

The Challenge

A New Dimension in Metadata Quality

For decades, metadata quality depended on two factors: **good cataloguing standards** and **skilled cataloguers**. Entity-based metadata introduce a third dimension that traditional cataloguing never had to address.

When entities become shared resources edited by many institutions simultaneously, metadata quality also depends on how the community **governs collaborative editing**. This is no longer only a modelling problem — it becomes a **governance problem**.

□ This is one of the most significant methodological challenges introduced by entity-based knowledge graphs.

A New Governance Challenge

Consider a Person entity collaboratively maintained by many libraries. Neither BIBFRAME nor RDA answers these questions — not because they are inadequate, but because they were never designed to govern collaborative editorial processes.

Preferred Label

Which label should be displayed for the shared entity?

Merge Decisions

Should two entities be merged or kept separate?

Relationship Removal

When should a relationship be removed?

Conflicting Contributions

How should competing institutional inputs coexist?

How Communities Work Together

In traditional cataloguing, most editorial decisions remain local. In a shared knowledge graph, every change may affect dozens of participating institutions.

Best Practices are not intended to replace RDA or BIBFRAME — they **complement** them. Standards define the conceptual model. Best Practices define how communities collaboratively apply that model, forming a **complementary layer of governance**.



Case Study

Share Family as a Living Research Laboratory

The Community

The Share Family has faced governance questions for several years — not theoretically, but through everyday collaborative cataloguing.

The Environment

This experience transformed the Share Family into a living research laboratory. JCricket evolved into a collaborative workspace where governance questions became visible, were discussed, and translated into operational Best Practices.

The Shared Knowledge Graph

The Share-VDE platform generates a shared knowledge graph by integrating bibliographic and authority data from multiple institutions and external sources. The **Cluster Knowledge Base (CKB)** provides the shared entity layer for collaborative editing.



Local Independence

Libraries continue managing their own local catalogues independently while contributing to the shared layer.



API Synchronization

Optional APIs allow local systems to synchronize selected entity updates from the shared layer.



Interoperability

JCricket facilitates interoperability with Sinopia, Marva, FOLIO, Alma, and Wikidata.



Why Collaborative Practices Matter

JCricket is important for one reason: it provides an **observable environment** where collaborative decisions become explicit. Every editing operation exposes governance questions that do not emerge in traditional cataloguing environments.

For this reason, the editor itself is less interesting than the **collaborative practices it makes visible**. Transparency through provenance is central — every value retains its institutional origin, so cataloguers always know who contributed each statement.

From Experience to Governance

Four recurring scenarios

- Adding information
- Replacing a value
- Managing multiple values
- Evolving controlled vocabularies

The real challenge

Responsibility • Transparency • Provenance • Shared decision-making

The goal

Enable knowledge to evolve while preserving consistency and trust.



Governance Scenario 1

Adding Property Values

One of the most common collaborative editing activities is adding a new value to an existing property. Different governance policies apply depending on the nature of the value.

Literal Values

Free-text contributions requiring consistency checks across institutions.

Controlled Vocabulary Terms

Terms drawn from shared vocabularies requiring alignment and authority decisions.

Entity Relationships

Links to other entities raising questions of provenance, duplication, and authority.

Governance Scenario 2

Managing Single-Valued Properties

Different institutions may legitimately contribute slightly different title forms, reflecting local cataloguing practices, transcription choices, or multilingual/multiscript requirements. Every contribution is preserved.

Stanford

One Hundred Years of Solitude and Other Novels (eng)

National Library of Norway (NLN)

One Hundred Years of Solitude and Other Novels (eng)

New York University (NYU)

100 Years of Solitude and Other Novels (eng) — uses numeral

University of Pennsylvania (UPENN)

One Hundred Years of Solitude & Other Novels (eng) — uses ampersand

The governance challenge lies in deciding **which title should represent the shared entity** in the public interface.

Mono-Value Property — Portal View

Explore
One Hundred Years of Solitude
and Other Novels

Simple search
marquez

Advanced search

Editor
"One Hundred Years of Solitude and Other Novels" (1970 edition)

García Márquez, Gabriel > "Cien años de soledad" > Cien años de soledad. English. (Text) > "One Hundred Years of Solitude and Other N..."

Publication ⓘ

One Hundred Years of Solitude and Other Novels

Published in English in 1970 in New York (N.Y.) by Harper & Row.

Edition statement: [First ed.]

Note: Translation of Cien años de soledad and other novels, Translation of 100 años de soledad, Translation of Cien años de soledad.

Responsibility statement: by Gabriel García Márquez

The *IsLeader* mechanism

The important point is not the flag itself, but the **collaborative decision-making process** behind it.

"One Hundred Years of Solitude and Other Novels" (1970 edition)

Provenance data

Title	One Hundred Years of Solitude and Other Novels	English (ENG)	STANFORD	🗑️ +
	One Hundred Years of Solitude and Other Novels	English (ENG)	NLN	🗑️ +
	100 Years of Solitude and Other Novels	English (ENG)	NYU	🗑️ +
	One Hundred Years of Solitude & Other Novels	English (ENG)	UPENN	🗑️ +

Managing Multi-Valued Properties

Multi-valued properties follow a different governance logic. Different notes may legitimately coexist because they provide **complementary information**.

