

Why Metadata Matters:

The Role of Standards and Models in Resource Discovery and Access

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Southampton
Solent
University

Outline



What is metadata?



Why metadata?



How we create and use metadata?



The role of metadata standards



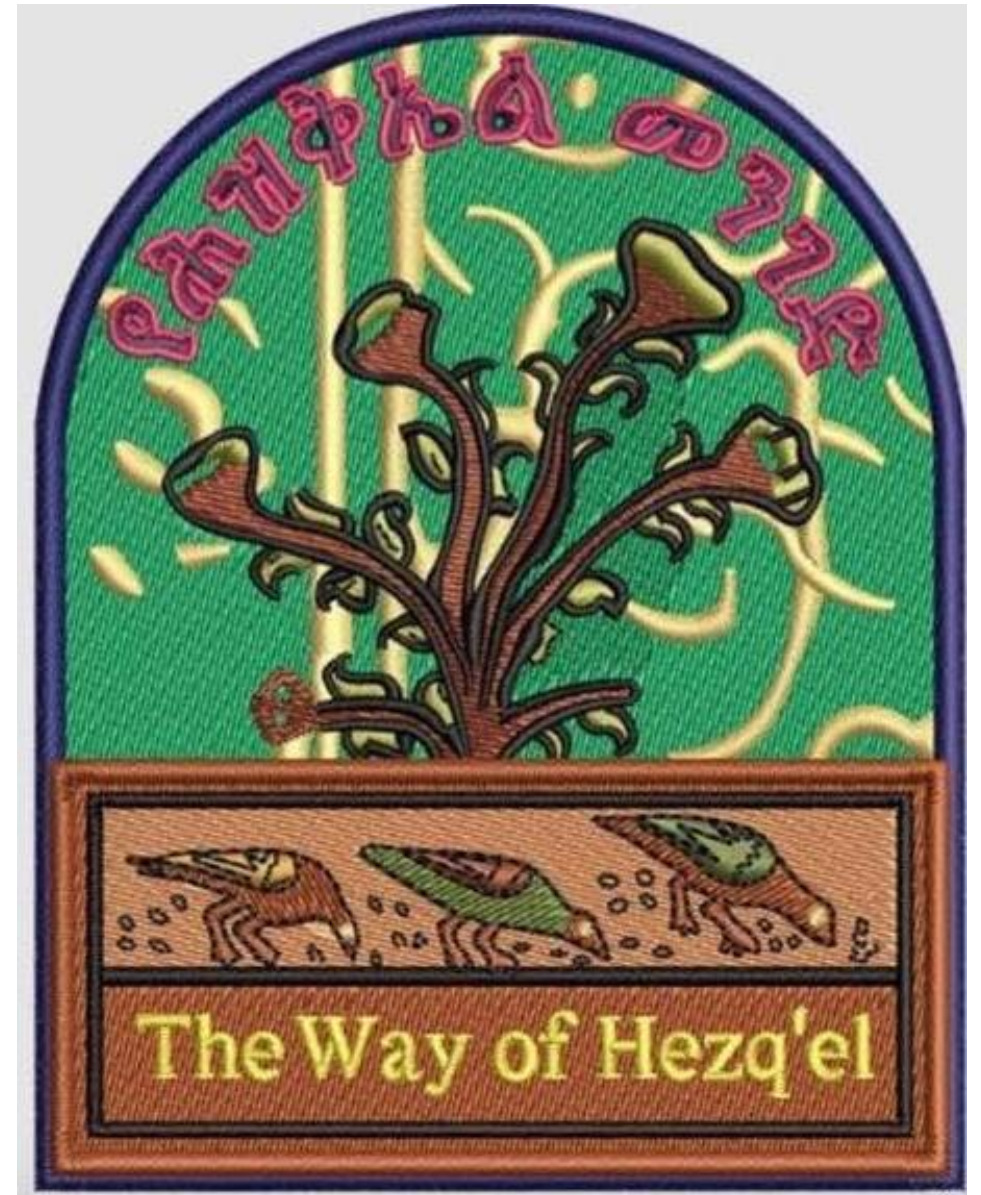
Metadata challenges and opportunities



Discussions on the way forward...

Context ...

What is not
catalogued cannot
be easily
discovered.



Living in the Information Age



(Floridi, 2014; Weinberger, 2012)

Access to information is everything ...



DATA WITHOUT CONTEXT IS JUST NOISE AT SCALE



Raj Koneru , Founder, Anvizent





Ever growing collections of information

Library of Congress (books, manuscripts, maps, photographs, audio-visual, digital)
≈170 million items | 20+ petabytes of digital data

British Library (printed books, manuscripts, maps, patents, sound, digital heritage)
≈170 million items | 5+ petabytes of digital content

Europeana (digitised artworks, artefacts, books, archival and museum objects)
≈50+ million records | metadata aggregation across 3,000+ institutions

Digital Public Library of America (DPLA) (aggregated digital library, archive and museum items)
≈20+ million items | distributed collections via shared metadata

Project Gutenberg (free and public-domain e-books)
≈75,000 e-books | text-centric digital library

Internet Archive / Archive.org (web archives, books, audio, video, software, datasets)
1+ trillion web pages | 100+ petabytes of data

Think about it...



Metadata is the fuel that drives information systems.



Metadata is the glue that connects content with users.



Did you know that Google, Amazon, libraries and even your personal photo collection function as metadata systems (think of how your smartphone organises your photos)?

What is metadata?



Metadata is “data about data”



Metadata expresses aboutness (what something is about)



Metadata is what you search with (author, title, subject, product name)



Metadata is the keyword in the sea of information



Metadata includes tags, likes, ratings, reviews and recommendations



Metadata names people, places, things and objects



Metadata is the language of finding, re-finding and discovery

What is Metadata?



Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use or manage an information resource.



Metadata is not an abstract technical layer but the central mechanism through which information objects become visible, discoverable and usable within systems.

Without metadata, resources become invisible from potential usage.



Metadata is the *raison d'être* for libraries, archives, galleries, museums and any content creating and managing institutions

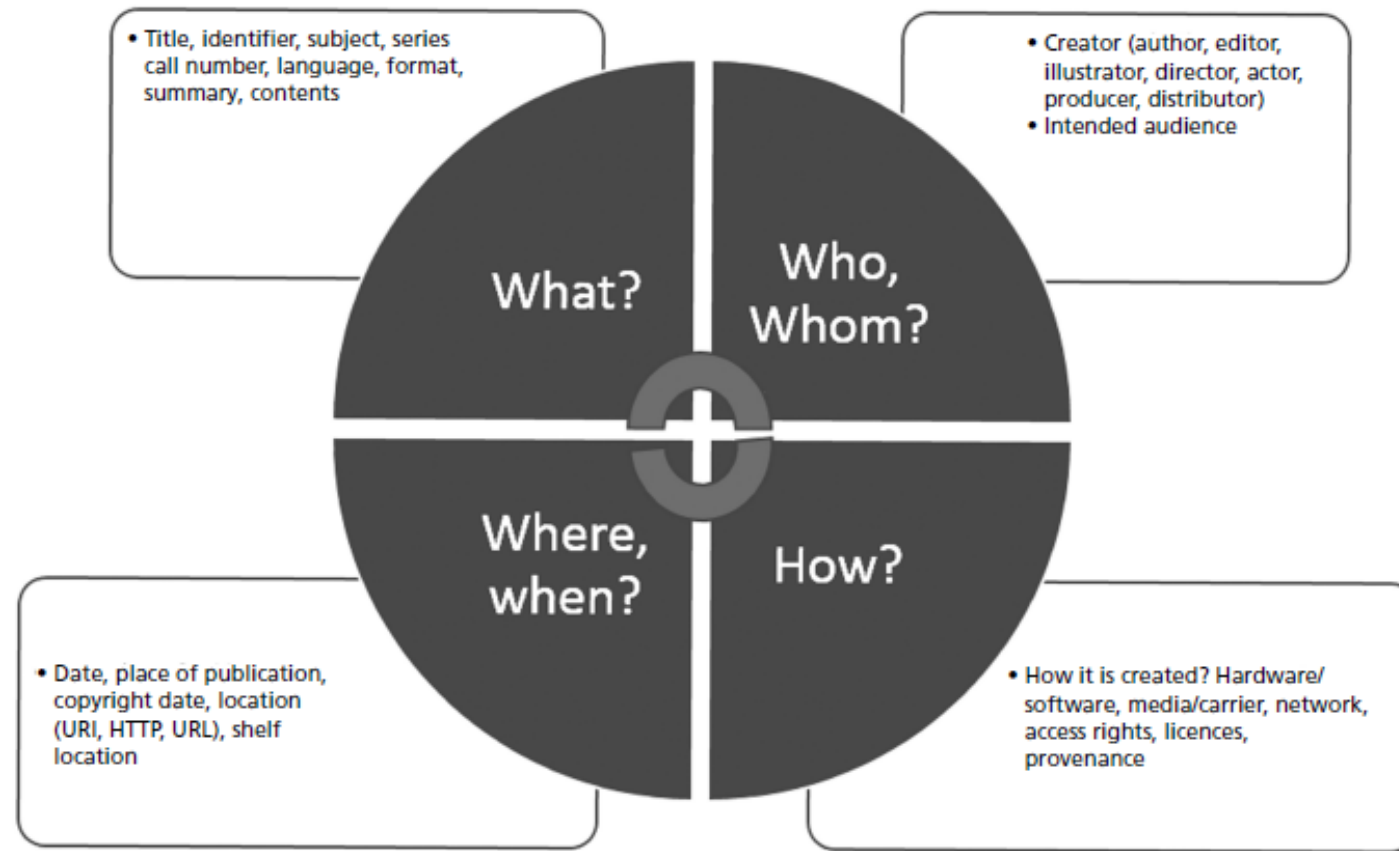


Figure 1.4 *Metadata answering what, when, how, where and by whom questions*



Metadata as an Indexing Language



Metadata functions as an indexing language that connects users to content through keywords, identifiers, and relationships.



Search engines, catalogues, and discovery layers all rely on metadata to mediate between user queries and information objects.



Metadata serves as a tool to search, navigate and explore information.



Metadata and Discovery



Discovery systems depend on accurate, consistent metadata to support searching, browsing and filtering.



