



# Share-VDE

Share Virtual Discovery Environment in Linked Data

<https://share-vde.org>  
[info@share-vde.org](mailto:info@share-vde.org)  
<https://wiki.share-vde.org/>

# The initiative and its goals

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# From pilot project...

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## Phase 1

October 2016 – January 2017

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

## Phase 2

March 2017 – May 2018

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

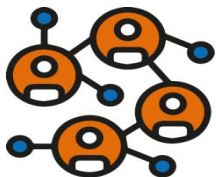
## Phase 3

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

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**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 Sapiientia Cluster Knowledge Base**, the common authoritative source of clusters accessible in RDF, open to the entire Share-VDE community.



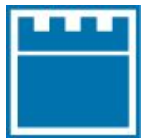
# ...in a cooperative environment

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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

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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

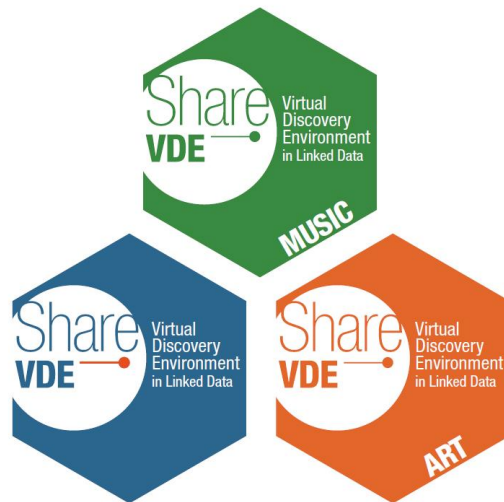
Batch/automated data dissemination to libraries

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



# The Share family

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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.

## 3



# The Share family participating institutions

## Share-VDE Full members

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

## National Libraries

Library of Congress  
National Library of Finland  
National Library of Norway  
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

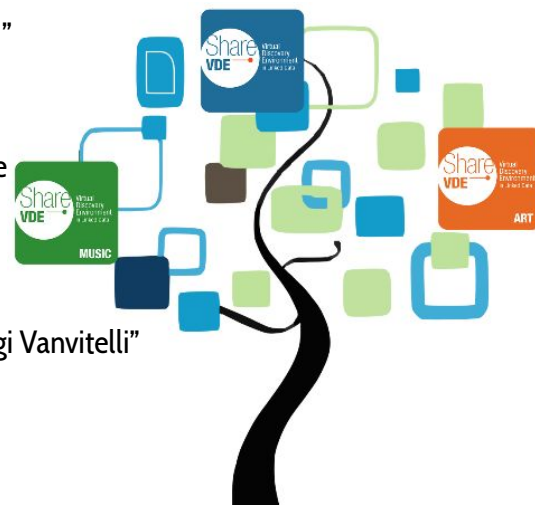
Università degli Studi di Napoli "Federico II"  
Università degli Studi della Basilicata  
Università degli Studi di Napoli L'Orientale  
Università degli Studi di Napoli Parthenope  
Università del Salento  
Università degli Studi di Salerno  
Università degli Studi del Sannio RCost  
Università degli 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](https://wiki.share-vde.org/wiki/ShareVDE:Main_Page/SVDE_institutions)



# Why Share-VDE

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

The platform [www.share-vde.org](http://www.share-vde.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

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**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

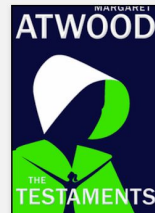
Sequel to: "The Handmaid's tale." [Search catalog for text "The Handmaid's tale" →](#)

### 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

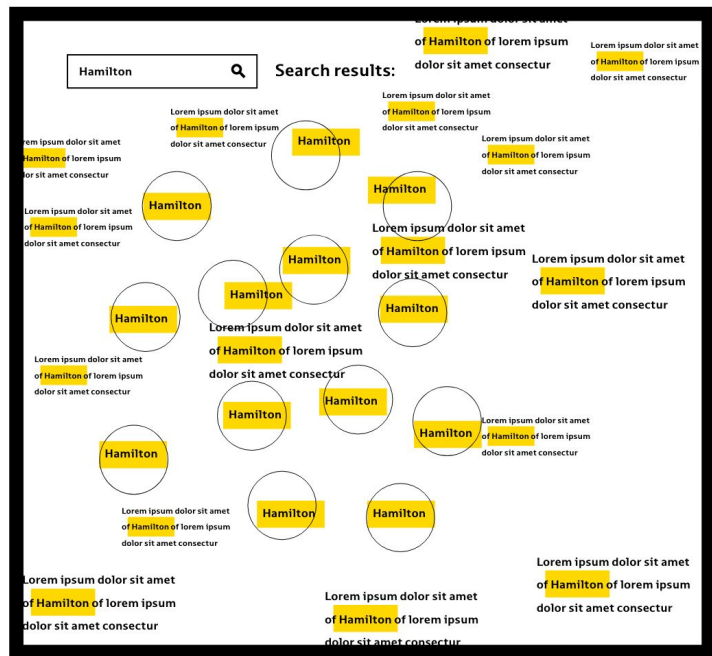
### Experience with linked data.

Search for known entities → Explore by moving from entity to entity directly.

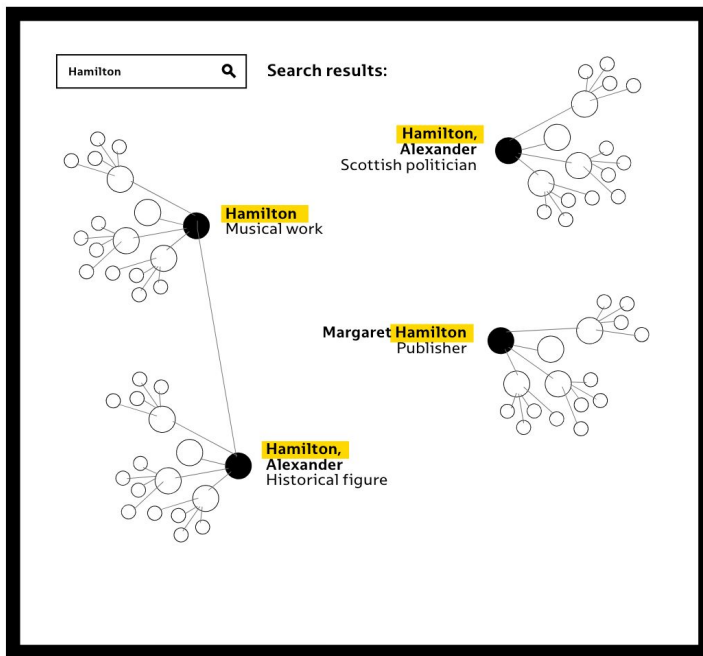


# Linked data means interconnections

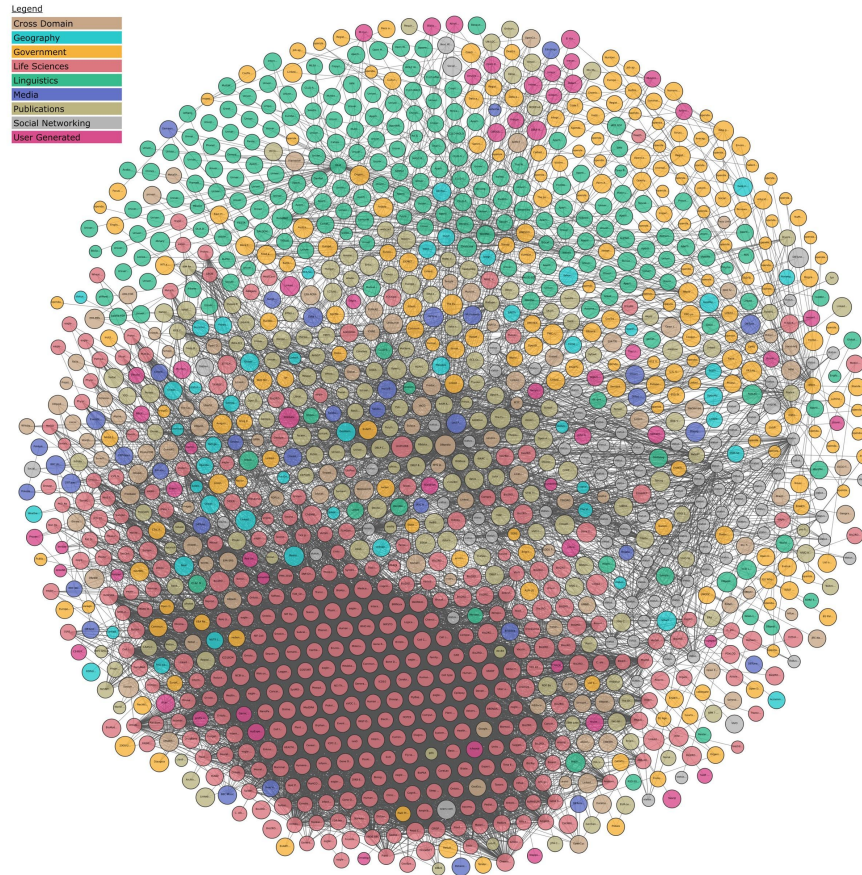
## Without linked data



## With linked data



# A network of interconnected data

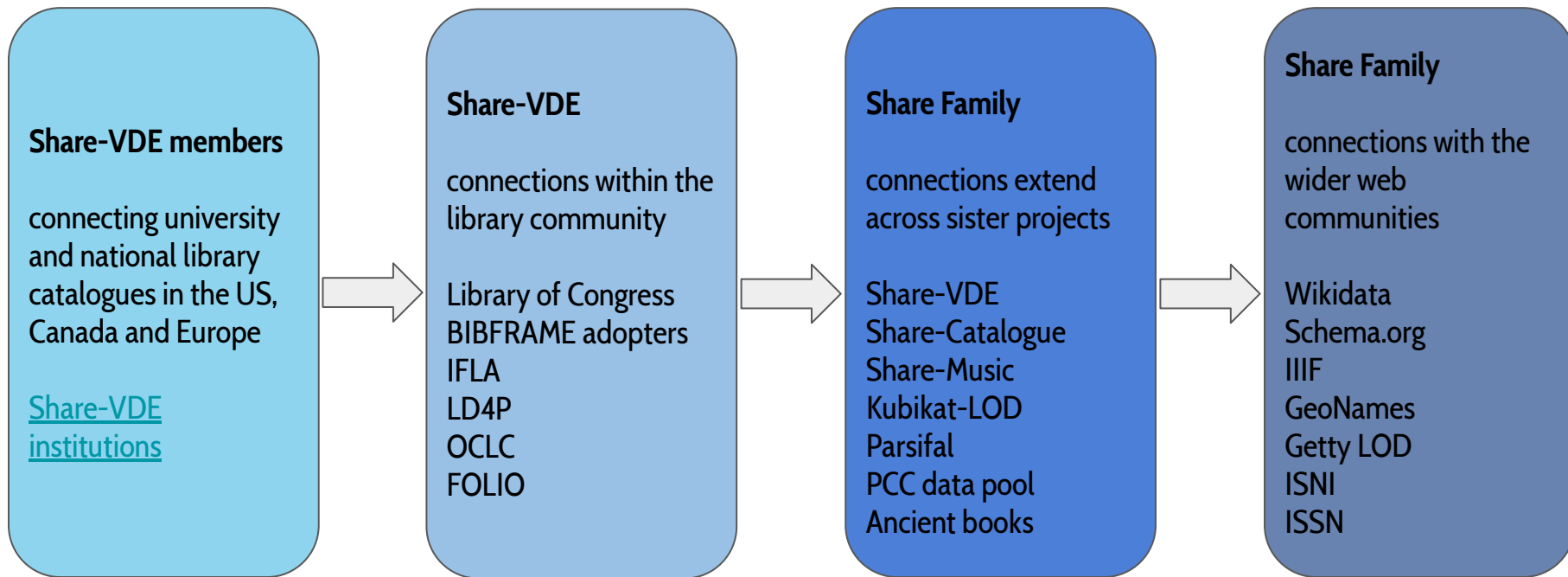


# A network of interconnected libraries

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# The diffusion in the worldwide communities



