



Share-VDE: Library Linked Open Data in Action

Beth Picknally Camden, Goldstein Director of Information Processing, University of Pennsylvania
Michele Casalini, CEO, Casalini Libri

New York Technical Services Librarians - June 6th 2023

Share-VDE Overview

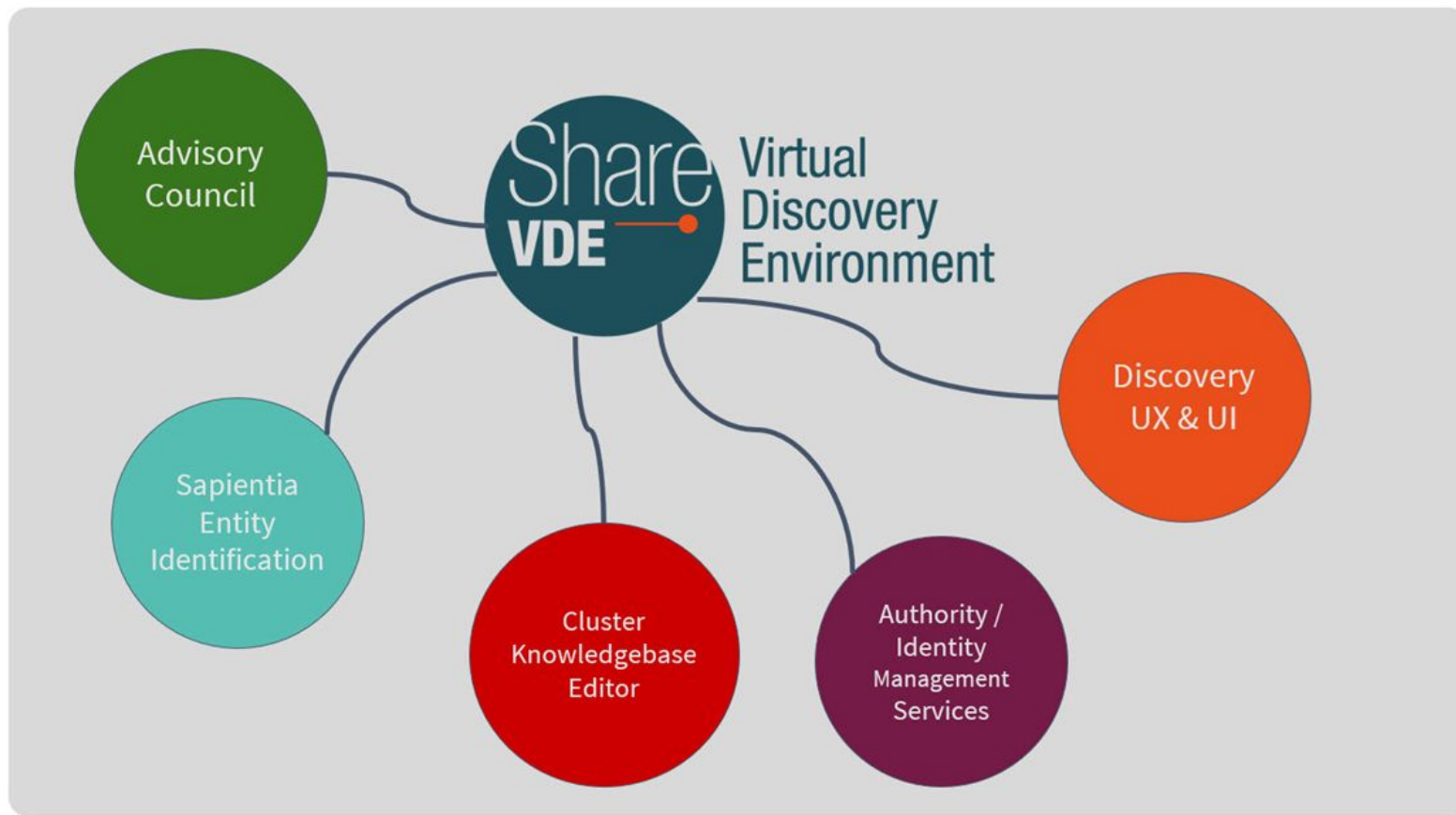


Active Participating Institutions in Share-VDE



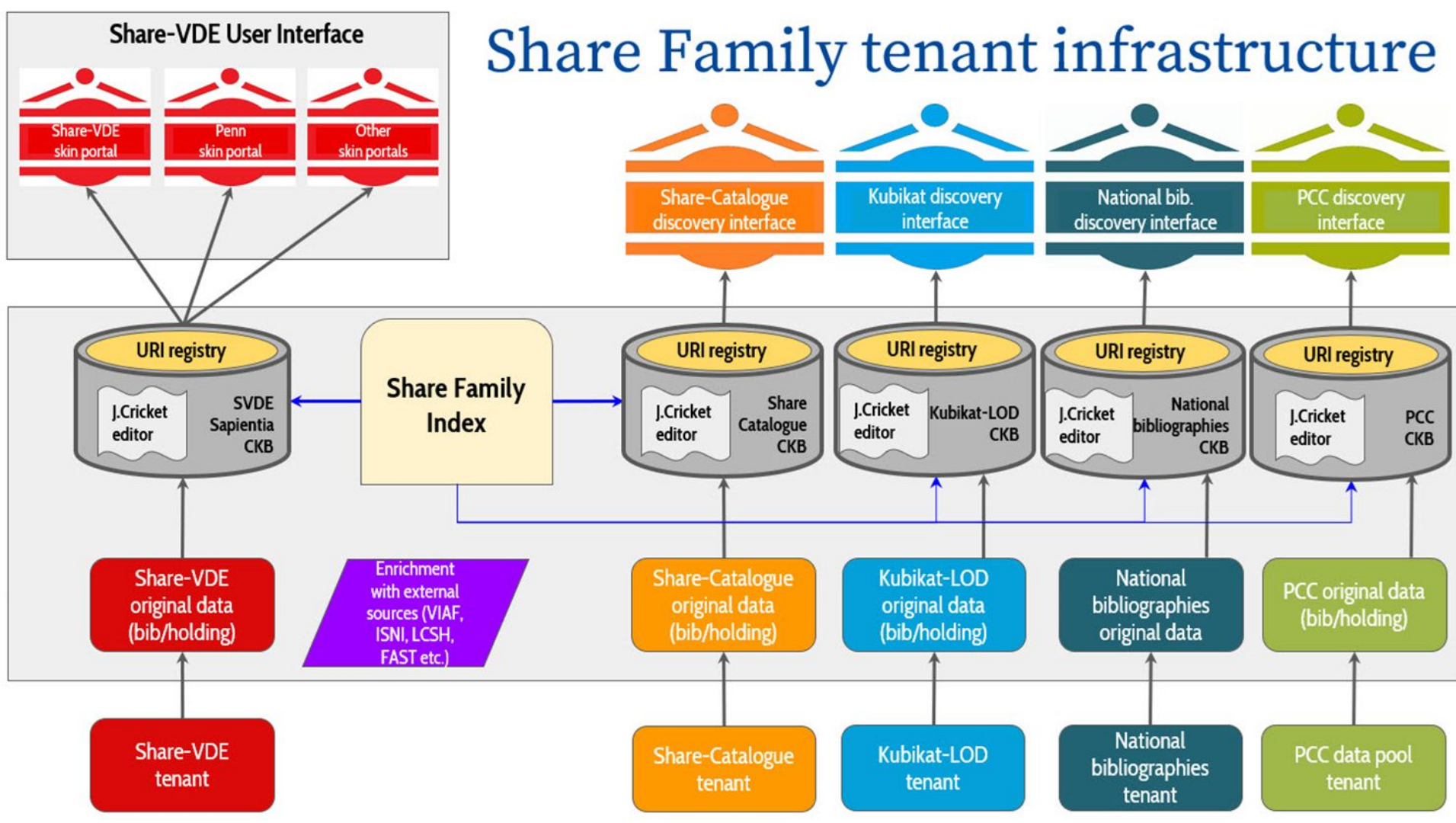
Libraries members of SVDE and Share Family working groups, and parallel projects are constantly contributing with their Subject Matter Experts to requirements gathering, functional analysis and providing feedback on developments.

Share-VDE Groups



Share Family tenant infrastructure

Share-VDE User Interface



PCC Data Pool

- Open pool of PCC-quality BIBFRAME data
- Converted and hosted by the Share Family initiative
- Collaboration via PCC liaison
- <https://pcc-lod.org/>



