

Managing Metadata in the Public Sector: Perspectives from the Government of Canada

Michael Mohammed^{1,†}, Marissa Paron^{1,†}, Matthew Moore^{2,†}, Katherine Timms^{2,†}, and Aliyan Haq^{3,†}

¹ Treasury Board of Canada Secretariat, Government of Canada, 90 Elgin Street, Ottawa, Ontario K1A 0R5, Canada

² Library and Archives Canada, Government of Canada, 550, boulevard de la Cité, Gatineau, Quebec J8T 0A7, Canada

³ Natural Resources Canada, Government of Canada, 580 Booth Street, Ottawa, Ontario K1A 0E4, Canada

Abstract

The Government of Canada (GC) represents a complex environment in which federal departments and agencies can exercise discretion in making information and data management-related implementation decisions. As a result, interoperability challenges have persisted that pose risks to the GC's digital transformation. Adding to the complexity of the current state is the fact that metadata needed to support government functions in the present may vary from what is subsequently needed to manage and preserve archival government records over the long term. Renewed attention has had to be placed on the fact that the open and strategic management of information and data inherently requires that metadata also be managed – with the use of prescribed metadata standards representing only one of several requirements in this policy context. Representing Canadian federal public servants with experience in developing and implementing metadata policy requirements across the GC, panelists will discuss the challenges associated with the GC's policy approach to metadata, including the conceptual approach given to archival metadata by Library and Archives Canada. The panel will also explore opportunities seized by the GC in the realm of artificial intelligence, machine learning, and related technologies for the automatic processing, summarization, and validation of metadata.

Keywords


archives, artificial intelligence, Government of Canada, interoperability, metadata, policy, public sector, reusability

The Government of Canada (GC) represents a complex legislative, policy and operational environment in which common information and data management-related policies apply but allow for departments and agencies to exercise discretion and make implementation decisions individually in practice. While GC requirements for managing information and data have been integrated with those for managing information technology, cyber security, and service delivery since 2020, interoperability challenges have persisted that pose risks to the GC's digital transformation. Adding to the complexity of the current state is the fact that metadata needed

* Corresponding author.

† These authors contributed equally.

✉ Michael.Mohammed@tbs-sct.gc.ca (M. Mohammed); Marissa.Paron@tbs-sct.gc.ca (M. Paron); Matthew.Moore3@bac-lac.gc.ca (M. Moore); Katherine.Timms@bac-lac.gc.ca (K. Timms); Aliyan.Haq@nrcan-rncan.gc.ca (A. Haq)

 0009-0001-2907-2548 (M. Mohammed); 0009-0004-8762-5026 (M. Paron); 0009-0000-4583-8235 (M. Moore); 0009-0008-7837-8990 (K. Timms); 0009-0008-3413-4054 (A. Haq)



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to support government functions in the present may vary from what is subsequently needed to manage and preserve archival government records over the long term.

To improve federated search across GC information holdings and repositories, increase the GC's capacity to design services digitally from end-to-end, and reduce barriers to discovering, accessing, exchanging, and reusing GC information and data now and into the future, renewed attention had to be placed on the fact that the open and strategic management of information and data inherently requires that metadata also be managed. Representing Canadian federal public servants with experience in developing and implementing metadata policy requirements across the GC, panelists will explore the merits of focusing the GC's new Standard for Managing Metadata [1] more holistically on how the Canadian federal government manages the metadata describing its information and data assets across individual departments and agencies and capturing the overall importance of using prescribed metadata standards as a single requirement in this policy context. This panel will also explore the role of artificial intelligence, machine learning, and related technologies for the automatic processing, summarization, and validation of metadata. Additionally, it will include a discussion of the conceptual approach given to archival metadata as set out in Library and Archives Canada Operational Standard for Digital Archival Records' Metadata [2].

