

Appendix B - Statement of Technical/Service Requirements

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1 INTRODUCTION

1.1 Technical/Service Requirements as part of Final Contract

This Statement of Technical/Service Requirements, as written, will constitute a central part of the final contract document with the Canadian Museum of Nature. **Acceptance by Bidders, without qualification, of this Statement of Requirements as part of the final contract is a mandatory (M) requirement.**

1.2 Background

The Canadian Museum of Nature (CMN) is a small to mid-sized Crown Corporation with approximately 135 current staff members and roughly 250 total IT users located in two buildings: a display facility in downtown Ottawa and an administrative and Research/Collections facility in Gatineau. The Museum has outsourced a large percentage of its IT infrastructure requirements since 2005 and plans to continue with a substantively outsourced IT services model.

Bidders will find additional information on CMN, its mission, mandate and values, at:

<http://nature.ca/en/home>

1.3 Planned Initiatives and Growth Estimates

Bidders may assume that all equipment and software listed in Appendix A will be in place at the beginning of the contract. Estimated growth/change of the infrastructure and IT services, as well as associated thresholds for upgrades and changes of equipment, are detailed in the introduction of the services in Section 4.0 and, in some cases, in the detailed sub-sections.

Major IT focus areas over the term of the contract, include, but are not limited to the use of:

1. High Availability (HA) Technology

The Museum has recently invested in high availability (HA) technology to minimize unplanned downtime and service disruption. This technology, based on storage area network replication, eliminates the need for dedicated standby hardware and installation of additional software. All future CMN infrastructure will be incorporated within this HA solution.

2. Cloud Computing

CMN is currently planning Privacy Impact Assessment (PIA)/Threat Risk Assessment (TRA) exercises against services that include Office365, and many others. An important objective is for CMN to begin trialing these services in the Fall of 2016. It is CMN's intent to work with the Contractor to optimize a "Cloud First" strategy, wherever possible.

1.4 Scope of Services

CMN is seeking an established IT services provider with a proven track record in the provision of IT infrastructure management services to provide expert and highly reliable services on an ongoing basis in the following areas and as further detailed in Section 4.0 below:

1. Network and Systems Management Services;
2. Service/Help Desk Services;
3. Deskside Services;
4. Telecommunications (Voice/Data) Services;
5. Other Recurring Services;
6. Technical Specialist Services; and
7. Specialized or project-based IT services on an as-and-when required basis.

Client service and continuous improvement orientation, flexibility, efficiency and the ability to leverage the Contractor's experience and other operations to benefit services for a small to medium-sized enterprise like the Museum are other important attributes.

1.5 Support Model

The Contractor must manage and deliver daily Museum IT network, service desk, deskside and telecommunication operations, subject to the considerations outlined in this section.

1.5.1 Functional Division of Roles

The Contractor's personnel, particularly the Core Delivery Team (see Section 3.1.1) must work very collaboratively with a small group of Museum staff dedicated to the IT function and with a slightly larger group of staff who are involved in various specific IT operations.

Table 1 provides a high level summary of how the Contractor's services fit within the context of overall IT service delivery at CMN and that the Contractor must adhere to:

Table 1 – Functional Roles

	Function or Service	CMN	Contractor
1	IT governance	1. Directs, develops and is responsible for: <ol style="list-style-type: none"> a) Development of Corporate IT policies, priorities, standards and procedures b) Technology Architecture and direction 	Supports, collaborates and advises as required

		<ul style="list-style-type: none"> c) Financial and Contract Management d) IT Operational and Strategic Planning e) Hardware acquisition f) Software acquisition and management of the software Library (excluding desktop/notebook images) 	
2	Corporate Application Management	<ol style="list-style-type: none"> 1. Manages all aspects of corporate application lifecycle: <ul style="list-style-type: none"> a) user requirements; b) user access; c) application development; d) application testing e) application incident management; f) application release management; g) user communication and training 2. Has full access to non production environment 	<ol style="list-style-type: none"> 1. Manages the server infrastructure, as per Section 4.3, that hosts the corporate application environment 2. Provides DBA services to support corporate applications as per Section 4.7.2 3. Adheres to CMN application release schedules and procedures 4. Manages relationship with application vendors and their technical support personnel
3	Network and System Management Services	<ol style="list-style-type: none"> 1. Determines service level and performance targets 2. Monitors Contractor's performance 	Manages, administers, operates and maintains all network equipment components as well as all utility software associated with the operation of this equipment, as per Section 4.3.
4	Service Desk/Help Desk Services	<ol style="list-style-type: none"> 1. Determines service level and performance targets 2. Monitors Contractor's performance 	Provides first point of contact to record and resolve desktop, network or telephone related incidents, as per Section 4.4.
5	Deskside Services	<ol style="list-style-type: none"> 1. Determines service level and performance targets 2. Monitors Contractor's performance 	Provides support on CMN premises to resolve user computer incidents and manage the life cycle of user computer equipment and associated productivity software, as per Section 4.5.
6	Voice/Data Telecommuni	<ol style="list-style-type: none"> 1. Determines service level and performance targets 	Manages, administers, operates and maintains PBX switches, user hand sets, firewalls and

	ation Services	2. Monitors Contractor's performance	other external-facing appliances as per Section 4.6.
7	Cable Management Services	1. Determines service level and performance targets 2. Monitors Contractor's performance	Installs, repairs and maintains all communications cabling and outlets (data and voice), as per Section 4.7.1

The Contractor's services must also be integrated and coordinated with some IT Services contracted to third parties, including but not limited to:

- a) External connectivity/telecommunication services (e.g. leased LAN extension, T1 line, Megaroute and Megalink phone services, - all provided by Bell): the Contractor must serve as the Museum's agent in monitoring these services, communication of technical and performance information and dealing with any technical/service issues affecting the service provided to Museum users;
- b) External Website Hosting Services: the Contractor must resolve any technical issues involving standard Internet-based data exchanges with the Hosting Service (e.g. use of FTP for daily file transfers);
- c) External Anti-spam Service: the Contractor must serve as the Museum's agent in monitoring these services, communication of technical and performance information and addressing any technical/service issues affecting the service provided to Museum users; and
- d) Second Level network printer maintenance

The Museum, at its discretion, may enter into agreements with additional third party providers to meet service delivery requirements during the Contract period. The Contractor must work cooperatively with these parties to meet the Museum's needs while not compromising Contractor confidential information.

1.5.2 Asset Ownership

For the most part, CMN acquires and maintains ownership of all IT assets related to the contracted services, unless otherwise indicated in Table 2 below.

Table 2 - IT Asset Ownership

	Service Component	CMN Provided	Contractor Provided
1	CMN Major Corporate Applications	<p>1. All Major Corporate application software as per list in Appendix A</p> <p>2. All database and supporting software</p>	N/A
2	Network and System Management	<p>The Museum is responsible for acquiring and providing all CMN network hardware including but not limited to:</p> <ul style="list-style-type: none"> a) servers; b) switches; c) gateways; d) routers; e) backup devices; f) wireless access devices; g) UPS equipment; h) network printers; i) racks; j) patch panels; k) patch cables and connectors <p>as well as utility software associated with the operation of this equipment, including but not limited to:</p> <ul style="list-style-type: none"> l) network operating system m) security software (anti-virus, anti-spam, internet content monitoring, intrusion detection/response) n) backup software o) Exchange server (email) p) firewall q) remote access-VPN r) Active Directory <p>See Note 1</p>	<p>The Contractor must supply the following software:</p> <ul style="list-style-type: none"> a) Network monitoring and control software (as described in section 4.3.4) b) IT asset management and automated remote software distribution application software (as described in section 4.3.5) <p>to carry out its network and system management responsibilities.</p> <p>See Note 2 below</p>

3	Service Desk/Help Desk	See Note 2	The Contractor must supply Service Desk/Help Desk application software (as described in section 4.4.2) See Note 2 below
4	Deskside	1. All personal computer equipment (e.g., desktop, laptop, notebook or tablet), including any external devices and associated productivity software 2. Printers (network and local) See Note 1	The Contractor must supply Change Management application software as described in section 4.5.3. See Note 2 below
5	Telecommunications (Voice)	1. All PBX equipment and associated software (e.g., voicemail) 2. All user telephone handsets	N/A See Note 3
6	Cabling	All cabling, outlets and wiring closets. See Note 4	N/A
7	External connectivity facilities	Leased from telcos	Any data connections from Museum premises to the Contractor's offsite operations.

Notes:

1. Includes any parts required to repair or upgrade this equipment which are not covered under warranty.
2. If required, the Museum will provide one standard server (may be physical or virtual) equivalent to the Dell R730 (or better) to run the Contractor provided:
 - Service Desk;
 - Asset Management and Software Distribution;
 - Network Monitoring; and
 - Change Management

applications at the CMN site. If the Contractor requires additional or more advanced servers to run these applications, the latter is at the Contractor's expense.

3. A complete replacement of the PBX system is outside the scope of the Contractor's responsibilities and is not considered an upgrade service for the purposes of the resulting contract.

4. While CMN retains ownership of the cabling infrastructure, the provisioning of these facilities is a Contractor responsibility.

As an integral part of its asset ownership practice, the Museum is responsible for the acquisition of any required parts or software, except where indicated in Table 2 above. The Museum is committed to:

- a) the acquisition of enterprise-class high quality equipment;
- b) required upgrades and patches; and
- c) the regular refresh of its IT assets

in order to maintain the operational viability of its IT infrastructure. The Contractor must assist (including assessments, evaluations and recommendations) the Museum in the upgrade process as well as performing the actual upgrade work.

During the life of the contract, the Museum may, at its discretion, choose to re-evaluate its IT hardware or software asset ownership practices, as well as the physical location of these assets, to ensure services are delivered in the most cost effective manner possible and to provide best value to the Museum. If these evaluations result in a determination by the Museum to change contract terms for equipment ownership or location, these changes will be made in negotiation with the Contractor through the normal Contract amendment process.

Bidders should note that the Contractor will retain ownership of any Contractor-provided software unless there is some future agreement with the Museum to change this.

1.5.2.1 Equipment for and Charges Incurred by Contractor Staff

The Contractor must provide all personal equipment (e.g. PCs, monitors, printers, photocopiers, diagnostic or testing equipment, etc.), software licenses other than network system software provided by the Museum and expendable supplies (e.g. office supplies, etc.) required by the onsite Service Delivery personnel to carry out their work.

The Contractor must also pay for the **telephone long distance charges and any dedicated data connections** from Museum premises to the Contractor's offsite operations established by the Contractor.

1.6 Service Location Considerations

The Museum wishes to allow as much flexibility as possible in the delivery of contracted services, however the Bidder must take certain location constraints, as outlined in this section, into consideration when preparing its bid. These constraints are intended to minimize client risk and ensure the highest quality of delivery to users of the Museum's IT services.

The Contractor must provide a small number of highly qualified core delivery team personnel who will be the primary on site (primarily at the Pink Rd., Gatineau site), service providers for the Contract, supplemented by other key contract personnel working primarily offsite/part time on an as and when required basis.

Table 3 provides a summary of service location considerations by service component:

Table 3 - Service Location Considerations

	Service Component	Service Location Considerations
1	Service Delivery Management	The Contractor's Site Service Delivery Manager (see section 3.1.1.(b)) must work primarily onsite at the Museum.
2	Network and System Management Services	The Contractor's Systems Administrator (see section 3.1.1.(a)) responsible for the delivery of services as described in Section 4.3, must work primarily onsite at the Museum.
3	Service Desk/Help Desk Services	It is assumed that the Contractor's Service Desk operations will not be located on Museum premises but Bidders may propose different options. Regardless, these services must be located in Canada and preferably in the National Capital Region.
4	Deskside Services	The individuals responsible for the delivery of these services, as described in section 4.5, must be located onsite, on a full time basis, at the Museum
5	Telecommunications (Voice/Data) Services	Contractor staff responsible for the delivery of these services are not required to be full time on site at the Museum.

1.6.1 Contractor Office Location

The Contractor must have office space in the National Capital Region (NCR) where meetings with senior IT Museum staff can be conducted and where the Contractor's staff, including key contract personnel such the Database Administrator and other Technical Specialists as listed in section 4.8, can work while in the NCR, but not on Museum premises. The office must comply with the security requirements in this RFP with regards to document safeguarding capability.

The Contractor's Account Manager and Site Service Delivery Manager must be available in the NCR on a daily basis, at least one of whom will be able to meet with the Museum at any time during the business day (subject to reasonable notice), to review documentation, attend presentations, negotiate the resolution of urgent situations and make binding decisions on behalf of the Contractor.

All Contractor personnel listed in this RFP must be prepared to work on site at the Museum to perform work, attend presentations or to satisfy other contractual obligations. The Museum will not pay for any travel or living expenses associated with the provision of Contractor services.

1.6.2 Travel to VMMB

As mentioned in section 1.2 above, Museum users are located in two buildings:

1. The Natural Heritage Campus (NHC) - CMN's Administrative, Collections and Research headquarters at 1740 Pink Rd, Gatineau, Quebec; and
2. The Victoria Memorial Museum Building (VMMB): the Museum's public display building in downtown Ottawa at 240 McLeod St.

While the Contractor's core personnel must be primarily located at the NHC site, the Contractor must dispatch deskside support personnel to the VMMB site on an as and when required basis, as determined by the Technical Authority. The frequency of such requests is not expected to exceed twice per week. The duration of each visit may range from one to several hours. As much as possible, such visits will be arranged to minimize disruption to individual schedules. During such visits, the Contractor's deskside personnel will primarily be involved in addressing non-urgent user issues.

1.6.3 Remote Access - Location Constraints

Work requiring remote access to Museum infrastructure must be conducted entirely in North America. Any Museum data that is accessed and/or maintained by the Contractor in accordance with the resulting contract, must remain in Canada.

1.7 Definitions

The Contractor must adhere to the following definitions when used in the context of this Statement of Requirements:

Table 4 - General Definitions

Term	Definition
Additional, Supplemental or Per Event Fees	Fees authorized by the Museum and charged by the Contractor that are in addition to the established <i>Recurring Services Fees</i> . Additional fees may be authorized by the Museum on a Task Authorization, Change Order, or Computer/Telephone Request Form and are itemized separately by the Contractor on their monthly invoice.
Availability	A piece of hardware and/or software is <i>available</i> if it is delivering its normally required business functionality.
Availability – Overall Network & Systems Availability	Overall Network & Systems Availability means that all network servers and switches are delivering their normally required business functionality. For example the formula used to calculate overall availability during Core Service Hours is: <i>the number of hours all servers and switches are available during Core Service Hours in the month divided by the total number of Core Service Hours in the month</i> Downtime caused by planned maintenance, by building electrical service outages, or any other action for which the Museum is responsible that causes a failure or outage is excluded from the calculation.
Best Effort	Best effort means the will attempt to deliver a service as effectively and efficiently as possible without an established Service Level.
Bidder	An entity submitting a proposal in response to this RFP.
Change	The change or upgrade of currently installed hardware or software components to different components
CMN Application Administrator	A CMN staff member who has been assigned responsibility for a Major Corporate Application.
CMN Fiscal Year	April 1 to March 31
CMN IT Staff	Museum staff dedicated primarily to the Corporate IT function. Currently (2016) there are three CMN IT positions.
IT Asset Management application	Software provided by the Contractor that records and presents information about CMN IT Assets including all network connected PC hardware and software.
CMN Network Hardware	Equipment that is important to the successful operation of the CMN LAN-WAN. Includes servers, switches, gateways, routers, backup devices, wireless access devices, UPS equipment, network printers, racks, patch panels and other network equipment components.