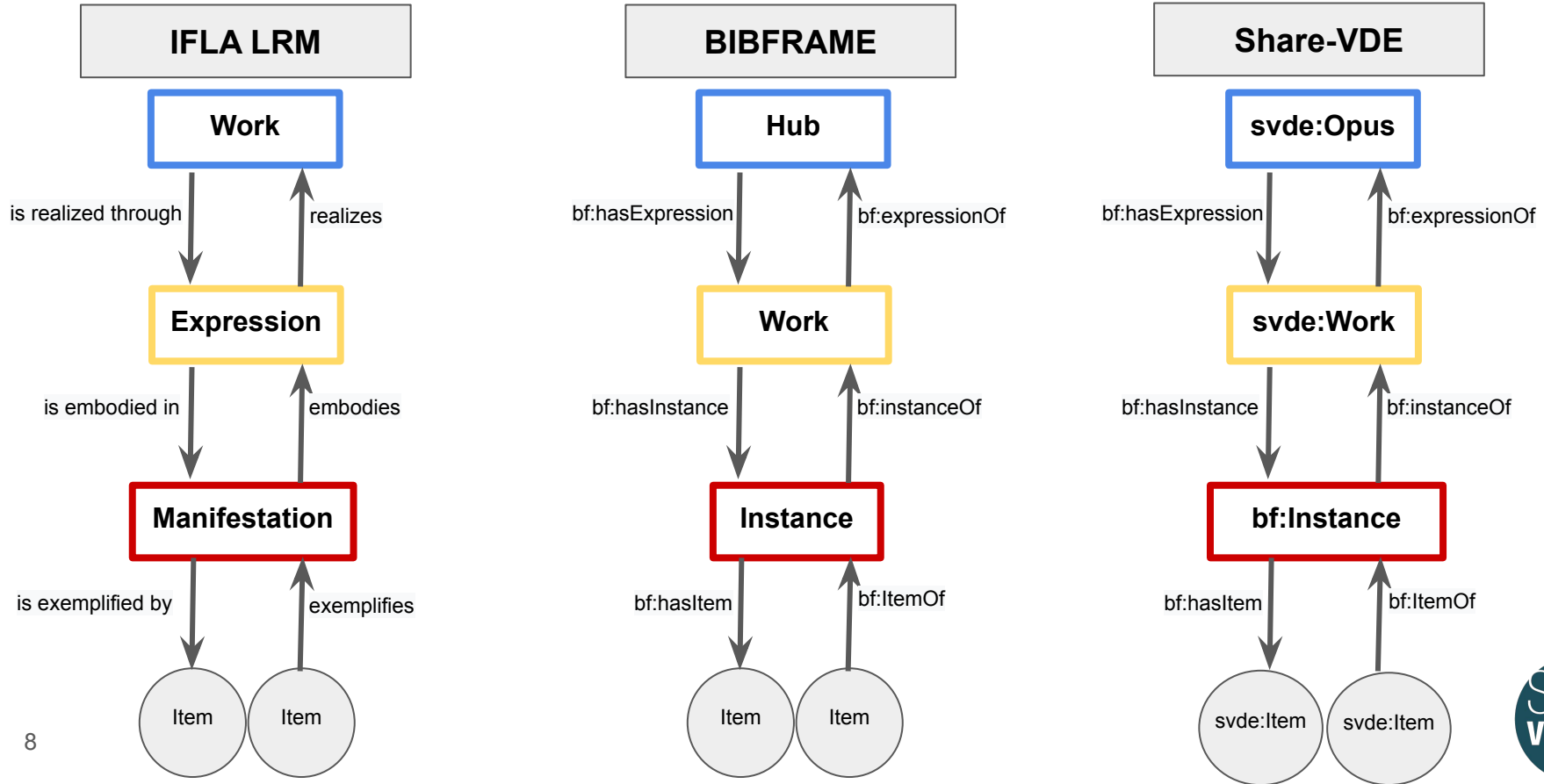
**Program for
Cooperative Cataloging**

BIBCO / CONSER / NACO / SACO

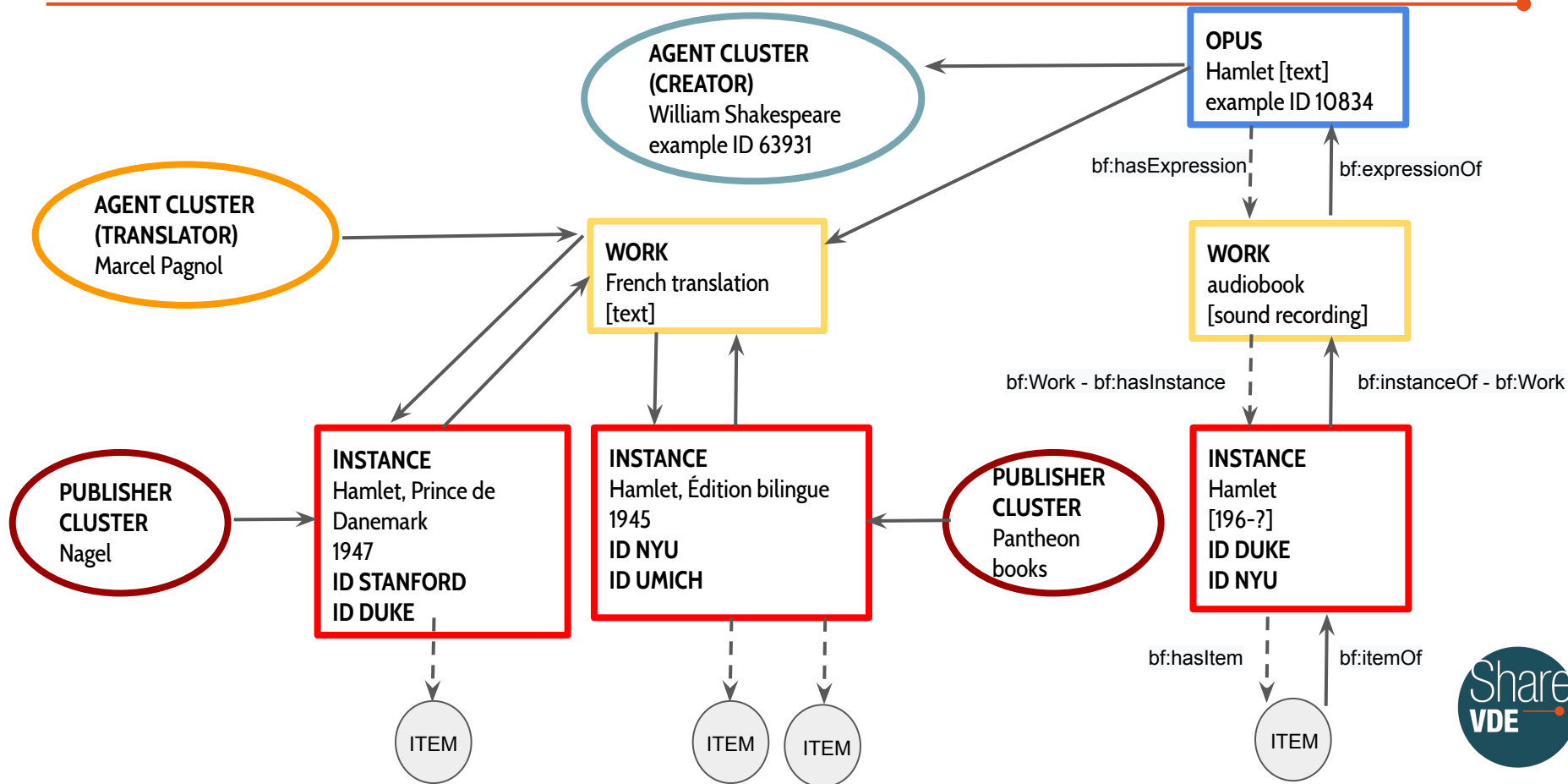
Share-VDE Suite of Tools and Services

- Data conversion service: MARC to BIBFRAME
- Member-developed data model
- Sapiaientia Cluster Knowledge Base
- JCricket Editor
- Entity-based BIBFRAME catalog <https://www.svde.org/>