# Useful materials

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The main [dissemination resources](#) about Share-VDE and the Share family:

- [Share-VDE brochure](#)
- [Video introducing Share-VDE](#)
- Document describing the [LOD Platform](#), that is the technology underlying the Share system
- Short overview of Share-VDE and executive summary on linked data in multiple languages
  - [Share-VDE: Short overview](#) and [Linked data and SVDE: Executive summary](#)
  - [Share-VDE: Brève perspective](#) and [Linked Data et SVDE: Synthèse Opérative](#)
  - [Share-VDE: Überblick](#) and [Linked Data und SVDE Zusammenfassung](#)
  - [Share-VDE: Panorama](#) and [Linked Data y SVDE: Síntesis operativa](#)
  - [Share-VDE: panoramica](#) and [Linked Data e SVDE: sintesi e contesto](#)

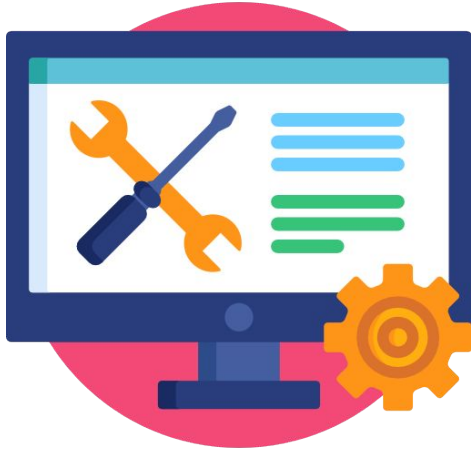
# The Share core technology

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# The LOD platform

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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

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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.



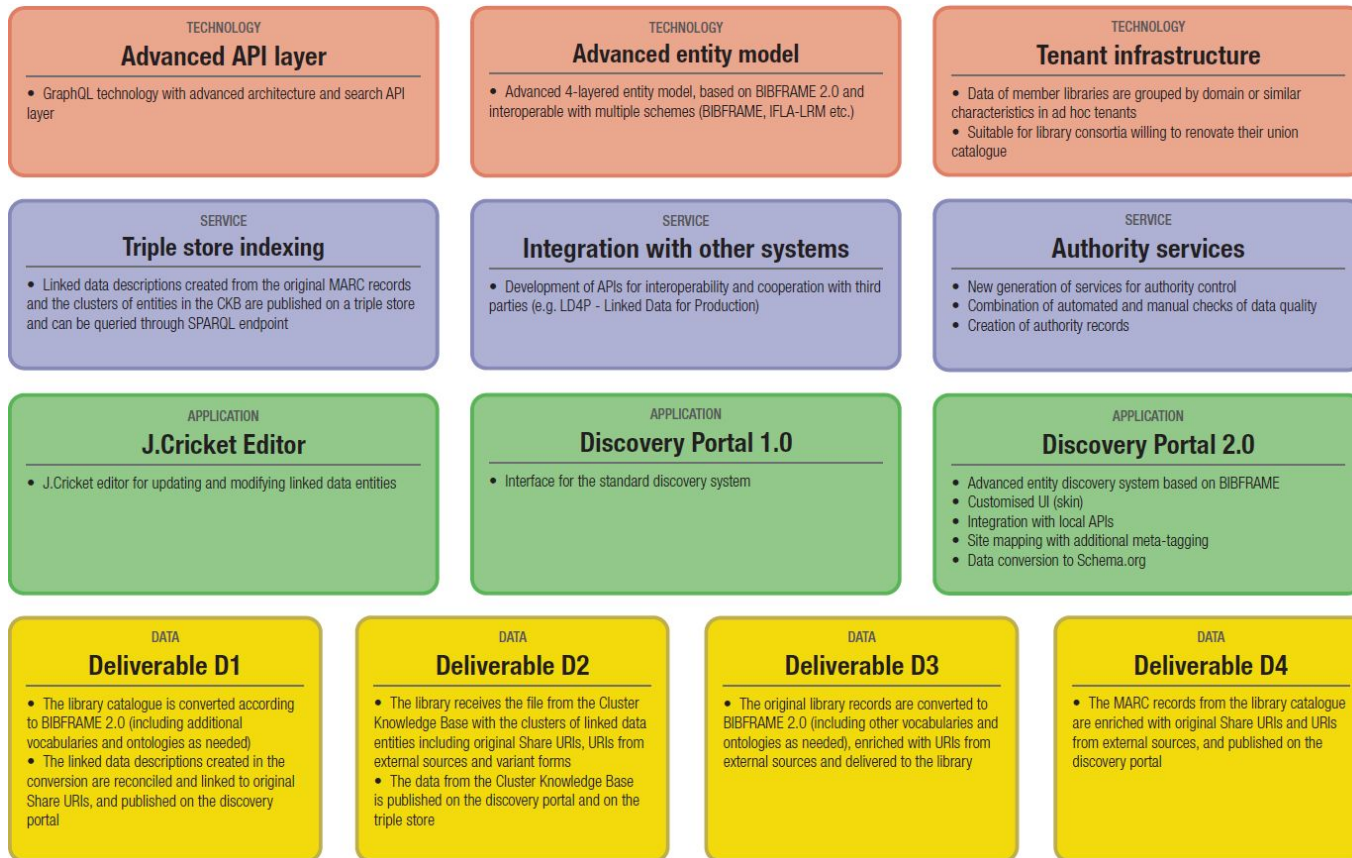
# The LOD platform modules

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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-VDE in 5 steps

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Share-VDE is an **initiative** lead by the **community of participating libraries**, with the aim of setting up linked data based workflows.

Share-VDE makes available:

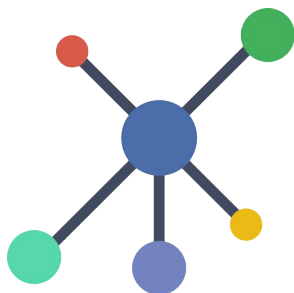
1. **enrichment** of original MARC data and of the records converted to linked data with identifiers from external sources (e.g. ISNI, VIAF) and with original Share-VDE identifiers;
2. **reconciliation and clusterization** of entities created from library data;
3. **conversion** of library catalogues from MARC to linked data;
4. **delivery of converted and enriched data** to libraries for reuse in their systems;
5. **publication** of linked data resources on the discovery platform [www.share-vde.org](http://www.share-vde.org).

# Enrichment, reconciliation and clusterization



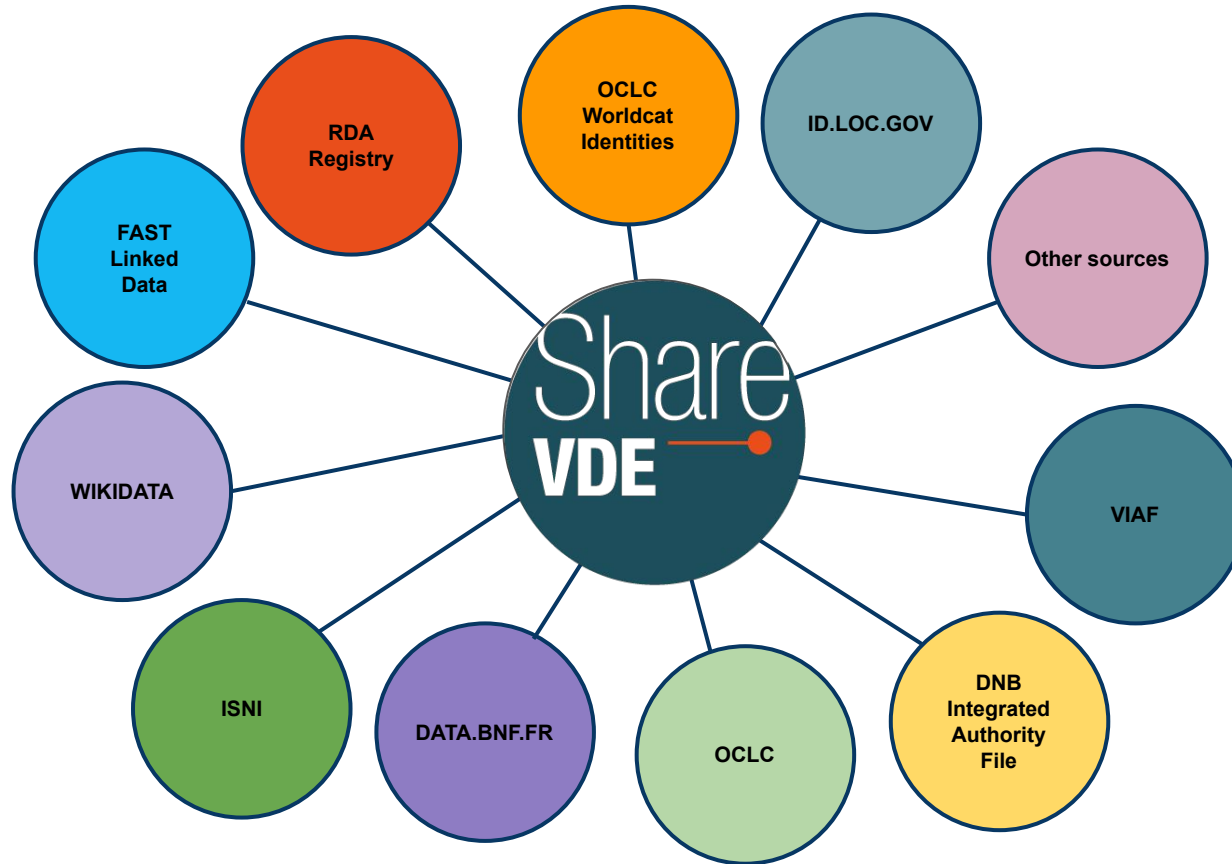
**Enrichment:** SVDE adds to the original MARC records of member libraries the entity **identifiers** (authors, works, subjects etc.) from **external data sources** (ISNI, Wikidata etc.) to facilitate the reuse of records in linked data. Also the data resulting from the conversion in BIBFRAME is enriched 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**.

