 

**GOVERNMENT OF SAINT LUCIA**

**DEPARTMENT OF THE PUBLIC SERVICE**

**CARIBBEAN DIGITAL TRANSFORMATION PROJECT**

**IDA Credit# 6682-LC**

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TERMS OF REFERENCE

FOR UNDERTAKING AN INVENTORY OF COMPUTER EQUIPMENT

FOR THE GOVERNMENT OF SAINT LUCIA

**1.0 Introduction**

The Caribbean Digital Transformation Program (CARDTP), also referred to as the (Project) is a World Bank funded regional initiative currently being implemented in Saint Lucia and three (3) other Organization of Eastern Caribbean States (OECS) Countries and OECS over the coming five (5) year period.

CARDTP is designed to address existing gaps in government infrastructure, cybersecurity, cloud infrastructure, platforms and build capacity. The Project enables the government to provide a unified portal for citizens to access digital services and track transactions, continuity of operations procedures, and capacity building of public sector ICT staff, in line with the enhanced mandate and workload and to implement, at the regional and national levels, a combination of digital infrastructure enhancements. These are aimed at creating an enabling environment for improvements, support for digitization of the private sector and greater adoption of digital services.

The Project serves to build on the framework of the Medium-Term Economic Development Plan and the National Competitiveness Agenda, the efforts of the Government of Saint Lucia (GOSL) to improve public sector modernization and develop a domestic digital economy as a top priority to:

1. transform public services delivery, utilizing digital technologies and platforms to improve the user experience for citizens accessing public services and to improve the efficiency of internal government operations;
2. mitigate the impact of climate change and natural disasters by putting in place resilient policies and systems, that promote government business continuity in the event of natural or other disasters;
3. implement a large-scale public service modernization project (DigiGov) that is supported by various international and regional programs, e.g. Caribbean Regional Communication Infrastructure Program (CARCIP).

**Project Components:**

The following provides a brief description of the Project components:

 **Component 1: Digital Enabling Environment**

This component will support the development of a positive enabling environment in Saint Lucia’s digital economy that drives competition, investment and innovation, while promoting trust and security of online transactions. It will focus on legal, regulatory and institutional reforms that are required to support modernization of the telecommunications and digital financial services sectors, while mitigating growing risks of a digital economy, including cybersecurity, data protection and privacy.

The Project will also support the development of national level cybersecurity capability to monitor, identify, protect against, and respond to cyber threats and support for requisite enabling environment and capacity improvements at the national level. The Computer Emergency Response Team (CERT) will be established using a regionally compatible design and frameworks developed as part of the regionally implemented activities under the subcomponent.

**Component 2: Digital Government Infrastructure, Platforms, and Services**

This component will support public sector modernization, resilience and delivery of digital public services to individuals and businesses. It will aim to strengthen the digital infrastructure, services, and platforms necessary to implement GOSL public service modernization vision, complementing the DigiGov Project. It will also prepare the GOSL for deeper interconnectivity and interoperability of data and information systems across borders to smooth administration of regional trade, immigration and other services between countries. Finally, it will aim to ensure continuity of GOSL’s operations and services, enable real-time data driven decision making, facilitate remote working for civil servants, and ability to rapidly target and deliver payments and social services to citizens and businesses, in the event of natural disasters and external shocks.

**Component 3: Digital Skills and Technology Adoption**

This component aims to better equip individuals and businesses in Saint Lucia for the jobs and economy of the future, and to spur innovation and productivity growth. It aims to create a pool of advanced digital talent to better position Saint Lucia to attract investment by digital firms. It takes a comprehensive supply and demand side approach, supporting greater technology adoption and utilization of digitally enabled business models, to drive demand for newly skilled employees, as well as establishing connections with global employment opportunities through online working platforms.

**Component 4: Project Implementation Support**

This component will support the national Project Implementation Unit (PIU), with management and implementation of the Project and associated activities. The Project will support capacity building initiatives, as well as the staffing of PIU, through the hiring of expert consultants for key areas such as, project management, technical advisory and implementation support, procurement, financial management, environment and social safeguards, monitoring and evaluation and strategic communications.

For the purposes of this activity, Broadband is defined as a wide bandwidth transmission that can transmit multiple signals and data over a high-speed internet connection. To qualify as Broadband a connection should be persistent (always on) and adequate to transmit data, voice, video streaming, etc.

**2.0 Background**

Productivity and efficiency gains from the digitization, business process re-engineering, and automation of GOSL’s operations and public services and use of shared digital infrastructure and platforms, are expected to result in significant savings based on time saved.

