



Share-VDE and the Share Family Cooperation and innovation to bring Linked Open Data into practice

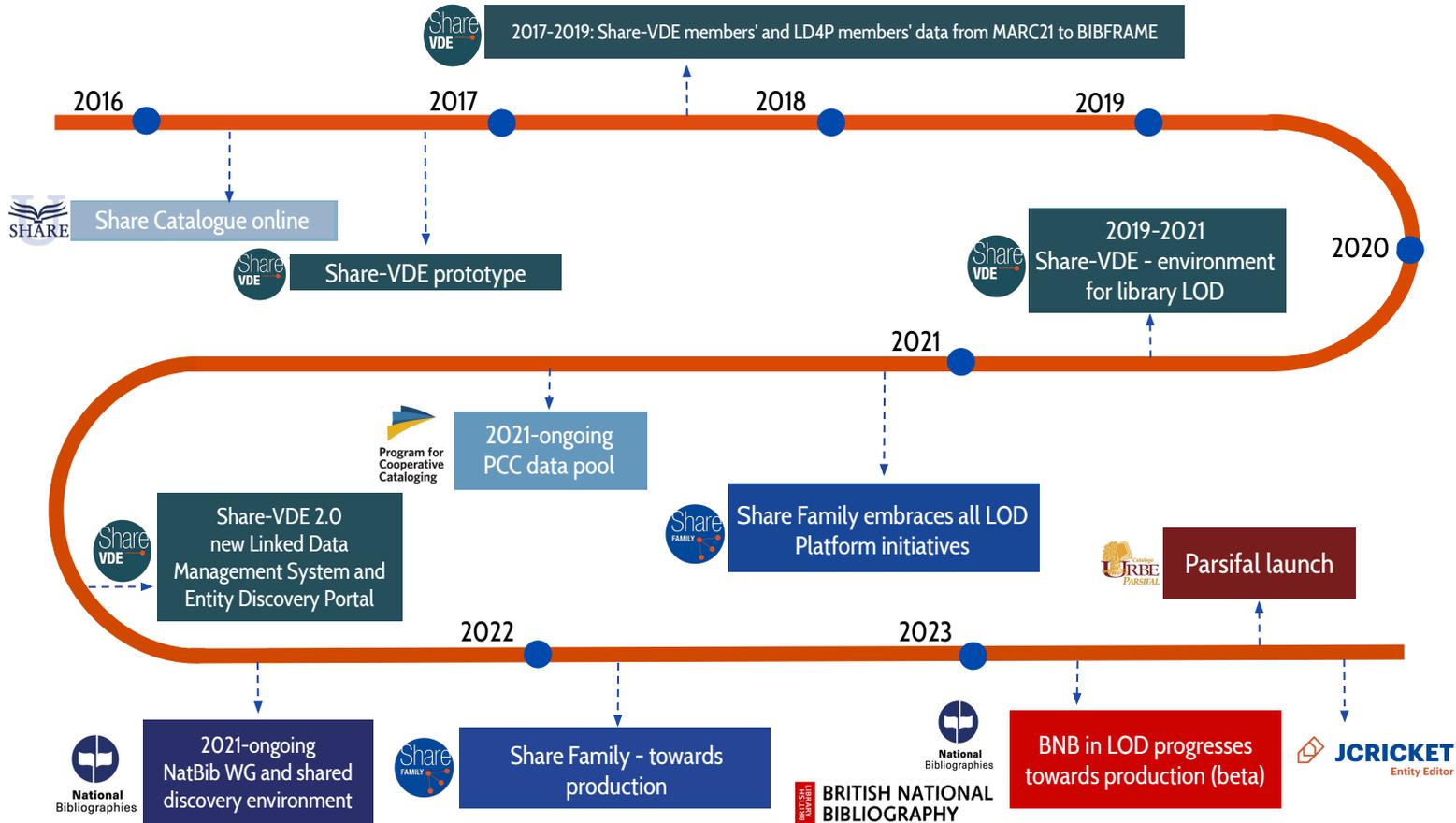
this slide deck https://bit.ly/Share-Family_update_2023-Jul-12_slides
recording available at https://bit.ly/Share-Family_update_2023-Jul-12_rec

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

Share-VDE background and the Share Family



Stepping stones



Share-VDE and Share Family - Linked Data Ecosystem: Principles



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.

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



SUSTAINABLE



INTEROPERABLE

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

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.



OPEN



FLEXIBLE

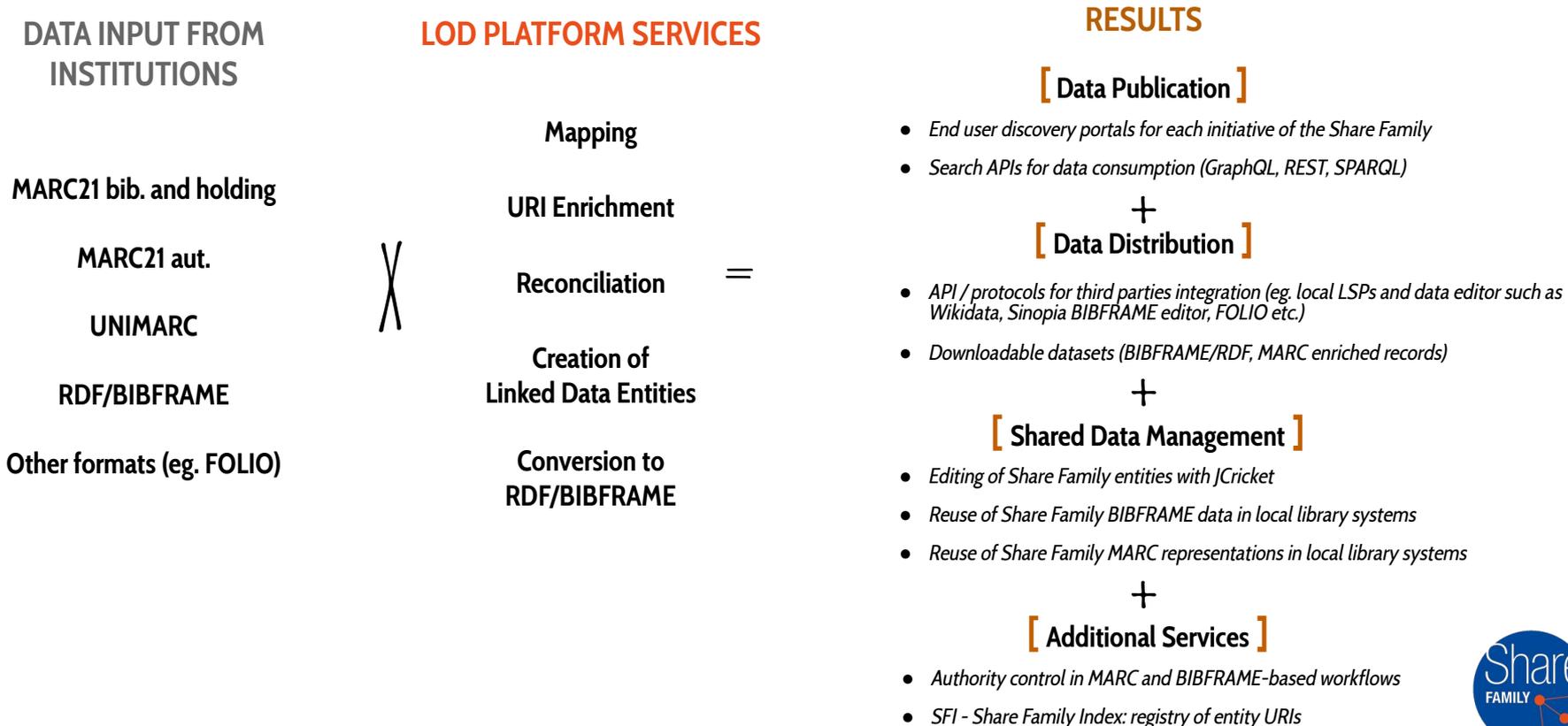
Enriched and structured data can be re-used in local and external systems, across library types and ILS/LSPs, enabling each institution to maintain control of its own catalogue data.

