



Guidance on Prescribing Metadata Reference Standards

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Preamble

This guidance provides advice to departmental officials on how to decide on the metadata reference standards they will formally endorse and prescribe for departmental use, particularly as this applies to metadata reference standards that have been developed by external organizations.

1. Key terms and concepts

▶ In this section

1.1 What is a metadata reference standard?

A metadata reference standard specifies how metadata is created, captured, managed, organized, represented or formatted. This can include a set of agreed-upon and documented guidelines, specifications, accepted practices, technical requirements or terminologies. A metadata reference standard establishes a common, consistent and repeatable set of rules for structuring (that is, in a schema or element set) or encoding (that is, using a particular format or syntax) metadata, or defining permitted metadata content or values. Within a Government of Canada (GC) context, these are mandatory and are distinct from acts, regulations and policy instruments, although they can be referenced in those instruments.

Why are metadata reference standards important?

The use of standardized metadata allows for similarities and differences between information and data resources to be more readily described and easily understood across collections and systems. Adherence to metadata reference standards offers a measurable level of performance, quality and accountability in metadata implementation and is key to enabling information and data findability, sharing, accessibility and reuse. Metadata reference standards can help increase the confidence of Canadians in the government's commitment to excellence in the open and strategic management of information and data.

1.2 Enterprise metadata reference standards

Enterprise metadata reference standards are metadata reference standards that have been formally prescribed by the Chief Information Officer (CIO) of Canada or their delegate for enterprise-wide application across GC departments according to section 4.3.1.1 of the *Policy on Service and Digital*.

1.3 Departmental metadata reference standards

Under section L.2.2.2 of “Appendix L: Standard for Managing Metadata” of the *Directive on Service and Digital*, departmental officials are responsible for using departmental metadata reference standards to define and describe information and data not otherwise covered within the scope of a GC enterprise metadata reference standard.

1.4 Associated Requirements

Sections 1.2 and 1.3 of this guidance correspond to the following requirements under the *Directive on Service and Digital*:

4.3.1 The departmental CIO, in collaboration with other departmental officials as necessary, is responsible for:

4.3.1.3 Ensuring information and data are managed to enable data interoperability, reuse and sharing to the greatest extent possible within and with other departments across the government to avoid duplication and maximize utility, while respecting security and privacy requirements.

4.3.1.5 Establishing and maintaining taxonomies or classification structures to manage, store, search, and retrieve information and data in all formats according to prescribed enterprise-wide standards.

2. Enterprise metadata reference standard endorsement

GC enterprise metadata reference standards, as with any enterprise data reference standard for the GC, are prescribed following endorsement by the senior information and data enterprise governance body at the assistant deputy minister level. For information on the current process by which standards secure recommendation and endorsement as GC enterprise metadata reference standards, see GC enterprise metadata reference

standards. As set out in the *Standard for Managing Metadata*, departments must use GC enterprise metadata reference standards before proceeding with adopting or developing their own.

GC enterprise metadata reference standards offers a table of standards endorsed as GC enterprise metadata reference standards that range in the scope of organizations or subject domains to which they were designed to apply and the ways in which they otherwise serve to structure metadata. Standards proposed for endorsement as GC enterprise metadata reference standards must be established and authoritative, international, national, GC or subject domain-specific metadata standards. They may focus on:

- schemata or schema (metadata element sets)
- content (that is, the data input into metadata elements)
- values (that is, controlled vocabularies of standardized terms and names used to create metadata that may take the form of term lists, authority files, thesauruses, taxonomies and so on) or
- exchange formats (specifications for the schemes by which metadata are encoded for exchange, that is, machine-to-machine exchange)

Some standards promote human readability and actionability, while others favour machine readability and actionability. Ideally, metadata reference standards endorsed for GC-wide application will demonstrate potential for both. Departments should direct questions regarding the status of metadata reference standards, including whether they represent potential or pending candidates as GC enterprise metadata reference standards, to servicedigital-servicesnumerique@tbs-sct.gc.ca.

3. Departmental metadata reference standard endorsement

It is recommended that departments apply a consistent and structured review and assessment process for identifying departmental metadata reference standards that align with the process for reviewing and potentially

endorsing GC enterprise metadata reference standards. This may result in formal endorsement by the departmental CIO or their delegate. To support transparent and auditable decision-making, departments are encouraged to include the following steps in this process:

- Conduct a metadata needs assessment (see *Guidance on Assessing Metadata Needs*).
- Define the specific metadata need to be met, or problem to be resolved, and the scope of what must be standardized about the department's metadata to address it.
- Confirm that the specific metadata need or problem cannot otherwise be addressed by an existing GC enterprise metadata reference standard, by a standard that is pending endorsement as a GC enterprise metadata reference standard, or by an already-endorsed departmental metadata reference standard.
- Identify the metadata reference standard recommended for endorsement by the department, including details such as:
 - title
 - version, if applicable
 - date
 - name of the entity or entities or organization(s) through which it was developed, published and is maintained
 - description of intended scope and purpose
 - copyright information, including notable restrictions on access or (re)use
 - cost considerations, if applicable
 - the name and contact information of the departmental representative(s) who can answer additional questions about the standard, including how it is anticipated to address and resolve the targeted departmental metadata problem
- Define how the department intakes requests for review and endorsement of departmental metadata reference standards, including

identification of the unit or position responsible for this activity. ¹

- Establish assessment criteria ² against which departmental representatives are to review, evaluate and recommend standards for endorsement as departmental metadata reference standards. As part of this process, departments should also consider the potential merit of the metadata standard as a GC enterprise metadata reference standard (for example, based on the extent of its usability, scalability) and consult the GC enterprise metadata reference standard endorsement process where eligibility is confirmed.
- Establish a governance body or working group of key stakeholders (for example, subject matter experts, information and data business owners, privacy experts, external advisors) to systematically review each standard proposed for endorsement by the department against the departmental metadata reference standard assessment criteria.
- Ensure each metadata reference standard review results in a specific and unambiguous recommendation as to whether the department should endorse the standard as a departmental metadata reference standard. Variations may include partial endorsement or adaptation of the standard and include notes for users to enhance applicability and appropriate use.
- Alternatively, metadata reference standards that are not recommended for endorsement for department-wide use may be affirmed as providing some benefit to a specific community within the department. Departments may want to formally endorse them as such or consider their potential as GC enterprise metadata reference standards depending on the reach of their benefits across other departments.
- Define recommendation categories to support this process.
- Review endorsed departmental metadata reference standards regularly according to a defined review cycle to ensure that they remain relevant and up to date.
- Document decisions resulting from the departmental metadata reference standard review and endorsement process, including all

departmental metadata reference standards ultimately prescribed for department-wide use, and make them known and widely accessible across the organization.

A departmental metadata reference standard review and endorsement tracking and status codification system can assist departments in documenting decision-making processes and communicating when new departmental metadata reference standards will be prescribed, or when existing ones will be reviewed for ongoing relevance.

Footnotes

- 1 Departments may wish to refer to the intake process for GC enterprise metadata reference standard endorsement requests as an example.
- 2 Departments may wish to refer to the assessment criteria for endorsing GC enterprise metadata reference standards as an example.

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