Term	Definition
CMN or “the Museum” or “the Corporation”	the Canadian Museum of Nature
Contractor or The Contractor	The entity which enters into an IT Services Contract with the Museum.
Contract Amendment Process	<p>A written amendment to the contract prepared by the Corporation and signed by the Corporation and the Contractor stating their agreement upon:</p> <ul style="list-style-type: none"> • A change in the work • The method of adjustment or the amount of the adjustment in the contract price, if any; and • The extent of the adjustment in the contract time, if any.
Delivered bilingually	Means that a service will be provided in the official language (English or French) of choice selected by the User/Client.
Failure	A piece of equipment, software or portion of a network is not delivering its normal business functionality
Form - Change Order Form	<p>A form used to document and authorize any significant change to the configuration of the CMN network, network hardware or system software, major corporate applications, or standard desktop configuration. Change Orders will typically be initiated by the Contractor, CMN IT staff, or CMN Application Administrators. This may occasionally include additional fees. The format of this form may occasionally be updated by CMN in collaboration with the Contractor.</p>
Form – Computer/ Telephone Request Form	<p>A form initiated by IT Users to request PC or telephone IMACRRs, account creations and changes and very occasionally misc. other IT Services. This form is prescreened and approved by CMN IT staff before being forwarded to the Service Desk for implementation in order to ensure that Requests are clear and justified. Although most Requests are fully funded within Recurring Service Fees some may entail “additional costs”. The format of this form may occasionally be updated by CMN in collaboration with the Contractor.</p>

Term	Definition
Form – Computer/ Telephone Request Form – Stop Clock	<p>The calculation of expired time accumulated from receipt of Computer/ Telephone Request by the Contractor towards completion time can be temporarily halted by any of the following conditions:</p> <ul style="list-style-type: none"> • The information provided on the Request is not sufficiently clear or complete for the Contractor to proceed with work. In these cases the Contractor must call CMN IT staff within one Core Business Day to ask for clarification. • The required equipment or software is not available to the Contractor to perform the work. • The affected user is not available to the Contractor <u>when</u> it is essential that the user be present or provide necessary information.
Form - Task Authorization Form	<p>A form used to document and authorize services offered by the Contractor that are outside the scope of those covered by Recurring Services Fees. Includes items such as Technical Specialist Services and one-time IT projects. Includes “additional fees”. The format of this form may occasionally be updated by CMN in collaboration with the Contractor.</p>
Hours – Core Business Day	<p>All weekdays, Monday through Friday, excluding locally observed statutory holidays.</p>
Hours - Core Service Hours	<p>The days and time periods when the Contractor must provide full support services and will have support personnel on-site at CMN i.e. Monday to Friday, 8:00 a.m. to 5:00 p.m., except locally observed statutory holidays</p>
Hours – Extended Service Hours	<p>The days and time periods when the Contractor must provide support services at a reduced level (as described elsewhere in this Statement of Technical/Service Requirements) i.e.</p> <ol style="list-style-type: none"> a) Monday to Friday 6:00 to 8:00 a.m. b) Monday to Friday 5:00 to 11:00 p.m. c) Saturday and Sunday 8:00 a.m. to 8:00 p.m. and locally observed statutory holidays 8:00 a.m. to 5:00 p.m.
Hours – NHC Business Hours	<p>The days and time periods when CMN normally has a significant number of staff working at the Natural Heritage Campus (NHC). i.e. Monday to Friday 8.00 a.m. to 5:00 p.m., except locally observed statutory holidays</p>
Hours – VMMB Business Hours	<p>The days and time periods when CMN normally has a significant number of personnel working at the Victoria Memorial Museum Building (VMMB), i.e. currently Monday to Wednesday & Friday 8.00 a.m. to 5:00 p.m.; Thursday 8:00 a.m. to 8:00 p.m.; Saturday, Sunday and statutory holidays (except Christmas Day) 8:30 a.m. to 5:00 p.m.</p>

Term	Definition
Incident	An event that is not part of the standard operation of a service and that causes, or may cause, an interruption to, or a reduction in, the quality of that service.
Incident - Severity 1	All or several Major Corporate Applications or Network System Applications are unavailable or unable to deliver their normal business functionality <u>or</u> the CMN telephone system is unavailable to 20 or more end users at their workstations.
Incident - Severity 2	An entire Major Corporate Application or Network System Application is unavailable or unable to deliver its normal business functionality <u>and/or</u> multiple CMN IT users are unable to use their PCs <u>or</u> the CMN telephone system is unable to deliver its full normal business functionality to 10 or more users.
Incident - Severity 3	A single CMN IT user is unable to use his/her PC <u>or</u> is unable to use his/her telephone
Incident - Severity 4	The performance of a single CMN IT user's PC is degraded <u>or</u> one of the user's applications is not delivering normal business functionality
Incident - Severity 5	All other incidents
Incident – Stop clock	<p>The calculation of expired time accumulated from receipt of an incident report at the Service Desk towards response and resolution time can be temporarily halted by any of the following conditions:</p> <ul style="list-style-type: none"> • The affected equipment or software is not available to the Contractor to resolve the incident. • The affected user is not available to the Contractor, <u>when</u> it is essential that the user be present or provide necessary information in order to respond to or resolve the incident.
Incident Resolution Time – Network & Systems, Deskside, Telecommunications, or Cable Management Services	The amount of time from when an incident is escalated from the Service Desk to another resolution group (e.g. onsite staff) until it is resolved (i.e. service/functionality fully restored), excluding any stop clock time.
Incident Response Time – Network & Systems, Deskside, Telecommunications, or Cable Management Services	The amount of time from when an incident is escalated from the Service Desk to another resolution group until Contractor personnel providing Network & Systems, Deskside/Onsite, Telecommunications or Cable Management services visit or contact the affected user or equipment to begin resolving the incident, excluding any stop clock time.
ITIL	Information Technology Infrastructure Library – a framework of IT services industry best practices

Term	Definition
Major Software Release	Major software releases typically contain large areas of new functionality (e.g., Windows Server 2012 to Windows Server 2016). A major upgrade or release usually supersedes all preceding minor upgrades, releases and emergency fixes.
Minor Software Release	Minor software releases normal contain product patches (e.g., service packs), small enhancements, configuration changes for performance optimization or other, some of which may have already been issued as emergency fixes. A minor upgrade or release usually supersedes all preceding emergency fixes.
NHC	The Natural Heritage Campus - CMN's Administrative, Collections and Research headquarters at 1740 Pink Rd, Gatineau, Quebec
Outage	A piece of equipment, software or portion of a network is entirely unavailable to deliver its normal business functionality
PC (Personal Computer)	A desktop, notebook, tablet or similar computer intended primarily for the use of individual CMN IT users.
PC – Support Level 1	This is the standard support level for Personal Computers, attached monitors and installed software. This is the level established for most CMN personal computers and monitors.
PC – Support Level 2	This is a reduced support level for some special CMN personal computers and for most attached peripherals except monitors (e.g. printers, mobile devices, USB devices, etc.). Level 2 PCs typically are used for a special/dedicated purpose (e.g. connected to scientific equipment), have a non-standard image and/or provide enhanced user privileges (e.g. hardware & software installs). Level 2 PCs are supported identically to Level 1 PCs with the exception that response to and resolution of incidents is “Best Effort” rather than subject to the Service Levels identified in section 4.12.
PC - Supported PC	A Personal Computer that is supported by the Contractor in this Statement of Requirements (includes Support Level 1 and Support Level 2). The total number of Supported PCs refers to the number of network-connected PCs the Contractor must support at any one point in time. See section 4.5 for additional detail.
PC – Supported PC Inventory	Total number of PC assets (including desktop, laptop, tablet or mobile device) owned by the Museum.
PC H/W Add	The installation of new hardware components or peripherals to an existing PC. Examples include memory, modems, CD/DVD drives, hard drives, printers, mobile devices and other external devices.
PC H/W Change	The change or replacement of existing hardware components or peripherals on a PC to upgraded or different components.

Term	Definition
PC H/W IMACRR	Hardware installs, moves, adds, changes, removes and retires to Personal Computers. These are further individually described below
PC H/W Install-New	<p>The installation of a new PC and all required software and peripherals. A typical installation includes:</p> <ul style="list-style-type: none"> - Un-box, set-up and connect the PC system and associated peripherals. - Verify that all new equipment is free from defect and the acquisition order is complete per the packing slip. - Install standard software image and any additional duly licensed software required by the user and agreed to by CMN IT. See support categories. - Test all functionality including, but not limited to, proper power up, operating system, LAN connection, dial-up/VPN connection(incl. actually establishing connection), local and network printing, operation without conflict, application software without conflict and driver load without errors. - Work with designated technical support personnel, end-users and designated third parties, as necessary, to achieve full functionality as verified by the end-user. - Provide the end-user (if end user is available) with a brief orientation of the PC system and associated peripherals. - Provide all required asset information updates to the Asset Management system. - Provide box to warehouse staff for storage.
PC H/W Install-Replace	<p>Same as an Install-New with the addition of :</p> <ul style="list-style-type: none"> - Copy all user data and personal configuration files and settings (e.g. favorites, bookmarks, customized toolbars, custom dictionaries, other info in personal documents and settings) to new PC. - Backup all user data on replaced PC to another media and maintain for a period of one month following installation to ensure no important corporate information is lost - Implement remove or retire of PC being replaced, as applicable.
PC H/W Move	<p>The move (including de-installation) and reconnection to the network of a computer and attached peripherals from one location to another. Includes verifying the full functionality of the PC in new location and update of all required information on the Asset Management system.</p>

Term	Definition
PC H/W Remove	Includes: <ul style="list-style-type: none"> - Disconnection of PC from the network. - Clean hard drive (reformat) ready for reallocation - Pack and safely transport PC and peripherals to designated Museum storage depot for reallocation - Provide all required asset information updates to the Asset Management system.
PC H/W Retire	Same as PC H/W Remove with addition of: <ul style="list-style-type: none"> - Securely clean hard drive so that no information is recoverable - Transport PC and peripherals to designated Museum storage depot for return to leaser or disposal
PC Software Support Categories	Five different support categories are defined for PC software – Categories are described in Section 4.5.6.
Problem and Problem Management	A Problem is the unknown underlying cause of one or more incidents. Problem Management is particularly concerned with discovering the root cause of and preventing or implementing workarounds for serious incidents or multiple/repeated similar incidents.
Project	A significant “one time” activity that the Museum requests the Contractor to perform that is outside the scope of Services included in Recurring Services.
Recurring Services	Ongoing services provided by the Contractor that are invoiced on a monthly basis at a fixed rate calculated as the annual fee divided by 12. Recurring Services include: Network Management; Administration, & Operation Services; Service/Help Desk Services; Deskside/Onsite Services; Telecommunications (Voice/Data) Services; and Other Recurring Services (e.g. Cable Management, DBA)
Recurring Services Fees	The established annual fees for Recurring Services, invoiced on a monthly basis at a fixed rate calculated as the annual fee divided by 12.
Start Services date	The date the Contractor is responsible to begin full delivery of contracted services.
S/W	Software
S/W – PC Supported Software List	A list of software and related support categories provided for software installed on CMN PCs (see also Sections 4.5.6 and 4.11.1).
S/W Add, Change	The addition of new software to an existing installed PC or the change of existing software (e.g. upgrade or patch).
S/W - Major Corporate Application	A CMN Application that is central to one or more Museum business functions, accessed by several or more users and installed and/or dependent on a server for successful operation. See Appendix A for additional detail.

Term	Definition
S/W-Network System Software	An application, usually installed on a server, that supports the management and/or operation of the Museum's LAN-WAN. Includes Network & Server Operating Systems, anti-virus, network backup, firewall, Web-Server, asset management & automated software deployment, Service/Help Desk, remote access-VPN, anti-spam, internet content monitoring software and similar software. Network System Software is distinguished from Major Corporate Applications that directly provide a Museum business function to end users.
S/W-PC Software	A software program that is installed and runs on an individual PC.
S/W-PC Software Support Categories	Five different support categories for PC software – categories are described in Section 4.5.6. Support Category 5 indicates software that will be installed on a best effort basis up to 20 minutes effort. If the software cannot be successfully installed in this timeframe installation efforts will either be stopped or become chargeable on an hourly rate basis.
S/W-PC Software, Base	A PC application that is part of the current base software installation for all PCs.
Upgrade, Hardware	A hardware upgrade is the modification of a piece of existing hardware to add new or improved components. <i>Hardware replacement</i> is the replacement of the entire piece of hardware.
Upgrade, Software	A software upgrade is the modification or replacement of an existing piece of software with a newer or improved version of this same software. <i>Software replacement</i> is the replacement of existing software with different software (i.e. different title and/or manufacturer).
User, IT User, or End User	A Museum staff member, volunteer, intern, Research Associate, or other personnel who has been granted use or access privileges to CMN IT assets. "End users" may also occasionally be used to represent most users as opposed to CMN IT staff.
VMMB	The Victoria Memorial Museum Building; the Museum's public display building in downtown Ottawa (240 McLeod St.)

2 CONTRACTOR CAPABILITY

2.1 General Corporate Capability

The Museum requires the Services of a Contractor who has a proven capability to effectively and efficiently manage and deliver services similar to those described in this Statement of Technical/Service Requirements as demonstrated through:

- extensive experience with similar contracts;
- a thorough understanding of the IT Service industry and a long term company; commitment to this Market;
- established and mature IT Service methodologies, management techniques and tools;
- a commitment to client service, continuous improvement and best practices;
- good client references; and
- well trained, qualified and motivated personnel.

2.2 Additional IT Services Capability

The Museum has an ongoing need for the specific Services described in this Statement of Technical/Service Requirements but also has other related needs associated with the IT operations of a major Federal Museum and with the continual evolution of technology. For example, in 2015/16 the Museum budgeted over \$300,000 for such “related” requirements. The successful Contractor will be in a position to meet these needs and will periodically be called upon to provide Proposals and quotes for them. Such services, if agreed to by the Museum as part of this IT Outsourcing Contract, will be described and authorized on a Task Authorization Form if they are one-time costs. New recurring services that are not costed into the rate schedules provided in Appendix D will be added through the contract amendment process. **The Contractor’s capability to provide additional IT Services as the Museum’s needs and opportunities evolve will be evaluated as part of the Bid process.**

3 CONTRACT PERSONNEL & RELATIONSHIP MANAGEMENT

3.1 Contractor Service Delivery Team

The Museum requires that the Contractor identify and maintain personnel to play some key defined roles in the relationship and that this personnel have established minimum skill sets and experience. The Museum expects that the Contractor must provide a small number of highly qualified “*Core Delivery Team*” personnel, who will be the primary onsite service providers for the Contract, supplemented by “*Other Key Contract Personnel*” working primarily offsite/part time and as required. Together these groups will be referred to as the Contractor’s “*Service Delivery Team*” for the Museum.

The Contractor may wish to identify additional personnel, add responsibilities and/or assign more than one role to an individual. The Contractor may also use different titles for these roles within their organization than those listed, however the listed titles will be used by the Museum to describe requirements for performing tasks, attending meetings, etc. The roles and qualifications listed are minimum levels to which the Contractor is encouraged to expand upon.

3.1.1 Core Delivery Team

Following is a summary of the Core Delivery Team (primarily onsite) roles and minimum qualifications. The Museum attaches a great deal of importance to the Core Delivery Team and encourages the Contractor to propose and assign highly skilled personnel to carry out these responsibilities.

- a) **Systems Administrator** - The senior technical person working primarily (approximately 3 out of 5 days per week) onsite at the Museum. This individual is the primary technical point of contact between CMN IT staff and the Contractor.
 - i. Responsible for the configuration and ongoing operation and maintenance of the CMN (LAN-WAN) network, including all hardware and software components;
 - ii. Manages, maintains and updates Active Directory configuration and structure of the Network Operating System;
 - iii. Provides ongoing technical advice and information to CMN IT staff and, as a minimum, must have the ability to interact and communicate well with other technical/semi-technical personnel primarily in English with some ability to communicate in French;
 - iv. Requires extensive network training and a minimum of 5 years experience in network administration. Will typically have Microsoft and/or Cisco or equivalent network certifications;
 - v. Responsible for the supervision of the Contractor’s Deskside Analyst/ Technicians (see item 3.1.1. c) below) and any other Contractor technical resources while they are working on site at the Museum; and

- vi. Requires good supervisory and interpersonal skills, along with proven experience, to meet requirement iv above.
- b) **Site Service Delivery Manager** – Individual responsible for the daily delivery of services and management of service levels at the CMN sites. While this person is the first point of contact to address service issues with CMN IT staff, he/she is not required to be on site at CMN premises.
- i. Communicates with and is quickly accessible to CMN IT Staff on a daily basis to understand and address issues, problems and opportunities; redirects issues as required to other Contractor personnel; serves as the Contractor’s contact for general CMN user issues such as addressing recurring incidents or inquiries, providing procedural information and advice, etc.
 - ii. Develops and maintains required ongoing contract documentation
 - iii. Prepares and presents monthly contract service level and other performance reports
 - iv. Recommends improvements to CMN IT policies and procedures and assists in the integration of these with the Contractor’s processes
 - v. Prepares materials for and attends regular meetings with CMN IT staff
 - vi. May manage configuration, problem management, preventive maintenance and other ongoing Service Delivery programs
 - vii. Facilitates and coordinates Museum access to Technical Specialists and other Contractor personnel/services
 - viii. May lead selected special “projects” (e.g., rollouts of 20+ PCs)
 - ix. May perform or be backup for other technical responsibilities.
 - x. Requires solid training/experience in the delivery and supervision of IT services – minimum 3 years experience in this area; will typically have ITIL or other related IT Service Management certifications; may also have technical certifications;
 - xi. This role must be delivered bilingually.
- c) **Deskside Analyst/Technicians 1 & 2** - Reporting to the Contractor’s Systems Administrator, these individuals are responsible for providing Deskside/Onsite Services to CMN IT Users and must work full-time, on-site at CMN premises. The Contractor may establish identical roles for the two technicians, senior/junior roles, or divide up some of the listed responsibilities.
- i. Responds to and resolves deskside PC incidents
 - ii. Performs Deskside PC IMACRRs
 - iii. Responds to and resolves deskside telecommunications system incidents
 - iv. Performs deskside telecommunications system IMACs
 - v. Coordinates Communications Cable/Outlet installations, moves and removes.
 - vi. Participates in deskside configuration and problem management programs
 - vii. May have telecommunications systems administration responsibilities - if not the Contractor must identify title of person who has this responsibility

- viii. May have network administrator backup responsibilities
- ix. Requires excellent client service skills
- x. Requires substantial training and minimum 1 year experience in Deskside support. At least one technician must have a minimum of 2 years experience in Deskside support. Will typically have A1 or other similar certification(s).
- xi. This role must be delivered bilingually.

3.1.2 Other Key Contract Personnel

The Contractor must provide the following “Other Key Contract” roles and meet the minimum qualifications listed. While these roles are important to the Museum, none are required to work on site at CMN premises and are required on an as and when required basis.