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



AUTHORITATIVE

Share-VDE and Share Family - Linked Data Ecosystem: Processes



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 (LSP) and joins their knowledge in an ever-widening network of interconnected bibliographic 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>

Berkeley Law Library
Duke University
Library of Congress
National Library of Finland
National Library of Norway
New York University
Smithsonian Libraries and Archives
Stanford University
University of Alberta / NEOS Library Consortium
University of Chicago
University of Michigan Ann Arbor
University of Pennsylvania
Vanderbilt University
Yale University



Share Catalogue: Scholarly Heritage and Access to Research



[Share Catalogue discovery portal](#)

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

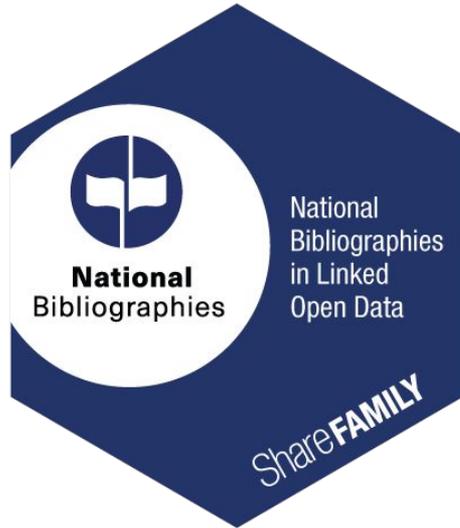
Università degli Studi del Salento

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



<https://natbib-lod.org/>

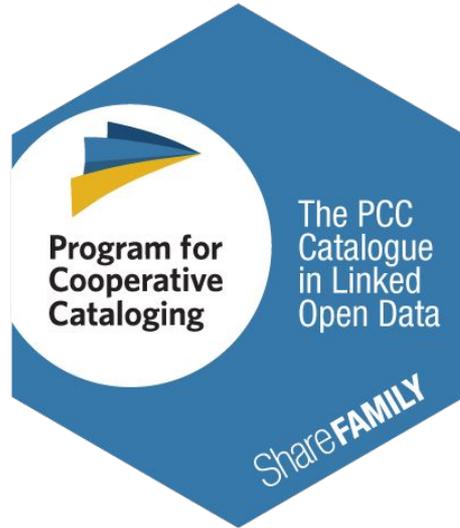
The aggregation of data from National Bibliographies in a shared entity discovery environment; the first of these is the BNB - British National Bibliography, soon to go into production.



The preview of the BNB beta website is available at

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

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/>

Parsifal - Integrated Catalogue in Linked Open Data



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

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

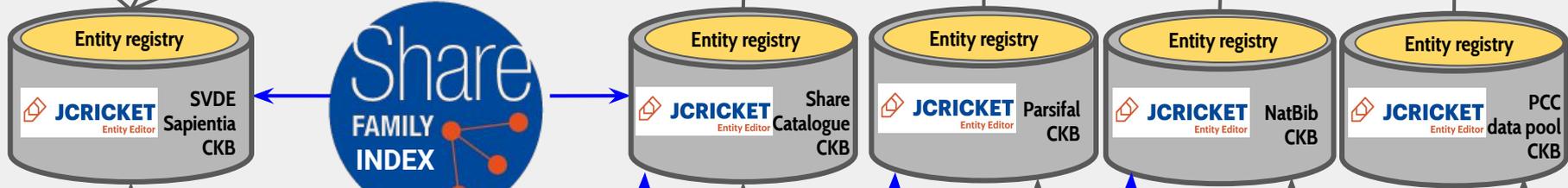
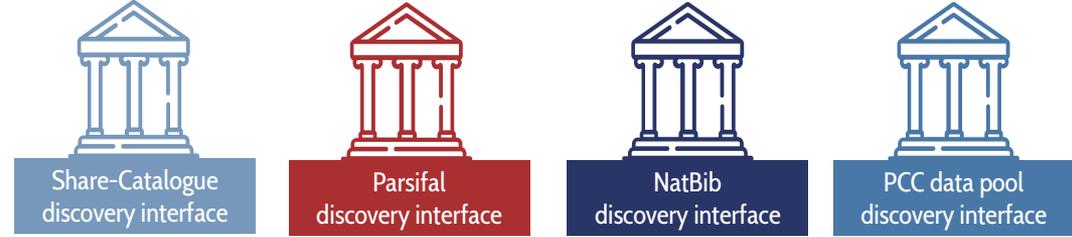
Share Art, Share Music, Share MIA



Three pilot projects for shared Linked Open Data environments in the domains of Art, Music and Manuscripts, Incunabula and Ancient books

Share Family tenant infrastructure

Share-VDE discovery portal and institutional skins



Main updates on Working Groups and cooperation



Share-VDE and Share Family Working Groups

Libraries members of Share-VDE and Share Family Working Groups and parallel projects are constantly contributing with their Subject Matter Experts to requirements gathering, functional analysis and feedback to developments.

Share Family Working Groups:

- National Bibliographies Working Group involving SVDE members and external institutions
- Italian group for the conversion UNIMARC - BIBFRAME
- discussions in the field of photo libraries and audio-visual collections

Share-VDE Advisory Council and Working Groups:

- Share-VDE Advisory Council
- Sapiaientia Entity Identification WG
- Authority/Identifier Management Services WG
- Cluster Knowledge Base Editor WG
- User experience/User Interface WG

Share-VDE Advisory Council

The [Share-VDE AC](#) takes an active role in determining future uses and vision for the Share-VDE initiative; Develop future use cases for Share-VDE, and set development priorities as needed; Monitor and lead the work of the various Advisory Council Working Groups; Maintain communication among the Share Family member institutions.

Among the latest outcomes:

- [Share-VDE Executive Summary](#), December 2022, summarising the scope of Share-VDE in the context of Linked Open Data for Libraries;
- [Share-VDE Statement](#), September 2021, illustrating the explanation of position of SVDE in the broader context of Library Linked Open Data;
- Library and community events sub-group, dedicated to monitoring conferences/events/initiatives of interest for the Share community, and to submitting proposals for presentations as appropriate;
 - see the [SVDE wiki Resources page](#) for details about SVDE presentations at conferences and events.

User Experience/User Interface WG

The [UX-UI WG](#) has redesigned the Share-VDE user interface to meet the requirements and expectations of both patrons and library staff. SVDE 2.0 entity discovery interface:

- reflects the components of the Share-VDE data model infrastructure;
- harnesses the potential of linked data and delivers wide-ranging and detailed search results;
- provides an intuitive user experience, hiding the complexity of the underlying data model;
- embeds partner APIs for interoperability with local library services (e.g. lending);
- allows dedicated skins, ie. customised sub-portals dedicated to individual institutions.

Among the latest outcomes:

- Share-VDE 2.0 Entity Discovery <https://svde.org>
- new Entity Discovery Portal and new back-end infrastructure for the Linked Data Management;
- other [Share Family discovery portals](#) supported by the same technology;
- review and enhancement of portal features, in conjunction with the National Bibliographies Working Group.

Sapientia Entity Identification WG

The [SEI WG](#) reviews the use of entities, identifiers, and associated modelling in the Sapientia CKB; evaluates and refines processes for Sapientia entity clustering in Share-VDE and the creation of associated open and stable URI for use in Share-VDE and in the library community; reviews MARC to BIBFRAME and BIBFRAME to MARC conversion; engages with the library community to outline and/or develop best practices for use of Sapientia identifiers in BIBFRAME and MARC data.

Among the latest outcomes:

- definition of SVDE Ontology;
- svde:Work is subclass of bf:Work → this ensures interoperability;
- review of clustering and conversion rules;
- cooperation in the IFLA context: the mapping UNIMARC-BIBFRAME is being prepared and a formal liaison with SVDE has been approved by the IFLA Bibliography Section Standing Committee.

Share-VDE Ontology

The Share-VDE Ontology is developed as an **extension** to BIBFRAME. Goals:



1) use web ontology language (OWL) to publish the classes, properties and constraints that are used in the Share-VDE environment;



2) clarify the relationship among Share-VDE entities and other linked data vocabularies and



3) provide internal (to Share-VDE) and external (to BIBFRAME) consistency and clarity to classes and properties used in Share-VDE.

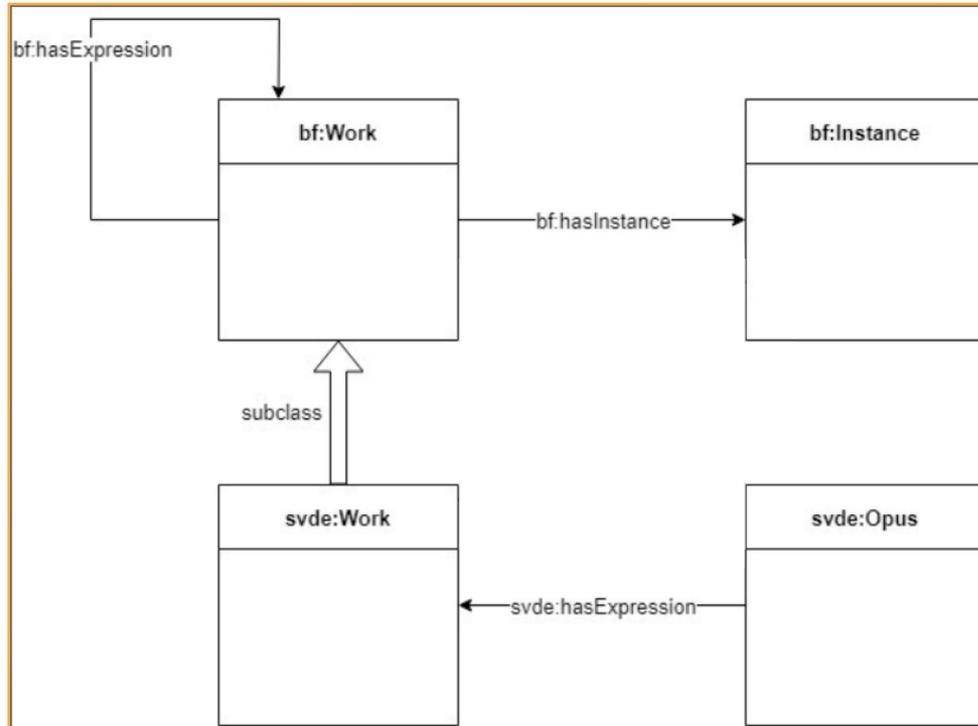
Principles

An overarching design principle is to re-use existing vocabularies wherever possible to reduce complexity of the Share-VDE ontology.