The global market of data centres has steadily grown in recent years and is expected to continue. This growth is attributed to numerous factors, including the development of a digital economy and rising demand for data storage capabilities, high security and cloud solutions. Public agencies, especially those providing digital services, are focused, among other things, on consolidation of the computing capacity, optimization of energy consumption and reduction of other operating expenditures by using data centres. Small and medium-sized enterprises (SME) and governments in small island developing states (SIDS) demonstrate great interest in mini data centres (e.g. modular or containerised), because of cost-effectiveness, flexibility and scalability of this technical solution.

High initial costs and power consumption, along with other concerns such as; cooling, efficient power infrastructure need and shortage of skilled IT staff, restrict market growth. Decisions on data centre locations and data storage in clouds outside national jurisdictions, are influenced by national regulations on data sovereignty.

IT and telecommunications, healthcare and governmental institutions are the largest users of these facilities, which are designed to manage mission-critical applications from latency-sensitive trading to storage of data of increasing volume and computing and multi-layered operational security.

Cloud, edge computing, developments in colocation and hosting services are transforming traditional data centres. It is mostly caused by enhanced services such as cabling, cooling, space, power and support and maintenance, offered by colocation providers.

**3.0 Objectives**

This consultancy is aimed at assessing the current ICT hardware and software environments of key Government Ministries, Departments and Agencies at various locations with a view to ascertaining their usefulness, capabilities and scalability to undertake the existing agency needs, as well as forecast their needs for the coming 5 - 10 years.

The data collected herein will be used to provide the groundwork for the following Consultancies:

1. Modular Datacenter
2. National Cybersecurity Policy
3. Business Continuity Plan and Cloud Infrastructure
4. Development of an E-Land Registry System.

These will collectively serve as a critical input to the GOSL’s broader national objective of building a knowledge-based economy and developing the telecommunication services sector as a significant driver for economic growth, job creation and poverty alleviation.

**4.0 Scope of Services**

The project to be in two phases with separate deliverables.

**Phase 1 – Inventory of server rooms**

Phase 1 involves an inventory of all Government data centers and server rooms as outlined in Appendix 1.

Phase 1 inventory requirements are outlined below:

* Inventory data to be submitted as MS Excel Spreadsheets, one workbook per location
* Each sheet to be clearly named to identify location
* Each sheet to have the following tabs:
	+ Servers
	+ Virtual Servers (VM’s)
	+ Switches
	+ Power
	+ Cooling
	+ Server Racks
	+ Network Racks
	+ Environmental
	+ Network Security
	+ Access Control
	+ Applications
* At the top of the ‘Servers’ tab, before the row headings, should be the name of the Ministry or Department, Address, Name and telephone number of relevant Contact person for the site

The tables below outline the required information (Row headings) for each tab. Note that entries in the ‘Permitted Values’ column of the table indicates that only those values are allowed (suggest use a dropdown list).

| **PHYSICAL SERVERS** |
| --- |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Asset ID | A/N |  | (optional) |
| Server/Device type | A/N | Tower, Rackmount, NAS |  |
| Server Usage Type | A/N | Bare metal, Hypervisor | Bare metal refers to a non-virtualized server |
| Server Function |  |  | e.g. Active Directory, Fileserver, Database Server, etc. |
| Server Name | A/N |  |  |
| Manufacturer/Model | A/N |  | Require both  |
| Operating System | A/N |  |  |
| Operating System Version | A/N |  |  |
| Height | N | 1U,2U,3U,4U,5U,6U,Mini Tower, Full Tower | For rackmount servers, height of server in ‘U’ |
| No of CPU(s) | N |  |  |
| CPU Type | A/N |  |  |
| RAM (GB) | N |  | Amount of RAM in GB |
| Serial #/Service Tag # |  |  |  |
| Used disk storage | N |  | In GB |
| Available disk storage | N |  | Total unallocated disk space in GB |
| Network Uplink | A/N | 100Mb, 1Gb,10Gb |  |
| Status | A/N | Active, Offline |  |

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| **VIRTUAL SERVERS** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Asset ID | A/N |  | (optional) |
| Server Name | A/N |  |  |
| Server Function | A/N |  | e.g. Active Directory, Fileserver, Database Server, etc. |
| Operating System | A/N | Server 2003, Server 2008, Server 2008R2, Server 2012, Server 2012R2, Server 2016, Server 2019, Other |  |
| Other O/S | A/N |  | List name and version of other O/S if applicable e.g. Ubuntu, Windows 8, etc. |
| V CPU | N | 1, 2, 3, 4,6,8 |  |
| V RAM | N |  | In GB |
| Used disk storage |  |  | In GB |
| Available disk storage |  |  | Total unallocated disk space in GB |
| Status | A/N | Active, Offline |  |

