed, substitute with the following*

THE COMMON SEAL OF)
[insert Company name])
was hereunto affixed by)
its Secretary in the presence of)
[insert name])
one of its Directors by order and)
authority of the Board of Directors)
and in conformity with the By-laws)
of the Company in the)
presence of:-