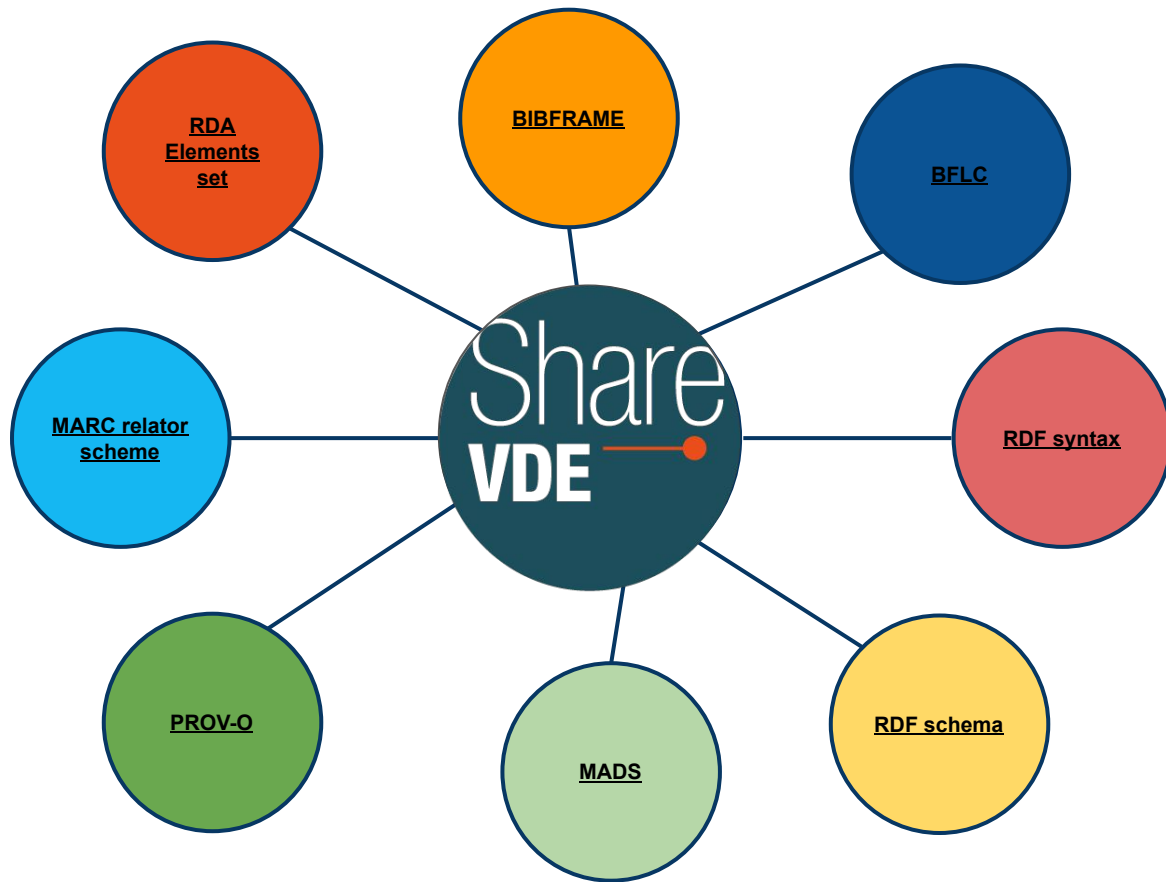


**Reconciliation and clusterization:** SVDE reconciles data from MARC records in order to identify **groups of entities (clusters)**. Example: starting from a set of library records describing the same book, SVDE creates a single cluster with its own original SVDE URI that groups together the manifestations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

# Some of the external sources

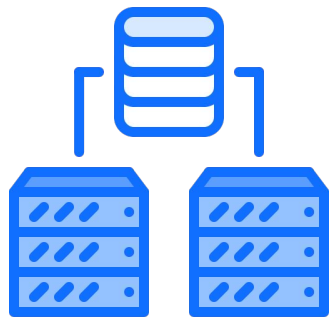


# The main Share-VDE ontologies



# Conversion

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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.

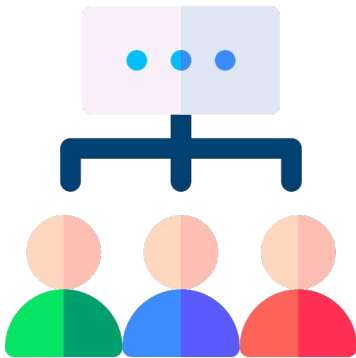
Share-VDE entity model includes the **Opus level**, in order to keep continuity with IFLA-LRM and BIBFRAME models.

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



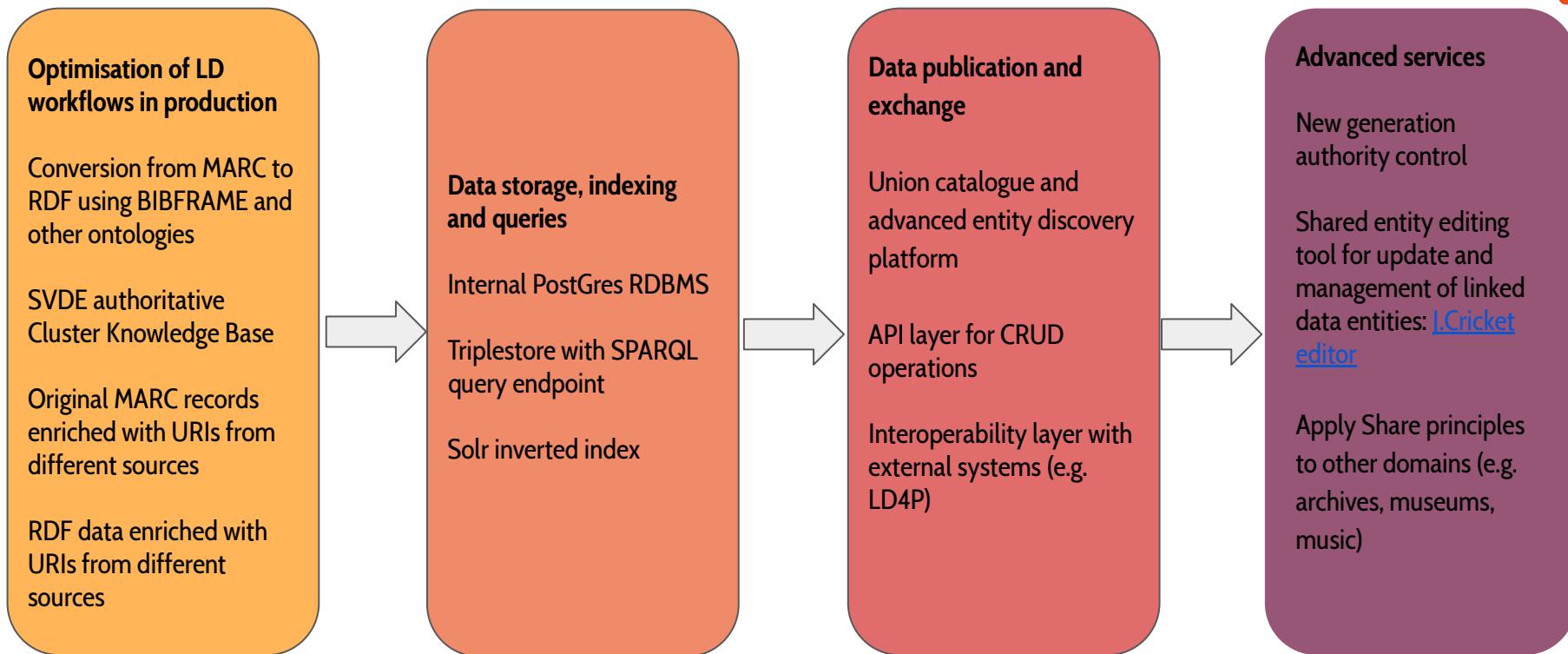
**Reuse:** the network of SVDE resources is the base of the SVDE **Cluster Knowledge Base** (named Sapiientia). The CKB is an **authoritative source of entities** (works, authors etc.), accessible in RDF format and open to the entire SVDE community. The CKB can be queried and can be used in the local 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.share-vde.org](http://www.share-vde.org) (currently available for **full member libraries** [https://wiki.share-vde.org/wiki/ShareVDE:Main\\_Page/SVDE\\_institutions](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



# 303 URIs forwarding to Different Documents



Accept: text/html

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

Accept: application/json

Accept: application/rdf+xml

0110  
1001  
1010

303 See Others

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



**William Shakespeare**

1564-1616, English writer

William Shakespeare (bapt. 26 April 1564 – 23 April 1616) was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist. He is often called England's national poet and the "Bard of Avon". His extant works, including collaborations, consist of approximately 38 plays, 154 sonnets, two long poems — *Venus and Adonis* and *A Lover's Complaint* — and a few other pieces of non-dramatic prose.

Original Works by Shakespeare Original Works about Shakespeare Related people

42 results

Filter original works... Format Year of publication

Title	Format	Year of publication	External links
A Midsummer Night's Dream	Physical book	1595	External links

<https://share-vde.org/data/agents/17282.json>

```
{
  "preferredHeading": "Eaton conference on science fiction and fantasy literature",
  "alternateHeadings": [
    "J. Lloyd Eaton Conference on Science Fiction and Fantasy Literature ",
    "Fifteenth Annual Eaton conference on science fiction and fantasy literature",
    "Nursery realms children in the worlds of science fiction, fantasy, and horror"
  ],
  "type": "http://id.loc.gov/ontologies/bibframe/Family",
  "startDate": 1993,
  "_links": {
    "self": [
      {
        "href": "https://share-vde.atcult.it:6443/families/1"
      },
      {
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      }
    ]
  }
}
```

