

Information, Privacy and Archives

Ministry of Government and Consumer Services

(Meta-)Data-enabled Government

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Metadata still matters

One man's metadata is another man's data

We need to know about data to manage it: data management is metadata management

Metadata is less visible in government strategy ...

But more necessary than ever, for:

Transparency

Privacy

Integration

Protection

Metadata and the Ontario Public Service

Government of Ontario has a long history of using Dublin Core

GO-ITS standards – enterprise architecture framework

GO-ITS 43 Web Metadata Standard and 46 Common Metadata Element Standard

Government of Ontario Web Metadata Element Set (GO-WMES) is based on the Dublin Core Metadata Element Set (DCMES) and the Dublin Core Metadata Initiative's (DCMI) Metadata Terms.

Similarly the Common Metadata Element Standard (CMES)

But ... last reviewed 2005 ...

GO-ITS 72 Geospatial metadata standard (ISO 19115-based)

And definitions of programs and services

Recent context

Evolution from e-Government to Digital Government

Downloadable forms ... to online forms ... to data-centric processes

Ontario Digital Service 2016, Chief Digital (now “and Data”) Officer 2017

2018: *Managing Transformation: A Modernization Action Plan for Ontario*

Modernizing services through better use of digital and shared service models

Emphasis on better, collective use of data

Also information gaps about our data ... metadata gaps

Building a Digital Ontario

<https://www.ontario.ca/page/building-digital-ontario>

A.k.a. “Digital and Data Strategy “

No mention of metadata (compare 150 mentions of data in a short document)

In any data strategy, metadata is an inherent component

Parallel refresh of Directives (internal policy instruments)

Vision: Ontario is the world's leading digital jurisdiction

Equipped to succeed: You have the right skills and access to participate, work and thrive in a digital world.

Safe and secure: Your privacy is protected, and you are safe when you interact or do business online.

Connected: You have access to the data you need to make good decisions for your health, education, life or business.

Supported: You are at the centre of more convenient, reliable and accessible government services that are available when and where you need them.

Enterprise Strategy – Technology Roadmap and Investment Plan

New Enterprise Technology Strategy Division, with Chief Technology Officer

Enterprise view of data identified as key driver (“Modernization accelerator”)

Make public sector digital and data-driven and put data at the centre of government decision-making

Focus on **enterprise** approach to

Infrastructure

Governance – including refresh of those GO-ITS standards!

Information and Data Assets Directive

Recognises metadata as an asset to be managed

Principles for managing information and data assets

Discoverable

Reusable

Interoperable

Protected

Trustworthy

Authoritative

Persistent

Contextualized

Disposed of Appropriately

Digital and Data Directive

Includes and expands earlier Open Data Directive

“All ministry data assets need to be listed on the government-wide data inventory, regardless of open status, with sufficient metadata for broad understanding of its nature, purpose and use by the government.”

“Open data must be accurate, timely, openly accessible, interpretable, coherent, de-identified, primary and released in accordance with the principles in the [International Open Data Charter](#).”

Open data ... so much more than just the data

Data catalogue – discovery, use and interpretation of data

API framework and guidelines

“Consistent metadata and encoding ensure that APIs are interoperable both within and across organizations, and clearly structured response data is easier for the client to manipulate.”

Access to Information

Data Authority

Proposal in *Building a Digital Ontario*

Unlocking public value needs more than just a catalogue

Better access to “high-value” data – how to identify that data?

Public data infrastructure

Standardization

Governance

Trustworthy Artificial Intelligence

Public interest not just in data assets, but how they are used

Especially in respect of artificial intelligence

Ontario Digital Service identified 3 key principles:

1. **No AI in secret:** There needs to be a clear understanding of how, when, and why AI is being used by government.
2. **AI use Ontarians can trust:** To gain and maintain public trust, the use of AI requires clear, risk-based governance with guardrails.
3. **AI that serves all Ontarians:** AI use must uphold democratic principles and individual rights while not jeopardizing personal privacy, expanding harmful surveillance, or reinforcing structures of discrimination.

What new types of metadata is needed?

Metadata for algorithms

Cyber Security

Basic metadata on sensitivity: Corporate Policy on Information Sensitivity Classification

Cybersecurity needs to know about data and technology assets: devices, solutions, data

Risk management requires categorization

Confidentiality, Integrity, Availability

Describing data behaviour

Metadata about other entities: Actors and privileges

Patch Management audit – findings highlight the importance of (meta-)data quality

Privacy

Metadata for privacy protection is more than just an accessRights term

Registers of “Personal Information Banks”

Transparency as foundation of privacy

Linking purpose, consent, and personal information

Data provenance

Privacy reform – AI transparency

Metadata as proxy identifiers

Possible re-identification from metadata – date, time, location ...

Data Integration

Amendments to privacy legislation

Privacy expects only limited re-use ...

But citizens expect data-driven decision making

Need new privacy protective approaches to integration of Personal Information datasets

Collection, integration, and de-identification of personal information to enable analysis in relation to,

- the management or allocation of resources;
- the planning for the delivery of programs and services provided or funded by the Government of Ontario, including services provided or funded in whole or in part or directly or indirectly; and
- the evaluation of those programs and services

Data Integration - Data Standards

What do the DI standards say about metadata?

Develop and maintain an inventory of Personal Information (PI) and coded information within the DI Unit.

At minimum, the inventory must include:

1. the purpose of the collection of the PI or coded information;
2. the specific data elements or fields contained within the PI or coded information (e.g., gender, date of birth or age, event dates, locations, etc.);
3. the source(s) of the PI or coded information; and
4. the need for the PI or coded information in relation to the identified purpose.

Recordkeeping

Recordkeeping by design

Integrating Recordkeeping into I&IT Projects

Recordkeeping metadata – applied intentionally

More than just document management – integrate EDRMS into business systems

Process design for automated metadata

Archival description

Inheritance of metadata – a different kind of metadata reuse

Metadata in records, especially digital records

Metadata about records

Context persistence

Sustainability of meaning

It doesn't matter if you don't see "meta-"