Editing the ontology

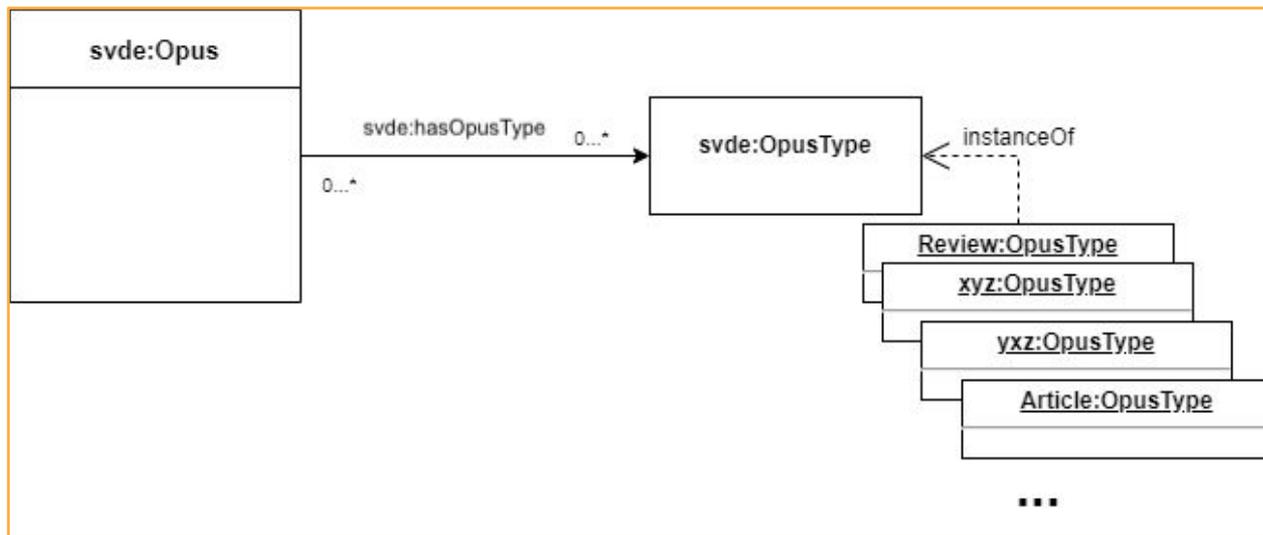
The ontology editing process began by evaluating existing Share-VDE classes and documenting in OWL; moving next to properties; finally, the process concluded by evaluating any needed restrictions for entities.

Conceptual Diagrams to OWL RDF/XML



Core model:
svde:Work,
svde:Opus,
svde:hasExpression

Conceptual Diagrams to OWL RDF/XML



Core model:
`svde:OpusType`,
`svde:hasOpusType`

Share-VDE RDF/XML Core Class

```
<!-- https://svde.org/ontology/Work -->
```

```
<Class rdf:about="https://svde.org/ontology/Work">  
  <rdfs:subClassOf rdf:resource="http://id.loc.gov/ontologies/bibframe/Work"/>  
  <rdfs:label>Work</rdfs:label>  
  <skos:definition>The svde:Work is defined by a constellation of elements representing the  
specific intellectual or artistic form that an Opus takes each time it is "realised."  
Individuals of the class svde:Work hold an Opus entity identity.</skos:definition>  
  <svde:closeMatch rdf:resource="http://iflaststandards.info/ns/lrm/lrmer/E3"/>  
  <svde:closeMatch rdf:resource="http://rdaregistry.info/Elements/c/C10006"/>  
</Class>
```

Share-VDE RDF/XML Core Class

```
<!-- https://svde.org/ontology/Opus -->
<Class rdf:about="https://svde.org/ontology/Opus">
  <disjointWith rdf:resource="https://svde.org/ontology/Work"/>
  <terms:relation rdf:resource="http://id.loc.gov/ontologies/bibframe/Hub"/>
  <rdfs:label>Opus</rdfs:label>
  <skos:definition>The svde:Opus is a distinct conceptual outcome of artistic or intellectual activity. The highest level of abstraction in Share-VDE, an Opus is an entity that permits the grouping of works that are considered functional or near equivalents. The Opus is defined by a constellation of elements that form the shared content of works and provides a grouping for svde:Work entities.</skos:definition>
  <skos:note>The svde:Opus class is not the same as the bf:Hub class.</skos:note>
  <skos:scopeNote>The Opus may be a piece of art, literature, music, a scientific result, or a creation within some other artistic or intellectual domain.</skos:scopeNote>
  <svde:closeMatch rdf:resource="http://iflastandards.info/ns/lrm/lrmer/E2"/>
  <svde:closeMatch rdf:resource="http://rdaregistry.info/Elements/c/C10001"/>
</Class>
```

Share-VDE RDF/XML Core Class

```
<!-- https://svde.org/ontology/Opus -->
```

```
<Axiom>
```

```
  <annotatedSource rdf:resource="https://svde.org/ontology/Opus"/>
```

```
  <annotatedProperty rdf:resource="http://purl.org/dc/terms/relation"/>
```

```
  <annotatedTarget rdf:resource="http://id.loc.gov/ontologies/bibframe/Hub"/>
```

```
  <skos:comment>While the bf:Hub and svde:Opus are not the same, there is a  
  relation among these classes in the sense they gather bf:Work entities by  
  bf:hasExpression/svde:hasExpression, respectively.</skos:comment>
```

```
</Axiom>
```

Share-VDE RDF/XML Core Class

```
<!-- https://svde.org/ontology/OpusType -->  
  
<Class rdf:about="https://svde.org/ontology/OpusType">  
  <rdfs:label>OpusType</rdfs:label>  
  <skos:definition>Individuals of the OpusType class support identification of  
Opus categories.</skos:definition>  
</Class>
```

Share-VDE RDF/XML Object Properties

```
<!-- https://svde.org/ontology/hasOpusType -->
```

```
<ObjectProperty rdf:about="https://svde.org/ontology/hasOpusType">  
  <rdfs:subPropertyOf rdf:resource="https://svde.org/ontology/hasType"/>  
  <rdfs:domain rdf:resource="https://svde.org/ontology/Opus"/>  
  <rdfs:range rdf:resource="https://svde.org/ontology/OpusType"/>  
  <rdfs:label>hasOpusType</rdfs:label>  
</ObjectProperty>
```

Share-VDE RDF/XML Object Properties

```
<!-- https://svde.org/ontology/hasType -->
```

```
<ObjectProperty rdf:about="https://svde.org/ontology/hasType">
```

```
  <rdfs:subPropertyOf
```

```
  rdf:resource="http://rdaregistry.info/Elements/u/P60944"/>
```

```
  <rdfs:label>hasType</rdfs:label>
```

```
  <skos:definition>The svde:hasType is an intermediate property that may be  
specialized by entity.</skos:definition>
```

```
</ObjectProperty>
```

Share-VDE RDF/XML Object Properties

```
<!-- https://svde.org/ontology/hasExpression -->
```

```
<ObjectProperty rdf:about="https://svde.org/ontology/hasExpression">  
  <rdfs:domain rdf:resource="https://svde.org/ontology/Opus"/>  
  <rdfs:range rdf:resource="https://svde.org/ontology/Work"/>  
  <rdfs:label>hasExpression</rdfs:label>  
  <svde:closeMatch rdf:resource="http://iflastandards.info/ns/lrm/lrmer/R2"/>  
  <svde:closeMatch rdf:resource="http://rdaregistry.info/Elements/w/P10078"/>  
</ObjectProperty>
```

Share-VDE RDF/XML Object Properties

```
<!-- https://svde.org/ontology/inHub -->  
  
<ObjectProperty rdf:about="https://svde.org/ontology/inHub">  
  <rdfs:subPropertyOf  
rdf:resource="http://id.loc.gov/ontologies/bibframe/relatedTo"/>  
  <svde:usageNote>A bf:Hub may be related to one or many  
svde:Works.</svde:usageNote>  
  <svde:useDomain>svde:Work</svde:useDomain>  
  <svde:useRange>bf:Hub</svde:useRange>  
</ObjectProperty>
```

Share-VDE RDF/XML Annotations

```
<!-- https://svde.org/ontology/closeMatch -->
```

```
<AnnotationProperty rdf:about="https://svde.org/ontology/closeMatch">  
  <rdfs:label>close match to</rdfs:label>  
  <skos:definition>Refers to a semantically similar entity (typically class or  
property) in another ontology or scheme.</skos:definition>  
  <rdfs:subPropertyOf rdf:resource="http://purl.org/dc/terms/relation"/>  
</AnnotationProperty>
```

Access the Share-VDE Ontology

Access the almost complete version 1 of the Share-VDE ontology here:
svde-ontology-june-26-2023.owl or <https://ow.ly/lKyC50OUjaB>

Note: we anticipate adding the set of OpusType individuals and providing additional clarity to the relationship of the bf:Hub within Share-VDE during the summer months and publish the version 1 Share-VDE Ontology shortly thereafter.

