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National Library of Finland
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Outline of the presentation

- In short about Melinda
- New platform for Melinda
- Findings on Libris XL and *Libris katalogisering*
- Linked library data project

■ Findings on Libris XL data mode

- C o o s s i o o n s ?
- Q u e s t i o n s ?
- t i e s

Melinda is a national metadata repository

- Shared metadata repository service for Finnish libraries
 - An essential part of the data description ecosystem
- Aims to collect all bibliographic metadata of all Finnish library collections into one database to be used by everyone
 - A shared metadata repository increases the efficiency of data description work and provides better information retrieval services



Melinda

National databases in Melinda

- National data description work is centralized into Melinda
 - Fennica, the Finnish national bibliography (2014-)
 - Arto, reference database of Finnish articles (2019-)
 - Viola, the Finnish national discography (2019-)
 - Asteri, Finnish name authorities

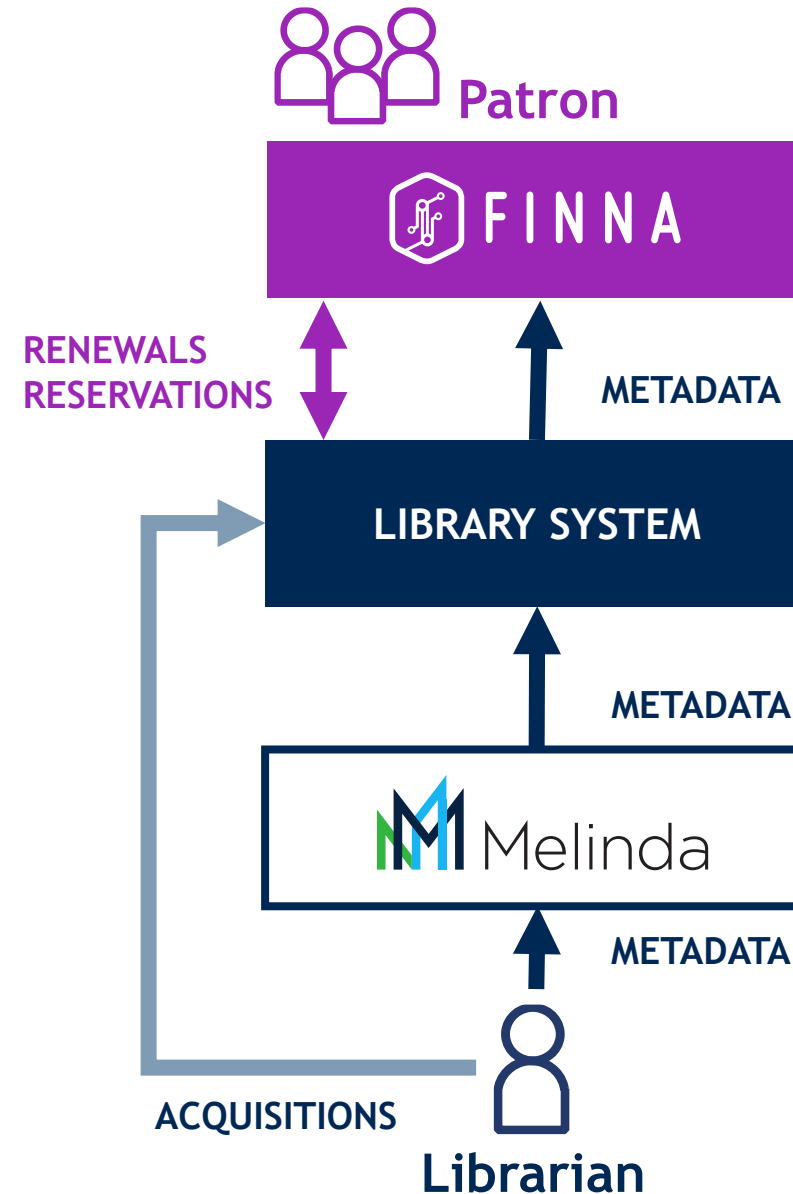


Current integrations to different library systems

Library system	Cataloguing interface	Integration between library system and Melinda
Koha (academic libraries)	Aleph	<ul style="list-style-type: none"> • Replication from Melinda to Koha
Ex Libris Alma (academic libraries)	Alma	<ul style="list-style-type: none"> • Search from Melinda through dedicated Z39.50 • Cataloguing to Melinda. replication from Melinda to Alma and update of holdings information through Ex Libris Aleph-Alma integration
Koha (public libraries)	Koha	<ul style="list-style-type: none"> • Search from Melinda through SRU • Cataloguing to Melinda through Melinda's REST-api • Replication from Melinda to Koha
Axiell Aurora (public libraries)	Aurora	<ul style="list-style-type: none"> • Search from Melinda through SRU • Cataloguing to Melinda through Melinda's Aleph-based old REST-api • Replication from Melinda to Aurora
Sierra (Helsinki area public libraries, Helmet)	Sierra	<ul style="list-style-type: none"> • Automatic daily loads from Helmet to Melinda • Copy cataloguing from Melinda to Sierra

The system as a whole

- Finna is the end user interface
- Collections are maintained and circulation activities in each library's own library system
- Melinda is the metadata repository and data description environment