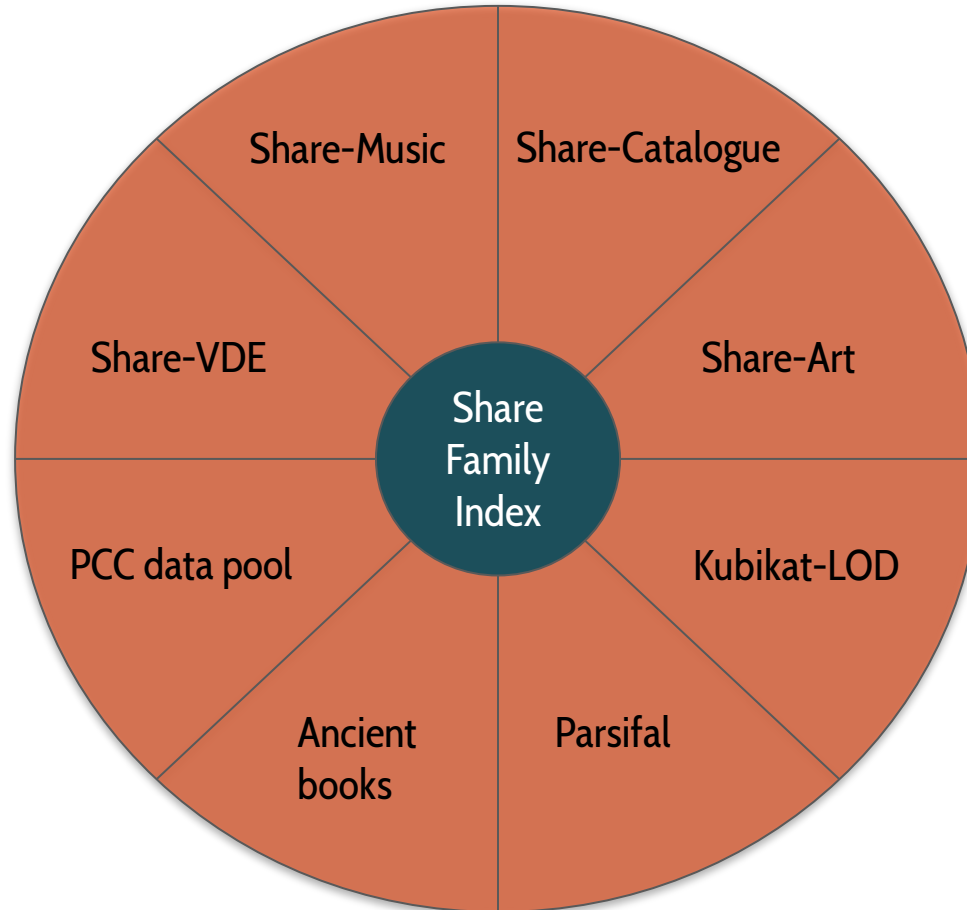
<https://share-vde.org/data/agents/17282.rdf>

```
<rdft:type rdt:resource="http://www.wikidata.org/entity/Q36180"/>
<rdft:type rdt:resource="http://dbpedia.org/ontology/Agent"/>
<rdft:type rdt:resource="http://www.ontologydesignpatterns.org/ont/
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<rdft:type rdt:resource="http://dbpedia.org/class/yago/Holder1101
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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 1781; italiano – um dos mais importantes nomes da literatura de seu país 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

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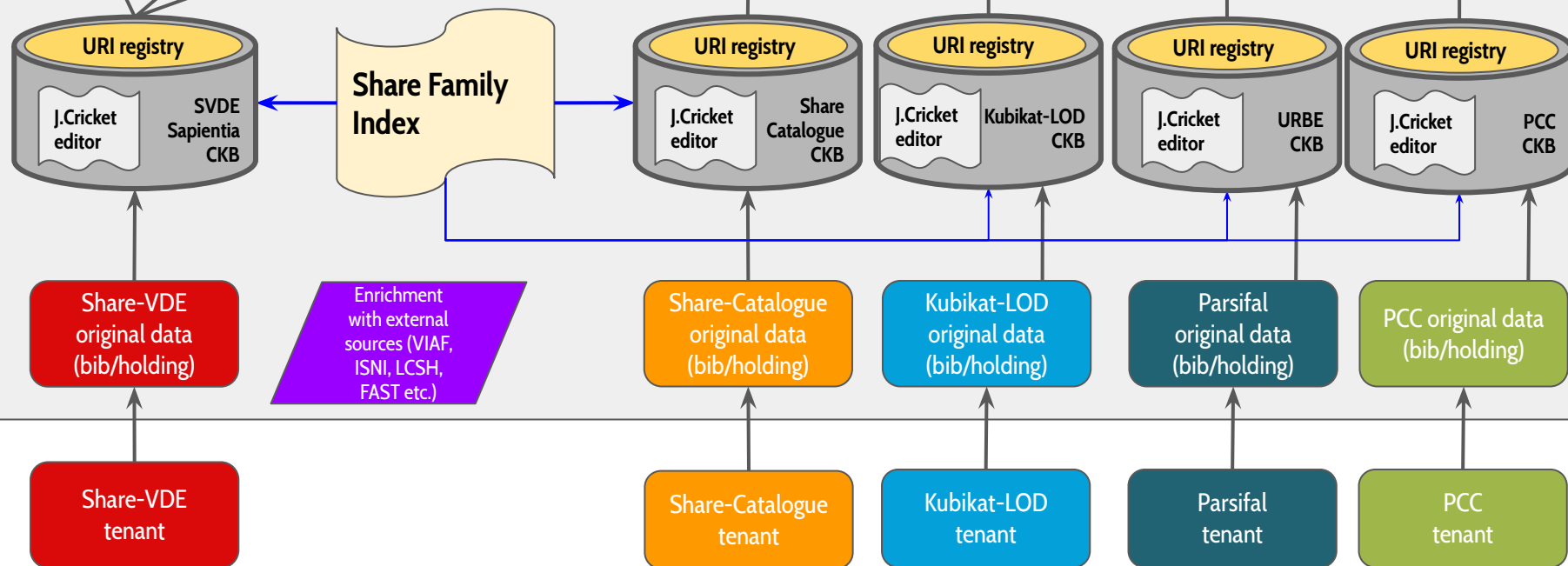
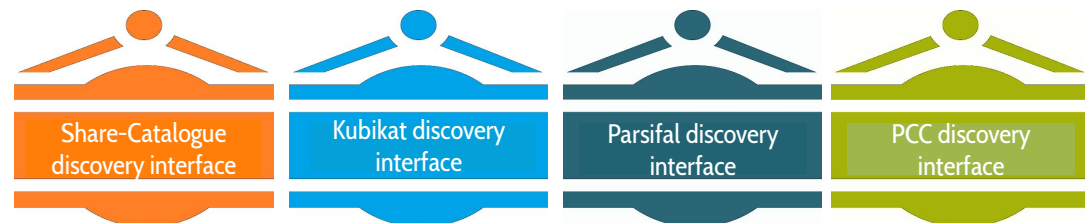
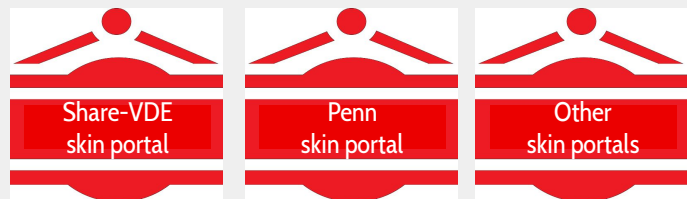
Definition of tenant from [Wikipedia](#):

- “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



# The Cluster Knowledge Base and the CKB editor

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## *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

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# Active participation



NLM



Penn  
UNIVERSITY of PENNSYLVANIA



University  
of Colorado  
Boulder

Yale



THE UNIVERSITY OF  
CHICAGO



UNIVERSITY OF ALBERTA  
LIBRARY



Duke  
UNIVERSITY

Stanford  
University



LIBRARY

LIBRARY  
OF CONGRESS



HARVARD  
UNIVERSITY

Libraries members of SVDE 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 & Working Groups

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The Share-VDE AC will take 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 member institutions.

There are 4 sub-committees focusing on specific areas:

- Sapiaientia Entity Identification Working Group
- Authority/Identifier Management Services Working Group
- Cluster Knowledge Base Editor Working Group
- User experience/User Interface Working Group

# Authority/Identifier Management Services WG

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- Defines guidelines and best practices for Authority/Identifier management in the linked data environment;
- 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.

# Cluster Knowledge Base Editor WG

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- An essential part of the MARC to RDF conversion process is the maintenance of metadata that have been produced and registered on the *Sapientia* Cluster Knowledge Base (CKB);
- the group analyses how libraries interact with the *Sapientia* CKB and their use of the Editor for modifying (correcting / enriching), deleting, merging and separating clusters;