National Bibliographies WG

The [National Bibliographies Working Group](#) is dedicated to facilitating practical cooperation among National Bibliographies, and addressing the needs of National Libraries and institutions that hold National Bibliographies within the framework of a shared entity discovery environment such as the Share Family of initiatives.

Among the latest outcomes:

- overview document [National Bibliographies Share Family initiative 2022-June.pdf](#)
- involvement of SVDE / Share Family members and external institutions;
- IFLA Bibliographic Section liaison (Maud Henry from KBR - Royal Library of Belgium);
- discussion on topics of interest related to hosting national bibliographies as an ad hoc tenant;
- main tenant of the shared discovery environment for national bibliographies: <https://natbib-lod.org/>;
- implementation of the skin portal for the BNB - British National Bibliography <https://bl.natbib-lod.org> (this is a preview of a beta site);
- joint work with the SVDE UX-UI working group to design end user services and user interface/discovery features.

Authority/Identifier Management Services WG

The [AIMS WG](#) defines guidelines and best practices for Authority/Identifier management; describes scope and data-flow for the creation and implementation of automated services based on preliminary documentation; proposes additional use cases identified as essential for effective knowledge base management.

Among the latest outcomes:

- definition of use cases;
- functional analysis;
- study of the interaction with Wikidata and ISNI (joint work with CKBE WG to design JCricket functionalities);
- pilot of MARC-based authority services with Stanford University Libraries;
- assessment of services for authority control in linked data workflows.

Cluster Knowledge Base Editor WG

The [CKBE WG](#) examines how libraries interact with the *Sapientia* Cluster Knowledge Base (CKB) and their use of the JCricket Editor for modifying (correcting / enriching), deleting, merging and separating clusters.

Among the latest outcomes:

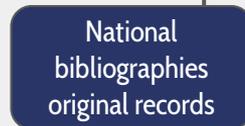
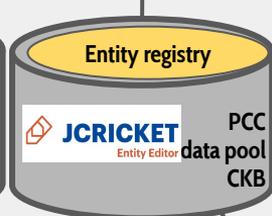
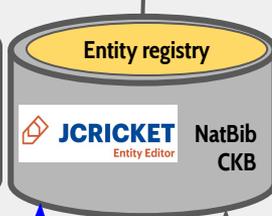
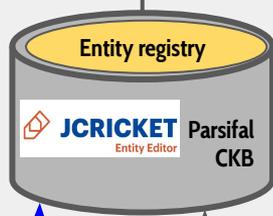
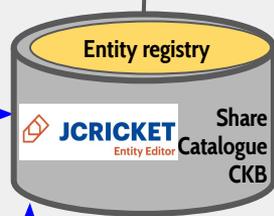
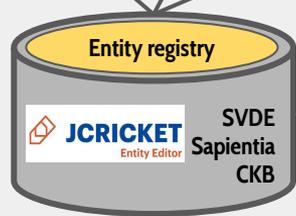
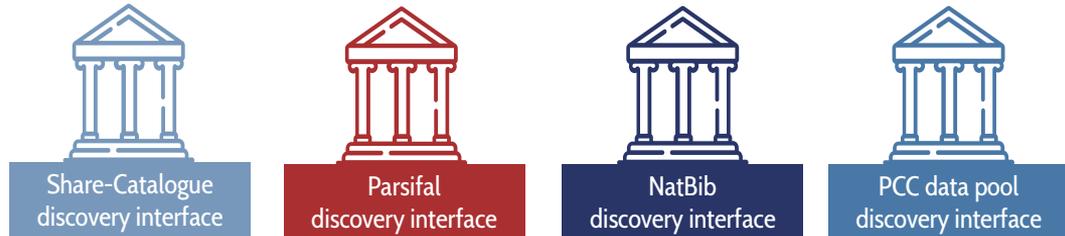
- back-end developments for JCricket entity editor are completed, front-end features in progress;
- definition of use cases;
- design of manual editing features;
- analysis of interaction with Wikidata and ISNI to be incorporated into JCricket and authority dataflows that feed the Cluster Knowledge Base (joint work with AIMS WG to design JCricket functionalities).

Main updates on developments



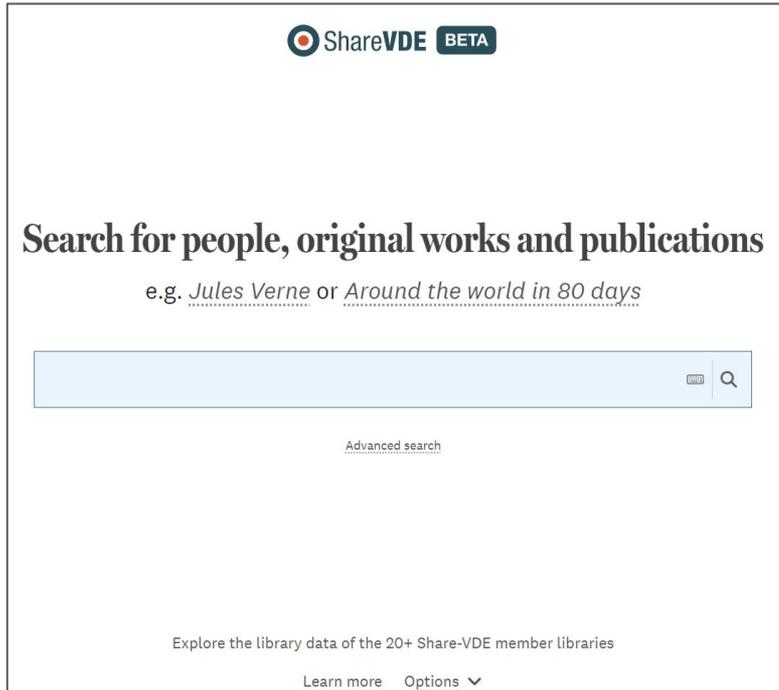
Different tenants, different configurations

Share-VDE discovery portal and institutional skins



Default configuration: SVDE and PCC data pool

Simple search default configuration on [SVDE](#) and [PCC data pool](#) portals



ShareVDE BETA

Search for people, original works and publications
e.g. Jules Verne or Around the world in 80 days

[Advanced search](#)

Explore the library data of the 20+ Share-VDE member libraries

[Learn more](#) [Options](#) ▾



THE PCC CATALOG BETA

Search for people, original works and publications
e.g. Jules Verne or Around the world in 80 days

[Advanced search](#)

Explore the open pool of PCC-quality BIBFRAME data housed by the Share Family initiative

[← Back to PCC](#) [Learn more](#) [Options](#) ▾

Default configuration: British National Bibliography

Simple search default configuration on [Natbib tenant](#) and the [BNB - British National Bibliography skin](#)*

The screenshot shows the top of the British National Bibliography website. The logo features the text 'BRITISH NATIONAL BIBLIOGRAPHY' in a bold, black, sans-serif font, with 'BETA' in a grey circle to the right. Below the logo is a search bar with the text 'e.g. the hitchhiker's guide to the galaxy adams' and a search icon. Underneath the search bar are three buttons labeled 'Language', 'Year', and 'Type'. Below these buttons is a link for 'Advanced search'. At the bottom of the page, there is a footer with the text 'Explore linked open data for books and journals published or distributed in the United Kingdom and Ireland since 1950, and electronic publications since 2013' and navigation links for 'Back to British Library', 'Learn more', and 'Options'.

The screenshot shows a detailed record for the publication 'Fruit of the lemon'. The title is prominently displayed at the top. Below the title, there is a description: 'Volume. Published in English in 2006 in Leicester by Charnwood.' The record includes various identifiers and details: ISBN: 1846171229, BNB: G5A586210, Identifier: p1891653381779206, Notes: ill., Acquisition term: 618.99, Bibliographic level: Monograph, Cataloging source: S1DuBDS, Descriptive cataloging form: AACR, Dimension: 24 cm., Edition statement: Large print ed., Encoding level: Full, Extent: 413 p. (large print), Record status: Increase in encoding level from prepublishing, and Responsibility statement: Andrea Levy. A 'Copy URI for this page' box contains the URL 'https://natbib-lod.org/publications/1891653381779206' and a 'Copy' button. Below this, there is a section for 'Download the page in these formats' with links for .json, MARC (binary), MARC (XML), and RIS. At the bottom, there are sections for 'Related agents' and 'Subjects'.