Ultimately, the panel will engage in a focused exchange on the challenges associated with the GC's policy approach to metadata, and the range of supplementary guidance instruments and governance processes that are needed and have been developed to support its successful deployment across the GC enterprise. Each panel member will take opportunities to discuss their experiences developing or implementing metadata across the GC, as well as the challenges they encountered and opportunities they seized related to that development or implementation process. Time will also be allocated for session attendees to ask questions of panelists.

Speaker Biographies

Michael Mohammed: During his fifteen years with the Government of Canada, Michael Mohammed has worked in a variety of operational and operational support roles that have either generated or used scientific and technical data, including environmental assessment, regulatory oversight, and in support of the Federal Nuclear Emergency Plan (FNEP), and the National Radon Program. Michael currently manages the Policy and Legislation team within Treasury Board of Canada Secretariat's Office of the Chief Data Officer, where he leads the development of policy instruments intended to improve Government of Canada-wide use of standardized metadata, with the overall objective of improving information and data sharing and IT interoperability across government departments and with Canadians. Michael holds Masters degrees in Geography from Rutgers University, a Bachelor of Arts degree in Geography from Mount Allison University, and graduate certificates in Women's and Gender Studies as well as Human Dimensions of Environmental Change.

Marissa Paron: Marissa Paron is an Analyst at the Treasury Board of Canada Secretariat (TBS) on the Information and Data Governance Policy and Legislation team of the Data and Digital Policy Sector within the Office of the Chief Information Officer of Canada. Her career in the federal public service spans more than 20 years, with the better part of it dedicated to information and data governance. Before joining TBS in 2020, she spent 13 years at Library and

Archives Canada, serving as both a Government Records Archivist and a Senior Project Officer focused on facilitating the management of government information. She has come to specialize in metadata through various projects and activities, including the development of the Government of Canada's Standard for Managing Metadata, participation in international information and documentation standards development via the International Organization for Standardization (ISO), and completion of the Society of American Archivists' Digital Archives Specialist certificate program.

Matthew Moore: Matthew Moore is the Manager of the Recordkeeping Strategies Team at Library and Archives Canada (LAC) in the Government Records Branch. He has over a decade of experience in the heritage and information management sectors, including working in museums and archives, private sector litigation support, and strategic information management and recordkeeping in the Government of Canada. Currently, his responsibilities include overseeing a series of projects designed to ensure that government information is appropriately managed to safeguard the authenticity and integrity of archival government records including their metadata. His recent work involves managing projects focused on information management advice around records identification and retention, digital transfers, and archival government records metadata requirements. This includes LAC's recently published Operational Standard for Digital Archival Records' Metadata and supplementary guidance. He is the Vice-Chair for the Canadian Mirror Committee for the International Organization for Standards (ISO) on archives and records management.

Kat Timms: Kat Timms is a Senior Analyst on the Recordkeeping Strategies team in the Government Records Branch at Library and Archives Canada (LAC). Since 2008, she has been working at LAC in numerous roles where she has acquired significant experience contributing to and coordination programs, services, and initiatives related to archival operations and metadata. In her work, she has developed and implemented operational policy in the domains of information management, digital archives, recordkeeping, and archival metadata. She is the author of LAC's recently published Operational Standard for Digital Archival Records' Metadata and primary architect of the suite of supplementary guidance currently in development meant to support its use. Fiercely brilliant and relentless passionate about digital archives and information, Kat has extensive experience in metadata standards development and archival standards development including work with the International Standards Organization (ISO) and the International Council on Archives (ICA).

Aliyan Haq: Aliyan Haq serves as a Geomatics Analyst at the Canada Centre for Mapping and Earth Observation (CCMEO) within Natural Resources Canada. He graduated from the University of Waterloo with both a degree and a diploma in Geomatics and GIS. Aliyan has engaged extensively with key geospatial standards organizations including the Open Geospatial Consortium (OGC), International Organization for Standardization (ISO), and World Wide Web Consortium (W3C). He currently chairs the Canadian Mirror Committee to ISO TC/211 (Geomatics) and leads the Satellite Imagery working group within ISO TC/211, driving the development of seven critical standards related to satellite imagery.

References

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