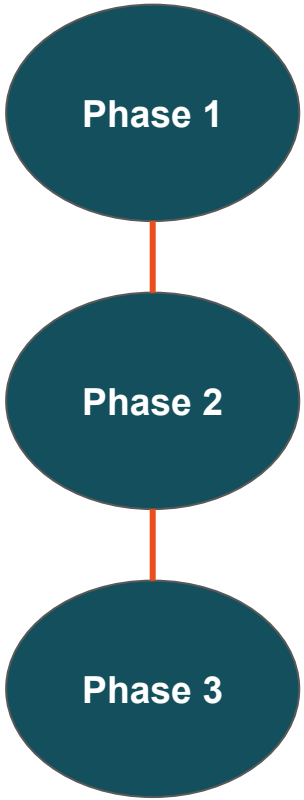
Share-VDE

Share Virtual Discovery Environment in Linked Data

https://svde.org
info@svde.org
https://wiki.svde.org/

The initiative and its goals

From pilot project…



October 2016 – January 2017

1985 and 2015 imprint titles; 2,249,397 bib-records and 3,601,327 auth-records.

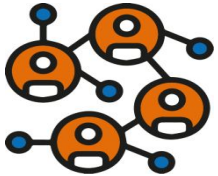
March 2017 – May 2018

The entire catalogues for all resource types; 94,378,728 bib-records and 24,150,238 auth-records.

Production environment: January 2019 - in progress

Share-VDE triplestore currently contains 24 billion quads of converted data and 400 million triples of clustered entities.

...to active initiative



Share-VDE is a library-driven initiative to establish an effective working environment for the use of linked data by libraries within a global context.

Library data are enriched with additional information and relationships, and bibliographic and authority data are converted into linked data.

A virtual discovery platform with the structure based on BIBFRAME data model is created to simplify the way in which that data is consumed.

The network of resources created is the basis for the Share-VDE Sapientia Cluster Knowledge Base, the common authoritative source of clusters accessible in RDF, open to the entire Share-VDE community.

...in a cooperative environment

Share-VDE is a collaborative endeavour based on the needs of libraries, developed by:

the joint effort of the Share-VDE Advisory Council and of the Working Groups;

Casalini Libri, provider of bibliographic and authority data as member of the Program for Cooperative Cataloguing;

@Cult, provider of ILS, Discovery tools and Semantic web solutions for the cultural heritage sector;

influenced by the vision of the Linked Data for Production initiative;

with input and active participation from an international group of research libraries.

Share-VDE overall goals

Enrichment of MARC records with URIs

Conversion from MARC to RDF using the BIBFRAME vocabulary (and other ontologies)

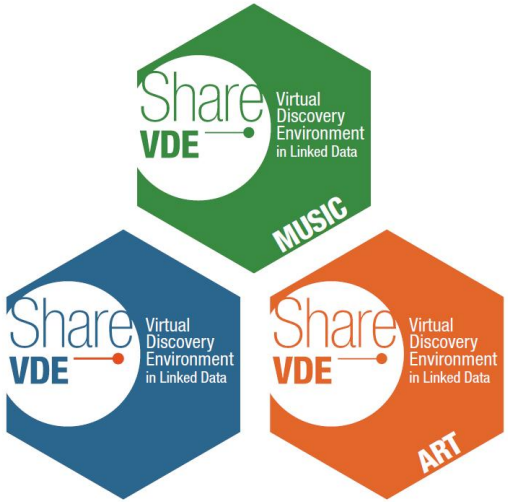
Data publication according to the BIBFRAME data model

Batch/automated data updating procedures

Batch/automated data dissemination to libraries

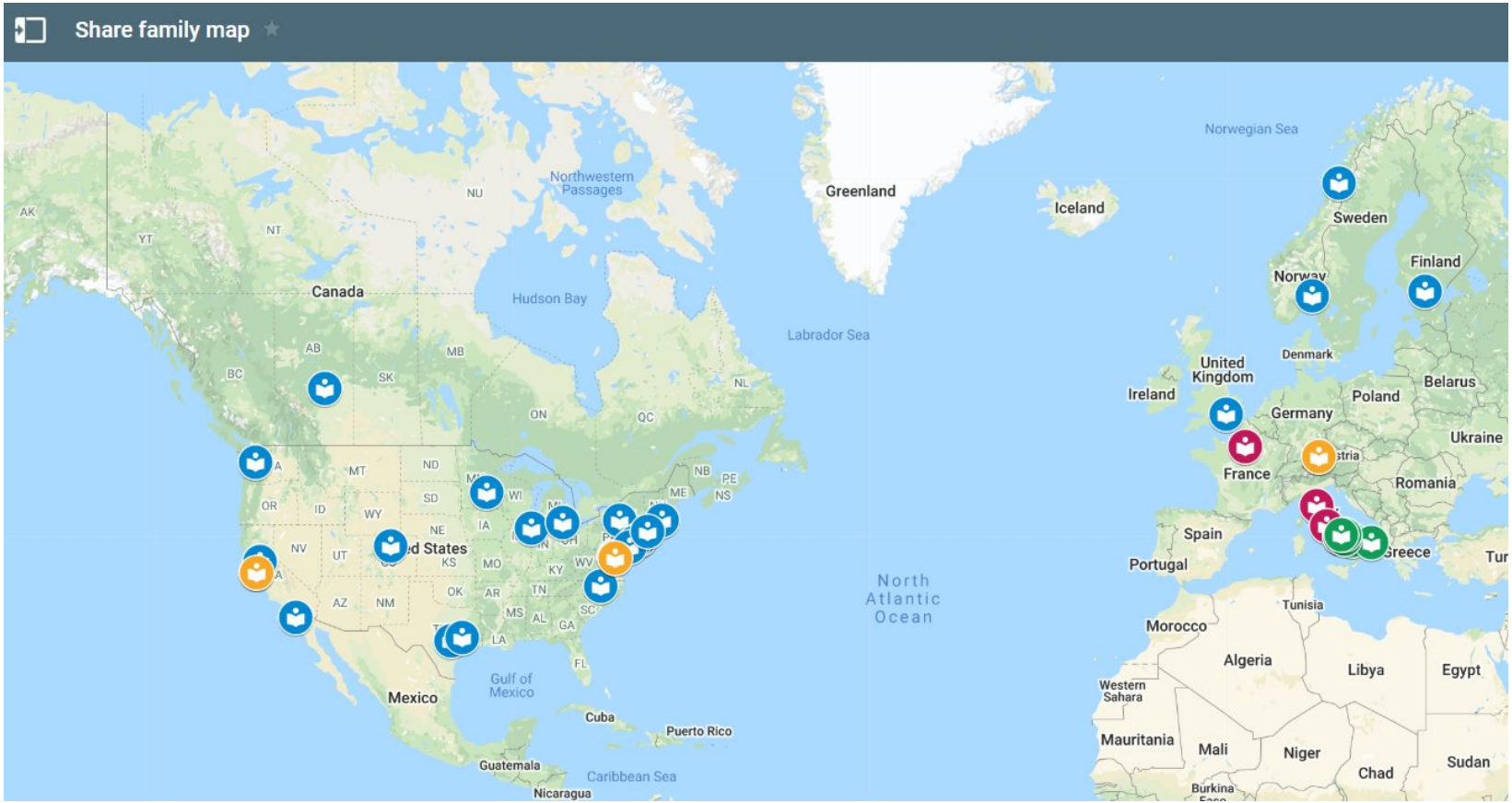
Progressive implementation of use cases, with priorities defined by the Share-VDE community

The Share family



The Share family of initiatives based on linked data currently comprises Share-VDE (Virtual Discovery Environment), Share-Catalogue (the Italian network of university libraries applying the Share principles), Share-Art and the Kubikat-LOD project of the Art History libraries of the Max Planck Institut, and other projects. The different characteristics of each field are a useful asset that can be used to the advantage not only of the Share family as a whole, but for each single discipline.

The Share family map around the world



The Share family participating institutions

Share-VDE Full members - university libraries

Duke University
New York University
Stanford University
University of Alberta
University of Chicago
University of Michigan at Ann Arbor
University of Pennsylvania
Yale University

Share-VDE Full members - national Libraries

Library of Congress
National Library of Finland
National Library of Norway
Smithsonian Institution
The British Library

LD4P Cohort members

Cornell University
Frick Art Reference Library
Harry Ransom Center Texas A&M
Harvard University
National Library of Medicine
Northwestern University
Princeton University
University of California Davis
University of California San Diego
University of Colorado at Boulder
University of Minnesota
University of Texas A&M
University of Washington

Share-Music project

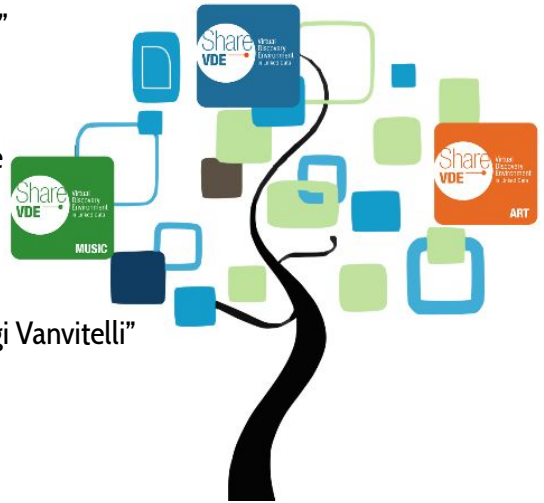
Bayerische Staatsbibliothek
Library of Congress
Stanford University

Share-Catalogue Institutions

Università degli Studi di Napoli "Federico II"
Università degli Studi della Basilicata
Università degli Studi di Napoli L'Orientale
Università degli Studi di Napoli Parthenope
Università del Salento
Università degli Studi di Salerno
Università degli Studi del Sannio RCost
Università degli Studi della Campania "Luigi Vanvitelli"

Share-Art (Kubikat-LOD) project

Max-Planck-Institut:
Kunsthistorisches Institut in Florenz
Biblioteca Hertziana Rome
Central Institute of Art History Munich
Deutsches Forum für Kunstgeschichte Paris



See also
https://wiki.share-vde.org/wiki/ShareVDE:Main_Page/SVDE_institutions

Why Share-VDE

Facilitates cataloguing and exposition of bibliographic records through a linked data based approach.

The platform www.svde.org enhances the discovery potential of library resources to scholars and students and unveils information that would otherwise have been hidden in archives → access to a rich amount of data that can be exported and re-imported by the participating institutions.

It's an authoritative source thanks to the data enrichment with external URIs (ISNI, VIAF, Wikidata etc.) and internal ones (the URI created by Share-VDE for each entity).

Enhances the cooperation with the Linked Data for Production (LD4P) initiative and the Program for Cooperative Cataloging (PCC) for the study and application of linked data.

Fosters the collaboration among institutions and the information exchange with the broader linked data community in the library, archive and museum domains.

Major benefits

Quality: enrichment with data from other authoritative sources and share responsibility for and contribute to maintenance of quality data

Use: better exposition, data analysis opportunity, reuse in other projects, improve visibility of hidden resources

Integration: intersection of different and multiple authoritative sources, increase circulation of data

Engagement: facilitate information exchange and collaboration with other communities

Linked data experience

The Testaments

Get a copy

Author/creator
"Atwood, Margaret, 1939- author." Search catalog for text "Atwood, Margaret, 1939- author." →

Format / description
Book. 419 pages ; 25 cm

Published by
London, England : Chatto & Windus, 2019. , ©2019
Search catalog for text "London, England : Chatto... →

Summary
"More than fifteen years after the events of The Handmaid's Tale, the theocratic regime of the Republic of Gilead maintains its grip on power, but there are signs it is beginning to rot from within. At this crucial moment, the lives of three radically different women converge, with potentially explosive results.Two have grown up as part of the first generation to come of age in the new order. The testimonies of these two young women are joined by a third voice: a woman who wields power through the ruthless accumulation and deployment of secrets.As Atwood unfolds The Testaments, she opens up the innermost workings of Gilead as each woman is forced to come to terms with who she is, and how far she will go for what she believes."—Publisher description.

Notes
Sequel to: "The Handmaid's tale." Search catalog for text "The Handmaid's tale" →

Contains
Sequel to: Atwood, Margaret, 1939-. Handmaid's tale.

Experience without linked data.
Search for text string → View a record → Search for text string → View...

The Testaments

The Testaments is a 2019 novel by Margaret Atwood. It is a sequel to The Handmaid's Tale (1985). The novel is set 15 years after the events of The Handmaid's Tale... Wikipedia

2 editions at our library. 14 editions at other libraries.

Get a copy

AUTHOR
Margaret Atwood (Canadian writer)
Margaret Eleanor Atwood CC OOnt CH FRSC (born November 18, 1939) is a Canadian poet, novelist, literary critic, essayist, inventor, teacher, and environmental activist. Wikipedia

Learn more about this author | View **34 works** by this author

RELATED TO THESE WORKS

"The Handmaid's tale"
...a dystopian novel by Canadian author Margaret Atwood, originally published in 1985. It is set in a

View this work →

PRIZES
2019 Man Booker Prize

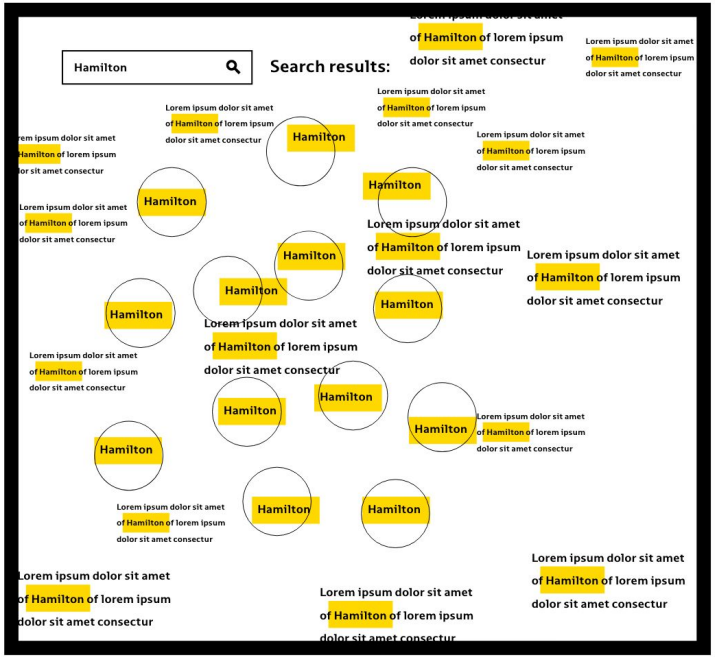
Show **12 books** from **other winners**

REVIEWS
★★★★★
"A fitting sequel to The Handmaid's Tale. The characters in this book are different, but the world is the same. The world becomes more fleshed out, as the author adds details

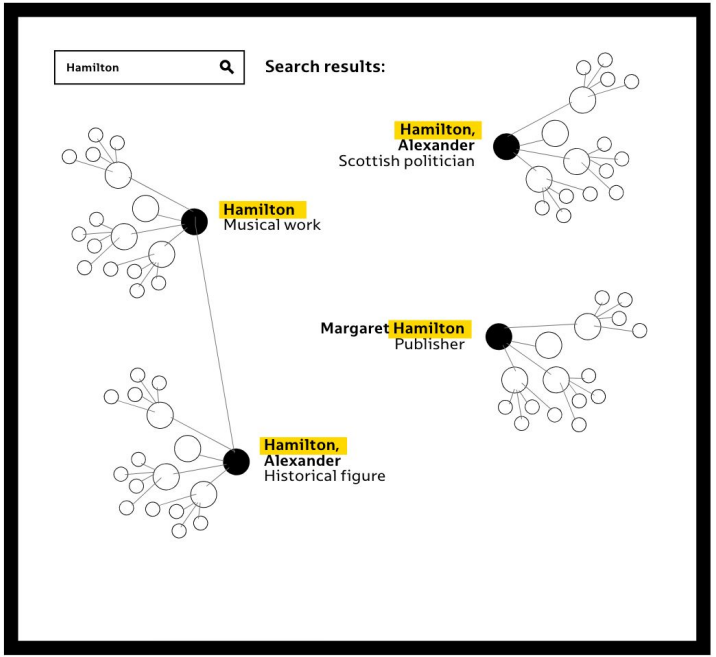
Experience with linked data.
Search for known entities → Explore by moving from entity to entity directly.