(*) Note: the skin for the British National Bibliography is a preview of a beta site.



Default simple search configuration: the BNB

BRITISH NATIONAL BIBLIOGRAPHY BETA

Search for people, original works and publications

Publications Original works People and organizations

e.g. the hitchhiker's guide to the galaxy adams

Language Year Type

[Advanced search](#)

Explore linked open data for books and journals published or distributed in the United Kingdom and Ireland since 1950, and electronic publications since 2013

[← Back to British Library](#) [Learn more](#) [Options](#) ▾

Simple search default configuration on [Natbib tenant](#) and the [BNB - British National Bibliography skin](#)* is set to Publications search, instead of the SVDE default.

This was done to comply with a different requirement whereby for the data stored in this tenant (ie. national bibliographies) it's meaningful to direct users to publications.

Different communities or types of institutions might need customised features

(* Note: the skin for the British National Bibliography is a preview of a beta site.

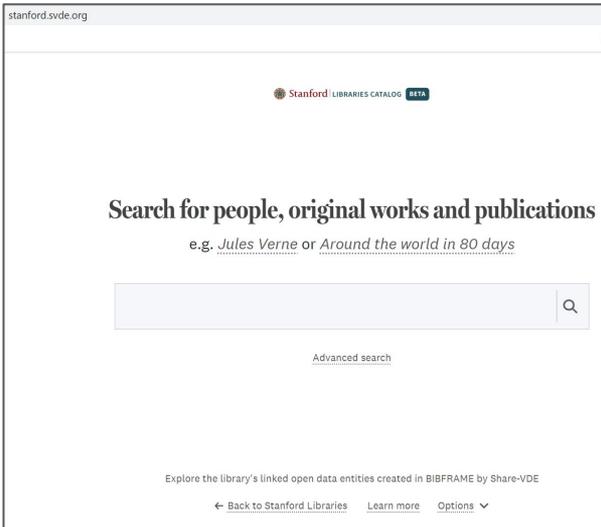


Institutional skin portals within a tenant

- While the main entity discovery portal of a tenant shows the data of all the institutions feeding the tenant's Cluster Knowledge Base, the skin portal gives the ability to filter only the data of the institution that the skin portal has been designed for.
- To this aim, the “held at” filter was added, allowing to filter publications by what is available at the current library. It is enabled on skin portals at Publication (= Instance) level in these cases:
 - in advanced search, see e.g. NYU data pre-filtered here [https://nyu.svde.org/advanced-search/publications?q=\(title+does+not+contain+xyz\)&heldAtLibrary=true](https://nyu.svde.org/advanced-search/publications?q=(title+does+not+contain+xyz)&heldAtLibrary=true) (see the toggle on the right of the screen, you can turn it on / off)
 - in the Original work entity page that lists Publications, see e.g. <https://nyu.svde.org/suite-de-la-mancha-flute-cello-piano-unknown-author-o781654264663247/library-publications> (see the toggle on the right of the screen, you can turn it on / off)
 - in simple search results in cases where the simple search default on the home page is the Publication simple search (e.g. [Natbib tenant](#))

Example: institutional skin portals in SVDE

- **SVDE tenant** - <https://svde.org> => with LC's authority data and the bibliographic data of member institutions
 - skin portals including: [Penn](#), [Smithsonian](#), [Stanford](#), [University of Alberta](#), [New York University](#), [National Library of Norway](#), [National library of Finland](#) (other skin portals will be set up following the load of libraries' catalogues to svde.org)



stanford.svde.org

Stanford LIBRARIES CATALOG **4474**

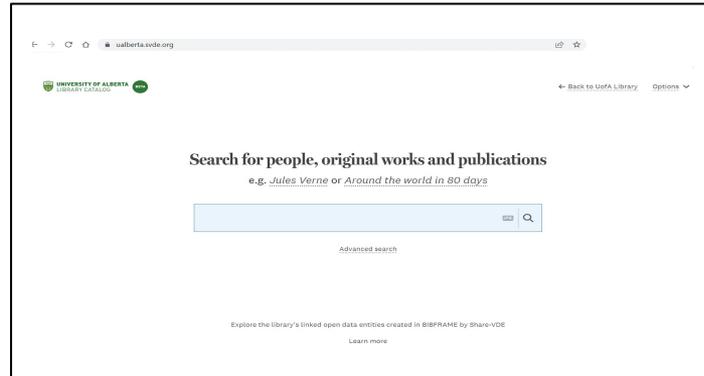
Search for people, original works and publications

e.g. *Jules Verne* or *Around the world in 80 days*

Advanced search

Explore the library's linked open data entities created in BIBFRAME by Share-VDE

[← Back to Stanford Libraries](#) [Learn more](#) [Options](#) ▾



ualberta.svde.org

UNIVERSITY OF ALBERTA LIBRARY CATALOG **1000**

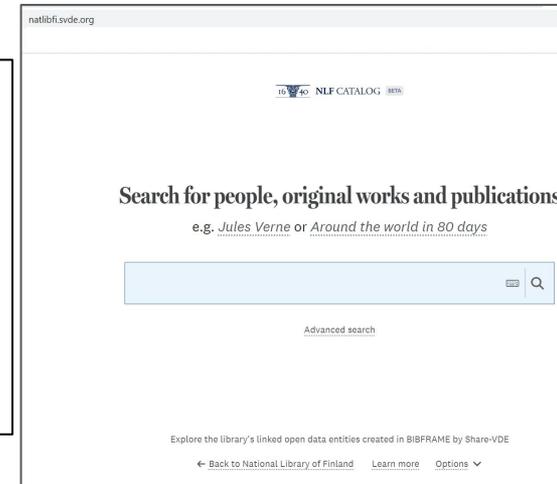
Search for people, original works and publications

e.g. *Jules Verne* or *Around the world in 80 days*

Advanced search

Explore the library's linked open data entities created in BIBFRAME by Share-VDE

[Learn more](#)



natlibfi.svde.org

NLF CATALOG **1000**

Search for people, original works and publications

e.g. *Jules Verne* or *Around the world in 80 days*

Advanced search

Explore the library's linked open data entities created in BIBFRAME by Share-VDE

[← Back to National Library of Finland](#) [Learn more](#) [Options](#) ▾



JCricket Editor - The Entity Management System

The screenshot displays the JCricket Editor interface for managing the entity 'Pietro Aretino'. The interface is divided into several sections:

- Header:** Includes the 'ShareVDE BETA' logo, navigation tabs for 'Explore Pietro Aretino', 'Simple search', 'Advanced search', and 'Editor Pietro Aretino', and an 'Options' menu.
- Overview Panel (Left):** Lists 'Pietro Aretino' under 'Basic info' with fields for Agent type, Name, Birth year, Death year, Birth place, and Death place. Under 'Other', it lists Alternative names, Local IDs, Occupation, First name, and Last name, with an 'Add property' button.
- Main Editor (Center):** Shows the 'Pietro Aretino' entity with tabs for 'Metadata' and 'External IDs'. The 'Basic info' section includes:
 - Agent type:** Set to 'Person' (URI: <http://sit3-base-svde.atcult.it/agentTypes/Person>).
 - Name:** Set to 'Aretino, Pietro'.
 - English:** A blank field for the name in English.
 - Birth year:** Set to '1492'.
 - English:** A blank field for the birth year in English.
- Right Panel:** Provides search and creation options:
 - Find it via search:** A message to view an entity through 'explore' or 'search' screens.
 - Open via ID:** A text input field for 'Entity URI' and an 'Open' button.
 - Create new...:** A grid of links for creating new entities, categorized by type: Agent (Person, Family, Organization, Conference), Opus (Original work), Bibliographic (Work, Instance, Item), and Concept (Form, Format, Genre, Language, Place).



