



Virtual
Discovery
Environment

Share-VDE entity discovery interface

Design process and demo of the system

Recorded live demo: <https://bit.ly/SVDE-discovery-live-demo>

This slide deck: <https://bit.ly/SVDE-discovery-demo-slides>

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

Overview

- Background of SVDE work on discovery
- Outcome: SVDE and Share Family Entity Discovery 2.0
- Live demo (and supporting slides with examples)
- Going forward with discovery...

Main content supporting the recorded live demo

- J.Cricket - collaborative entity editing use case
- Future plans
- Technical overview

Additional materials for reference

Background



SVDE UX design process

2018-2019: study and analysis for the enhanced SVDE discovery portal

- surveys with users run by SVDE partner designer and input gathered from real users (e.g. library patrons, scholars)
- dedicated UX-UI working group run by SVDE institutions: iterative feedback between stakeholders and UX designers

2020: user interface prototype

- not merely decorative but shaped on the SVDE BIBFRAME-based entity model
- further design input from SVDE institutions (Penn) for connecting SVDE with local circulation services

2021: SVDE 2.0 entity discovery portal development

- <https://svde.org> launched in September 2021 with other [Share Family discovery portals](#) supported by the same technology

2022: review and enhancements of SVDE 2.0

- build on SVDE users' feedback and researches (e.g. Penn study on UX testing: [Slides](#), [Video](#))
- SVDE UX-UI group re-convened to collect new input for refinements and enhancements

User Experience/User Interface Working Group

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.

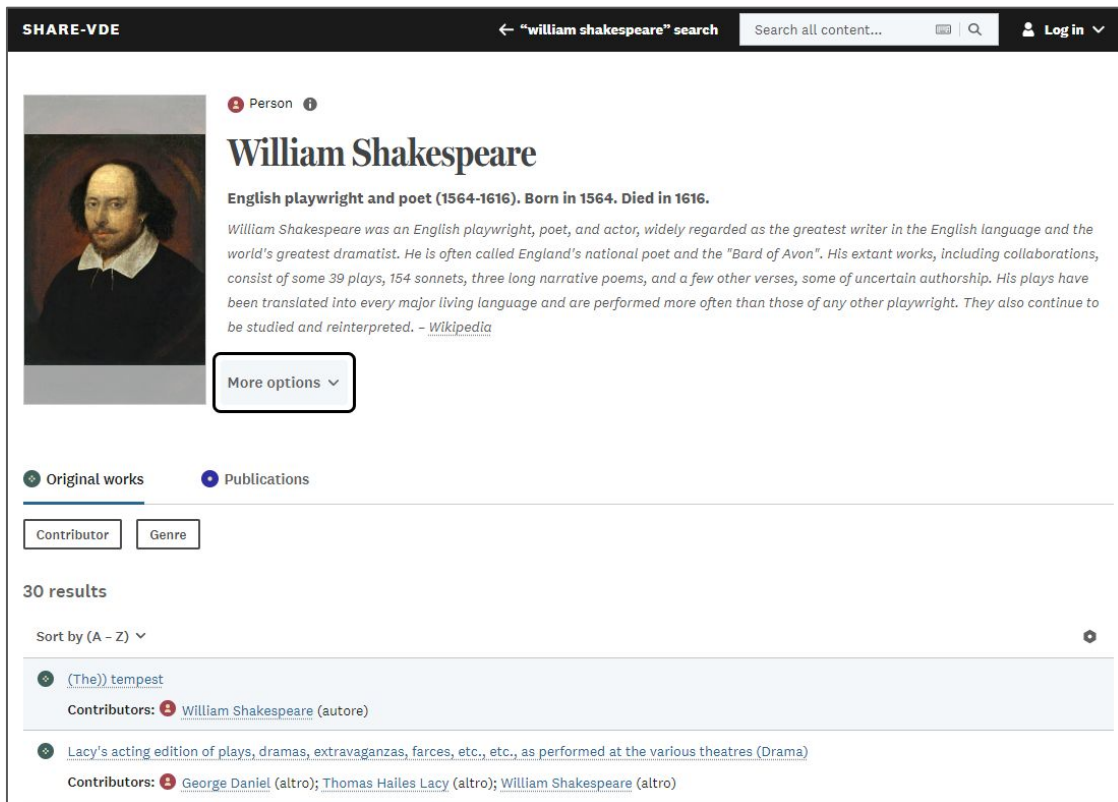
Main outcomes: Share-VDE 2.0 Entity Discovery <https://svde.org>

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

Outcome: SVDE and Share Family Entity Discoveries 2.0



Share-VDE 2.0 Entity Discovery



The screenshot shows the Share-VDE 2.0 interface. At the top, there is a search bar with the text "william shakespeare" and a search button. Below the search bar, there is a profile card for William Shakespeare. The card includes a portrait of Shakespeare, a "Person" icon, and a "More options" button. Below the profile card, there are two tabs: "Original works" and "Publications". Under the "Original works" tab, there are two buttons: "Contributor" and "Genre". Below the buttons, it says "30 results" and "Sort by (A - Z)". The first result is "(The) tempest" with contributors William Shakespeare (autore). The second result is "Lacy's acting edition of plays, dramas, extravaganzas, farces, etc., etc., as performed at the various theatres (Drama)" with contributors George Daniel (altro); Thomas Hailes Lacy (altro); William Shakespeare (altro).

Launched in September 2021 (beta version)

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

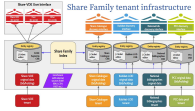
Improved user experience

Back-end infrastructure based on APIs

Initial list of the main features (we are going to see them live)

<https://www.svde.org/about/release-log>

Some of the main features



Release of **Share Family tenants** (beta version): PCC-LOD, Natbib-LOD, Kubikat-LOD



New release of the Entity Discovery Portal 2.0 supporting an enhanced CKB, including (among others):



Instance as entity (aggregation of SVDE institutions' data in a shared Instance, with link to resource in the local OPACs)



Default simple search configuration (plain simple search vs. “OPAC like” search on publications)



Skin portals supporting features specific to the individual skin (e.g. the [British National Bibliography skin](#) within the [Natbib-LOD tenant](#))



Initial version of **Subject management**, including various subject schemes (e.g. National Library of Finland subjects) linked subject strings and the display of concepts



Guiding principles

- present complex data aggregated from different sources and translated into linked data in a simple way (e.g. Google-like search)
- design focus: provide intuitive access to complex data and make BIBFRAME easy to benefit from
- the actual use of the discovery unveils issues that cannot be predicted in advance
→ (a lot of) practice should be combined with theoretical models
- mutual input among SVDE working groups: e.g. SEI group defining the treatment of data impacts the presentation layer of the data on the web discovery portal

Some of the challenges with discovery

ensure smooth user experience AND model interoperability

- end users should understand easily what content and data are represented by an Opus and the resources that embody it
- svde:Opus was chosen as highest level of abstraction

strive to present data typically used by machines in a way that benefits also humans

- the SVDE UX group opted not to render the expression layer on the discovery interface
- so, this data are presented in the Publication layer of the discovery

find a compromise to satisfy professional and generic users

- language and labels of the discovery portal are not pure “library language”: Original Work = svde:Opus which is equivalent to the RDA Work (mostly). Publication is equivalent to the bf:Instance (RDA manifestation) and may list multiple expressions of the work. You can filter by various expression aspects in the filters
- this stems from the analysis by SVDE members and UX designers: we wanted to use labels that can be understood by non-expert users

Live demo



Supporting slides with examples from the SVDE and Share Family entity discoveries



Simple search #2

virginia woolf

All results (3.5K) **People and organizations (693)** Original works (2.8K)

Results for virginia or woolf

Start year End year Location Type Sort by: Name, A-Z ^

693 results

- Person**
Elizabeth Abel
Born in 1945.
Created an original work titled *Virginia Woolf and the fictions of psychoanalysis*.
- Person**
Michael Adams
Born in 1947.
Created an original work titled *Edward Albee's Who's afraid of Virginia Woolf?*.
- Person**
Elina Aho-Pirnes
Created an original work titled *Feminine ways of being in Virginia Woolf's novel To the Lighthouse*.