Linked data means interconnections

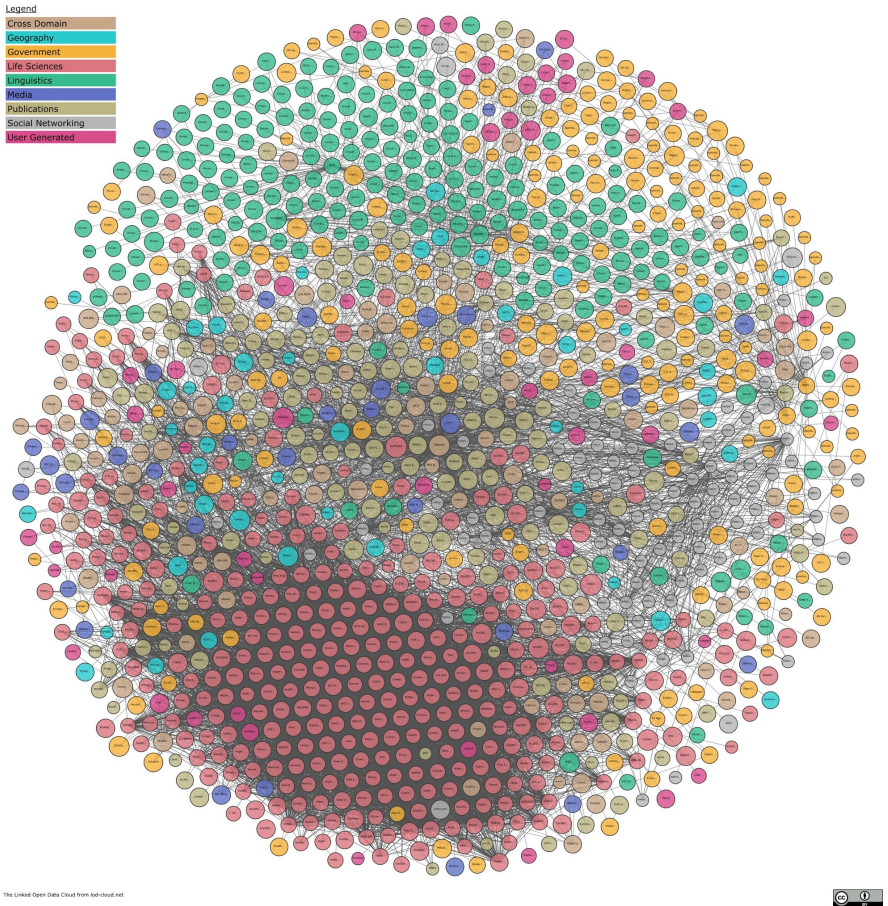
Without linked data



With linked data

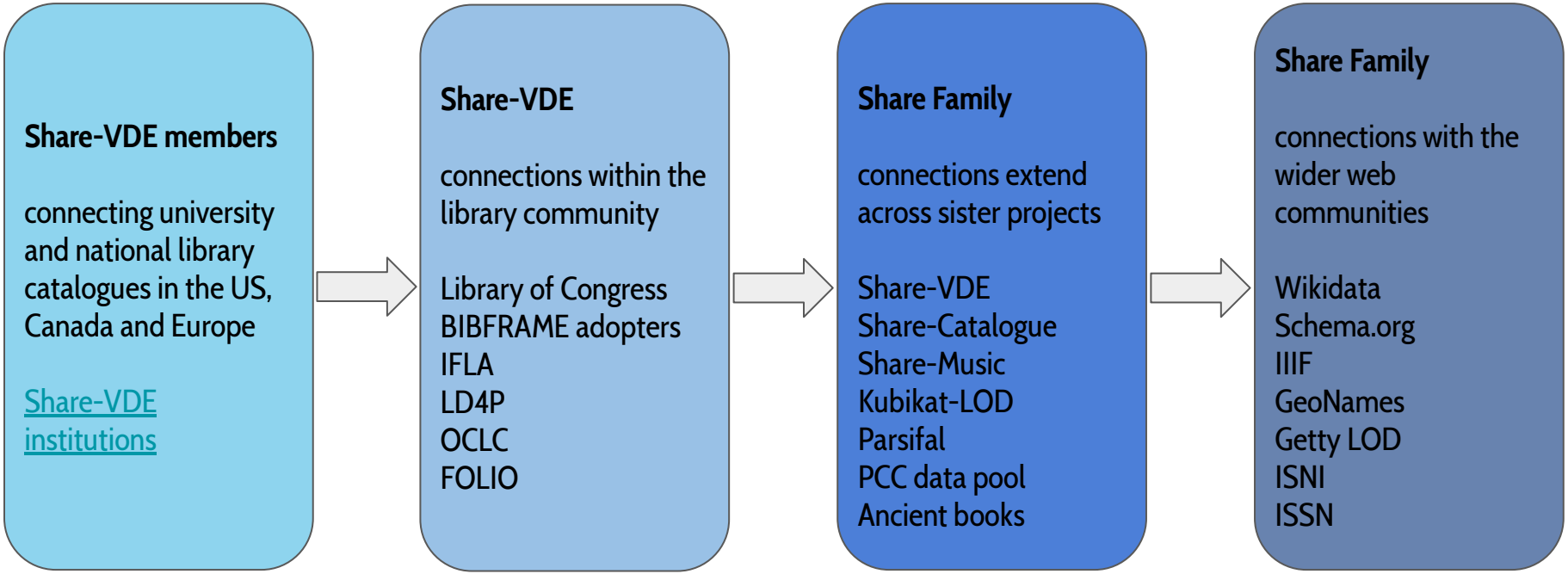


A network of interconnected data



A network of interconnected libraries

The diffusion in the worldwide communities



What data is available

The new SVDE 2.0 is now live at https://svde.org

- new back-end infrastructure for the Linked Data Management and the Cluster Knowledge Base
- new Entity Discovery Interface (web portal)

Progressive load of SVDE member libraries data into the new system:

- Share-VDE 2.0 is available at https://svde.org
- Share-VDE 1.0 is available at https://share-vde.org

SVDE 1.0 and 2.0 will coexist until clustering iterations and data load on the new version will be completed.

Useful materials

Wiki resources to learn more https://wiki.svde.org/

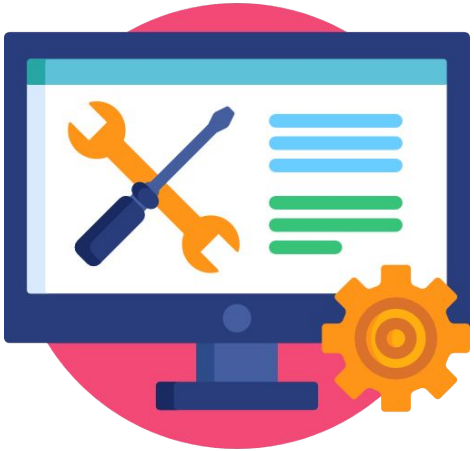
Share-VDE data can be queried through several methods:

- entity discovery portal (web user interface available at https://svde.org)
  - https://www.svde.org/about/about-share-vde
- via API through GraphQL and RESTful API endpoints
- via Stardog triple store (the Stardog db including the new CKB 2.0 will soon be available)

Report bugs and suggestions on the forum https://forum.svde.org/

The Share core technology

The LOD platform



The LOD Platform is a highly innovative framework of applications and components for handling bibliographic catalogues and transforming them in Linked Open Data.

The LOD Platform uses BIBFRAME as main ontology but is able to combine and add other ontologies and data models as required by each specific project.

The LOD platform

The system allows:

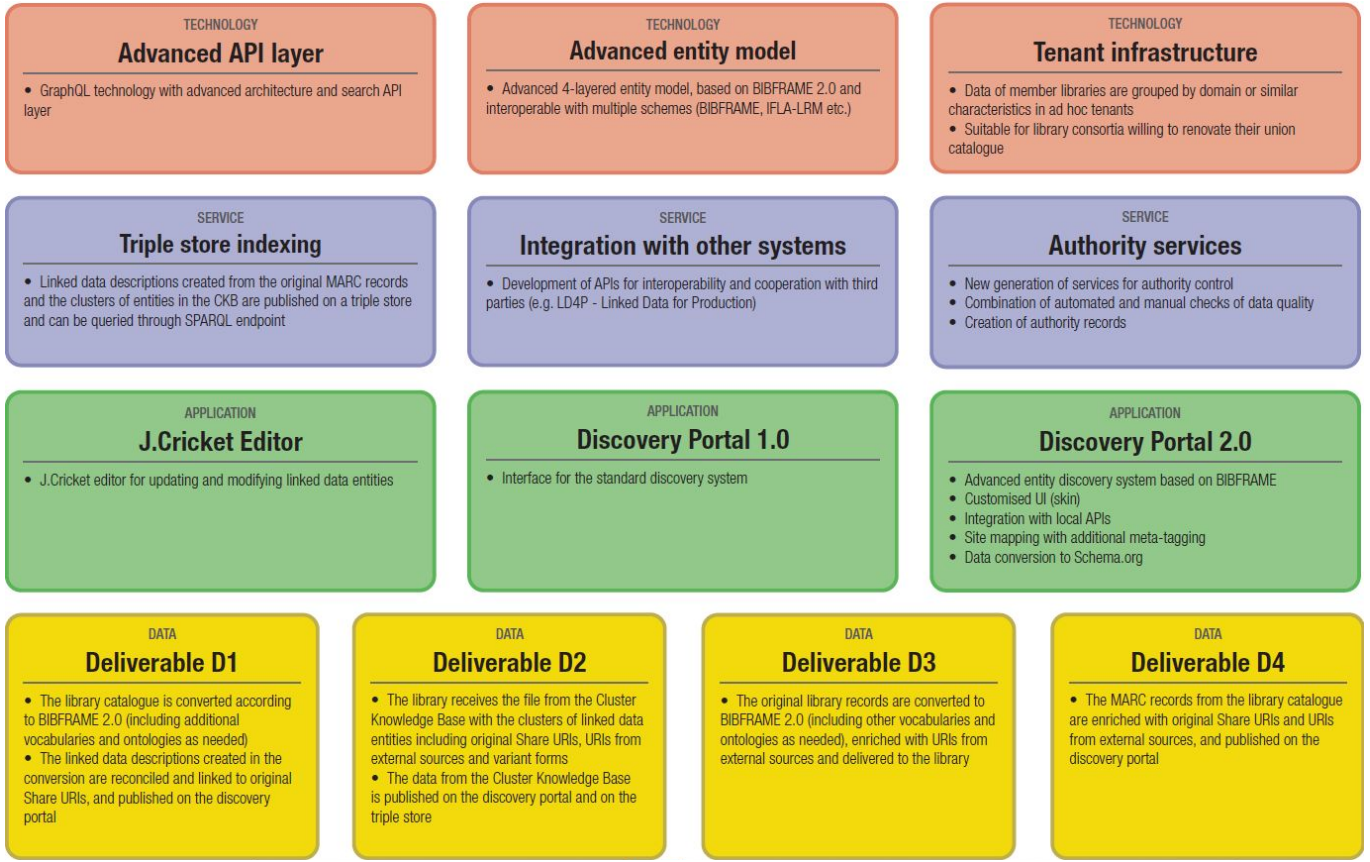
- data analysis and management, to identify and group the entities (clusterization process);
- data enrichment through links with URIs from external data sources;
- bibliographic and authority data conversion to RDF (Resource Description Framework, the standard model by the W3C for LOD), using vocabularies and ontologies;
- publication of the RDF dataset on a triplestore;
- user-friendly discovery portal based on BIBFRAME.

The LOD platform modules

Main modules of the technological architecture:

- AUTHIFY, RESTFul module that provides bibliographic and authority search services and full text of external datasets, mainly related to Authority files (VIAF, Library of Congress Name Authority file...) but also extendable to other types of datasets;
- CLUSTER KNOWLEDGE BASE, on PostgreSQL database, is the result of data identification, enrichment, and clusterization processes;
- LODIFY, RESTFul module that automates the entire process of data conversion in RDF format;
- TRIPLESTORES for storing RDF files;
- DATA PRESENTATION PORTAL, the personalized portal on which data is published.

The LOD Platform components



Share family technology in 5 steps

The initiative is steered by the community of participating libraries, with the aim of setting up linked data based workflows.