Without quality metadata, even expensive digital resources remain invisible to users.



Without accurate, consistent and quality metadata... resources may remain invisible and inaccessible.



Types of Metadata



Metadata can be broadly categorized into descriptive, administrative, structural, and technical metadata.



These categories reflect different functional requirements such as discovery, management, and preservation.



There are at least four metadata typologies: descriptive, administrative, structural and technical metadata”.

Descriptive Metadata



Descriptive metadata identifies and describes information resources using elements such as title, creator, subject and summary.

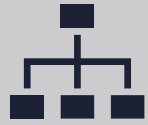


Descriptive metadata is central to the user tasks of Find, Identify, Select, Obtain and Explore.



Descriptive metadata provides details about the attributes or characteristics of information resources.

Administrative Metadata



Administrative metadata supports management functions including acquisitions, circulation, and rights management.



Much of this metadata is not visible to end users but is essential for library operations.



Administrative metadata helps to effectively manage the storage and utilisation of resources.

Preservation Metadata



Digital preservation requires metadata that records provenance, fixity, and technical environments.



Alemu highlights PREMIS and OAIS as foundational preservation frameworks.



Metadata plays a vital role by allowing significant properties of information objects/physical carriers to be systematically recorded.

MARC and RDA



MARC encodes bibliographic metadata using tags and subfields, while RDA focuses on relationships and user tasks.



RDA and IFLA LRM as conceptual advances beyond record-centric cataloguing.



RDA is about access points that allow the user to search and discover.

RDA

<https://www.rdatoolkit.org/>

UN: [redacted for publication]

PW: [redacted for publication]

Online Training

To to be organised in Summer 2026

LRM user tasks

Task	Definition of task
Find	“To bring together information about one or more resources of interest by searching on any relevant criteria.”
Identify	“To clearly understand the nature of the resources found and to distinguish between similar resources.”
Select	“To determine the suitability of the resources found, and to be enabled to either accept or reject specific resources.”
Obtain	“To access the content of the resource.”
Explore	“To discover resources using the relationships between them and thus place the resources in a context.”

Source: [IFLA LRM](#), Table 3.1 User Tasks Summary, page 15



LRM user tasks imply that...

	An agent who creates metadata...	An information system...
(Find)	...records data about attributes or relationships associated with a resource.	...offers end users the functionalities to search for resources using specific attributes or relationships.
(Identify)	...records data to represent a resource accurately and unambiguously.	...presents data that end users can recognize and interpret easily.
(Select)	...records sufficient data to help an end user make choices.	...presents data in various ways to support relevance judgements.
(Obtain)	...records data that allow end users to interact with a resource.	...provides location and access information for resources.
(Explore)	...records data to facilitate discovery of relationships between entities and enable serendipitous discoveries.	<ul style="list-style-type: none">● makes relationships explicit.● enables browsing.● provides contextual information.● provides navigational features.



RDA entities

- RDA Toolkit only provides instructions on RDA entities.
- An RDA entity may be narrowed down to one of these subtypes:
 - Work
 - Expression
 - Manifestation
 - Item
 - Agent
 - Person
 - Collective Agent
 - Family
 - Corporate Body
 - Nomen
 - Timespan
 - Place



PREMIS and OAIS



PREMIS defines objects, events, agents, and rights to support preservation actions.



OAIS provides a conceptual model for archival systems.



PREMIS is the de facto preservation standard at present.

MAKE YOUR ARCHIVAL COLLECTIONS DISCOVERABLE USING STANDARDS

Jisc Archives Hub Search Help Access to Material

Back to Search Within Search terms: Search

The Andrew Marshall Collection

This material is held at Solent University Library

Information about access <http://archiveshub.jisc.ac.uk/data/gb3600-mar> Cite this

Reference	GB 3600 MAR
Dates of Creation	1969-2003
Name of Creator	Marshall Andrew 1954-
Language of Material	English
Physical Description	32 boxes (7 metres)

Scope and Content

This collection holds the papers of the writer Andrew Marshall, including scripts, correspondence, and other documents from his writing career, as well as some photographs, audio cassettes, and videotapes. The collection covers Marshall's work from the 1970s to the 2000s.

Administrative / Biographical History

British screenwriter Andrew Marshall was born in Lowestoft, Suffolk on 27 August 1954. He began contributing to comedy sketch shows in the early 1970s, quickly developing a writing partnership with David Renwick, with whom he wrote several successful comedies, including the radio series *The Burkiss Way* (1976-1980), the TV sitcoms *Hot Metal* (1986-1988) and *Whoops Apocalypse* (1982), the film version of *Whoops Apocalypse* (1986), and the film adaptation of the Tom Sharpe novel *Wilt* (1989).

Much of Marshall's writing since 1990 has been solo work, including the TV sitcom *2point4 Children* (1991-1999), probably his best known work. During this period Marshall also began to write straight drama, working on episodes of *Poirot* (1991) and creating and writing the BBC drama series *Strange* (2002-2003).

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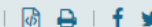
The Andrew Marshall Collection		MAR
Literary Papers		MAR/1
2point4 Children		MAR/1/1
The Burkiss Way		MAR/1/2
Whoops Apocalypse		MAR/1/3
Alexei Sayle's Stuff		MAR/1/4
Hot Metal		MAR/1/5
If You See God, Tell Him		MAR/1/6
Hordes of the Things		MAR/1/7
End of Part One		MAR/1/8
Sob Sisters		MAR/1/9
Dad		MAR/1/10
Slinger's Day		MAR/1/11
Not The Nine O'clock News		MAR/1/12
The Two Ronnies		MAR/1/13
The Steam Video Company and What's On Next		MAR/1/14
There's a Lot of It About		MAR/1/15
Alas Smith & Jones		MAR/1/16
Health and Efficiency		MAR/1/17
The Curse of the Jasons		MAR/1/18
Cracker Factory		MAR/1/19
The Street Show		MAR/1/20
Housebound and On Your Bike		MAR/1/21
Lunch		MAR/1/22
Poirot		MAR/1/23
Strange		MAR/1/24
Bayswater		MAR/1/25
Wilt		MAR/1/26
Miscellaneous Films		MAR/1/27
Miscellaneous Screenplays		MAR/1/28
Miscellaneous TV and Radio Scripts		MAR/1/29
Miscellaneous Sketches		MAR/1/30
Miscellaneous Papers		MAR/1/31

[Back to Search](#)

Within

Search terms:

Search



The Philip Mackie Collection

The Philip Mackie Collection

This material is held at Solent University Library

[Information about access](#)[Cite this](#)<http://archiveshub.jisc.ac.uk/data/gb3600-mac>

Reference	GB 3600 MAC
Dates of Creation	1947 - 1999, predominant 1950 - 1985
Name of Creator	Mackie Philip 1918-1985
Language of Material	English
Physical Description	108 boxes (15 metres)

Scope and Content

This collection holds the papers of the writer Philip Mackie, including scripts, correspondence, and other documents from his writing career, as well as some personal papers. The collection covers Mackie's novels, stage plays, films, and television productions dating from the 1950s to the 1980s.

Administrative / Biographical History

British screenwriter and producer Philip Mackie was born in Salford, Lancashire on 26 November 1918. He studied English at University College London, graduating in 1939. After serving in the army in World War Two, he worked for the Ministry of Information, producing documentary films. From 1954 he began a career as a writer, publishing a novel, *Hurrah, the Flag!* (1957), in addition to scripting several works for theatre and the BBC. He served as Granada Television's Head of Drama from 1958-1962, and then worked primarily as a freelancer for the rest of his career. Many of his productions are adaptations of classic works (*Maupassant* [ITV, 1963], *Raffles* [Yorkshire TV, 1977]) or based on the lives of historical figures (*The Caesars* [ITV, 1968], *Napoleon and Love* [ITV, 1974]). His best-known work is probably *The Naked Civil Servant* (ITV, 1975), an adaptation of Quentin Crisp's autobiography. Mackie died on 23 December 1985.

[Previous](#)

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Expanded

The Philip Mackie Collection	MAC
Literary Papers	MAC/1
The Liars	MAC/1/1
Raffles	MAC/1/2
Dolly	MAC/1/3
Saki	MAC/1/4
Shades of Greene	MAC/1/5
The Night Nurse, or, Hospital	MAC/1/6
Red Letter Day. The Retirement, or, Last Orders	MAC/1/7
They Called Me Al: The Life of Al Bowlly	MAC/1/8
All the Way Up	MAC/1/9
A Marriage	MAC/1/10
The Whole Truth	MAC/1/11
Conjugal Rights	MAC/1/12
The Anti-Death League	MAC/1/13
All the Little Animals	MAC/1/14
Black and Blue. The Middle-of-the-Road Roadshow for All the Family	MAC/1/15
The Cleopatras	MAC/1/16
The Caesars	MAC/1/17
Cover	MAC/1/18
Hurrah! The Flag	MAC/1/19
Maigret's Boyhood Friend	MAC/1/20
Good Girl	MAC/1/21
Victorian Villainies. In the Fog	MAC/1/22
East Lynne	MAC/1/23
An Englishman's Castle	MAC/1/24
The Girl at the Next Table [TV]	MAC/1/25
Harriette	MAC/1/26
A Death in the Family, or, The Key of the Door	MAC/1/27
Women Beware Women	MAC/1/28
The Changeling	MAC/1/29
The Revenger's Tragedy	MAC/1/30
The Limbo Connection	MAC/1/31
Malice Aforethought	MAC/1/32
A Season of Giants, or, Michelangelo	MAC/1/33
Mr Rose	MAC/1/34
The Naked Civil Servant	MAC/1/35
Le Dindon	MAC/1/36
Nanking Road	MAC/1/37
Snow White	MAC/1/38
Napoleon and Love	MAC/1/39
Nell!	MAC/1/40
Amends for Ladies	MAC/1/41

