

Government-wide Metadata Application Profile for CMS



Presentation to MGI Forum 2006

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Overview

- Why an enterprise GC Content Management System Metadata Application Profile (CMS-MAP)?
- CMS Metadata Sub-Group
- Vertical and horizontal metadata
- Challenges and opportunities

Why an enterprise GC CMS-MAP?

- GC metadata guidelines since 2000
- 5 Common Look and Feel metatags
- absence of tools to apply or use metadata
- recent acquisition of GC ECM suite (Verity, Interwoven, Oracle Portal)
- departments implementing CMS: HRSDC/Service Canada, Industry Canada, CRA, AAFC, LAC, NRTREE, FAC, DND
- beyond “what is metadata and why is it important”
- opportunity for rich metadata set for administering and delivering content and information services

Why an enterprise GC CMS-MAP?

- CMS-MAP is effort to move beyond department-specific or application-specific metadata silos
 - interoperability
 - support government-wide improvement in the provision of information service offerings and retrieval for Canadians
 - realization of the promise of citizen-focused vision, with personalization and client segmentation
 - shared information management and development
 - shared best practices
 - GC-wide content reuse
 - enables business rules, processes and IM policies
 - connects authors, technical systems, workflows, content repositories, web sites, end-users, publishers in the IM life-cycle
- CMS-MAP is a standardized set of metadata elements, plus rules for applying them

Why an enterprise GC CMS-MAP?

- Connects people, processes and technology:
- authors (decentralized and/or centralized)
 - publishers
 - end-users
 - records managers
 - workflows
 - system events
 - syndication
 - documents and content and presentation objects
 - versioning
 - approval processes
 - content repositories and web sites
 - CMS and interfaces for authoring, metatagging and publishing
 - search indexes and interfaces
 - dynamic web pages and faceted user choices

Why an enterprise GC CMS-MAP?

- Metadata facets of the GC information holdings can be combined in virtual information and service “views” for client-centric or program-centric delivery
- Information portability and reusability (write-once, use multiple times processes)

Why an enterprise GC CMS-MAP?

Without shared metadata

- Multiple departmental metadata indexes
- Mapping and equivalencies at GC level difficult if not impossible
- No shared processes or interfaces
- Labour-intensive and costly development with no investment reusability
- Difficult to go beyond the basics
- Ongoing web site silos

With shared metadata

- Multiple departmental metadata indexes brokered at GC level as one virtual index
- Shared business processes, workflows and interfaces possible
- Shared cost of development
- Shared development of training materials
- All efforts build on core functionality to get the most from investment in solution
- Leveraging content for GC-wide reuse
- GC-wide service offerings

CMS Metadata Sub-Group

➤ CMS Metadata Sub-Group formed in April 2005

- Reports to the GOL Metadata Working Group, led by TBS (Nancy Brodie)
- Formed to take requirements from CMS Functional Working Group
- Role is to define, align and manage metadata frameworks and processes in support of the enterprise GOC CMS
- Includes departmental and cluster representatives
- Have had joint RM-CM meetings

➤ Primary Objectives

- CMS Metadata Element Set
- CMS-Metadata Application Profile (MAP)
- Align the Element Set with the Records Management Element Set by finding opportunities for interoperability and aligning metadata names

CMS Metadata Sub-Group

➤ Metadata Elements

- The set of metatag names
- Name (dc:title, dcterms:spatial, dc:subject, gcterms.topicGC, etc)
- Label (Title, Subject, Topic, etc)
- Definition (intended scope or purpose of the metadata element)
- Datatype
- The CMS Element Set will be a standard once completed
- Dublin Core, with GC CMS extensions for authoring and publishing

➤ Metadata Application Profile

- elements from one or more element sets, along with rules for implementation
- how the metatag value is populated and used within a CMS
- single or multiple values
- Optional, Mandatory, Conditional
- schemes and vocabularies to use
- relationship to other metadata elements and to business process
- enforcement constraints

CMS Metadata Sub-Group

- Some possible uses of the metadata:
 - Information delivery (for resource discovery, automated navigation, personalization, etc) - Geographic Coverage, Subject, Type, Audience, Date, Language, Topic
 - Administrative (for authoring, ownership, access rights, date, etc) - Creator, Language, Identifier, Relation
 - Descriptive - Title, Language, Subject, Type,
 - Publishing - Language, Relation, Identifier, Creator

Vertical and horizontal metadata

- Enterprise Content Management (ECM) = a suite of products that combine the functionalities of CMS, DMS, Search and Portal for end to end life-cycle management and delivery of content
 - **Content Management Systems (CM):** authoring, security, presentation styles, business processing, metatagging, archiving and content deployment to web; when using an XML-based system content can become objects to manage, deploy and reuse with complex relationship between content maintained
 - **Documents Management (DM):** also authoring, security, workflow, metatagging and archiving of document formats (i.e. MSWord); the first-generation product suites don't always have strong capabilities for web publishing and XML
 - **Search engine:** indexes content and metadata and provides end-user interfaces and querying; can also broker and federate indexes
 - **Portalware:** end-user customizable front-end “window” that connects to back-end content repositories, search indexes, transactional applications, presentation objects, security – and metadata is the “DNA” for much of this