What JCricket *is*



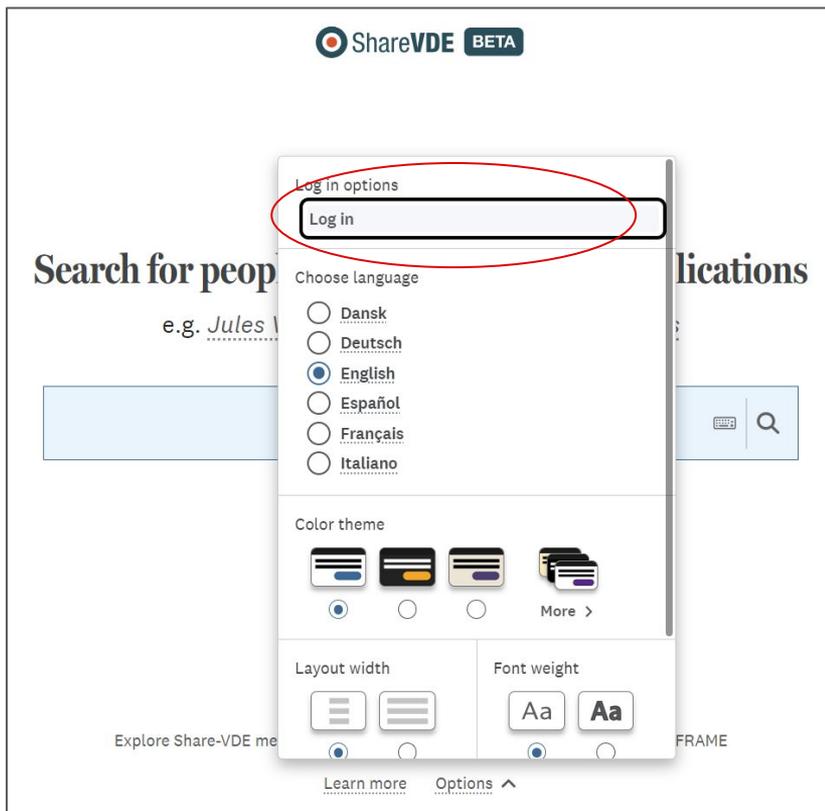
- ✓ it's a linked data entity editor
- ✓ it applies to linked data entities created within all tenants of the Share Family (svde.org, pcc-lod.org, natbib-lod.org)
- ✓ it's a manual application that manages properties (attributes, relations and links) of entities in the CKB - Cluster Knowledge Base
- ✓ it's a collaborative tool shared across member institutions
- ✓ it can be a new tool for entity sharing in LOD

What JCricket *is not*



- ✗ not a traditional bibliographic data editor
- ✗ not an original cataloguing tool (even if new entities can be created!)
- ✗ not in contrast with other tools eg. Sinopia or Marva
- ✗ not impacting original data that reside in member libraries' systems (unless libraries want to use ad hoc APIs for entity updates both in SVDE and in their systems)

What it does



Integrated in the discovery portal web interface, **for authenticated users**

User types: **basic and advanced**

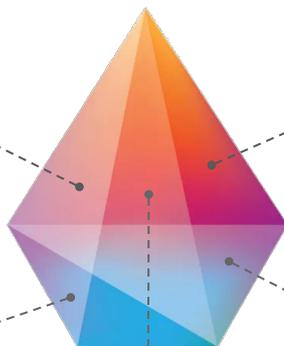
Entities aggregate data from different contributing libraries (aka Provenances):

★ **an entity is also called Prism**, where each face represents data coming from a given Provenance

Entity Cluster: the Prism

 UNIVERSITY OF ALBERTA LIBRARY	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201

 Stanford	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201



 LIBRARY LIBRARY OF CONGRESS	
title	Alice in wonderland

 National Library of Norway	
title	Alice's adventures under ground
titleAlternative	Journeys in Wonderland
author	https://svde.org/people/201

 (links)		
sameAs	http://dbpedia.org/resource/Alice&#39;s_Adventures_in_Wonderland	Dbpedia
sameAs	https://www.wikidata.org/wiki/Q189875	Wikidata
sameAs	https://data.bnf.fr/ark:/12148/cb358500385#about	bnf

Properties: Attributes, Relationships, Links



Name	Value	Provenance
title	Alice in wonderland	 LIBRARY OF CONGRESS  Stanford
titleAlternative	Alice's adventures under ground	 LIBRARY OF CONGRESS
titleAlternative	Journeys in Wonderland	 National Library of Norway

An attribute is a data property, having a literal as value

Share VDE		
sameAs	http://dbpedia.org/resource/Alice&#39;s_Adventures_in_Wonderland	Dbpedia
sameAs	https://www.wikidata.org/wiki/Q189875	Wikidata
sameAs	https://data.bnf.fr/ark:/12148/cb358500385#about	bnf

A link is a connection between a Share-VDE Prism and an external reference

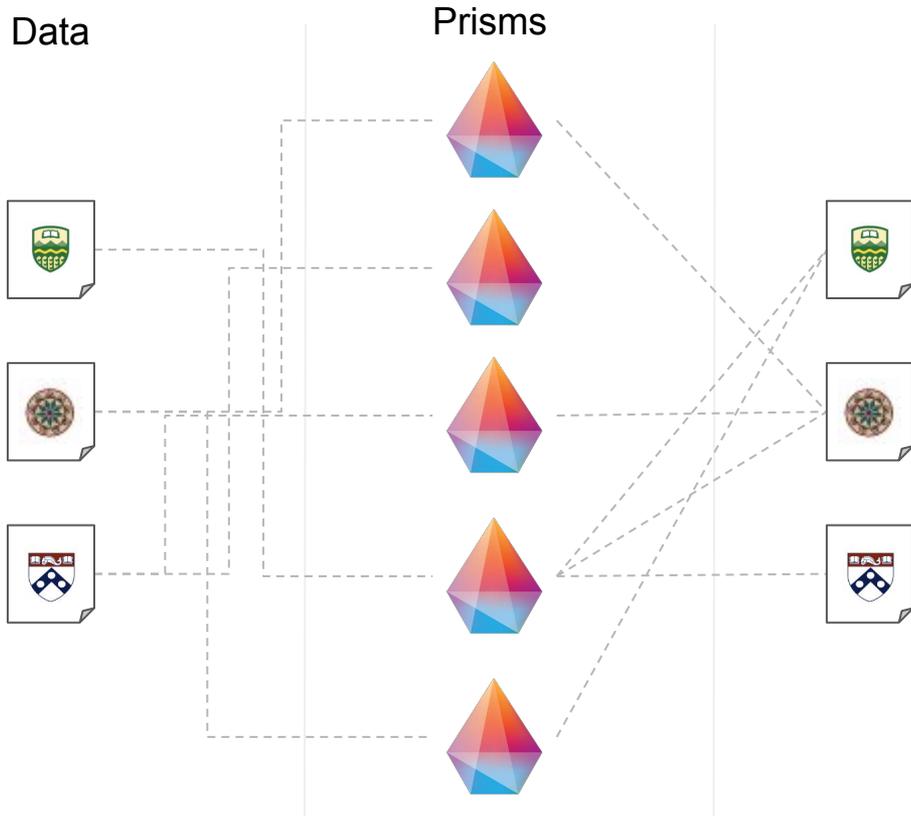
Name	Provenance
author	 LIBRARY OF CONGRESS  Stanford

A relationship is a connection between two Share-VDE Prisms

Name	Value	Provenance
name	Carroll, Lewis	 LIBRARY OF CONGRESS  Stanford
nameAlternative	Dodgson, Charles Lutwidge	 LIBRARY OF CONGRESS  Stanford
nameAlternative	Karol, Luis	 National Library of Norway



Prism: Record-Level Provenance



Each record coming from a **provenance** **contributes** in **building/enriching** one or more **Share-VDE prisms**.

An entity / cluster can be seen as a **prism** where each **face** represents **data** coming from a given **provenance**

Each cluster maintains a **link** to the **records** it **originated from**

JCricket: Edit Scenarios

Edit: a property* of a prism is added/updated/deleted



~~Lewis Carroll~~



Lewis Carroll

is author of

~~<https://svde.org/opuses/1827349>~~



<https://svde.org/opuses/920302>



properties can be

- attributes
- relationships
- links

Merge: multiple prisms are merged into one



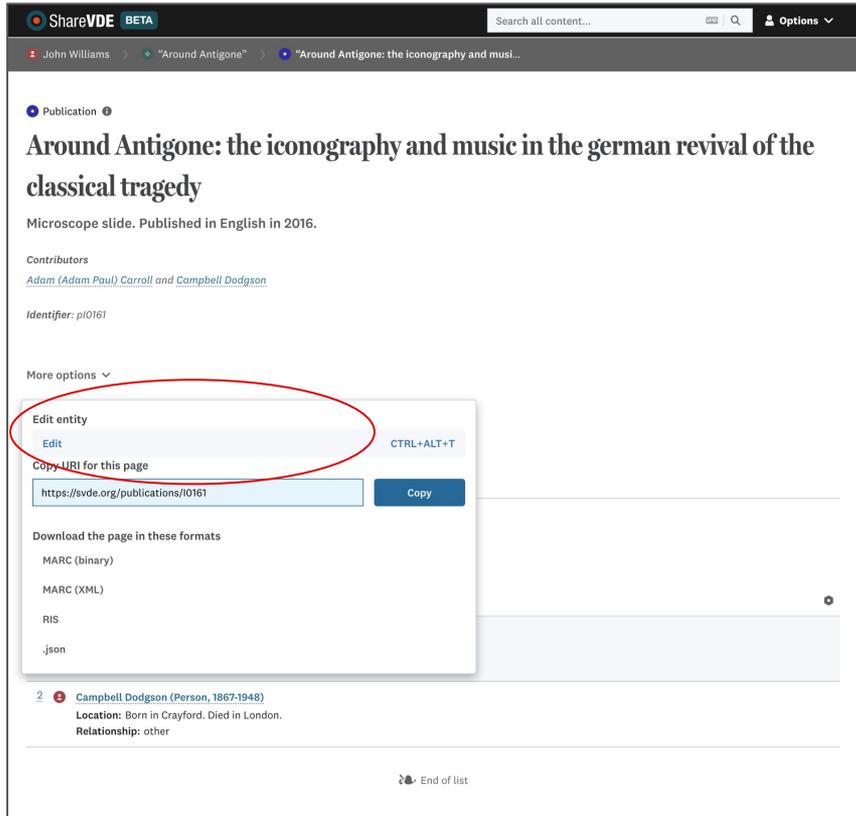
For example, the editor detects multiple prisms that belong to the same entity.