- a) **Account Manager** – Responsible for monthly invoicing, addressing any other Contract financial issues and for the resolution of major or escalated Contract issues. Working with other Contractor personnel, this individual is also the Museum’s primary point of escalation for the management of service delivery operations, including authority over delivery personnel.
 - i. May also have other responsibilities as proposed by the Contractor;
 - ii. Requires good knowledge of the Contractor’s organization, business and delivery issues; and
 - iii. Has authority to make or obtain timely contract decisions on behalf of the Contractor, including personnel decisions.

- b) **Network Specialist** (also known as Network Engineer) – Has operational responsibility for the operation and maintenance of all voice/data telecommunications facilities, including, but not limited to:
 - break fix;
 - account administration;
 - coordination of IMACs;
 - management of third party contracts (interpretation of or response to any service provider inquiries, accounts or invoices; especially those from Bell and/or Shared Services Canada); and
 - documentation.

Also responsible for addressing complex/specialized network issues on behalf of the Contractor including issues escalated from onsite technical staff. Will occasionally investigate and provide technical advice and information on a best effort basis, on voice/data telecommunications related issues and inquiries made by CMN IT staff.

- i. Requires extensive training and minimum 8 years experience in the design and operation of computer networks. Will typically have Microsoft and/or

- Cisco or equivalent network engineer certification(s). Also requires specific experience and/or training managing voice/data systems and dealing with service providers (e.g., Bell, Telus, etc.)
- ii. A minimum of four (4) times annually the Network Specialist will attend and contribute to monthly IT Operations meetings in order to address network performance and planning issues. The identification of meetings to which the Network Specialist will attend will be agreed to with Museum IT staff in order to coincide with the discussion of important network issues. It is suggested that Contractor fees for this time, if any, be included in the Recurring Service Fee for Network and Systems Management Services.
- c) **Service/Help Desk Personnel** – Located off-site, these individuals are responsible to respond to incidents reported to the Service/Help Desk, to attempt to resolve these incidents immediately, to document incidents and to appropriately forward incidents to onsite personnel that can't be resolved at the Service Desk.
- i. Must have training and/or experience supporting similar IT environment (hardware/software) to that at the Museum;
 - ii. Requires good client service skills;
 - iii. This service must be delivered bilingually.
- d) **Contractor Executive Sponsor** – Responsible to represent the Contractor in overall relationship issues, high-level remedies and contract issue escalation/dispute resolution.
- e) **DBA** - Responsible for the delivery of Database administration issues as described in Section 4.7.2
- i. Requires specialized training and extensive experience with enterprise level database management systems (e.g. Oracle, MS SQL Server, etc.)
- f) **Other Technical Specialists** - Responsible for the provision of specialized expertise to support Service Delivery operations on an as and when required basis, including the delivery of database administration services. These individuals must be available to other Service Delivery personnel for troubleshooting and expert technical advice when necessary. These specialist services include, but are not limited to, the roles identified in section 4.8.

3.1.3 Contractor Organization Chart

The Contractor must provide an organization chart showing all Service Delivery Team Members and their organizational relationship to one another. Changes to roles or members must be updated on the chart and provided to the Museum within two weeks of the change.

3.2 General Requirements for Contractor Service Personnel

3.2.1 Ongoing Fees

All ongoing fees for the Contractor's Service Personnel will be incorporated into the *Recurring Service Fees* for services described in Section 4.0 and provided in *Appendix D*. The only additional fees for these personnel will be those specifically identified as "per event", "additional", or "supplemental" fees and approved in advance by the Museum on a *Task Authorization, Change Order, or Computer/Telephone Service Request Form*.

3.2.2 Continuity of Service Delivery Team

It is important to **maximize the continuity of the Service Delivery Team**, particularly the Core Delivery Team and a few other Key Personnel, in order to effectively deliver services and avoid excessive personnel briefing and retraining. In addition to the Contractor's plans to maximize the continuity of personnel, the Museum will be given the opportunity to review and must approve any substitutions to personnel fulfilling the roles listed below. The Contractor must also ensure that there will be a minimum overlap period of 10 Core Business Days for any replacements to these roles.

- Systems Administrator
- Site Service Delivery Manager
- Deskside Analyst/Technicians 1 & 2
- Account Manager
- Network Specialist

3.2.3 Replacement of Personnel

The Museum reserves the right to **require that the Contractor replace** any member of the Contractor's Service Delivery Team whom it deems unacceptable. This type of requirement will be invoked only after serious discussion and efforts by the Technical Authority and the Contractor's Account Manager or Site Service Delivery Manager to resolve the situation.

3.2.4 Security Clearance

All Contract personnel working on CMN premises and/or having direct access to CMN data must have a currently valid **Security Clearance** issued by CMN Security to at least the Reliability Level. Contract Personnel with access to sensitive information will require a SECRET Level Security Clearance. CMN Security will establish the requirement for SECRET level in consultation with the Contract Authority and the Contractor. For SECRET level positions the Contractor must put forward personnel whom it believes can attain a SECRET level clearance and will be given an appropriate timeframe up to a maximum of six months to acquire this clearance.

3.2.5 Training

The Contractor must **ensure that all members of the Service Delivery Team are fully trained** to fulfill their duties. The Contractor must also ensure that as the external

technology environment and the Museum's IT infrastructure evolves, team members are adequately trained in required new technologies. The Contractor must assume all costs for the training of its personnel.

3.2.6 Provision of bilingual services

Any Contractor role that involves providing services directly to end users must be delivered in a **fully bilingual** manner. This includes the roles of Site Service Delivery Manager, Deskside Analyst/Technicians and Service Desk personnel. Rare exceptions to this provision may be granted by the Technical Authority to address urgent/unusual situations (e.g. recovery from a widespread virus infection)

3.2.7 Compliance with Policies and procedures

The Contractor must ensure that its Personnel working on CMN premises **will comply with all Health and Safety, security, anti-discrimination, anti-harassment and other general workplace policies and procedures** established by the Museum for workers at its sites. The Museum will supply these policies and procedures to the Contractor.

3.3 CMN Contract Management Team

The key roles assigned by the Museum regarding the management and delivery of this contract are as follows:

3.3.1 Director IM/IT

CMN's Director of Information Management and Information Technology (Director IM/IT) is the CMN executive with overall responsibility for the management of the resulting contract. He/she acts as the point of contact for high level escalation issues and is the CMN representative at the annual Relationship Meetings (see section 3.4.5).

The Director IM/IT also acts as the contract **Technical Authority**. At his/her discretion, the role of Technical Authority may be delegated to other CMN staff.

3.3.2 Information Management/Information Technology (IM/IT) Project Lead

CMN IT staff assigned to life cycle manage IT projects including requirements gathering and analysis, development of project charters, schedules, implementation management, reporting and stakeholder communications.

3.3.3 IT Assistant

CMN IT Staff assigned to address daily CMN IT User issues and clarify/resolve these with Contractor personnel as required.

3.3.4 Other Staff with IT Responsibilities

Various other CMN staff with IT related responsibilities (e.g. Application Administrators, Web Master, Exhibits Technology staff, etc.) may attend meeting and address specific issues with Contractor personnel.

3.3.5 Right to Change roles and assignments

The Museum **reserves the right to change the roles and assignments** of CMN personnel involved in the management and delivery of this contract and commits to keep the Contractor informed of any changes in a timely manner.

3.4 Contract Management Relationships and Processes

The Contractor's Service Delivery Team will work closely with CMN IT staff to plan, deliver and continuously improve services. Selected Service Delivery team members will attend/contribute/respond to regularly scheduled meetings convened by CMN IT staff, ad hoc meetings convened by either party and ad hoc queries as described below. The Contractor may assign other staff to attend meetings as well. Contractor personnel will make every effort to attend scheduled meetings and will propose alternative times/dates if they are unavailable for the original venues. During the initial several months of the Contract these meetings may be convened more often.

3.4.1 IT Advisory Committee

The IT advisory committee is composed of senior CMN business and IT representatives. The committee's purpose is to discuss and review IT services with a view to enhance CMN business operations. The IT Advisory Committee meets on a quarterly basis and must be attended by the Contractor's Account Manager.

3.4.2 Access to On Site resources

The *Site Service Delivery Manager, Systems Administrator and Deskside Analyst/Technicians* will be **directly accessible to CMN IT staff to answer ad hoc phone or e-mail queries/requests and to attend ad hoc meetings** related to the CMN IT infrastructure. Ad hoc meetings will not exceed three (3) occurrences monthly involving the Systems Administrator or Deskside Analyst/Technicians. Ad hoc meetings with the *Site Service Delivery Manager* may be frequent (e.g. weekly or biweekly), especially during the initial phase-in period of the contract. The *Site Service Delivery Manager* will also be required to attend periodic IT Users Group meetings with CMN staff representatives.

3.4.3 Attendance at Monthly Operations Meetings

The *Site Service Delivery Manager* and the *Systems Administrator* **must attend and contribute to monthly "IT Operations" meetings** of a maximum duration of three hours with CMN IT staff to present and the discuss the monthly service performance and the Service Level report, technical issues and/or opportunities and Museum IT processes and policies. The *Network Specialist* will attend the technical issues portion of this meeting a minimum of four (4) times annually. The identification of meetings to which the *Network Specialist* will attend will be agreed to with Museum IT staff in order to coincide with the discussion of important network issues. The *Account Manager* may also occasionally attend these meetings if there are overall Account issues to address.

3.4.4 Quarterly IT Review Meetings

Every **third monthly “IT Operations” meeting** will be replaced with a **quarterly “IT Review’ meeting**. In addition to the *Site Service Delivery Manager*, the *Systems Administrator* and the *Account Manager* must also attend this meeting. In addition to normal monthly agenda items the Contractor must review quarterly performance and propose any continuous improvement initiatives to improve services, adjust to evolving needs and take advantage of changing technologies. Changes to Service Levels will also be discussed and decided upon in this meeting. The quarterly meetings in March and September will, in particular, include Contractor recommendations on changes and upgrades to the Museum’s Network and Telecommunications systems (see also 4.3.1 and 4.6.1).

3.4.5 Annual Relationship Meeting

A minimum of once **annually** the Contractor must convene a **“Relationship Meeting”** which will include the Contractor’s *Executive Sponsor*, *Account Manager* and *Site Service Delivery Manager* and the Director IM/IT to discuss overall Contract performance, opportunities and the relationship of the two parties.

3.4.6 Issue escalation/dispute resolution levels

The Contractor must establish and provide to the Museum clear **issue escalation/dispute resolution levels** for their organization which includes the Contractor Executive Sponsor. For the Museum the issue escalation levels will be as follows:

- Level 1 – IM/IT Project Lead
- Level 2 - Director IM/IT

3.4.7 Audits

The Museum may **periodically conduct audits** or engage a qualified independent consultant to conduct an audit to ensure that the Contractor is meeting contractual obligations (e.g. for IT security, etc.). The Contractor must cooperate with these evaluations.

3.4.8 Annual User Satisfaction Survey

The Contractor must **develop and administer an annual User satisfaction survey** to assess and improve user satisfaction with Services provided. The Contractor must consult CMN IT staff in the preparation of the survey and will provide survey results to the Director IM/IT. The Contractor must strive to achieve a consistently high level of satisfaction demonstrated in the survey and address any problem areas.

3.5 Museum IT Facilities

The Museum's main IT facilities include a Main Server Room and five telecommunications closets at the NHC and a Server Room and ten telecommunications closets at the VMMB.

3.5.1 Museum provided office space and Building Services

The Museum will **provide office space and building services for up to seven modular workstations adjacent to the Main Server Room at the NHC** site for the use of the Contractor's Service Delivery personnel. In the same area the Museum will also provide space for a small staging area and a small storage/testing room. In addition the Museum will provide a storage room at the NHC for spare PCs, monitors and other equipment and may occasionally provide additional temporary space, when requested and available, for major PC Rollouts, etc. At the VMMB the Museum will provide a small workstation and storage shelving for the Contractor's use in the Server Room. The Contractor must cooperate with the Museum to ensure compliance with applicable Provincial and Federal Health and Safety regulations in these areas.

3.5.2 Contractor Occupancy of Server rooms

The Contractor **will be the main occupant of Server Rooms, telecommunications closets and office/staging space adjacent to the NHC Server Room** and will maintain all equipment, cabling, racks and other items in the areas in a clean, neat, safe and well organized manner. Access to these areas by other personnel will be highly restricted and generally confined to CMN IT staff (all areas), a small number of VMMB Exhibition technical staff (VMMB areas), Security staff (VMMB telecommunications closets) and, as specifically arranged, building cleaning staff. The technical responsibilities and authorities of any personnel having access to these facilities (e.g. Exhibits technical staff) will be carefully segregated from the Contractor's. Access procedures will be periodically reviewed with the Contractor.

3.6 Invoicing

3.6.1 Single Monthly Invoice

The Contractor will invoice the Museum for Services on a **single monthly invoice** at the end of each month itemizing each of the following:

- a) Monthly Recurring Service Fee - Network & Systems Management Services
- b) Monthly Recurring Service Fee - Service Desk/Help Desk Services
- c) Monthly Recurring Service Fee - Deskside (Onsite) Services
- d) Monthly Recurring Service Fee - Telecommunications (Voice/Data) Services
- e) Monthly Recurring Service Fee - Communications Cable Management Services
- f) Monthly Recurring Service Fee - DBA Services
- g) Monthly Recurring Service Fee – Technical Specialist Services (Recurring Cost only)

- h) Any services costed and authorized on a numbered Task Authorization, Change Order, or Computer/Telephone Service Request Form that have been delivered. The costs for each form must be individually listed and cross-referenced to the appropriate Form number.
- i) Transition In fees at the beginning of the Contract which will be invoiced in the first monthly invoice after Start Services Date (ref. 4.9.1e)
- j) Transition Out fees at the end of the contract which will be invoiced in the Contractors final monthly invoice.
- k) If requested by the Museum the Contractor must issue bilingual invoices

3.6.2 Change to Pricing Threshold

The Contractor must notify the Museum in writing as part of their Monthly IT report anytime **a pricing change threshold as defined in Appendix D has been exceeded (up or down) resulting in an altered Recurring Service Fee amount.** No change will be made to the then current monthly Recurring Service Fee amount for the Service in question until:

- a) the change threshold has been verified/validated to the Museum (e.g. through a detailed inventory of Supported PCs); and
- b) the change threshold has been exceeded for a period of two consecutive Monthly IT reports

3.6.3 Changes to Recurring Services

Additional Recurring Services, or changes to existing Recurring Services which are not addressed in the pricing structure in Appendix D, must be addressed through the Contract Amendment process specified in Appendix E of this RFP document.

4 SERVICES

The Contractor is expected to manage and deliver daily Museum IT Network, Service/Help Desk, Deskside and Telecommunications operations with substantial autonomy whereas technology development, change activities and continuous improvements of service will be planned in close collaboration with CMN staff.

4.1 Service Requirements

4.1.1 Summary

A summary of the specific services the Museum requires is as follows:

- **Network & Systems Management Services (4.3)** – to manage, administer, operate and maintain the Museum’s LAN-WAN and Server infrastructure
- **Service/Help Desk Services (4.4)** – to manage and operate a service for users to report and try to resolve desktop, network, or telephone related incidents or problems; to ask questions or request information on hardware or selected Museum software and to initiate IMAC and network account requests
- **Deskside/Onsite Services (4.5)** – to manage and deliver onsite support services to CMN IT users to address computer related incidents and problems that couldn’t be resolved by the Service Desk; to implement installs, moves, adds, changes, removes and retires (IMACRR); and to implement other IT services for users requiring an onsite technician.
- **Telecommunications (Voice/Data) Services (4.6)** - to manage, administer, operate and maintain the Museum’s internal telephone system and services
- **Other Recurring Services (4.7)**– includes: Communications Cable Management Services - to coordinate the ongoing installation, repair and maintenance of communications cable and outlets (data and voice) within CMN premises; and Database Administration (DBA) Services – to provide DBA Services for the Museum’s relational database management systems, in particular MS SQL Server and Oracle, that support several corporate applications
- **Technical Specialist Services (4.8)** – to provide access on an as required basis to highly qualified IT Professionals in specific fields
- **Transition Services (4.9)** – to provide the effort and work required for the Contractor to transition in their services at the beginning of the contract and transition out their services at the end of the contract.

4.1.2 Integration with In-house and Third Party Contract Services

As noted in Section 1.5.1 above, the Contractor’s personnel, particularly the Core Delivery Team and a few others, will be required to work very collaboratively with a small group of Museum staff dedicated to the IT function and with a slightly larger group of staff who are involved in various specific IT operations.

The division of functional roles between the Museum and the Contractor is described above. The Contractor's services must also be integrated and coordinated with some IT Services contracted to third parties as described in section 1.5.1.

4.2 General Service Requirements

4.2.1 Identification Badges

Contractor staff providing services to end users on Museum premises will wear standardized **identification badges or some other form of insignia or clothing** to clearly identify them as authorized members of the Contractor's Service Delivery Team.

4.2.2 Bilingual Service

As noted in section 3.2.6 **services provided directly to end users** (e.g. Service Desk, Deskside, etc.) **must be delivered bilingually**. Rare exceptions to this provision may be granted by the Technical Authority to address urgent/unusual situations (e.g. recovery from a widespread virus infection).