Enriched, Linked, Open, and Filtered Metadata

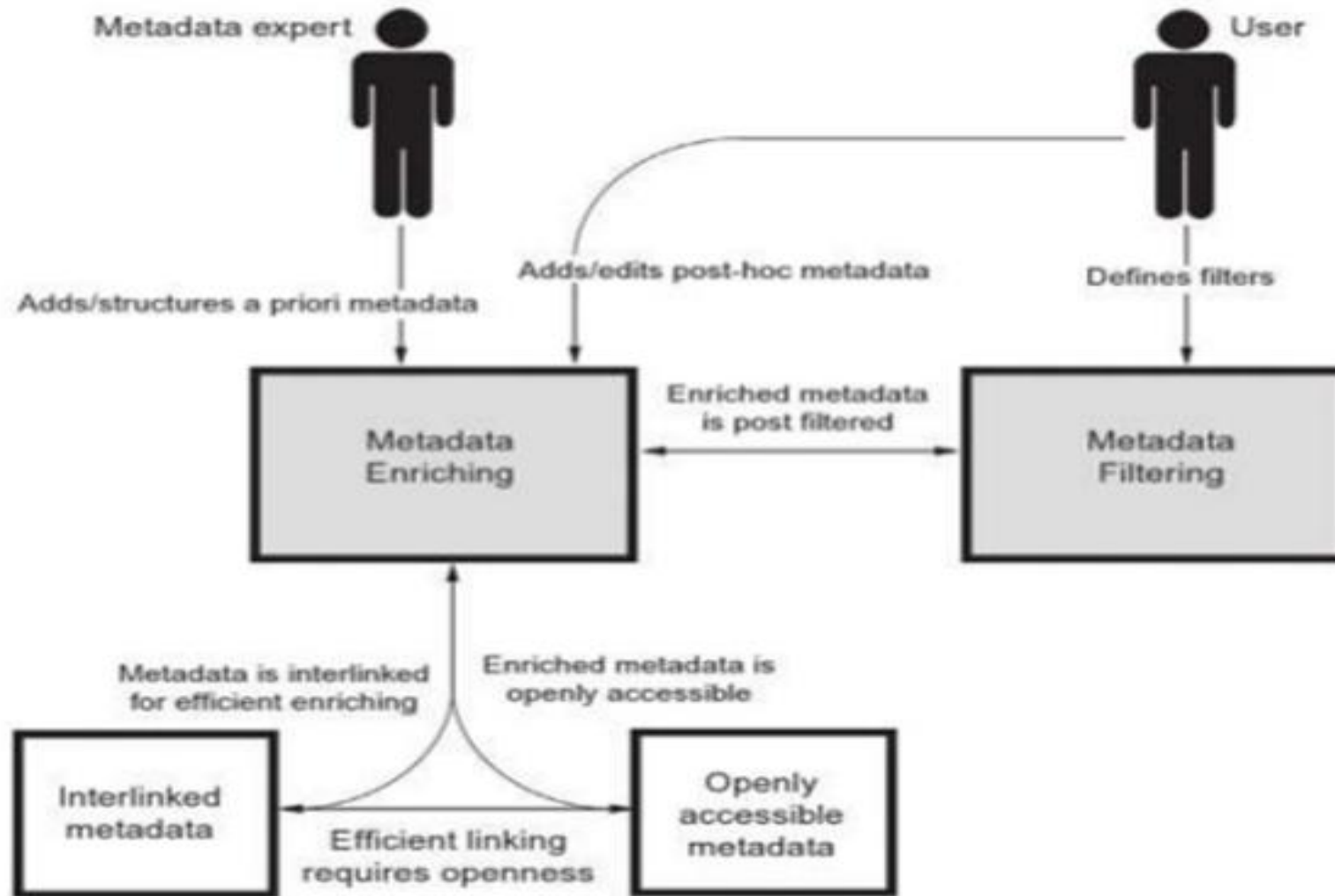


A new metadata theory based on enrichment, linking, openness, and filtering.



Metadata is never complete; it must be continuously improved.





The more metadata, the better

Create, ingest/import, harvest,
collaborate, share, inter-link



ENRICHING ---

Books and more Articles Everything

Costa Concordia

Search Advanced Search

Corporate manslaughter in the maritime and aviation industries

Daniels, Simon

Abingdon : Informa Law from Routledge 2016

Online access

View online Details Reviews & tags Additional services



Actions

Title: Corporate manslaughter in the maritime and aviation industries

Author: Daniels, Simon

Statement of Responsibility: Simon Daniels

ISBN: 1315677873

9781315677873

Description: This text provides expert analysis of the application of the evolving law in corporate manslaughter as it relates to the maritime and aviation industries. It will prove to be a useful tool for practitioners and students in this specialised area, as well as those working in the maritime and aviation industries, such as those who will be accountable under the Corporate Manslaughter Act 2007; the masters and pilots who manage the risks; and the insurers who underwrite the cost of the risks.

Series: Lloyd's practical shipping guides

City of Publication: Abingdon

Publisher: Informa Law from Routledge

Creation Date: 2016

Copyright Date: ©2017

Language: English

Format: 1 online resource (xiv, 157 pages)

Subjects: EBOOKS; LAW; CRIMINAL LAW; CORPORATE RESPONSIBILITY; CORPORATE CRIME; CORPORATE LIABILITY; EMPLOYER LIABILITY; MANSLAUGHTER; MARITIME LAW; AERONAUTICS; AVIATION; Aeronautics, Commercial -- Law and legislation; Maritime law; Criminal liability of juristic persons -- Great Britain

Contents: Examining the bottom line, A comparative study of the key players, The evolution of corporate accountability, The analysis of reform, What society wanted, and what society got: The Corporate Manslaughter and Corporate Homicide Act 2007, The Corporate Manslaughter Act -- Critical review by case study, So near . . . the Costa Concordia disaster, Sentencing in corporate manslaughter, Domestic guidance, global consequence, Crisis in civil aviation accountability, Lessons to be shared and In hazard: The next generation in the High Arctic.

Links

- > This item in the Library Catalogue
- > Click here to access this ebook (A university username and password required).
- > One person at a time can access this ebook. It can also be downloaded for offline reading. Click here for help on access to ebooks.
- > Abstract/Table of contents



Linked Data and BIBFRAME



Linked Data breaks metadata into reusable components identified by URIs.



BIBFRAME uses RDF to express bibliographic relationships in a web-compatible way.



We are moving from metadata silos to interoperable, shared, open and scalable metadata.



Linked Data

A data model that identifies, describes, links and relates structured data elements, analogous to the way relational database systems function, although Linked Data is aimed to operate at a web scale.

(Coyle, 2010; Coyle & Hillmann, 2007; Lagoze, 2010; Mathes, 2004; Shirky, 2005; Veltman, 2001; Weinberger, 2005, 2007; Wright, 2007; Lehmann, 2010; Andersen & Skouvig, 2006.; Floridi, 2000; Hjørland, 2000)

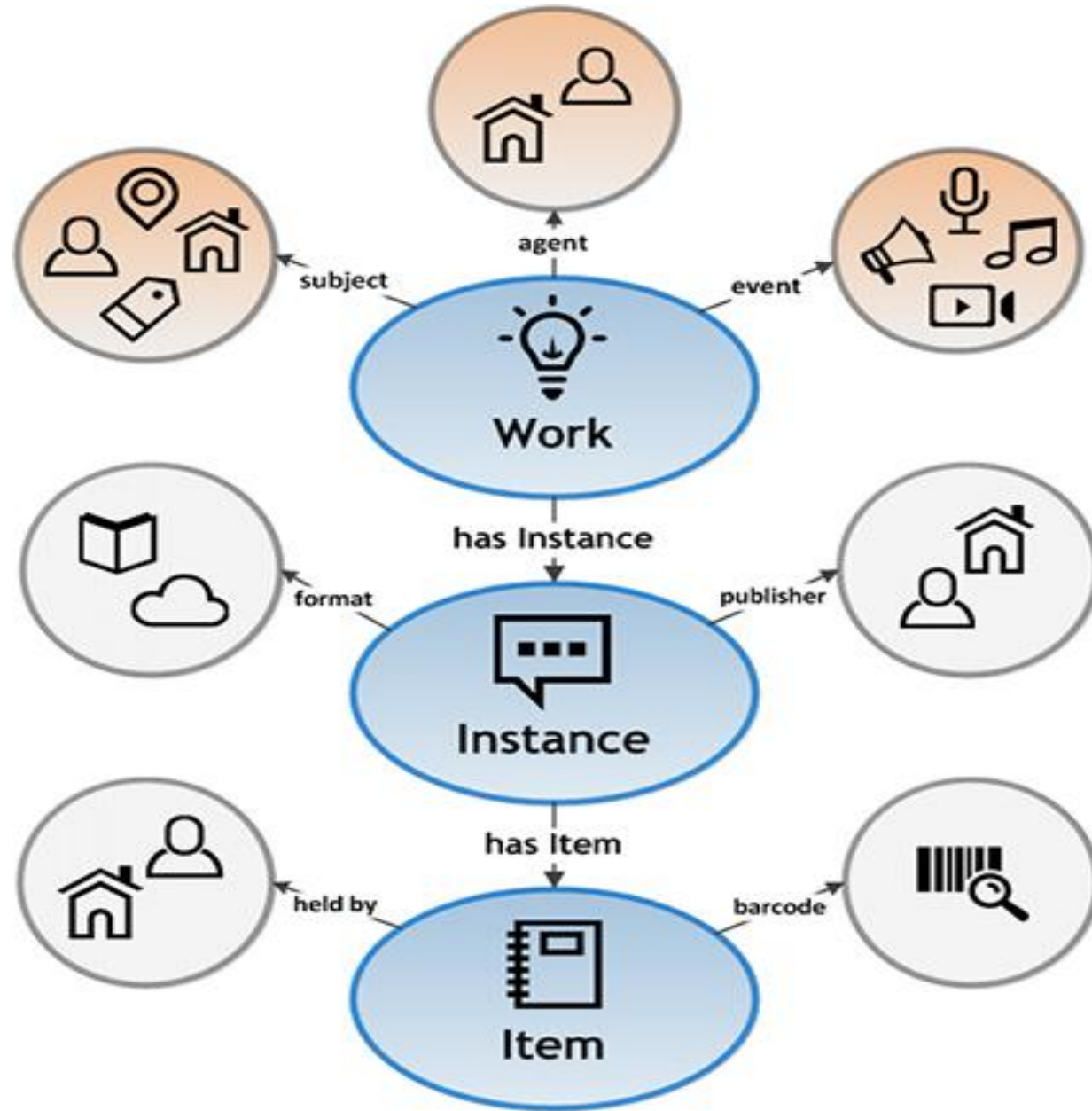


Linked Data

- Linked Data is data model
 - Identifies data
 - Describes data
 - Links/relations between data elements
 - Structured data elements
 - Analogous to the way relational database systems function
 - But Linked Data is aimed to operate at a web scale
 - Web-scale data linking



