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K1A 0S5

Title - Sujet RFI - ARCHIVAL INFORMATION SYSTEM	
Solicitation No. - N° de l'invitation 5Z011-190066/A	Date 2019-03-26
Client Reference No. - N° de référence du client 5Z011-190066	GETS Ref. No. - N° de réf. de SEAG PW-\$EEM-003-34830
File No. - N° de dossier 003eem.5Z011-190066	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-04-26	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Boyer, Tania	Buyer Id - Id de l'acheteur 003eem
Telephone No. - N° de téléphone (613) 858-9232 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: LIBRARY AND ARCHIVES CANADA PLACE DE LA CITE 8TH FL. 550 DE LA CITE BLVD GATINEAU Quebec J8Y0A7 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
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Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	Request for Information Archival I nformation System Renewal (AIS)	5Z011	5Z011	1	Each	\$	XXXXXXXXXXXX	See Herein	

**REQUEST FOR INFORMATION REGARDING
ARCHIVAL INFORMATION SYSTEM
FOR
LIBRARY AND ARCHIVES CANADA (LAC)**

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REQUEST FOR INFORMATION REGARDING ARCHIVAL INFORMATION SYSTEM (AIS) FOR LIBRARY AND ARCHIVES CANADA (LAC)

1) Background and Purpose of this Request for Information (RFI)

The Government of Canada (GC) is in the process of determining the availability of commercially available Archival Information System (AIS) solutions offered as a Software as a Service (SaaS), hosted using a third party infrastructure provider or at a datacenter operated by the Contractor.¹ For the purpose of this Request for Information (RFI), the functions of an AIS include but are not limited to the following:

- Appraisal, Registration, Disposition, Acquisition and Accessioning;
- Resource Description;
- Collection Care and Preservation;
- Workflow Management;
- Physical Storage Management (including space management);
- Loans and Exhibitions;
- Circulation; and,
- Access and Discovery (internal) and via APIs to custom, public-facing access and discovery solutions.

Within the context of the AIS Renewal Project at Library and Archives Canada, LAC is seeking to identify and obtain information on:

- Technology components that are available to deliver a comprehensive integrated solution for the establishment of an AIS;
- Viability of acquiring the components as SaaS to align with the Cloud First principle as outlined in the Government of Canada Strategic Plan for Information Management and Information Technology;
- Current offerings, capabilities and relevant industry standards and best practices;
- Interoperability with existing and future systems using open standards; and,
- Likely costs of the proposed solution(s).

Expected Outcomes of the Archival Information System (AIS) Renewal Project:

For Library and Archives Canada (LAC), the business goal of the AIS renewal project, is to acquire and implement an AIS solution that will help consolidate and integrate its archival collection information (including disparate information that currently lies outside its primary descriptive systems) - up to and including Protected B² - and automate archival business workflows.

¹ Please refer to the following documents which outline Government of Canada security and data residency requirements for SaaS solutions: [Government of Canada Security Control Profile for Cloud-based GC Services](#), [Direction on the Secure Use of Commercial Cloud Services: Security Policy Implementation Notice \(SPIN\)](#), [IT Security Risk Management: A Lifecycle Approach \(ITSG-33\)](#) and [Direction for Electronic Data Residency](#).

² "Protected B applies to information or assets that, if compromised, could cause serious injury to an individual, organization or government." ("Protected B," *Security levels for sensitive government information and assets*, Public Works and Government Services Canada. <https://www.tpsgc-pwgsc.gc.ca/esc-src/protection-safeguarding/niveaux-levels-eng.html>.)

The security requirement has been identified at the Protected B level but Canada reserves the right to change this requirement as needed at any time. All data will be the property of Canada.

The LAC stakeholders are looking for an integrated solution to replace legacy applications for the management of archival holdings (analogue and digital), which:

- (i) possesses a full range of collection management capabilities;
- (ii) aligns with national and international archival standards;
- (iii) supports online viewing and consultation through interoperability with the institution's custom-built public-facing discovery layer and external applications in accordance with GC and LAC policies;
- (iv) possesses the ability to manage a variety of rights, restrictions and permissions, including but not limited to: legislated access restrictions, administrative access restrictions, copyrights, donor assigned restrictions and agreements, indigenous assigned restrictions and agreements, etc.;
- (v) improves usability by enabling staff to perform tasks efficiently with a reasonable amount of training; and,
- (vi) is customizable to meet GC and LAC policy requirements and business process needs.

2) Nature of Request for Information

This RFI is not a solicitation nor will it be used to pre-qualify or otherwise restrict participation in any future RFP. A contract will not result from this RFI.

The issuance of this RFI does not create an obligation for the Stakeholders to issue a subsequent RFP, and does not bind the Stakeholders legally or otherwise, to enter into any agreement or to accept any suggestions from potential bidders. Industry recommendations that do not restrict the level of competition nor favour a particular company or option will be given consideration. However, the Stakeholders reserve the right to accept or reject any or all recommendations received.

Responses to this RFI will not be used to identify a source list for the purposes of undertaking any future work. Responding to this RFI is neither a condition nor a prerequisite for participation in any RFP if the Stakeholders elect to proceed with the RFP.

3) Nature and Format of Responses Requested

Respondents are requested to provide their comments, concerns and, where applicable, alternative recommendations regarding how the requirements or objectives described in this RFI could be satisfied.

Respondents are also invited to provide the following information as part of their response:

- (i) A company profile;
- (ii) An overview of their archival information solution;
- (iii) A list of sites where their archival information system has been implemented;
- (iv) A list of Galleries, Libraries, Archives and Museums (GLAM) institutions that currently use their solution, including contact information; and
- (v) A statement indicating whether or not they are willing to participate in a one-on-one meeting, at no cost to Canada, and by which method (on-site or by video conference) they wish to participate.

This RFI also contains specific questions addressed to the industry (refer to Attachment 2 – Questions to Industry).

Respondents should explain any assumptions they make in their responses.

4) Response Costs

Canada will not reimburse any respondent for expenses incurred in responding to this RFI.