- the same approach will be applied on the data originally created in BIBFRAME.

# Sapientia Entity Identification WG

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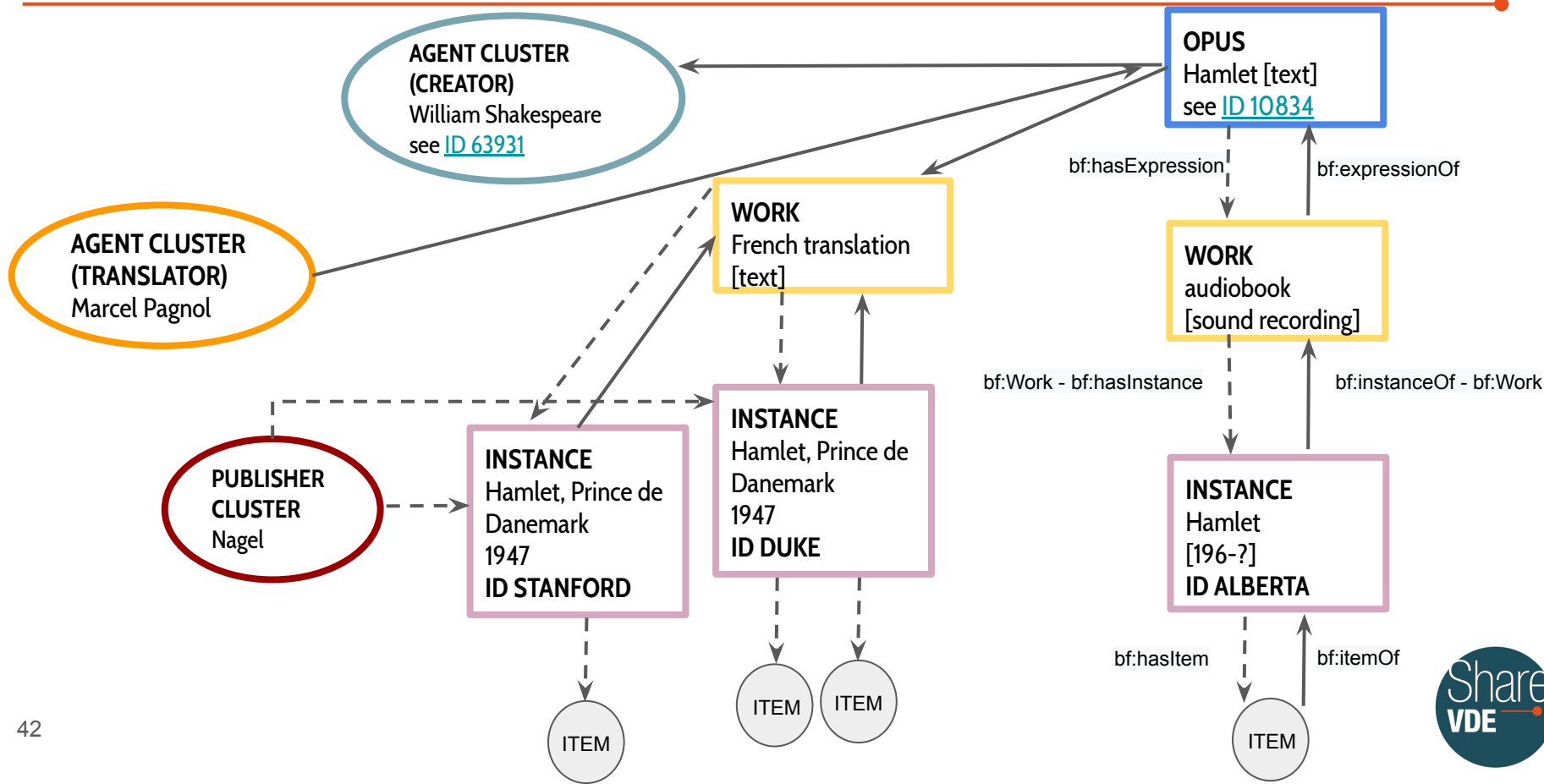
- Review use of entities, identifiers, and associated modelling in the Sapientia CKB;
- review and refine processes for Sapientia entity clustering in Share-VDE and the creation of associated open and stable URI for use in Share-VDE and the library community;
- review MARC to BIBFRAME and BIBFRAME to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

# User Experience/User Interface WG

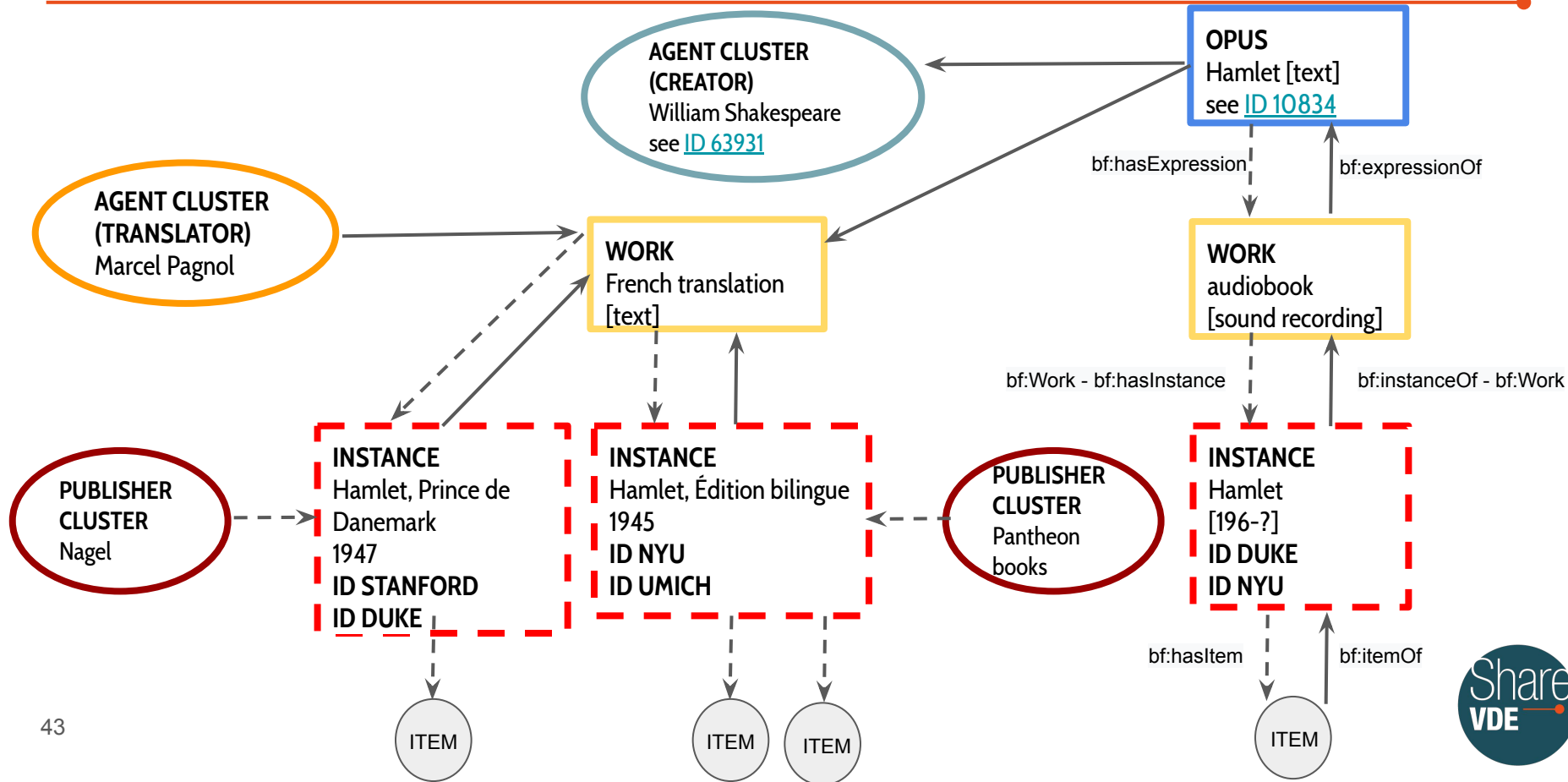
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- Re-designs Share-VDE user interface to respond to both patrons and library staff requirements and expectations. The new interface will:
  - reflect the components of the Share-VDE data model infrastructure;
  - harness the potential of linked data and deliver wide-ranging and detailed search results;
  - provide an intuitive user experience hiding the complexity of the underlying data model;
  - embed partner APIs for the interoperability with local library services (e.g. lending);
  - allow the branding of the institution, or of the consortia of libraries.

# Current Share-VDE model (simplified version)



# Future Share-VDE model (simplified version)



# Share-VDE approach

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# Share-VDE pillars

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Integration



Autonomy

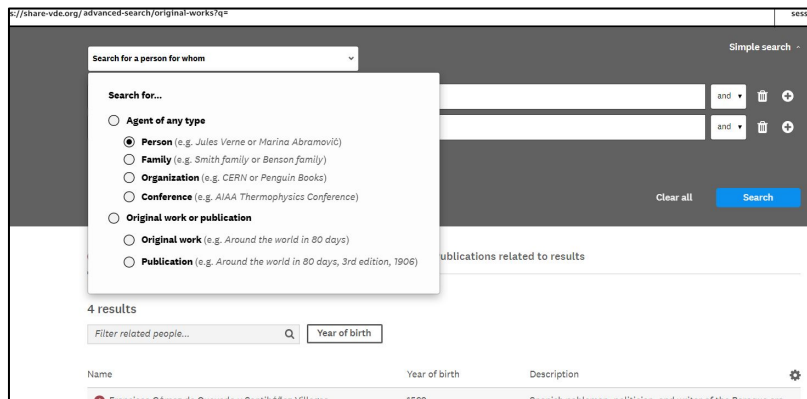


Community engagement

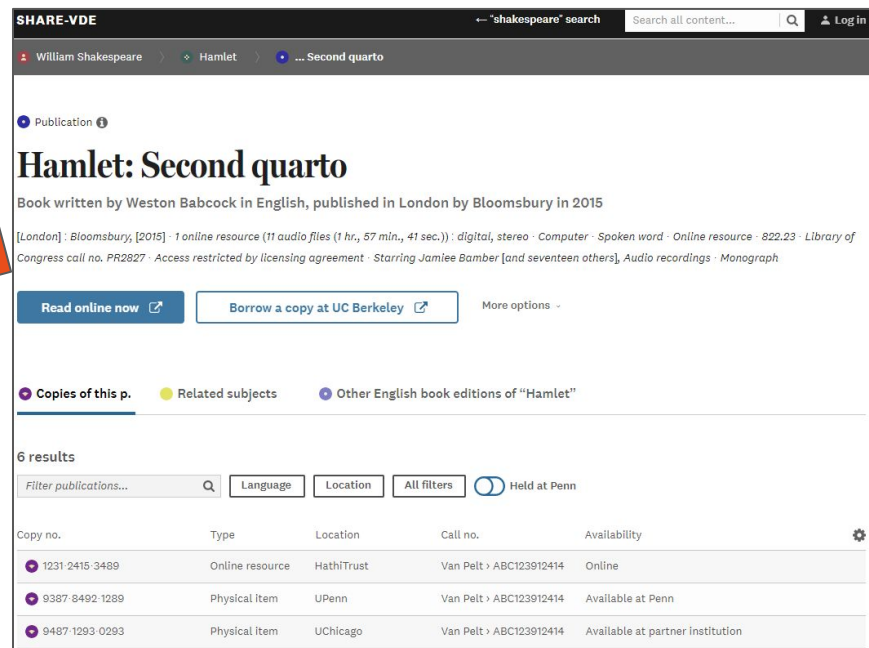


Shared vision

# 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

SHARE-VDE

Search all content...

Person

**William Goulding**

British novelist, poet, playwright and Nobel Prize for Literature laureate

Sir William Gerald Goulding, CBE (19 September 1911 – 19 June 1993) was a British novelist, playwright, and poet. Best known for his debut novel *Lord of the Flies* (1954), he would go on to publish another eleven novels in his lifetime. In 1980, he was awarded the Booker Prize for *Rites of Passage*, the first novel in what became his sea trilogy, *To the Ends of ...* — [Wikipedia](#)

More options ^

Original works by

Original works about

Related people

Filter...

Location

Language

All filters

Publication title	Contributors	Language	Year
<input type="checkbox"/> Lord of the Flies	William Goulding	English	1954
<input checked="" type="checkbox"/> Pincher Martin, 1956 novel.	William Goulding	English	1956