- filters available on both People and organisations and Original works tabs

- sorting People and organisations tab by alphabetical order we see other results that apparently are not related with the search → explanation of results under the headline

Entity page - Agent



Person ⓘ

Virginia Woolf

English modernist writer. Born in 1882 in London (England). Died in 1941 in Ouse, River (East Sussex, England).

Adeline Virginia Woolf was an English writer, considered one of the most important modernist 20th-century authors and a pioneer in the use of stream of consciousness as a narrative device. – Wikipedia

More options ▾

Original works by | Publications by | Original works about

Filter original works... | Q | Year | Creator | Genre

420 results

Sort by (A - Z) ▾

1 **Common reader, Second series (Essays/Fiction)**

Creators:

- Hogarth Press (other)
- English Culture Class Collection (University of Pennsylvania) (other)
- Culture Class Collection (University of Pennsylvania) (other)
- Sallie Bingham Center for Women's History and Culture (other)
- Gotham Book Mart Collection (University of Pennsylvania) (other)
- Virginia Woolf (author)
- Vanessa Bell (other)
- Andrew McNeillie (other)
- Andrew McNeillie (other)

2 **Songs, Selections (Autobiographies/Ballads/Cantatas/Concertos/Dance music/Dictionaries/Drama/Far (Music)/Operas/Part songs/Revue/Sonatas/Song cycles/Songs/Video recordings/Waltzes (Music)/Poel**

Creators:

Toggle visible columns

- No.
- Title
- Also known as
- Year
- Genre
- Creators
- VIAF ID
- Identifier

Reset Done

Agent page for Virginia Woolf

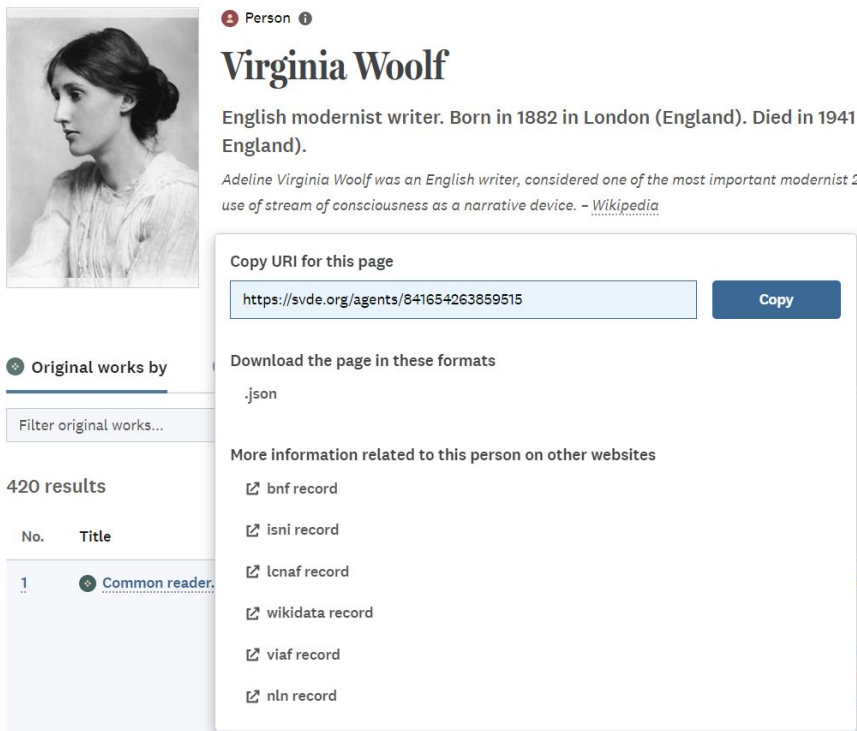
- aggregation of all the info about the author: her works, publications derived from those works, works about the author

- the system pulls in author data from Wikipedia, localised in the language selected for the interface

- additional info can be toggled and record descriptions change dynamically

<https://www.svde.org/virginia-woolf-a841654263859515/original-works-by>

Entity page - Agent



Person

Virginia Woolf

English modernist writer. Born in 1882 in London (England). Died in 1941 in London (England).

Adeline Virginia Woolf was an English writer, considered one of the most important modernist & use of stream of consciousness as a narrative device. - Wikipedia

Copy URI for this page

<https://svde.org/agents/841654263859515> **Copy**

Download the page in these formats

- .json

More information related to this person on other websites

- [bnf record](#)
- [isni record](#)
- [lcnaf record](#)
- [wikidata record](#)
- [viaf record](#)
- [nln record](#)

Original works by

Filter original works...

420 results

No.	Title
1	Common reader

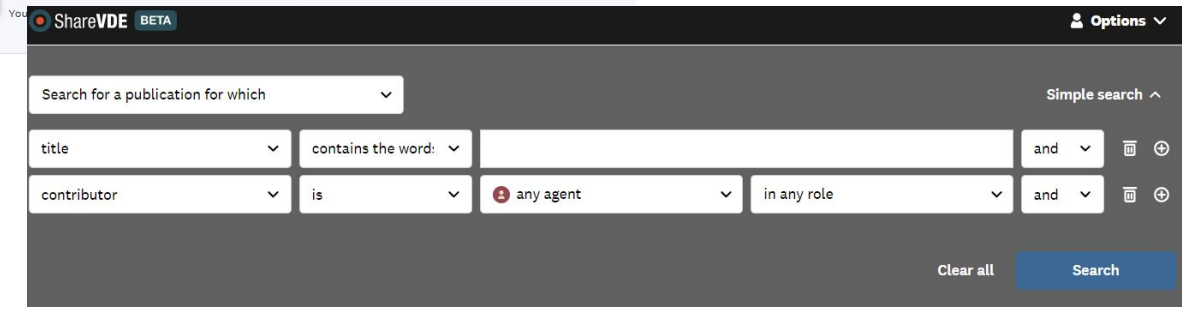
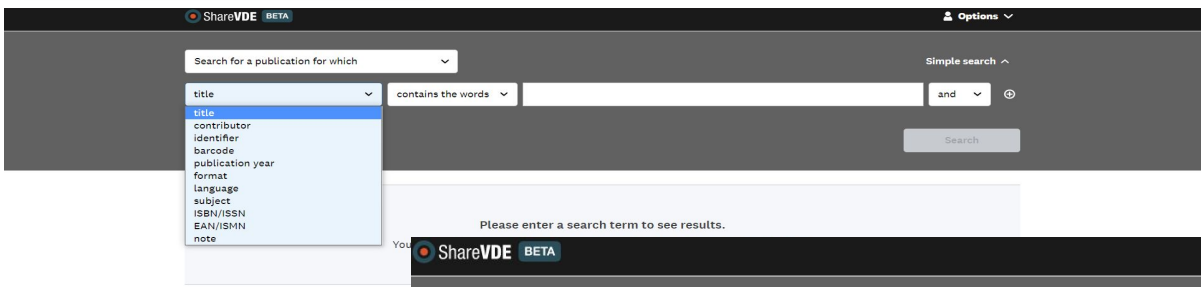
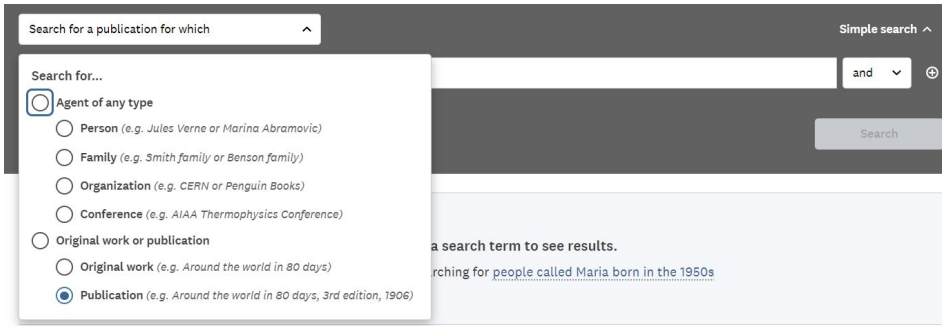
More options button:

- SVDE URI for the entity

- Agent data representation in JSON

- link to IDs from external sources

Advanced search #1



Advanced search for all the entities fully implemented in the system:

- Agent, Original work, Publication

- search for Subjects will be added

- different search parameters can be combined



Advanced search #2

The screenshot shows the ShareVDE interface with the following search criteria:

- Search for a person for whom: [dropdown]
- name: contains the word: foster wallace
- death year: is in a range: from: 2005 to: 2009

Results:

- Person results: 1 result
- Sort by (A - Z)
- Result 1: David Foster Wallace (1962-2008)
 - Also known as: Foster Wallace, David Wallace, D. F.
 - Birth place: 0
 - Death place: 0
 - Notes: 0
 - VIAF ID: [68975157](#)

A 'Toggle visible columns' panel is open, showing the following columns checked:

- No.
- Name
- Also known as
- Birth year
- Death year
- Birth place
- Death place
- Occupation
- Notes
- VIAF ID

Columns not checked: Identifier. Buttons for 'Reset' and 'Done' are visible at the bottom of the panel.

Advanced search for [https://www.svde.org/advanced-search/agents?q=\(name+contains+foster+wallace\)+and+\(date+end+is+in+a+range+2007-2008\)](https://www.svde.org/advanced-search/agents?q=(name+contains+foster+wallace)+and+(date+end+is+in+a+range+2007-2008))

- toggle extra info e.g. VIAF ID, Also known as

Entity page - Original work (= svde:Opus)

ShareVDE BETA

← László Krasznahorkai search Search all content... Options

László Krasznahorkai > "Ellenállás melankóliája"

Volume 1

Ellenállás melankóliája

Fiction/novel written by László Krasznahorkai.

Also known as: *Az ellenállás melankóliája*; *Ellenállás melankóliája*; *Ellenállás melankóliája*; *Melancholy of resistance*

This is part of the series [New Directions paperback](#).

More options

Publications of this

Related agents

Filter publications...



Publication year

Publication place

Contributor

Type

Language

11 results

Sort by (A - Z)

1 [The melancholy of resistance \(Volume in English, published in 2016.\)](#)

Contributors:

- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [Tuskar Rock Press](#) (publisher)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

2 [The melancholy of resistance \(Volume in English, published in 1998.\)](#)

Contributors:

- [Quartet Books](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [George Szirtes](#) (translator)

Sort by (A - Z)

5 [Az ellenállás melankóliája \(Volume in Hungarian, published in 1989.\)](#)

Contributors:

- [László Krasznahorkai](#) (author)
- [Magvető Könyvkiadó](#) (publisher)

6 [The melancholy of resistance \(Volume in English, published in 1998.\)](#)

Contributors:

- [Quartet Books](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

7 [Motståndets melankoli \(Volume in Swedish, published in 2014.\)](#)

Contributors:

- [Norstedts](#) (publisher)
- [Daniel Gustafsson Pech](#) (translator)
- [László Krasznahorkai](#) (author)

8 [The melancholy of resistance \(Volume in English, published in 2016.\)](#)

Contributors:

- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)
- [Tuskar Rock Press](#) (publisher)
- [George Szirtes](#) (translator)
- [László Krasznahorkai](#) (author)

9 [Melanholija soprotivlenija : roman \(Volume in Russian, published in 2020.\)](#)

Contributors:

- [Izdatel'stvo AST](#) (publisher)
- [Vjatšeslav Sereda](#) (translator)

10 [Az ellenállás melankóliája \(Volume in Hungarian, published in 1989.\)](#)

Contributors:

- [László Krasznahorkai](#) (author)
- [Magvető Könyvkiadó](#) (publisher)

11 [The melancholy of resistance \(Volume in English, published in 2000.\)](#)

Contributors:

- [New Directions](#) (publisher)
- [Gotham Book Mart Collection \(University of Pennsylvania\)](#) (other)

Entity page - Original work (= svde:Opus)

David Foster Wallace > "Infinite Jest"

Infinite Jest
1996 novel by David Foster Wallace.
Infinite Jest is a 1996 novel by American writer David Foster Wallace. Categorized as an encyclopedic novel, *Infinite Jest* is featured in *TIME* magazine's list of the 100 best English-language novels published between 1923 and 2005. - [Wikipedia](#)

More options ▾

Publications of this Related agents

Filter publications... Q Publication year Format Publication place Contributor Language

11 results

Sort by (A - Z) ▾

1 **Infinite Jest : a novel (Volume in English, published in 2016.)**
Contributors:
Back Bay Books, Little, Brown and Company (publisher)
Back Bay Books (publisher)
Gotham Book Mart Collection (University of Pennsylvania)
David Foster Wallace (author)
Back Bay Books, an imprint of Little, Brown and Company

2 **Infinite Jest : a novel (Volume in English, published in 1996.)**
Contributors:
Gotham Book Mart Collection (University of Pennsylvania)
David Foster Wallace (author)
Little, Brown and Company (publisher)

11 results

Sort by (A - Z) ▾

1 **Infinite Jest : a novel (Volume in English, published in 2016.)**
Contributors:
Back Bay Books, Little, Brown and Company (publisher)
Back Bay Books (publisher)
Gotham Book Mart Collection (University of Pennsylvania) (other)

More options ▾

Copy URI for this page
<https://svde.org/opuses/841654265592866> Copy

Download the page in these formats
.json

More information related to this original work on other websites
viaf record
bnf record
Icnaf record

Filter for connected Publication data

Related agents

More options button:

- SVDE URI for the entity

- Original work data representation in JSON

- link to records from external sources

<https://www.svde.org/infinite-jest-david-foster-wallace-o841654265592866/library-publications>

Entity page - Publication (~ bf:Instance)

ShareVDE BETA

Name contains the words **foster wallace** search Search all content... Options

David Foster Wallace > Infinite Jest > Infinite Jest : a novel (2016 edition in English)

Publication

Infinite Jest : a novel (2016 edition in English)

Volume, Published in English

Back Bay Books, and Back Bay Books, an imprint of Little, Brown and Company.