5) Treatment of Responses

- a) **Use of Responses:** Responses will not be formally evaluated. However, the responses received may be used by Canada to develop or modify procurement strategies or any draft documents contained in this RFI. Canada will review all responses received by the RFI closing date. Canada may, in its discretion, review responses received after the RFI closing date.
- b) **Review Team:** A review team composed of representatives of the client (where applicable) and PSPC will review the responses. Canada reserves the right to hire any independent consultant, or use any government resources that it considers necessary to review any response. Not all members of the review team will necessarily review all responses.
- c) **Confidentiality:** Respondents should mark any portions of their response that they consider proprietary or confidential. Canada will handle the responses in accordance with the Access to Information Act.
- d) **Follow-up Activity:** Canada may, in its discretion, contact any respondents to follow up with additional questions or for clarification of any aspect of a response.

6) One-on-One Vendor Sessions

In addition to written responses, Canada is seeking one-on-one meetings with the industry to consult on the development for any potential procurement of an AIS. Following the closing date, the Contracting Authority will follow up individually with all respondents who indicated in their responses that they wish to meet with Canada. The intent of these meetings is to allow respondents to present an overview of their solution and to provide Respondents with the opportunity to ask questions and to provide feedback regarding this RFI. All information and questions regarding one-on-one meetings to respondents will be managed and sent by the Contracting Authority.

One-on-one meetings are planned to be held in Gatineau, Quebec, Canada following the closure of the RFI's posting period. Representatives from the Stakeholders and PWGSC will be in attendance. Upon the request of the interested parties, videoconferencing will be considered as an alternate to in-person meetings.

The feedback received at the one-on-one sessions will first be analyzed for further consideration by the LAC Stakeholders and any pertinent recommendations, questions and answers will be included in a One-on-One Meeting Day Record. The One-on-One Meeting Day Record will be provided through an amendment to the RFI, and will not directly or indirectly attribute questions, comments or recommendations to any particular Respondent.

Participants to the one-on-one meetings will be required to identify the following:

- a) Legal company name and corporate address;
- b) Names of representatives and respective titles requesting to attend;
- c) Contact information of representatives (office address, telephone number(s) and email address); and
- d) Type of one-on-one meeting (in-person or via videoconference).

Please note that:

- All participants are requested to sign-in upon arrival at the venue.
- Participants are responsible for their own transportation, accommodation, meals, parking and all other expenses.
- Participation is not mandatory.
- Media cannot participate in the one-on-one meetings.

7) Contents of this RFI

- a) Annex 1—Overview of Current Situation
- b) Annex 2—Questions to Industry
- c) Annex 3—Definitions, Acronyms and References

8) Volumetric Data

The volumetric data (see page 8 of this document) is being provided to respondents purely for information purposes. Although it represents the best information currently available to PWGSC, Canada does not guarantee that the data is complete or free from error.

9) Format of Responses

- a) **Cover Page:** If the response includes multiple volumes, respondents are requested to indicate on the front cover page of each volume the title of the response, the solicitation number, the volume number and the full legal name of the respondent.
- b) **Title Page:** The first page of each volume of the response, after the cover page, should be the title page, which should contain:
 - i. the title of the respondent's response and the volume number;
 - ii. the name and address of the respondent;
 - iii. the name, address and telephone number of the respondent's contact;
 - iv. the date; and
 - v. the RFI number.
- c) **Numbering System:** Respondents are requested to prepare their response using a numbering system corresponding to the one in this RFI. All references to descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.
- d) **Number of Copies:** Canada requests that respondents submit **1** electronic copy of their responses.

10) Submission of Responses

- a) **Time and Place for Submission of Responses:** Suppliers interested in providing a response should deliver it by email to the Contracting Authority identified above by the time and date indicated on page 1 of this document.
- b) **Responsibility for Timely Delivery:** Each respondent is solely responsible for ensuring its response is delivered on time to the correct email address.
- c) **Identification of Response:** Each respondent should ensure that its name and email address, the solicitation number and the closing date appear legibly on the outside of the response.

11) Language of Response

Responses may be tabled in English or French at the preference of the Respondent

12) Enquiries

Because this is not a bid solicitation, Canada will not necessarily respond to enquiries in writing or by circulating answers to all potential suppliers. However, respondents with questions regarding this RFI may direct their enquiries to:

Contracting Authority: Tania Boyer
E-mail Address: Tania.Boyer@tpsgc-pwgsc.gc.ca
Telephone: (613) 858-9232

ANNEX 1 - OVERVIEW OF CURRENT SITUATION

The role of Library and Archives Canada (LAC) is to collect, manage, preserve and provide enduring access to the wide range of documentary resources within its [mandate](#). LAC is proposing to establish an integrated Archival Information System (AIS) for its archival collection areas. LAC is looking for solution(s) that address collections management in government and private archives, comprising information up to and including Protected B status. The solution(s) and any training required must be available in both Canadian English and Canadian French and comply with any other applicable legislated requirements.

In order to respond to this fundamental challenge, LAC developed a Digital Strategy (http://publications.gc.ca/collections/collection_2016/bac-lac/SB4-36-2016-eng.pdf) with ten key strategic goals in 2015. LAC is implementing an institution-wide initiative that includes the alignment of policies, processes, and digital infrastructure.

The envisaged LAC Digital Platform comprises the integration of multiple systems, primarily operating in certified cloud environments, including managed file transfer and pre-ingest processing, asset management, descriptive catalogue systems, and content delivery solutions to manage the full life cycle of digital and non-digital material. The diagram below illustrates the Digital Platform in the context of LAC as a digital enterprise.