New platform for Melinda

■ Strategical premises: open source system, supports LOD

Strategiska val och utvecklingsområden 2021–2030

I Kulturarv för det gemensamma bästa



- I samarbete med minnesorganisationsnätverket stärker vi intresset för kulturarvsmaterial genom att främja tillgången till och synligheten för materialen.
- Vi går internationellt i främsta ledet när det gäller att deponera föränderliga och mångformiga material inom det elektroniskt tillkomna kulturarvet.
- Vi påverkar arbetet med att uppdatera kulturmateriallagen för att minska antalet exemplar som ska deponeras i tryckt format och för att effektivisera elektronisk lagring och långtidsförvaring.
- Genom digitalisering inriktar vi oss på att erbjuda omfattande, sammanhängande material som är öppet tillgängliga.
- Vi främjar tillgången till material och tjänster genom att utveckla interoperabla lösningar med tillhörande infrastruktur i nationellt och internationellt samarbete.
- Vi utvecklar beskrivningen av material i enlighet med principerna för öppna länkade data.

"Vi utvecklar beskrivningen av material i enlighet med principerna för öppna länkade data."

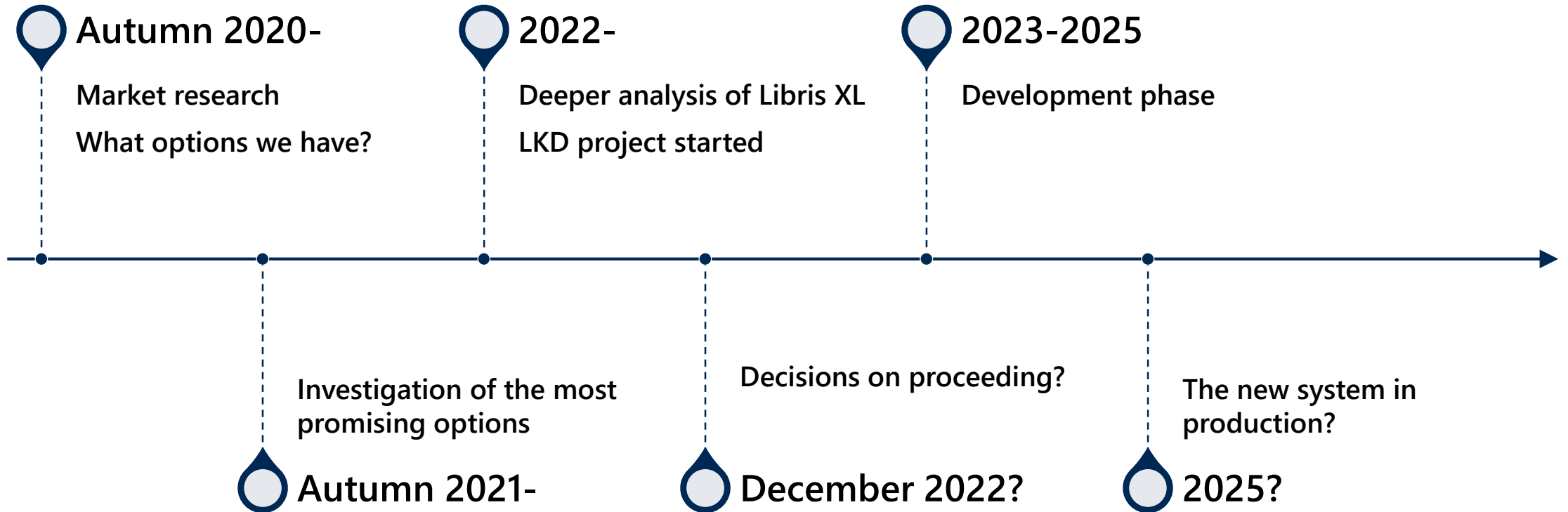
IV Ett starkt kompetenscentrum via nätverkssamarbete



- Vi stärker kulturarvsorganisationernas samarbete samt interoperabla tjänster på det nationella och det internationella.
- Vi utvecklar biblioteket till ett brett kompetenscentrum som är aktivt i kulturella och vetenskapliga nätverk.
- I samarbete med vårt partnerskapsnätverk arbetar vi för att utveckla lösningar inom maskininlärning och artificiell intelligens samt datamaterialtjänster som utnyttjar kulturarvsmaterial och metadata.
- Lösningarna för de digitala tjänsterna bygger huvudsakligen på en öppen källkod, öppna gränssnitt och omfattande nationellt och internationellt samarbete.
- I samarbete med våra partner upprätthåller och utvecklar vi den kompetens som förändringarna i samhället kräver enligt den devisen "vi testar, vi misslyckas, vi vågar".

"Lösningarna för de digitala tjänsterna bygger huvudsakligen på en öppen källkod, öppna gränssnitt och omfattande nationellt och internationellt samarbete."