Contributors

Gotham Book Mart Collection (University of Pennsylvania)

ISBN: 9780316306058

Identifier: p137165+086963191

Notes: "Originally published in hardcover by Little, Brown and Company, February 2016"--Title page verso.

Bibliographic level: Monograph

Cataloging source: YDXCP

Descriptive cataloging form: ISBD

Dimension: 23 cm

Edition statement: Back Bay 20th anniversary paperback edition.

Encoding level: Full

Extent: xv, 1079 pages ;

Record status: Corrected or revised

Responsibility statement: David Foster Wallace ; foreword by Tim Bissell.

System control number: (OCoLC-M)913135859, (OCoLC)ocn913135859

Available at 2 libraries More options

https://www.svde.org/infinite-je-st-david-foster-wallace-0841654265592866

Instance cluster:

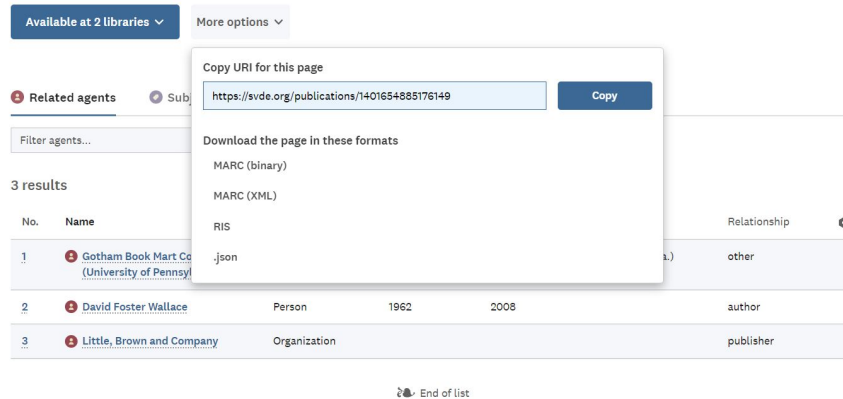
- created with data contributed by all SVDE libraries. The description refers to the common Instance cluster
- breadcrumb retains relationship and shows snippet / preview of the content of connected entities on mouse over
- "Available at" function that enable connections with local library environments or connected services, including the link to the local OPACs and optionally interactive features like circulation request buttons

Available at 2 libraries More options

UPenn Libraries

Stanford Libraries

Entity page - Publication (~ bf:Instance)



The screenshot shows a web interface for an entity page. At the top, there are two buttons: 'Available at 2 libraries' and 'More options'. The 'More options' dropdown menu is open, showing a 'Copy URI for this page' section with a text input field containing the URL 'https://svde.org/publications/1401654885176149' and a 'Copy' button. Below this, there is a section for 'Download the page in these formats' with links for 'MARC (binary)', 'MARC (XML)', 'RIS', and '.json'. The main content area shows a table with 3 results. The table has columns for 'No.', 'Name', 'Person', 'Organization', 'Date', and 'Relationship'. The first result is 'Gotham Book Mart Co (University of Pennsylvania)'. The second result is 'David Foster Wallace' with 'Person' type, '1962' birth date, and '2008' death date, and 'author' relationship. The third result is 'Little, Brown and Company' with 'Organization' type and 'publisher' relationship.

No.	Name	Person	Organization	Date	Relationship
1	Gotham Book Mart Co (University of Pennsylvania)				other
2	David Foster Wallace	Person		1962 2008	author
3	Little, Brown and Company		Organization		publisher

More options button:

- SVDE entity URI

- data representation in different formats including JSON, MARC, MARCXML, RIS (other linked-data based representation formats are in progress, including JSON-LD, RDF XML, N-triples, N3, Turtle, N-Quads, TriX, TriG).

<https://www.svde.org/infinite-jest-a-novel-p1401654885176149/subjects>

Subjects and Concepts

Related agents Subjects

45 results

No.	Subject	Concepts	Subject provenance
1	FICTION (Topical subject)		University of Pennsylvania
2	Family life > Fiction (Topical subject)	Family life (Topic) Fiction (Genre)	University of Pennsylvania
3	Motion pictures > Fiction (Topical subject)	Motion pictures (Topic) Fiction (Genre)	University of Pennsylvania
4	Compulsive behavior (Topical subject)		University of Pennsylvania
17	Tennis > Fiction (Topical subject)	Tennis (Topic) Fiction (Genre)	Library of Congress
18	Compulsive behavior > Fiction (Topical subject)	Compulsive behavior (Topic) Fiction (Genre)	University of Alberta
19	Addicts > Fiction (Topical subject)	Addicts (Topic) Fiction (Genre)	University of Alberta
20	Compulsive behavior (Topical subject)		University of Alberta
21	Comportement compulsif > Romans, nouvelles, etc (Topical subject)	Comportement compulsif (Topic) Romans, nouvelles, etc (Genre)	University of Alberta
22	Addicts (Topical subject)		University of Alberta
23	englannin kieli (Topical subject)		National Library of Finland
24	kaunokirjallisuus (Topical subject)		National Library of Finland
25	englanninkielinen kirjallisuus (Topical subject)		National Library of Finland

Subject entity - initial version:

- aggregates all subjects pertaining to the resource

- Concepts are the pieces that form a subject string and in SVDE they are entities of their own (initial version of Concepts that we will expand further)

- clicking on a Subject, the user is redirected to the resources attached to that Subject

Tracking of Provenance:

- the system can be queried via API to return the bibliographic records of a given Provenance (= institution) connected to an Instance

- On the interface it shows which institutions have contributed to a linked data cluster, or to subjects

- Provenance is key to support the editing of linked data entities with J.Cricket, to track updates and collaborative services

<https://www.svde.org/infinite-jest-a-novel-p1401654885176149/subjects>

Subjects and Concepts

Subject

Family life > Fiction

University of Pennsylvania

Concepts
Family life (Topic)
Fiction (Genre)

More options

Original works about

Year Creator Genre

97 results

Sort by (A - Z)

- Akin (Fiction/Novel)**
Creators:
Emma Donoghue (author)
VIAF ID:
- Gnomes and their families (Fiction)**
Creators:
Wil Huygen (other)
James Diaz (illustrator)
Rien Poortvliet (author)
VIAF ID:
- When Dimple met Rishi (Fiction/Novel)**
Creators:

- Initial version of Subject entity page, including subject strings linked in the Subject tab of the Publication page and the display of concepts

- Concepts are the pieces that form a subject string and in SVDE they are entities of their own (initial version of Concepts that we will expand further)

<https://www.svde.org/family-life-fiction-s1031654873687244/original-works-about>

Interesting Instance entity example

Rae R. Newton > "Your statistical consultant" > "Your statistical consultant : answers to your..."

Publication

Your statistical consultant : answers to your data analysis questions

Volume. Published in English in 1999 in Thousand Oaks (Ventura County, Calif.) by Universidade Federal do Rio de Janeiro. Laboratório de Sistemas Avançados de Gestão da Produção and Sage Publications.

Contributors

[Kjell Erik Rudestam](#)

ISBN: 0803958226

Identifier: p26341656929688702

Notes: ill. ; ill. ; kuvitettu

Bibliographic level: Monograph, Monograph

Cataloging source: DLC, DLC

Descriptive cataloging form: AACR, AACR, ISBD

Dimension: 24 cm.