<input checked="" type="checkbox"/> Pincher Martin	William Goulding	English	1956

↶ End of list

Click to add to merge list

2 original works selected View selected ^

Deselect all Add relationship Merge Add to my merge list

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, Sapiientia, 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.

SHARE-VDE

Search all content...

Q

3D

➔

## 2 original works merged

1 BF work affected

Merge summary

Destination	Attachments	Title	Contributors	Language	Year
Destination	18	Pincher Martin	William Goulding	English	1956
	0	Pincher Martin, 1956	William Goulding	English	1956

View destination original work

View graph on external site

This agent has been flagged for manual review

Name

William Goulding

...

Assign to me

# 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

← →

Edit: "Isaiah Thomas" · Share-VDE

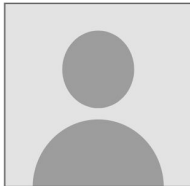
Share-VDE

Search all content...

Isaiah Thomas > Edit

Manual review needed · This cluster was automatically created and is likely in need of manual review

Verify this



Person

Isaiah Thomas



Cluster metadata

Connected external IDs

Actions

Source	ID	Name	Born	Died	Confidence	
OCLC	<a href="#">21X1241</a>	Isaiah Thomas	1989		Manually added by Anna Doe 4 months ago (June 2nd, 2021 at 04:32PM) <a href="#">View log</a>	...
VIAF	<a href="#">15684Y9</a>	Isaiah Thomas	1989		Automatically added on June 2nd, 2021 at 04:32PM based on identical LC authority ID in VIAF and SVDE <a href="#">Validate</a>	...
LC	<a href="#">89Z5663</a>	Isaiah Thomas	1989		Automatically added on June 2nd, 2021 at 04:32PM based on identical LC authority ID in VIAF and SVDE <a href="#">Validate</a>	...
Wikidata	<a href="#">Q55322233</a>	Isaiah Thomas	1773	1819	Automatically added on June 2nd, 2021 at 04:32PM based on identical LC authority ID in VIAF and SVDE <a href="#">Validate</a>	...

SUGGESTION

 **Isaiah Thomas** (or Isaiah Jamar Thomas)  
American basketball player · Born 1989 · [Q336030](#)  [Add this](#)

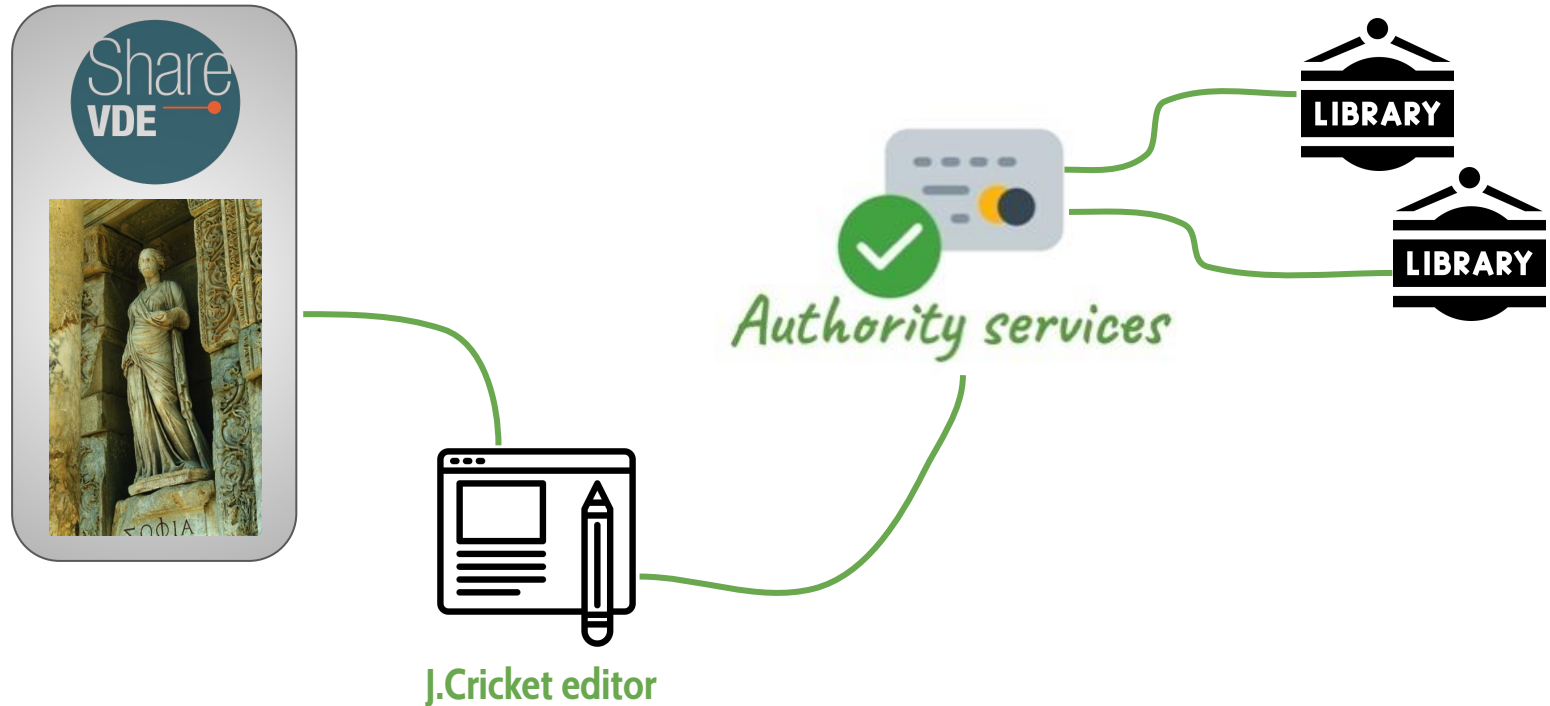
Add another external URI

Share VDE

# Integration - the technological perspective



# Integration - new Authority services generation





# Autonomy - the end user perspective

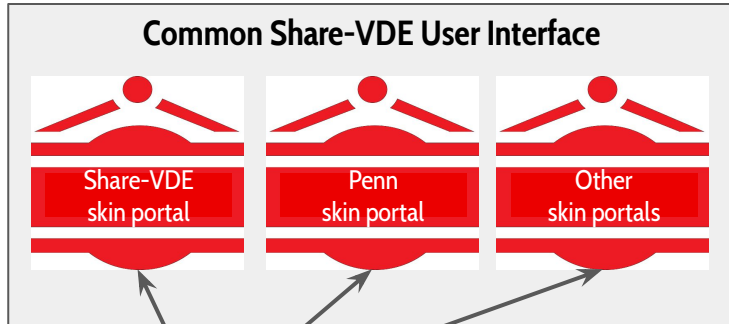