Split: a prism is split into multiple prisms



Several entities have been (wrongly) clustered into one.

What it does



The screenshot shows the ShareVDE interface. At the top, there is a search bar and a navigation breadcrumb: "John Williams > 'Around Antigone' > 'Around Antigone: the iconography and musi...". The main content area displays a publication titled "Around Antigone: the iconography and music in the german revival of the classical tragedy". Below the title, it says "Microscope slide. Published in English in 2016." and lists contributors "Adam (Adam Paul) Carroll and Campbell Dodgson". An identifier "p10161" is shown. A "More options" dropdown menu is open, and the "Edit entity" option is highlighted with a red circle. The "Edit entity" dialog box is open, showing a text input field with the URL "https://svde.org/publications/10161" and a "Copy" button. Below the dialog, there are options to download the page in various formats: MARC (binary), MARC (XML), RIS, and json. At the bottom, there is a list of entities, with "Campbell Dodgson (Person, 1867-1948)" selected, showing his location and relationship.



Edit function to change entities' properties

- ★ add, remove and amend attributes, relationships and links belonging to a single entity
- ★ real time notifications about cluster property changes



Merge function: reconcile multiple entities into one (e.g. two authors who are in fact the same person)

- ★ choose the properties to copy to the merged entity
- ★ multiple phases: create the merge list, edit the merge list, edit clusters, request for review, approve (or deny) the merge



What it does

The screenshot shows the 'Edit metadata' section of the ShareVDE BETA interface. The page title is 'Around Antigone : the iconography and music in the german revival of the classical tragedy'. The publication year is 2015. The print/online identifier is 7274. The auction/exhibition type is 'exhibition'. The interface includes a search bar, a breadcrumb trail, and a 'More options' dropdown. The 'Edit metadata' section is active, showing a table of metadata fields with columns for Title, Language, Provenances, and Leader. Each row has a 'Select provenance' dropdown and a 'Leader' radio button. There are also 'Add attribute', 'Cancel', and 'Save and close' buttons at the bottom.

Title *	Language	Provenances	Leader
Around Antigone : the iconography and music in the german revival of tl	Undefined	Select provenance	<input checked="" type="radio"/>
Publication year		Select provenance	<input type="checkbox"/>
Print/online *	Undefined	Select provenance	<input checked="" type="radio"/>
Auction/exhibition	Undefined	Select provenance	<input checked="" type="radio"/>



Split and Create functions: move one or more properties between two entities; optionally create a new one

- ★ choose the properties to move from entities
- ★ properties can be moved from an entity to create a brand new one
- ★ multiple phases: create the split-set, edit the split-set, edit clusters, request for review, approve (or deny) the split

What it does

The screenshot shows the ShareVDE BETA interface. At the top, there's a search bar and user options. The main content area displays a publication titled "Around Antigone : the iconography and music in the german revival of the classical tragedy" by Adam (Adam Paul) Carroll and Campbell Dodgson. Below the title, it says "Microscope slide. Published in English in 2015." and lists the ISBN and Identifier. There are tabs for "Edit metadata" and "Log". Under the "Log" tab, there are buttons for "Operation type", "Provenance", and "Event date". Below these buttons, it says "38 results" and "Sort by event date (9 - 0)". The log entries show property updates with details like provenance, user, and changes.

ShareVDE BETA

Search all content...

John Williams > "Around Antigone" > "Around Antigone: the iconography an..." > Edit

Publication

Around Antigone : the iconography and music in the german revival of the classical tragedy

Microscope slide. Published in English in 2015.

Contributors
Adam (Adam Paul) Carroll and Campbell Dodgson

ISBN: 1234567891011
Identifier: p10161

More options

Edit metadata Log

Operation type Provenance Event date

38 results

Sort by event date (9 - 0)

- Property `upaert: end` on 22/1/2023, 13:33:54
Provenance: Stanford Libraries
User: Loretta McCormick
Changes:
 - Changed property: Title
 - Value: एण्टिगोनस्य परिक्तः शास्त्रीयदुःखदृष्टनायाः जर्मनगुनरुथाने प्रतिमातेखनं सङ्गीतं च
 - Language: SAN
 - Leader: No
- Property `upaert: begin` on 22/1/2023, 13:33:20
Provenance: Stanford Libraries
User: Loretta McCormick
Changes:
 - Started editing prism I0161



Review workflow: edits are reviewed by advanced editors

★ notifications to manage the review workflow



Dictionary API: what are the available cluster types? Which attributes belong to a cluster type? What cardinality? Which relationships?



Entity Event Log: tracks the history of changes



Data changes synchronization across SVDE storages (e.g. RDF Store, Search Engine, RDBMS)



JCricket Editor - The Entity Management System

The screenshot displays the JCricket Editor interface. At the top, there is a navigation bar with 'ShareVDE BETA', 'Explore Pietro Aretino', 'Simple search aretino', 'Advanced search', and 'Editor'. The main content area shows a profile for 'Pietro Aretino', an Italian author, playwright, poet, satirist, and blackmailer (1492-1556). A modal window titled 'Editor options' is open, showing an 'Edit' button (CTRL+ALT+T), 'Add to my merge list' (ALT+SHIFT+M), and a 'Copy URI for this page' section with the URL 'https://svde.org/agents/254' and a 'Copy' button. Below the modal, there are sections for 'Original works by' (with a filter), 'Download the page in these formats' (listing .json), and 'More information related to this person on other websites' (listing wikidata record, viaf record, and isni record). A table of results is partially visible at the bottom.

No.	Title
1	Edizione nazio

Currently in internal demo environment, updates will follow as soon as it will be available for testing

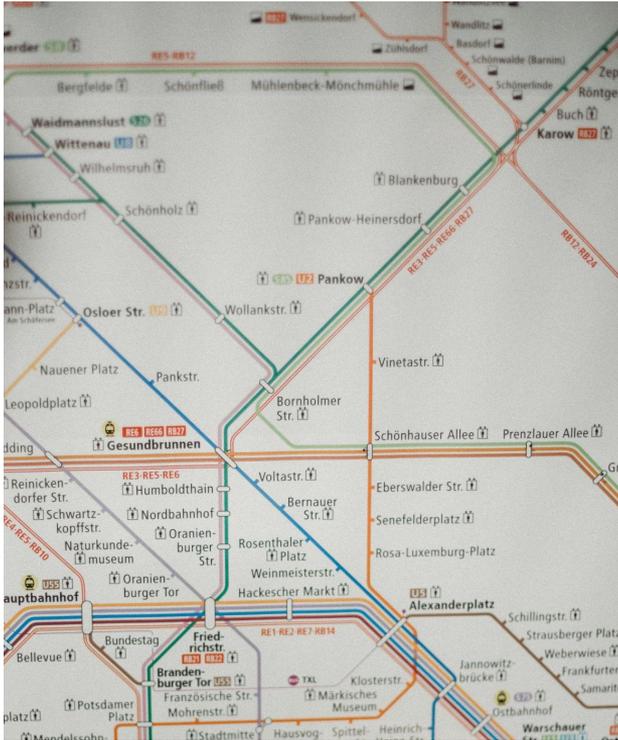
JCricket Editor - The Entity Management System

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- Main Editor (Center):** Shows the 'Pietro Aretino' entity with tabs for 'Metadata' and 'External IDs'. The 'Basic info' section includes:
 - Agent type:** Set to 'Person' (URI: <http://sit3-base-svde.atcult.it/agentTypes/Person>).
 - Name:** Set to 'Aretino, Pietro'.
 - English:** An empty field.
 - Birth year:** Set to '1492'.
 - English:** An empty field.
- Right Panel:** Provides search instructions: 'Find it via search' and 'To view an entity here, open it through explore or search screens.' It includes an 'Open via ID' section with an input field for 'Entity URI' and an 'Open' button. Below is a 'Create new...' section with a grid of entity types: Agent (Person, Family, Organization, Conference), Opus (Original work), Bibliographic (Work, Instance, Item), and Concept (Form, Format, Genre, Language, Place).