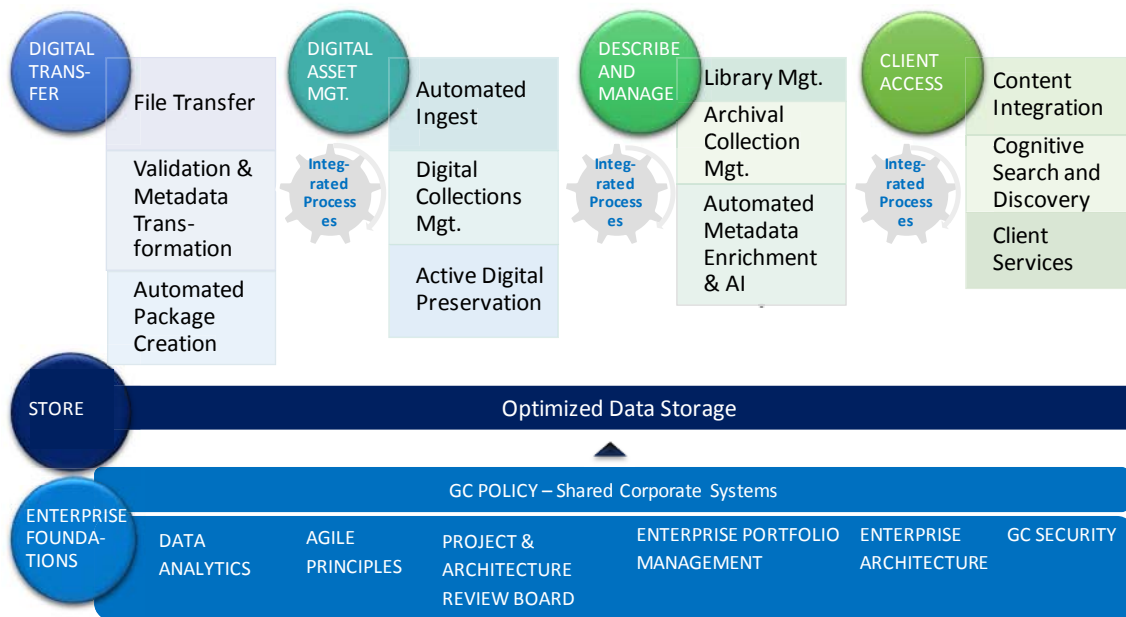


Figure 1 – LAC as a Digital Enterprise

The current RFI pertains to the box labeled Archival Collection Management under **Describe and Manage**. While Archival Resource Description remains a primary focus, additional functionalities related to the management of analogue and digital collection are also sought. These include but are not limited to the following:

- Appraisal, Registration, Disposition, Acquisition and Accessioning;

- Collection Care and Preservation;
- Workflow Management;
- Physical Storage Management (including space management);
- Loans and Exhibitions;
- Circulation; and,
- Access and Discovery (internal) and via APIs to custom, public-facing access and discovery solutions.

KEY BUSINESS CHALLENGES

Based on consultations with LAC staff through workshops, the following challenges were identified:

- Legacy systems that do not enforce current archival metadata (descriptive and administrative) standards and workflows;
- Processing efficiency issues include lack of workflow management, lack of support for controlled vocabulary and linked data, reliance on spreadsheets, lack of effective system-managed finding aids;
- Multiple data quality issues due to legacy migrations and business process variations over time;
- Lack of support for conservation activities of collections; and
- Lack of support for loans and exhibitions of collection material.

LAC COLLECTION

LAC has the role of custodian and steward responsible for providing enduring access to the country's documentary heritage. Its key archival collection programs include:

A) GOVERNMENT ARCHIVES

Government records are information resources in all media created or received by federal government institutions in support of public policy, the administration of government, and the delivery of programmes and services to Canadians. In accordance with the [Library and Archives of Canada Act](#) (2004), federal government institutions cannot dispose of their records without the authority of the Librarian and Archivist of Canada, and must transfer records identified by the Librarian and Archivist to have historical or archival importance, to LAC. Government records at LAC date from before the time of Confederation to the present and include material such as censuses, military personnel files, patents of invention, records from Commissions of Inquiry, treaties signed with First Nations, and immigration records (passenger lists and border entry lists).

Government records include a variety of formats and media, such as audiovisual material, cartographic material, technical and architectural drawings, photographs, textual documents, philatelic material, digital record and databases. Currently, LAC's archival government holdings are primarily paper. However, as of 2017, born-digital archival records created after 2017 will be acquired in digital format only.³

B) PRIVATE ARCHIVES

Private archives are records created or received by non-government agencies, corporations, institutions, families, or individuals in the course of their activities, and preserved for their informational, intrinsic, and evidential value. Private archives cover virtually every sphere of activity in a society. LAC's private archives holdings include a variety of formats and media, such as art, audiovisual material, cartographic material, technical and architectural drawings, photographs, textual documents, philatelic material and born-digital record.

Also included within the private archives are records from those GC institutions not subject to the LAC Act; these institutions work with LAC on a voluntary basis to ensure the long-term preservation of important records.

³ Library and Archives Canada, "Digital by 2017," [Guidelines for Information Management](#)

CURRENT ARCHIVAL SYSTEMS

LAC uses two main systems to capture its descriptive and administrative collection information:

- Mikan/CMS - a bespoke application built in-house and used to capture the intellectual (descriptive) and physical management information for the majority of LAC's archival holdings.
- MISACS (Moving Image and Sound Archive Collection System) - a set of MINISIS data sets used to capture intellectual, format/version, and location information for LAC's audiovisual holdings.

Complementary to these systems is an additional extensive set of discrete applications and subject repositories (databases) used to support aspects of the archival function and workflow (IHMS, RDACS, ACTS, QMS, Outlook, etc.), in addition to the discoverability of and access to specialized content such as detailed note and physical location information (WebTrakker) or granular document-level information and digital surrogates (GenApps).

LAC VOLUMETRIC DATA (as of September 2017)⁴

Collection	Storage Volume	Number of records	Estimated Growth Projections	Formats	Comments
Specialized subject repositories (databases) such as census records, passenger lists, military files	Storage size unknown	Nearly 55 million descriptive records	4% per year	Object/item/file-level descriptive metadata with digital objects (digital presentation copies) Digital content includes: over 11.2 million jpgs, 6.7 million PDFs, 2.1 million gifs, and 12,000 mp3s.	Content contained in over 100 discrete databases and online exhibitions. These repositories vary in size and structure. Digital objects (presentation copies) are stored in a separate repository. Intellectually related high-level Fonds/Collection/Series descriptive metadata are stored separately in Mikan/CMS.
Private and government archival descriptions (Mikan/CMS)	214 gigabytes (descriptions only)	2,510 collection and 11,290 fonds/collection-level descriptions; nearly 5 million lower-level descriptions (sous-fonds, series, sous-series, file, item, etc.); links to 2 million+ digital presentation copies; over 88,000 URLs,	3% per year	Descriptive metadata is stored in relational databases according to a locally customized MARC21 format. Metadata is presented in the internal user interface according to a Rules for Archival Description (RAD) template	Digital objects (digital presentation copies, finding aids, etc.) are stored in a separate repository.