## SVDE localisation for the University of Pennsylvania

The screenshot shows the Penn Libraries Catalog interface. At the top, there's a search bar and a user profile for Jane Doe. Below the navigation bar, the breadcrumb trail 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, followed by 'Original Work' and 'Written by William Shakespeare in English'. A descriptive paragraph follows, mentioning the play's origin and a link to Wikipedia. Below the text are buttons for 'Read online now', 'Get it now at Van Pelt', and 'More options'. A section titled 'Library-held publications of Hamlet' is active, showing '8 results'. Below this, there are filters for 'Availability', 'Language', and 'All filters', along with an 'ADD FORMAT' button. A table lists the results, with the first entry being 'Hamlet: Second quarto' by Michael Heppell, in English, available online at Penn.

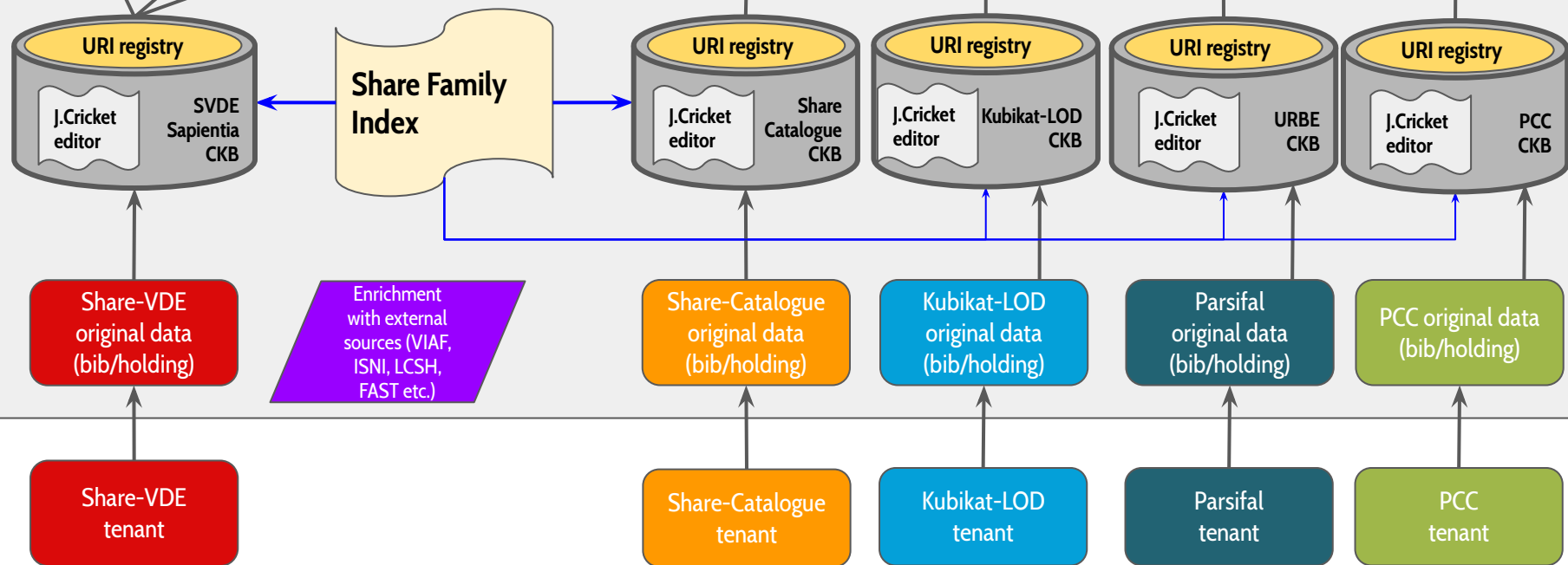
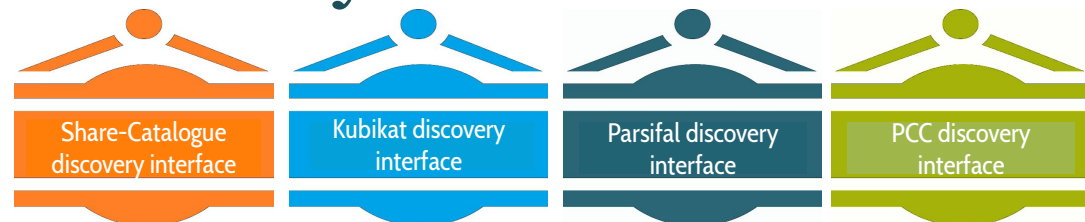
## Kubikat-LOD project platform

The screenshot shows the Kubikat-LOD project platform. The header features the 'Kubikat-LOD' logo in red and white. Below the header, there are search bars for 'Person' and 'Work'. The main content area is titled 'THE KUBIKAT-LOD PROJECT' and contains a paragraph describing the project as a collaborative venture to unite and connect resources in a discovery platform based on the BIBFRAME Linked Data model. It further explains the aim of the initiative to offer a single, shared point of access to catalogues, providing interoperability and discoverability. The text mentions the identification and reconciliation of entities, the enrichment of data with authoritative sources, and the use of the Gemeinsame Normdatei (GND) and its integration with external sources. At the bottom, it states that the current prototype contains bibliographic data held by the Kubikat member libraries, updated to February 15th 2019.

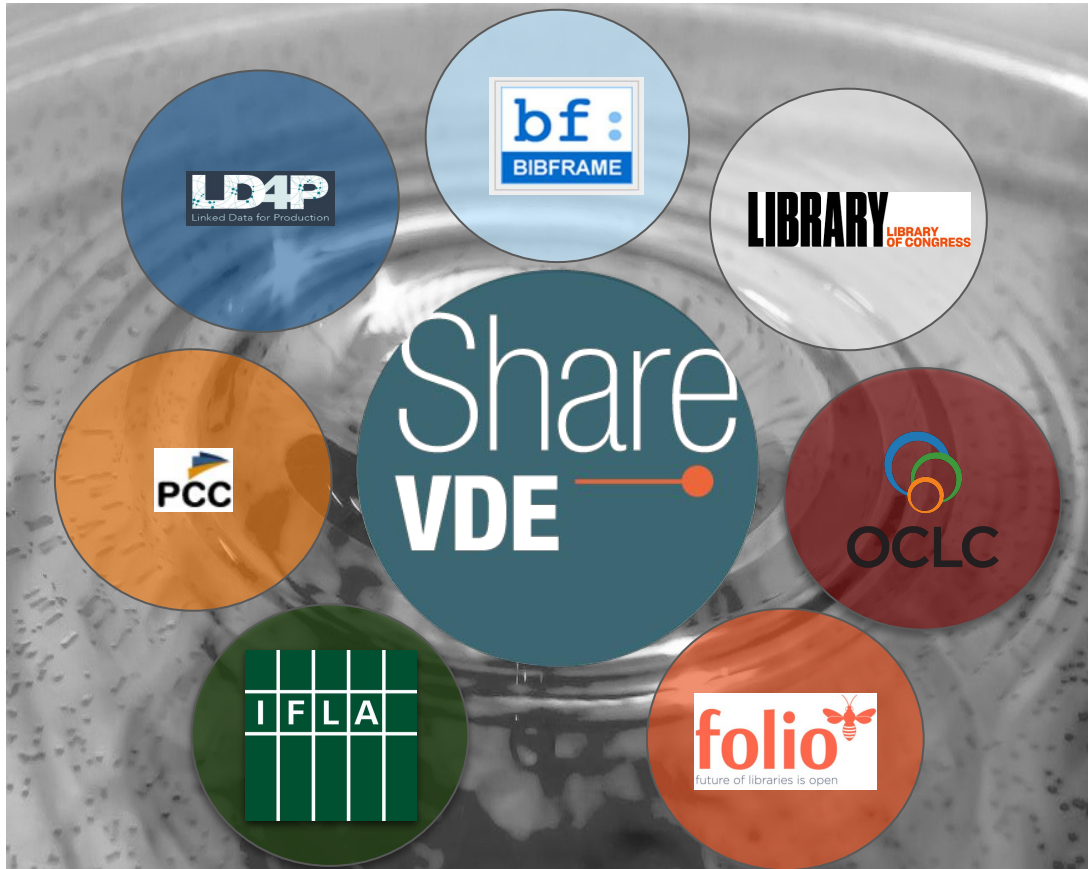
## Common Share-VDE User Interface



## Autonomy: Share-VDE tenants



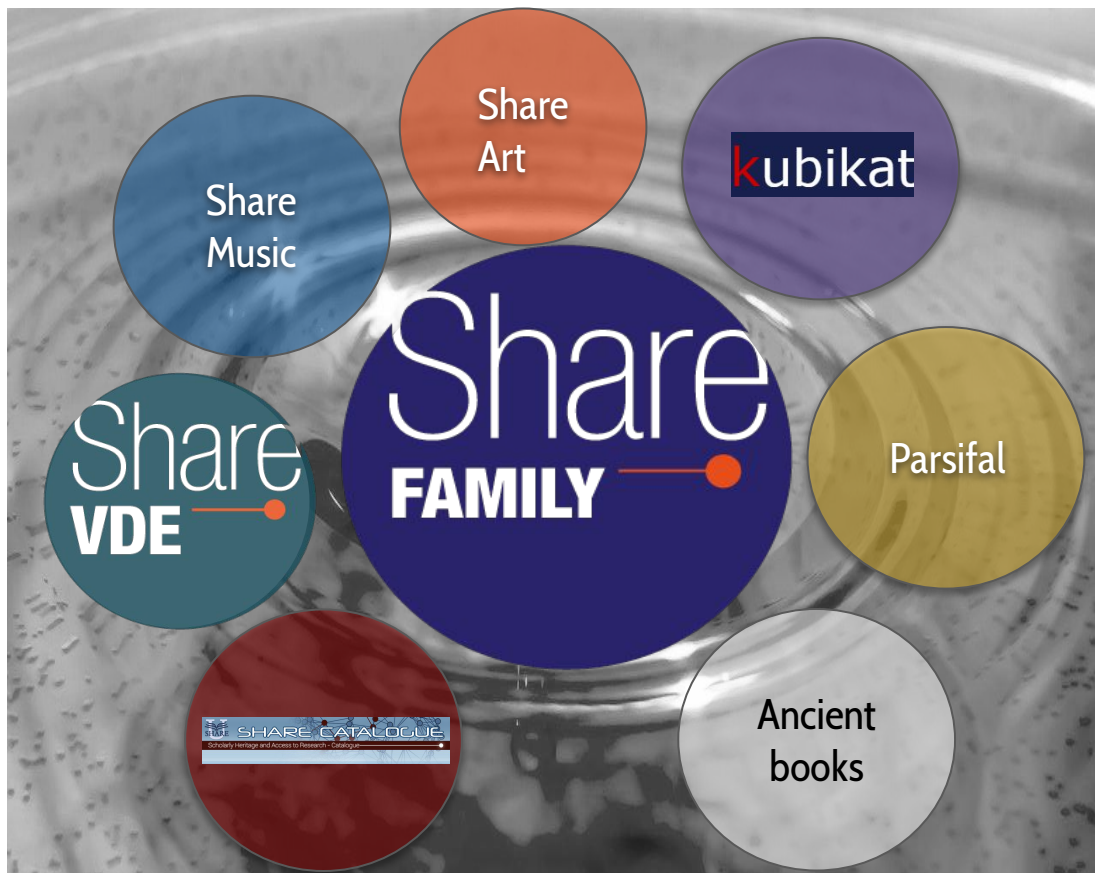
# Community engagement: library community



**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-VDE principles and technologies

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

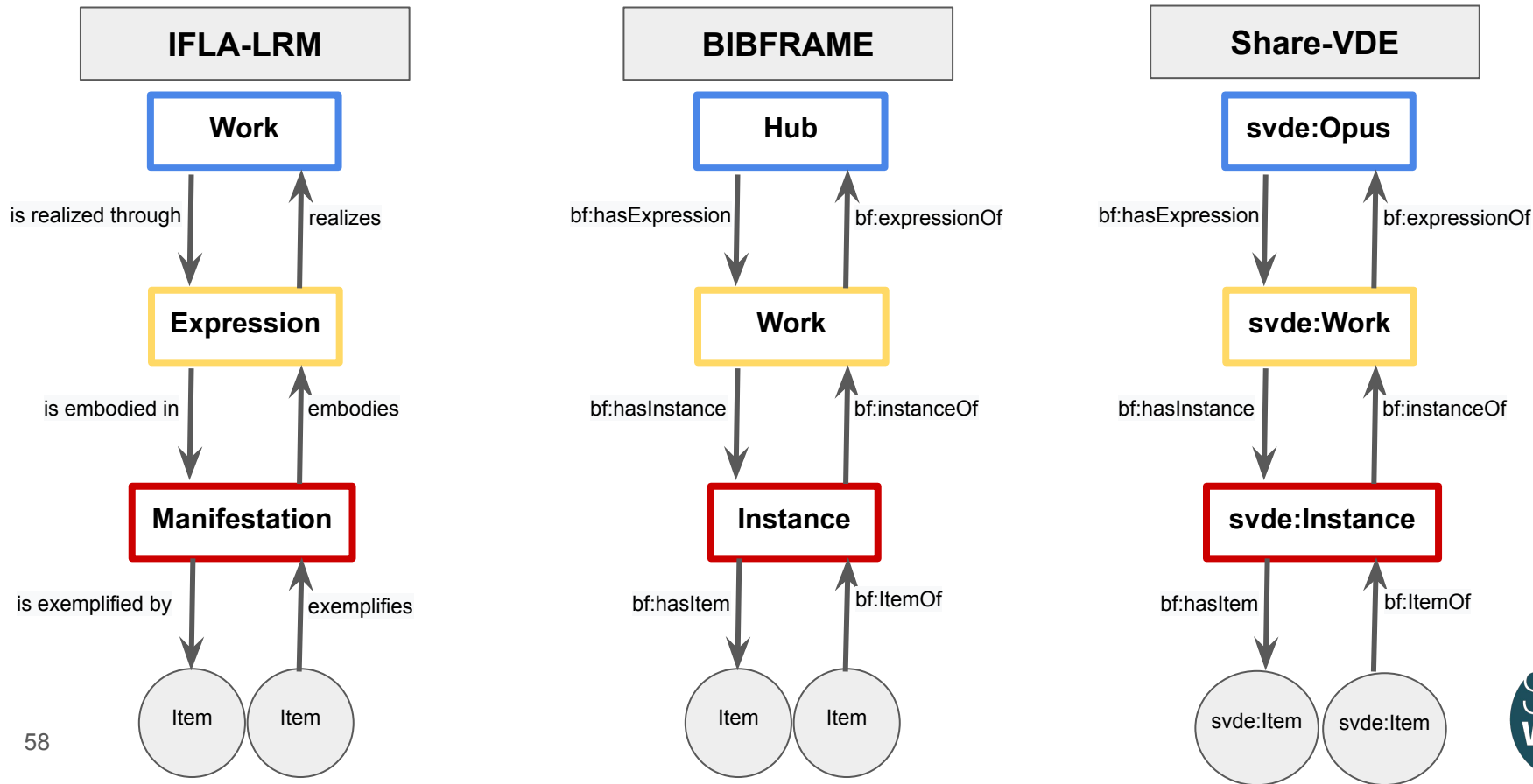
# Community engagement: World Wide Web



**Mixed community:**  
cross-domain cooperation  
across the Web community

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

# Shared vision - interoperability of entity models



# Share-VDE achievements over the last year

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# The Share-VDE development team expanded

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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:



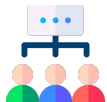
Infrastructure & Architecture