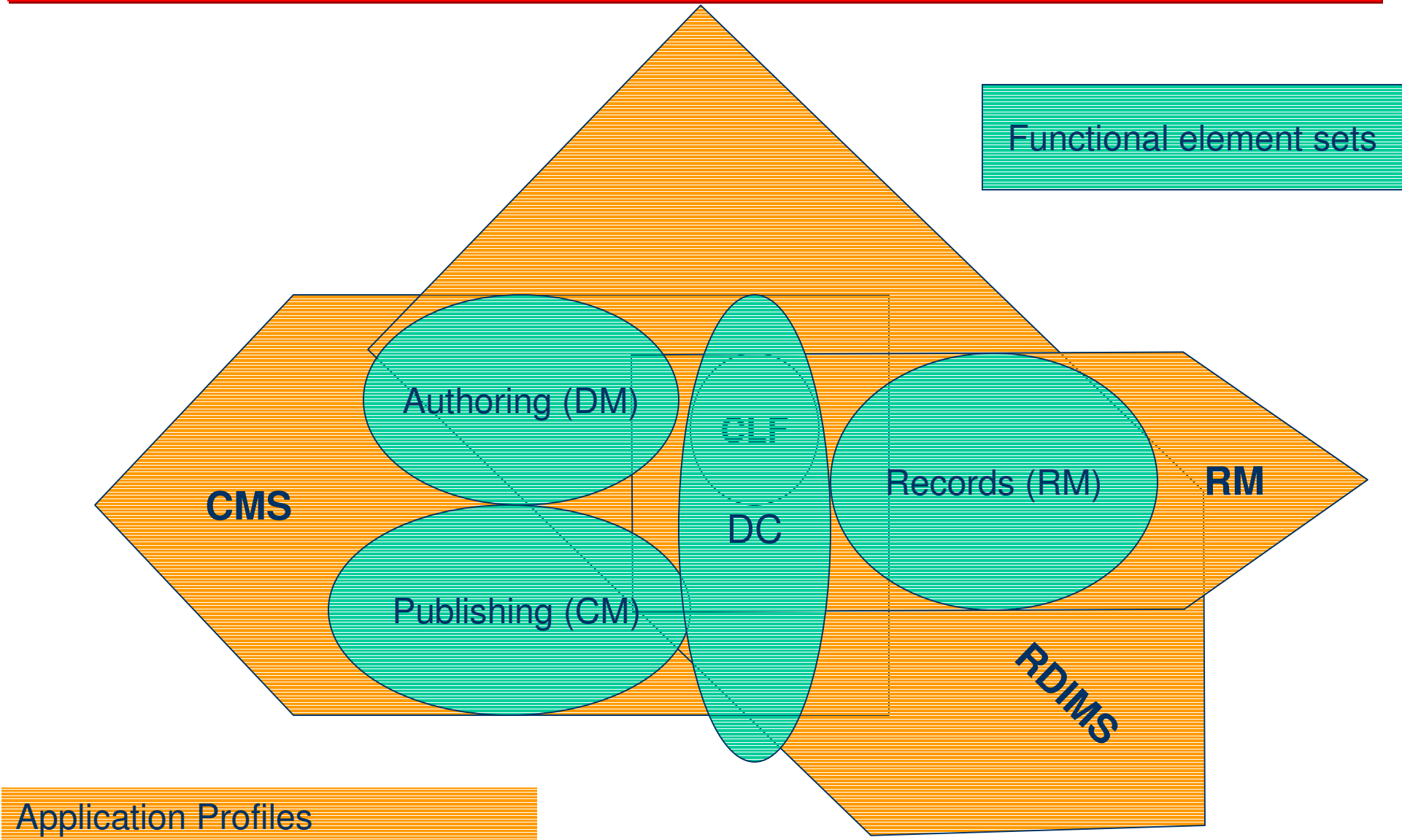
Vertical and horizontal metadata

- GC metadata context is broader than CMS
- Horizontal Metadata: CMS Metadata Sub-Group represents vision for metadata across the organization and across departments (departmental enterprise and GC enterprise)
- Vertical Metadata: within ECM and covering all aspects of IM including documents management and authoring, publishing and web delivery, search, records keeping, ATIP, accountability, etc

Vertical and Horizontal Metadata Context

- The vertical perspective is why we have tried to harmonize metadata for DM, CM, RM even though we don't yet have linked/integrated technologies or processes
- Metadata standards, core concepts to link within departments and enterprise-wide
- Departments will be able to use the CM, RM and DM functional elements as core building blocks to integrate IM vertically