4.2.3 Policy and Procedure Guidance

The Contractor must provide advice and guidance to assist the Museum in the **development of effective internal IT Policies and Procedures** that meet the Museum's business and user community needs, are well integrated with the Contractor's Services and facilitate reliable cost-efficient IT services. The Contractor may provide, for example, copies of existing templates or procedures developed to address similar needs in other organizations. CMN IT policies and procedures will be a frequent topic at the Monthly IT Operations meetings. Assistance with IT policies and procedures is a specific role identified for the Site Services Delivery Manager.

4.2.4 Integration with Approved CMN IT Policies and Procedures

The Contractor must use best effort to integrate IT Services with **approved CMN IT Policies and Procedures**. This currently includes two policies:

- a) CMN IT Security policy (CMN policy number 2406 dated January 2016); and
- b) Policy on Acceptable Network and Device Use (CMN policy number 2004 dated December 2015)

as well as other written procedures/guidelines for end users. For example, there are procedures/guidelines on connecting to the Museum's network through VPN, on storage quotas for network folders, use of instant messaging applications, issuing all staff e-mails, use of mobile devices, closing network accounts for departing users, etc. See Appendix A for more detail.

4.2.5 Process to Encourage and Record User feedback

The Contractor must implement a process to **encourage and record ongoing IT user feedback** for the continuous improvement in Contractor services. This is in addition to the formal satisfaction survey described in 3.4.8.

4.2.6 Performance of Tasks Outside Recurring Services

Occasionally the Contractor may be requested to perform tasks that are outside the scope of those covered by Recurring Services Fees and are therefore subject to additional fees. Typical tasks include onsite consultations with Technical Specialists and the implementation of one-time IT projects. The Museum will describe such requirements on a **Task Authorization Form**, the exact format of which may be periodically updated in consultation with the Contractor. The Contractor must respond within 5 Core Service Days to such requests with:

- a) The name(s) and Per Diem Rate(s) of the resource(s) (in accordance with the Rates set out in Appendix D) required to perform the work, an estimated ceiling number of days per resource required to complete the work and an estimate of any authorized travel and living expenses if applicable **or**
- b) A firm lot price to perform the work, including an estimate of the number of days to complete the work and an estimate of the authorized travel and living expenses required, **or**
- c) Questions of clarification for the Museum on the required work and/or an offer that the Contractor prepare a more thorough proposal and description of work in order to better define requirements and establish an accurate price **or**
- d) An acknowledgement that it is unable to perform the work

4.2.7 Warranty Repair

As it relates to equipment repair, the Contractor must perform all equipment maintenance, servicing and upgrade, both warranty and post warranty related. The Museum expects that the Contractor has or will obtain the right to perform warranty repairs on much of this equipment and is entitled to any resulting financial compensation from equipment manufacturers for these services.

4.2.8 Software License management

The Contractor must perform life cycle management of all software licenses, regardless of the platform (i.e., server, desktop, laptops, mobile devices, etc..) and according to the policies and practices established by the contract Technical Authority. The Contractor must keep track of license allocation (software version, associated device, user, etc..) and current usage (i.e., whether the license is being used or not). The Contractor must track of quantities and any associated renewal dates (i.e., for version updates or technical support)

associated with each software license and provide CMN with sufficient lead time to either acquire additional licenses or ensure that maintenance coverage does not lapse. The Contractor must provide CMN with reports on an as and when required basis, including any recommendations for improvement in the area of software license management practices.

4.3 Network (LAN-WAN) and Systems Management Services

The Contractor is responsible for the management, administration, daily operation and maintenance and continuous improvement of the Museum's LAN-WAN and Server infrastructure as further described in this section. A description of the Museum's current network infrastructure, including hardware, software and connectivity, is provided in Appendix A. **The Museum utilizes a highly standardized network/server computing platform including Windows OS, high quality Intel based processors and Commercial-off-the-shelf (COTS) software, to facilitate IT management, operations and training; reduce maintenance and minimize costs.**

The Contractor should note that while the Museum is responsible for acquiring and providing all CMN network hardware and software (unless noted otherwise in the requirements), the Contractor must manage, operate and maintain these assets and perform all associated upgrades. This does not preclude the potential for future changes to hardware/software ownership negotiated through the normal contract amendment process should the Museum decide it would be beneficial to do so.

The Contractor's responsibilities to deliver effective and efficient Network (LAN-WAN) and Systems Management Services include, but are not limited to the following:

4.3.1 Provision of Advice and Recommendations

The Contractor must **monitor, research and periodically provide advice and recommendations on any required or proposed changes or upgrades to the Museum's network architecture, network hardware, network system software and connectivity configurations** to resolve problems, reduce costs and best meet growth and evolving Museum business needs, industry standards, best practices and new available technologies. Some typical issues on which the Contractor is expected to provide recommendations include hardware or system software reconfiguration; upgrade and replacement requirements; network performance; IT Security; Business Resumption plans; and adaptation to the growing use of Cloud-based software, architecture and collaboration tools.

- a) The Contractor must discuss its advice and recommendations with CMN IT staff during the monthly IT Operations meetings and will identify serious/recurring problems on their monthly report.
- b) Recommendations for new/upgraded hardware or system software will include written specifications for these items sufficient for CMN to implement acquisition.
- c) Every six months, i.e. in March and in September, the Contractor must include a full written report of their recommendations for network changes and upgrades in their monthly report. The recommendations will address any specific needs identified by the Museum in addition to other items the Contractor may wish to propose.

4.3.2 Management of CMN Network Hardware

The Contractor must **manage all CMN Network Hardware and related network connections**. This includes the installation, configuration, operation, monitoring, upgrade, repair and maintenance of network equipment/components such as servers, switches, gateways, routers, backup devices, wireless access devices, UPS equipment, network printers, racks, patch panels, patch cables and connectors. The Contractor must:

- a) Implement or, in the case of some equipment under warranty, direct the implementation of repairs, upgrades and configuration changes to this hardware on an ongoing basis as required and will inform/consult CMN IT staff regarding these changes as applicable.
- b) Communicate and coordinate work with hardware manufacturers, vendors and third-party technical support providers as required to address any warranty issues, resolve network hardware matters and plan and implement replacements or upgrades. The Contractor is liable for any actions its personnel take that invalidates equipment warranty coverage.
- c) Respond to and resolve Network incidents according to the service levels identified in 4.12.
- d) Replace (including installation and configuration) obsolete equipment in consultation with Museum IT staff and as alternative hardware is acquired by the Museum (typically on a 5-7 year refresh cycle). A maximum threshold of six (6) server and three (3) switch replacements annually will be performed without being subject to additional fees above the Recurring Services Fee for Network and Systems Management Services. There is no threshold on other equipment replacements (e.g. UPS, racks, etc.)
- e) Occasionally recycle/reallocate and reconfigure existing equipment to better meet evolving needs or be more efficient (e.g. server consolidations). Historically these types of reallocations have been implemented an average of twice per year however the Museum cannot make a firm commitment to this frequency. Reallocations are not included in the replacement thresholds identified in 4.3.2 d) above.
- f) Occasionally install new equipment as acquired by the Museum for a new purpose or application. This could include new servers, switches, storage/backup devices, wireless access points, etc. Historically this type of “one-of” requirement has occurred 2 or 3 times per year. Multiple installations of three or more major pieces of equipment required at one time will be implemented through a Task Authorization Form and will be subject to additional fees above the Recurring Services Fee for Network and Systems Management Services.
- g) Install, configure and manage VLAN, Quality of Service and other available network switch functions to meet Museum requirements.
- h) Provide and implement a preventive maintenance program on hardware and perform any planned maintenance activities that compromise network or Corporate Application performance outside of Business Hours for the building(s) affected.
- i) Perform 1st level diagnostic and break fix support for both local and network printers. If repairs require advanced technician support which is not covered by

warranty the Contractor will arrange and supervise such support but technician costs, if any, will be paid by the Museum (the Museum has an existing support contract with a third party for these services).

Equipment reallocations, replacement and new installations must be documented and approved on a duly completed and authorized Change Order Form.

4.3.3 Management of CMN Network System Software

The Contractor must **manage all CMN Network System Software** (see list at Appendix A). This includes the installation, configuration, operation, monitoring, patch, upgrade and maintenance of the following software, including but not limited to:

- Network & Server Operating Systems;
- Web-server (for Intranet);
- anti-virus;
- network backup;
- network monitoring/control;
- intrusion detection;
- firewall and firewall zones (physical and virtual);
- asset management & automated software distribution;
- Help Desk;
- remote access-VPN;
- anti-spam; and
- Internet content monitoring.

The Contractor must:

- a) Ensure the effective ongoing operation and functionality of this software, including implementation of planned and unplanned (e.g. after power outages) system reboots as required;
- b) Implement ongoing maintenance and configuration changes to this software as required. The Contractor must perform any planned software maintenance activities that compromise network or Corporate Application performance outside of NHC and VMMB Business Hours (as defined in Table 4);
- c) Ensure that Contractor staff working with this software are well trained to understand the software's capability and are proficient in its use;
- d) Employ best industry practices when testing software patches, upgrades and new installations to ensure that the level of testing is commensurate with the level of risk;
- e) Test and implement patches to this software as they become available (e.g. security patches);
- f) Plan and implement upgrades to this software in consultation with CMN IT staff up to a maximum of four (4) upgrades per fiscal year. The Contractor must proactively monitor and report on available upgrades to this software to ensure

that it never falls outside the manufacturer's support timeframe. Additional upgrades beyond the maximum annual number, if required and approved, will be subject to additional fees above the Recurring Services Fee for Network and Systems Management Services;

- g) Given the potential scope of a major Network Operating System (NOS) release, major NOS releases will count as three (3) system software upgrades for the purposes of the annual threshold in 4.3.3 f) above. See Table 4 above for a definition of major and minor software releases;
- h) Plan and implement replacements to this software and the installation of new Network System Software in consultation with CMN IT staff. New and replacement system software installs will be limited to a maximum of two (2) installs per fiscal year included in Recurring Services Fees. Additional installations, if required and approved, will be subject to additional fees. New and replacement software will be added to the Network System Software list at Appendix A;
- i) Communicate and coordinate work with software vendors and third-party technical support providers as required to resolve *Network System Software* issues, plan and implement upgrades and ensure licensing requirements are met; and
- j) Apply a problem management program to resolve or find workarounds for any recurring incidents with the software.

Network System Software upgrades, replacements or new installations require a duly completed and authorized Change Order Form. Except as specifically noted otherwise in this Statement of Technical/Service Requirements the Museum will acquire and provide all licenses for *Network System Software*.

4.3.4 Contractor-provided Network Monitoring and Control Software

The Contractor must **provide, configure, operate and maintain network monitoring and control software** to ensure reliable and effective network operation. This software will provide information for monthly reports and must be directly accessible on a read-only basis by CMN IT staff in order to review information in real time and produce ad hoc printed reports. The Contractor may also occasionally be required to participate and assist the Museum in special network or application performance analysis. As a minimum the network monitoring/control software must include the following functionality:

- a) Availability of all servers and switches, including automated time stamping of any failures (system down, system up)
- b) Offsite monitoring (using the Internet).
- c) Offsite (remote) system shutdown/reboot capability for all CMN servers and switches. The Contractor must, on occasion, (estimated 1-2 times annually) implement planned system shutdowns and reboots (e.g. for Quebec Hydro shutdowns) and must be able to implement these remotely.
- d) Automated alarms/failure notifications that are received instantly by the Service Desk

- e) Disk Space monitoring
- f) Network traffic monitoring on all network segments

Notes to Bidders

1. The above constitute minimum requirements for the proposed utility application. The Museum recognizes that the application proposed by the Bidder may have additional capabilities.
2. The Bidder's response to rated requirement C5.2 in Appendix C may be used to further develop this section of the Statement of Requirements.

4.3.5 Contractor-provided Asset Management Software

The Contractor must **provide, configure, operate and maintain IT asset management and automated remote software distribution software** to effectively and efficiently monitor and manage network connected hardware and software assets and to distribute software to Supported PCs. It is recognized that these functions may be combined in one application or separated into two applications. The Contractor must:

- a) Provide an IT asset management tool which, at a minimum:
 - includes automated discovery capability for hardware and software on network connected devices
 - can provide the basic PC hardware inventory information required by the Museum which is listed in 4.5.10.
 - can discover and display a list of software names and version #s installed on any network connected PC
 - provides direct access to current data and ad hoc query/reporting capability for CMN IT staff without requiring Contractor intervention
- b) Provide a software distribution tool which at a minimum provides for the effective automated/remote distribution of software and software upgrades/patches to network connected devices from a single distribution point (server).
- c) Input necessary CMN asset information into this software (e.g. existing assets)
- d) Ensure that this software is functioning effectively and provides current, accurate information on the Supported PC Inventory and installed software.
- e) Ensure that Contractor personnel using this software (e.g. onsite personnel, Service Desk personnel) are fully trained and knowledgeable in its use to maximize its effectiveness.
- f) Use this software whenever feasible and cost-effective to distribute patches and upgrades to existing installed desktop applications and install new desktop applications. The Contractor must use modern, efficient best practice methods to implement such distributions.
- g) Ensure that CMN IT staff have direct real-time read-only access and report/print capability to the this software and will assist IT staff in the effective use of the software to retrieve information and generate reports.

- h) Use this tool to provide effective and efficient Deskside Services as described generally in 4.5 and to track and report on the Museum's Supported PC Inventory as described specifically in 4.5.10.

Notes to Bidders

- a) With regards to asset management software, the Museum's IT interests are more focused on inventory management than on financial management.
- b) The above constitute minimum requirements for the proposed utility application. The Museum recognizes that the applications proposed by the Bidder may have additional capabilities.
- c) The Bidder's response to rated requirement C5.3 in Appendix C may be used to further develop this section of the Statement of Requirements.

4.3.6 Network Operating System (NOS) Software

The Contractor must **effectively configure, manage and maintain the Network and Server Operating Systems** (currently Windows Server). The Contractor must modify and maintain the existing Active Directory structure and other key Operating System configuration settings in consultation with CMN IT staff to best meet CMN needs and to be consistent with CMN IT policies and procedures.

4.3.7 Electronic Mail

The Contractor must **install, configure, operate, monitor, patch, upgrade and maintain the Museum's Electronic Mail application** (currently Microsoft Exchange/Outlook). A major upgrade to or replacement of the Electronic Mail application will be required approximately every three years to five years, with provision for an eventual move to Cloud-based services.

4.3.8 System Level Support for Major Corporate Applications

The Contractor must provide **system level support (network hardware and network system software) for Major Corporate Application installations, upgrades, patches and problem resolution**. Individual application vendors or their agents normally support these installations at the application level. The Contractor must liaise with these vendors, their technical staff and CMN staff to help determine and implement appropriate Operating System and Database Management System settings and configurations and to diagnose and resolve problems. Major Corporate Applications (see list at Appendix A) are typically upgraded every three years. The Museum anticipates the increased use of browser-based user interfaces to Major Corporate Applications.

4.3.9 System Level Support for Other Corporate Applications

The Contractor must, on occasion, **install and provide system level support for server components of other Corporate Applications**. These are typically applications that have a minor or modest server component such as a license metering utility for concurrent user applications. There will be a maximum of four such installations per fiscal year within the scope of the Recurring Service Fees for Network and Systems Management Services. Additional installations will be subject to supplementary fees.

4.3.10 Administration of Network User Accounts

The Contractor must **administer network user accounts**. This includes account creations, modifications and deletions as required and approved by CMN IT staff. These are not included in desktide IMAC counts and must be implemented subject to the following considerations:

- a) Network account creation, modification and deletion requests will be initiated and authorized by the Museum on a Computer/Telephone Service Request Form;
- b) The Contractor must implement these Requests within one Core Service Day after receipt; and
- c) Account maintenance must be coordinated with CMN human resources (HR) personnel to obtain current employee information in order to update Active Directory services and associated network user accounts.

4.3.11 Network Backups

The Contractor must plan and manage a **network backup program** to ensure the efficient, effective and highly reliable backup and restoration of all data and configuration information stored on the network. **This is a Mission Critical service**. The Contractor must:

- a) design the backup program in consultation with CMN; this will include, as a minimum, daily (weekday) backups of all network data, a monthly tape rotation schedule (with month-end tapes kept for one year and year-end tapes kept for 5 years) and weekly offsite tape storage;
- b) include in the backup program a current image backup of installed Network System and Major Corporate Application Software. The image must be verified before any major change to this software and refreshed after successful change installation/reconfiguration;
- c) ensure that the backup routine is scheduled and managed to cause minimum disruption to any other network operations or services to users
- d) perform full test restores of all network data and all *Major Corporate Applications* annually;
- e) perform individual data restores as requested/required;
- f) periodically review and update the program;
- g) maintain an up-to-date electronic file documenting the program;
- h) obtain the Museum's written approval of the original program and any subsequent modifications to it; and
- i) provide detailed specifications and suggested supplier(s) for required backup media and forward this to the Museum for acquisition(s) as required.

The Contractor is not responsible for the back-up of data stored on Personal Computer hard drives unless this is part of a PC Roll Out project or there is an exceptional "one of" request from the Museum to do so.