⁴ The contents of this chart have been adapted from information originally submitted by various LAC AIS business stakeholders as part of the Digital Curation Initiative procurement process. The information is current to September 2017.

Collection	Storage Volume	Number of records	Estimated Growth Projections	Formats	Comments
		(including links to 6,000+ finding aids)		with a MARC21 view option.	
MISACS suite of datasets (6) for audiovisual descriptions	4 gigabytes (descriptions only)	498,000+ item-level intellectual descriptions, 740,000 descriptions of physical items linked to intellectual descriptions and 48,000 work orders linked to physical descriptions.	4% per year	Descriptive metadata is stored according to a locally customized metadata format mapped to MARC 21	The database contains no digital content

OTHER RELATED SYSTEMS

Digital Asset Management

LAC has procured a digital asset management and preservation system, Preservica Enterprise Edition, as a private cloud SaaS solution. Any proposed AIS will need to interoperate with Preservica to allow bi-directional synchronization of metadata records related to digital assets. This may be through a pre-built connector or through customization using, ideally, an API based on REST (preferred) or SOAP.

Public-Facing Collection Access and Discovery

[Collection Search Beta](#) is a tool that provides LAC's public users with a single collection search window in both Canadian French and Canadian English. It consolidates access to descriptive information and digital object content (i.e., digital surrogates) from LAC's main archival system Mikan/CMS in addition to descriptive information and digital object content from the institution's extensive set of discrete subject repositories (i.e., GenApps) developed over many years and, more recently, to new repositories for crowdsourced descriptive and digital content (i.e., [Co-Lab](#)). Select data from the aforementioned sources are extracted, transformed (i.e., cleaned, standardized, mapped, denormalized, etc.) and loaded into a read-only format into LAC's aggregated data source, or Global Output Metadata Repository (GOMR), ready for indexing. Proprietary search technology indexes content from the GOMR, makes it searchable via its REST interface, and offers a series of advanced features such as facet refinement, autosuggestion, etc. A custom-built search API layer pre-processes all search requests. This same layer translates the end user selection into a call via the search REST API making it directly consumable by the user interface (presentation API layer).

With Collection Search Beta, users have access to modern functionalities, such as downloadable content (i.e., digital surrogates) and exportable result lists, and are able to search within crowdsourced metadata provided by the users themselves.

ANNEX 2 – QUESTIONS TO INDUSTRY

Organization Background and Reference Information

	Profile of the Organisation
Q.1	Describe your organisation.
Q.2	What security management certifications and assessments have been completed at your organization and third party infrastructure provider from the following: a) ISO/IEC 27001; b) ISO/IEC 27017; c) ISO/IEC 27018; d) Federal Risk and Authorization Management Program (FedRAMP) e) Cloud Security Alliance (CSA) Security, Trust and Assurance Registry (STAR) (i.e. Certification Level 2); and, f) American Institute of Certified Public Accountants (AICPA) System and Organization Controls (SOC) audit reports or certifications (i.e. SOC 2 Type II, SOC for Cybersecurity).
	Product Offerings
Q.3	Does your company currently provide any solutions for documentary heritage institutions (galleries, libraries, archives, museums), particularly at national and state/provincial/territorial levels? Please provide details.
Q.4	Identify and provide a brief, high-level overview of your software solution(s) that could apply to an Archival Information System. (If Spectrum compliant, please specify the relevant Spectrum 5.0 procedures.)
Q.5	Describe your solution's security model.
	Product Roadmap and Support
Q.6	Is there a process that defines how the user community can propose enhancements to the product roadmap and how product features are decided, prioritized, developed and released?
Q.7	Do you offer professional services related to configuration, customization, and data migration?
Q.8	Describe the extent of your user and technical documentation, training and support services. Are these available in Canadian French and Canadian English?
	Cost Structure PLEASE PROVIDE PRICING INFORMATION AS A SEPARATE DOCUMENT THAT DOES NOT INCLUDE ANY COMPANY/PRODUCT INFORMATION OR IDENTIFIERS. ANY DOCUMENTS WHICH INCLUDE FINANCIAL/PRICING INFORMATION ALONG WITH COMPANY/PRODUCT IDENTIFIERS WILL NOT BE ACCEPTED.
Q.9	Describe the licensing model and costs associated with your software. Please include details where possible, such as: a) separate lines software; b) software maintenance and support services; c) professional services; d) training; and, e) other (please specify).
Q.10	Are your product offerings available as a Software as a Service (SaaS) either hosted using a third party infrastructure provider or at a datacenter operated by you? If so, please provide details and the pricing model.
	Case Studies and Other Reference Documentation
Q.11	Please provide case studies related to the successful large-scale implementation of your solution(s) within the context of documentary heritage or other institutions.
Q.12	Describe the experiences and key challenges that you faced in migrating large archival collection information catalogues into your solution from legacy systems?
Q.13	Please provide a published scalability test and architectural diagram(s) for your solution.

