The Share Family
Cooperation and interconnection
for a sustainable Linked Open Data ecosystem

CNI Project Briefing Series, May 2024

info@svde.org
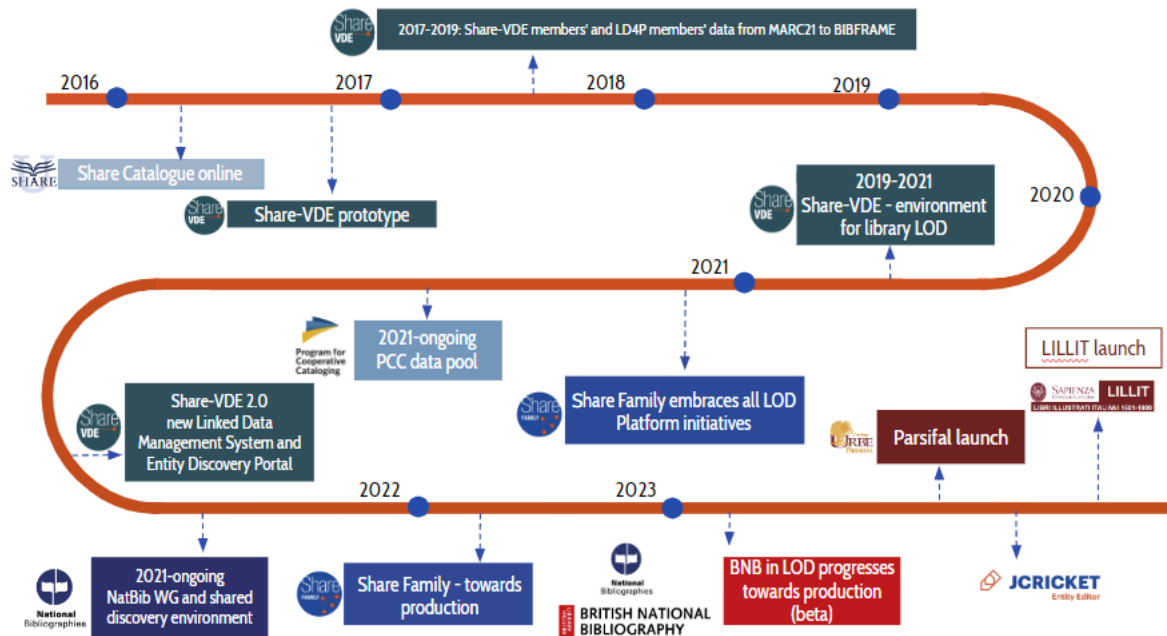https://share-family.org
https://svde.org
https://wiki.svde.org

Vision, values, governance

Vision and stepping stones

Developed and guided by the international library community, the Share Family initiative envisions a future where individual libraries and consortia collaboratively define and shape the tools and principles driving advancements in discovery.

2017-2019: Share-VDE members' and LD4P members' data from MARC21 to BIBFRAME

2016   2017   2018   2019   2020

Share Catalogue online

Share-VDE prototype

2019-2021
Share-VDE – environment for library LOD

2021

2021-ongoing
PCC data pool

Share-VDE 2.0
new Linked Data Management System and Entity Discovery Portal

Share Family embraces all LOD Platform initiatives

LILLIT launch

Parsifal launch

2022   2023

2021-ongoing
NatBib WG and shared discovery environment

Share Family – towards production

BNB in LOD progresses towards production (beta)

JCRICKET

Share Family Linked Data Ecosystem values

CO-OPERATIVE

Developed and driven by libraries, for libraries, the Share Family is a growing international community built on collaboration. Participating institutions play an active role in defining the vision, aims and progress of the Share Family and its tools.

INTEROPERABLE

By implementing the RDF-based BIBFRAME data model and facilitating interoperability with different data models and data pools, resource description can be transformed into Linked Data, increasing the visibility of research and encouraging greater engagement with library, archive and museum collections.

FLEXIBLE

Enriched and structured data can be re-used in local and external systems, across library types and ILS/LSPs, enabling each institution to maintain control of its own catalogue data.

The Share Family opens the door to a flexible, sustainable, interoperable and co-operative approach to resource description, with time, expertise and costs shared across the community for the benefit of all members.

We strive to encourage open access to data, and support diversity by freely sharing information. We apply and support open metadata policies as part of our commitment to enhancing the discovery of library and cultural heritage resources.

The quality of data is guaranteed both through advanced technical processes and through collaborative data modeling, enrichment and sharing, handled collectively by member organizations.