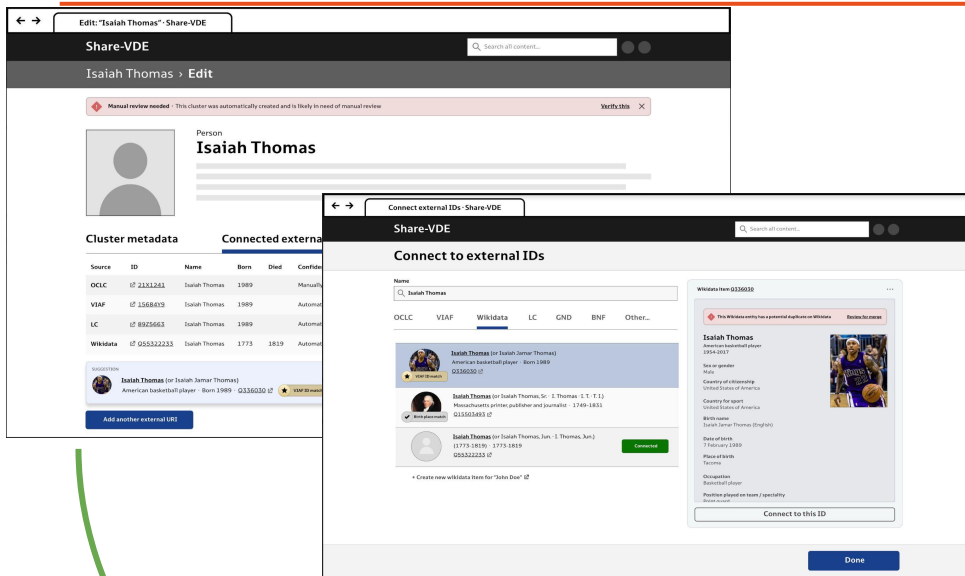
Comparison IFLA-LRM/BIBFRAME/Share-VDE



Share-VDE model (simplified version)



JCricket Editor - The Entity Management System



JCricket is an entity editor that carries out the transition from Marc to a real Entity Management System.

JCricket acts on the entity database (CKB) created through Entity Resolution and clustering processes.

"The more, the merrier" is a perfect vision in a collaborative community. But each library also has local needs: the architecture of JCricket allows to operate locally or centrally, creating a collaborative group that does not forget local specificities.

APPLICATION J.Cricket Editor

- J.Cricket editor for updating and modifying linked data entities

What JCricket *is*



- ✓ it's a linked data entity / authority editor
- ✓ it applies to linked data entities created within all tenants of the Share Family (svde.org, pcc-lod.org, natbib-lod.org)
- ✓ it's a manual application that 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 copy cataloging in LOD

What JCricket *is not*



- ✗ not a traditional bibliographic data editor
- ✗ not an original cataloguing tool
- ✗ not in contrast with 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)


Penn's Involvement in Share-VDE





Penn's involvement

- Participant since the initial 2016 pilot project
- Serving on Advisory Council and other teams
- Partnering with SVDE to develop a Penn skin
<https://penn.svde.org/>
- Linked Data vision:
<https://guides.library.upenn.edu/linked-data>

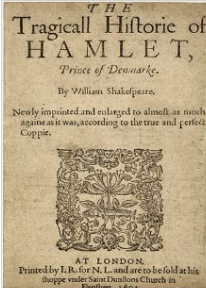
SVDE integrations for Penn's local services



 Penn Libraries Catalog

Search all content... 

Log in 

William Shakespeare > Hamlet




 Original Work 


Hamlet


Written by William Shakespeare in English


The Tragedy of Hamlet, Prince of Denmark, often shortened to Hamlet (ⁱ/ˈhæmlɪt/), is a tragedy written by William Shakespeare sometime between 1599 and 1602. Set in Denmark, the play depicts Prince Hamlet and his revenge against his...— [Wikipedia](#)

Read online now 


Get it now at Van Pelt

More options 

 Library-held publications of Hamlet

 Related Original Works


8 results






Filter publications... 

Availability

Language

All filters

 Held at Penn

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

Penn UX testing

Penn Libraries Catalog BETA Search all content...

Topic

Civil rights movement

1954–1968 U.S. social movement against institutional racism

"The civil rights movement was a political movement that sought to end institutional racial segregation, discrimination, and violence against African Americans. Its origins in the Reconstruction era during the late 19th century and early 20th century led to the formation of the NAACP and other organizations that fought for equality and justice for all people."



Penn Libraries Catalog BETA Search all content...

Person

Martin Luther King Jr.

American civil-rights activist and leader (1929–1968)

"Martin Luther King Jr. was an American Baptist minister and leader who played a key role in the American civil rights movement from 1955 until his assassination in 1968. He was the son of the pastor and minister Martin Luther King Sr., King advanced civil rights for African Americans through nonviolent resistance and led the Southern Christian Leadership Conference (SCLC)."



Penn Libraries Catalog BETA Search all content...