Global Capabilities

	General
Q.14	<p>Describe the scope of the relational capabilities of your software (in all modules or only select modules – please specify). In other words, describe the ways in which different records, or sub-records, could be related or associated to each other, and which multiplicities of relations are allowed (e.g. one-to-many, many-to-one, one-to-one, many-to-many).</p> <p>Examples of this include: descriptive records sharing hierarchical relations in a traditional fonds structure (fonds, series, files, items); accession records that are related to descriptive records; descriptive records that contain links to physical carriers or digital objects; and interrelated physical locations (e.g. shelf locations in vaults).</p>
Q.15	<p>Describe the capabilities of your software to define business rules (all modules or only select modules – please specify) on information records with regards (but not limited) to:</p> <ol style="list-style-type: none"> circulation (i.e. on-deposit, legislated restriction, donor restriction, administrative closure, etc.); access control (i.e. on-deposit, legislated restriction, donor restriction, etc.); and approvals.
Q.16	<p>Describe the customization capabilities of your software (all modules or only select modules – please specify) with regards to:</p> <ol style="list-style-type: none"> data entry templates; user interface; configuration/integration of custom controlled vocabulary lists; configuration/integration of custom multilingual translation tables (French, English, Indigenous); and reporting.
	Data Entry and Data Management
Q.17	Does your software support the conversion of existing description records to a newer version of a metadata standard or to an alternate metadata standard?
Q.18	<p>Describe the following editing capabilities (as applicable) of your software:</p> <ol style="list-style-type: none"> an inline editor for multi-line fields, find and replace text strings, bulk update of whole fields to a value or to null, for the repeatable fields of a selected sub-set of descriptive records, the ability to select the instance of repeat and globally update entire field content or a portion of content for the selected instance only, ability to edit hyperlinks to other assets within or outside the system (i.e., finding aids, digital presentation copies, etc.) in bulk, and spell check.
Q.19	<p>Describe the features of your software that support approvals and execution of large-scale bulk (batch) operations such as the following:</p> <ol style="list-style-type: none"> import (creation) of descriptive records and finding aids; update (modification) of descriptive records; rearrangement of descriptive records; export of descriptive records and finding aids; and deletion of descriptive records. <p>What data file formats are supported for import and export? Are there any published performance tests for batch import and export of records using your software?</p>
Q.20	Can archival staff perform the batch import and export of descriptive records or does this activity require more specialized technical skills?
Q.21	Is it possible to store documents within the system (all modules and/or only select modules) or link to documents stored external to the system? What file formats are supported? Is there a limit to how much information can be stored/linked?
Q.22	Describe the template creation and data validation features of your software (i.e., input masking, date formats, etc.).

Q.23	Does your software support the translation of field labels and controlled vocabulary lists? Is it possible to integrate an external translation service with your system?
	Workflows
Q.24	Describe the workflow features of your software with regards to supporting business processes such as: <ul style="list-style-type: none"> a) task management (assignment, approvals, dashboards); b) work order management (treatment, digitization, etc.); and, c) rights management (legislated, donor assigned, indigenous, administrative).

Archive Information Management

	Appraisal, Registration and Accessioning
Q.25	Describe the features of your software related to documenting the appraisal, acquisition, transfer, registration, accessioning and removal (e.g. de-accessioning, private archives disposition, transfer, etc.) of archival material. What type of information can be captured/stored.
	Resource Description
Q.26	Does your software support the data entry and viewing of multilingual description from a single screen?
Q.27	State the abilities of your software to support hierarchical description (for example fonds/collection, series, accession, etc.) and different hierarchy depths across collections. <ul style="list-style-type: none"> a) Are there any limits to hierarchically-related descriptive records, such as those that would be constructed in an archival arrangement for a fonds/collection? Limits could include a maximum number of levels available in a hierarchy. b) In addition, could other types of relations be devised between different types of descriptive records, such as those describing records being separated from authority records for creators, as would be the case in a series system of arrangement? c) Could your system support having a series system for government archives at the same time as a traditional fonds/collection system for private archives, with shared creator authority records?
Q.28	Is it possible to reorganize hierarchies? Can the reorganization of hierarchies be performed with mouse drag and drop actions?
Q.29	Within a hierarchy, is it possible for child-level records to inherit properties (access rules, default values, etc.) from a parent-level record and <i>vice versa</i> (extent, date ranges, media, etc.) at the time of descriptive record creation or subsequent update?
Q.30	Describe how your software supports the linking of multiple digital surrogates (presentation copies, presentation manifestations of “born-digital” material) in various formats to a descriptive record? Are there any limits on the maximum number of items that can be linked to a single descriptive record?
Q.31	Describe how your software supports the use of metadata templates for the tracking and viewing of migration/digitization history particularly for audio-visual media? For example, is it possible to utilize a custom Extensible Markup Language (XML) template such as the one developed by the Museum of Modern Art (https://github.com/peggygriesinger/NDSR) for describing the processing history of audio-visual media?
Q.32	Does your software provide the ability to comply with archival description standards such as: <ul style="list-style-type: none"> a) Rules for Archival Description (RAD); b) General International Standard Archival Description (ISAD-G); c) International Standard for Describing Functions (ISDF); d) International Standard for Describing Institutions with Archival Holdings (ISDIAH); and, e) International Standard Archival Authority Record for Corporate Bodies, Persons and Families (ISAAR-CPF).
Q.33	Does your software support integration with automated metadata enrichment and AI tools (i.e., Autonomy Collaborative Classifier, Luxid, Synaptica Solutions, etc.) for indexing (authorities, place names/communities and subject headings), classification and taxonomy generation?
	Collection Care