4.3.12 Network Security Program

The Contractor must **establish and maintain a network security program** to be consistent with industry best practices, the government's Operational Standard for the Management of Information Technology Services (MITS) and CMN IT Security Policy and procedures. The Contractor must:

- a) Establish and maintain a program including:
 - proactive security alerts;
 - the identification and application of security patches for network and desktop operating systems;
 - the daily retrieval of updated antivirus definition files and the automated deployment of these to all required network connected devices (PCs and servers);
 - monitoring and rapid detection of unauthorized probes, scans, attempts to gain access to a system, or changes to a system;
 - rapid detection of denial of service attacks;
 - application of regular patches and updates to key IT security components such as antivirus, firewall, VPN, PKI and intrusion detection/response software.
- b) Respond to and resolve security incidents at the network level;
- c) Participate in, fully cooperate with and provide required information for periodic IT security audits and threat assessments conducted by CMN IT staff or by qualified third-party network security experts;
- d) Immediately apply critical security patches which threaten the Museum's network. If critical security alerts are received during core service hours the Contractor, may, with the approval of the Technical Authority, take systems offline if necessary during core hours to install these patches. This "approved downtime" will be excluded from the calculation of system downtime for the purpose of measuring Contract Service Levels;
- e) Review and analyze firewall security logs on a daily basis;
- f) Develop and maintain an IT security awareness program and deliver a minimum of 4 IT security awareness sessions per year to CMN staff; and
- g) Perform any other actions necessary to reasonably protect the CMN network.

4.3.13 Local Administration Rights and Privileges

The Contractor must ensure that all user desktop, laptop, tablet, mobile or other computing devices that are located on the CMN production network are configured to deny local administration rights or privileges to users. Users that require such access must be segmented from the production network on a separate administrative zone behind a firewall.

4.3.14 Support for Policy on Government Security

The Contractor must keep its staff knowledgeable with regards to the Government of Canada security policy, as it applies to the work performed for the Museum. The

Contractor must incorporate the requirements of this policy, including applicable standards, into the performance of the work and all associated deliverables.

In particular, the Contractor must work in close cooperation with the Museum's IT Security Officer (ITSO) to ensure compliance with applicable GoC security policy. This includes, but is not limited to, providing administrative assistance to the ITSO in reviewing and reporting periodically to Treasury Board on the status and progress of implementation of government security policy and on the results of ongoing performance measurement.

4.3.15 Bilingual Notifications

The Contractor must **draft and issue bilingual e-mail/web-site notifications to CMN staff** as required to advise them in a timely manner of new IT policies and/or procedures, network disruptions, network security or other important network/phone system events.

4.3.16 Special Network Tasks

The Contractor must occasionally perform **special network tasks on a best effort basis** at the request of CMN IT staff; for example the special configuration or monitoring of a piece of hardware, an application, or a user account. Requests to perform these tasks will not exceed an average of one per month on an annual basis.

4.3.17 Monthly Reporting

In addition to the information required for Service Level reporting the Contractor must continuously monitor and **provide accurate and complete monthly reports** in electronic (Excel) format to the Museum **to document other network/server performance metrics and identified problems** including, as a minimum, the following information:

- Network utilization at each switch;
- LAN extension bandwidth utilization (esp. 5 min peak utilization);
- Internet bandwidth utilization (esp. 5 min peak utilization);
- % free disk space used on every server/storage array;
- Server and Switch Availability, including exact times of any outages;
- # e-mails in and out (provided by anti-spam service);
- Security Exceptions; and
- Status of any outstanding network problems identified by the Contractor or the Museum, including workarounds and any remedial measures taken.

On an ad hoc basis, CMN IT staff may request, and the Contractor must supply, any one of the above reports.

The Contractor must work in collaboration with CMN IT staff to periodically update and improve the exact nature and format of this information to ensure that it meets Museum needs.

4.3.18 Network Configuration – Lists and Diagrammatic Information

The Contractor must continuously monitor, maintain and make accessible to Museum IT staff, accurate and complete documentation in the formats indicated of the following **network configuration information**:

- complete network diagram in Visio format
- list of all network-attached devices, including, but not limited to: servers, switches, routers, gateways, storage/backup devices, other network live components and their detailed configuration (Excel format);
- list of currently installed *Network System Software* including software version # (Excel format)

4.3.19 Service Levels for Network & Systems Management Services

See Section 4.12

4.3.20 Network and Systems Management Services Delivery Timeframes

The Contractor must:

- a) Provide full Network and Systems Management Services during *Core Service Hours*
- b) Remain onsite to resolve Severity 1 and Severity 2 incidents reported during *Core Service Hours*, even if resolution time falls outside *Core Service Hours*. In these cases no additional fees apply.
- c) Provide remote network monitoring for Severity 1 and Severity 2 incidents 24/7/365
- d) Respond to and resolve Severity 1 and Severity 2 incidents reported during Extended Service Hours. Resolution requiring an onsite visit to Museum facilities is subject to an additional fee as identified in Appendix D.
- e) Perform any planned hardware or software maintenance activities that compromise network or Corporate Application performance outside of Business Hours for the building(s) affected. All costs for these activities should be included in Recurring Service Fees Network and Systems Management Services.

4.4 Service Desk/Help Desk Services

The Contractor must provide a highly accessible Service Desk/Help Desk that will be the first point of contact for users to report and try to resolve desktop, network, or telephone related incidents and to ask questions or request information on hardware or selected Museum software. PC hardware and software IMACs, network account creations and changes, communication cable/outlet installations and miscellaneous other special “requests” will be pre-screened and approved by CMN IT staff before being forwarded to the Service Desk for implementation.

It is generally assumed that Contractor Service Desk operations will not be located on Museum premises but Bidders may propose different options. Since the Service desk is one of the two major direct points of contact between CMN IT users and the Contractor it is important the Service Desk personnel have excellent bilingual and client-service skills in addition to the required IT knowledge and expertise.

CMN Service/Help Desk call statistics for 2015/16 are provided in Appendix A. The Museum has no reason to expect dramatic long-term changes to these statistics but cannot guarantee that changes won't occur.

The Contractor's responsibilities to deliver effective and efficient Service Desk/Help Desk services include, but are not limited to the following:

4.4.1 Service Desk Access

The Contractor's Service Desk must be **accessible to all CMN IT users by phone (toll-free for calls made within the National Capital Region), e-mail and the Web**. The Service Desk must be fully bilingual and address any incident or question related to CMN IT assets as well as any question or incident related to remote access to the CMN network.

- a) The Service Desk must answer all phone calls in person during Core Service Hours (see section 4.12 for call wait time).
- b) During Extended Service Hours the Service Desk must answer phone calls in person or by voice mail within a maximum of 2 minutes. If answered by voice mail the caller must be called back by phone within a maximum of 20 minutes.

4.4.2 Contractor-provided Service Desk Application

The Contractor must **provide, set-up and maintain a Service Desk/Help Desk application** that must, at a minimum:

- a) provide information on any CMN IT user and his/her PC's current configuration
- b) allow remote takeover of CMN IT user PCs if required
- c) log, track and provide reports on the following incident information: incident number, IT User, Time/Date logged, incident type, incident severity level,

- incident response time, incident resolution time, CMN Computer/Telephone Service Requests including Request number
- d) provide effective incident and problem management tools (e.g. knowledge base)
- e) provide for the collection, analysis and reporting of the following incident information as a minimum: detailed and summary listings of Service Desks calls including call category, user name, current status and time/date of initiation, response and resolution.
- f) provide real time read access to CMN IT staff to view information and produce ad hoc reports
- g) provide for export of data in SQL and/or ASCII comma delimited format

The Contractor's Service Desk staff and core onsite staff must be fully trained and knowledgeable in the use of this application.

Notes to Bidders

- a) The above constitute minimum requirements for the proposed utility application. The Museum recognizes that the applications proposed by the Bidder may have additional capabilities.
- b) The Bidder's response to rated requirement C6.1 in Appendix C may be used to further develop this section of the Statement of Requirements.

4.4.3 Escalation Procedures

The Service Desk must escalate or attempt to resolve any reported incident as described below. The Service Desk must:

- a) Attempt to immediately resolve any incident involving CMN IT assets reported by a CMN IT user.
- b) Escalate an incident to another resolution group as soon as it becomes apparent that the incident cannot be resolved remotely within a reasonably short timeframe (i.e. 15 minutes)
- c) Immediately escalate any Severity 1 or 2 incident to another resolution group.

4.4.4 Response to 'How-to' Questions

The Service Desk must respond to **“how to” questions** (i.e. “usability questions”) for category 1 supported software on the *PC Supported Software List* (section 4.11.1) and for any general network/phone login or account access inquiries.

4.4.5 Recurring Incidents

The Contractor must **address recurring incidents reported to the Service Desk or anticipated recurring needs** by pro-actively seeking and implementing solutions such as implementing configuration changes, providing required information/instructions to all users and/or managing an incident knowledge base accessible by users.

4.4.6 Use of Asset Management Software

The Service Desk must utilize the asset management software described in 4.3.5 or information derived from it to assist and facilitate Service Desk operations.

4.4.7 Bilingual Notifications

The Service Desk or onsite personnel must prepare and distribute timely **bilingual written (e.g. e-mail, Cloud-accessible) and/or voice notifications to all staff** on major problems or issues affecting many users (e.g. network shutdowns, etc.)

4.4.8 Monthly Reporting

In addition to the information described in 4.4.2 the Service Desk or other Contractor staff must maintain and provide to the Museum in Excel format complete and accurate **monthly reports on all Change Orders and Computer/Telephone Service Requests including all PC hardware and software IMACs and all Telecom IMACs.** The report must include as a minimum the following information:

- Request/Change Order number
- Brief (one line) description
- IMAC category (if relevant)
- Date Requested
- Stop Clock Time (if any) and reason for stop clock
- Date completed
- Total resolution time (= date completed – date requested – stop clock time)
- Cost (if applicable)

4.4.9 Service/Help Desk Service Levels

See section 4.12

4.4.10 Service Desk/Help Desk Service Delivery Timeframes

- a) The Contractor must deliver full Service Desk/Help Desk Services during Core Service Hours
- b) The Contractor must deliver Service Desk/Help Desk Services with reduced Service Levels (as described in 4.12) during the Extended Service Hour periods as defined in Table 4 above. Pricing for each component period of Extended Service Hours is provided in Appendix D.

4.5 Deskside (Onsite) Services for Desktop/Laptop/Telephone/ & Peripheral Hardware & Software

The Contractor must provide onsite (i.e. at the NHC and VMMB sites) support services to CMN staff to address computer related incidents and problems that couldn't be resolved by the Service Desk; to implement installs, moves, adds, changes (IMACs) and removes/retires in order to support and continually improve the personal computing environment; and to action any other needs requiring an onsite technician. These Services apply to supported personal computers including but not limited to: attached peripheral devices (such as monitors, local printers and USB devices) and to installed software. Bidders may refer to Appendix A for more detailed information.

PCs are currently comprised of approximately 92% Windows/Intel based and 8% MAC based. Two different Service Levels apply depending upon the identified support level for the affected computer (see 1.7 "Definitions" PC Support Levels 1 & 2). **The Museum has attempted to standardize and control the desktop environment as much as possible in order to reduce incidents, improve productivity and facilitate IT maintenance and support. High quality equipment is deployed and is normally acquired once annually to reduce the number of configurations/images required. PC software is standardized as much as possible.** With very few exceptions PC software is Commercial Off-the-Shelf (COTS).

The current number of Supported PCs includes approximately 235 units, comprised of 215 Level 1 Supported PCs and 20 Level 2 Supported PCs (see Definitions in section 1.7 and Note to Bidders below). Level 2 PCs are supported identically to Level 1 PCs with the exception that response to and resolution of incidents is "Best Effort" rather than subject to the Service Levels identified in 4.12. The Museum anticipates incremental, rather than dramatic changes to this number over the life of this contract. Changes to the *PC Supported Software List* in section 4.11.1 are also expected to be incremental.

Deskside Services represents the face of the Contractor's services to CMN IT users and therefore it is very important that service personnel have excellent client-service skills in addition to the required IT knowledge and expertise. These services must also be delivered bilingually.

The Contractor's responsibilities to deliver effective and efficient Deskside services include, but are not limited to the following:

4.5.1 Incident/Problem Diagnosis and Break/Fix Repair

The Contractor must **manage and implement incident/problem diagnosis, break fix and repair** services for personal computing equipment and software provided by the Museum for the use of staff and other authorized CMN IT Asset users. This service may be considered a "second level" service for PC incidents escalated from the Service Desk and is deliverable on all CMN owned/controlled premises (e.g. no "house calls" to staff's personal dwellings). The Contractor must:

- a) Communicate/coordinate with other hardware, software, service providers as required to resolve incidents and implement repairs. This includes acquisition of parts, downloading of software, resolution of warranty issues with suppliers, making shipping arrangements for parts under warranty, etc.
- b) If feasible, attempt to secure manufacturer's authorization for the Contractor's Deskside/Onsite staff to perform warranty services for CMN equipment. The Contractor is liable for any actions its personnel take that invalidate equipment warranty coverage.
- c) Respond to and resolve Deskside incidents escalated from the Service Desk according to the Service Levels identified in section 4.12.
- d) Manage a small replacement inventory of monitors, keyboards and mice acquired and sustained by the Museum
- e) Advise CMN IT staff when replacement stocks are low, i.e., 2 units remaining of each item listed in d) above. The Contractor will have access to one or two spare PCs owned by the Museum to use as temporary swaps when necessary to meet Service Levels for Severity 3 incidents.
- f) Specify any part not covered under warranty required to restore the normal operation of a PC to CMN IT staff for acquisition. Specifications should include part number and suggested supplier.
- g) Apply preventive maintenance to PC hardware and software when warranted to prevent incidents (e.g. disk defragmentation).
- h) Implement a problem management program for recurring PC incidents to attempt to permanently resolve or find workarounds for these problems. Report on problem status as part of monthly performance report to the Museum and present/discuss at monthly IT Operations meetings.
- i) Provide these services for PCs and attached peripheral devices designated at both Level 1 and Level 2 PC Support according to the Service Levels described in 4.5.11.

4.5.2 Hardware IMACRRs

The Contractor must **manage and implement hardware installs, moves, adds, changes, removes and retires** (H/W IMACRR) for computers, attached peripheral devices and mobile devices. H/W IMACRRs are described under Section 1.7 - "Definitions". H/W IMACRRs requests are pre-screened and approved by CMN IT staff before being forwarded on a *Computer/Telephone Service Request Form* to the Service Desk for implementation.

- a) The Contractor must implement a maximum number of H/W IMACRRs annually as part of the established Recurring Service Fee for Deskside Services. This is shown in the table below. Additional H/W IMACRRs will be invoiced at the hourly rate for Deskside Services Technicians established in Appendix D.

Service	Annual Threshold Number
H/W IMACRR	Equal to the total current number of Supported PCs

- b) A H/W installation with a remove or retire counts as one IMACRR.
- c) Software (only) adds and changes are calculated independently of H/W IMACRRs as described in 4.5.6
- d) The Contractor must employ industry best practices for installations, including the use of software images and the automated software distribution tool described in 4.3.5 whenever feasible and cost-effective.

4.5.3 Change Management Software

To facilitate and enhance the Museum’s ability to manage the planned deployment of modifications to assets in its desktide environment, the Contractor must supply, install, configure, operate and maintain change management software to track, manage and control changes.

- a) The Contractor must provide a change management software tool which, at a minimum, provides the following capabilities and/or functionality:
 - i. Must be based on ITIL (v3 or better) best practices;
 - ii. Must be fully compatible and integrated with Microsoft Outlook/Exchange server and Active Directory services;
 - iii. Must allow users to configure workflow including the creation of approval groups and the ability to prompt users to provide comments when a Request for Change is submitted for validation and/or is validated;
 - iv. Must have the ability to define a pre-authorization process based on configurable criteria;
 - v. Must include out-of-the-box reports and key performance indicators, including: total number of changes over a given period, status (active, closed), number of emergency changes, or the percentage of failed changes;
 - vi. Must provide a calendar function to allow users to view all scheduled and proposed changes and outages;
 - vii. Must record the date and time a change request is closed and have that information fully searchable and reportable;
 - viii. Must provide the ability to record and store notes associated with any change request;
 - ix. Must provide the ability to prevent the closure of a Request for Change before all assignments have been completed;
 - x. Must allow users to create a Request for Change (RFC) from an Incident report and have the associated information populate automatically into the RFC; and
 - xi. Must provide the ability to associate problems and incidents resulting from an implemented change

- b) The Contractor must ensure that Contractor personnel using this software (e.g., onsite personnel, Service Desk personnel) are fully trained and knowledgeable in its use to maximize its effectiveness.
- c) The Contractor must ensure that CMN IT staff have direct real-time access and report/print capability for this software and must assist IT staff in the effective use of the software to retrieve information and generate reports.

Notes to Bidders

- a) The above constitute minimum requirements for the proposed utility application. The Museum recognizes that the Change management software proposed by the Bidder may have additional capabilities.
- b) Use of this software should cover all other areas of CMN infrastructure service delivery, including, but not limited to: network and systems management, telecommunications (voice/data).
- c) The Bidder's response to rated requirement C6.3 in Appendix C may be used to further develop this section of the Statement of Requirements.

4.5.4 PC installation of 20 or More

The Contractor must **plan and implement multiple PC installations of 20 or more systems** installed at one time in consultation with CMN IT staff.

- a) These installations must be approved on a Task Authorization Form and will be invoiced per event by the Contractor at the rates established in Appendix D. They are not included in the H/W IMACRRs described in 4.5.2.
- b) These installations must follow the steps described for PC H/W Install-New or Replace in Section 1.7 "Definitions" and must typically include the creation and storage of a new PC image by the Contractor.
- c) Trickle downs implemented during such multiple PC installations must be counted as a standard H/W IMACRR. The number of trickle downs at the Museum during multiple PC installations has traditionally been quite low.