Place

Selma, Alabama (USA)

City in and county seat of Dallas County, Alabama, United States

"Selma is a city in and the county seat of Dallas County, in the Black Belt region of south central Alabama and extending to the west. Located on the banks of the Alabama River, the city has a population of 17,971 as of the 2020 census. About 80% of the population is African-American." — [Wikipedia](#)



[Wikimedia](#)

Options ▾

Original works by Publications by

47 results

No.	Image	Concept
1		Selma to Montgomery
2		I Have a Dream
3		Ole Miss riot of 1962
4		Civil rights movement

Options ▾

No. Image Concept

Penn's Future Plans

PennLibraries | Franklin University of Pennsylvania Login

Keyword Find books, journals, videos, & m Advanced Bookmarks (0)

Everything Catalog Articles+ Databases Colenda Website

[Previous](#) | 7 of 15,089 | [Next](#) [Back to Search Results](#) [Start Over](#)

Bach.

Author/Creator: [Bach, Johann Sebastian, 1685-1750, composer.](#)

Publication: [\[Germany\] : Berlin Classics, \[2020\]](#)

Format/Description: [Sound recording](#)
[1 online resource \(1 audio file\)](#)

Series: [Naxos Music Library.](#)

Status/Location: [Online access](#) [Naxos Music Library](#)

Knowledge Panel

Johann Sebastian Bach

Bach | J.S. Bach | J. S. Bach | J S Bach

Family

Self **From related entities**

spouse

[Anna Magdalena Bach](#)
start time : 12/02/1721
end time : 07/27/1750 (proleptic Julian calendar)

[Maria Barbara Bach](#)
start time : 10/16/1707
end time : 1719

sibling

[Johann Christoph Bach III](#)
kinship to subject : elder brother

[Johann Jacob Bach](#)
kinship to subject : elder brother


Links

[Wikidata page](#)

[Wikipedia article](#)

[Reasonator](#)

Identifiers



22. Erets Yiśra'el : 3

Author: Jabotinsky, Vladimir, 1880-1940

Author: 1880-1940 זאב, יבאָטנינסקי, ז'ב

☐ Bookmark



23. Erinnerung

Author: Mahler, Gustav, 1860-1911

☐ Bookmark



Share Family: initiatives beside Share-VDE



Common priorities, challenges and concerns

- By adopting BIBFRAME as main ontology, take advantage of the potentials of linked data to facilitate interoperability among data pools, in coexistence with MARC.
- Transform library catalogs in research tools providing structured access and visibility to research in original languages in all disciplines.
- Apply and support open metadata policies.
- Be independent of local practices and of local choices of ILS/LSP.
- Open up a new level of international cooperation to maintain the wealth of information that will continue to grow.
- By serving as an authoritative data source, contribute to a new bibliographic ecosystem where data modeling, data enrichment and data sharing are handled collectively.

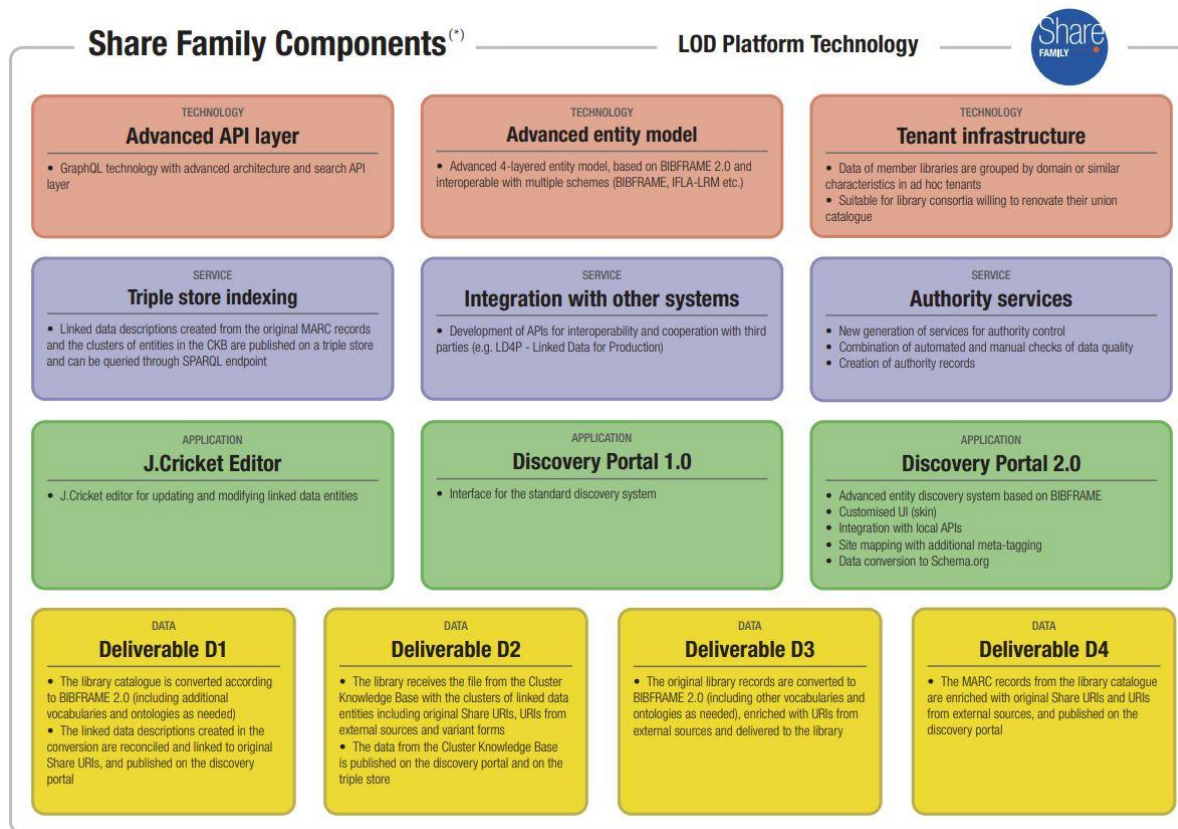
The Share Family initiatives



For further details please refer to the following section of the wiki: [About the Share Family](#).