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| **SWITCHES** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Asset ID | A/N |  | (optional) |
| Manufacturer/Model | A/N |  | Require both  |
| No of ports | N | 2,4,8,16,24,48 | Data ports (excluding uplinks) |
| Port Speed | A/N | 10MB, 100MB, 1GB, 10GB, 40GB |  |
| No of Uplink Ports | N | 1,2,3,4 |  |
| Uplink Speed | N | 10MB, 100MB, 1GB, 10GB, 40GB |  |
| Uplink Type | A/N | Ethernet, SFP, SFP+, Other |  |
| PoE | A/N | Yes/No |  |
| Ports in use | N |  |  |
| Managed | A/N | Yes/No |  |
| Estimated Age(years) | N | <1, 1-3, 4-6, >6 |  |
| Manufacturers Support | A/N | Active, End of Life |  |
| Status | A/N | Active, Offline |  |

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| **POWER** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Device Type | A/N | UPS, Standby generator, Transformer |  |
| Asset ID | A/N |  | (optional) |
| Manufacturer/Model | A/N |  | Require both  |
| Max capacity (kVA) | N |  |  |
| Capacity used | N |  | Percentage. Estimate as needed |
| Phase | N | Single Phase, 3 Phase |  |
| Input Voltage | N | 120, 240, 415 |  |
| Output Voltage | N | 120, 240, 415 |  |
| Service Frequency | A/N | Quarterly, Semi-Annual, Annual, Bi-Annual, No scheduled service |  |
| Status | A/N | Active, Offline |  |

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| --- |
| **COOLING** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Manufacturer/Model | A/N |  |  |
| Capacity (Ton) | N |  |  |
| Estimated Age | A/N | <1, 1-3, 4-6, >6 |  |
| Service Frequency | A/N | Quarterly, Semi-Annual, Annual, Bi-Annual, No scheduled service |  |
| Status | A/N | Active, Offline |  |

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| **SERVER RACKS** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| ID | A/N |  |  |
| Manufacturer | A/N |  |  |
| Height (in U) | N |  |  |
| Free Space (U) | N |  |  |
| PDU | A/N | Yes/No |  |
| Cable Management | A/N | Yes/No |  |

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| **NETWORK RACKS** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| ID | A/N |  |  |
| Manufacturer | A/N |  |  |
| Height (in U) | N |  |  |
| Free Space (U) | N |  |  |
| Cable Management | A/N | Yes/No |  |

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| **ENVIRONMENTAL** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Device Type | A/N | BC/Disaster Recovery Plan, Automated Fire Suppression, Manual Fire Suppression, Smoke Detector, Temperature Monitor, Flood Monitor, Fire Extinguisher, Raised Flooring |  |
| Quantity | N |  |  |
| Manufacturer/Model | A/N |  |  |
| Status | A/N | Active, Offline |  |

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| **Network Security** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Device Type | A/N | Firewall, IDS/IPS, UTM, Email Security Gateway, Web Application Firewall, Log Consolidation, Anti-Virus, Backup  |  |
| Platform | A/N | Hardware Appliance, Installed Software |  |
| Manufacturer/Model | A/N |  |  |
| License Status | A/N | Licensed, Expired, Not Required |  |
| Status | A/N | Active, Offline |  |

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| **Access Control** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Type | A/N | Lock & Key, Fingerprint, Access Code Lock, Swipe Card, Log Book, Electronic Log, Video Surveillance, Security Guard  |  |

| **Applications** |
| --- |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Application name | A/N |  |  |
| Vendor |  |  |  |
| No. of users | N |  | Estimate |
| Application Type | A/N | Static Website, Browser Based App, Client Server App., System App |  |
| Application Description |  |  |  |
| Priority |  | Mission Critical, High Priority, Medium Priority, Low Priority |  |

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| **Photographs** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Hyperlink | A/N |  | Hyperlinks to photographs taken at the location. At a minimum, should include photos of any racks (server or switch). Also capture any other noteworthy features such as signs of water leaks, damaged or improper cabling, etc. |

NOTE: Specimen spreadsheets will be available from the Client at the Inception Meeting.

**Phase 2 – Inventory of GOSL Personal Computing Devices**

The second phase of the project involves an island wide inventory of personal computing equipment owned by the government. There are 200 locations to be inventoried, as shown in Appendix 1.