SUSTAINABLE

OPEN

AUTHORITATIVE

Share FAMILY

Member-driven governance model

The direction of Share Family is overseen by the [Share Family Advisory Council](), comprising representatives from member institutions. Representatives actively participate in policy-making and tool development, sharing expertise, responsibilities, and costs to benefit the entire community and its patrons.

Being a community initiative, the goals and desired outcomes are defined by the participating institutions through active engagement in different [Working Groups]().

https://bit.ly/SVDE-Open-Metadata-Policy
https://bit.ly/SF-Executive-Summary-Consortia

Shared tools in an integrated ecosystem

Share Family – processes and output

DATA INPUT FROM INSTITUTIONS

- MARC21 bib. and holding
- MARC21 aut.
- UNIMARC
- RDF/BIBFRAME
- Other formats (eg. FOLIO)

LOD PLATFORM SERVICES

- Mapping
- URI Enrichment
- Reconciliation
- Creation of Linked Data Entities
- Conversion to RDF/BIBFRAME

RESULTS

[**Data Publication**]

- *End user discovery portals for each initiative of the Share Family*
- *Search APIs for data consumption (GraphQL, REST, SPARQL)*

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[**Data Distribution**]

- *API / protocols for third parties integration (eg. local LSPs and data editor such as Wikidata, Sinopia BIBFRAME editor, FOLIO etc.)*
- *Downloadable datasets (BIBFRAME/RDF, MARC enriched records)*

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[**Shared Data Management**]

- *Editing of Share Family entities with JCricket*
- *Reuse of Share Family BIBFRAME data in local library systems*
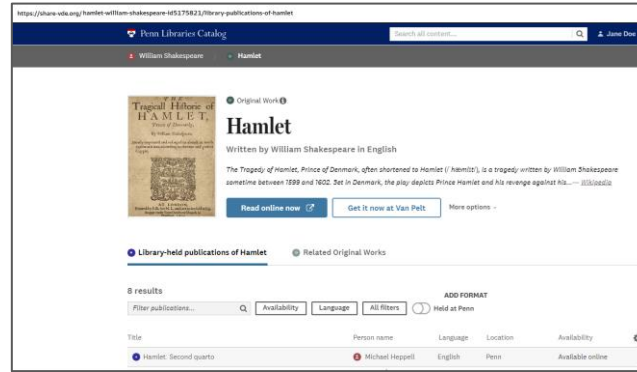- *Reuse of Share Family MARC representations in local library systems*
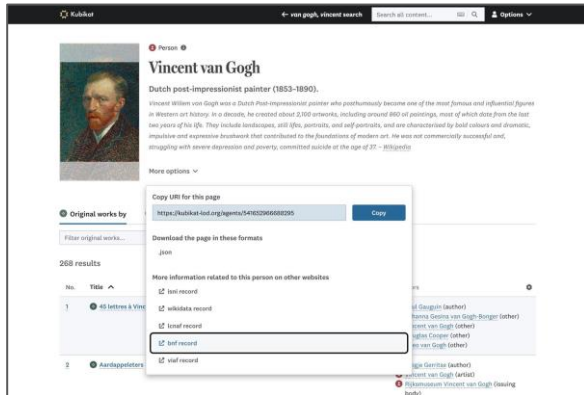
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[**Additional Services**]

- *Authority control in MARC and BIBFRAME-based workflows*
- *SFI - Share Family Index: registry of entity URIs*

Entity Discovery Portal

The Share Family technology makes available end user tools for data consultation and consumption: a linked data-based discovery portal reflecting BIBFRAME model and ad hoc extensions

The common presentation layer of the shared environment is configurable at institutional level, focusing the design on ease of use and integrating local services

APPLICATION

Discovery Portal 2.0

- Advanced entity discovery system based on BIBFRAME
- Customised UI (skin)
- Integration with local APIs
- Site mapping with additional meta-tagging
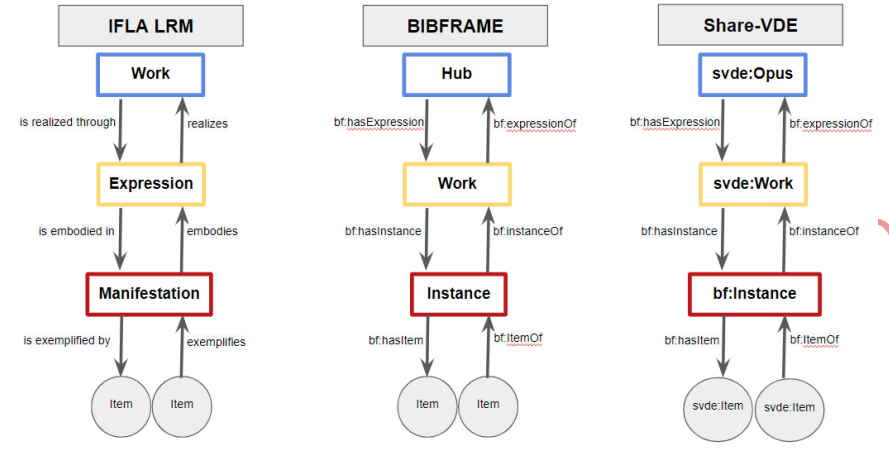- Data conversion to Schema.org