Encoding level: Core, Core, Full

Extent: xxii, 313 p. :

Record status: Corrected or revised, Corrected or revised, Increase in encoding level from prepublication

Responsibility statement: Rae R. Newton, Kjell Eric Rudestam., Rae R. Newton, Kjell Erik Rudestam.

System control number: 40550891, (FI-MELINDA)000300742, ocn:40550891

Available at 5 libraries

Publisher description

More options

Copies of this publication

Related agents

Subjects

1 result

No.	Title	Library	Call no.	Availability status	Barcode
1	Copy no. I45921660982738584	NYU	MAIN HA29 .N458 1999	Data not available	

<https://www.svde.org/your-statistical-consultant-answers-to-your-data-analysis-questions-p26341656929688702/subjects>

- many libraries contributed to this cluster
- subjects have different provenances
- initial rough display of item data
- additional resources extracted from the resource information, e.g. ToC, Publisher description etc.
- known issues: duplicated fields
- Provenance is retained in the system back-end along with original library records → key to support the editing of linked data entities with J.Cricket, to track updates and collaborative services

Other entities

ShareVDE BETA Search all content... Options

Christopher Tolkien "History of Middle-Earth"

Series of original works

History of Middle-Earth

Series of indexes/statistics original works by Christopher Tolkien.
Also known as: History of Middle-Earth; History of Middle-Earth index

More options

Original works in this series Publications of this Related agents

Filter original works... Year Creator Genre

21 results

No.	Title	Year	Genre	Creators
1	Lost road and other writings		Fiction	J. R. R. Tolkien (author) Christopher Tolkien (other)
2	Peoples of Middle-earth		Fiction	J. R. R. Tolkien (author) Christopher Tolkien (other)
3	Lays of Beleriand		Novel	J. R. R. Tolkien (author)

Original work of type Series connected to all the Original works of the series volumes

<https://svde.org/opuses/961654264848228>

Other discovery features and front-end design

Lord of the rings, the fellowship of the ring
Motion picture music.

Original work

The lord of the rings
Video recordings.

Original work

Lord of the rings
Blues (music)/fiction/video recordings/wall charts/motion picture music.

Original work

Lord of the Rings
Motion picture music.

Original work

The lord of the rings. The two towers
Written by [J. R. R. Tolkien.](#)

Original work

Lord of the rings, the return of the king
Motion picture music.

Person

J. R. R. Tolkien

English philologist and author (1892–1973). Born in Bloemfontein, Etelä-Afrikka. Died in Bournemouth, Englanti.

John Ronald Reuel Tolkien was an English writer and philologist. He was the auth... -

NLN | Catalog BETA

Søk etter personer, originale

f.eks. [Jules Verne](#) eller [Jorde](#)

Velg språk

- Dansk
- Deutsch
- English
- Español
- Français
- Italiano
- Norsk bokmål

Fargetema

Layoutbredde

Fonttykkelse

Avanserte alternativer for bibliotekarere

Vis entitetenes ID

Utforsk bibliotekdataene til de 20+ Share

← Tilbake til National Library of Norway Les mer Alternativer ^

Hover over linked information and the system loads info, snippet or even photo from Wikipedia extracted by matching the Wikipedia ID

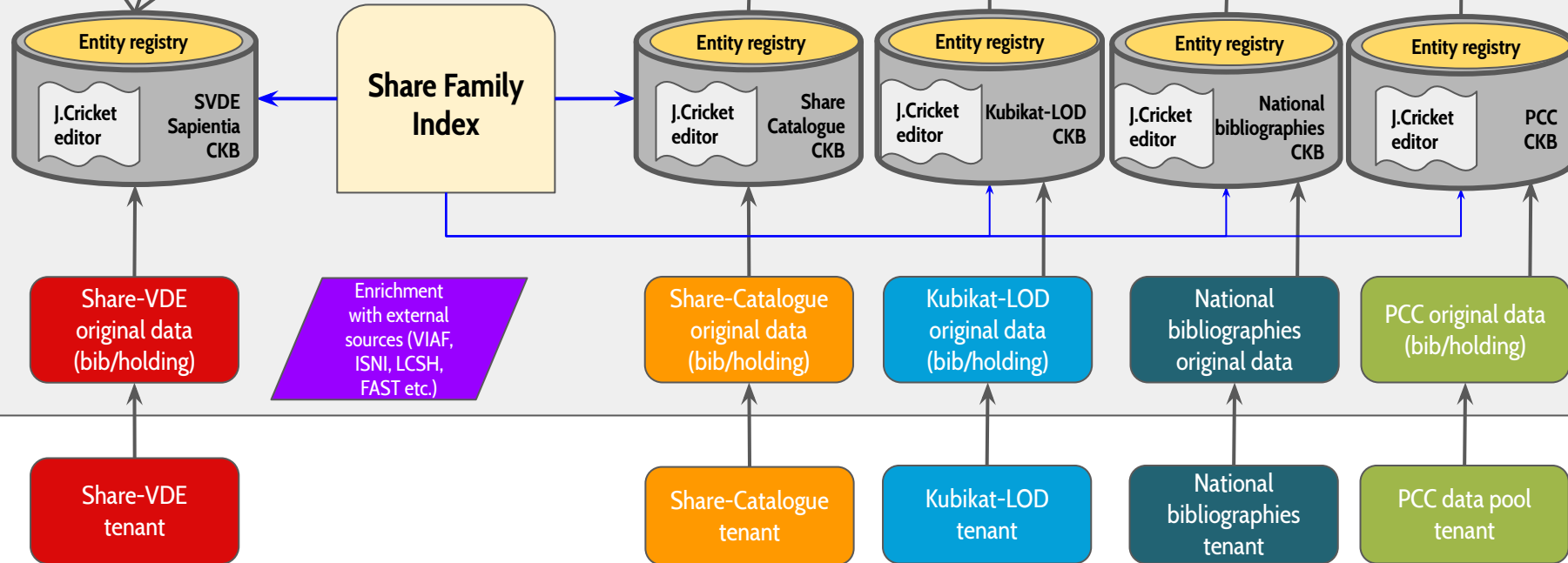
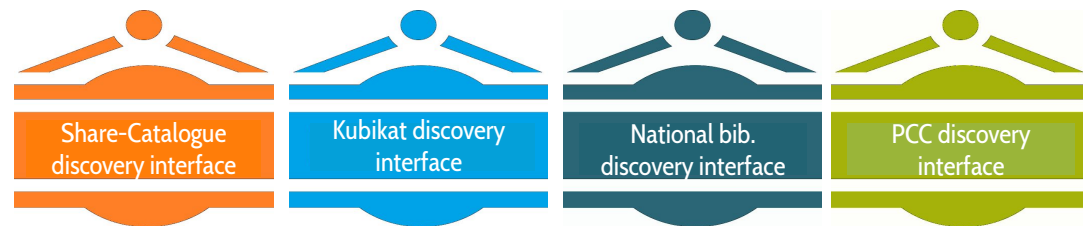
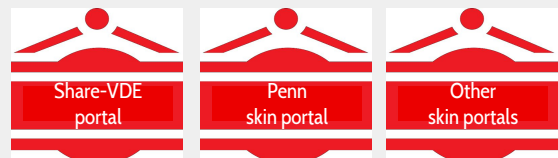
Localisation: discovery portal available in multiple languages