Phase 2 inventory requirements are outlined below:

* Inventory data to be submitted as MS Excel Spreadsheets, one workbook per location,
* Each sheet to be clearly named to identify the location inventoried,
* The name of the Ministry should be at the top of the ‘Computers’ tab, before the row headings, Department, Address with precise location. The name and telephone number of relevant Contact person for the site and GPS coordinates of site are also important.
* The tables below outline the required information (Row headings) for each tab. Note that entries in the ‘Permitted Values’ column of the table indicates that only those values are allowed (suggest use a dropdown list).

| **Computers** |
| --- |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Asset ID | A/N |  | (optional) |
| Device type | A/N | Desktop, Laptop, Tablet |  |
| Manufacturer/Model | A/N |  | Require both  |
| Operating System | A/N | Windows XP, Windows 7, Windows 8, Windows 10, Windows 11, Other |  |
| Windows Edition | A/N | Home, Professional, Not Applicable |  |
| Other O/S | A/N |  | List name of other O/S if applicable e.g. Ubuntu, etc. |
| CPU Type | A/N |  | Not required for tablets |
| RAM (GB) | N |  | Amount of RAM in GB |
| Disk Size | N |  | In GB |
| Serial #/Service Tag # | A/N |  |  |
| Monitor/Screen Size | N |  | 10”, 19”, 24”, etc. |
| Monitor Serial # | A/N |  |  |
| Monitor 2 Screen Size | N |  | If applicable |
| Monitor 2 Serial # | A/N |  | If applicable |
| MS Office Suite Version | A/N | Office 2000, Office XP, Office 2003, Office 2007, Office 2010, Office 365, Office 2013, Office 2016, Office 2019, No Office Suite |  |
| MS Office Type | A/N | Home, Standard, Professional, Not Applicable | Select ‘Not Applicable’ if no MS Office Suite installed |
| Anti-Virus Installed | A/N |  | Enter ‘None’ if no A/V |
| Other Specialized Software | A/N |  | Record any specialized software installed on the machine e.g. AutoCAD, etc. |
| Name of Officer | A/N |  | Name of the officer to whom the device is assigned |
| Position of Officer | A/N |  | Officers Job/Position title |
| Extension Number or Phone Number | N |  |  |
| Domain Name | A/N |  | Enter the domain that the device authenticates to or ‘No Domain’ |
| Officer Active Directory Username | A/N |  |  |
| Email address | A/N |  |  |
| VPN Account | A/N | Yes, No | Does officer use the device to access Government services via VPN.  |
| Status | A/N | Active, Offline |  |

| **SWITCHES** |
| --- |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| Asset ID | A/N |  | (optional) |
| Manufacturer/Model | A/N |  | Require both  |
| No of ports | N | 2,4,8,16,24,48 | Data ports (excluding uplinks) |
| Port Speed | A/N | 10MB, 100MB, 1GB, 10GB, 40GB |  |
| No of Uplink Ports | N | 1,2,3,4 |  |
| Uplink Speed | N | 10MB, 100MB, 1GB, 10GB, 40GB |  |
| Uplink Type | A/N | Ethernet, SFP, SFP+, Other |  |
| PoE | A/N | Yes/No |  |
| Ports in use | N |  |  |
| Managed | A/N | Yes/No |  |
| Estimated Age(years) | N | <1, 1-3, 4-6, >6 |  |
| Manufacturers Support | A/N | Active, End of Life |  |
| Status | A/N | Active, Offline |  |

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| --- |
| **NETWORK RACK** |
| **Column Name** | **Type** | **Permitted Values** | **Comment** |
| ID | A/N |  |  |
| Manufacturer | A/N |  |  |
| Height (in U) | N |  |  |
| Free Space (U) | N |  |  |
| Cable Management | A/N | Yes/No |  |
| UPS present | A/N | Yes/No |  |
| UPS Asset ID | A/N |  | (optional) |
| UPS Manufacturer/Model | A/N |  | Require both  |
| UPS Max capacity (kVA) | N |  |  |
| UPS Capacity used | N |  | Percentage. Estimate as needed |
| UPS Phase | N | Single Phase, 3 Phase |  |
| UPS Input Voltage | N | 120, 240, 415 |  |
| UPS Output Voltage | N | 120, 240, 415 |  |
| UPS Service Frequency | A/N | Quarterly, Semi Annual, Annual, Bi-Annual, No scheduled service |  |
| UPS Estimated Age | A/N | < 1 yr, 1 – 3 yr, 4 – 6 yr, > 6 yr |  |
| Status | A/N | Active, Offline |  |

**5.0 Expected Deliverables and Timelines**

| **Deliverable** | **Weeks** **after Contract Signing** | **Payment%** |
| --- | --- | --- |
| **Phase 1** |
| Inception report including updated work plan and timelines to complete Scope of Services.At minimum the inception report should contain:1. A brief background to the project. This can be taken from the TOR
2. A description of the contractors understanding of the requirements of the project
3. An outline of the resources being brought to bear. How many persons will be engaged in the inventory, the management structure being employed, the composition and qualifications/expertise of the teams, etc.
4. Estimated timelines for the completion of each project deliverable.
5. Suggestions proposing changes to add value to the structure, deliverables or nature of this assignment.