Q.34	Describe the features of your software to record physical condition and conservation treatment information at the collection and individual item levels.
Q.35	What are the features in your software that allow it to have sufficient flexibility to support recording of collection care for all materials including: art (oil, watercolour, drawing, and other various supports), textual records (various supports), architectural plans, maps, charts, objects (i.e., medals, models), postal stamps, photographs, negatives, nitrate, all audio-visual formats, and digital.
Physical Storage Management	
Q.36	Describe the features of your software to manage physical locations and containers.
Q.37	Does your software allow the linking of multiple units of storage (tape, box, reel, portable media storage device, etc.) and locations to a single descriptive record or multiple descriptive records to a single unit of storage?
Q.38	Describe the features of your software with regards to collection space management (vaults, shelving, processing areas, etc.) and reporting. At what level of granularity is your software able to indicate if space is occupied or available?
Loans and Exhibitions	
Q.39	Describe the features of your software to manage loans and exhibitions. For example, does it offer collection item selection and curation functionality; is it possible to register and view the history of loans and exhibitions for collection items; and does your software permit the definition of alerts (i.e., items due for return from loan, items due for rotation out of exhibition, etc.)?
Circulation	
Q.40	Describe the features of your software with regards to the circulation of collection material? For instance, are there features that relate to holds or restrictions on the movement of containers or digital assets (e.g. preventing orders for items on loan or otherwise unavailable: restrictions based on permission or collection closures, etc.).
Q.41	How does your software track the movement of containers? For example: can it provide an audit trail of the complete movement history of a container (location and user); does it support the real time download and upload of data using wireless barcode scanners?
Access and Discovery (Internal)	
Q.42	Describe the search and discovery features of your software with regards to the following: a) basic and advanced search such as Boolean operators, fuzzy search, stemming, phrase search, proximity search, phonetic search, wildcard search; b) faceted search, date ranges; c) semantic, concept, natural language and other advanced search strategies.
Q.43	Describe the features of your software with regards to access rights management. These could include but are not limited to: a) ability to assign, edit, remove access rights singly or in batch processes; b) ability to capture blanket (collection-level) and/or granular (file/item-level) restriction information; c) ability to customize assignment of access rights (down to the file or item level) for certain users and link to authority documents (departmental researcher letter, Band Council Resolution, donor letter, etc.) under circulation profiles.
User interface (Internal)	
Q.44	Describe if your user interface uses a web browser or a desktop client. Are any special plug-ins required? If browser-based, which browsers are supported?
Q.45	Describe the help features of your software such as online help, tool tips, context sensitive help, and tutorials. For example, is it possible to integrate context-sensitive data field explanations?
Q.46	Describe the features of your software that will allow a user to enter data rapidly. For example, can the user enter data without the use of a mouse?

System Management

System-level Administration	
Q.47	Describe the auditing capability of your software as it relates to information access history and data changes.

Q.48	Is it possible to revert to any previous version of a record? Please state any limitations.
Q.49	Does your software support soft and permanent delete of records? Is there an approval workflow to prevent the accidental deletion of records?
Q.50	Describe the reporting capabilities of your software with examples of the types of reports that can be generated. Does your software support the capability of creating custom reports? Can reports be printed or saved to file formats such as PDF or Excel?
Q.51	Can the system be linked via APIs to external reporting software (e.g., Cognos)?
	User Management
Q.52	Does your software allow for the definition of fine-grained access control such as authorization levels and field-level access control based on user roles and groups?
	System Requirements
Q.53	Does your software support Canadian English and Canadian French user interfaces and online help? If not, describe the process by which this can be achieved. Can the user toggle between the desired language (Canadian English and Canadian French) of the user interface?
Q.54	Does your software support the input and display of special characters through an implementation of Unicode such as UTF-8?
Q.55	How does your software achieve scalability to the multi-million range of records with extensive hierarchical arrangements? For example, the Department of National Defence fonds (English description) has a total number of 1100 lower-level hierarchical sub-sets as follows: 782 series, 161 sub-series and 157 sub-sub series in addition to thousands of related file-level descriptions. Please provide a case study of a successful large-scale implementation or a published scalability test and architectural diagram(s).
	Compliance with Metadata standards
Q.56	Does your software support international and custom metadata standards such as: a) Metadata Encoding and Transmission Standard (METS); b) DCMI Metadata Terms; c) Metadata Object Description Schema (MODS)?
Q.57	Does your software support: a) Encoded Archival Description (EAD); b) Encoded Archival Context (EAC-CPF)?
	Metadata Import/Export
Q.58	Is it possible to dynamically generate Encoded Archival Description (EAD) finding aids and publish them for online use?
	Integration and Interoperability
Q.59	Does your software have documented APIs based on REST (preferred), SOAP, and OAI-PMH to exchange and synchronize metadata with external systems such as digital asset management (e.g. Preservica), digital archival processing and custom-built, public-facing search/discovery systems? What metadata standards does your API use (i.e., METS, MODS)? What exchange formats does your API use (i.e., JSON, XML)?
Q.60	Does your software provide single sign-on authentication of users? Please describe how this is implemented.
Q.61	Does your software support integration with external lexicon, ontology and thesauri services?
	Data Sovereignty, Security and Residency
Q.62	Does your solution meet the following requirements related to data sovereignty: a) all data are the property of the Government of Canada; b) all data infrastructure components reside in Canada; c) all servers and data repositories are housed in Canada; d) any off-site storage is housed within secure approved location(s) in Canada.
Q.63	Does your solution allow Canada to retain sovereign control over its data, meaning that all data will be stored on servers that reside in Canada and all data in transit will be appropriately encrypted? (See: https://www.canada.ca/en/treasury-board-secretariat/services/information-technology/cloud-computing/government-canada-cloud-adoption-strategy.html)
Q.64	How is data isolated and safeguarded from other clients (i.e., dedicated data centers/servers)?
Q.65	What steps has your organization taken to address the following: a) ensure the security and confidentiality of Canada's data;

	<ul style="list-style-type: none"> b) protect against any anticipated threats or hazards to the security or integrity of Canada's data; c) protect against unauthorized disclosure, access to, or use of Canada's data; d) ensure the proper disposal of Canada's data; and, e) ensure that all employees, agents, and subcontractors of the Contractor, if any, comply with all of the foregoing.
	Exit Strategy and Disaster Recovery
Q.66	<p>Describe the exit strategy for your software as it pertains to the following:</p> <ul style="list-style-type: none"> a) Documented XML standard-based output packages for all forms of metadata; b) Retention of all hierarchical structural metadata; c) Retention of all access rules applied to metadata (i.e., descriptive, administrative); d) Return of all data to the Government of Canada; and, e) Documentation related to the exit strategy process.
Q.67	Describe your Disaster Recovery Plan, including the architecture. Would any additional investment be required?

Additional Information

Q.68	Are there any additional features that we have not addressed above? Please identify and explain.
Q.69	Do you have any additional comments that you would like to share?

ANNEX 3 — DEFINITIONS, ACRONYMS AND REFERENCES

1. DEFINITIONS

For the purpose of the RFI, the following definitions apply.

