

TERMS OF REFERENCE

BACKGROUND

The Government of Barbados and the Inter-American Development Bank (IDB) have entered into a technical cooperation agreement under which the latter will provide resources from the IDB-Canada Trade Fund to finance the contracting of consulting services for the execution of a programme to support the enhancement of the business facilitation capability of the Corporate Affairs and Intellectual Property Office (CAIPO) of the Ministry of Economic Affairs and Development.

The main objectives, inter alia, of the programme are:

- (i) To enhance Barbados' business facilitation capabilities using modern information and communication technologies;
- (ii) to increase internal efficiencies of the Department of Corporate Affairs and Intellectual Property staff; and
- (iii) to increase the efficiency of the internal process within Department of Corporate Affairs and Intellectual Property. To achieve these objectives the project will comprise two components:
 - i. The implementation of an intranet – Component I
 - ii. The implementation of the provision of on-line services – Component II

Objective and Scope of Consultancy

The Ministry of Economic Affairs and Development through the Department of Corporate Affairs and Intellectual Property Office is desirous of hiring a single firm

The firm will be required to

1. Make recommendations for the hardware and software specifications to be used in the CAIPO project.
CAIPO will purchase the hardware and software based on these recommendations.
2. Create the Intranet (Component I) and by extensions the online-services (Component II)
3. The firm must provide the following services
 - i. Team Leader/Coordinator – design and define the requirements necessary to develop the Intranet and on-line services This is to be done in collaboration with CAIPO staff, based on the staff's recommendations in relation to the content, internet options, documents to be posted and data to be made available. The Team Leader will also have responsibility for managing the entire project
 - ii. System Administrator – Prepare, install and configure any required hardware and software
 - iii. Database Administrator/Developer – Plan, design and develop new databases or make any major changes to existing databases
 - iv. Web Page Designer – Design and implement the layout and graphical content of website and web-based GUI interface of the Intranet as well develop any scripting required

- v. Webmaster/Application Developer – Design and develop the core functionality (middleware) of the Intranet application and the online-services component

Note more than one of the above services may be carried out by the same person

- 4. Downstream maintenance of the project is required once the testing has been completed and the bugs have been resolved. This maintenance includes any new bugs discovered once the system is in place as well as any minor modifications needed. The degree of maintenance is also a function of the comprehensiveness of the documentation provided by the firm on the project completion.

If the documentation is not detailed, then CAIPO is not in a position to do any modification of the application and more specifically the underlying programme code.

The roles/skills required are further defined as follows: -

a) Team Leader/Project Coordinator

Objective

- 1.1 The construction and operation of an Intranet system and on-line services are complex undertakings requiring various stages of work. In moving this objective to realization, this consultancy has the following objectives:
 - a) To create a detailed Definition of Requirements for the provision of online services;
 - b) to develop software development plan; including guidelines and goals and

- c) manage implementation to ensure that it meets its defined goals within the specified time.

Tasks

2.1 The consultant selected to carry out this consultancy will have the following specific tasks:

- a) The consultant will be required to create requirements documentation after discussions with the Department of Corporate Affairs and Intellectual Property team and stakeholders to ensure that the definitions for the content, look and feel and general information for the Intranet System and Online Services are well defined prior to the project going forward;
- b) As team leader, the consultant will also ensure that all activities of Component I “Intranet for use by CAIPO Officials” and Component II “Provision of on-line services by CAIPO” are identified and undertaken;
- c) identify all project stages and develop a project plan including a timescale with milestones and deadlines in-order to aid in its proper management;
- d) provide specifications for hardware and advice on software resources needed to produce the requirements for CAIPO within the agreed timescale;
- e) define the business rules, develop standards and determine workflow in accordance with CAIPO’s organizational requirements;
- f) work together with Department of Corporate Affairs and Intellectual Property, Project Manager to assist in signoff at completion of appropriate stages;

- g) management of colleagues involved in the project, Database Administrator, Systems Administrator etc;
- h) promptly identify any emerging problems before they impact on the progress of work. Take corrective action to deal with the identified problems and alter the project plan/timescale so as to minimize disruption to the work flow;
- i) preparation of a final report documenting the performed activities.

Requirements

- 3.1 The consultant must have at least five years of specific professional experience and at least a bachelor's degree in Computer Science or equivalent.

The consultant must have at least one year prior experience in website development/e-commerce related activities in the role of Team Leader or Project Leader.

The consultant must also be familiar with the concepts of multi-tier applications and/or Model-View-Controller (MVC) approaches to programming and Web Application development. This experience must be demonstrated by proof of previously completed successful projects.

b) Systems Administrator

Objective

- 1.1 The construction and operation of an intranet system and on-line services are complex undertakings requiring various stages of work. In moving these objectives to realization, this consultancy has the following objectives:

- a) Preparation of servers for application installation;

- b) Preparation of workstation PC's for installation/ connectivity;
- c) Preparation of network file systems and routine backup plan; and
- d) Creation of any necessary user accounts.
- e) Deployment of servers that meet standard security requirements in an ecommerce environment

Tasks

2.1 The consultant selected to carry out this consultancy will have the following specific tasks:

- a) Confirm that the appropriate hardware has been sourced in accordance to the specifications supplied;
- b) confirm that all components of the software have been received by Department of Corporate Affairs and Intellectual Property before installation of the application'
- c) setup of RAID/mirror and other disaster tolerant methods on the server;
- d) Configuring TCP/IP
- e) setup/Review of UPS and associated fault tolerant software;
- f) setup of Tape Drive and associated recovery software;

- g) creation of network shares, users and associated correct permissions;
- h) installation and configuration of appropriate software packages;
- i) creation/Implementation of Backup & Restore and/or Disaster Recovery plan;
- j) ensure Optimization of total system; and
- k) preparation of a final report documenting performed activities with a view to ensuring a smooth handover of the system to Department of Corporate Affairs and Intellectual Property personnel.