4.5.5 Standardized PC Configuration

The Contractor must develop, in consultation with CMN IT staff, a **standardized and secure PC configuration** to meet the Museum's needs. The Contractor must:

- a) Obtain CMN approval for these configurations and any subsequent changes;
- b) Adopt and implement a standard security message (as directed by the Director IM/IT) that users will be required to acknowledge prior to sign-on;
- c) Produce, deploy and maintain images for these configurations in order to facilitate break fix and repair operations;
- d) Periodically review and update images in consultation with CMN IT staff and in coordination with the deployment of patches and upgrades described in 4.5.6. ;
- e) Maintain an accurate record of all current configurations and images and provide this to the Museum in MS Excel or MS Word format;

- f) Maintain a PC configuration management program in accordance with industry best practices; and
- g) Ensure that the standard background image for any CMN desktop, laptop, tablet, mobile device or other computing device, is free of any commercial branding, advertising, promotion or marketing material.

4.5.6 PC Software Support Categories

The Contractor must **provide support for PC software identified in Table 6 in section 4.11.1 and according to the categories defined in Table 5 below.** The Contractor must:

- a) Maintain and update (e.g. version #s) the PC Supported Software List provided in Section 4.11.1, as required. The periodic addition or deletion of software to the list or change of support category must be implemented in consultation and with the approval of CMN IT staff.
- b) Provide the following PC Software Support Categories:

Table 5 - PC Software Support Categories

Support Provided	PC S/W Support Cat. 1	PC S/W Support Cat. 2	PC S/W Support Cat. 3	PC S/W Support Cat. 4	PC S/W Support Cat. 5
Install application as required and ensure it is working properly as part of original PC H/W Install or afterwards as a S/W Add	X	X	X	X	
Diagnose and repair any problems with installed software to ensure it is functioning properly and not interfering with other applications	X	X	X	X	
Monitor and report on software patch releases from the manufacturer; test and install patches as available and approved by CMN	X	X	X	requires S/W add/change	requires S/W add/change
Monitor and report on software version upgrades; recommend, test and install version upgrades if/as approved by CMN so that S/W is no greater than one release behind the manufacturer's current release level.	X	X	requires S/W add/change	requires S/W add/change	requires S/W add/change
Provide usability support at the Service Desk (i.e. "How to" questions) - max 20 minutes effort per incident	X				
Install software as part of original PC H/W Install or afterward as a S/W Add; diagnose and repair problems - Best effort max 20 minutes per install/add/incident.					X

- c) For SW Support Category 5, effort beyond 20 minutes to install the software or resolve problems is chargeable by the Contractor at the hourly rate for Deskside support indicated in Appendix D. In such cases the Contractor must obtain

advance authorization from the affected user to proceed, with the clear understanding that additional time is chargeable. The Contractor must inform the IM/IT Project Lead of the charge immediately after the installation/problem resolution is completed. If the user does not want to proceed with the installation/problem resolution the Contractor must remove the software from the system.

4.5.7 Firmware

The Contractor must **test and deploy hardware firmware patches and upgrades to all PCs as these are made available by the manufacturer and must test and deploy software patches and upgrades to applicable PC software as identified in the PC Supported Software List provided in 4.11.1.**

- a) The Contractor must employ industry best practices when testing Software patches, upgrades and new installations to ensure that the level of testing is commensurate with the level of risk.
- b) Critical security patches must be deployed immediately when available and tested.
- c) As indicated in the *PC Software Support Categories* table (Section 4.5.6) installation of patches and upgrades on some software is fully included in Recurring Service Fees for Deskside Services. For other software, patches and/or upgrades require the use of a limited number of *Software adds/changes* included in Recurring Services Fees. The annual threshold for these adds/changes is shown in the table below. Additional S/W Adds/Changes will be invoiced per event by the Contractor at the hourly rates for Deskside Support established in Appendix D.

Service	Annual Threshold Number
S/W add/change	Equal to the total current number of Supported PCs

- d) Patches and upgrades must be approved in advance by CMN IT staff using a Computer/ Telephone Service Request Form (for a single PC) or a Change Order (for changes to multiple PCs).
- e) The Museum is generally committed to staying within the manufacturer’s support window when determining timing of version upgrades.
- f) Adding or changing more than one piece of software to a PC during a single deskside visit will count as one S/W Add/Change
- g) The Contractor must use the software distribution tools described in 4.3.5 and best practices whenever practical to implement software patches and version upgrades, especially when these are applied to multiple PCs.
- h) In addition to the S/W add/change threshold numbers identified in 4.5.7 c above the Contractor must use software distribution tools to implement up to three (3) software patches or upgrades to multiple systems per fiscal year, that would have otherwise invoked use of a S/W add/change.

4.5.8 Damage Caused by Security Incidents

The Contractor must **repair damage caused by security incidents** as required to restore and protect desktop systems as quickly as possible following the incident (e.g. virus infections). In the case where multiple PCs are affected the Contractor must deploy additional personnel as necessary and as agreed with the Museum to attempt to restore all systems as soon as possible and within the next Core Business Day. The cost of additional personnel in such cases will be paid by the Museum when the Contractor can demonstrate that it has provided adequate IT security according to the requirements described herein (e.g. firewall, anti-virus, etc. management) and has adhered to agreed-upon CMN IT security policies and procedures.

4.5.9 IT Equipment Owned by CMN Staff

The Contractor must **provide the following support for PCs owned by CMN staff and maintained outside of CMN premises:**

- a) Set-up and configuration of remote VPN access to CMN network. Requires an authorized Computer/Telephone Service Request Form and user to bring PC to NHC site.
- b) Service Desk support for problems Web Mail access to the CMN network from their own computers . This support will be Best Effort and will include only those issues specifically relating to the CMN dial in or Web Mail function. It will not include the diagnosis of other problems with PCs owned by CMN staff.

4.5.10 PC Inventory reporting

The Contractor must **track, manage and provide accurate up-to-date reports on the Museum's Supported PC Inventory**. The Contractor must provide and maintain **Asset Management software** as described in 4.3.5 to manage and maintain accurate up-to-date records and provide reports on the Supported PC Inventory and installed software. In addition the Contractor must:

- a) Maintain and provide access to CMN IT Staff an accurate, up-to-date file in Excel format including the following basic information for the Supported PC Inventory (it is expected that the Contractor will utilize the software tool to provide all or much of this inventory information) :
 - Username
 - PC Name
 - PC Support Level (1 or 2)
 - User department
 - PC location (Workstation #)
 - PC model
 - CPU speed (MHz)
 - Installed RAM (MB)
 - HD type (SDD or other) and size (GB)
 - OS

- Image # applied
 - PC Serial #
 - Date originally installed
- b) Periodically review and update asset information and format of this information provided to CMN to ensure that it meets CMN needs

4.5.11 Service Levels for Deskside Services

See Section 4.12

4.5.12 Deskside (Onsite) Service Delivery Timeframes

The Contractor must deliver Deskside (Onsite) Services during *Core Service Hours*. Museum requested Deskside Services delivered outside Core Service Hours are subject to additional fees.

4.6 Telecommunications (Voice/Data) Services

The Contractor must manage, administer, operate and maintain the Museum's internal telephone system and services. This currently includes 2 Meridian Option 11 PBX switches (one at each of the Museum's sites), 365 programmed lines, approximately 290 handsets, a voicemail system and 240 user mailboxes, internal cabling and other systems hardware and software as further described in Appendix A. PBX and supporting equipment are housed in the Main Server rooms at the NHC and VMMB. External voice connectivity between the switches at the two Museum sites and from these sites to the Local COs is currently done through a separate contract with Bell Canada, with whom the Contractor must coordinate services.

Significant technical components of telecommunications services (e.g. switch hardware and software management) are currently sub-contracted and it is anticipated that this practice may be continued by the Contractor. The Museum does not necessarily require highly knowledgeable Contractor staff stationed on site to manage Telecommunication services but does require timely response to telecommunications IMAC requests and very rapid response to and resolution of Telecommunications incidents, particularly severity 1 and 2 incidents.

The current hardware was installed in 1995 and will likely be replaced or eliminated during the term and any extension thereof of the contract. The Museum expects incremental, rather than dramatic changes, to the number of programmed lines, voice handsets and mailboxes over the life of the contract.

The Contractor's responsibilities to deliver effective and efficient Telecommunications services include, but are not limited to the following:

4.6.1 Provision of Advice and Recommendations

The Contractor must **monitor, research and periodically provide advice and recommendations on any required or proposed changes or upgrades to the Museum's telecommunications infrastructure** to resolve problems, reduce costs and best meet growth and evolving Museum business needs, industry standards, best practices and new available technologies. This includes costed options analysis and recommendations on a going-forward strategy for replacement of the current PBX technology to be delivered under the scope of Technical Specialist services as described in section 4.8.

Every six months, i.e. in March and in September, the Contractor must include a written report of their recommendations for telecommunications infrastructure changes and upgrades in their monthly report. The recommendations must address any specific needs identified by the Museum in addition to other items the Contractor may wish to propose.

4.6.2 PBX Support

The Contractor must **configure, operate, monitor, repair and maintain the PBX switches, voicemail and related centralized hardware/software and connectivity components of the Voice/Data Systems infrastructure** as detailed in Appendix A. The Contractor must:

- a) respond to and resolve Telecommunications system incidents, problems and security events;
- b) perform system level performance tuning;
- c) monitor and manage Systems availability;
- d) manage warranty issues;
- e) provide and implement a preventive maintenance program; and
- f) perform any planned maintenance activities that compromise telecommunications system performance outside of the Business Hours for the buildings affected (NHC and/or VMMB).

A hardware maintenance replacement contract is in place with Minitel Communications.

4.6.3 Changes to System Configuration

The Contractor must plan and manage **changes to system configuration** and must plan, manage and implement **hardware and software upgrades and patches** in consultation with the CMN IT staff.

4.6.4 Third Party Services

The Contractor must establish and manage third party service contracts as required to deliver its Services. When/if services are subcontracted the Contractor remains fully accountable to the Museum for service delivery.

4.6.5 Data Backup

The Contractor must develop an **appropriate data backup regime and schedule** for voice/data systems in consultation with the Museum. The Contractor must:

- a) perform data backups as per schedule that must include as a minimum one full backup after Business Hours on weekdays;
- b) perform data restores as required including voice mail restores; and
- c) maintain backup media according to regime, including provision for appropriately scheduled offsite copies.

4.6.6 Deskside Support

The Contractor must **provide onsite deskside services for voice system incidents** escalated from the Service Desk; coordinate and provide **voice system (i.e. telephone) Install, Move, Add and Change** services; and maintain an inventory of handsets utilized by the Museum. Voice/Telephone IMACs must be delivered as part of the Recurring Service Fee for Telecommunication Services up to a maximum fiscal year threshold

identified in the table below. Additional voice system IMACs will be invoiced at the hourly rate for Deskside Services Technicians established in Appendix D.

Service	Annual Threshold Number
Voice/Data System (telephone) Install, Move, Add, Change	Equal to 10% of the total current number of programmed lines

4.6.7 Account administration

The Contractor must manage and **perform telephone account administration** as required including account/phone number creation, deletion and modification; DID allocation; voice-mail access, changes to Automated calling schemes, etc. Account administration transactions are not included in telephone IMAC counts.

4.6.8 Cabling and Outlet Installations

The Contractor must coordinate any required **voice system cabling and outlet installations** as further described under section 4.7.

4.6.9 Assistance with Service Provider Inquiries

The Contractor must assist **the Museum with the interpretation of or response to any telephone service provider inquiries**, accounts or invoices; especially those from Bell and Shared Services Canada. The Contractor must, on occasion, investigate **and provide technical advice and information on a best-effort basis** on telecommunications related issues and inquiries made by CMN IT staff. These types of “informal” requirements are not highly technical in nature and will be addressed to the Network Specialist— average frequency 1 to 3 per month. More technical/formal inquiries will be addressed to the Telecommunications/Connectivity Engineer as described in 4.8.

4.6.10 Documentation

The Contractor must produce, **maintain and provide required voice system documentation** including up-to-date phone number listings, system configuration documentation (e.g. voice system diagrams) and monthly performance reports including:

- detailed start and end time, duration, description and remedial measures taken for any failure
- availability (%) during the month

4.6.11 Service Levels for Telecommunications Services

See section 4.12.

4.6.12 Telecommunications Service Delivery Timeframes

The Contractor must:

- a) Provide full Telecommunications Services during *Core Service Hours*
- b) Provide remote network monitoring for *Severity 1* and *Severity 2* incidents 24/7/365
- c) Respond to and resolve *Severity 1* and *Severity 2* incidents reported during *Extended Service Hours*. Resolution requiring an onsite visit to Museum facilities is subject to an additional fee as identified in Appendix D.

4.7 Other Recurring Services

4.7.1 Communications Cable Management Services

The Contractor must **coordinate the ongoing installation, repair and maintenance of communications cable and outlets** (data and voice) within CMN premises.

- a) The Contractor must **monitor all communications cable and outlets, diagnose and correct any fault conditions and respond to and resolve Cabling incidents** escalated from the Service Desk.
- b) The Contractor must **manage and coordinate all communications cable/outlet adds, moves and removes.**
 - i. Cable/Outlet materials and physical installation will typically be sub-contracted by the Contractor and charged back to the Museum at cost plus margin rates identified in Appendix D.
 - ii. The Contractor must ensure that cable installations are performed according to current industry standards such as the ANSI/NECA/BICSI 568-2001 Standard for Installing Commercial Building Telecommunications Cabling or equivalent. The Contractor must also ensure that all outlets are physically labeled in accordance with the Museum's labeling protocol.
 - iii. Cable/outlet installations, moves and removes must be documented and approved on a *Computer/Telephone Service Request Form*. When requested on this form the Contractor must provide an advance estimate of the cabling cost.
 - iv. Coordination of multiple cable/outlet installations totaling more than 10 at one time must be described and costed on a Task Authorization Form and are subject to supplemental fees at the hourly rate for Cable Installation Coordination established in Appendix D. The Contractor must provide an advance estimate of costs for these installations.
- c) The Contractor must **maintain up-to-date documentation** on all cable runs and outlets in AutoCAD or Visio files shared with the Museum and must label outlets in accordance with the Museum's established outlet labeling protocol.
- d) **Communications Cable Management Service Delivery Timeframes.** The Contractor must deliver Communications Cable Management Services during *Core Service Hours*.

4.7.2 Database Administration (DBA) Services

The Contractor is responsible for providing DBA services to ensure that relational database management systems, in particular MS SQL Server and Oracle that currently underlie some *Major Corporate Applications*, are properly configured and maintained. It is anticipated that this service will be based offsite with occasional (e.g. annual) onsite visits to CMN. This service is listed separately

from the Technical Specialist Services identified in 4.8 because there is a small ongoing service component to the requirement (i.e. monthly monitoring and maintenance if required).

Although these services are important and require some initial setup, they have historically required a very small amount of time annually to deliver them (perhaps a few hours monthly plus one annual onsite meeting).

- a) The Contractor must establish, **provide advice on and implement the proper configuration of corporate database management systems** in consultation with CMN IT staff and the relevant CMN Application Administrator in order to help ensure the effective performance, reliable operation and dependable fault recovery of these database management systems.
- b) The Contractor must **monitor database performance** including disk capacity (e.g. table space usage), database errors (e.g. alert messages, trace files) and integrity checking (e.g. dbcc check); and **implement performance tuning and file maintenance** required to maintain these databases in good working condition.
- c) The Contractor must **establish and ensure a backup strategy** to ensure data recovery ability for CMN Corporate Databases and must perform an annual test full restores on all of these Databases.
- d) The Contractor must **troubleshoot and resolve database system problems** related to the DBMS, including those forwarded from CMN Application Administrators. The Contractor must also flag and communicate any serious or unresolved problems to the relevant Application Administrator and to CMN IT staff.
- e) The Contractor must **provide DBA system level support** (Operating System and Database Management System) if/as required **for Major Corporate Application installations**, upgrades and patches in collaboration with CMN Application Administrators and application vendors or their agents
- f) The Contractor must **provide and maintain documentation on Corporate Database configurations**, procedures, monitoring/maintenance schedules and any identified substantive problems.
- g) The Contractor must provide **occasional phone and/or e-mail based consultation with CMN IT staff and CMN Application Administrators** on corporate database issues as well as one face-to-face onsite DBA meeting per year to discuss global database planning and management issues. Occasional inquiries should not exceed an average of one per month.
- h) **DBA Service Delivery Timeframes.** The Contractor must deliver DBA Services during Core Service Hours.

4.8 Technical Specialist Services

The Museum periodically requires, on an as-and-when-requested basis, direct consultation with and advice from Technical Specialists with a high degree of experience and expertise in particular IT fields as identified in 4.8.5. Services described in this section are intended to address the Museum's need for specialized information on technical subjects which may or may not relate to technologies currently in place and which could include, for example, the need for explanations of technical terminology, methods, standards, or some new technological capabilities.

Requests for these services will typically be made by the IM/IT Project Leader or the Director IM/IT. While the Contractor may wish to log or screen initial inquiries and distribute these to the appropriate resource, the Museum's requirement is to establish direct communication with the relevant expert within the specified timeframes. Direct communication is important to avoid the inefficient exchange of second hand information, as the topics may be complex and involve a back and forth discussion. In cases where an onsite meeting is required, the Contractor may elect to have managerial staff attend as well as their Technical Specialist. Such meetings are issue-specific and are not a substitute for the quarterly technology review meetings as described in section 3.4.4 and formal recommendations by the Contractor. The quarterly reviews are perceived as the best venue to address major technology changes and development opportunities.