Archive Management

Term	Definition
Accession	Accessions are materials physically and legally transferred to a repository as a unit at a single time; an acquisition. The materials may be acquired by gift, bequest, purchase, transfer, retention schedule, disposition authorization, or statute. An accession may constitute part (accretion or accrual) of a larger, existing collection/fonds.
Accessioning	Accessioning is defined as the process of formally accepting and recording the receipt of material into archival custody. Accessioning involves physical and intellectual control. The process also documents the legal transfer of material. (See also: Registration .)
Acquisition	The act of obtaining records for the archives, through donations, transfers, loans, or purchase.
Appraisal (archival)	In an archival context, appraisal is the process of determining whether records and other materials have permanent (archival) value. Appraisal may be done at the fonds/collection, creator, series, file, or item level. Appraisal can take place prior to donation and prior to physical transfer, at or after accessioning. The basis of appraisal decisions may include a number of factors, including the records' provenance and content, their authenticity and reliability, their order and completeness, their condition and costs to preserve them, and their intrinsic value.
Collection	A body of archival material formed by or around a person, family group, corporate body, or subject either from a common source as a natural product of activity or function, or gathered purposefully and artificially without regard to original provenance. A collection may contain manuscripts, documents, correspondence, memoranda, photographs, maps, drawings, near-print materials, pamphlets, periodical tear-sheets, broadsides, newspaper clippings, motion picture films, computer files, etc.
Deaccessioning	The process by which an archives, museum, or library permanently removes (legal and physical custody) accessioned materials from its holdings.
Descriptive record	Documenting in a standardized form, information about the structure, function and content of records. Typically includes information such as creator, title, dates, extent and contents. At LAC, descriptions are devised in accordance to its implementation of the Canadian descriptive standard, the <i>Rules for Archival Description</i> .
Deposit	Materials placed in a repository without transfer of formal title or legal custody.
Disposition	The final stage in the information life cycle during which records are either <ul style="list-style-type: none"> a) transferred to LAC for preservation, b) transferred outside the Government of Canada, or c) destroyed. Disposition on the Private side consists of Destruction, Returned to source, or transferred to another Institution. It also consists of deaccessioned material.
Finding Aid	A tool that facilitates discovery and retrieval of information within a collection of records. Finding aids can come in a wide range of formats, including card indexes, calendars, guides, inventories, shelf and container lists, and registers. At LAC the majority of finding aids consist of: <ul style="list-style-type: none"> a) Item, file or box listings, available in paper format, pdf format, Excel format or b) File-level or item-level descriptions within current description systems (Mikan [as part of a hierarchy tree] or MISACS).
Fonds	The entire body of records of an organization, family, or individual that have been created and accumulated as the result of an organic process reflecting the functions of the creator. A fonds may contain manuscripts, documents, correspondence, memoranda, photographs,

	maps, drawings, near-print materials, pamphlets, periodical tear-sheets, broadsides, newspaper clippings, motion picture films, computer files, etc.
Reappraisal	The process of identifying materials that no longer merit archival preservation and that are candidates for deaccessioning .
Registration	<p>Registration is the establishment of initial physical control over records received by LAC prior to their final evaluation as potential acquisitions. The process involves recording the arrival of x number of containers of records, recording the source or location from which the material was picked up, the physical application of a registration number on each container, the assignment of containers to an interim storage location (or the temporary location on LAC servers in the case of digital records), and the data entry of the basic data elements into a registration record. Registration also applies to records retained on deposit.</p> <p>The primary purpose of registration is to establish initial physical control over material received by LAC. For a variety of reasons, not all records presented to LAC are suitable for acquisition. Registration allows archivists an opportunity to examine material, and evaluate its value as a potential acquisition.</p> <p>In the case of government records received from institutions subject to the LAC Act, registration is the acknowledgement of receipt of records. LAC assumes its legal responsibilities under the Access to Information Act and the Privacy Act for government records received from institutions subject to the LAC Act at the time of registration.</p>
Resource description	The process of analysing, organizing, and recording details about the formal elements of a record or collections of records, such as, creator, title, dates, extent and contents in order to facilitate the identification, management, understanding of and access to record(s), material(s), fonds/collections held within the archival repository (intellectual control).
Spectrum 5.0	Spectrum is the UK collection management standard, which is also used internationally.

2. ACRONYMS

Term	Definition
ACTS	Acquisition Case Tracking System is a SharePoint tool that facilitates the tracking of acquisition cases from private donors, publishers, and non-LAC Act Government of Canada (GC) Institutions. The system is primarily used by staff in Private Archives.
AIS	Archival Information System
API	Application Program Interface
DCMI	Dublin Core Metadata Initiative. The DCMI Metadata Terms lists the current set of the Dublin Core vocabulary which includes the fifteen terms of the DCMES, as well as the qualified terms for Audience, Provenance and Rights Holder. Qualified Dublin Core (QDC) was superseded by the DCMI Metadata Terms in 2008
EAD	<p>Encoded Archival Description</p> <p>Encoded Archival Description (EAD) is an XML standard for encoding archival finding aids, maintained by the Technical Subcommittee for Encoded Archival Standards of the Society of American Archivists, in partnership with the Library of Congress.</p>
Genapps	Genapps or Generic applications are LAC-specific, custom-built legacy databases used to capture archival item/file-level description information and links to digital surrogate or presentation copies of the original archival material. Genapps were designed primarily as a means of pushing large quantities of digital content to LAC's public facing discovery layer. Item/File descriptive metadata as found in the Genapps do not always have corollary hierarchical descriptive metadata or complete physical management metadata at the accession, fonds, or series- levels in Mikan/CMS. There is no link between the Genapps and Mikan/CMS.
GC	Government of Canada
IHMS	The Information Management Holdings System