Timeline and roadmap



What we have done so far

- In-house groups to investigate the two most promising options in different areas (2021-)
 - Data description tool
 - Data processing
 - Integrations and APIs
 - Technical platform
- Deeper analysis of Libris XL (Spring 2022-)
 - Local test instance of XL
 - Deeper investigations in code level, pull requests to KB
 - Deeper testing with *Libris katalogisering*
 - Discussions with KB Libris team & management
- Resourcing (2022-)
 - 3 new IT staff members (+ 4 new in Linked Library Data Project)
 - Allocation of existing resources from client base expansion to development
 - Totally ~17 staff members in Melinda team + LLDP staff in other team

Some differences between Melinda and Libris

- Integrations: Many Melinda libraries use their local system for cataloguing – integrations would be probably more complicated in Finland
- Melinda contains millions of records of journal/book articles and music – and linking between host records and component parts
- Language of the user interface, local fields and practices, local vocabularies

Testing of *Libris katalogisering*

- A group of NLF metadata specialists has examined *Libris katalogisering* both theoretically and by testing it in our own XL environment
- Many kinds of test material (MARC records downloaded to XL)
- Some preliminary ideas how component parts (journal/book articles, music) could be described
- Wishing to share thoughts with Swedish Libris cataloguers

Findings on *Libris katalogisering*

- Flexible: enables different approaches and implementation methods
 - the possibility to describe expressions and works in connection with the description of the instance and/or separately
- Easy to use even without in depth knowledge of the format or RDA
 - However, adoption of the latest version of RDA would be needed
- Lots of good tutorials as well as video material
- The user interface and layout are clear and easy to adopt

Findings on technical platform

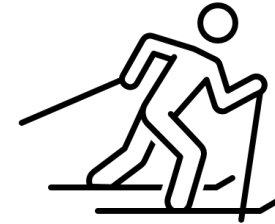
- Dependencies to KB systems, standards and practices in hardcode level -> implementation in Finland would need to make XL more universal
- Metadata imports
 - Some performance issues in massive loads, but also ideas to fix them
 - How to handle big component part families?
- Integration to local library systems in Finland is a big job that has to be done – but would be so, whatever system we choose
- No unfeasible issues yet

Linked Library Data Project

Linked Library Data Project

- Preparing the adoption of linked data for bibliographic cataloguing for the National Library and in part for the whole Finnish library sector
- 2022-2024
- A companion project for the platform change for our union catalogue Melinda

Our linked data continuum



Union
Catalogue
Melinda

Adoption of
Original RDA

Identifiers

Concept-
based SKOS
vocabularies

Official RDA

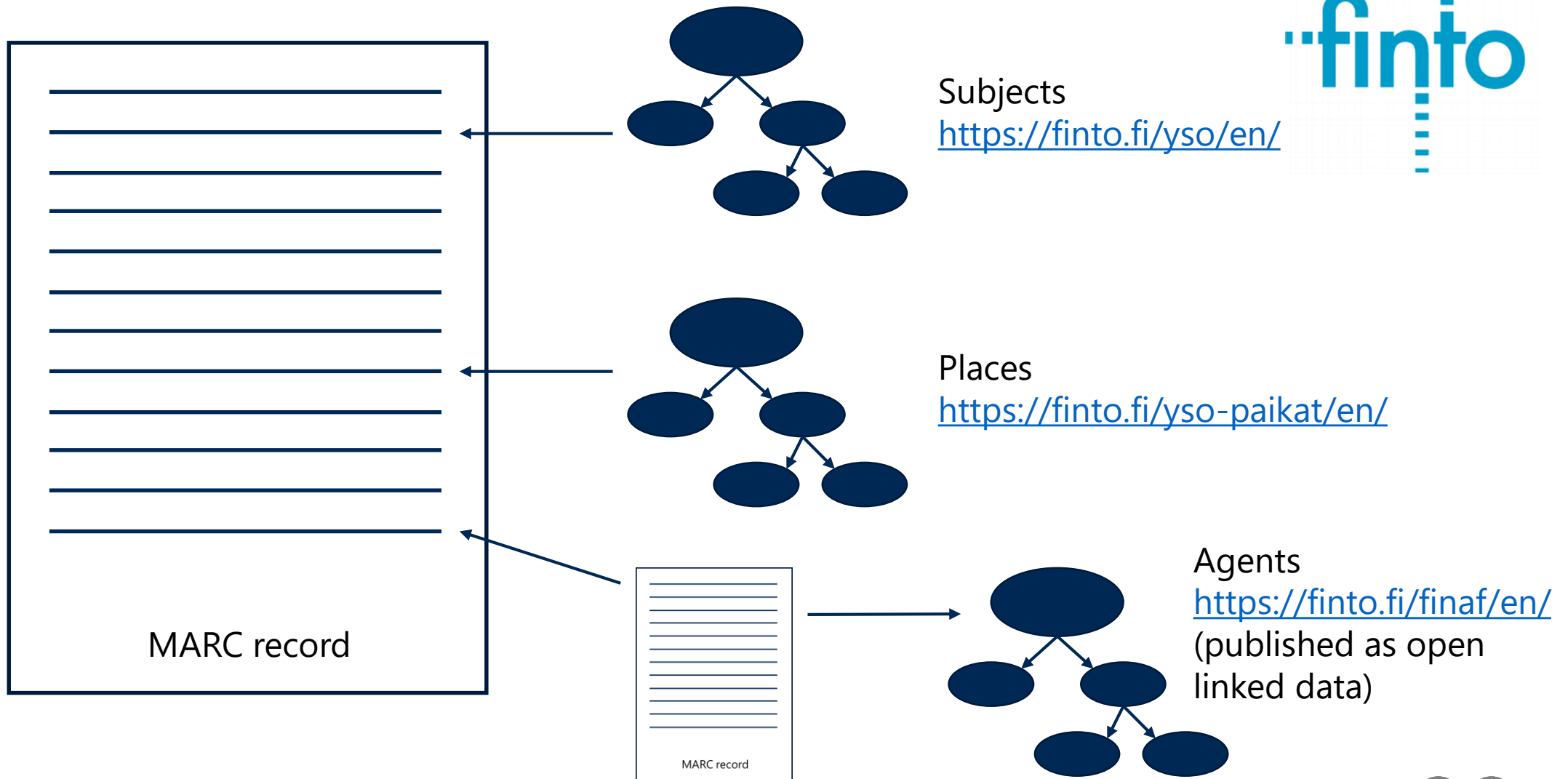
New
Melinda

Finto
Thesaurus and
Ontology
Service

BIBFRAME

Works and
expressions

Bibliographic records in MARC



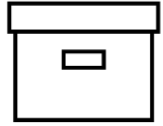
Main goals of the Linked Library Data Project