BIBFRAME



BIBFRAME

Browse

Editor

Load Work

Load IBC

Load MARC

Create Resource

Monograph ▾

Notated Music ▾

Serial ▾

Cartographic ▾

Sound Recording: Audio CD



Sound Recording: Audio CD-R ▾

Sound Recording: Analog ▾

Moving Image: BluRay DVD



Moving Image: 35mm Feature Film ▾

Rare Materials ▾

BIBFRAME Work

Creator of Work (RDA 19.2)

Primary Contribution

Weinberger, David, 1950-



Title Information

Work Title

Work Title Variation

Transliterated Title

Too big to know



Form of Work

Form/Genre

Textbooks



Date of Work (RDA 6.4)

Date of Work (RDA 6.4)

2012



Place of Origin of the Work (RDA 6.5)

Place Associated with a Work

(Geographic) Coverage of the Content

Geographic coverage

Internet & democracy case study series



(Time) Coverage of the Content (RDA 7.3)

(Time) Coverage of the Content (RDA 7.3)

Intended Audience

Intended Audience

Contribution (RDA 19.3 and 20.2)

Contribution



BIBFRAME-RDF

```
@prefix bf: <http://id.loc.gov/ontologies/bibframe/>.
@prefix bflc: <http://id.loc.gov/ontologies/bflc/>.
@prefix madsrdf: <http://www.loc.gov/mads/rdf/v1#>.
@prefix pmo: <http://performedmusicontology.org/ontology/>.
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>.
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>.
@prefix xsd: <http://www.w3.org/2001/XMLSchema#>.

<http://id.loc.gov/resources/instances/e119710288512818968697872971288138247568> bf:carrier <http://id.loc.gov/vocabulary/carriers/nc>;
  bf:copyrightDate "1968";
  bf:editionStatement "መቶኛ እትም";
  bf:identifiedBy _:b1_b0;
  bf:issuance <http://id.loc.gov/vocabulary/issuance/mono>;
  bf:media <http://id.loc.gov/vocabulary/mediaTypes/n>;
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  bf:title _:b1_b1;
  a bf:Instance.

<http://id.loc.gov/vocabulary/carriers/nc> a bf:Carrier;
  rdfs:label "volume".

_:b1_b0 a bf:Isbn;
  rdf:value "987654321091".

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  rdfs:label "single unit".

<http://id.loc.gov/vocabulary/mediaTypes/n> a bf:Media;
  rdfs:label "unmediated".

_:b1_b1 a bf>Title;
  bf:mainTitle "ፍቅር እስከ መቃብር".
```

Why standards matter?



A set of rules, specifications, principles or guidelines
Define how things should work across systems and contexts.



Cross-community reach
Bridge gaps between different groups, industries, or technologies.



Enable interoperability
Allow diverse systems to work together seamlessly.

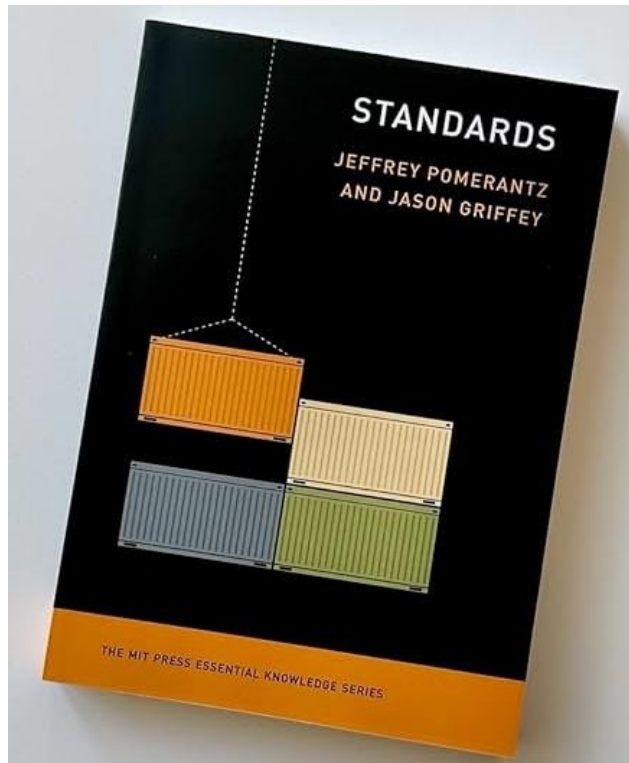


Institutionally enforced
Maintained and upheld by governing bodies and organisations.

(Bowker & Star, 1999)

Standards: invisible, essential and powerful

(Pomerantz & Griffey, 2025)







“Boring, complex and important.”
Cory Doctorow

“Negotiated compromises.” Bowker
& Star (1999)

Invisible but foundational

“Easy to ignore what makes smooth
running possible.” Pomerantz &
Griffey (2025)

Standards: invisible, essential and powerful

			
Consistent recording, sharing, retrieval	Less friction in collaboration & communication	Trust & reliability	Global scalability (e.g., Internet)


(Pomerantz & Griffey, 2025)

Key principles of standards development

 Open participation

 Coordination and harmonisation


 Notification of standards development

 Consideration of views and objections

 Consensus vote

 Appeals process

 Written procedures






 Compliance with normative policies

(Pomerantz & Griffey, 2025)

Why standards matter?

- **Standards**
 - Agreed rules for consistency, quality and interoperability.
 - *“Standards provide a basis for mutual understanding... Standards are the distilled wisdom of people with expertise in their subject matter and who know the needs of the organizations they represent”* (ISO Website, 2025)
<https://www.iso.org/standards.html>
- **Frameworks**
 - Structured guides to develop LIS systems and policies.
 - *“Provide a consistent method (approach) to describing resources”* (IFLA, 2025)
- **Models**
 - Abstract representations for organising and accessing information (FRBR, LRM)

Why standards matter? *Statement on Universal Bibliographic Control – Principles (July 2025)*

-  Distribute responsibility globally – each national bibliographic agency manages metadata for its national output
-  Create and maintain metadata at the source, in the territory of origin
-  Ensure timeliness of production and distribution of quality metadata
-  Make metadata widely and openly available for reuse
-  Use internationally agreed standards to make metadata consistent and interoperable

<https://repository.ifla.org/handle/20.500.14598/4259>

Metadata standards : IFLA trends *(Dezuanni et al., 2024)*

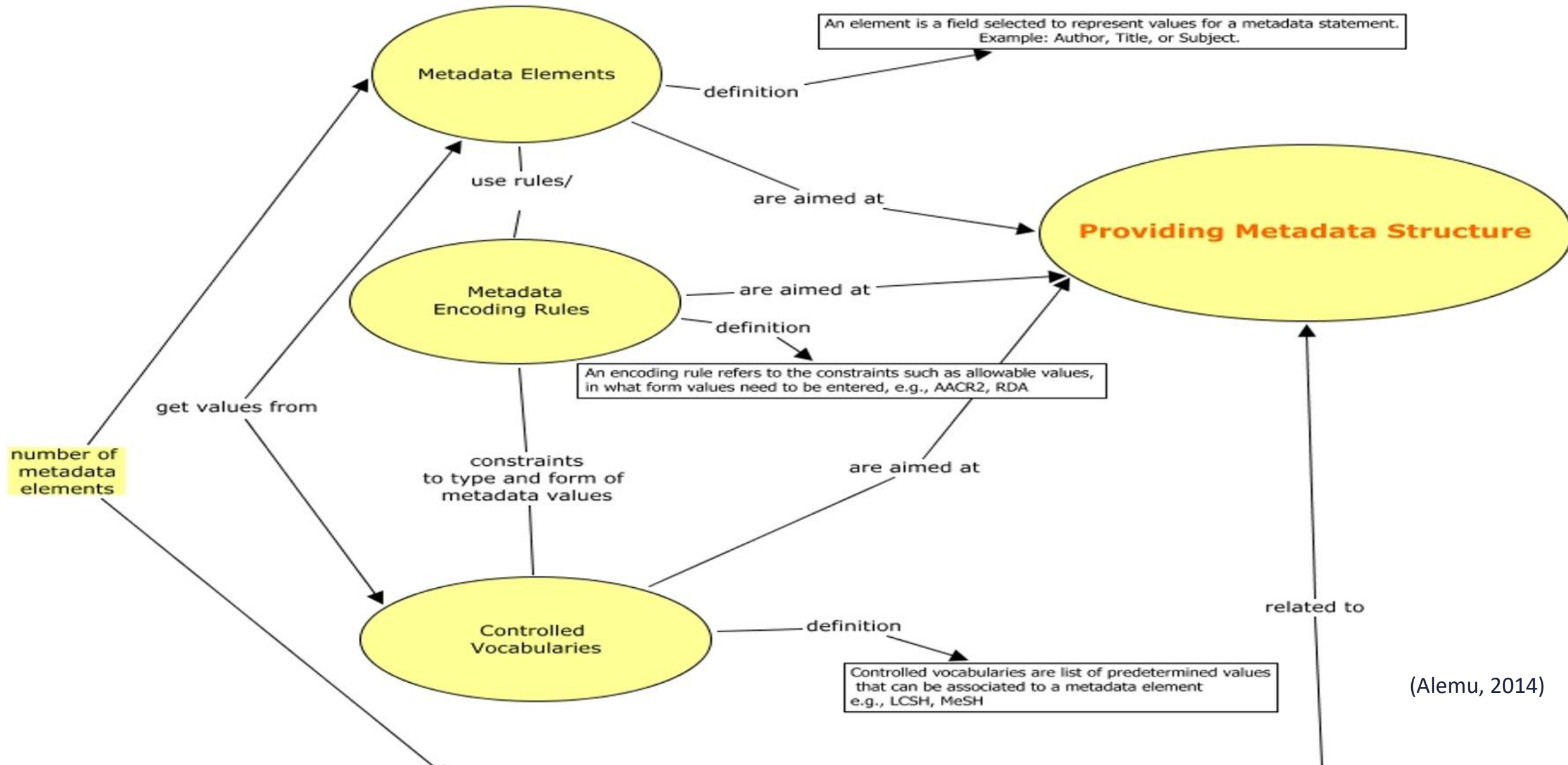
- Metadata is important for **data infrastructure and big data analysis**
- **Supports online and lifelong learning** by supporting IFLA tasks: identify, find, select, obtain, explore *(Dezuanni et al., 2024)*
- Enables **data ethics and privacy** by ensuring authority, integrity, provenance; supports copyright, attribution, timestamps
- Shapes **hyper-connectivity**: impacts digital inclusion, social equity, democratic participation
- Drives **access innovation**: metadata supports overcoming technological access barriers