While the Museum recognizes and expects that some of these same specialists may be contributing advice and assistance "behind the scenes" to the Contractor's delivery staff as part of their ongoing operations, Technical Specialist services are not intended to address problems with the ongoing IT operations or services provided by the Contractor. In terms of the latter, the Contractor is fully accountable for resolving problems with existing services and escalating issues to senior technical specialists within their organization if /as necessary to provide in depth support or advice to their service delivery staff. Unresolved service problems would normally be discussed at the monthly IT Operations meeting.

The Museum does not know in any one year the volume of direct consultation required for any individual specialist.

The Contractor must provide and deliver these services within the following parameters:

4.8.1 Base Threshold

For occasional and quick inquiries the Contractor must provide a base threshold of a maximum of 2 days per month combined time required of these experts. These will mostly be phone or e-mail inquiries. If onsite (CMN premises) meetings are required these should not exceed 4 hours of the total 2 days in the monthly threshold. Provision for a flat monthly fee for these base services (if the Contractor wishes to charge a fee) is provided in Appendix D.

4.8.2 Response to Museum Queries

Specialists must respond to e-mail and phone inquiries within a maximum of 2 *Core Business Days*. If a face to face meeting is required, Specialists must be made available for such consultations within 10 *Core Business Days* of the date requested. It is understood that the Contractor may want to log or screen initial inquiries and distribute these to the appropriate resource. However the Museum's requirement is establish direct communication with the relevant expert within the specified timeframe.

4.8.3 Briefings on Museum Infrastructure

The Contractor must commit to briefing these specialists **on the Museum's current IT environment** so that inquiries and consultations can proceed efficiently. The Contractor must maintain and provide to the Museum an up-to-date list and contact coordinates (e-mail & phone #) for these specialists.

4.8.4 TA for More Extensive Consultation

More extensive consultation with these Specialists (i.e. more than 2 days total in a month, or more than 4 hours for on site consultation) will be **accessible through a Task Authorization Form** completed and submitted by the Museum that outlines the purpose and requirements of the consultation. The Specialists must be made available for such consultations within 10 *Core Business Days* of the date requested. These services are billable by the Contractor at the blended Technical Specialist rate identified in Appendix D.

4.8.5 Scope of Technical Specialist Services

The Contractor must provide access to Technical Specialists in the following fields of expertise. **The same individual may be a specialist in more than one field.**

a) Network Specialist (Network Engineer)

- i. Requires expertise and minimum 8 years experience in network design and performance, switch configuration, VLAN configuration, VOIP implementation, etc.
- ii. Certifications would typically include Cisco Certified Network Engineer and/or Microsoft Certified Network Engineer.
- iii. This may be the same Specialist as that identified in 3.1.2 b). However time spent contributing to the four monthly IT Operations meetings referred to is not billable as a Technical Specialist Service and should be incorporated elsewhere (e.g. under Network and Systems Management Services).

b) Telecommunications/Connectivity Engineer

- i. Requires strong knowledge of MPLS, Megaroute & Megalink, VOIP, telecommunication architectures, communications cabling and leased lines, communications terminating equipment (e.g. switches, multiplexors, etc.).

- ii. Requires expertise in available technologies, services and pricing models provided by telecommunications companies such as Bell, Talus, Videotron, etc.

c) IT Security Specialist

- i. Requires expertise in IT security technologies and their practical application (anti-virus, network intrusion detection/prevention, firewall technologies, VPN, IPSec, secure socket layer, use of VLANs, Internet content monitoring and filtering, anti-spam, security measures for wireless networks and devices, certification/accreditation of systems, etc.)

d) Analytics/Business Intelligence Specialist

- i. Requires 3 or more years of experience in data extraction and reporting, performing data conversions from multiple data sources
- ii. Must possess working knowledge of relational databases and database structures
- iii. Experience with implementation and usage of analytics tools
- iv. Experience in evaluation of business processes, developing Key Performance Indicators (KPIs) for business units, Trending Analysis, Predictive Modeling, dashboards, etc.

4.8.6 IT Professional Service Delivery Timeframes

The Contractor must deliver Special IT Professional Services during *Core Service Hours*.

4.9 Transition Services

The Contractor is required to provide “Transition In” Services at the beginning of this Contract and “Transition Out” Services at the end of the Contract.

4.9.1 Transition In

It is important that the transition from the previous contract to this Contract take place with as little disruption to CMN IT Services as possible. As previously stated it is anticipated that the majority of the current CMN IT Infrastructure described in Appendix A; including hardware, software and configurations; will remain in place at the beginning of this Contract. It is also anticipated that there will be at least 60 calendar days between Contract Award date and Start Services date. To ensure a smooth transition in the Contractor must:

- a) Assign at least one senior resource at Contract Award to work with the Museum and the current Contractor to plan the transition.
- b) Produce a Transition In plan no later than 30 days after Contract Award that addresses all key aspects of the transition-in including any hardware/software, configuration issues, migration of data (e.g. for Service Desk, Asset Management software, etc.) and training/orientation of Contractor personnel.
- c) Allocate selected personnel to work onsite in parallel with current Contract staff over a period of one to two weeks (not necessarily full time) to help ensure proper briefing and orientation.
- d) Commit to the Service Levels defined in 4.12 effective at Start Services date. However Remedies will not apply until 60 days after Start Services date.
- e) Invoice the Museum for transition in fees in the first monthly invoice after Service Start Date. The Museum's funding for transition costs has been allocated at Service Start date. Therefore it is assumed that any transition in costs incurred by the Contractor will be invoiced in the first Monthly invoice after Service Start date.

4.9.2 Integration of Utility applications

As described in Section 1.5.2 above, the Contractor must provide certain utility applications to meet its service obligations under the resulting contract. The existing Service Desk (Service Desk Express from BMC), Asset Management and Software Distribution (Microsoft's SCCM) and Network monitoring (N-Central from N-Able/Solar Winds) applications in use at the Museum are provided and owned by the incumbent Service Provider.

All of the most important information from these applications, from the Museum's perspective, is provided to the Museum on a monthly basis in Excel format. If current and historical data from these applications can be readily/easily migrated directly to new applications (if necessary) as part of transition-in the Museum will encourage this to be done. However if automated migration of this data requires significant resources the

Museum will rely on the existing Excel “flat files” for all historical data and depend on the Contractor to enter new startup data in the most efficient way possible.

4.9.3 Transition Out

It is important that transition out of this Contract take place with as little disruption to CMN IT Services as possible and that the Contractor ensures that all CMN data, hardware, software, configuration and other important IT information is preserved and passed on to the next Service Provider. To ensure a smooth transition out the Contractor must:

- a) Return all CMN data, hardware, software, configuration and other important IT information to the Museum or to another designated by the Museum.
- b) Perform and provide to CMN a “dump” in SQL format of all database information concerning the Museum that is maintained on a Contractor owned application so that this information can be used to populate a replacement application. This includes the Service Desk, Network Monitoring and Asset Management/Software Distribution Applications
- c) Cooperatively provide, during a minimum four week transition out period, information and knowledge transfer to the next Service Provider to enable a smooth transition and minimize disruptions to IT Services
- d) Adhere to the “transition out” plan submitted as part of the Contract Bid.

4.10 Value Added Services

The Bidder’s response to rated requirement C9.0 in Appendix C may be used to further develop this section of the Statement of Requirements.

4.10.1 Equipment Acquisition Pass-through Option

Over and above its response to rated requirement C9.0 in Appendix C, the Contractor must offer the ability for CMN to acquire IT goods (hardware, software and/or firmware) from the Contractor. Acquisition may take the form of a lease, rental or outright purchase arrangement. The scope would be limited to goods that fall within the scope of this Statement of Requirement. Each such request would be negotiated as a separate amendment under the resulting contract. This provision would be in force for the duration of the contract and any resulting extension thereof.

4.11 Tables – PC Supported Software List, IMAC Summary, Contractor Reports

This section contains three charts/tables as follows:

1. **PC Supported Software List** – Table 6 provides a listing of PC supported software (base and add-on) including an approximate number of current installations and the relevant software support level. Category 5 software (“best effort”) is not listed.

2. **IMAC Summary** – A consolidated listing of the various categories of installs, moves, adds and changes included in the requirements and the number of occurrences included in Recurring Service Fees.
3. **Contractor Reports** – A consolidated listing of reports required from the Contractor.

4.11.1 PC Supported Software List

While this list is current as of April 2016 it may be modified somewhat by Contract Start date due to operational requirements. Over the life of the contract however, changes are anticipated to be incremental rather than dramatic.

Table 6 - PC Supported Software List

No.	Software/ Application Type	Software Title	Purpose	approx# current installs	PC S/W Support Category*
1	PC S/W - base	Windows 7 OS	Base desktop install	235	1
2	PC S/W - base	Drivers (specific to the workstation)	Base desktop install	235	
3	PC S/W - base	Adobe Flash Player 18 Active X	Base desktop install	235	2
4	PC S/W - base	Adobe Reader XI MUI	Base desktop install	235	2
5	PC S/W - base	Adobe Shockwave Player	Base desktop install	235	2
6	PC S/W - base	Adobe SVG Viewer	Base desktop install	235	2
7	PC S/W - base	Google Chrome	Base desktop install	235	1
8	PC S/W - base	Internet Explorer	Base desktop install	235	1
9	PC S/W - base	Java™	Base desktop install	235	2
10	PC S/W - base	Microsoft .Net Framework	Base desktop install	235	2
11	PC S/W - base	Microsoft Office Professional Plus 2013	Base desktop install	235	1
12	PC S/W - base	Microsoft Visual C++ 2005 Redistributable	Base desktop install	235	2
13	PC S/W - base	Microsoft Visual C++ 2010 x86 Redistributable	Base desktop install	235	2
14	PC S/W - base	Mozilla Firefox	Base desktop install	235	2
15	PC S/W - base	Roxio Creator Business	Base desktop install	235	2
16	PC S/W - base	Symantec Endpoint Protection	Base desktop install	235	1
17	PC S/W - base	VLC media player	Base desktop install	235	2
18	PC S/W	ACDSee	Personal image file management	63	4
19	PC S/W	Adobe Creative Cloud (Mac)	Graphic Design (Exhibits presentations)	1	4
20	PC S/W	Adobe Illustrator (Mac)	Graphic Design (Exhibits, Web and Research presentations)	9	4
21	PC S/W	Adobe InDesign (Mac)	Graphic Design (Exhibits, Web and Research presentations)	7	4
22	PC S/W	Adobe Photoshop (Mac)	Photo editing – advanced	9	3
23	PC S/W	Adobe Photoshop (PC)	Photo editing – advanced	26	3
24	PC S/W	Adobe Photoshop Elements	Photo editing	17	3
25	PC S/W	ArcView	Geographical Information Application	6	4
26	PC S/W	AutoCad	Architecture drawings – advanced	1	4
27	PC S/W	AutoCad Lt	Architecture drawings	5	4
28	PC S/W	Crystal Reports	Reporting tool for SQL databases	8	4
29	PC S/W	Delta	Research - taxonomy applic.	1	4

No.	Software/ Application Type	Software Title	Purpose	approx# current installs	PC S/W Support Category*
30	PC S/W	Digital Chart of the World	Maps for ArcView	6	4
31	PC S/W	EnterpriseOne (JDEdwards)- client	Finance, Pay and HR	38	3
32	PC S/W	File Maker Pro (Mac)	MAC personal database	4	4
33	PC S/W	Firefox – Mozilla (Mac)	Browser	15	4
34	PC S/W	InDesign Suite	Design (Exhibits and Research presentations)	1	4
35	PC S/W	Macromind Director (Mac)	Exhibit interactives development		4
36	PC S/W	MS Front Page	basic html editing (Intranet)	7	2
37	PC S/W	MS Project	Proj. Management	18	2
38	PC S/W	MS Publisher	basic desktop publishing	3	3
39	PC S/W	MS Visio	Business and IT charts, diagrams	8	2
40	PC S/W	MultiMIMSY 2000 - client	Collections Management	20	3
41	PC S/W	OrgPlus 3.x	org charts	1	4
42	PC S/W	PC Anywhere 32	remote computer control	2	4
43	PC S/W	Portfolio - client	Digital Asset Management	5	3
44	PC S/W	ProCite	Research – citations	10	4
45	PC S/W	Quark Express (Mac)	Graphic Design (Exhibits and Research presentations)		4
46	PC S/W	Raiser's Edge - client	Fundraising & Memberships	4	3
47	PC S/W	ReportSmith	Required for Collections System clients	11	4
48	PC S/W	Sequencer	DNA Research Tool	2	4
49	PC S/W	SigmaPlot	Statistics – Research	2	4
50	PC S/W	Smart Label Printer	Label printers	88	4
51	PC S/W	SmarTerm	Terminal Emulation	1	3
52	PC S/W	SPSS	Statistics – Research	2	4
53	PC S/W	SYSTAT	Statistics – Research	3	4
54	PC S/W	TM Vista - client	VMMB Admissions & Reservations	8	3
55	PC S/W	VectorWorks (Mac)	Exhibit Design, drawings	3	4
56	PC S/W	Volo View	Viewing AutoCad files	5	4
57	PC S/W	VPN Client (Cisco)	Remote Access	31	1
58	PC S/W	WinFax Pro	mass faxing (Communications dept)	5	4
59	PC S/W	WS FTP Pro	advanced FTP		4

4.11.2 Network, PC, Telephone and Cabling IMAC Summary Table

Table 7 - Network, PC, Telephone and Cabling IMAC Summary

IMACRR category	Reference	Annual (fiscal year) occurrences included in Recurring Services Fees	Procedure
Network H/W – IMACRRs	4.3.2	unlimited	requires Change Order
NetworkSysSW – patches	4.3.3	unlimited	requires Change Order
NetworkSysSW – upgrades	4.3.3	4	requires Change Order

IMACRR category	Reference	Annual (fiscal year) occurrences included in Recurring Services Fees	Procedure
NetworkSysSW - replaces & new installs	4.3.3	2	requires Change Order
System level support for Major Corp Application installations and upgrades (ref. 4.3.8)	4.3.8	unlimited	requires Change Order
System level support for Other Corporate Application installations and upgrades	4.3.9	4	requires Change Order
PC H/W IMACRRs	4.5.2	= number of current Supported PCs	requires Computer/Telephone Service Request
PC Installs > 20 at one time	4.5.4	0	requires Task Authorization Form
PC S/W adds/changes to PC Software Support Categories 1 and 2 (patches and upgrades) and Category 3 (patches only)	4.5.6, 4.5.7	Unlimited	requires Computer/Telephone Service Request
PC S/W adds/changes to PC Software Support Categories 3, 4, 5	4.5.6, 4.5.7	= number of current Supported PCs	requires Computer/Telephone Service Request
PC S/W adds/changes to PC Software Support Categories 3, 4, 5 for multiple systems using software distribution tool	4.5.6, 4.5.7	3	requires Computer/Telephone Service Request
Telecommunications (Voice/Data) System Installs, Moves, Adds, Changes	4.6.6	= 10% of the total current number of programmed lines	requires Computer/Telephone Service Request
Coordinate multiple Cable/Outlet installation of > 10 at one time	4.7.1b)iv	0	requires Computer/Telephone Service Request

4.11.3 Summary of Required Contractor Reports and Documentation

Table 8 below summarizes the regular/ongoing reports and documentation required from the Contractor. The Museum wants to streamline reporting requirements as much as possible and reduce generation of paperwork. Therefore much reporting/ documentation consists of electronic files or data repositories that are updated as required by the Contractor and are available to CMN IT staff.

Table 8 - Required Contractor Reports and Documentation

	Report/Documentation	Service Ref.	Timeframe for Updates
a	Contractor Organization chart showing Service Delivery Team Members and their organizational relationship to one another	3.1.3	Ongoing - Word or PDF file accessible to CMN IT staff

	Report/Documentation	Service Ref.	Timeframe for Updates
b	Recommendations on changes/upgrades to network architecture, hardware, software, connectivity and/or configuration; status report on serious/recurring network problems	4.3.1	- Recommendations discussed at monthly IT Operations meetings and provided in writing as part of IT Report every 6 months (i.e. in March and September) - Network problem status provided at monthly IT Operations meetings
c	Monitor and report on available upgrades to network system software to ensure it stays within manufacturers support window. Make recommendations on upgrades.	4.3.3 f	Ongoing – Word or Excel file accessible to CMN IT staff. - Recommendations discussed at monthly IT Operations meetings and provided in writing as part of IT Report every 6 months (i.e. in March and September)
d	Network/server performance - ongoing	4.3.4	Ongoing - Read/reporting access to Network monitoring/control application provided to CMN IT staff
e	IT Asset info – general	4.3.5	Ongoing – Read/reporting access to Asset Management application provided to CMN IT staff
f	Network/server performance metrics	4.3.17	Stats added monthly to an Excel file accessible to CMN IT staff
g	Network configuration information	4.3.18	Ongoing - Excel and Visio files accessible to CMN IT staff
h	Service Desk incident info	4.4.2	Ongoing – Service Desk application accessible to CMN IT staff for read and reporting
i	Summary of Change Orders and Computer/Telephone Service Requests (including all IMACRRs)	4.4.8	Stats added monthly to an Excel file accessible to CMN IT staff
j	Desktop problem status	4.5.1 h	Required as part of Contractor’s monthly IT Report and discussed at monthly IT Operations meetings
k	PC configuration info	4.5.5	Ongoing – Word or Excel file accessible to CMN IT staff
l	Specific IT Asset info – hardware and software	4.5.10	Ongoing - Excel file accessible to CMN IT staff
m	Telecommunications recommendations	4.6.1	Recommendations discussed at monthly IT Operations meetings and provided in writing as part of IT Report every 6 months (i.e. in March and September)
n	Telecommunications system info	4.6.10	Ongoing – Excel or Word file accessible to CMN IT staff

	Report/Documentation	Service Ref.	Timeframe for Updates
o	Communication Outlet info	4.7.1c)	Ongoing – shared AutoCAD file updated by the Contractor as changes are made (AutoCAD LT license provided by the Museum)
p	Corporate Database configuration info	4.7.2f)	Ongoing – Word or Excel file accessible to CMN IT staff
q	Service Level Report	4.12	Required Monthly in Excel format
r	Invoices	3.6	Required monthly in paper format (electronic PDF file is also desirable)
s	Software Licensing	4.2.8	As and when requested, but not less than annually.