Interoperable entity model

The approach to the BIBFRAME-based entity model is to make it as much interoperable as possible, to facilitate data exchange with other systems.

The SVDE Ontology supports the discovery functionality of the Share Family search systems and may be re-used in any system requiring a bridge among BIBFRAME, IFLA LRM and RDA.

Presentation and preliminary version available

IFLA LRM	BIBFRAME	Share-VDE
Work	Hub	svde:Opus
is realized through / realizes	bf:hasExpression / bf:expressionOf	bf:hasExpression / bf:expressionOf
Expression	Work	svde:Work
is embodied in / embodies	bf:hasInstance / bf:instanceOf	bf:hasInstance / bf:instanceOf
Manifestation	Instance	bf:Instance
is exemplified by / exemplifies	bf:hasItem / bf:ItemOf	bf:hasItem / bf:ItemOf
Item Item	Item Item	svde:Item svde:Item

TECHNOLOGY

Advanced entity model

- Advanced 4-layered entity model, based on BIBFRAME 2.0 and interoperable with multiple schemes (BIBFRAME, IFLA-LRM etc.)

Share FAMILY

Entity management - expanding authority control

JCRICKET
Entity Editor

☑ it's a linked data entity / authority editor

☑ it applies to linked data entities created within all tenants of the Share Family (svde.org, pcc-lod.org, natbib-lod.org)

☑ it's a manual application that that manages properties (attributes, relations and links) of entities in the CKB - Cluster Knowledge Base

☑ it's a collaborative tool shared across member institutions

☑ it is a new application for shared metadata management

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Collaboratively manage entity metadata

Step 1: Search on Share-VDE Main Portal

Step 2: Enter the entity details page

Step 3: Click on the edit action and enter the JCricket UI

JCricket - the entity management tool

The JCricket editor is an example of how the LOD Platform technology, within the Share Family Linked Data Ecosystem, is pursuing a new way of managing descriptive data in a cooperative way:

- ★ aggregation of data from multiple sources
- ★ managed through standard protocols (linked data)
- ★ in a collaborative and integrated environment
- ★ that makes available open data and resources
- ★ to end users and professionals (researchers, scholars etc.)
- ★ for reuse in the research community and beyond

An expanding community

The Share Family Linked Data Ecosystem

The Share Family is a global community built on collaboration that brings together libraries, archives, museums, consortia and Library Service Platforms (LSPs) to join knowledge in an ever-widening network of interconnected descriptive data.

For further details please refer to https://www.share-family.org and the dedicated Share-VDE wiki section.