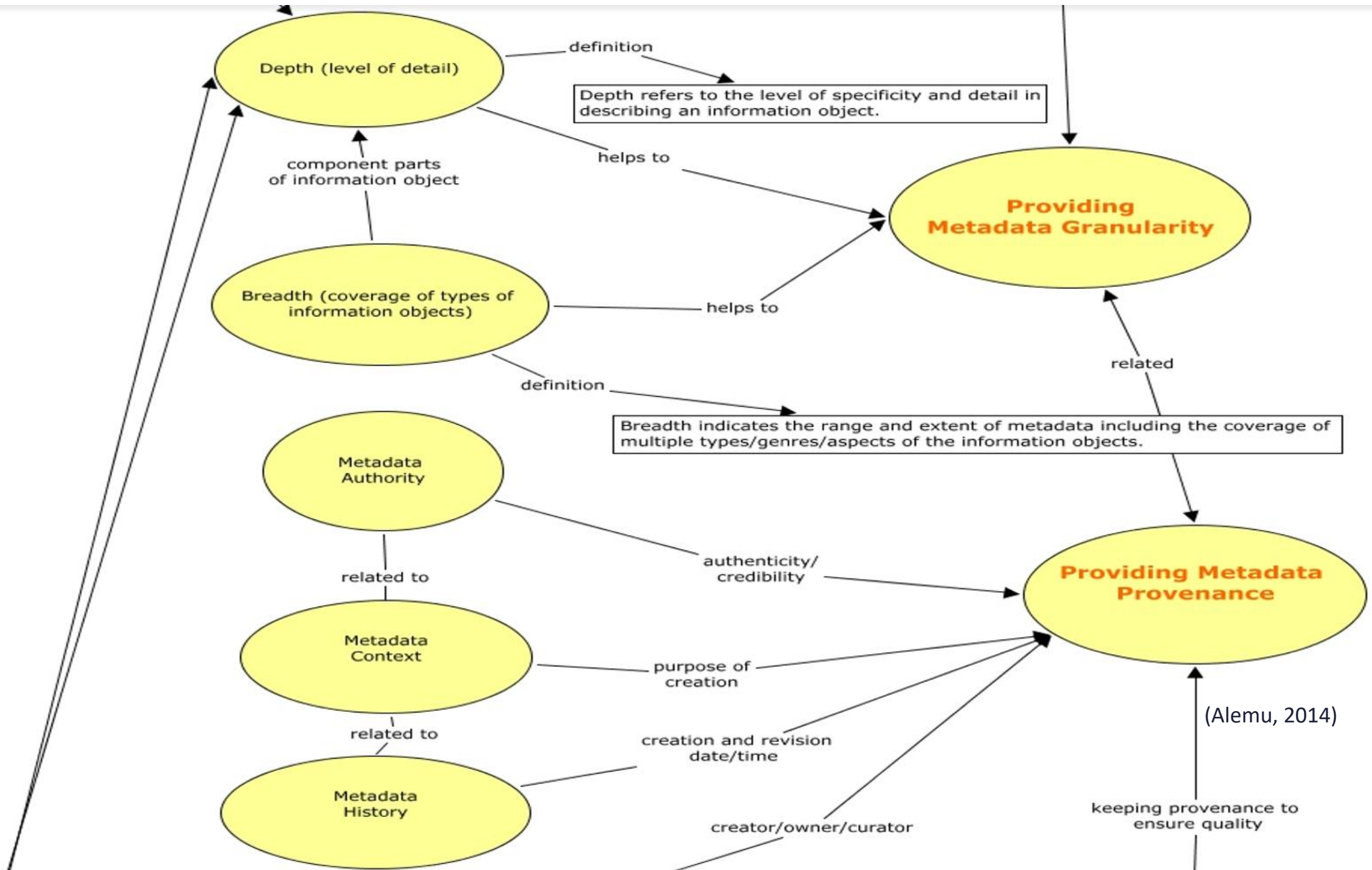
Dezuanni, M., Osman, K. Burton, A. & Heck, E. (2024) IFLA Trend Report 2024: Facing the future of information with confidence: Phase 2. Brisbane: Digital Media Research Centre.