The Share family technology, based on the LOD platform, makes available:

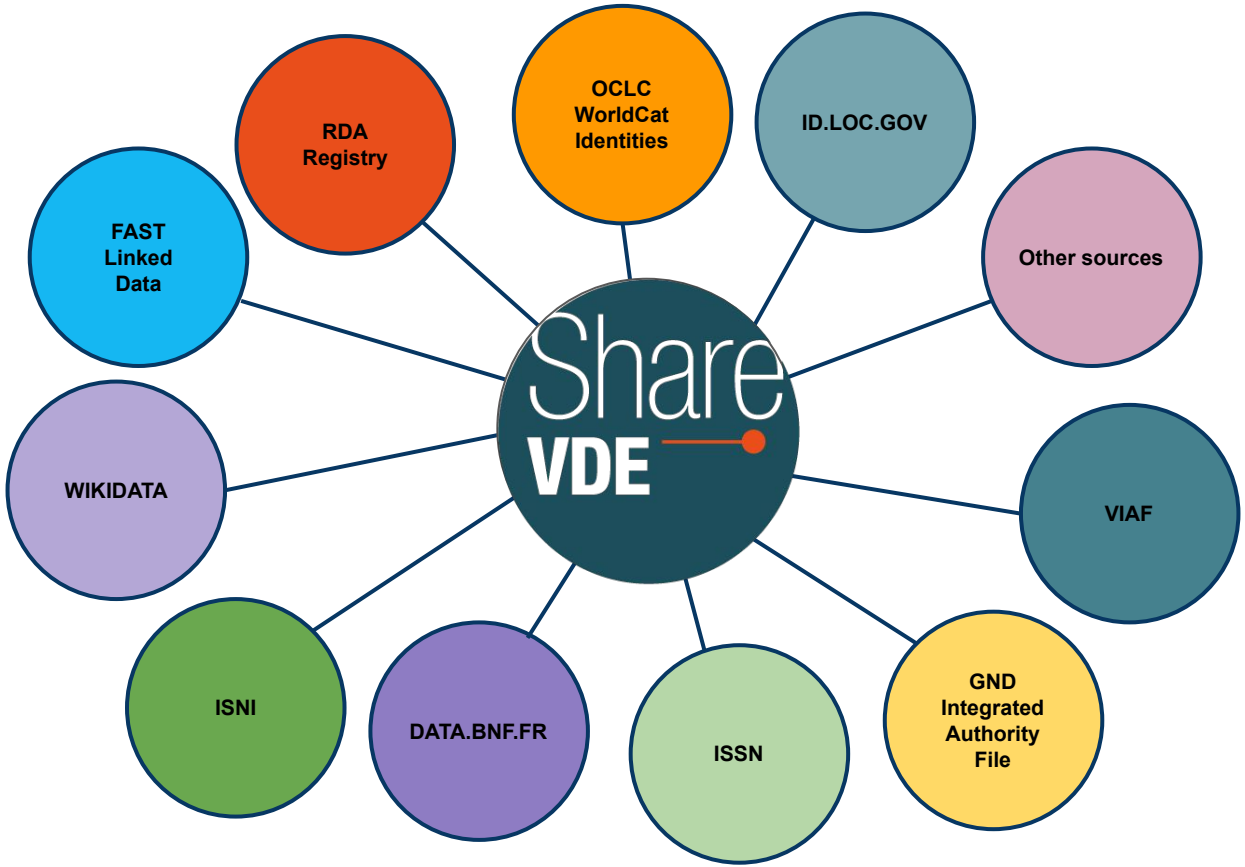
1. enrichment of original MARC records with identifiers from external sources (e.g. ISNI, VIAF) and with original Share-VDE entity URIs;
2. reconciliation and clusterization of entities identified in the MARC data;
3. conversion of library catalogues from MARC to linked data;
4. delivery of converted and enriched data to libraries for reuse in their systems;
5. publication of linked data descriptions on the discovery platform www.svde.org.

Enrichment, reconciliation and clusterization

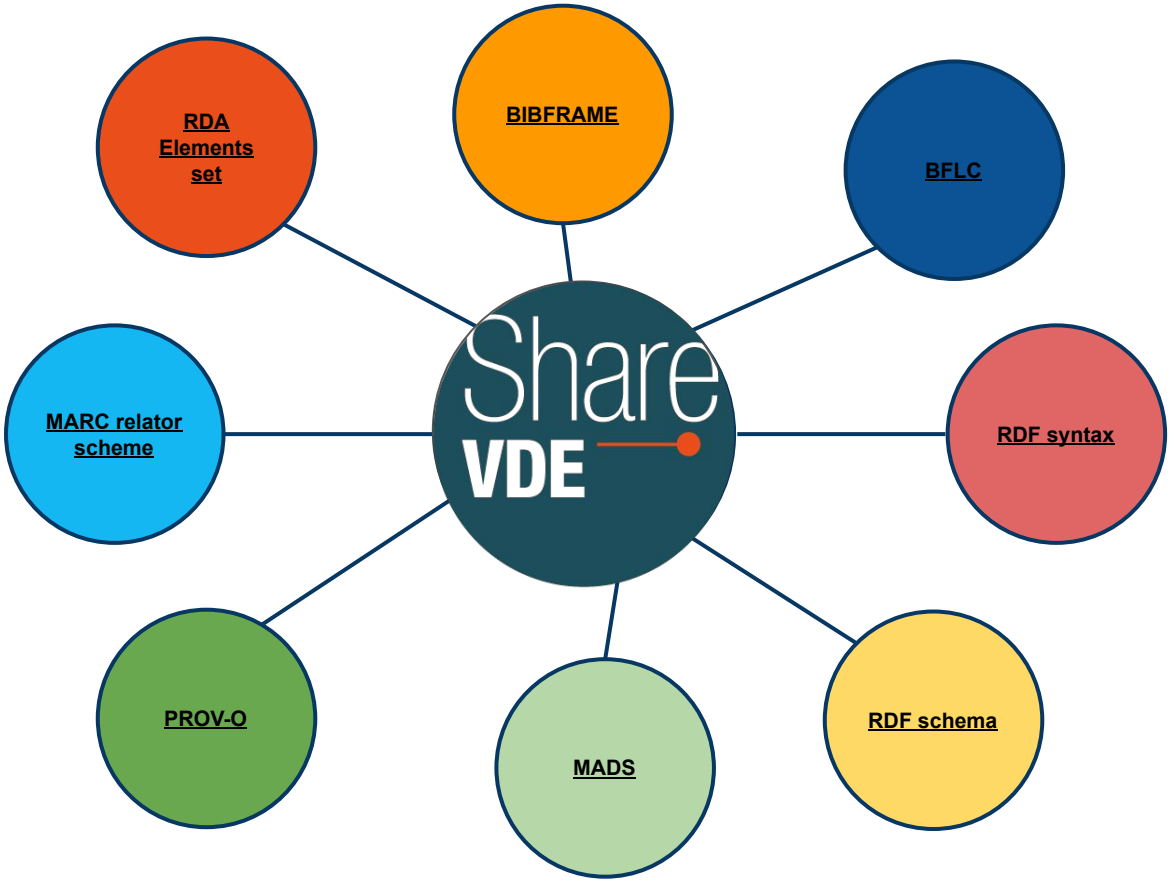
Enrichment: SVDE adds to the original MARC records of member libraries the entity identifiers (authors, works, subjects etc.) from external data sources (ISNI, Wikidata etc.) to facilitate the reuse of records in linked data. Also the data resulting from the conversion in BIBFRAME is enriched in the same way.
Added value: SVDE creates original URIs assigned to the entities managed by the system (authors, works etc.): this further benefits data enrichment and makes SVDE an authoritative data source.

Reconciliation and clusterization: SVDE reconciles data from MARC records in order to identify groups of entities (clusters). Example: starting from a set of library records describing the same book, SVDE creates a single cluster with its own original SVDE URI that groups together the manifestations of the same work. The same happens for authors, e.g. William Shakespeare.

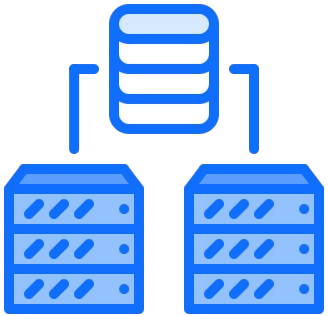
Some of the external sources



The main Share-VDE ontologies



Conversion

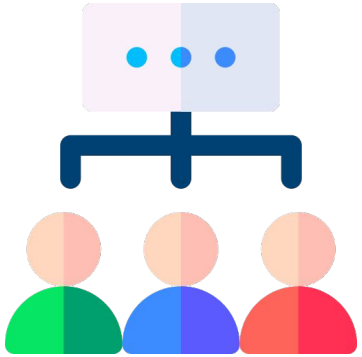


Share-VDE converts library data from MARC to linked data. The ontology currently in use is BIBFRAME, one of the major standards in use in the transition from original MARC-based workflows to linked data cataloguing.

Share-VDE entity model includes the Opus level, in order to keep continuity with IFLA-LRM and BIBFRAME models.

This facilitates the conversion from MARC to linked data and viceversa and allows Share-VDE infrastructure to be in line with the developments of the Library of Congress that has released the Hub property as highest level of abstraction in BIBFRAME model.

Reuse and publication



Reuse: the network of SVDE resources is the base of the SVDE Cluster Knowledge Base (named Sapientia). The CKB is an authoritative source of entities (works, authors etc.), accessible in RDF format and open to the entire SVDE community. The CKB can be queried and can be used in the local systems of SVDE member libraries. Also the MARC records enriched can be reused by libraries, that continue handling their own data independently.

Publication: the linked data descriptions resulting from the conversion of library records are published on the discovery platform www.svde.org (currently available for full member libraries https://wiki.share-vde.org/wiki/ShareVDE:Main_Page/SVDE_institutions). SVDE interface is being renewed as far as user experience and discoverability potential, and ad hoc branding options of the interface are available.

Technical advancements

Optimisation of LD workflows in production

Conversion from MARC to RDF using BIBFRAME and other ontologies

SVDE authoritative Cluster Knowledge Base

Original MARC records enriched with URIs from different sources

RDF data enriched with URIs from different sources

Infrastructure, data storage, indexing and queries

Internal PostGres RDBMS

Triplestore with SPARQL query endpoint

Solr inverted index

Tenant infrastructure with Share Family Index across Share Family CKBs

Data publication and exchange

Union catalogue and advanced entity discovery platform

API layer for CRUD operations

Interoperability layer with external systems (e.g. LD4P)

Advanced services

New generation authority control

Shared entity editing tool for update and management of linked data entities: J.Cricket editor

Cross-tenant services

Apply Share principles to other domains (e.g. archives, museums, music)

More on the latest achievements

303 URIs forwarding to Different Documents

Accept: text/html

https://share-vde.org/agents/17282

Accept: application/json

Accept: application/rdf+xml

303 See Others

https://share-vde.org/page/agents/17282

https://share-vde.org/data/agents/17282.json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  "alternateHeadings": [
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    "Fifteenth Annual Eaton conference on science fiction and fantasy literature",
    "Nursery realms children in the worlds of science fiction, fantasy, and horror"
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  "startDate": 1993,
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        "href": "https://share-vde.atcult.it:6443/families/1"
      },
      {
        "href": "https://share-vde.atcult.it:6443/agents/1"
      }
    ]
  }
}
```


https://share-vde.org/data/agents/17282.rdf