Accessibility features (color themes, layout, font)

Layout can change dynamically depending on what data the user wants to see: from table list layout to card list layout

Share Family tenant infrastructure

Share-VDE User Interface



Share Family tenant infrastructure

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

Skin portals

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

Live tenants and skin portals

- **SVDE tenant** - www.svde.org => with LC's authority data and the bibliographic data of member institutions
 - skin portals including: [Penn](#), [Smithsonian](#), [Stanford](#), [University of Alberta](#), [New York University](#), [National Library of Norway](#), [National library of Finland](#) (other skin portals will be set up following the load of libraries' catalogues to svde.org)
- **PCC tenant** - <https://pcc-lod.org> => with the PCC datapool
- **National Bibliographies tenant** - <https://natbib-lod.org>
with the skin for the British National Bibliography <https://bl.natbib-lod.org> (*)
- **Kubikat LOD pilot tenant** - <https://kubikat-lod.org>
Kubikat art history libraries group

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

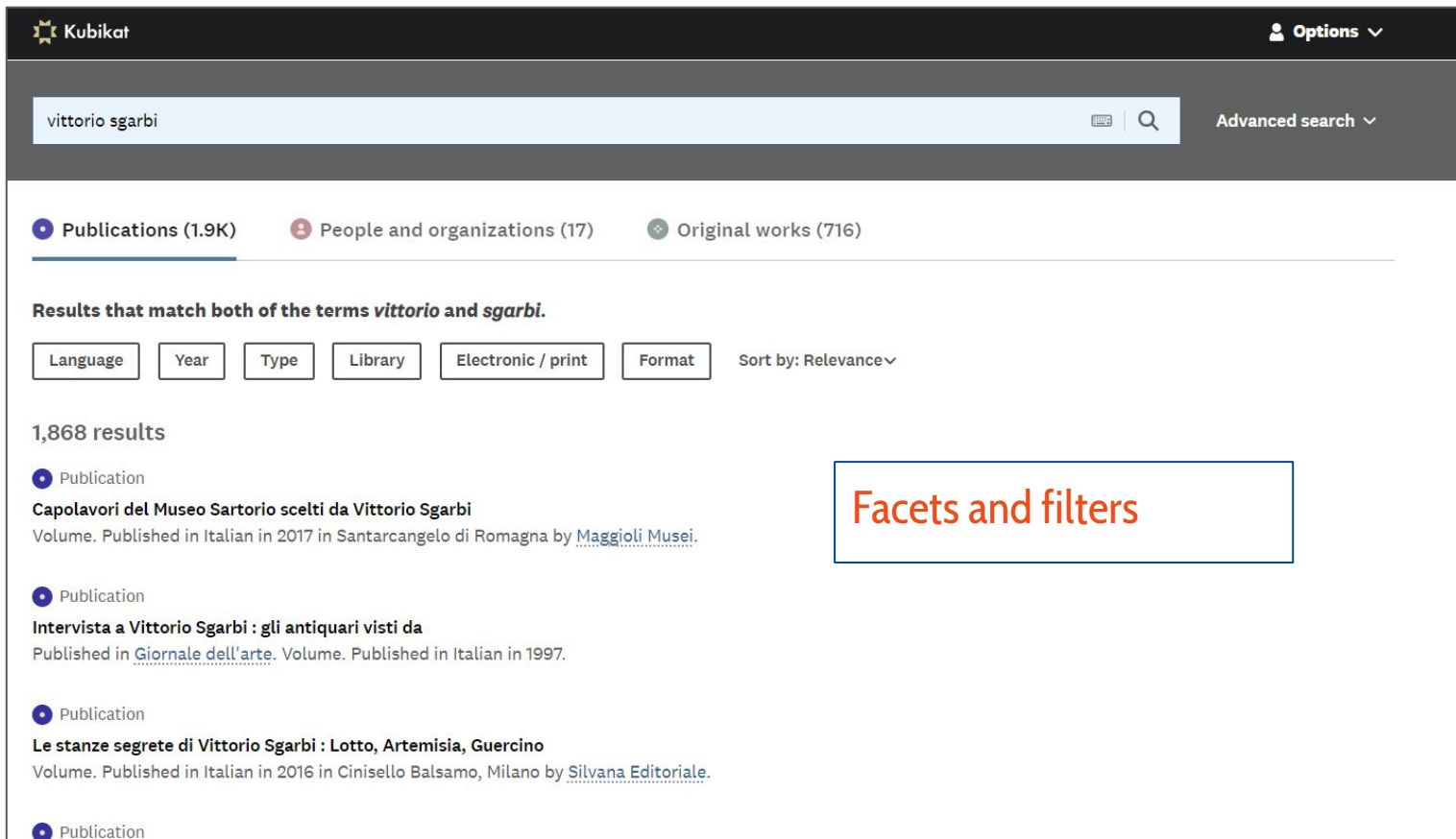
Maximise efforts - Promote autonomy

The main purpose of this centralized architecture is to ensure **long-term sustainability** while promoting the **autonomy** of each [tenant](#).

To foster this vision, it is essential to avoid ad hoc developments while ensuring the ability of local customizations. This flexibility is achieved through mechanisms that allow each tenant to selectively enable functions according to the purpose:

- on/off mechanism
- optional default configurations
- local features/services

On/Off mechanism example



The screenshot shows a search interface for 'vittorio sgarbi' on the Kubikat platform. The search bar contains the text 'vittorio sgarbi' and a search icon. To the right of the search bar is an 'Advanced search' dropdown menu. Below the search bar, there are three tabs: 'Publications (1.9K)', 'People and organizations (17)', and 'Original works (716)'. The 'Publications (1.9K)' tab is selected. Below the tabs, there is a section titled 'Results that match both of the terms vittorio and sgarbi.' This section contains a row of filters: 'Language', 'Year', 'Type', 'Library', 'Electronic / print', and 'Format'. To the right of these filters is a 'Sort by: Relevance' dropdown menu. Below the filters, there is a section titled '1,868 results'. This section contains three results, each with a 'Publication' icon and a title. The first result is 'Capolavori del Museo Sartorio scelti da Vittorio Sgarbi', the second is 'Intervista a Vittorio Sgarbi : gli antiquari visti da', and the third is 'Le stanze segrete di Vittorio Sgarbi : Lotto, Artemisia, Guercino'. Each result also includes a brief description of the publication.

Kubikat Options

vittorio sgarbi Advanced search

Publications (1.9K) People and organizations (17) Original works (716)

Results that match both of the terms *vittorio* and *sgarbi*.

Language Year Type Library Electronic / print Format Sort by: Relevance

1,868 results

Publication
Capolavori del Museo Sartorio scelti da Vittorio Sgarbi
Volume. Published in Italian in 2017 in Santarcangelo di Romagna by [Maggioli Musei](#).

Publication
Intervista a Vittorio Sgarbi : gli antiquari visti da
Published in [Giornale dell'arte](#). Volume. Published in Italian in 1997.