METADATA STANDARDS MATTER

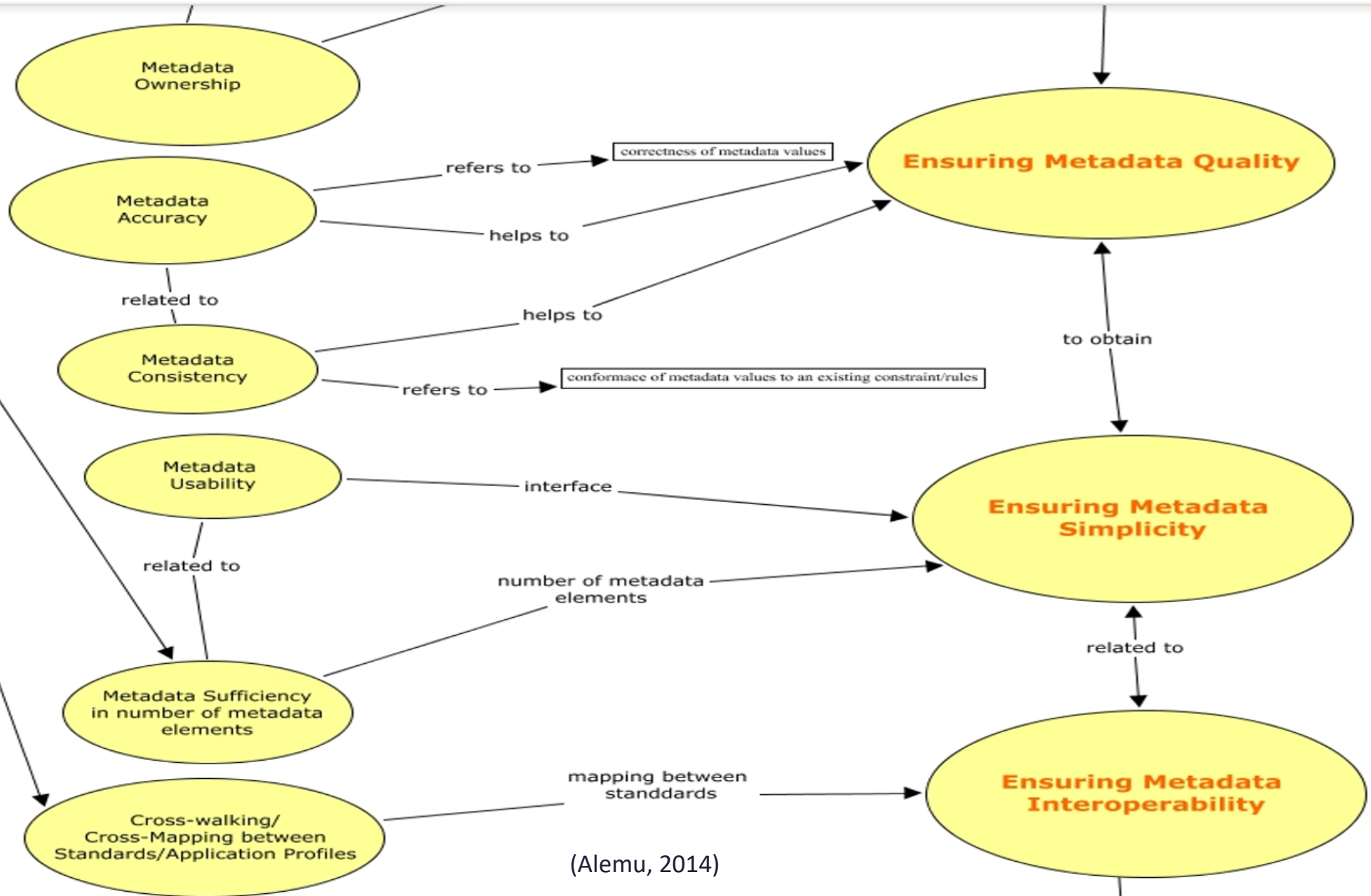


The role of standards

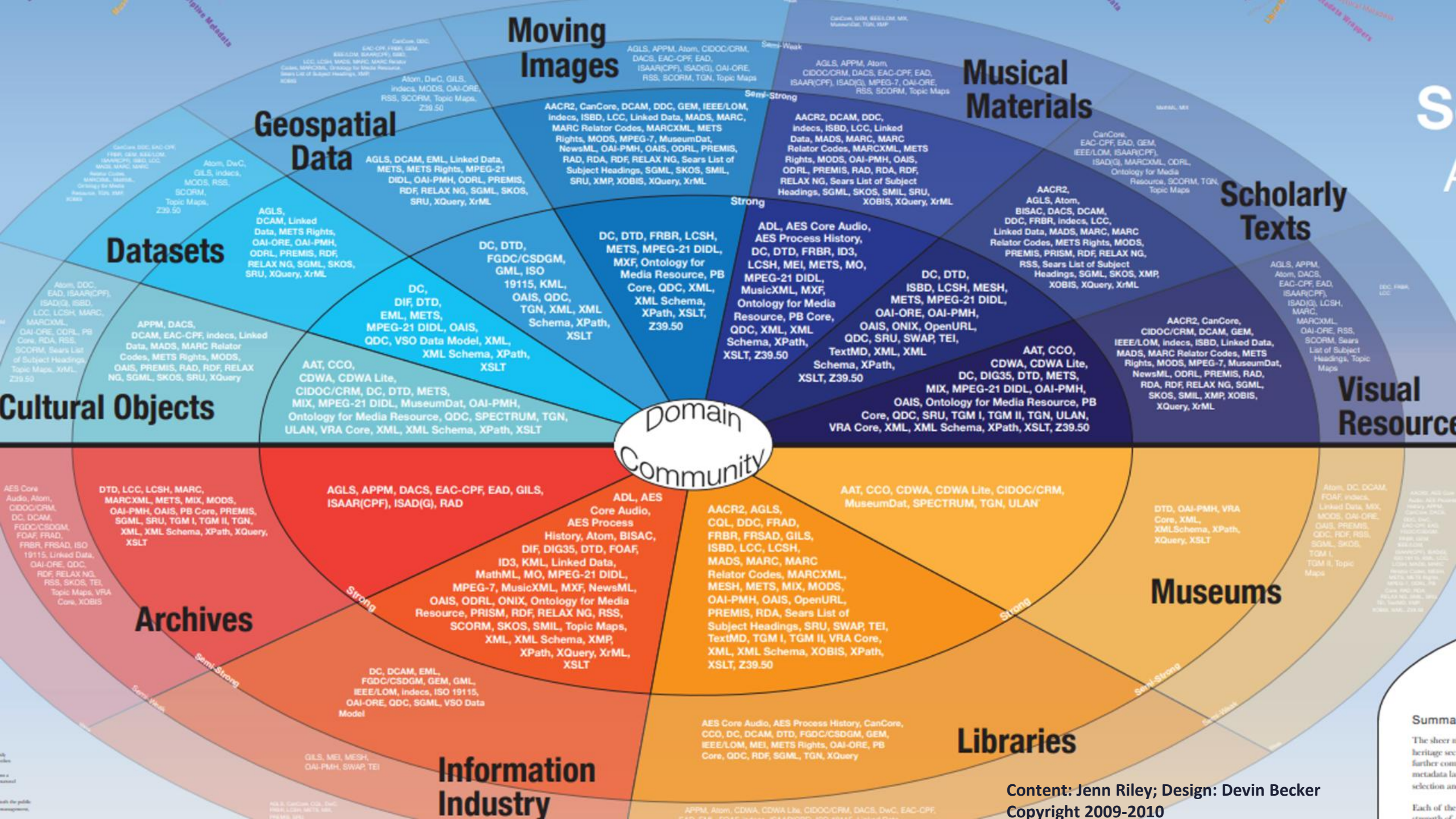




number of elements



(Alemu, 2014)



Metadata standards : metadata quality



Core indicators

Completeness, correctness, consistency, duplication (Zeng & Qin, 2016)



Functional qualities

Accuracy, relevance, timeliness, accessibility, interoperability (Haynes, 2018)



Structural capabilities

Modularity, extensibility, multilingualism, refinement (Gartner, 2016, Duval et al., 2002; Zeng & Qin, 2016)



Improvement mechanisms

Templates, validation tools, automated correction, vocabularies, encoding (Zeng & Qin, 2016; Gartner, 2016)

IFLA standards

I. CONCEPTUAL MODELS

- IFLA LRM - IFLA Library Reference Model
- FRBR - Functional Requirements for Bibliographic Records
- FRAD - Functional Requirements for Authority Data
- FRSAD - Functional Requirements for Subject Authority Data
- LRMoo - Library Reference Model object-oriented
- PRESSoo - FRBR-aligned conceptual model for continuing resources

• II. CATALOGUING PRINCIPLES & RULES

- ICP - Statement of International Cataloguing Principles

- ISBD - International Standard Bibliographic Description
- ISBD in RDF - International Standard Bibliographic Description in RDF

• III. ENCODING STANDARDS

- UNIMARC - Universal Machine-Readable Cataloging
- UNIMARC Bibliographic
- UNIMARC Authority
- UNIMARC Classification
- UNIMARC Holdings

• IV. SELECTED GUIDELINES & BEST PRACTICES

<https://www.ifla.org/g/standards/current-ifla-standards/>

IFLA'S STATEMENT OF INTERNATIONAL CATALOGUING PRINCIPLES (IFLA, 2016)

Convenience of
the user

Common usage

Representation

Accuracy

Sufficiency and
necessity

Significance

Economy

Consistency
and
standardization

Integration

Interoperability

Openness

Accessibility

Rationality

Linked Data work - IFLA vocabularies and namespaces

LRM Vocabularies (FRBR, FRAD, FRSAD)

ISBD

UNIMARC Vocabularies

MulDiCat

IFLA's Library Reference Model (IFLA LRM)

(Riva et al., 2017)

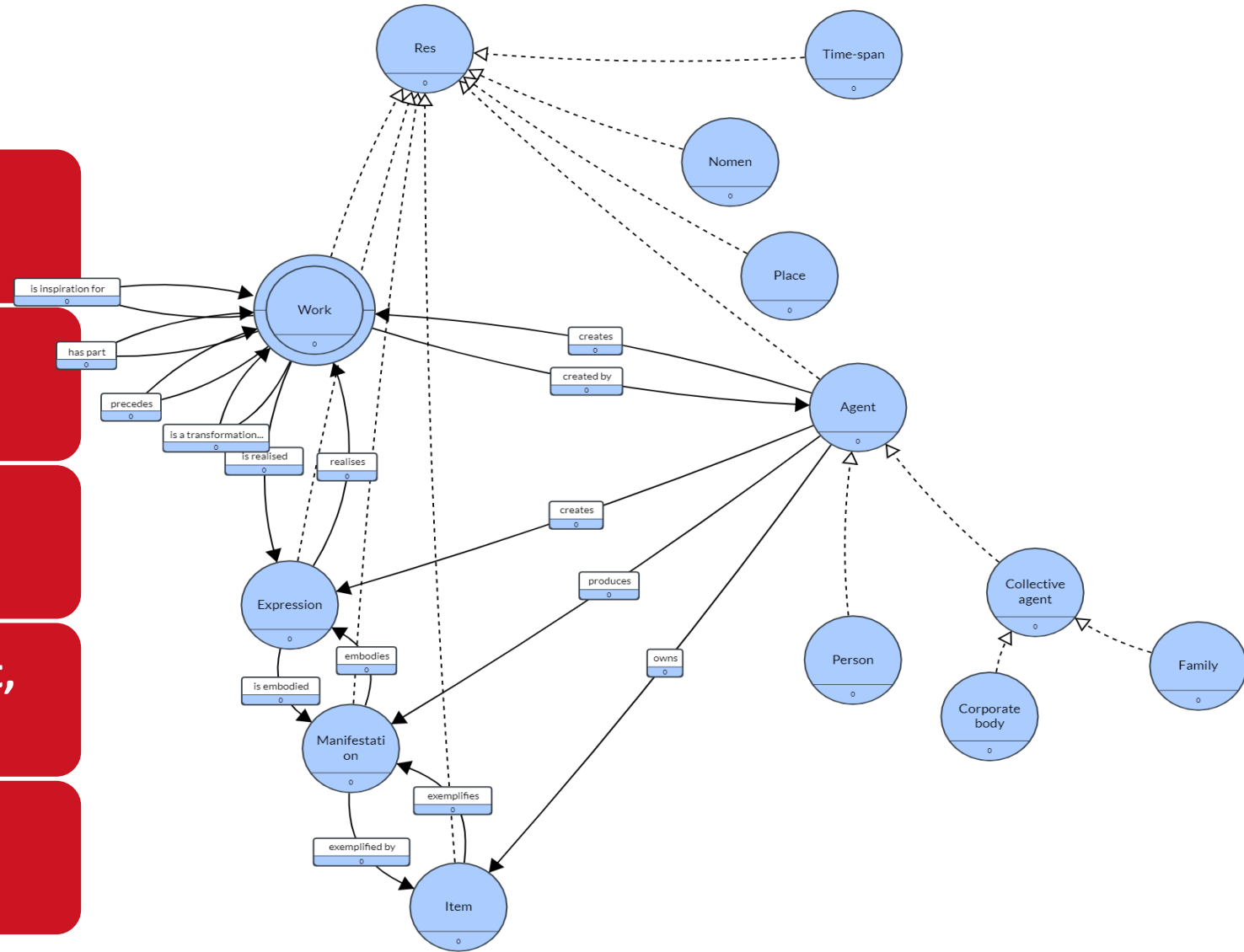
Conceptual model (entities, elements, relationships)