```
<rdf:type rdf:resource="http://www.wikidata.org/entity/Q36180"/>
<rdf:type rdf:resource="http://dbpedia.org/ontology/Agent"/>
<rdf:type rdf:resource="http://www.ontologydesignpatterns.org/on
<rdf:type rdf:resource="http://dbpedia.org/class/yago/WikicatSen
<rdf:type rdf:resource="http://dbpedia.org/class/yago/Holder1101
<rdfs:label xml:lang="it">Alessandro Manzoni</rdfs:label>
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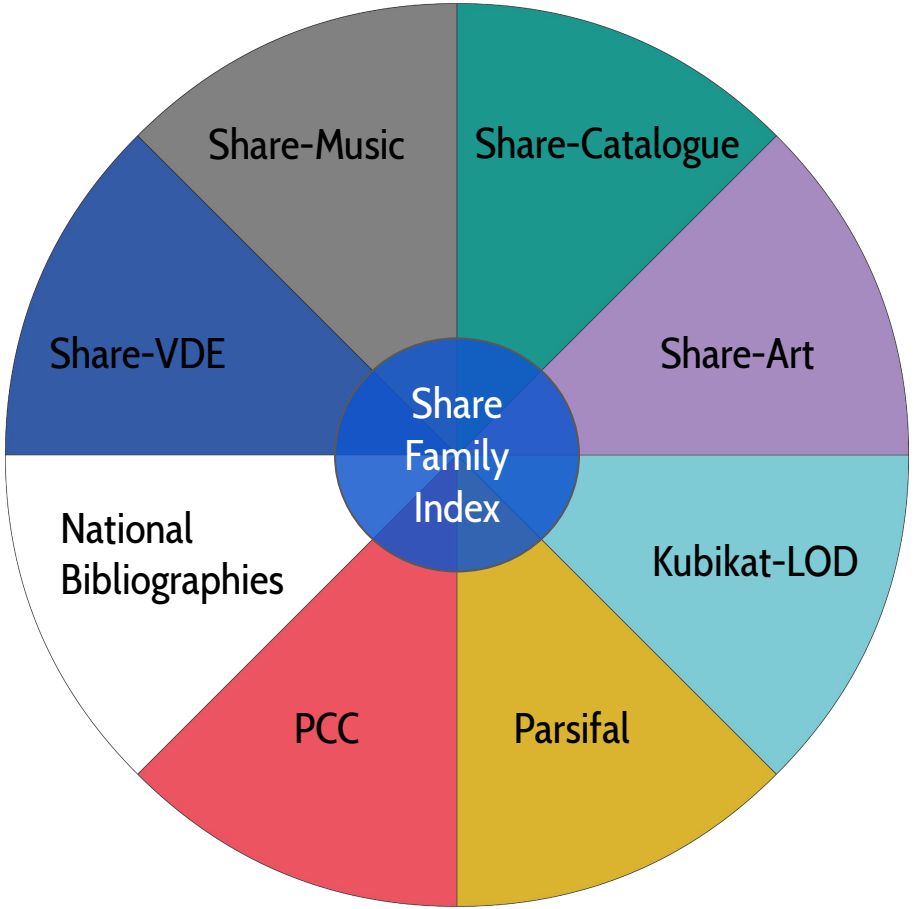
<rdfs:label xml:lang="zh">亚历山达罗·孟佐尼</rdfs:label>
<rdfs:label xml:lang="ru">Мандзони, Алессандро</rdfs:label>
▼<rdfs:comment xml:lang="pt">
  Alessandro Francesco Tommaso Manzoni (Milão, 7 de março de 1785
  italiano - um dos mais importantes nomes da literatura de seu p
  com o título Os noivos). Foi ainda senador do Reino da Itália.
```


Reference: https://www.w3.org/TR/cooluris/ (Par. 4.2)

Participation and autonomy in the Share Family



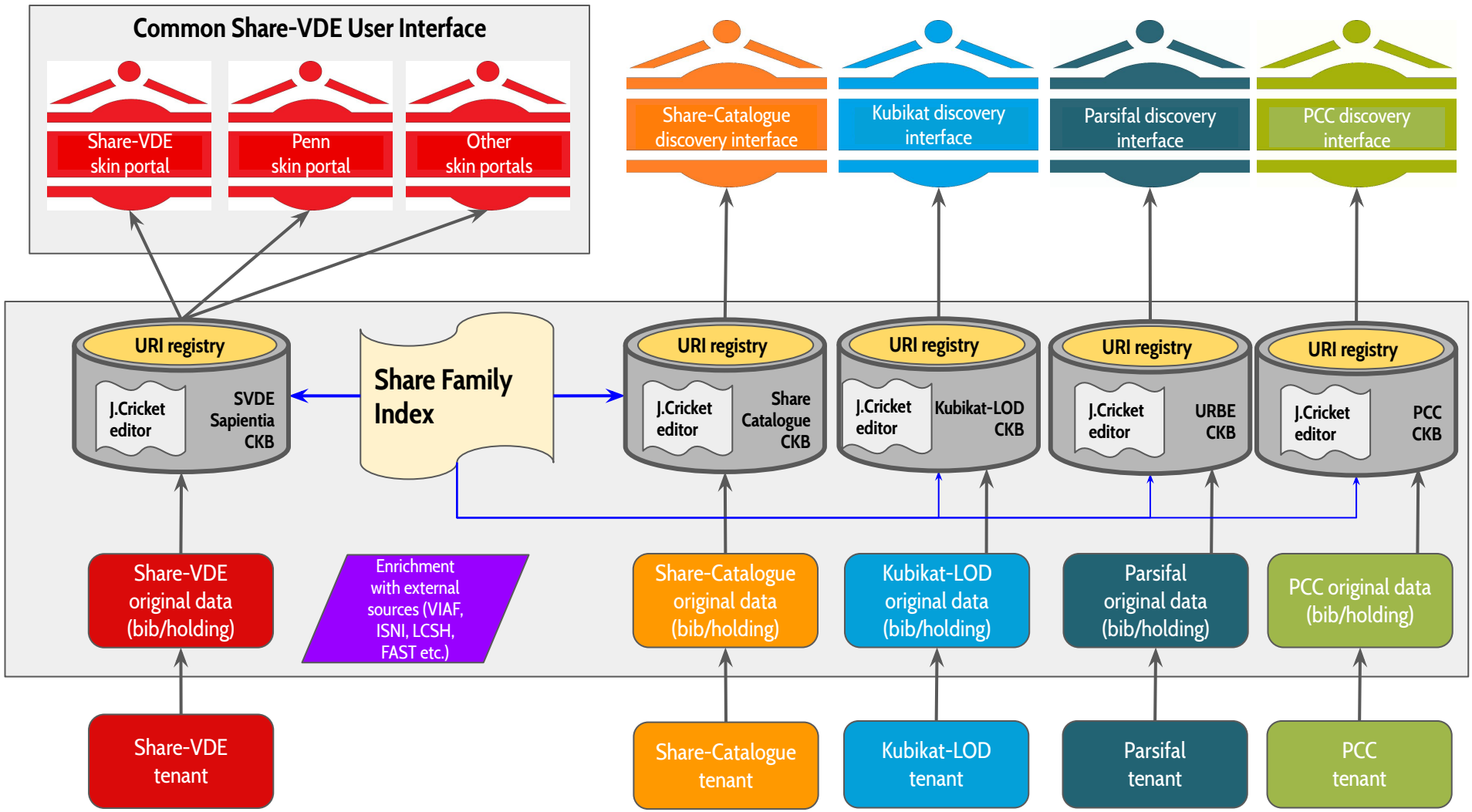
Tenant architecture

Definition of tenant from Wikipedia:

- "The term software multitenancy refers to a software architecture in which a single instance of software runs on a server and serves multiple tenants".
- "A tenant is a group of users who share a common access with specific privileges to the software instance. With a multitenant architecture, a software application is designed to provide every tenant a dedicated share of the instance - including its data, configuration, user management, tenant individual functionality" etc.

Share tenants:

- data of Share member libraries are grouped by similar requirements/characteristics (e.g. the tenant for art libraries —> Share-Art);
- purpose:
  - more efficient data management;
  - technological sustainability: lighter RDF graph of Share libraries' data.


Common Share-VDE User Interface
Share-VDE skin portal
Penn skin portal
Other skin portals
Share-Catalogue discovery interface
Kubikat discovery interface
Parsifal discovery interface
PCC discovery interface
URI registry
J.Cricket editor
SVDE Sapientia CKB
Share Family Index
URI registry
J.Cricket editor
Share Catalogue CKB
URI registry
J.Cricket editor
Kubikat-LOD CKB
URI registry
J.Cricket editor
URBE CKB
URI registry
J.Cricket editor
PCC CKB
Share-VDE original data (bib/holding)
Enrichment with external sources (VIAF, ISNI, LCSH, FAST etc.)
Share-Catalogue original data (bib/holding)
Kubikat-LOD original data (bib/holding)
Parsifal original data (bib/holding)
PCC original data (bib/holding)
Share-VDE tenant
Share-Catalogue tenant
Kubikat-LOD tenant
Parsifal tenant
PCC tenant

The Cluster Knowledge Base and the CKB editor

Sapientia Cluster Knowledge Base:

- Sapientia includes the clusters of entities created in the reconciliation and conversion to linked data of the catalogues of all Share-VDE participating libraries;
- the first release of Sapientia is online and the database is constantly enriched with the new data created by libraries and converted by Share-VDE;
- more than 100 millions of bibliographic records and 24 millions of authority records have been processed;
- Sapientia contains 400 millions triples in its triplestore, and 24 billions quads of converted bibliographic records.

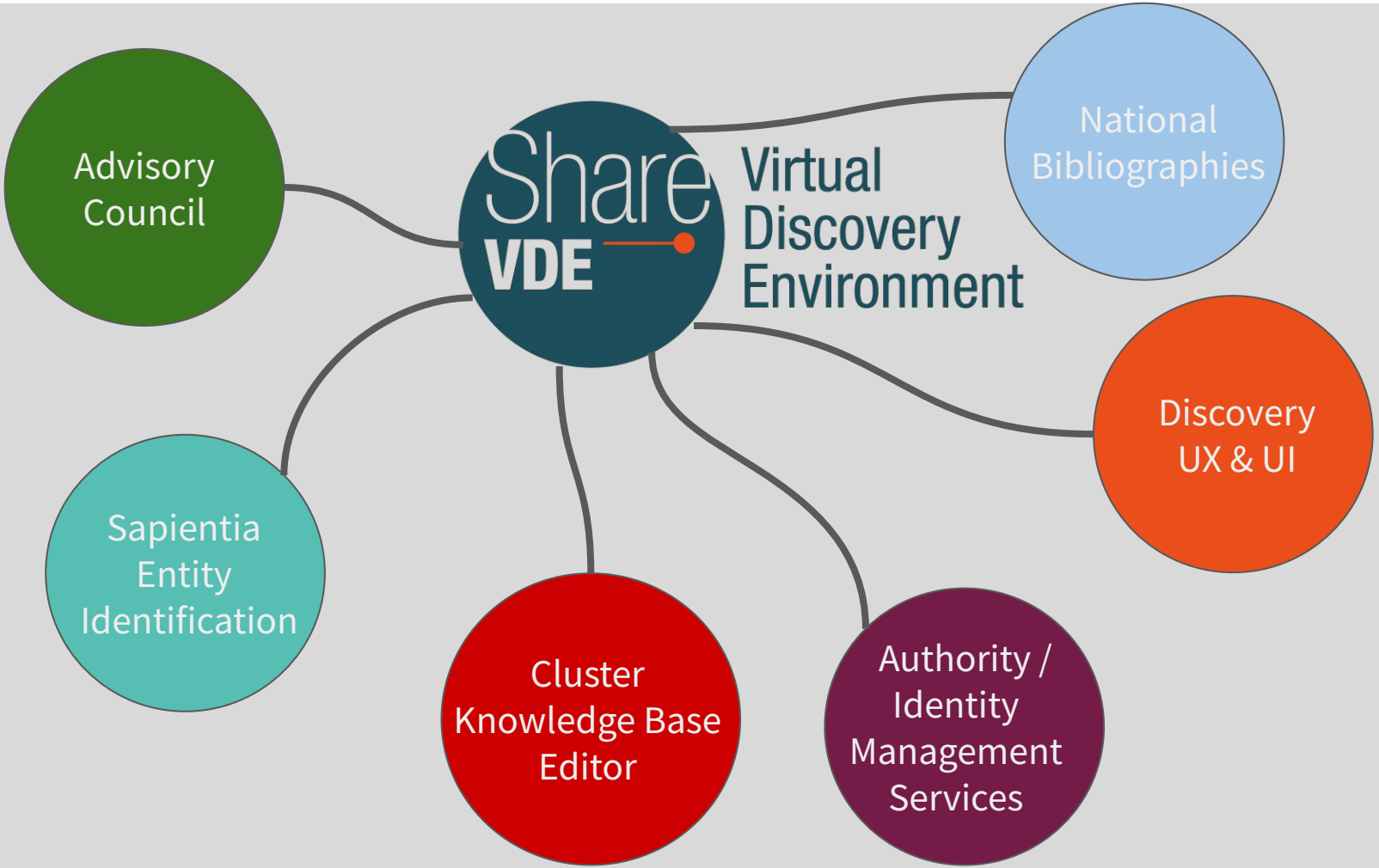
J.Cricket Cluster Knowledge Base editor:

- J.Cricket is the module dedicated to the editing of the SVDE entities, essential for the management of Share-VDE database;
- the initial model of the J.Cricket Cluster Knowledge Base Editor has been analysed from a functional perspective, along with the design of its user interface;