Where we are now



- ★ The back-end APIs that manage JCricket behind the scenes are ready ✓
- ★ The respective front-end functions for the end users to actually use JCricket are under development 🛠️
- ★ currently in internal demo environment, updates will follow as soon as it will be available for testing

Why JCricket is valuable



- ★ A **collaborative tool**, shared across the Share Family community and improving the data created within it
- ★ Linked data conversion in a shared discovery environment and **direct entity management** capabilities in one place
- ★ Increases **data quality** where massive automated processes are necessarily lacking
- ★ Collaboration ensures higher quality and **authoritativeness of data**
- ★ Conceived by **SVDE and Share Family community**, ie. **real users**
- ★ Potentially **complementary to other tools**, e.g. Sinopia - as they cover different aspects of the entity management flow
- ★ Could potentially **support other workflows** and connections with systems external to the Share Family
- ★ You can always **track back to your data** through the Provenance
- ★ JCricket will extend authority capabilities through the integration with external data sources such as **Wikidata**

Next generation cataloguing



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 library cataloguing 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 library community and beyond

JCricket references

Useful references:

- JCricket overview
https://wiki.share-vde.org/w/images/7/74/JCricket_overview_-_2023-Jan-26.pdf
- for more technical details on JCricket
https://wiki.share-vde.org/w/images/e/e8/JCricket_entity_editor_presentation.pdf
- on how JCricket has been conceived
https://wiki.share-vde.org/w/images/b/b3/Share-VDE_perspective_on_Cluster_Knowledge_Base_and_Provenance.pdf

See the live demos!

JCricket première demo at ALA Conference 2023, during the Share-VDE Workshop:

https://bit.ly/SVDE_Workshop2023_recording

JCricket demo at the LD4 Conference 2023:

<https://www.youtube.com/watch?v=wbrqvWGnvfl>

Share-VDE discovery portal general demo: <https://bit.ly/SVDE-discovery-live-demo>

Share Family tenant infrastructure

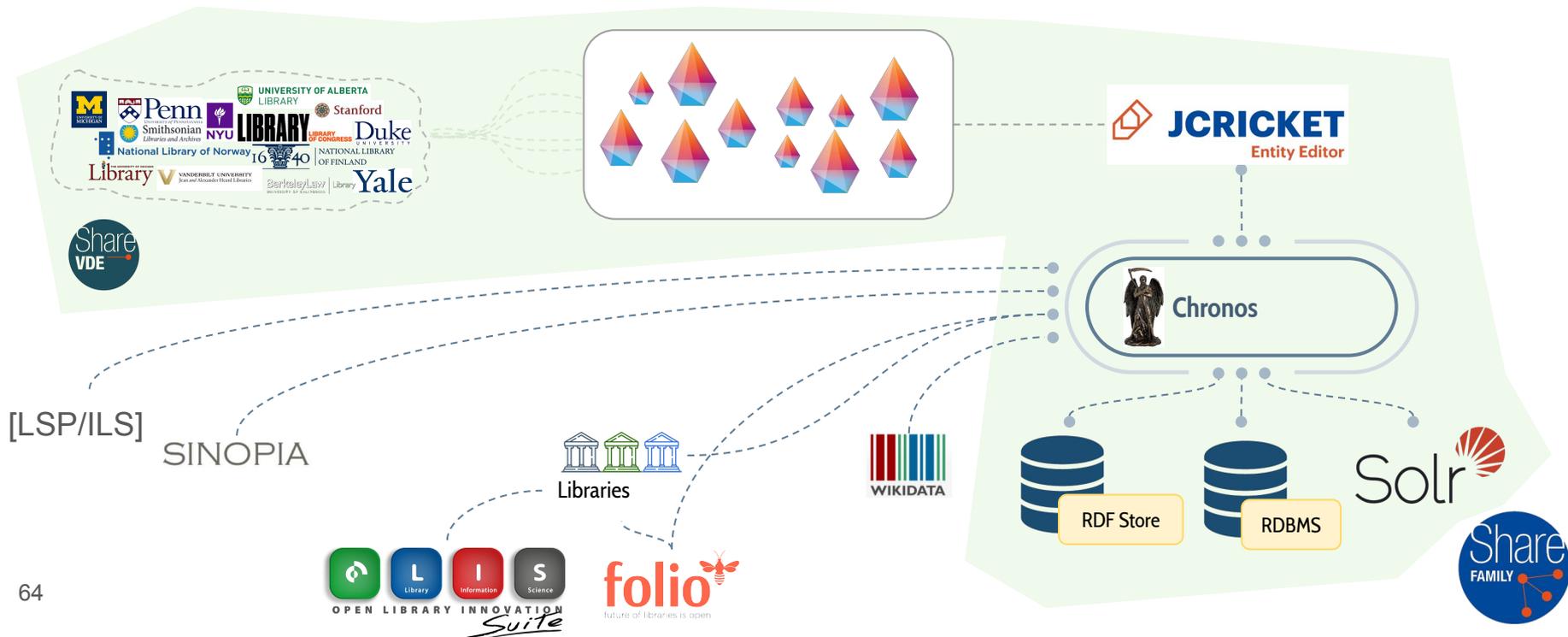
- The Share Family of initiatives includes different branches and sister projects, supported by the same [LOD Platform technology](#). Each branch or project is hosted in a specific tenant of the system architecture with a corresponding specific Cluster Knowledge Base and a dedicated web entity discovery portal.
 - For more details on the Share Family tenant infrastructure see the [Summary of Share Family tenants](#).
- In some cases, within a single tenant a customised skin (ie. a sub-portal of the main entity discovery) can be created to address ad hoc needs of an institution, or group of institutions, willing to expose only their own data or to integrate local services in the Share environment.
 - For example, Share-VDE entity discovery portal at [svde.org](#) is one of such tenants, including a pool of data from a number of institutions, and the respective skin portals.

Third party integration - Outbound Connectors Architecture

Data flows into Share-VDE from libraries, institutions and third-party sources (e.g. VIAF, ISNI, FAST)

The Share-VDE knowledge base (**Sapientia**) contains the integrated/clustered/enriched entities.

Data is mainly edited through JCricket, the Share-VDE entity editor.



FOLIO Integration: high-level milestones

Level 1: Instance correlation

- Folio inventory instances are retained in dedicated faces of Share-VDE prisms
- The inbound connector receives FOLIO data (instances) and feeds the Cluster Knowledge Base (CKB)
- The outbound connector communicates back data changes to FOLIO

Level 2a: Agents (and works) correlation

- Same interaction as above, but using authority records (agents, works), instead.

Level 2b: JCricket UI App in FOLIO

- Using the FOLIO built-in “pluggable” nature, the FOLIO UI SDK and the Share-VDE (GraphQL) API



Local services: University of Pennsylvania

The screenshot shows the Penn Libraries Catalog interface. At the top, there is a search bar with the text "Search all content..." and a "Log in" button. Below the search bar, the breadcrumb navigation shows "William Shakespeare" and "Hamlet". The main content area features a book cover for "THE Tragicall Historie of HAMLET, Prince of Denmark." by William Shakespeare. To the right of the cover, the title "Hamlet" is displayed in a large font, followed by "Written by William Shakespeare in English". A brief description of the play is provided, along with a "Read online now" button and a "Get it now at Van Pelt" button. Below the main content, there are two tabs: "Library-held publications of Hamlet" (selected) and "Related Original Works". Under the "Library-held publications of Hamlet" tab, there are 8 results. A filter bar allows for filtering by "Availability", "Language", and "All filters", with a "Held at Penn" toggle switch. The results are displayed in a table with columns for Title, Person name, Language, Location, and Availability.

Title	Person name	Language	Location	Availability
Hamlet: Second quarto	Michael Heppell	English	Penn	Available online
Hamlet. A new version [by] Rouben Mamoulian	Mike McClement	English	Penn	Available online

Integration with local services, e.g. connection to Alma APIs for Penn circulation services (see the [prototype](#) of integration)



Penn integration with local services - lending

The screenshot shows the Penn Libraries Catalog interface. A modal window is open for the item "Hamlet: Second quarto". The modal contains the following information:

- Item**
- Hamlet: Second quarto**
- Physical book by William Shakespeare. Published by Penguin in 1997.**
- Copy no. 1231-2415-3489 · Shelving location: Van Pelt > M1503.S44 H33 1971 · Notes about this item: "Some marginal ms. notes in pencil. Athenaeum copy; Hopkinson library; Uzzell gift, 1987."*

Below the information, there are three radio button options:

- Place a hold on this physical item
- Scan a chapter and send it to my email
- Place on course reserve

At the bottom of the modal, there are two buttons: "Cancel" and "Place hold on item".

In the background, the catalog page shows a search bar with "Search all content...", a user profile for "Jane Doe", and a list of results. The first result is "Hamlet: Second quarto" by Michael Heppell, published in English in Penn, and is available online.



Thank you!

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