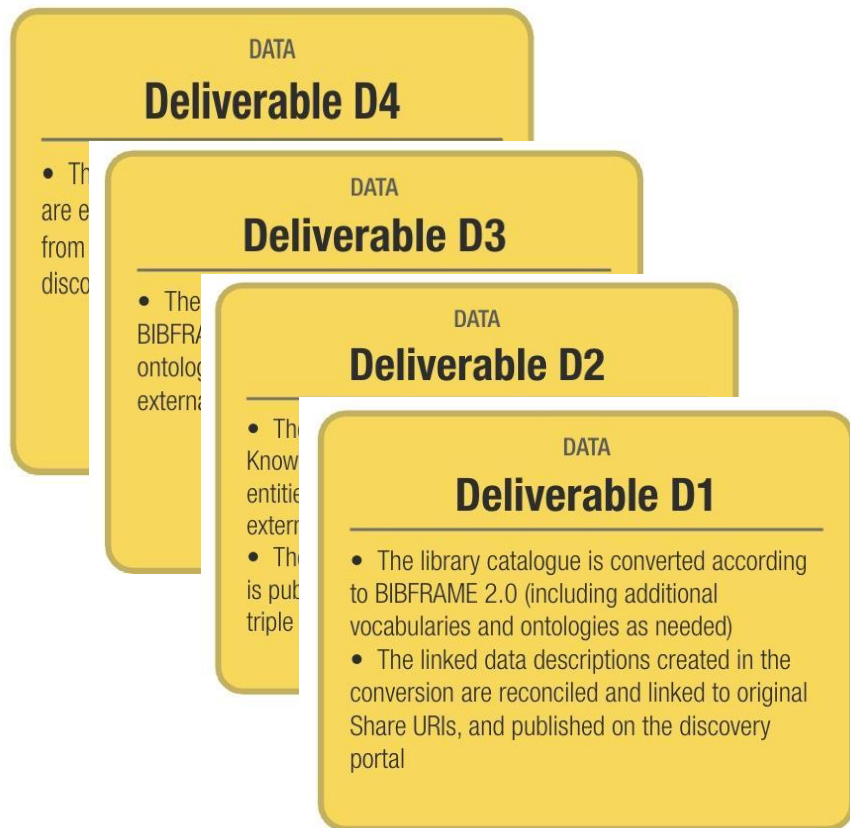
Further information are available on the [wiki](#).

The configurable components



(*) Please consider the list indicative, to be adapted to each single context, and subject to change.

Deliverables



Data, enriched with information (URIs and values) from external authoritative sources and converted following the BIBFRAME data model, are available for the publication on the Share portal and for other library projects, both in Marc 21 enriched and in RDF.

Data can be enriched with specific sources selected by each library, following their special and local needs

A different 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.

Enhanced Authority Services

Authority Services Web

Authority Record count: 1441103

New Record:

Updated Record:

Workflow ID: 00000000-0000-0000-0000-000000000000

Current linked record for request ref.: 000-000000

[Search](#)

[Add Records](#)

[Add New Log](#)

Date	Size MB	Download
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Upload File: (Maximum upload size: 10 MB)

Tue 10th Dec 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21

([View all dates](#))

[Open CSV](#)

	POSITION	TAG	INDICATORS	CONTENT
	1	<input type="text"/>	<input type="text"/>	0002002 az000105n 4000
	2	<input type="text"/>	<input type="text"/>	n B0210003
	3	<input type="text"/>	<input type="text"/>	DLC
	4	<input type="text"/>	<input type="text"/>	118001001403147.5
	5	<input type="text"/>	<input type="text"/>	B020000q acanacab020000gaaad00
Delete	6	<input type="text"/>	<input type="text"/>	San B0210003
Delete	7	<input type="text"/>	<input type="text"/>	SOLD CH-DLCS/DLC
	8	<input type="text"/>	<input type="text"/>	Soldygarman, Alan D.
Delete	9	<input type="text"/>	<input type="text"/>	Barth tech real estate, c1865-1864 p. (Alan D. Sugarmann, Merrill Lynch RealEstate)
Delete	10	<input type="text"/>	<input type="text"/>	Garris Commercial tenant's leasing transactions guide, 1991-5cCIP 1.p. (Alan D. Sugarmann) data sheet (p. 12-20-48)
Delete	11	<input type="text"/>	<input type="text"/>	\$athttp://id.loc.gov/authnames/names=B0210003
Delete	12	<input type="text"/>	<input type="text"/>	\$athttp://nat.org/vufind/B02091032
Delete	13	<input type="text"/>	<input type="text"/>	\$athttp://nan.org/nas000000067490016

The next step is to make Authority Services available also for linked data-based workflows - a truly new generation of features for authority control.

Innovative solutions that facilitate and improve authority control through automatic and manual procedures.

Libraries will receive constantly updates on their bibliographic and authority records from authoritative sources.

Authority Services currently available for MARC-based workflows offer automated URI enrichment, reconciliation and validation of library data.