Not a Selection Tool

Here, *IsLeader* is not intended to select a single preferred value — multiple contributions can coexist.

Presentation vs. Preservation

IsLeader determines which notes are presented to users, while every institutional contribution is preserved for editorial purposes.

Multi-Value Property — Portal View

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Notes	
Note	
	
 Translation of 100 años de soledad	 English (ENG)
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 Includes bibliographical references (p. 133-154) and index	 English (ENG)

Governance Scenario 4

Managing Vocabulary Evolution

When should the community preserve stability? When should it allow new concepts to emerge? These are **governance decisions before they become software functions**.

01

Decide Which Vocabularies May Evolve

Not all vocabularies should be open to community-driven change.

02

Determine Who May Introduce New Concepts

Authorization and roles must be clearly defined.

03

Prevent Unnecessary Duplication

New concepts must be checked against existing terms before creation.

04

Decide When a Concept Joins the Shared Base

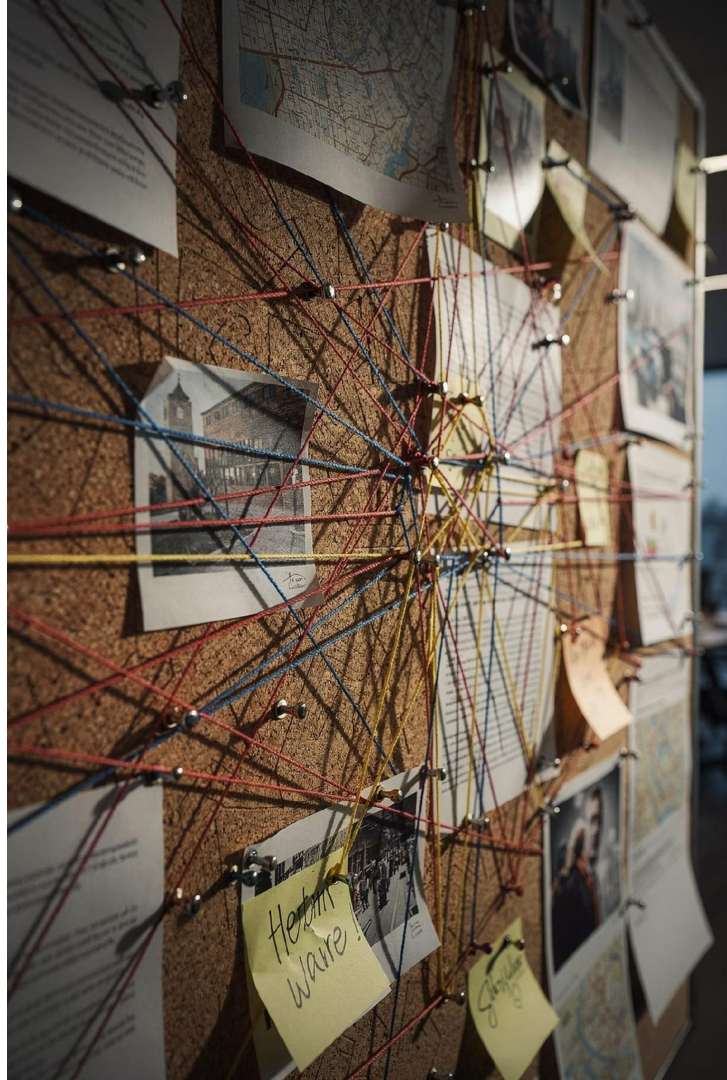
Community consensus determines when a concept becomes canonical.

A Broader Governance Framework

The scenarios presented represent only part of the overall framework. Other Best Practices address:

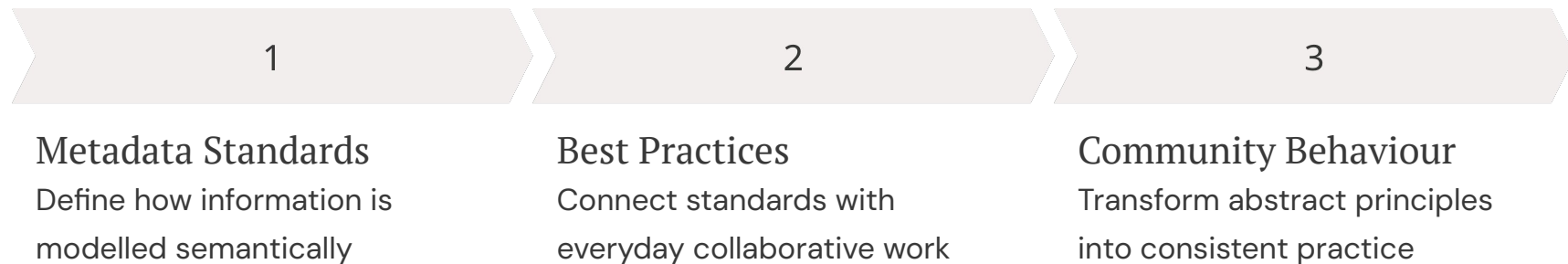
- Protecting contributions made by other institutions
- Merge and split policies
- Removing relationships
- Selecting authoritative external sources
- Managing preferred labels
- Visibility policies
- Interoperability with external environments

These practices did not derive from metadata standards — they **emerged through practical community experience.**



From Best Practices to Shared Governance

In collaborative knowledge graphs, metadata quality depends on more than robust ontologies and sound cataloguing rules. It also depends on **shared governance**.