Consolidates FRBR, FRAD, FRSAD

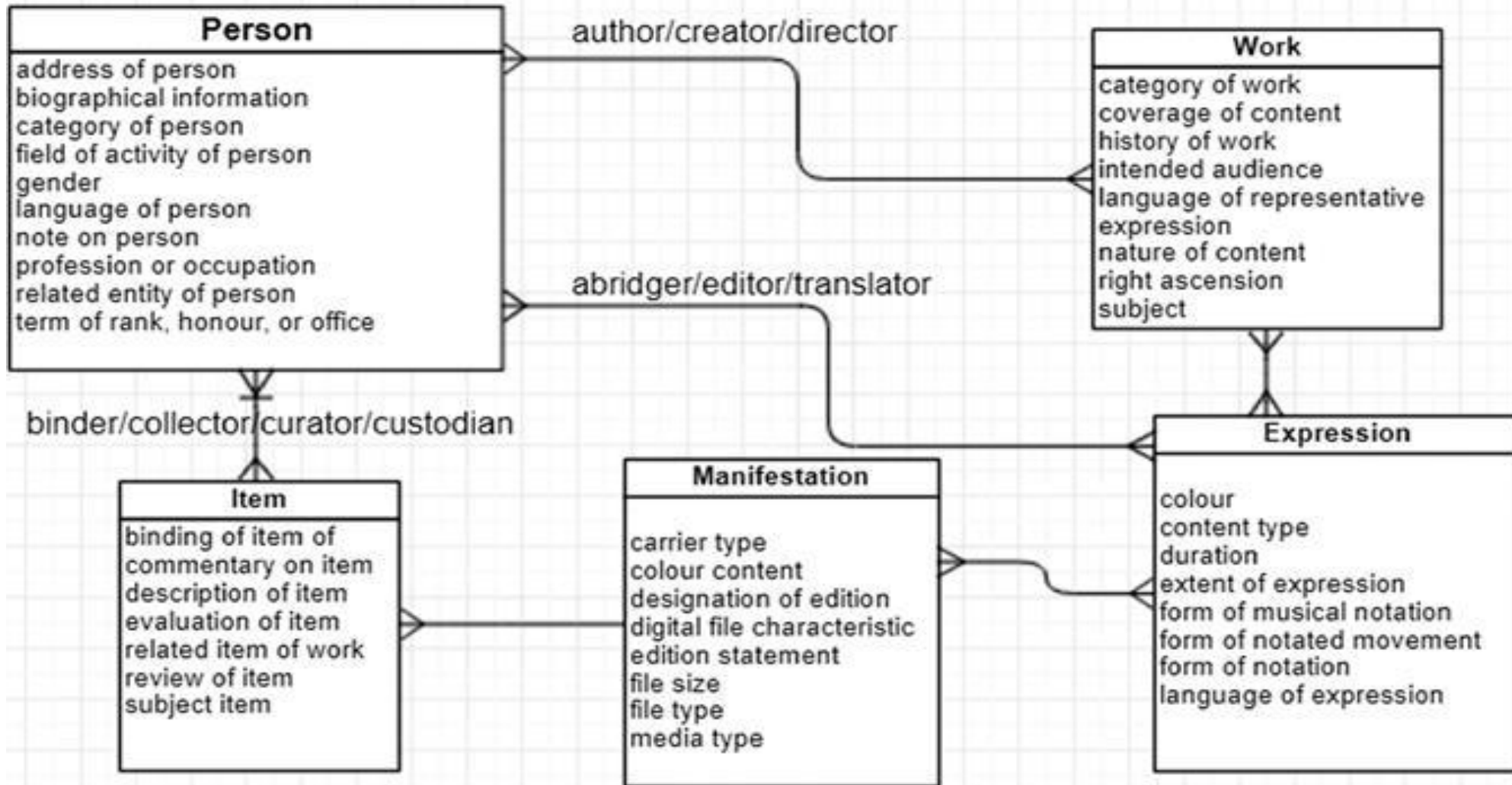
Adaptable, leverages Linked Data

Supports user tasks (find, identify, select, obtain, explore)

Promotes metadata reuse, interoperability, multilingualism, granularity, scalability and modularity.

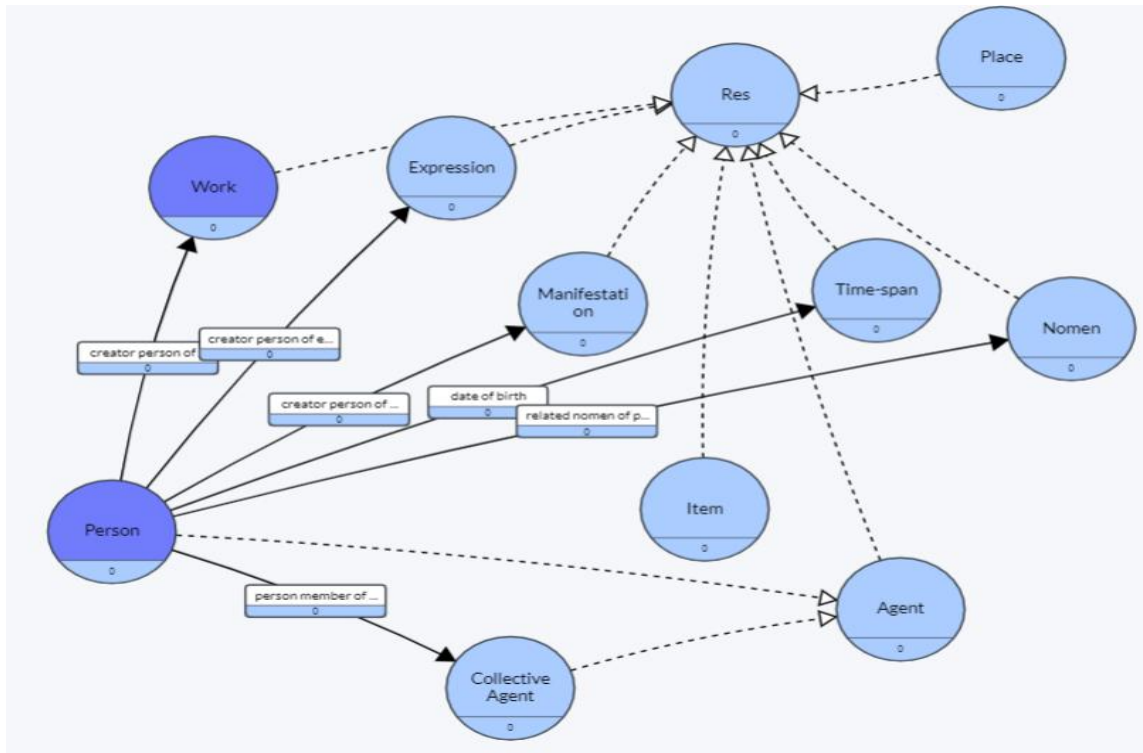


A Metadata model



Resource Description and Access (RDA)

(El-Sherbini, 2013; Oliver, 2010)



Replaces AACR2, supports digital resource cataloging.



Aligns with FRBR and IFLA LRM.



Non-prescriptive and internationally adaptable.



Supports Linked Data and metadata reuse.



Enhances resource linking and collocation.

MARC family



Machine-readable cataloging format



Supports global sharing of bibliographic records



Uses standardised tags and subfields



Includes administrative and bibliographic elements



Widely used for cataloging diverse library resources

BIBFRAME



- Initiated by Library of Congress in 2011.



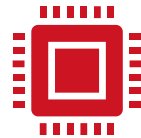
- Replaces MARC with Linked Data principles.



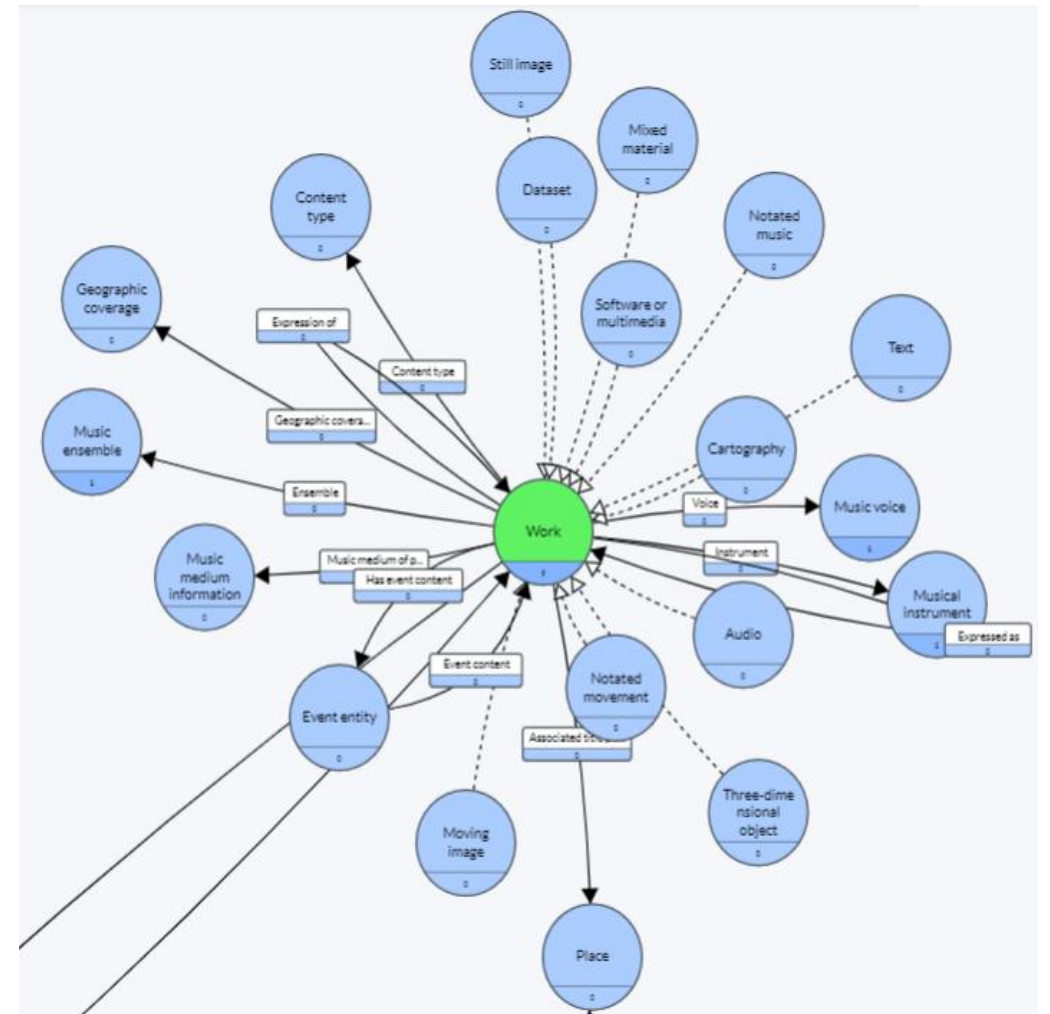
- Defines Work, Instance, Item, Agents, Events.