- the result will be a collaborative environment enabling the editing of the entities managed in Share-VDE (works, authors etc.).

Continuous R&D in the Share-VDE community

Active participation

Libraries members of SVDE 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.


Advisory Council
Share VDE
Virtual Discovery Environment
National Bibliographies
Discovery UX & UI
Sapientia Entity Identification
Cluster Knowledge Base Editor
Authority / Identity Management Services

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-VDE Advisory Council and Working Groups:

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

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

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.

Main outcomes: Share-VDE Statement, September 2021:

- edited and approved by the Share-VDE Advisory Council;
- explanation of position in the broader context of Library Linked Open Data;
- Share-VDE has been a reference point in library linked open data since the initial R&D and prototype phase in 2016;
- cooperation: member libraries have contributed their data and are actively involved in the developments of the initiative.

Authority/Identifier Management Services WG

The AIMS WG defines guidelines and best practices for Authority/Identifier management; defines 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.

Main outcomes: new generation of services for the authority control

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

Focus on Authority Services

Services for the authority control that combine automated and manual processes

For record environments:

- validation of MARC bibliographic records (correction of MARC fields and obsolete forms, update of tags and subfields etc.);
- enrichment of MARC fields with SVDE original URIs and URIs from external sources according to ad hoc profiling, including LCNAF, VIAF, ISNI;
    - Casalini Libri is ISNI registration agency creating and assigning ISNI to persons and organisations (e.g. publishers)
- matching processes on external authority files;
- import of authority records;
- reporting features providing complete details of the validation and corrections done to the records.

→ initial release of the authority control features for MARC records delivered to Stanford.

Next step developments: Authority Services fully integrated in the Linked Open Data environments.

Cluster Knowledge Base Editor WG

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

Main outcomes: back-end developments for J.Cricket entity editor started

- definition of use cases;
- design of manual editing features;
- analysis of interaction with Wikidata and ISNI to be incorporated into J.Cricket and authority dataflows that feed the Cluster Knowledge Base (joint work with AIMS WG to design J.Cricket functionalities);
- back-end developments almost completed; respective front-end features will follow.

Sapientia Entity Identification WG

The SEI WG reviews use of entities, identifiers, and associated modelling in the Sapientia CKB; reviews and refine processes for Sapientia entity clustering in Share-VDE and the creation of associated open and stable URI for use in Share-VDE and the library community; reviews MARC to BIBFRAME and BIBFRAME to MARC conversion; engage with the library community to identify and/or develop best practices for use of Sapientia identifiers in BIBFRAME and MARC data.

Main outcomes: svde:Instance as entity under definition

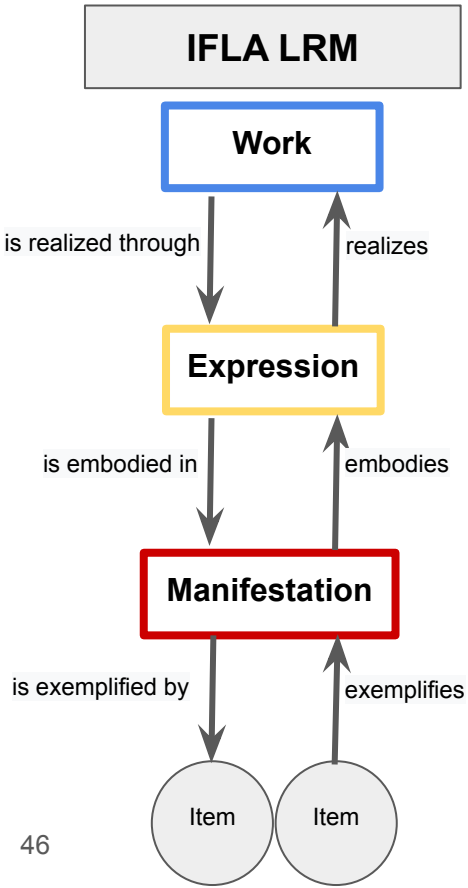
- 4 layers in SVDE entity model: svde:Opus | svde:Work | svde:Instance | svde:Item;