- BIBFRAME data model for Melinda
 - Including support for works and expressions
 - Deep integration with RDA
- Further development of our metadata vocabulary
- Training for linked data cataloguing for the library sector
- Preparation of the conversion
 - Conversion rules
 - A plan on what will be done in the pre-processing steps and what in the conversion itself
 - Mining the works and expressions from the MARC records
 - Support for MARC21 will continue for many years to come

Resources

- Project manager
- Two systems specialists
- Two information specialists
- Our RDA specialist with 30% workload for this project

Our approach



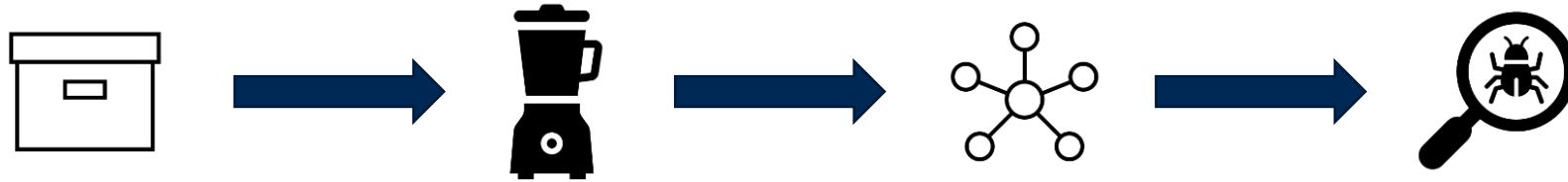
We took a (scary) sample
of MARC records from our
union catalogue Melinda

Our approach



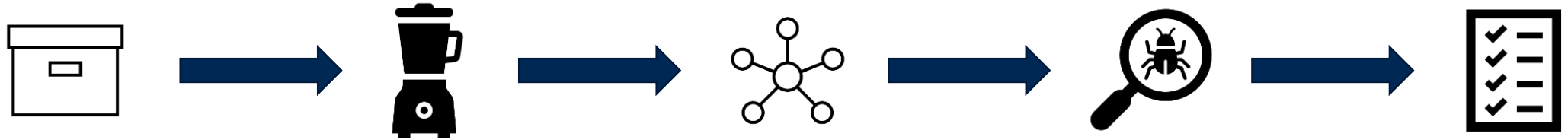
Converted the MARC into
BIBFRAME using the Library of Congress Converter

Our approach



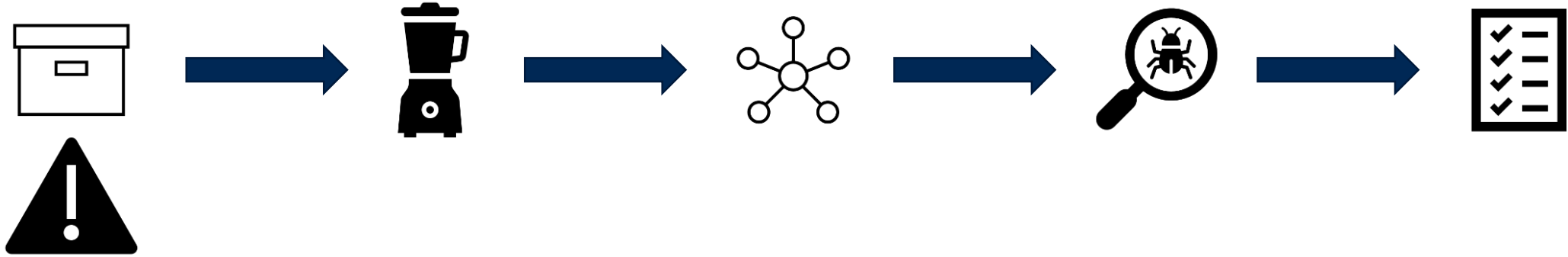
Analyzed the result trying to discover possible challenges caused by the nature of our data and our national conventions

Our approach



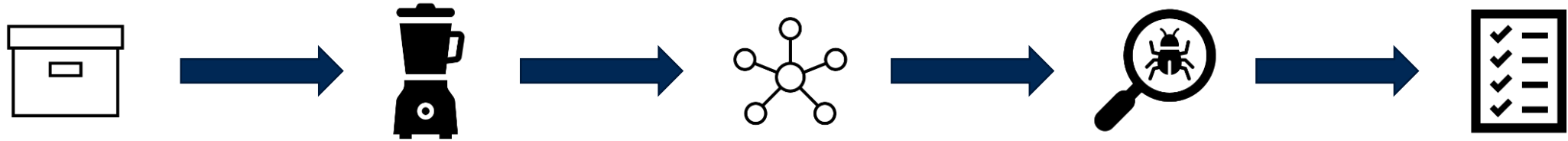
Conversion rules
and pre-processing
steps for our data

Our approach



But we want to go
beyond MARC!