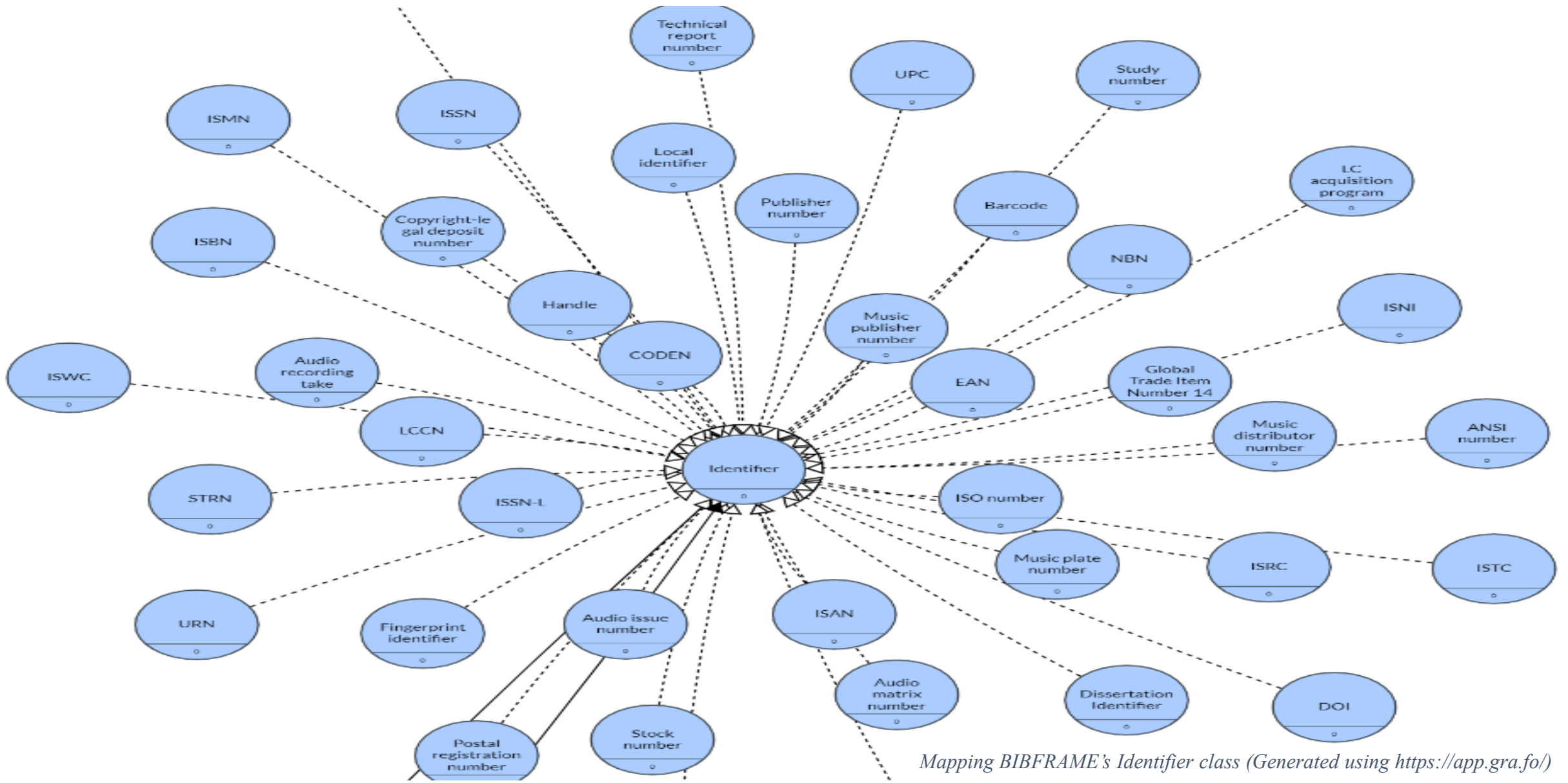
- Improves metadata linking and reuse.



- Supports RDF, JSON-LD, and XML formats.



(Park *et al.*, 2018; Steele, 2019)



Controlled vocabularies and authority headings



Standardizes terms and access points.



Includes LCSH, LCNAF, AAT, VIAF, etc.



Facilitates accurate metadata tagging.



Improves user access and search results.



Supports metadata interoperability across systems.

Are metadata standards relevant and sustainable?



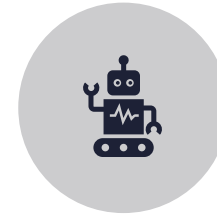
Foster community governance



Provide structure consistency and control; machine-readable metadata



Embed ethical and inclusive design



Support modularity and extensibility (adapt to local needs without sacrificing interoperability)



Mandate documentation of provenance, rights and transformations

Metadata standards: challenges and realities

- Library collections grow, technologies evolve and user expectations change.
- Metadata reflects cultural, linguistic and political contexts (Bowker & Star, 1999)
- Metadata is purposeful, contextual and subjective. It is an approximation to the things it represents (Gartner, 2016)
- Categories can quickly become outdated or exclusionary (Weinberger, 2007)
- “Each standard and each category valorizes some point of view and silences another” (Bowker & Star, 1999, p.6)
- Catalogues must evolve as living systems (Ranganathan, 1957, p. 444)

Cataloguing Ethics – Statements of Ethical Principles

- 1. User-focused access and discovery**
- 2. Non-discriminatory description**
- 3. Awareness and mitigation of bias**
- 4. Critical use of standards**
- 5. Accessible and inclusive tools**
- 6. Accountability and transparency**
- 7. Collaboration across environments**
- 8. Workplace diversity, equity and inclusion**
- 9. Advocacy for cataloguing value**
- 10. Community engagement and responsiveness**

https://docs.google.com/document/d/1IBz7nXQPfr3U1P6Xiar9cLAKzoNX_P9fq7eHvzfSIz0/edit?tab=t.0

Why metadata standards & models matter: key takeaways

- Ensure consistent description, classification and access; metadata re-use and exchange
- Enable interoperability across systems, formats and platforms
- Support seamless data exchange
- Support user tasks
- Empower users through access, findability and relevance
- Facilitate machine-readability for Linked Data and AI integration
- Promote metadata reuse, reducing duplication and silos
- Support inclusivity, transparency and equity
- Ensure continuity, integrity and trust across systems
- Adapt to change
- Shape future-ready knowledge infrastructures

(Bowker & Star, 1999; Pomerantz & Griffey, 2025)

References

- Alemu, G. (2022). The future of enriched, linked, open and filtered metadata: Making sense of IFLA, LRM, RDA, Linked Data and BIBFRAME. Facet Publishing.
- Bowker, G. C., & Star, S. L. (1999). Sorting things out : classification and its consequences. MIT Press.
- Brenndorfer, T. (2016). RDA essentials. ALA Editions.
- Chan, L. M., & Zeng, M. L. (2006). Metadata interoperability and standardization: A study of methodology, Part I: Achieving interoperability at the schema level. D-Lib Magazine, 12(6).
- Cutter, C. A. (1904). Rules for a dictionary catalog. Government Printing Office.
- Delsey, T. (2002). Functional analysis of the MARC 21 bibliographic and holdings format. Network Development and MARC Standards Office. https://www.loc.gov/marc/marc-functional-analysis/original_source/analysis.pdf
- Doctorow, C. (n.d.). Cory Doctorow. https://en.wikipedia.org/wiki/Cory_Doctorow
- Duval, E., Hodgins, W., Sutton, S., & Weibel, S. L. (2002). Metadata principles and practicalities. D-Lib Magazine, 8(4).
- El-Sherbini, M. (2013). RDA: Resource description and access: Strategies for implementation. ALA Editions.
- Gartner, R. (2016). Metadata: Shaping knowledge from antiquity to the semantic web. Springer.
- Haynes, D. (2018). Metadata for information management and retrieval: Understanding metadata and its use. Facet Publishing.
- Hider, P. (2018). Information resource description: Creating and managing metadata. Facet Publishing. <https://doi.org/10.1108/LHTN-10-2018-0067>



References

- IFLA. (1997). Functional requirements for bibliographic records: Final report. <https://repository.ifla.org/bitstream/123456789/811/2/ifla-functional-requirements-for-bibliographic-records-frbr.pdf>
- IFLA. (1998). Functional requirements for bibliographic records: Final report. <https://archive.ifla.org/VII/s13/frbr/frbr.pdf>
- IFLA. (2009). Functional requirements for bibliographic records: Final report. International Federation of Library Associations and Institutions.
- IFLA. (n.d.). IFLA standards. <https://www.ifla.org/standards/>
- Lubetzky, S. (1953). Development of cataloging rules. *Library Trends*, 2(2), 179-186.
- Lubetzky, S., Connell, T. H., & Maxwell, R. L. (2000). *The future of cataloging: Insights from the Lubetzky symposium: April 18, 1998*. University of California, American Library Association.
- Mirović, D. (2024). Bringing Order to Chaos Ethically: “Cataloging Code of Ethics” and Critical Cataloging. *BOSNIACA*, 29(29), 91–108. <https://doi.org/10.37083/bosn.2024.29.91>
- NISO. (2004). Understanding metadata. <https://www.niso.org/publications/press/UnderstandingMetadata.pdf>
- NISO. (2007). ANSI/NISO Z39.85 – The Dublin Core Metadata Element Set. NISO Press. https://colab.mpdl.mpg.de/mw010/images/1/1e/DublinCore_Metadata_Z39-85-2007.pdf



References

Oliver, C. (2010). *Introducing RDA: A guide to the basics*. Facet Publishing.

Phipps, J., & Hillmann, D. (2016). The RDA registry: Supporting RDA in a multilingual world. Paper presented at: IFLA WLIC 2016 – Columbus, OH – Connections. Collaboration. Community in Session S17 - Satellite Meeting: Cataloguing with Serials and Other Continuing Resources. In *RDA in the Wider World*, 11 August 2016, Dublin, OH, USA. <http://library.ifla.org/id/eprint/2048>

Pomerantz, J. (2015). *Metadata*. MIT Press.

Pomerantz, J., & Griffey, J. (2025). *Standards*. MIT Press.

Ranganathan, S. R. (1957). *The five laws of library science*. Madras Library Association.

RDA Steering Committee. (2021). *RDA Toolkit*. American Library Association, Canadian Library Association, and CILIP: The Chartered Institute of Library and Information Professionals. <https://www.rdatoolkit.org>

Riva, P., Le Bœuf, P., & Žumer, M. (2017). IFLA library reference model: A conceptual model for bibliographic information.

Smiraglia, R. P., Riva, P., & Žumer, M. (2013). *The FRBR family of conceptual models: Toward a linked bibliographic future*. Routledge.

Steele, T. D. (2019). What comes next: Understanding BIBFRAME. *Library Hi Tech*, 37(3), 513-524. <https://doi.org/10.1108/LHT-06-2018-0085>

Svenonius, E. (2000). *The intellectual foundation of information organisation*. MIT Press.

Willer, M., & Dunsire, G. (2014). ISBD, the UNIMARC bibliographic format, and RDA: Interoperability issues in namespaces and the linked data environment. *Cataloging & Classification Quarterly*, 52(8), 888-913. <https://doi.org/10.1080/01639374.2014.921260>

Zeng, M. L., & Qin, J. (2016). *Metadata (2nd ed.)*. Facet Publishing.



THANK YOU



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Any Questions?

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