SERVICE

Authority services

- New generation of services for authority control
- Combination of automated and manual checks of data quality
- Creation of authority records

Triple store publication - an open query endpoint

SVDE data are open and accessible through an open endpoint, allowing retrieval in RDF format through SPARQL queries.

SERVICE

Triple store indexing

- Linked data descriptions created from the original MARC records and the clusters of entities in the CKB are published on a triple store and can be queried through SPARQL endpoint

```
<http://id.loc.gov/vocabulary/mstatus/> <http://www.w3.org/2000/01/rdf-schema#label> "changed" <https://svde.org/agents/UPENN> .
<https://svde.org/AdminMetadata/upenn9916551383503681>
<http://id.loc.gov/ontologies/bflc/encodingLevel> <http://id.loc.gov/vocabulary/menclvl/f>
<https://svde.org/agents/UPENN> .
<http://id.loc.gov/vocabulary/menclvl/f> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type> <http://id.loc.gov/ontologies/bflc/EncodingLevel>
<https://svde.org/agents/UPENN> .
<http://id.loc.gov/vocabulary/menclvl/f> <http://www.w3.org/2000/01/rdf-schema#label> "full" <https://svde.org/agents/UPENN> .
<https://svde.org/AdminMetadata/upenn9916551383503681>
<http://id.loc.gov/ontologies/bibframe/descriptionConventions>
<http://id.loc.gov/vocabulary/descriptionConventions/aacr>
<https://svde.org/agents/UPENN> .
<http://id.loc.gov/vocabulary/descriptionConventions/aacr>
<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
<http://id.loc.gov/ontologies/bibframe/DescriptionConventions>
<https://svde.org/agents/UPENN> .
<http://id.loc.gov/vocabulary/descriptionConventions/aacr>
<http://id.loc.gov/ontologies/bibframe/code> "aacr" <https://svde.org/agents/UPENN> .
<https://svde.org/AdminMetadata/upenn9916551383503681>
<http://id.loc.gov/ontologies/bibframe/identifiedBy>
<https://svde.org/UPENN9916551383503681_Local_001/83d25d24-2db9-4d7a-868e-8d7d11827a4b> <https://svde.org/agents/UPENN> .
<https://svde.org/UPENN9916551383503681_Local_001/83d25d24-2db9-4d7a-868e-8d7d11827a4b> <http://www.w3.org/1999/02/22-rdf-syntax-ns#type>
```

The core of SVDE integrated catalogue, ie. the Cluster Knowledge Base of linked data entities created from SVDE institutions' data, is published on a public query interface.

Advanced API layer to facilitate the data consumption

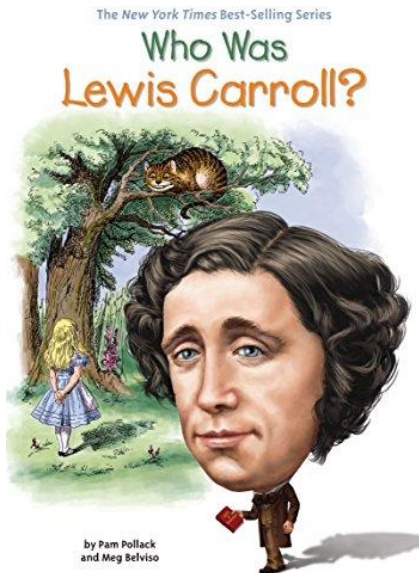
SVDE 2.0 back-end infrastructure leverages an advanced API layer that orchestrates queries to SVDE data from the web discovery portal and from machine-to-machine applications.

The API layer is designed to handle the increasingly complex search logic, the update to the entity model and the enhancement to the Cluster Knowledge Base.

- Two API protocols: GraphQL API and REST API
- All Share-VDE entities are exposed through (read-only) API
- Search API provide several shapes / context behaviour (e.g. simple, advanced search, partial or full match, exact matches suggestions, terms modifiers, results explanation)
- Three query languages: TermsQL, SVDEQL, StructQL



Entity Resolution (ER) and Entity modeling (1)



?