4.11.3.1 Dashboard for IT Infrastructure Operations

In addition to the individual reports listed in Table 8, the Contractor must on a regular (not less than monthly) basis supply the Technical Authority with a single screen, integrated dashboard which allows roll-up of key performance indicators to indicate the overall health of IT infrastructure operations or of a specific service delivery component (e.g., network management or deskside operations). The dashboard must be in a presentation (e.g., graphs, pie charts) format, suitable for executive-level review. It is desirable but not mandatory that the dashboard provide drill down capability to investigate trends (e.g., display a performance metric based on a rolling period), exceptions and critical performance issues in more depth.

Working with the Technical Authority and within 60 days of the Start Services date, the Contractor must present its recommendations for a dashboard solution which meets the above requirements, including its methodology for data collection, building and deploying the solution. The intention is that both the development and ongoing production of the dashboard should not be onerous. As much as possible, generation of the dashboard results should require little or no manual intervention. Once the recommendations are accepted by the Technical Authority, the Contractor must deliver a working model of the dashboard solution within 30 days of acceptance and a finalized version within 30 days of acceptance of the working model.

During the contract period, the Contractor may be required to provide modifications and/or enhancements to the dashboard solution.

4.12 Service Levels, Service Level Reporting and Remedies

Service Levels represent a concrete/quantifiable indicator of some the Contractor's key service performance requirements. This section consolidates all Service Levels for the Services described in Sections 4.3 through 4.8 and establishes Service Level reporting and escalation/remedy procedures. Service Levels will be reviewed periodically and may be adjusted through negotiation and agreement between the Museum and the Contractor (ref. 3.4.4).

Refer to Definitions (Section 1.7) for Incident Severity Levels, Incident Response and Resolution times and other definitions relevant to Service Level Requirements.

4.12.1 Changes to Service Levels

The appropriateness and usefulness of the Service Levels and the reporting timeframe will be reviewed on a periodic basis (see Section 3.4.4).

Changes to Service Levels which are mutually agreed to by the Museum and the Contractor at Quarterly Review meetings and don't involve changes to Recurring Service Fees can be approved and implemented by a written copy of the revised levels initialed by the Director IM/IT and an authorized representative of the Contractor. The **process to make alterations to Services or Service Levels** that involve changes to Recurring Service Fees is described in Section 3.6.3.

4.12.2 Monthly Service Level Performance Report

The Contractor must provide a **monthly Service Level Performance Report** in Excel format to the Technical Authority no later than 5th business day of each month. The report must include:

- a) A duplicate of columns 1 through 4 shown in 4.12.6
- b) A fifth column with, where relevant, the formula and detailed numbers used to calculate the Service level obtained for the month
- c) A sixth column displaying the service level attained in the month
- d) A seventh column indicating (y/n) if the minimum service level has been attained
- e) The exact format of the report may be modified with the mutual consent of the Museum and the Contractor

Note to Bidders:

The Museum has tried to construct the Service Levels so that once they are initially set up, the Contractor's automated tools (e.g. network monitoring, Service Desk, etc.) and ongoing processes will capture much of the required data. Many of the Service Levels which are not data oriented are simply measured by "random verification". It is therefore assumed that monthly reporting does not have to be a resource intensive task. The Museum, for its part, does not intend to devote significant time or resources to Service Level management, including the review of same, unless reports demonstrate a significant problem.

4.12.3 Accuracy of Reports

The Museum reserves the right to **question the accuracy** of any item in the Monthly Service Level Report. In these cases the Contractor must check the accuracy of the report and make adjustments if necessary.

4.12.4 Remedies

Measured on a monthly basis the Contractor must **meet or exceed the Service Levels for each service described in 4.12.6**. In any case where the Contractor fails to meet the Service Levels in 4.12.6 measured over a three month (i.e. quarterly) period ending in June, September, December and March of each year the Museum will have the **right to apply the Service Level Remedies** referenced under “Applicable Remedies” for each item. These Remedies are as follows:

Table 9 – Service Level Remedies

Remedy #	Description
1	Verbal acknowledgement by Account Manager or Site Service Delivery Manager and discussion with CMN IT Manager on remedial measures
2	Written acknowledgement by Account Manager that Service Levels were not achieved and written description of remedial measures being undertaken.
3	Written acknowledgement signed by the Contractor’s Executive Sponsor that Service Level(s) were not achieved
4	A member of the Contractor’s senior management team must provide a presentation to the Museum’s senior executives, on Museum premises, to explain how the Contractor proposes to remedy the situation.

The Remedies will apply over a moving time period of eight (8) quarters starting with the current quarter and going back the seven previous quarters. In other words “1st occurrence” means the Remedy applies to the first time a quarterly Service Level is missed during the last 8 quarters, “2nd occurrence” means the Remedy applies to the second time the quarterly Service Level is missed during 8 quarters and so on. Effectively the Remedy counter is reset every 8 quarters.

Since the Museum is responsible for providing hardware assets, the Contractor is not accountable for missed Service Levels which are directly attributable to unserviceable network or desktop equipment, provided the Contractor has identified and recommended replacement of this equipment.

Note to Bidders:

Remedies are progressive, with the highest level (level 4) applicable only when a Service Level is missed for the fourth time in 8 quarters and applicable only to a few of the most important service levels. The Museum expects the application of level 3 and 4 remedies to be very rarely required during the life of the Contract.

4.12.5 Earnback Credits

For four (4) of the most important Services Levels the Contractor may earn **credits** by substantially exceeding the quarterly measured Service Level Requirements that may be used to offset “missed” quarterly Service Levels for the same Service/Event. These are presented in the chart below.

- a) Credits are earned on quarterly compiled and measured Service Levels
- b) Credits expire in 8 quarters
- c) A maximum of 2 credits may be applied to offset missed service levels in any 8 quarter period
- d) Credits may only be applied against the same service/event for which they were earned.

Table 10 – Earnback Credits

#	Service/Event	Quarterly Measured Service Level Requirement to Qualify for 1 Service Level Credit for the Service/Event listed
5	Deskside, Telecommunications, & Cable Management Services – Incident Severity Level 3 response during Core Service Hours for Telephones, Communications Cable and Level 1 Supported PCs (Level 2 Supported PCs response is Best Effort)	Incident is responded to within 1 Core Service Hour 95% of the time
7	Deskside, Telecommunications, & Cable Management Services - Incident Severity Levels 3 & 4 resolution during Core Service Hours for Telephones, Communications Cable and Level 1 Supported PCs (Level 2 Supported PCs resolution is Best Effort)	Incident is resolved within 3 Core Service Hours 95% of the time
15	Network & Systems Mgt. Mgt. and Telecommunications Mgt. Services- Incident Severity Levels 1 & 2 Resolution during Core Service Hours	Severity Level 1 & 2 Incidents reported during Core Service Hours are resolved within 30 minutes 95% of the time.
20	Network & Systems Mgt. Mgt. and Telecommunications Mgt. Services- Overall Network & Systems Availability during Core Service Hours	Overall Network & Systems Availability is a minimum of 99.5% during Core Service Hours

4.12.6 Service Level Requirements and Applicable Remedies

Table 11 - Service Level Requirements and Applicable Remedies

#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
1	All Services – Required reports/documentation (4.11.3) are accurate and delivered on time	The reports and documentation summarized in 4.11.3 contain accurate information and are delivered on time 95% of the time.	Reports are checked at monthly IT Operations meetings and at random verifications/audits. Any found discrepancies are noted by the Technical Authority	1- 1 st occurrence 2- 2 nd occurrence 3- 3 rd & more occurrences
2	All Services – Timely response to Task Authorization Forms	The Contractor responds to Task Authorization Forms or revisions thereof initiated by CMN within 5 Core Business Days 95% of the time. Acceptable responses are described in 4.2.6.	Task Authorization Forms are dated when issued by the Museum. Periodic verifications confirm that these are being responded to on time.	1- 1 st occurrence 2- 2 nd occurrence 3- 3 rd & more occurrences
3	Deskside and Telecommunications Services – Computer/Telephone Service Requests - IMACRR requests completed on time	Computer and telephone IMACRR requests are completed within 5 Core Business Days 95% of the time, excluding any stop clock time.	Monthly Excel file report (4.4.8) confirms that IMACs have been completed within time frame.	1- 1 st occurrence 2- 2 nd occurrence 3- 3 rd & more occurrences
4	Deskside Services – H/W installs completed correctly	H/W installs are completed according to established procedures and tested to ensure all hardware and software is functioning properly 95% of the time.	Incident reports and random verifications confirm service has been delivered as required.	1- 1 st occurrence 2- 2 nd occurrence 3- 3 rd & more occurrences

Appendix B: Statement of Technical/Service Requirements

#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
5	Deskside, Telecommunications, & Cable Management Services – Incident Severity Level 3 response during Core Service Hours for Telephones, Communications Cable and Level 1 Supported PCs (Level 2 Supported PCs response is Best Effort)	Incident is responded to within 2 Core Service Hours 95% of the time	Incident response time is calculated as the amount of time from when an incident is escalated from the Service Desk to another resolution group until Contractor personnel providing Network & Systems, Deskside/ Onsite, Telecommunications or Cable Management services visit or contact the affected user or equipment to begin resolving the incident, excluding any stop clock time.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences
6	Deskside, Telecommunications, & Cable Management Services – Incident Severity Level 4 response during Core Service Hours for Telephones, Communications Cable and Level 1 Supported PCs (Level 2 Supported PCs response is Best Effort)	Incident is responded to within 4 Core Service Hours 95% of the time	Same calculation method as item # 6 above	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
7	Deskside, Telecommunications, & Cable Management Services - Incident Severity Levels 3 & 4 resolution during Core Service Hours for Telephones, Communications Cable and Level 1 Supported PCs (Level 2 Supported PCs resolution is Best Effort)	Incident is resolved within 5 Core Service Hours 95% of the time	Incident Resolution time is the amount of time from when an incident is escalated from the Service Desk to another resolution group (e.g. onsite staff) until it is resolved (i.e. service/functionality fully restored), excluding any stop clock time.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences

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#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
8	Technical Specialist Services - Timely provision of Technical Specialist Services	Technical Specialists must respond to phone or e-mail inquiries within 2 Core Business Days and to requests for onsite consultation within 10 Core Business Days 95% of the time.	Random testing will confirm that Technical Specialist response is within required timeframe	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
9	Network & Systems Mgt- Uptime for Wi-Fi solution	The Wi-Fi solution is available 99% of time during core service hours at both VMMB and NHC locations.	Based on network monitoring statistics	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
10	Network & Systems Mgt- Backups completed correctly	All end-of-weekday backups are completed successfully 95% of the time.	All weekdays except statutory holidays are "backup days". Any end-of-day failed backup identifies that day as "backup failure day". The (number of "backup days" minus the number of "backup failure days") divided by the number of backup days gives the percentage of successful backup days. This number is reported each month in the SLA report.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
11	Network & Systems Mgt- Backups completed correctly	In <u>no</u> case must two consecutive backups fail to be completed successfully	The Contractor must inform the Director IM/IT and the relevant application administrator (if applicable) any time a backup fails. The Contractor must identify any two consecutive backup failures for the same data or system on their Monthly SLA report.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences

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#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
12	Network & Systems Mgt- Backup media handled & stored as per approved procedures	Backup media handled and stored as per approved procedures 100% of the time	Incident reports and random testing to confirm media has been handled and stored as per approved procedures	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
13	Network & Systems Mgt- and Telecommunication Services Backup restores completed on time	Backup restores for network or telephone data (e.g. voice mail boxes) are completed within 9 Core Service Hours 95% of the time	Incident reports and random testing to confirm restores have been completed as required.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
14	Network & Systems Mgt- Backup restores completed successfully	Backup restores are completed successfully 100% of the time.	Incident reports and random testing to confirm restores have been completed as required.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences
15	Network & Systems Mgt- Disk Capacity Management –	The Contractor must either correct the situation or request the acquisition of additional disc space within one Business Day whenever any network disc space exceeds 85% of capacity.	Incident reports and random testing to confirm that disc utilization has not exceeded 85% without notification to CMN.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
16	Network & Systems Mgt. and Telecommunications Mgt. Services- Incident Severity Levels 1 & 2 Resolution during Core Service Hours	Severity Level 1 & 2 Incidents reported during Core Service Hours are resolved within 1 hour 95% of the time.	The amount of time from when an incident is escalated from the Service Desk to another resolution group (e.g. onsite staff) until it is resolved (i.e. service/functionality fully restored), excluding any stop clock time.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences

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#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
17	Network & Systems Mgt. and Telecommunications Mgt. Services- Incident Severity Levels 1 & 2 Response during Core Service Hours	Severity Level 1 & 2 Incidents reported during Core Service Hours are responded to within a maximum of 30 minutes 98% of the time.	Incident response time is calculated as the amount of time from when an incident is escalated from the Service Desk to another resolution group or from when an automated network alarm is generated (whichever is sooner), until Contractor personnel providing Network & Systems Mgt. services visit or contact the affected system or equipment to begin resolving the incident, excluding any stop clock time.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd occurrence 4- 4th & more occurrences
18	Network & Systems Mgt. and Telecommunications Mgt. Services- Incident Severity Levels 1 & 2 Response during Extended Service Hours	Severity Level 1 & 2 Incidents reported during Extended Service Hours are responded to within a maximum of 3 hours 95% of the time.	Same calculation method as item # 16 above. The clock for the 3 hour response time will be running during all Extended Service Hour Periods. However if the 3 hours extends beyond 30 minutes into a Core Service Hour Period and the required 30 minute Core Service Hour response will prevail.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
19	Network & Systems Mgt- Network Security policies and procedures adhered to	Network Security policies and procedures are adhered to 100% of the time	Incident reports and random checking to confirm security policies and procedures are being observed and adhered to 100% of the time	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
20	Network & Systems Mgt- and Deskside Services Problem Management – problem resolution or workaround	The Contractor resolves or develops acceptable workarounds for network and desktop problems identified by the Contractor or by CMN IT staff within 20 Core Business Days 95% of the time.	In addition to the Contractors own Problem identification procedures the CMN will occasionally flag serious problems (usually recurring incidents or a serious unresolved incident) in writing.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences

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#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
21	Network & Systems Mgt- Overall Network & Systems Availability during Core Service Hours	Overall Network & Systems Availability is a minimum of 99% during Core Service Hours	Overall Network & Systems Availability means that all network servers and switches are delivering their normal required business functionality. The formula used to calculate overall availability during Core Service Hours is the number of hours all servers and switches are available during Core Service Hours in the month divided by the total number of Core Service Hours in the month Downtime caused by planned maintenance, by building electrical service outages, or any other action for which the Museum is responsible that causes a failure or outage is excluded from the calculation.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
22	Network & Systems Mgt- Server/Switch Availability outside Core Service Hours	Overall Network & Systems Availability is a minimum of 98% of the time outside Core Service Hours	Same as Item # 20 except the formula is number of hours all servers and switches are available outside Core Service Hours during the month divided by the total number of hours outside Core Service Hours in the month	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
23	Service/Help Desk – E-mail or Web form incident response time during Core Service Hours	Incidents reported by e-mail or Web form are responded to within 30 minutes 95% of the time.	As measured and reported in Service Desk application.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
24	Service/Help Desk – Incident resolution time at first point of contact during Core Service Hours	Incident is resolved at the Service Desk or escalated to another resolution group maintained by the Contractor within 15 minutes 95% of time.	As measured and reported in Service Desk application.	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences

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#	Service/Event	Service Level Requirement	Calculation/Measurement Method	Applicable Remedies
25	Service/Help Desk – Telephone caller wait time during Core Service Hours	A Service Desk Agent receives the call and speaks to the telephone caller within a maximum of 2 minutes 95% of the time.	As measured and reported in Service Desk application	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences
26	Service/Help Desk – Telephone caller wait time during Extended Service Hours	A Service Desk Agent receives the call and speaks to the telephone caller within a maximum of 5 minutes 95% of the time.	As measured and reported in Service Desk application	1- 1st occurrence 2- 2 nd occurrence 3- 3rd & more occurrences