Our approach

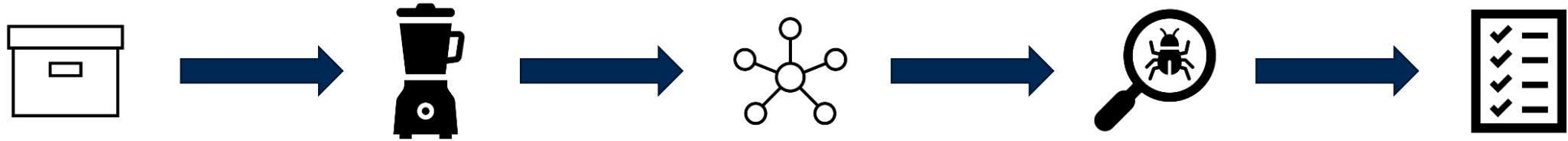


A two-pronged approach:

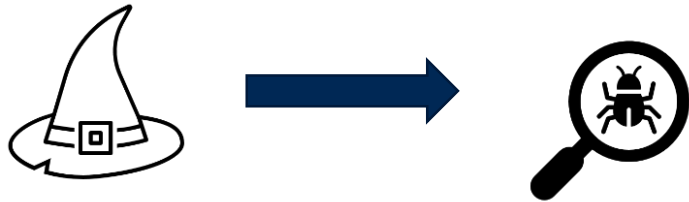


RDA as another starting point

Our approach

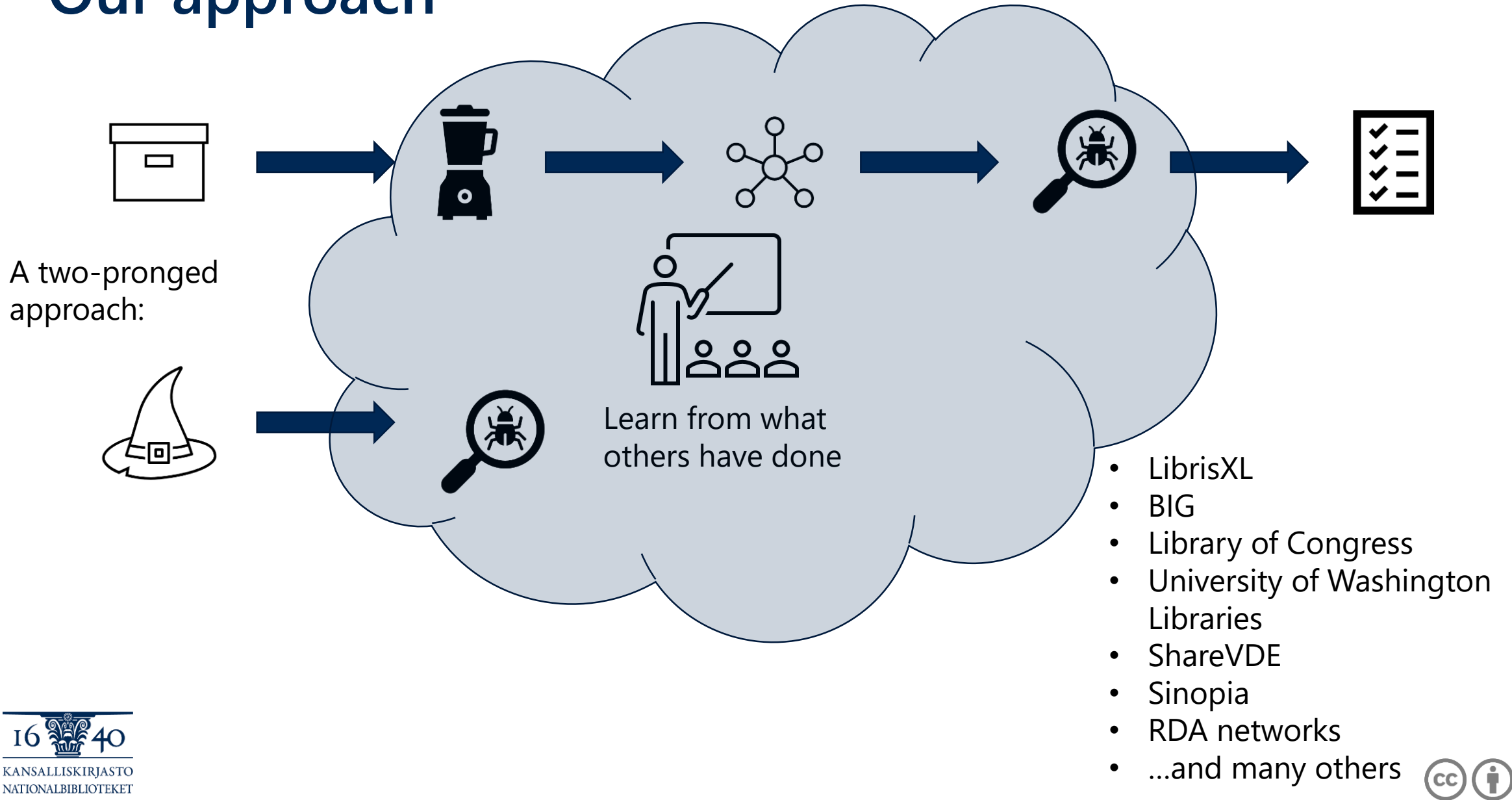


A two-pronged approach:

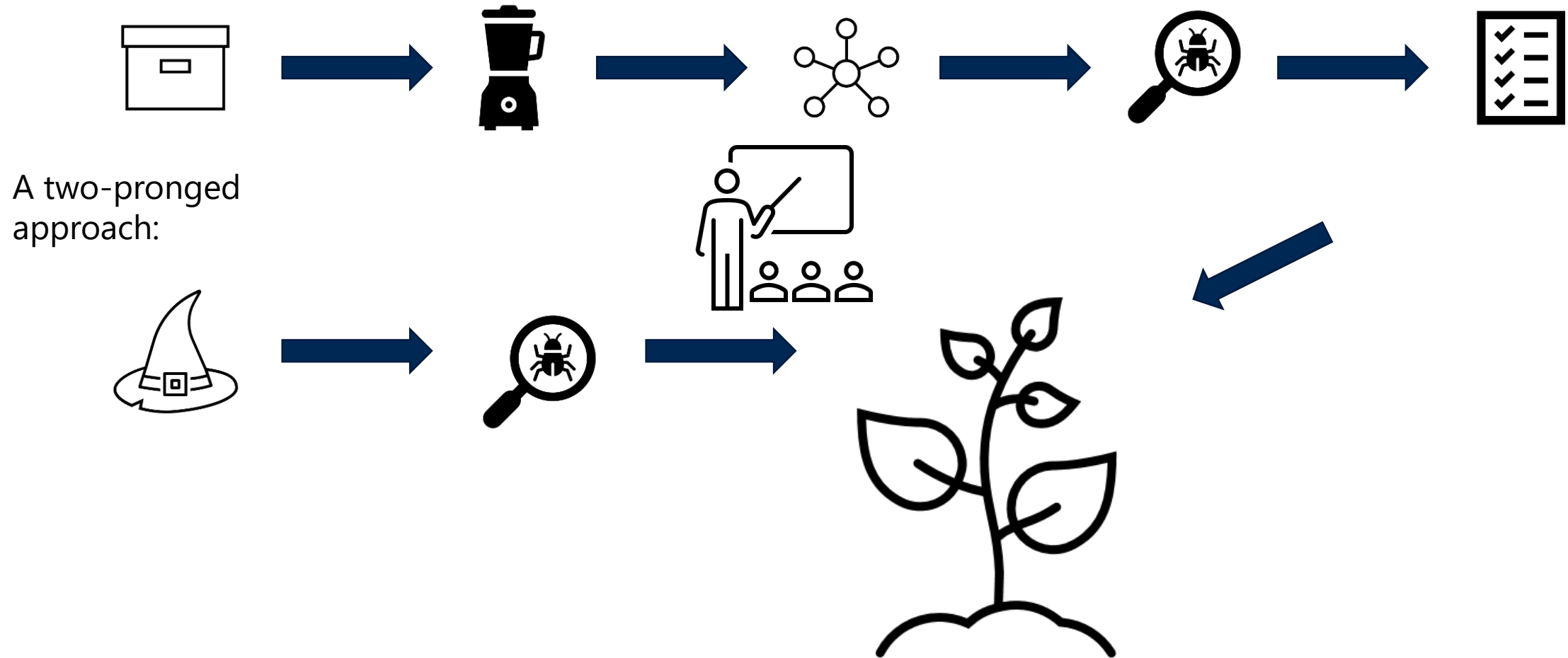


Mapping RDA
to BIBFRAME

Our approach



Our approach

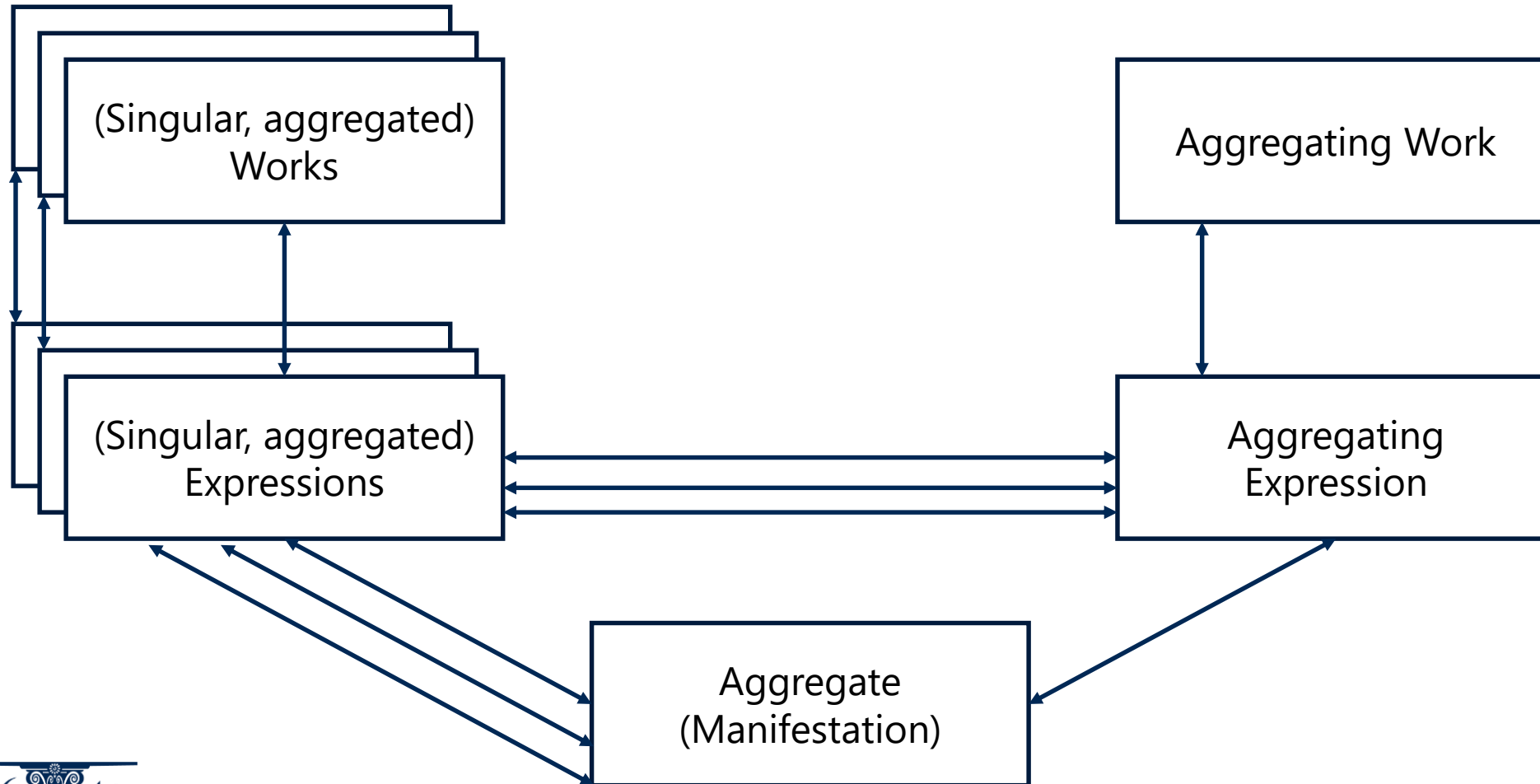


Harmony!