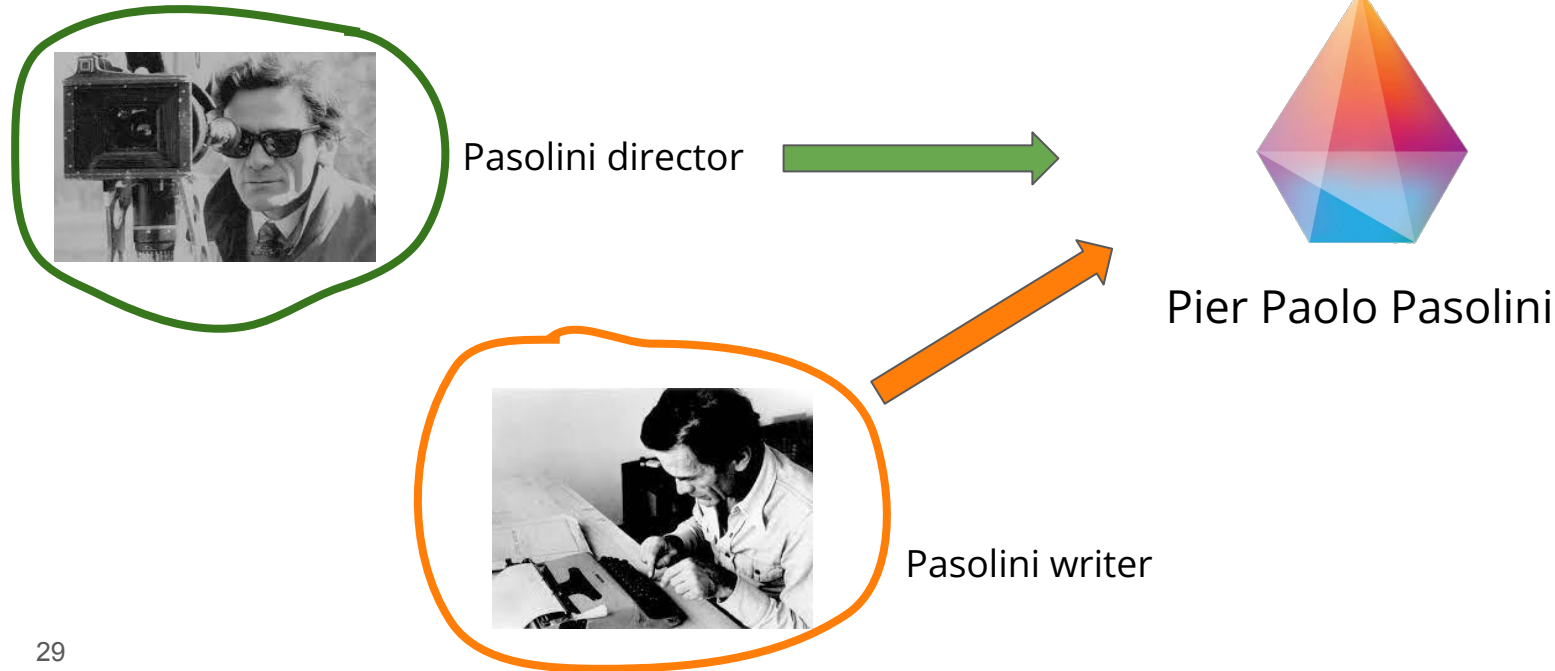


Lewis Carroll => *Alice's Adventures in Wonderland*

Charles Lutwidge Dodgson => *The game of logic*

Entity Resolution (ER) and Entity modeling (2)

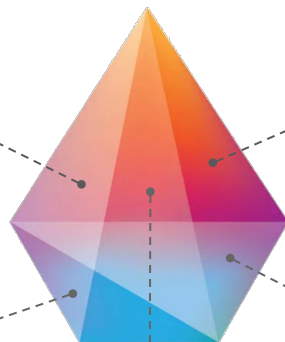
Profile: the information unit that expresses the identity of a particular and unique entity



Share-VDE 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 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

Share - News & Updates on wiki.svde.org



Find ...

HIGHLIGHTS

[Share-VDE: linked data for libraries](#)

[Contact us](#)

[About this wiki](#)

[All pages](#)

SHARE FAMILY

[About the Share Family](#)

[News and updates](#)

SHARE-VDE

[About Share-VDE](#)

[Share-VDE institutions](#)

[FAQ](#)

[Share-VDE resources](#)

ACTIVITIES

[Strands of work](#)

[Working groups](#)

MEMBERS AREA

[Community work](#)

[How to](#)

[Share-VDE workshop](#)

[Materials for wiki administrators](#)

TECHNICAL DOCUMENTATION

[Technical documentation](#)

Pages

Main Page

Last edited one week ago
by Anna Lionetti

Share-VDE: linked data for libraries

Share-VDE (SVDE) is a library-driven initiative which brings together the bibliographic catalogues and authority files of a **community of libraries in a shared discovery environment** based on linked data. Share-VDE expanded its scope to embrace a wider community of over thirty institutions also from the art and music domains, building the **Share Family**.

From September 2021, the **new version Share-VDE 2.0 is live** at <https://svde.org> with an enhanced Entity Discovery Portal and Linked Data Management System. The previous version at <https://share-vde.org> will be progressively dismissed. The load of Share-VDE libraries' data is being done progressively and currently the new web portal hosts a subset of the data available on the previous version. If you want to discover the advanced functions of Share-VDE 2.0, the web portal at <https://svde.org> is the place to go.

The **press release** announcing **Share-VDE 2.0** is available, along with the **explanation of position** of Share-VDE that is outlined in the **Share-VDE Statement 2021** and in the **more recent Executive Summary**. Share-VDE also adopts an **Open Metadata Policy**, approved by its Advisory Council.

The collaborative endeavour, based on the requirements and perceptions of libraries, is promoted by **Casalini Libri**, international bibliographic agency and member of the Program for Cooperative Cataloging; **@Cult**, provider of ILS, Discovery tools and Semantic Web solutions for the cultural heritage sector, with input and active participation from an international group of national and research libraries and influenced by the vision of the **LD4P project**.


After two successful research & development phases launched in 2016 and with the cooperation of the Library of Congress, Share-VDE and the Share Family are now going progressively into production **connecting the catalogues of libraries in the US, Canada and Europe**. The collaborative initiative is potentially open to any library and is steered by the library community.

Contents [hide]

- 1 How it works
- 2 Main areas of focus
- 3 Benefits
- 4 Being part of Share-Art, Share-Music, Share-Catalogue
- 5 Info and contacts

How it works

For an overview of the entity discovery portal, see the demo of the Share-VDE entity discovery portal with an introduction on the Share-VDE user experience and user interface design process; supporting slides are also available.





Thank you.

Please reach out for any question.
bethpc@upenn.edu | michele@casalini.it

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