- svde:Opus and svde:Work are types of bf:Work → this ensures interoperability;
- consolidating the definition of svde:Instance entity properties;
- review of clustering and conversion rules.

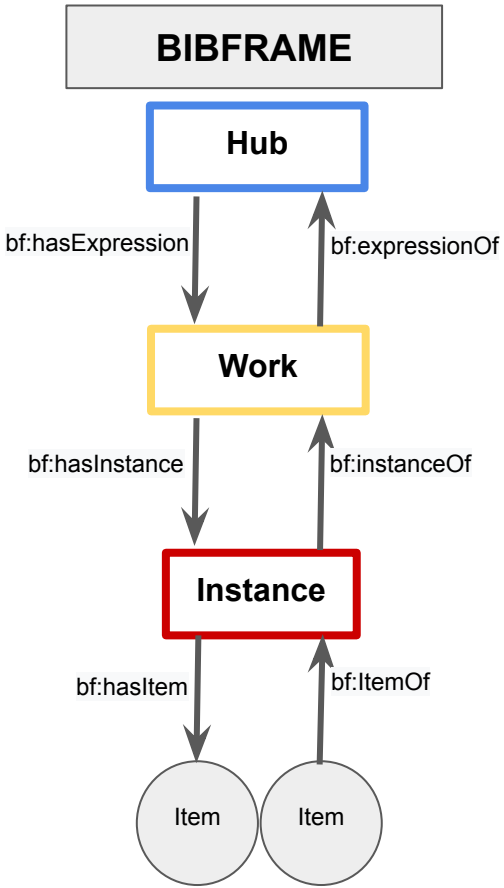
Focus on entity model

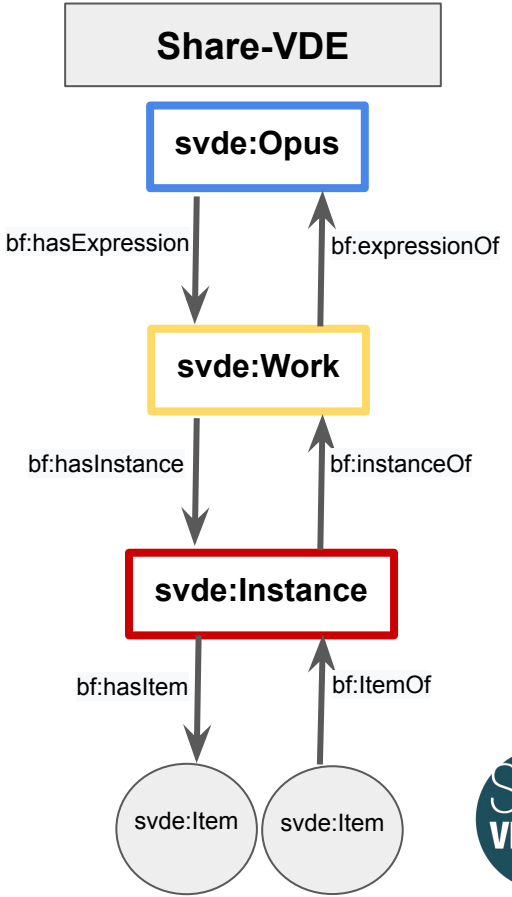
Share-VDE as a BIBFRAME node to put BIBFRAME into practice:

- Share-VDE provides enriched data that is interoperable with other BIBFRAME nodes and with other models;
- the Share-VDE working groups have reviewed algorithms and processed, and expanded the BIBFRAME model to meet real-world needs;
- focus on cooperation also 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.

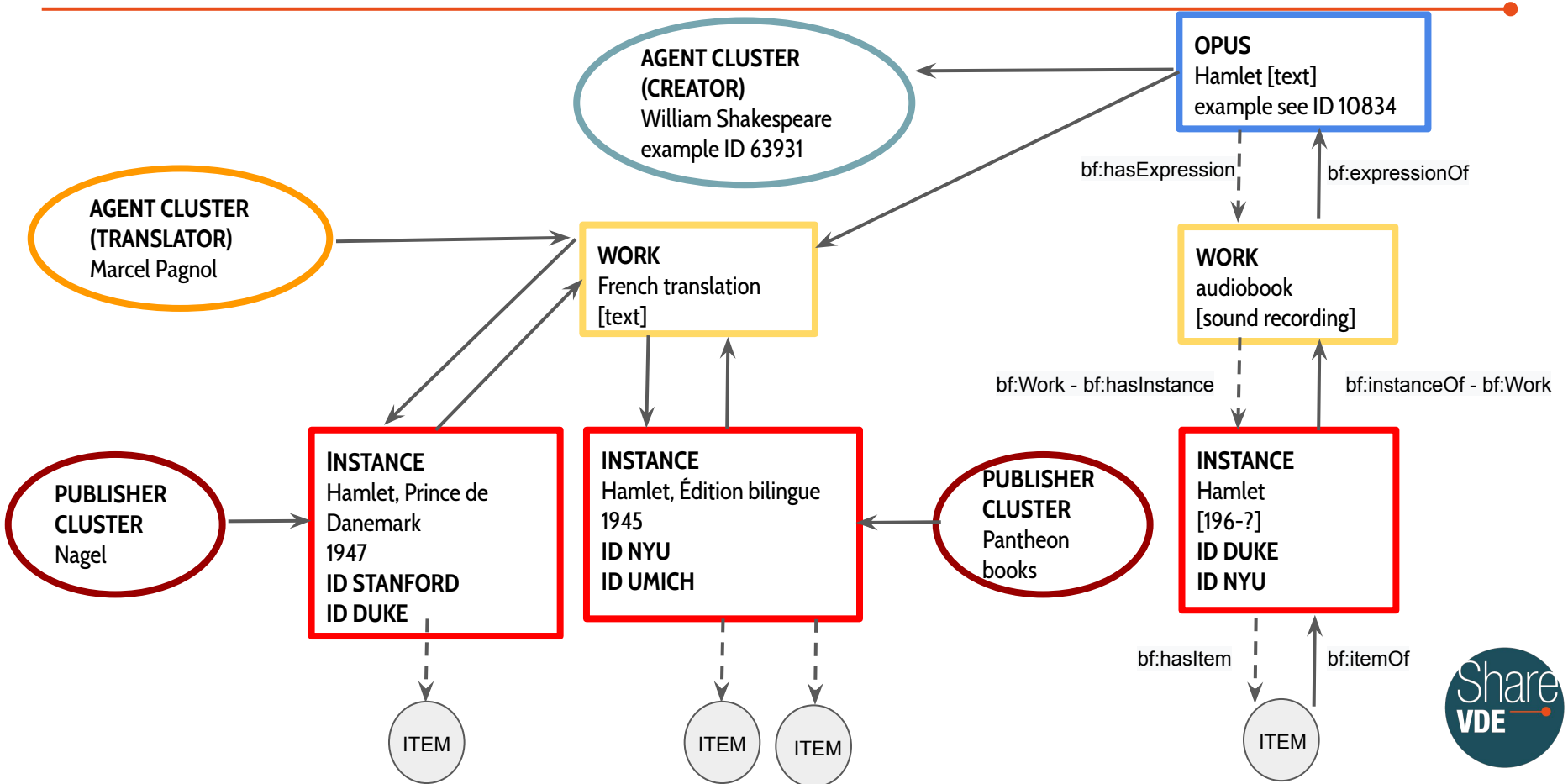
Comparison IFLA-LRM/BIBFRAME/Share-VDE







Share-VDE model (simplified version)



User Experience/User Interface WG

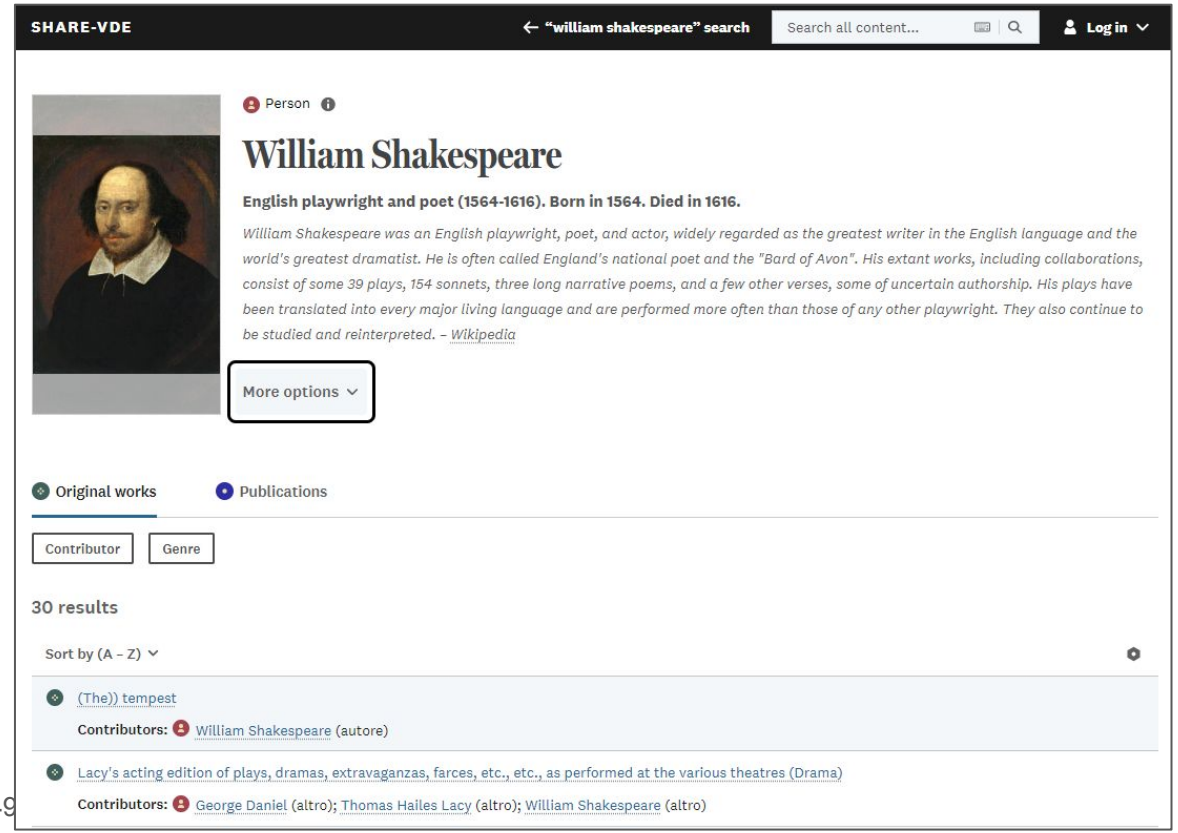
The UX-UI WG has re-designed Share-VDE user interface to respond to both patrons and library staff requirements and expectations. SVDE 2.0 entity discovery interface:

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

Main outcomes: Share-VDE 2.0 Entity Discovery https://svde.org

- new Entity Discovery Portal and new back-end infrastructure for Linked Data Management;
- other Share Family discovery portals supported by the same technology;
- review and enhancements of portal features, in conjunction with the National Bibliographies Working Group.

Focus on Share-VDE 2.0 Entity Discovery



A (much more) complex system with entity-based presentation layer, reflecting BIBFRAME and the ad hoc SVDE extensions

Improved user experience

Back-end infrastructure based on APIs and enhanced with a new version of the [LOD Platform framework] and of the CKB

National bibliographies WG

The National bibliographies WG is dedicated to the practical cooperation among the National Bibliographies, to address the needs of National Libraries and institutions that hold National Bibliographies in the framework of a shared entity discovery environment such as the Share Family of initiatives.

Main updates:

- involvement of SVDE / Share Family members and external institutions;
- IFLA Bibliographic Section liaison (Maud Henry from KBR - Royal Library of Belgium);
- discussion around topics of interest for an ad hoc tenant hosting national bibliographies;
- main tenant of the shared discovery environment for national bibliographies: https://natbib-lod.org/
- analysis of use cases for specific features.

National bibliographies WG - latest outcomes

- Study and address the needs of institutions that hold National Bibliographies WRT linked data platforms;
- goal: build a shared discovery environment hosting LOD National bibliographies dataset;
- British Library is early adopter: the British National Bibliography will be the first national bibliography tenant for the Share-VDE virtual discovery environment
  - **National Bibliographies tenant** - https://natbib-lod.org
  - with the skin for the British National Bibliography https://bl.natbib-lod.org (*Note: the skin for the British National Bibliography is a preview of a beta site)*
- the group is currently analysing use cases for ad hoc features of the shared National Bibliographies portal;
- review and enhancements of portal features, in conjunction with the SVDE UX-UI Working Group.

Share-VDE approach

Share-VDE pillars

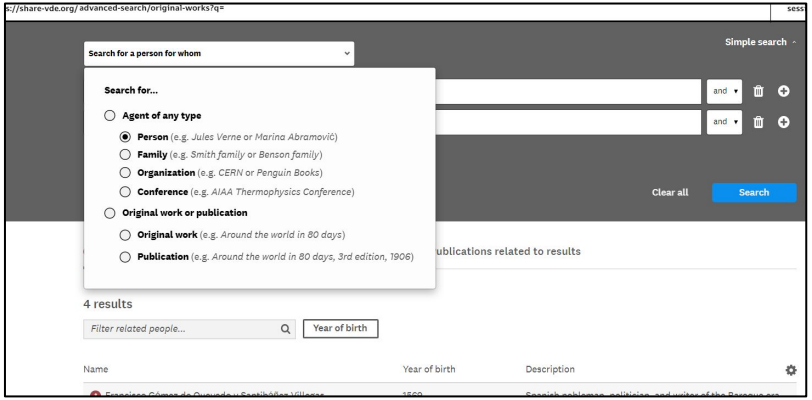
Integration

Autonomy

Community engagement

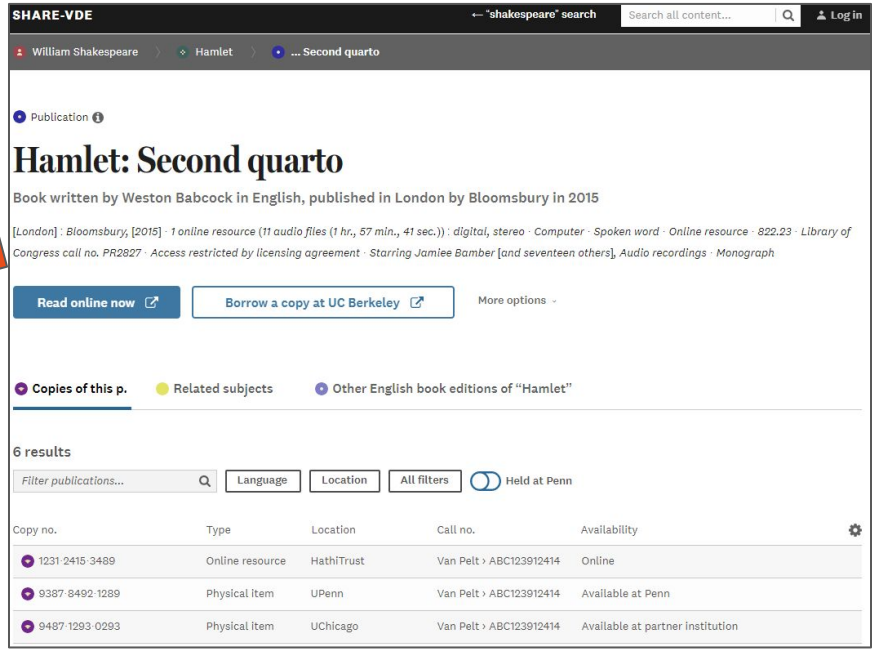
Shared vision

Integration - the end user perspective

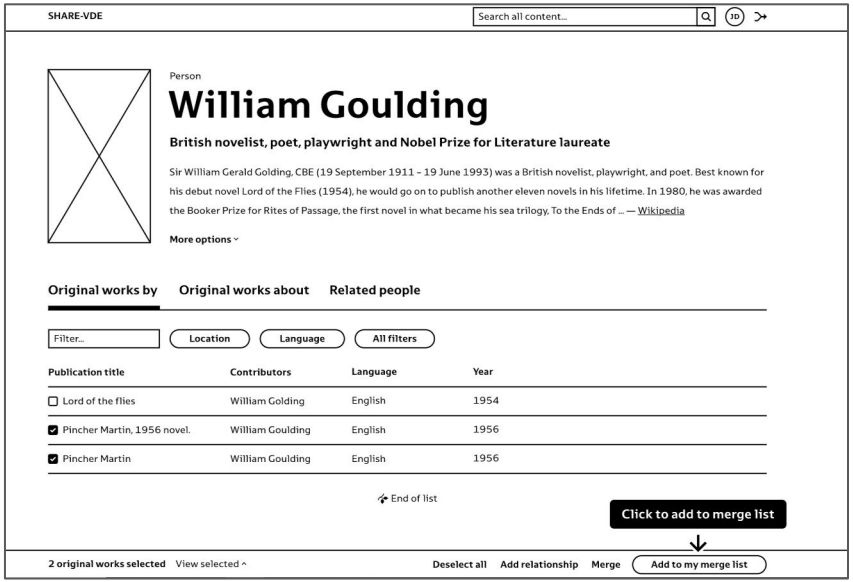