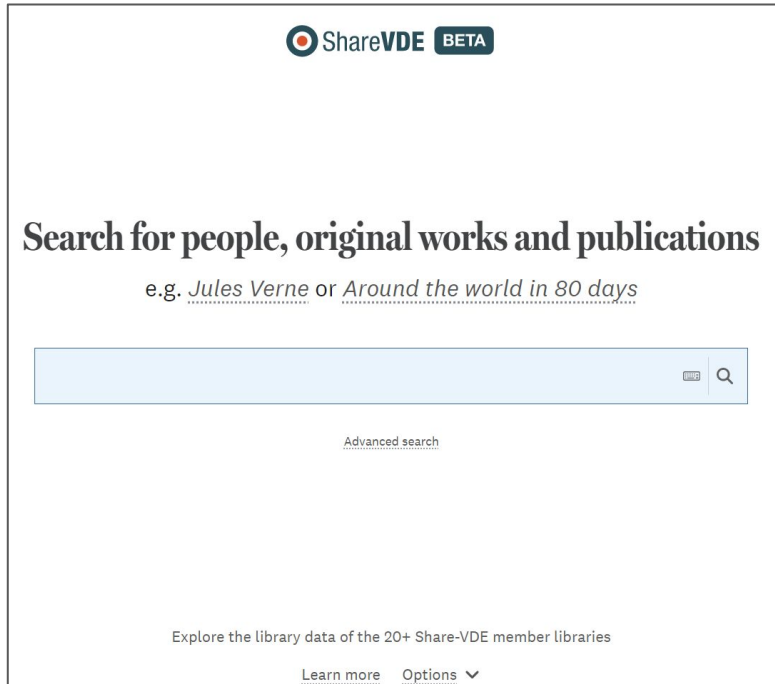
Publication
Le stanze segrete di Vittorio Sgarbi : Lotto, Artemisia, Guercino
Volume. Published in Italian in 2016 in Cinisello Balsamo, Milano by [Silvana Editoriale](#).

Publication

Facets and filters

Default configuration: SVDE and PCC data pool

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



ShareVDE BETA

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

[Advanced search](#)

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

[Learn more](#) [Options](#) ▾



THE PCC CATALOG BETA

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

[Advanced search](#)

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

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

Default configuration: British National Bibliography

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

The screenshot shows the top of the British National Bibliography website. The logo features the text 'BRITISH NATIONAL BIBLIOGRAPHY' in a bold, black, sans-serif font, with 'BRITISH LIBRARY' in a smaller font to its left. A 'BETA' badge is positioned to the right of the main title. Below the logo is a search bar with the placeholder text 'e.g. the hitchhiker's guide to the galaxy adams'. To the right of the search bar is a magnifying glass icon. Below the search bar are three filter buttons: 'Language', 'Year', and 'Type'. Further down, there is a link for 'Advanced search'. At the bottom of the page, there is a footer with the text 'Explore linked open data for books and journals published or distributed in the United Kingdom and Ireland since 1950, and electronic publications since 2013' and navigation links: '← Back to British Library', 'Learn more', and 'Options'.

The screenshot displays a detailed record for a publication titled 'Fruit of the lemon'. The title is prominently displayed at the top. Below it, the volume information is provided: 'Volume. Published in English in 2006 in Leicester by Charnwood.' A list of identifiers follows, including ISBN (1846171229), BNB (GSA586210), and an identifier (p1891653381779206). Other details include 'Notes: ill.', 'Acquisition term: 618.99', 'Bibliographic level: Monograph', 'Cataloging source: StDuBDS', 'Descriptive cataloging form: AACR', 'Dimension: 24 cm.', 'Edition statement: Large print ed.', 'Encoding level: Full', and 'Extent: 413 p. (large print)'. The record status is noted as 'Increase in encoding level from prepublishing' and the responsibility statement is 'Andrea Levy'. A 'Copy URI for this page' section provides the URL 'https://natbib-lod.org/publications/1891653381779206' and a 'Copy' button. Below this, there is a section for 'Download the page in these formats' with options for .json, MARC (binary), MARC (XML), and RIS. At the bottom, there are tabs for 'Related agents' and 'Subjects', with a search box for 'Filter agents...'.

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



Default simple search configuration: the BNB

BRITISH NATIONAL BIBLIOGRAPHY BETA

Search for people, original works and publications

Publications Original works People and organizations

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

Language Year Type

[Advanced search](#)

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

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

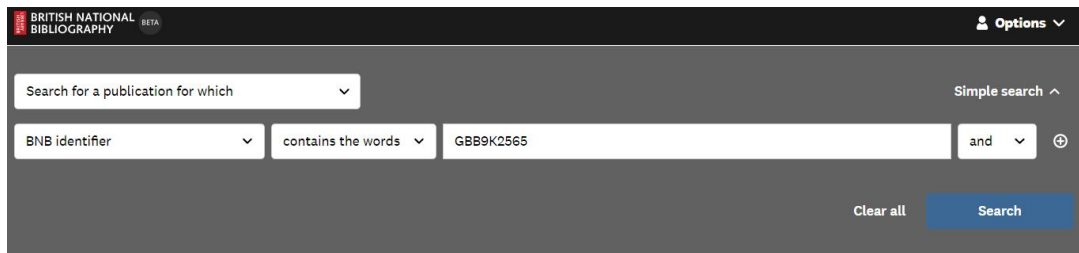
Simple search default configuration on [Natbib tenant](#) and the [BNB - British National Bibliography skin](#)* is set to Publications search, instead of the SVDE default.

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

Different communities or types of institutions might need customised features

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

Support for ad hoc use cases



BRITISH NATIONAL BIBLIOGRAPHY BETA Options

Search for a publication for which Simple search

BNB identifier contains the words GBB9K2565 and

Clear all Search

Publication results

1 result

Sort by (A - Z)

1 [Return to Stringybark Creek \(Online resource in English, to be published.\)](#)

Contributors:

[Karyl Lane](#) (author)

[George Allen & Unwin Ltd](#) (publisher)

End of list

Implemented search for local ID (BNB number identifying all resources stored in this tenant)

[https://bl.natbib-lod.org/advanced-search/publications?q=\(nbn+contains+GBB9K2565\)](https://bl.natbib-lod.org/advanced-search/publications?q=(nbn+contains+GBB9K2565))

Support for ad hoc use cases

Karly Lane > "Return to Stringybark Creek" > 2019 edition in English

Publication ⓘ

Return to Stringybark Creek

Novel. Online resource. To be published in English in Sydney by George Allen & Unwin Ltd.

ISBN: 9781760872984

BNB: GBB9K2565

Identifier: p1901653378603115

Notes: Description based on CIP data; resource not viewed.

Acquisition term: £10.43

Bibliographic level: Monograph

Cataloging source: StDuBDS

Descriptive cataloging form: ISBD

Encoding level: Prepublication CIP

Extent: 1 online resource

Projected publication date: 201912

Responsibility statement: Karly Lane.

Explore the BNB at the British Library ↗

More options ▾

Display the information that the resource is a CiP record (Catalogue in Publication), ie. it has not been published yet (ad hoc data treatment was done to cover this case)

<https://bl.natbib-lod.org/return-to-stringybark-creek-p1901653378603115/related-agents>

Going forward with discovery...