Report should include documentation of the system(s) as needed for subsequent day-to-day operation and maintenance of system.

Requirements

The consultant must have at least five years of specific professional experience; and a Microsoft Certified Systems Engineer qualification or the equivalent computing certification for other operating systems (e.g. Linux). The consultant must have prior experience in Application configuration and hardware configuration.

c) Database Administrator/Developer

Objective

- 1.1 The construction and implementation of an intranet system and on-line services are complex undertakings

requiring various stages of work. This consultancy has the following objectives:

- (a) Plan, design and develop new databases or make changes to existing databases;
- (b) ensure the integrity of data including that to be published on Intranet; and
- (c) ensure the optimization of data.
- d) ensure the security of the database and the data

Tasks

2.1 The consultant selected to carry out this consultancy will have the following specific tasks:

- (a) Setup of database indexes;
- (b) design and creation of schemas, tables, triggers, functions, store procedures etc. for publishing of content on the Intranet and Internet;
- (c) modification of legacy database system as needed for (b) and for facilitating correct and quick searches for Intranet and Internet;
- (d) creation of links to legacy databases, other websites and business systems where necessary;
- (e) design procedures to verifying the integrity of the data to be published for the Intranet and Internet;
- (f) defining and implementing access controls to the data;

- (g) preparation of a final report documenting performed activities with a view to ensuring a smooth handover of the system to CAIPO personnel. The report should include database structure, tables (schema), functions and triggers etc.

Requirements

- 3.1 The consultant must have at least three years of specific professional experience and a degree in Computer Science or equivalent. Any Database Administrator (DBA) certification, preferably in DB2 or a working knowledge of DB2 is required. Working knowledge of the AS400/iSeries is an advantage. The consultant must have at least two years prior experience with respect to manipulating database structures, as well as working with a wide range of operating systems.

d) Web Page Designer

Objective

- 1.1 The design, construction and implementation of an intranet and online system are complex undertakings requiring various stages of work. In moving this objective to realization, the consultant will develop standards and construct the required pages for the deployment of content on the intranet and the software/webpages required for the provision of online services.

Tasks

- 2.1 The consultant selected to carry out this consultancy will have the following specific tasks:

- (a) Development of the appropriate web software/server pages; including any client side and server side scripting/programming
- (b) implementation and testing of community web features;
- (c) develop standards for deployment of content
- (d) standard forms design and creation for common style and the publishing of content
- (e) design web layout, graphics and look and feel of web pages based on required specifications
- (f) Thorough testing of the webpages using content created for this purpose
- (g) preparation of a final report detailing the technical standards used in the coding, design and construction of the intranet pages with a view to transferring knowledge for a smooth handover of the system to CAIPO personnel.

Requirements

- 3.1 The consultant must have at least three years of relevant professional experience and a degree or associate degree in Computer Science or equivalent. Or alternatively five years of relevant professional experience in lieu of a degree. The consultant will have prior experience in web-based programming or scripting, HTML, web-page graphics, and design and layouts for the websites. The consultant will have good organizational skills and a demonstrated ability to deliver high quality work within established deadlines.

e) Webmaster/Application Developer

Objective

- 1.1 The design, construction and implementation an intranet and online system are complex undertakings requiring various stages of work. In moving this objective to realization, the consultant will
- a) Develop Web Applications required for the provision of online services.
 - (b) utilize multi-tier concepts in developing the complete Web Application
 - (c) Ensure the security of the application during implementation and testing phases.

Tasks

- 2.1 The consultant selected to carry out this consultancy will have the following specific tasks:
- (a) Develop, implement and test the web application. The complete web application being the Internet web site, Intranet and Extranet
 - (b) develop, implement and test the associated business rules (middleware)
 - (c) utilize middleware for ease of programming, deploying and maintaining the Web Application
 - (c) develop, implement and test integration to third party business systems
 - (d) develop, implement and test all forms published;

- (e) develop, implement and test the workflow associated with the submission process; and
- (f) Preparation of a final report documenting the performed activities and recommendations on future courses of action.

Requirements

- 3.1 The consultant must have at least three years of relevant professional experience and a degree in Computer Science or equivalent. The consultant should be competent in application development/programming using languages like ASP.NET, VB.NET, C#, Java, PHP etc; and working with a wide range of operating systems.

The consultant should have a clear understanding of developing and deploying applications using multi-tier techniques, as shown by previous completed projects

The consultant will have good organizational skills and a demonstrated ability to deliver high quality work within established deadlines.

f) Consultant Trainer

Objective

- 1.1 The design, construction and operation of an intranet and online system are complex undertakings requiring various stages of work. In moving this objective to realization, the consultant will then train a core group of three CAIPO staff on the use of the intranet. These staff will then train

the rest of the CAIPO staff. This process puts into action the “train the trainer” methodology.

Tasks

- 2.1 The consultant selected to carry out this consultancy will have the following specific tasks:
- (a) Train the core team of three trainers on the use of the Intranet and online system;
 - (b) mentor trainers for period of time to ensure correct methods and a smooth handover of system too CAIPO personnel; and
 - (c) preparation of a training manual on the system.

Requirements

- 3.1 The consultant must have at least five years of relevant professional experience and a degree in Computer Science or equivalent. The consultant will have prior experience in training users on web-based systems through a “train-the-trainers” methodology. Previous experience in preparing cogently written training manuals is highly desirable. The consultant will have good organizational skills and a demonstrated ability to deliver high quality work within established deadlines.