Integration is the core of the SVDE platform that aggregates data from multiple libraries to form clusters of entities.

From the end user perspective: the discovery platform has to accurately represent the entity model, but also provide an intuitive experience, seamless navigation and rich resources to the end users. A new, advanced discovery interface is being developed to harness the potential of linked data.



Integration - J.Cricket: the professional perspective

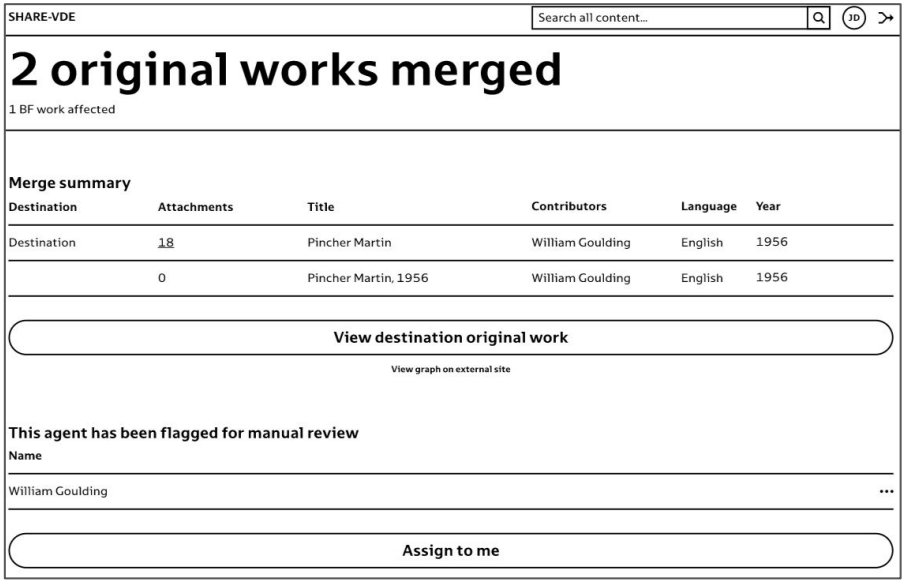


SVDE is evolving from a discovery platform that converts MARC data of libraries in Linked Open Data to an interactive authoritative source providing real services for libraries. This transition is happening through the editor named J. Cricket, that is the new application dedicated to the editing of SVDE data in a collaborative environment.

Integration - J.Cricket: the professional perspective

The editing tool J.Cricket will allow for editing the SVDE Cluster Knowledge Base, Sapientia, enabling several actions on the clusters of entities saved in SVDE database, including creation, modification, merge of clusters of works, of agents etc.

J.Cricket will extend authority capabilities through the integration with external data sources such as Wikidata and ISNI.



Integration - Wikidata

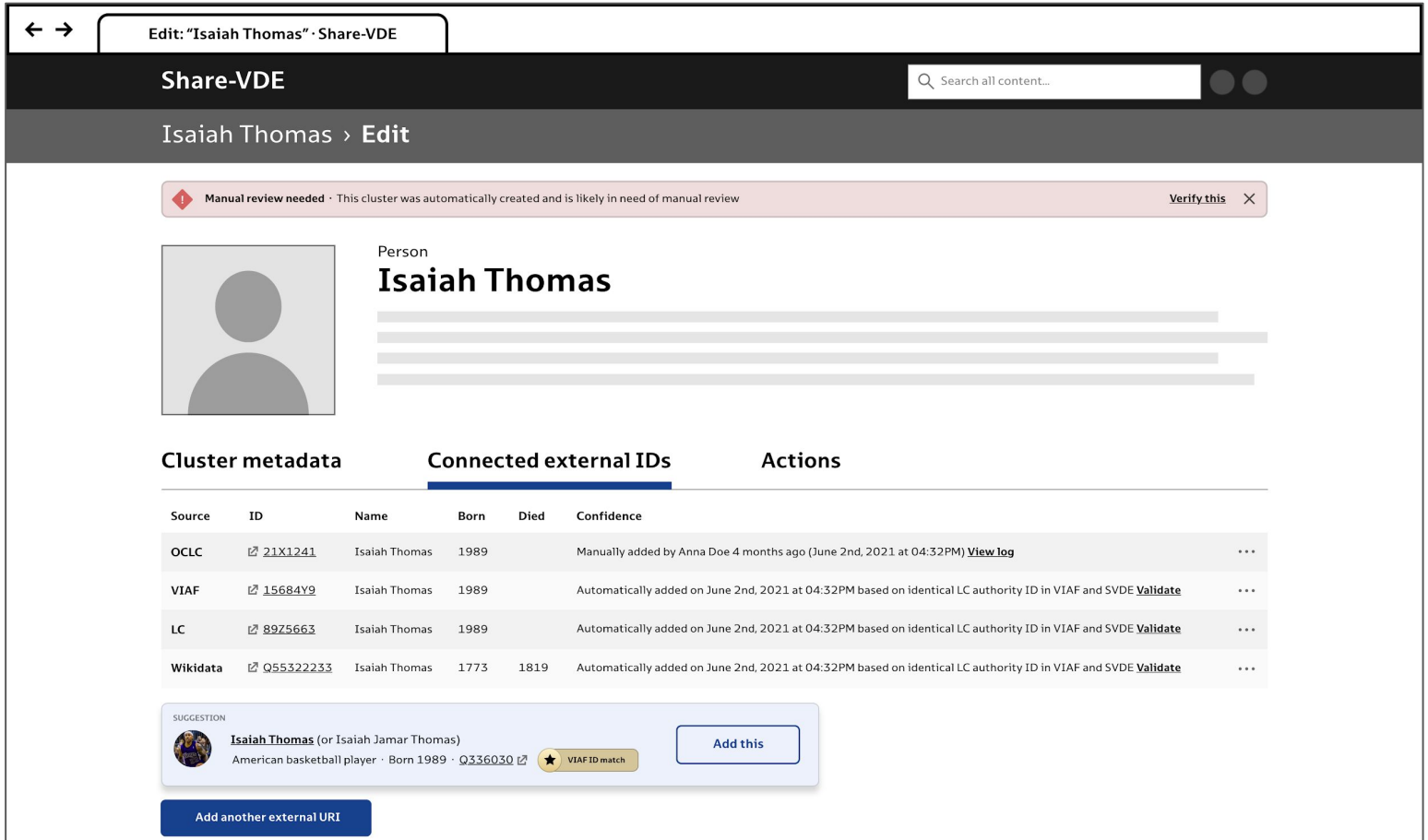
Wikidata is increasingly authoritative and is used in the library community as a source for entity identification (SVDE property on Wikidata Share-VDE author ID)

Query the source and enrich SVDE data with Wikidata entities information and vice versa → connection with Casalini participation in the PCC Wikidata pilot

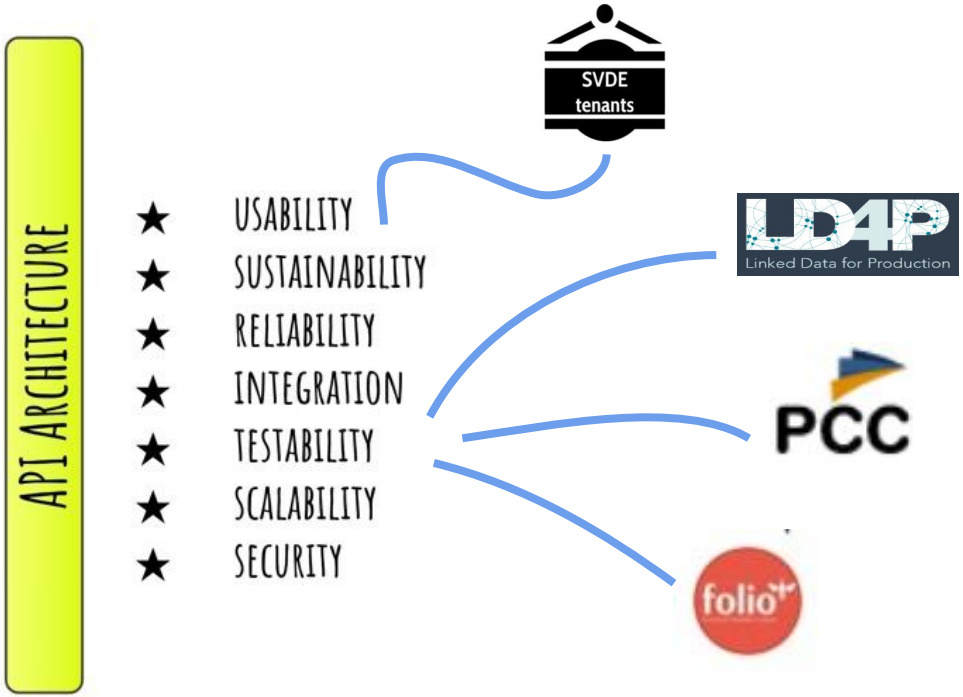
Ad hoc SVDE working group is studying the use cases for interaction (e.g. starting points for the analysis are API:Main page + Wikibase/API, and other documentation)

Major challenge: alignment between Wikidata and SVDE entities

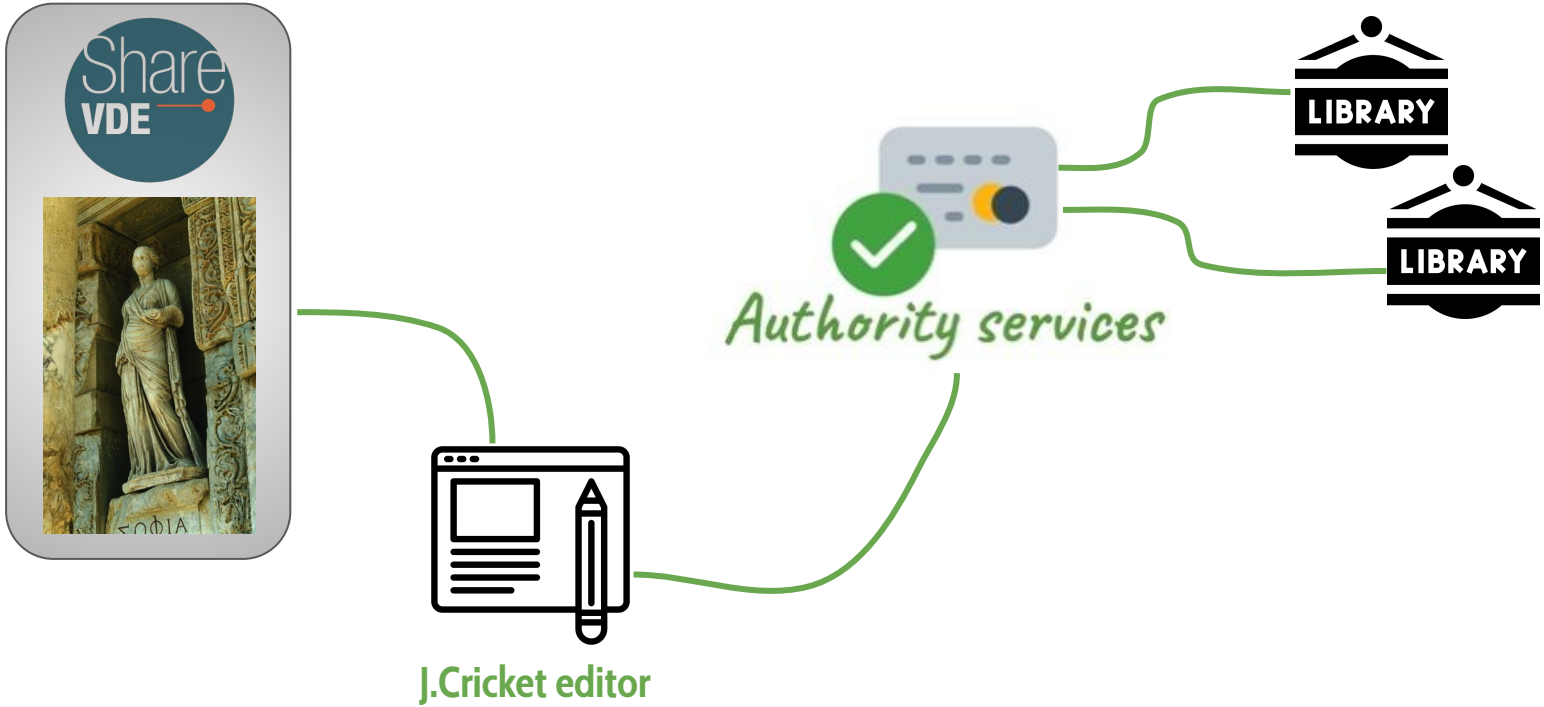
How J.Cricket interacts with Wikidata



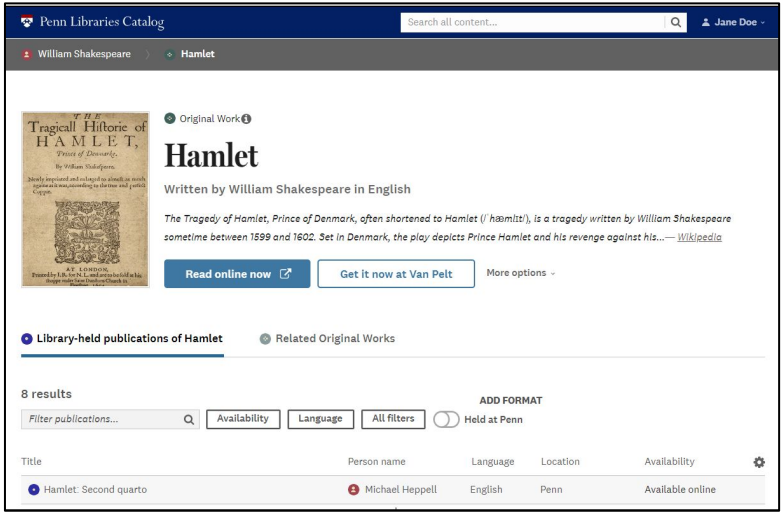
Integration - the technological perspective



Integration - new Authority services generation



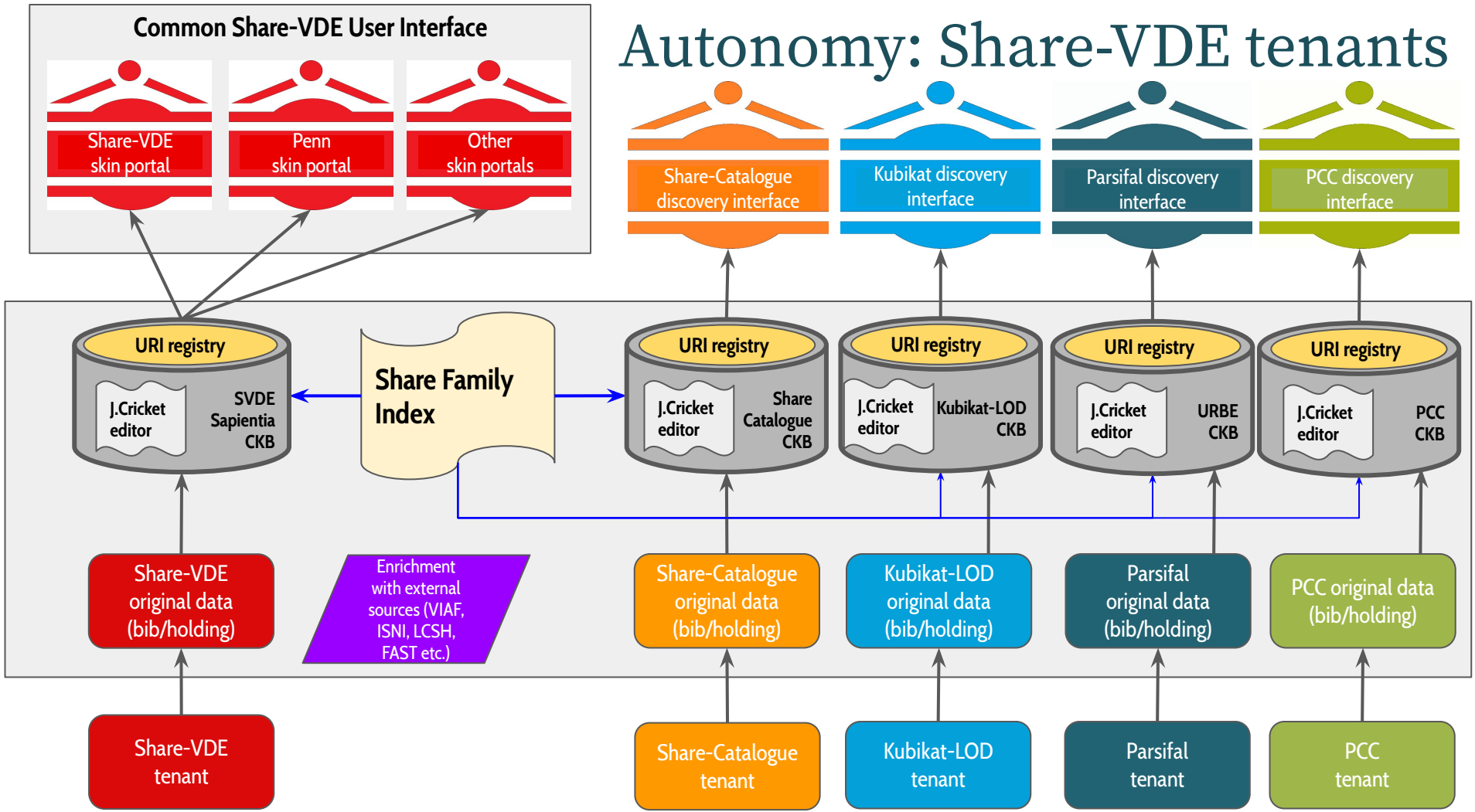
Autonomy - the end user perspective



SVDE localisation for the University of Pennsylvania

Kubikat-LOD project platform

Autonomy: Share-VDE tenants

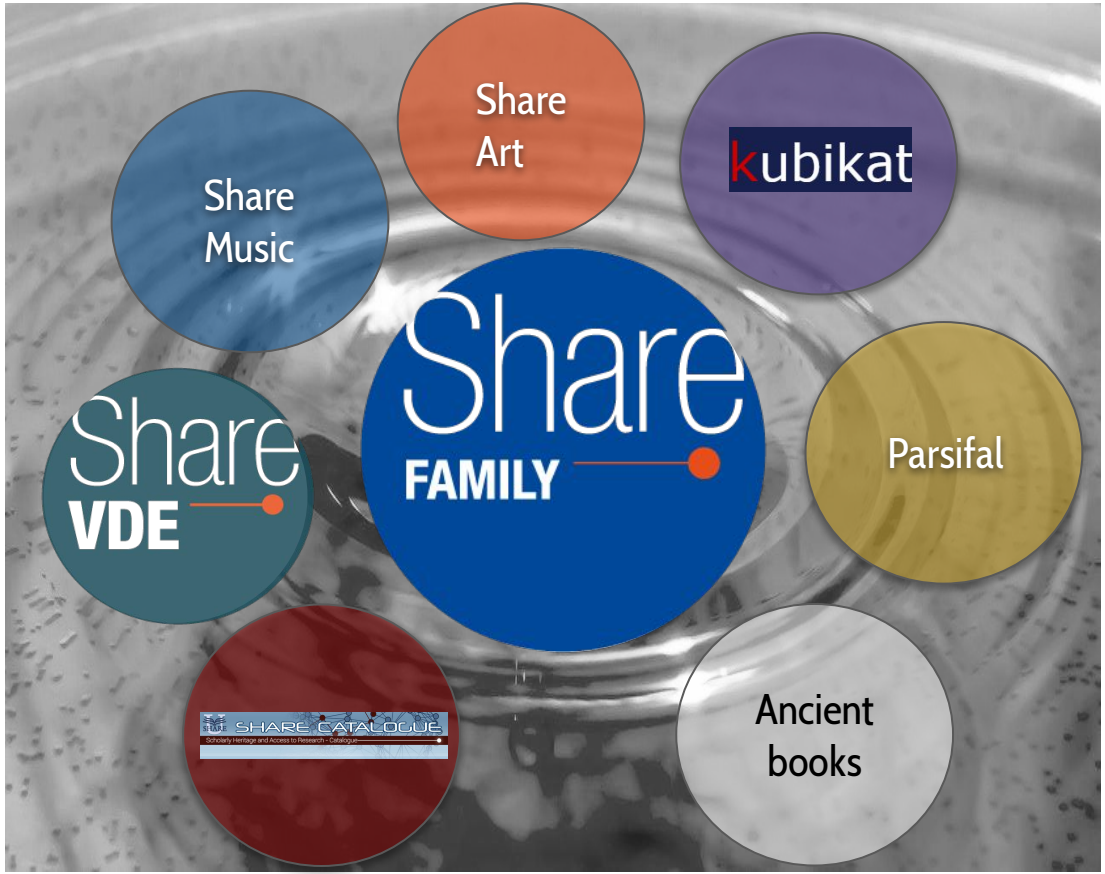


Community engagement: library community

Extended community: collaboration with heterogeneous initiatives and institutions in the library domain

Scientific value: sharing of data and services in different technological environments and diverse bibliographical and cultural context

Community engagement: SVDE sister projects



Homogeneous community: collaboration with projects and institutions applying the Share Family principles and technologies

Scientific value: shared vision whereby each initiative contributes with tools and practices that benefit everyone

Community engagement: World Wide Web

Mixed community: cross-domain cooperation across the Web community

Scientific value: same solutions serve scopes of different communities, data reuse

Share-VDE latest achievements

The Share-VDE development team expanded

The SVDE IT team has been restructured and enlarged in order to cope with the increasing complexity of the developments, meet the needs of the community and interconnect with several projects. Five main development teams:

Infrastructure & Architecture

SVDE Backend (Database and Indexing, APIs development)

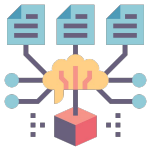
SVDE Frontend (Frontend components, APIs development, SVDE portal and J.Cricket search functions)