*GOSL will respond to report within 5 working days of receipt* | 2 | 10 |
| Provide draft Phase 1 report including Phase 1 inventory as outlined in Scope of services.*GOSL will respond to report within 5 working days of receipt.* | 4 | 15 |
| Provide Phase 1 final report including addressing any comments/feedback received regarding the draft report.*GOSL will respond to report within 7 working days of receipt.* | 6 | 10 |
| **Phase 2** |
| Provide draft Phase 2 report including Phase 2 inventory as outlined in Scope of services.*GOSL will respond to report within 10 working days of receipt.* | 10 | 45 |
| Provide Phase 2 final report including addressing any comments/feedback received regarding the draft report.*GOSL will respond to report within 10 working days of receipt.* | 12 | 20 |

**Duration**

The assignment is expected to be undertaken over a twelve (12) week period after contract signing.

**7.0 Expertise Required**

The Consultant shall be a qualified firm or association of firms in Saint Lucia which possess the following experience:

* At least two (2) years background in computer service, networking, maintenance and repair.
* The firm much have provided services to networks consisting at least ten (10) computers.
* Experience undertaking similar assignments would be an asset.

 ***Team Composition and Skills***

The Consultant is expected to build teams of relevant personnel to undertake the inventory within the stipulated timelines.

***Team Leaders***

* At least a Associate’s Degree or equivalent in Computer Science, Information Technology, Information Technology Management, Business Administration or related field.
* At least one (1) years post qualification related experience.
* Good Oral and Written Communication Skills
* Competent in the use of MS Excel.
* Knowledge and familiarity with current and legacy Datacenter peripherals; UPS, AC Cooling Systems, Network Switches and connectivity, Firewalls, Access control systems, Fire suppression, Server Operating Systems, WorkStation Operating systems.

**Team Members**

* CXC Computing, CompTIA A+, or other related qualifications.
* Good Oral and Written Communication Skills
* Basic Competence in the use of MS Excel.

**8.0 Stakeholder Listing from GWAN**

At the very least, the entities indicated here (especially those in ICT positions) must be engaged. Others deemed important should be engaged and included in the corresponding reports:

* Public Sector Modernization, Ministry of the Public Service
* DigiGov and CarCIP Projects, Public Sector Modernization
* Government Information Technology Services Limited (GITS)
* Government Information Service (GIS),
* ICT Officers within the Government of Saint Lucia
* Ministry of Finance, Economic Development and Youth Economy
	+ Accountant General
	+ Inland Revenue Department
	+ Customs and Excise Department
* Department of Education
* Ministry of Health, Wellness and Elderly Affairs
* Ministry of Infrastructure, Ports, Transport, Physical Development and Urban Renewal
	+ Department of Infrastructure
	+ Department of Physical Planning
	+ Division of Transport Board
* Civil Status Registry
* National Council of and for Persons with Disabilities
* Ministry of Equity, Social Justice and Empowerment
* Royal Saint Lucia Police Force
* Saint Lucia Fire Service
* Saint Lucia Electoral Department

**9.0 Responsibilities**

**9.1 Consultant**

* All data, corresponding information, and reports obtained from the Government in the execution of the services shall be properly reviewed and analyzed by the Consultant. All such data, information and reports shall be treated as confidential.
* Each employee of the contractor working on the inventory would need to sign a non-disclosure agreement with respect to confidentiality of the information obtained.
* The Consultant shall participate in fortnightly meetings at which he will present to the Client inventory data collected during the period.
* As needed, the consultant shall be responsible for arranging living accommodations, transportation, and secretarial services and all other input required for the purpose of the assignment.
* The consultant shall make his own arrangements for document reproduction, printing and reproduction of all reports during the course of the assignment.

**9.2 Client**

* The Client shall facilitate the participation of necessary entities and institutions and shall provide material support to ensure the successful organization of the planned activities.
* The Client will provide the Consultant with local office space, meeting and conference facilities.
* The Client will provide oversight and strategic guidance during project implementation.
* The Client shall provide access to all available relevant information as well as access to the offices, datacenters and other locations where the equipment is placed.
* Unless otherwise specified herein, the Client shall provide feedback on reports submitted within two weeks of receipt.