Towards a New Layer of Metadata Practice

Standards Define the Semantic Model

Traditional cataloguing standards remain essential — they define how information is modelled. RDA and BIBFRAME are not replaced; they are the foundation.

Communities Define the Operational Model

Operational Best Practices define how communities collectively curate information. In collaborative knowledge graphs, metadata quality depends on **both dimensions**.

JCricket as example of cooperative context in which a broader methodological question has emerged and become clearly visible.

The Evolution of Cataloguing in the Linked Data Era

The shift from traditional cataloguing to collaborative knowledge graphs necessitates a conceptual progression, expanding the scope of metadata practice.

1

Cataloguing Theory

The foundational principles for organizing and describing information.

2

Entity Modelling

Transformation of the unit of description from records to granular, interconnected entities.

3

Shared Entities

The collaborative nature of entity creation and maintenance transforms traditional cataloguing work.

4

Collective Decision-Making

Continuous, community-wide agreements become necessary for data consistency and interoperability.

5

Community Best Practices

Shared operational knowledge emerges to guide collaborative efforts and ensure quality.

6

Knowledge Governance

A new layer of governance is established to manage the shared knowledge base.

7

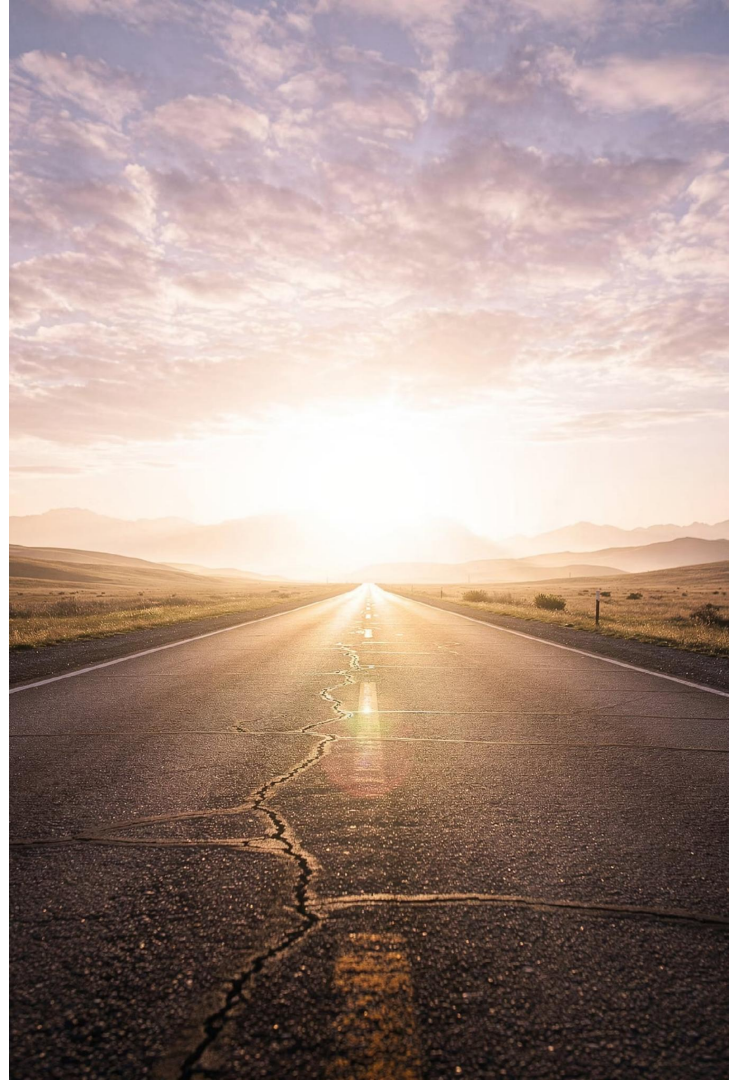
Extended Cataloguing Theory

Cataloguing theory is extended to encompass the complexities of knowledge graphs and collaborative environments.

The Defining Challenge of the Linked Data Era

How can communities sustainably govern shared knowledge graphs?

Finding answers to this question may become one of the defining challenges for metadata practice in the Linked Data era. The Share Family experience demonstrates that governance is a **core methodological requirement** for collaborative entity-based knowledge graphs.



Thank You!

Learn more about JCricket, SHARE-VDE, and the broader SHARE Family of projects through the resources below. We welcome questions, contributions, and collaboration from catalogers and data stewards across the community.

SHARE Family

share-family.org

SHARE Wiki

wiki.share-family.org

Contact Us

info@share-family.org

SVDE Portal

svde.org