APIs for Penn's localisation and other skin portals

J.Cricket Editing functions

Latest achievements

The design of the UI has been completed and enhanced by the activities around the J.Cricket Cluster Knowledge Base editor, the requirements for the University of Pennsylvania localisation and for the Kubikat-LOD parallel project



Backend infrastructure rearranged to respond to many layers and complex search logic → general revision of the development plans

The CKB is being enhanced with new attributes and new controlled vocabularies as a result of the UI design and the revision of the backend infrastructure

Tenant modelling: skins and tenant architecture to assure benefits from cooperation without forgetting the independence of the libraries (e.g. National Bibliography and Kubikat tenants)

Latest achievements

Design of the J.Cricket Cluster Knowledge Base Editor with the CKB Editor working group

Analysis of authority services with the Authority Identifier Management Services working group and initial release of the authority control features delivered to Stanford

Analysis for the integration with Wikidata and ISNI in AIMS and CKB working groups

Revision of the entity model with the Sapientia Entity Identification working group:

- svde:Opus approved
- 4 layers in SVDE entity model: svde:Opus | svde:Work | svde:Instance | svde:Item
- svde:Opus and svde:Work are types of bf:Work → this ensures interoperability
- work on svde:Instance implementation

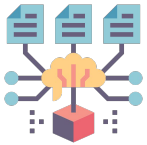
Next steps: developing interconnections

LD4P and the PCC

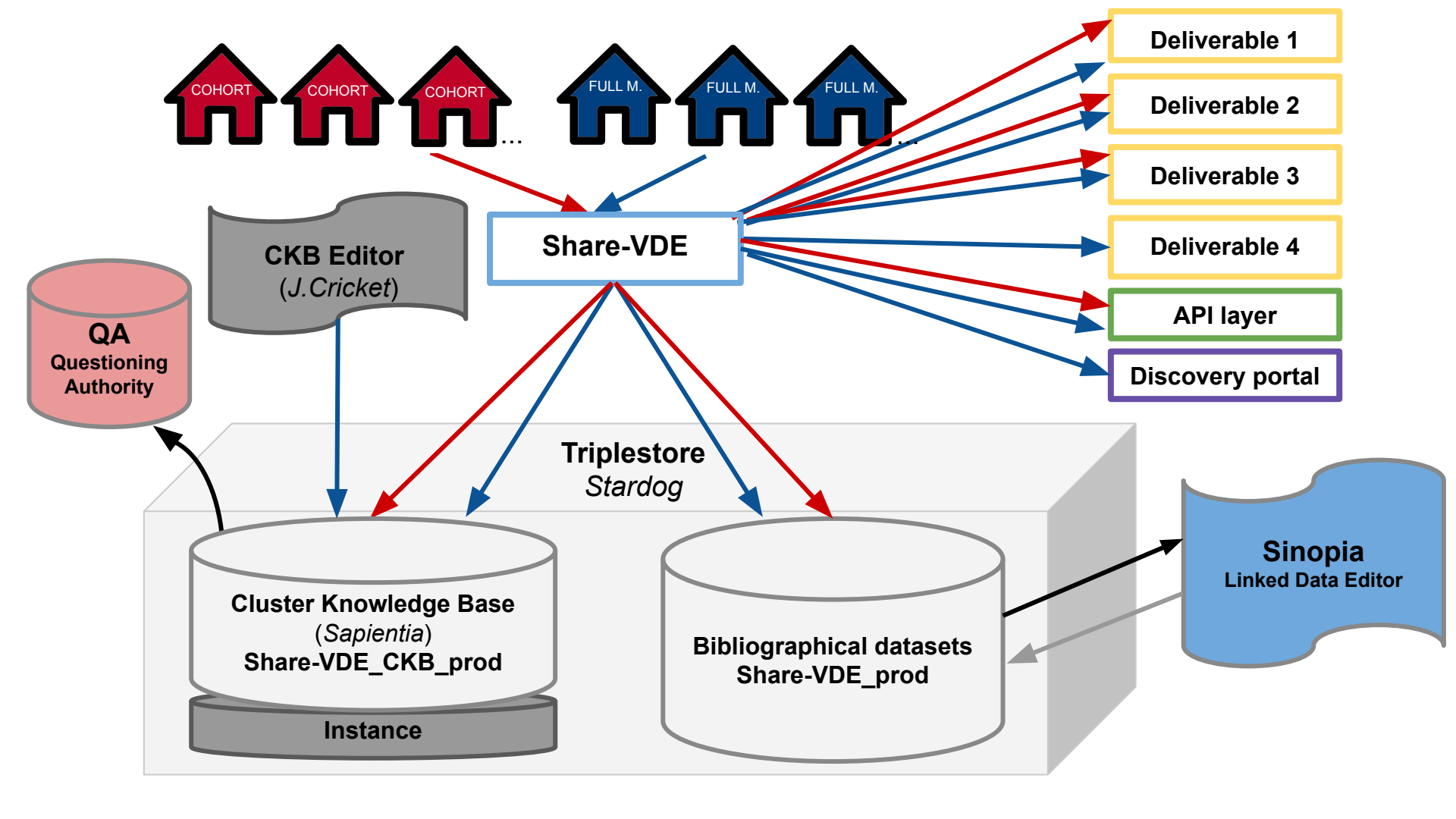
MARC records converted in linked data by SVDE are delivered to Sinopia cataloguing module

In LD4P3 an API based two-ways flow Sinopia-SVDE will be put in place to optimize interaction and close the loop between the systems

Conversion and housing of PCC data in SVDE in a dedicated data pool



PCC data will be in an autonomous tenant with a dedicated namespace for PCC URIs and enrichment from other sources (URIs from SVDE, LC, GNF, VIAF, Wikidata etc.)


COHORT
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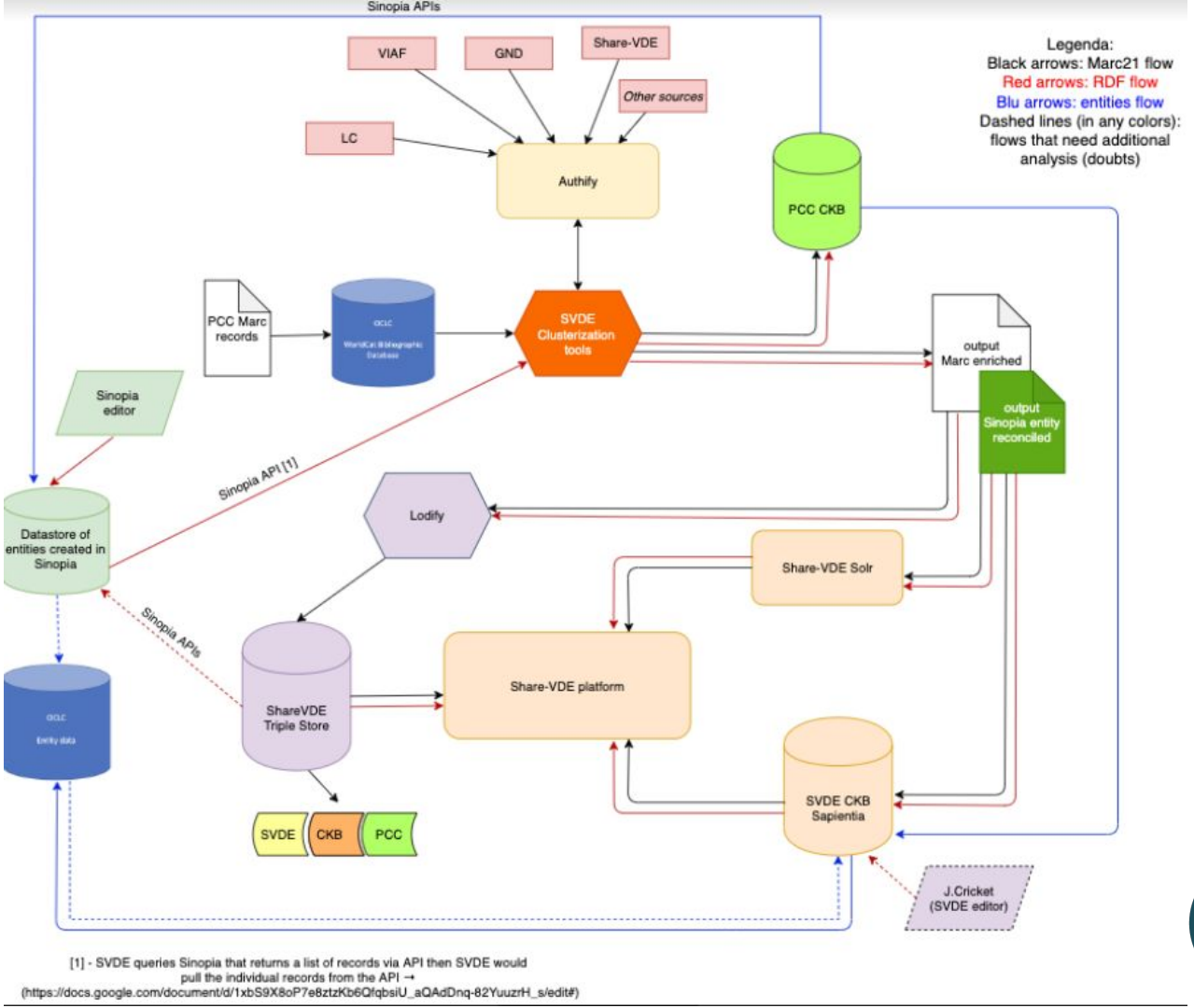
Deliverable 1
Deliverable 2
Deliverable 3
Deliverable 4
API layer
Discovery portal
CKB Editor
(J.Cricket)
Share-VDE
QA
Questioning
Authority
Triplestore
Stardog
Cluster Knowledge Base
(Sapientia)
Share-VDE_CKB_prod
Instance
Bibliographical datasets
Share-VDE_prod
Sinopia
Linked Data Editor

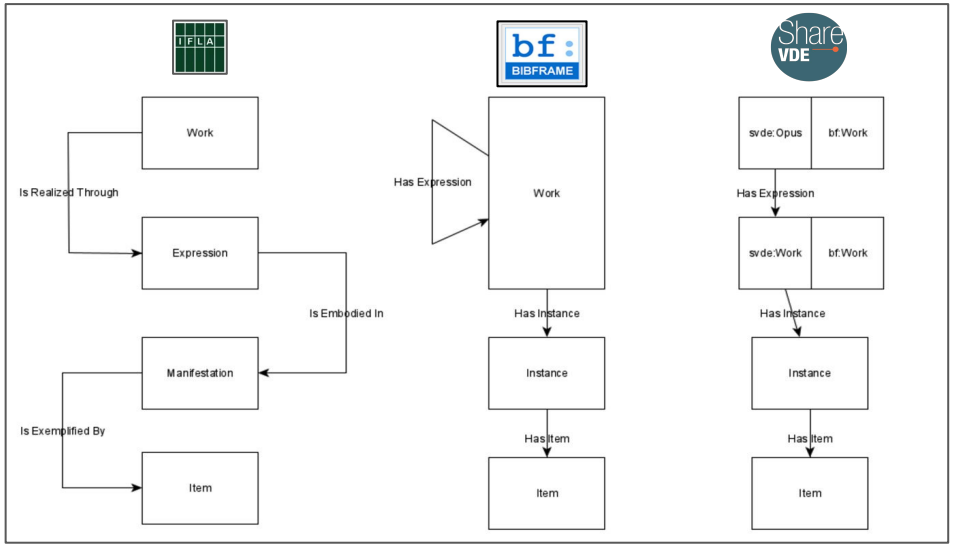
Participation in LD4P3: towards closing the loop

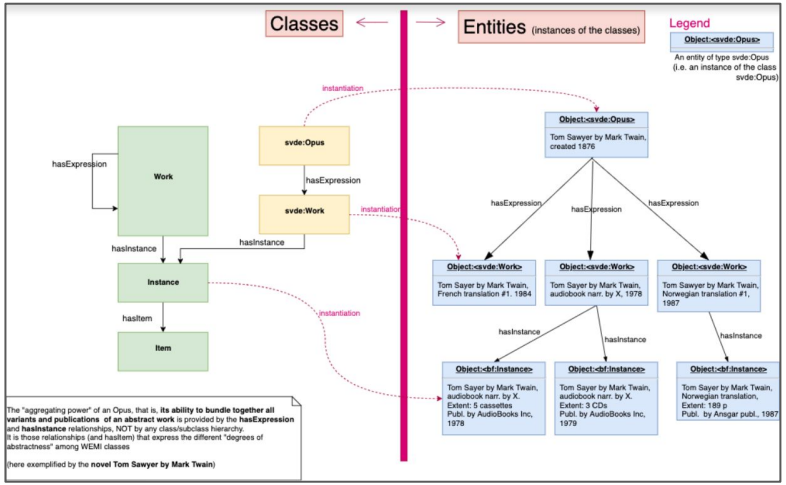
[See the diagram online here]



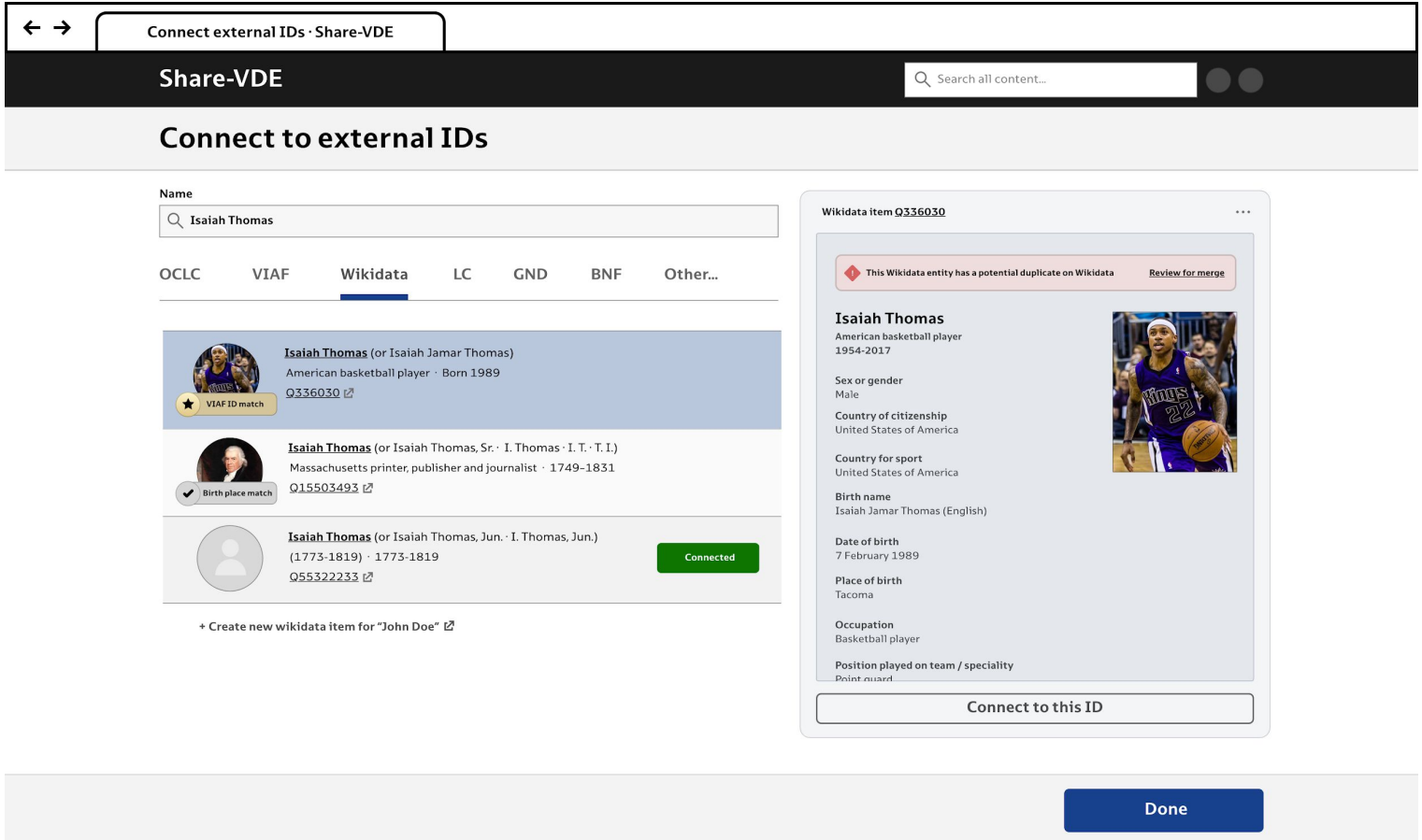
Participation in LD4P3: the challenge of data models interoperability

See the [SVDE entity model compared to BF and LRM] and an [example of application of the model]

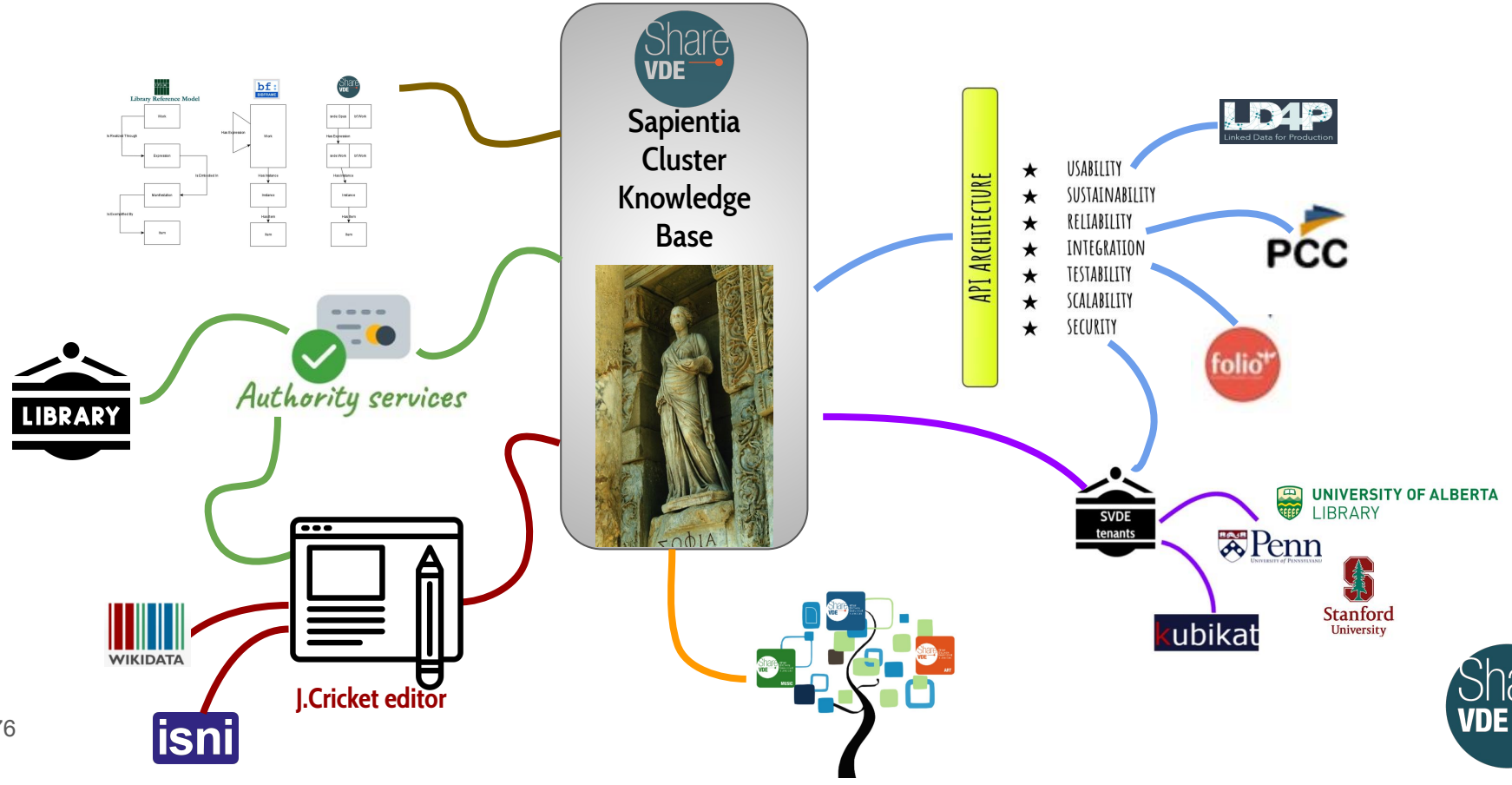




Integration of Wikidata IDs in SVDE with J.Cricket



Towards the Share-VDE Sapientia CKB ecosystem



What comes next

- API layers for ILS, external applications and other LD systems (such as BF editors and triplestores);
- Authority Management and services;
- Reporting to serve library needs;
- Internationalization of the Share-VDE environment in relationship with new projects;
- Strategies to make the Share-VDE environment a trusted source of identifiers and to facilitate interaction with international initiatives as Wikidata, VIAF, ISNI etc.
- Application of further Wikidata entity properties.

November 2022

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