Vertical and horizontal metadata



Challenges and opportunities

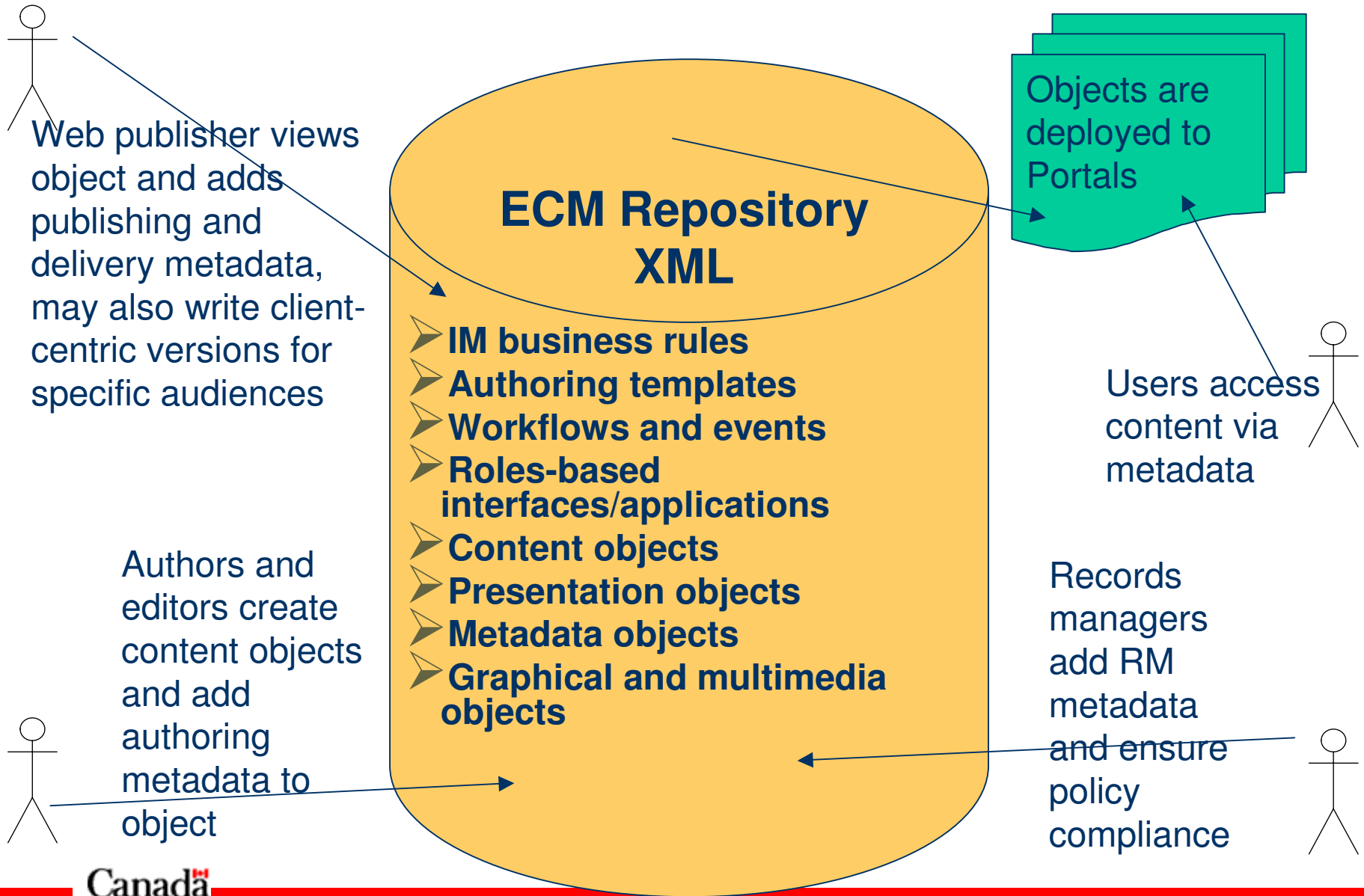
- CMS GC metadata will enable:
 - metatag, manage, archive and re-use the objects by multiple people (roles-based functions in the IM life-cycle)
 - plays role in ECM enablement of enterprise horizontal and vertical IM business rules and policies (e.g. MGI)
 - deliver to multiple end-users in personalized ways (e.g. knowledge portals)

Challenges and opportunities

- We need to start demonstrating the value-added services of metadata, or risk losing business support and momentum
- The metadata will only be value-added if it is of high quality and usefulness
- Metadata governance, quality assurance and change management processes are key
- We are in a race to finalize the CMS MAP before critical mass of departmental CMS implementations and tagged files are in place
- The MAP can be implemented by any department regardless of CMS status, as it can still be useful for interoperability and standardization

Challenges and opportunities

- Departments may need to add extensions to the MAP to incorporate specific additional requirements
- If the MAP is designed in an abstract fashion on paper, may be difficult to encode and implement in the enabling technology
- Perfect the MAP as much as possible prior to giving it to implementers, and before content is tagged
- Change management issues recognition is key to success as changing metadata in the MAP is the easy part
- The change management processes in a functioning CMS can be complex, and departments should plan for adequate time, tracking, process cycles and governance issues



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