	IHMS is a tool for managing dormant or semi-active records that have not yet been transferred to LAC custody and control. The System is currently used to manage the locations, disposition dates and custodial history of accession boxes that are in storage at the CCRSC in Winnipeg. The system is not coordinated with Winnipeg's archival holdings (which are only barcoded "virtually" in Mikan.) The IHMS also contains information about the former holdings of National Archives of Canada/Library and Archives Canada regional service centers no longer in operation.
LAC	Library and Archives Canada
MARC	Machine-Readable Cataloging MARC defines a data format that emerged from a Library of Congress-led initiative that began nearly forty years ago. It provides the mechanism by which computers exchange, use, and interpret bibliographic information, and its data elements make up the foundation of most library catalogs used today. MARC became USMARC in the 1980s and MARC 21 in the late 1990s.
METS	Metadata Encoding and Transmission Standard The METS schema is a standard for encoding descriptive, administrative, and structural metadata regarding objects within a digital library, expressed using the XML schema language of the World Wide Web Consortium. The standard is maintained in the Network Development and MARC Standards Office of the Library of Congress, and is being developed as an initiative of the Digital Library Federation.
Mikan/CMS	Mikan is bespoke web application built over an Oracle based relational database management system. Mikan is used to capture the intellectual information for LACs archival collection. Mikan is fully integrated with the Collection Management system (CMS) developed in 2008 for the physical management of LAC's archival analog and digital assets (stored on a physical carrier).
MISACS	Moving Image and Sound Archives Collection System is a group of 6 data sets built on a MINISIS platform: Receipt of Good (ROG), Collection Inventory Record (CIR), In-depth Catalogue (IDC), Vault, Work In Progress Log (WOLOG) DSINTRNL. The system is used to: <ul style="list-style-type: none"> • Manage metadata for AV assets primarily at the item-level; • Capture and store accession level records; • Capture and store item-level intellectual descriptions; • Capture and store technical description of AV assets (format, quality and condition); • Capture work orders for preservation activities; and, • Store redundant legacy data that is no longer required or has been migrated into Mikan.
MODS	Metadata Object Description Schema Metadata Object Description Schema (MODS) is a schema for a bibliographic element set that may be used for a variety of purposes, and particularly for library applications. The standard is maintained by the Network Development and MARC Standards Office of the Library of Congress with input from users. Library of Congress: http://www.loc.gov/standards/mods/
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting The Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) is a low-barrier mechanism for repository interoperability. Data Providers are repositories that expose structured metadata via OAI-PMH. Service Providers then make OAI-PMH service requests to harvest that metadata. OAI-PMH is a set of six verbs or services that are invoked within HTTP.
QMS	Query Management System is a custom-built enterprise application used internally to manage client requests.
RDACS	Records Disposition Authorities Control System (RDACS) is a custom-built web based application used to store and track work on government disposition authorizations. RDACS was first developed in 1997 by the Government Archives And Records Division and is specifically designed to meet the needs of LAC government archivists and authorized Canadian government ministry, department, etc. records-keeping personnel. The system is

	accessible to LAC staff and, since 2004, to all federal institutions via a secure government portal.
REST	Representational State Transfer
RFP	Request for Procurement
SaaS	Software as a Service
SOAP	Simple Object Access Protocol
JSON	JavaScript Object Notation
UTF-8	Unicode (Universal Coded Character Set) Transformation Format – 8-bit. UTF-8 is a variable width character encoding capable of encoding all 1,112,064 valid code points in Unicode using one to four 8-bit bytes. UTF-8 was designed for backward compatibility with ASCII (American standard code for information exchange).
XML	Extensible Markup Language XML is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

3. REFERENCES (STANDARDS, LEGISLATION, POLICIES, OTHER)

STANDARDS

Archival

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Dublin Core Metadata Initiative
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Library of Congress. *Metadata Encoding and Transmission Standard (METS)*
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Open Archives Initiative. *Open Archives Initiative Protocol for Metadata Harvesting*
<https://www.openarchives.org/pmh/>

ISO

International Organization for Standardization. ISO/IEC 27001 Information security management systems – Requirements
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International Organization for Standardization. ISO/IEC 27017 Code of practice for information security controls based on ISO/IEC 27002 for cloud services
<https://www.iso.org/standard/43757.html>

International Organization for Standardization. ISO/IEC 27018 - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors
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LEGISLATION

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Copyright Act, R.S.C., 1985, c. C-42
<https://laws-lois.justice.gc.ca/eng/acts/C-42/FullText.html>

Library and Archives of Canada Act, S.C. 2004, c. 11
<https://laws-lois.justice.gc.ca/eng/acts/L-7.7/>

Official Languages Act, R.S.C., 1985, c. 31 (4th Supp.)
<https://laws-lois.justice.gc.ca/eng/acts/o-3.01/>

Privacy Act, R.S.C., 1985, c. P-21
<https://laws-lois.justice.gc.ca/eng/acts/p-21/>

POLICIES, DIRECTIVES, ETC.

Library and Archives Canada

Library and Archives Canada. *Access Policy Framework*
<http://www.bac-lac.gc.ca/eng/about-us/policy/Pages/access-policy.aspx>

Library and Archives Canada. *Evaluation and Acquisition Policy Framework*
<http://www.bac-lac.gc.ca/eng/about-us/policy/Pages/evaluation-acquisition-policy-framework.aspx>

Library and Archives Canada. *Stewardship Policy Framework*
<http://www.bac-lac.gc.ca/eng/about-us/policy/Pages/stewardship-policy-framework.aspx>

Library and Archives Canada. *Directive on the Official Language of Description*.
<http://www.bac-lac.gc.ca/eng/about-us/policy/Pages/directive-official-language-description.aspx>

Library and Archives Canada. *Guidelines for Information Management*
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Treasury Board of Canada Secretariat. *Direction for Electronic Data Residency*.

<https://www.canada.ca/en/treasury-board-secretariat/services/information-technology/policy-implementation-notice/direction-electronic-data-residency.html>

Treasury Board of Canada Secretariat. *Direction on the Secure Use of Commercial Cloud Services: Security Policy Implementation Notice (SPIN)*

<https://www.canada.ca/en/treasury-board-secretariat/services/access-information-privacy/security-identity-management/direction-secure-use-commercial-cloud-services-spin.html>

Treasury Board of Canada Secretariat. *Directive on Management of Information Technology*.

<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12755>

Treasury Board of Canada Secretariat. *Directive on Open Government*.

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Treasury Board of Canada Secretariat. *Standard on Web Accessibility*.
<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=23601>

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