Share-VDE - Virtual Discovery Environment

https://www.svde.org

97,1 million bib. records
13 million aut. records

Berkeley Law Library – **600,000 bib.**

Duke University – **5,5 million bib.**

Library of Congress – **12 million bib. + 11 million aut.**

National Library of Finland – **16 million bib. + 220,000 aut.**

National Library of Norway – **2,3 million bib. + 2,3 million aut.**

National Taiwan University Library – **6 million bib. + 300,000 aut.**

New York University – **6 million bib.**

Smithsonian Libraries and Archives – **900,000 bib.**

Stanford University – **9 million bib.**

University of Alberta / NEOS Library Consortium – **6,3 million bib.**

University of Chicago – **12 million bib.**

University of Michigan Ann Arbor – **1 million bib.**

University of Pennsylvania – **6,5 million bib.**

Yale University – **13 million bib.**

Share Catalogue: Scholarly Heritage and Access to Research

Share Catalogue discovery portal

5 million records

Università degli Studi di Napoli Federico II

Università degli Studi della Basilicata

Università degli Studi del Sannio

Università degli Studi di Salerno

Università degli Studi di Napoli Parthenope

Università degli Studi del Salento
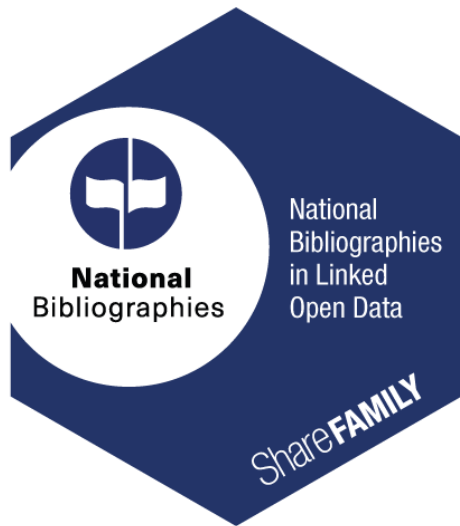
Università degli Studi di Napoli L'Orientale

Università degli studi della Campania Luigi Vanvitelli

Università degli Studi Suor Orsola Benincasa

National Bibliographies in Linked Open Data

The aggregation of data from National Bibliographies in a shared entity discovery environment; the first of these is the BNB - British National Bibliography, soon to go into production.
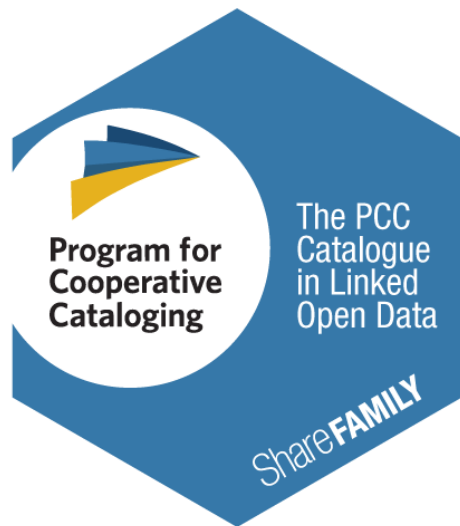
The linked open data BNB beta website is available at

https://bl.natbib-lod.org/

https://natbib-lod.org/

5 million records

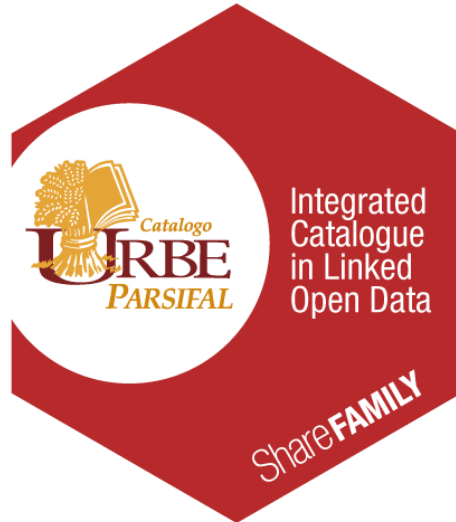# PCC Catalogue in Linked Open Data

The Share Family hosts a dedicated tenant for the data of the PCC - Program for Cooperative Cataloging, to provide PCC-quality BIBFRAME data housed in an ad hoc data pool

https://pcc-lod.org/

5 million records

Parsifal - URBE Catalogue in Linked Open Data

Integrated Catalogue in Linked Open Data

https://parsifal.urbe.it/parsifal/?l=en

3 million records

Accademia Alfonsiana

Centro Pro Unione

Pontificia Facoltà di Scienze dell'Educazione "Auxilium"

Pontificia Facoltà Teologica "Marianum"

Pontificia Università Antonianum

Pontificia Università della Santa Croce

Pontificia Università di San Tommaso d'Aquino (Angelicum)

Pontificia Università Gregoriana

Pontificia Università Lateranense

Pontificia Università Urbaniana

Pontificio Ateneo Sant'Anselmo

Pontificio Istituto Biblico

Pontificio Istituto Orientale

Pontificio Istituto Teologico "Giovanni Paolo II" per le Scienze del Matrimonio e della Famiglia

Pontificium Institutum Patristicum Augustinianum

Università Pontificia Salesiana

Facing the future together

Facilitate information exchange and collaboration with other communities, cross-reference between resources

Transform catalogs in research tools providing structured access and visibility to research in original languages in all disciplines

Improve data publication, data analysis and reuse in other projects

Open up a new level of international cooperation to maintain the growing wealth of information, while preserving local practices

Serve as an authoritative data source, contribute to an ecosystem where data modeling, enrichment and sharing are handled collectively

Thank you - please reach out with any questions

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Martin Knott, University of Michigan at Ann Arbor
Jacquie Samples, Duke University

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https://svde.org
https://wiki.svde.org/