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



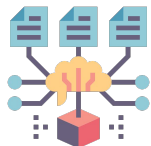
J.Cricket Editing functions



# 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

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# LD4P and the PCC

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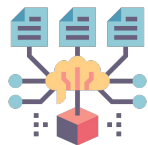
MARC records converted in linked data by SVDE are delivered to Sinopia cataloguing module



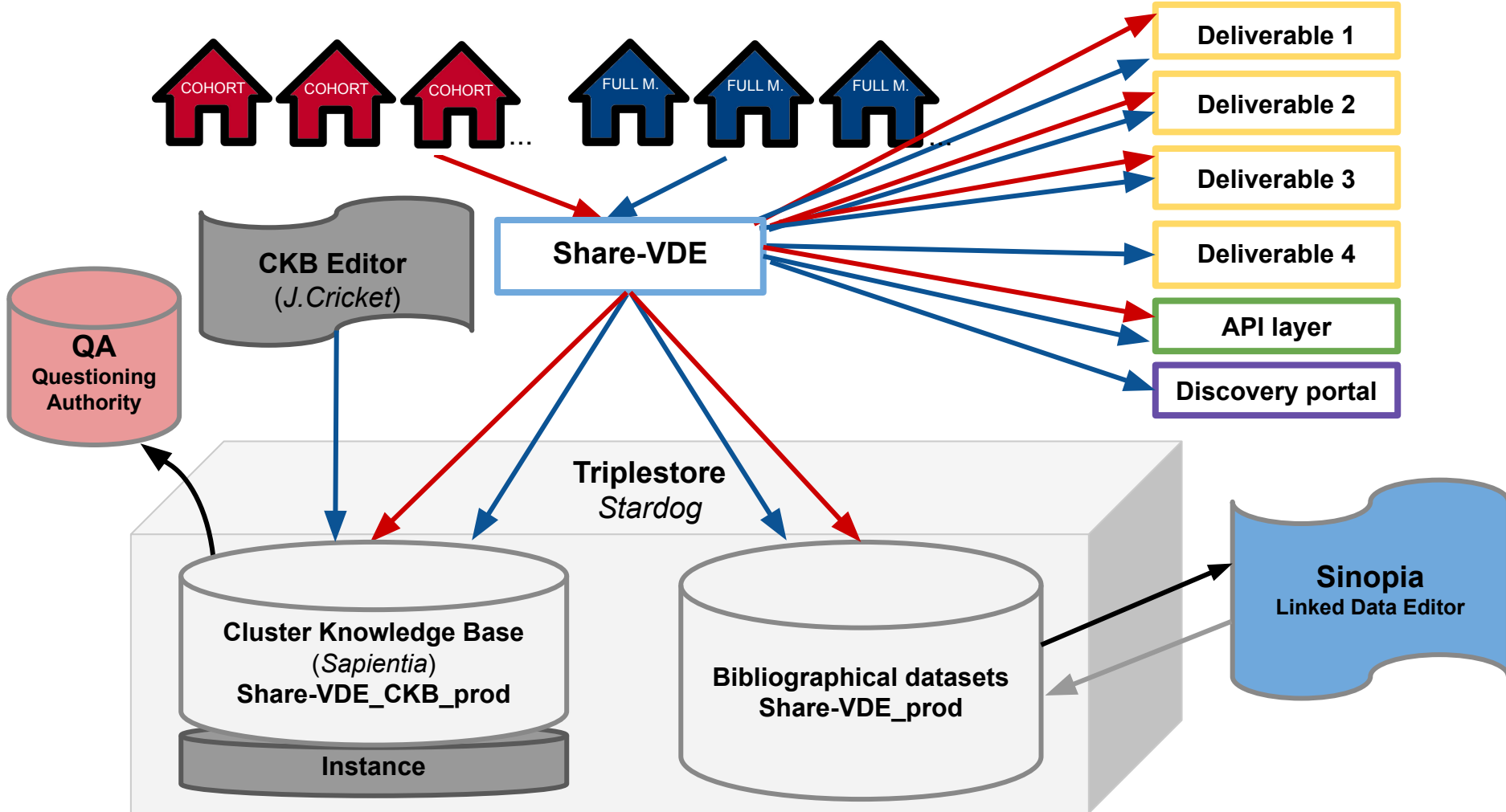
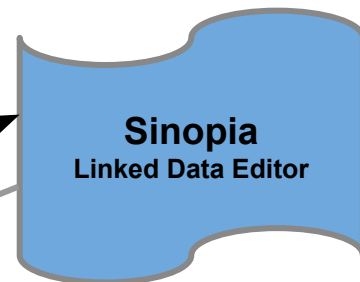
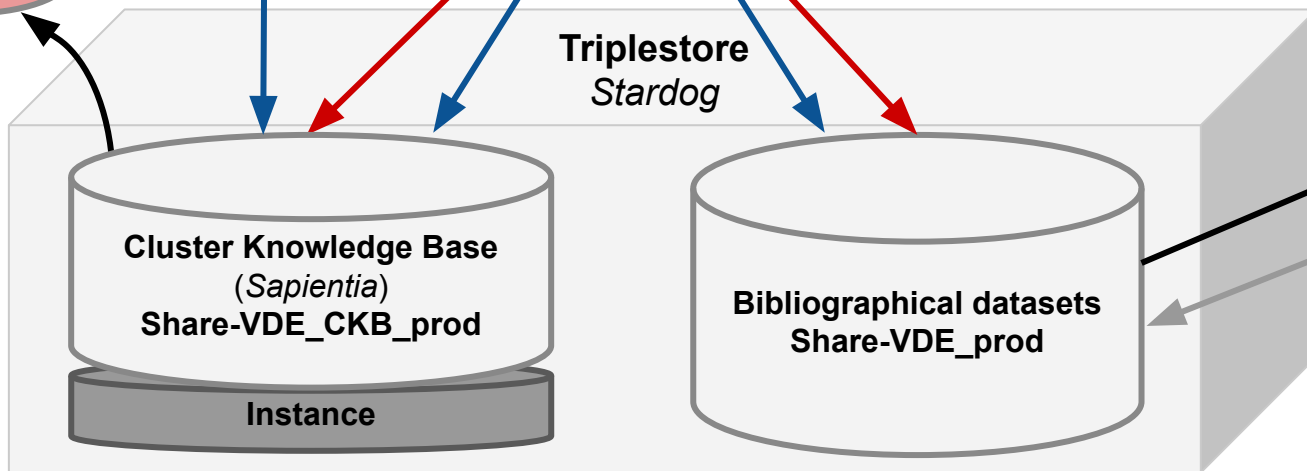
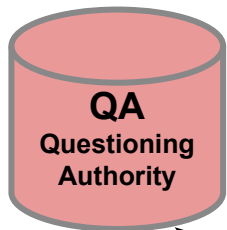
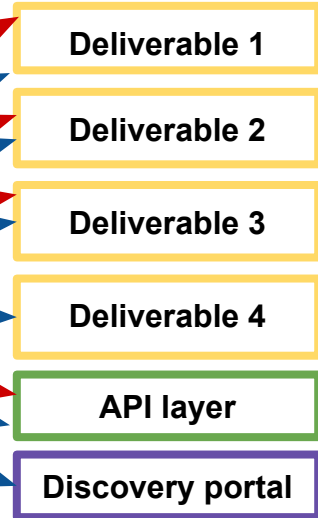
In LD4P3 an API based two-ways flow Sinopia-SVDE will be put in place to optimize interaction and close the loop between the systems



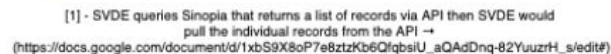
Conversion and housing of PCC data in SVDE in a dedicated data pool



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.)

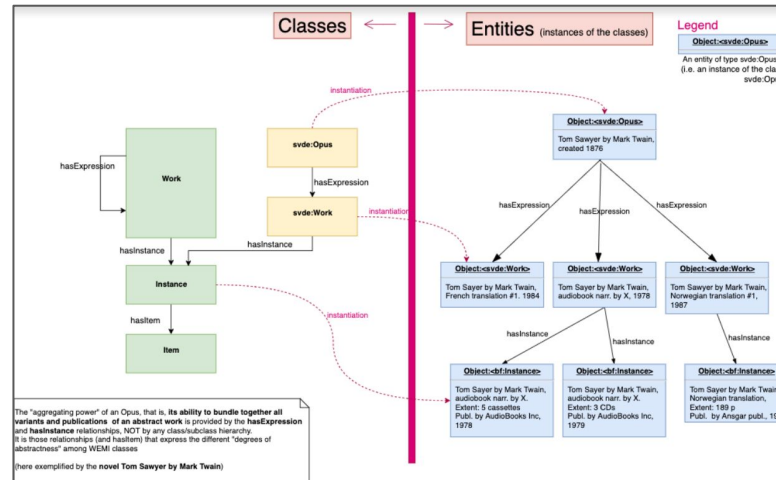
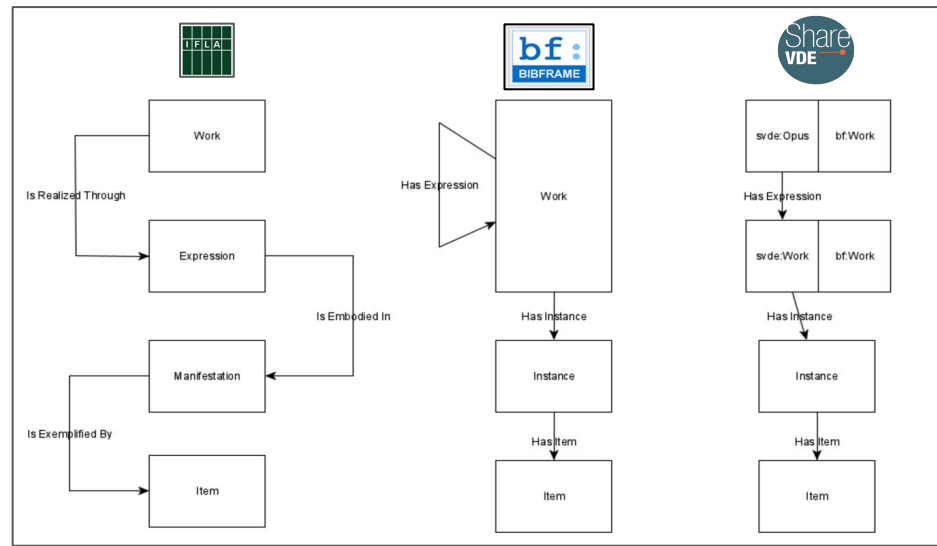


[See the diagram online here](#)



# 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

← →

Connect external IDs · Share-VDE

Share-VDE

Q Search all content...

Connect to external IDs

Name

Q Isaiah Thomas

OCLC

VIAF


Wikidata


LC


GND


BNF


Other...




**Isaiah Thomas** (or Isaiah Jamar Thomas)  
American basketball player · Born 1989  
Q336030 




**Isaiah Thomas** (or Isaiah Thomas, Sr. · I. Thomas · I. T. · T. I.)  
Massachusetts printer, publisher and journalist · 1749-1831  
Q15503493 



**Isaiah Thomas** (or Isaiah Thomas, Jun. · I. Thomas, Jun.)  
(1773-1819) · 1773-1819  
Q55322233 


Connected

+ Create new wikidata item for "John Doe" 

Wikidata item Q336030

This Wikidata entity has a potential duplicate on Wikidata [Review for merge](#)

**Isaiah Thomas**  
American basketball player  
1954-2017



**Sex or gender**  
Male

**Country of citizenship**  
United States of America

**Country for sport**  
United States of America

**Birth name**  
Isaiah Jamar Thomas (English)

**Date of birth**  
7 February 1989

**Place of birth**  
Tacoma

**Occupation**  
Basketball player

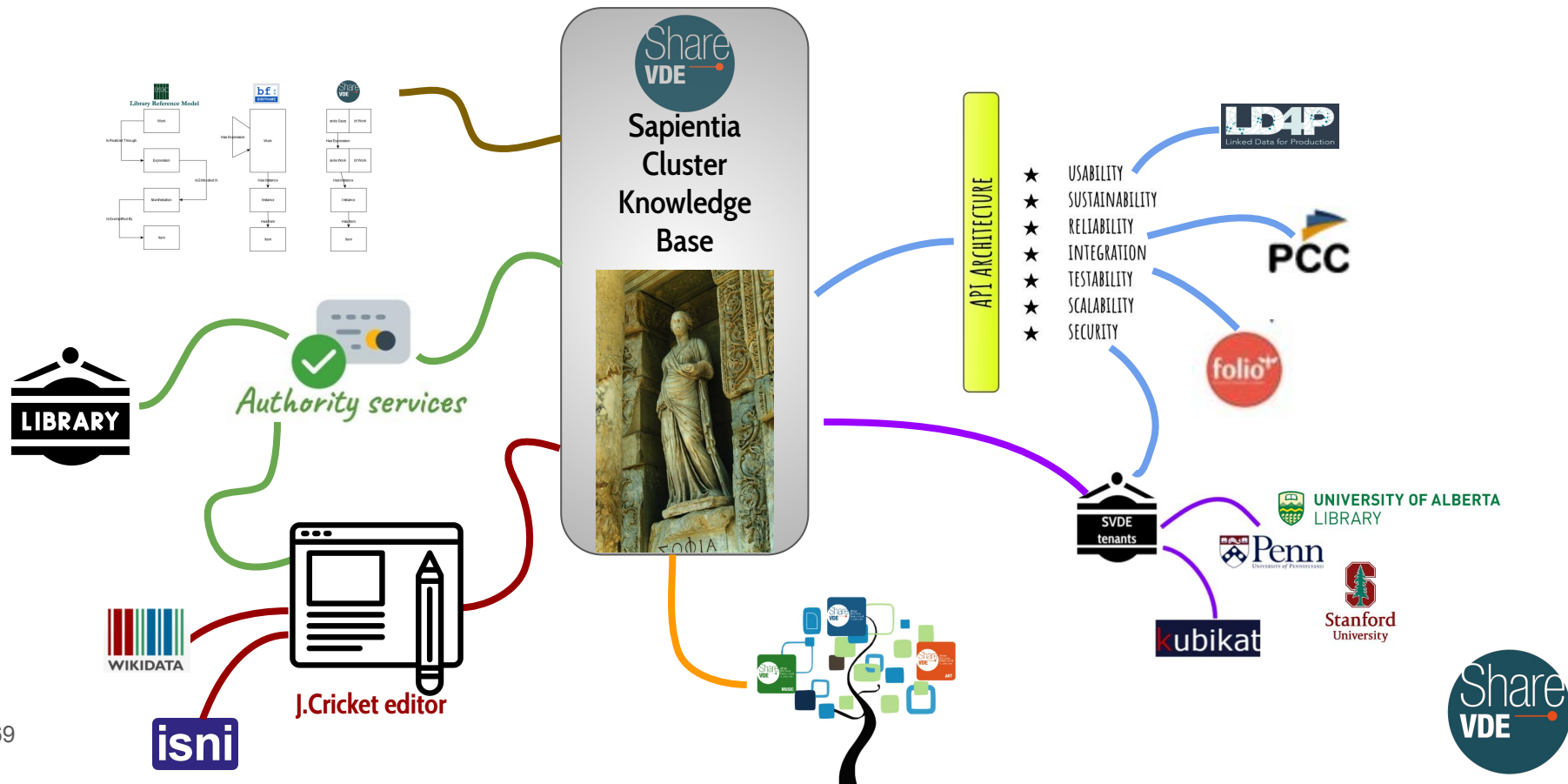
**Position played on team / speciality**  
Point guard

Connect to this ID

Done



# Towards the Share-VDE Sapientia CKB ecosystem



# What comes next

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- **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**.



May 2021

<https://share-vde.org>  
[info@share-vde.org](mailto:info@share-vde.org)  
<https://wiki.share-vde.org/>