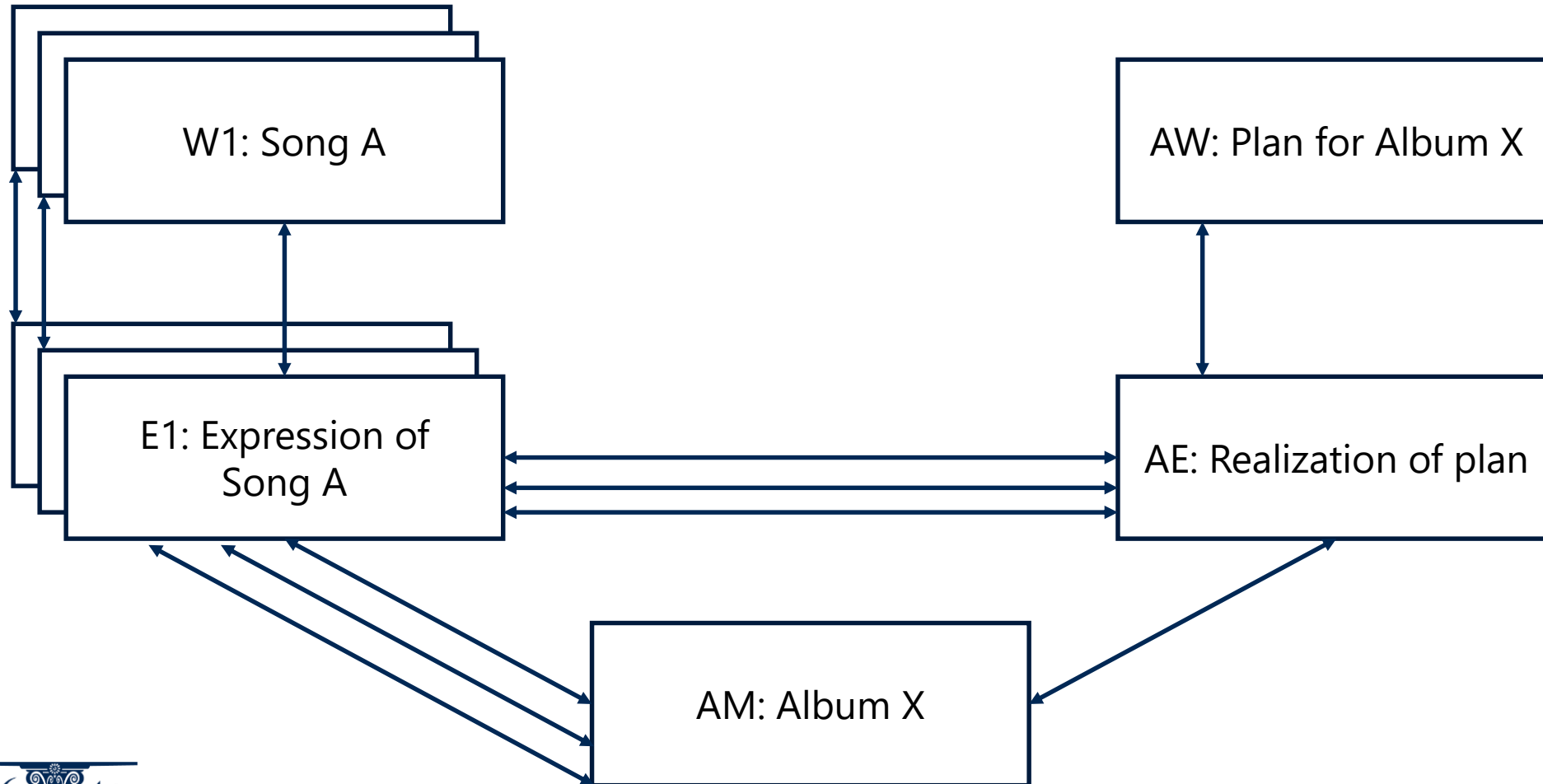
LibrisXL Data Model

- What there is, is mostly suitable for us
 - Excellent, general additions from other widely-used schemas
- We lean more strongly to the Official RDA
- Aggregates are a key feature for us

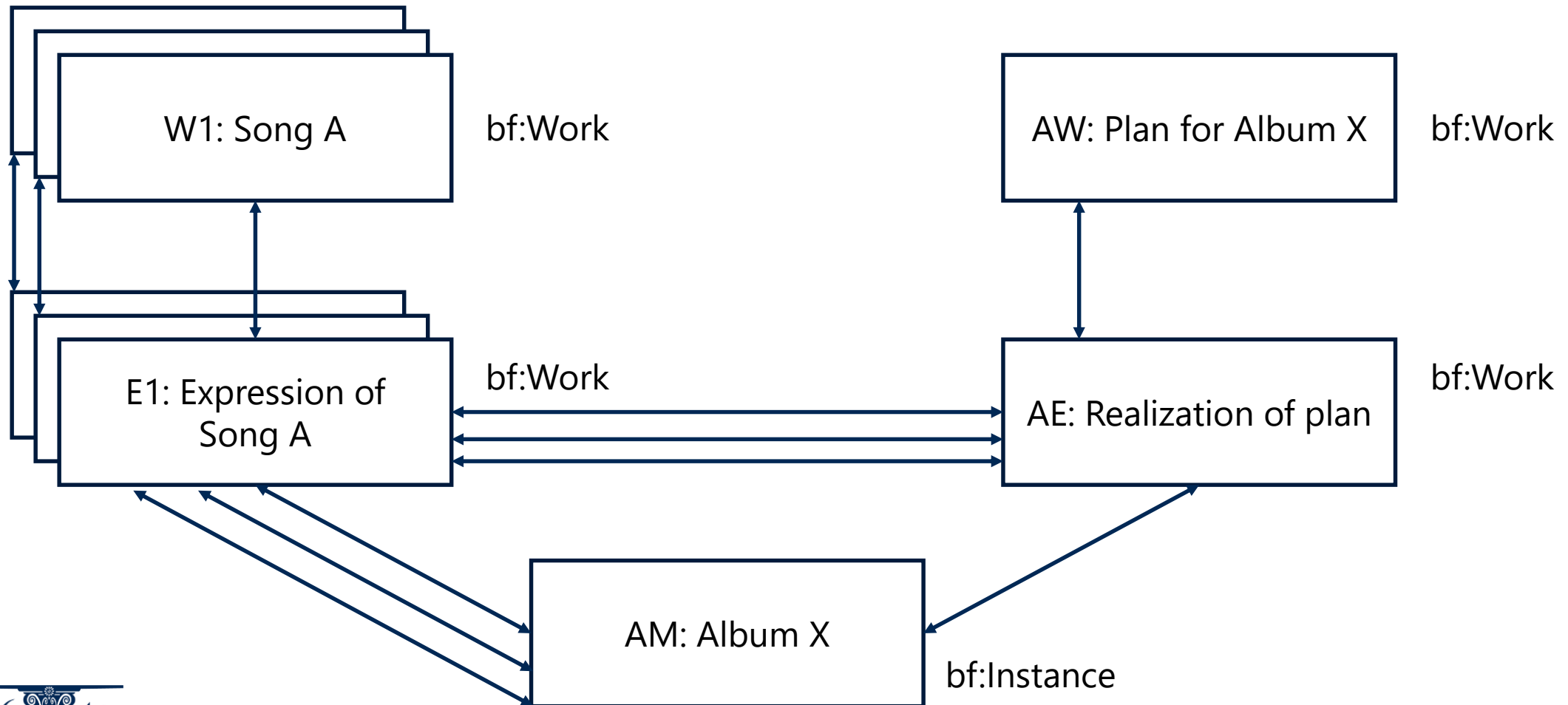
Aggregates in the official RDA



Aggregates in the official RDA



Aggregates in the official RDA



Finding Works and Expressions

- Preliminary testing for finding Works during the publication of our national bibliography Fennica as linked open data
 - Utilizing the FRBR Work-Set Algorithm
 - Proved to be difficult
 - Drawing the automatic lines between different versions of Works
 - Missing metadata
- A possible topic for fruitful collaboration

Future of active collaboration

- Together we are stronger



Future of active collaboration

- Together we are stronger
- Both in BIG (BIBFRAME interoperability group)
- RDA collaboration already exists



Co-operation possibilities, if Finland goes to XL

- Shared development tasks
- Shared user-experience, some education material?
- Multilingualism in user interface and vocabularies?





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