Identify areas for improvement

The elaboration of data from many sources and the creation of millions (and millions) of entities needs a consistent presentation layer for all cases

- e.g. in bibliographic models *series* are typically at abstract work level (ie. svde:Opus) → this creates Instances tied to more than one svde:Opus
- this is material for the SVDE SEI working group to define and give input to UX on how to render multiple Opuses

Continuous optimisation of:

- system performance
- ranking and relevance of search results based on users' feedback

Other known issues are being collected by the SVDE UX-UI group that will give input for enhancements

Local services: University of Pennsylvania

The screenshot shows the Penn Libraries Catalog interface. At the top, there is a search bar with the text "Search all content..." and a "Log in" button. Below the search bar, the breadcrumb navigation shows "William Shakespeare" and "Hamlet". The main content area features a book cover for "THE Tragicall Historie of HAMLET, Prince of Denmark." by William Shakespeare. To the right of the cover, the title "Hamlet" is displayed in a large font, followed by "Written by William Shakespeare in English". Below this, a paragraph of text describes the play: "The Tragedy of Hamlet, Prince of Denmark, often shortened to Hamlet ('hæmlit'), 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](#)". There are two buttons: "Read online now" and "Get it now at Van Pelt", along with a "More options" dropdown. Below the main content, there are two tabs: "Library-held publications of Hamlet" (selected) and "Related Original Works". Under the selected tab, it says "8 results". There is a search bar for filtering publications and several filter buttons: "Availability", "Language", "All filters", and a toggle for "Held at Penn". Below the filters is a table with the following data:

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 integration with local services - lending

The screenshot shows the Penn Libraries Catalog interface. A modal window is open over a search result for 'Hamlet: Second quarto'. The modal contains the following information:

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

Below the text, there are three radio button options:

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

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

The background shows the catalog search results for 'William Shakespeare'. The first result is 'Hamlet: Second quarto' by Michael Heppell, published in English in Penn, available online. The second result is 'Hamlet: First quarto' by Michael Heppell, published in English in Penn, available online. The third result is 'Hamlet: Second quarto' by Michael Heppell, published in English in Penn, available online. The fourth result is 'Hamlet: First quarto' by Michael Heppell, published in English in Penn, available online. The fifth result is 'Hamlet: Second quarto' by Michael Heppell, published in English in Penn, available online. The sixth result is 'Hamlet: First quarto' by Michael Heppell, published in English in Penn, available online. The seventh result is 'Hamlet: Second quarto' by Michael Heppell, published in English in Penn, available online. The eighth result is 'Hamlet: First quarto' by Michael Heppell, published in English in Penn, available online.

Future updates

The recorded live demo will be updated as soon as new functions will be available for the Share-VDE and Share Family entity discovery portals

Share the live demo: <https://bit.ly/SVDE-discovery-live-demo>

Share!

Additional materials for reference



J.Cricket - collaborative entity editing use case



From linked data publication to linked data editing

SHARE-VDE Search all content...

Person
William Goulding
British novelist, poet, playwright and Nobel Prize for Literature laureate

Sir William Gerald Golding, 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 Golding	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

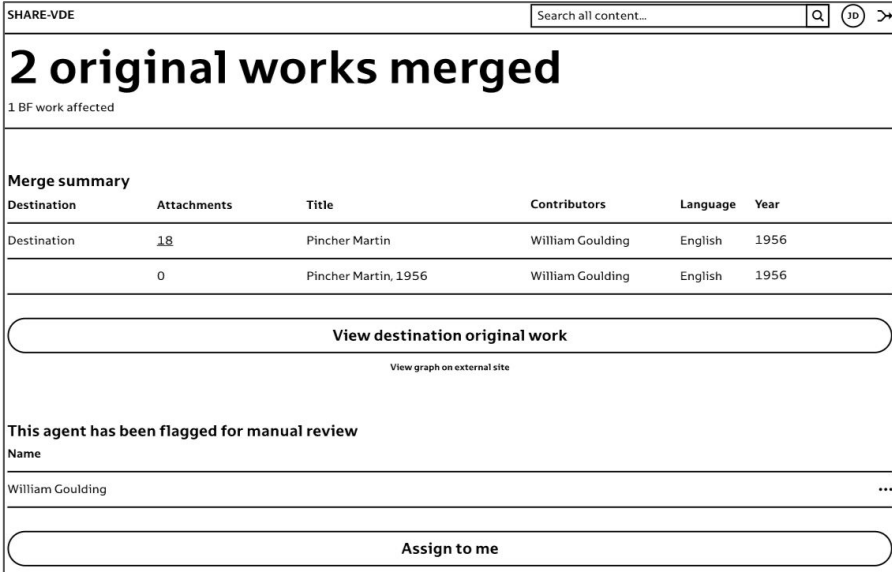
2 original works selected View selected ▾ Deselect all Add relationship Merge Add to my merge list

The Share family platform is evolving from a discovery environment that converts traditional 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 the clusters of data in a collaborative and integrated environment.

From linked data publication to linked data editing

The editing tool J.Cricket will allow for editing the Cluster Knowledge Base of each tenant where it is installed, enabling several actions on the clusters (entities) saved in the 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 🔍 ⓘ ➔

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](#)

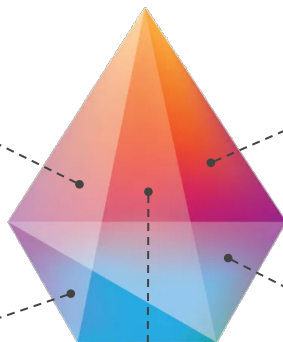
J.Cricket 1.1.0: Features Recap


- **AAA:** Authentication + Authorization + Auditing
- **Cluster Status API**
- **Edit Cluster**
 - real time notifications (through GraphQL subscriptions) about cluster property changes
- **Merge:** C1, C2, C3 => ~~C1~~, ~~C2~~, C3
 - Multiple phases: create the merge list, edit the merge list, edit clusters, request for review, approve (or deny the merge)
- **Split (Cluster):** C1 => C1, C2
 - C2 could even be a new cluster
 - Multiple phases: create the split-set, edit the split-set, edit clusters, request for review, approve (or deny the merge)
- **Dictionary API:** What are the available cluster types? Which attributes belong to a cluster type? Which relationships? Given an attribute, which is its cardinality? Is it mandatory or not?
- **Data changes synchronization across Share-VDE storages (e.g. RDF Store, Search Engine, RDBMS)**
- **Entity Event Log (aka cluster changes):** give me the history of changes of a given cluster
- **User notifications:** for managing the merge/split review lifecycle


Share-VDE Cluster: the Prism

 P1	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201

 P2	
title	Alice in wonderland
titleAlternative	Alice's adventures under ground
author	https://svde.org/people/201



 P3	
title	Alice in wonderland

 P4	
title	Alice's adventures under ground
titleAlternative	Journeys in Wonderland
author	https://svde.org/people/201

		
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

How J.Cricket will interact with Wikidata


← → Connect external IDs · Share-VDE


Share-VDE


Connect to external IDs

Name

OCLC VIAF **Wikidata** LC GND BNF Other...

 **Isaiah Thomas** (or Isaiah Jamar Thomas)
American basketball player · Born 1989
Q336030 [✎](#)
★ VIAF ID match

 **Isaiah Thomas** (or Isaiah Thomas, Sr. · I. Thomas · I. T. · T. I.)
Massachusetts printer, publisher and journalist · 1749-1831
Q15503493 [✎](#)
✔ Birth place match

 **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

J.Cricket - Postponed Features

- Create new Cluster
- Split cluster outputs n clusters ($n \geq 2$)
- Unauthorized users should be able to request changes to entities
- Ad-hoc alert system for misaligned clusters with respect to bibliographic records

Next generation cataloguing

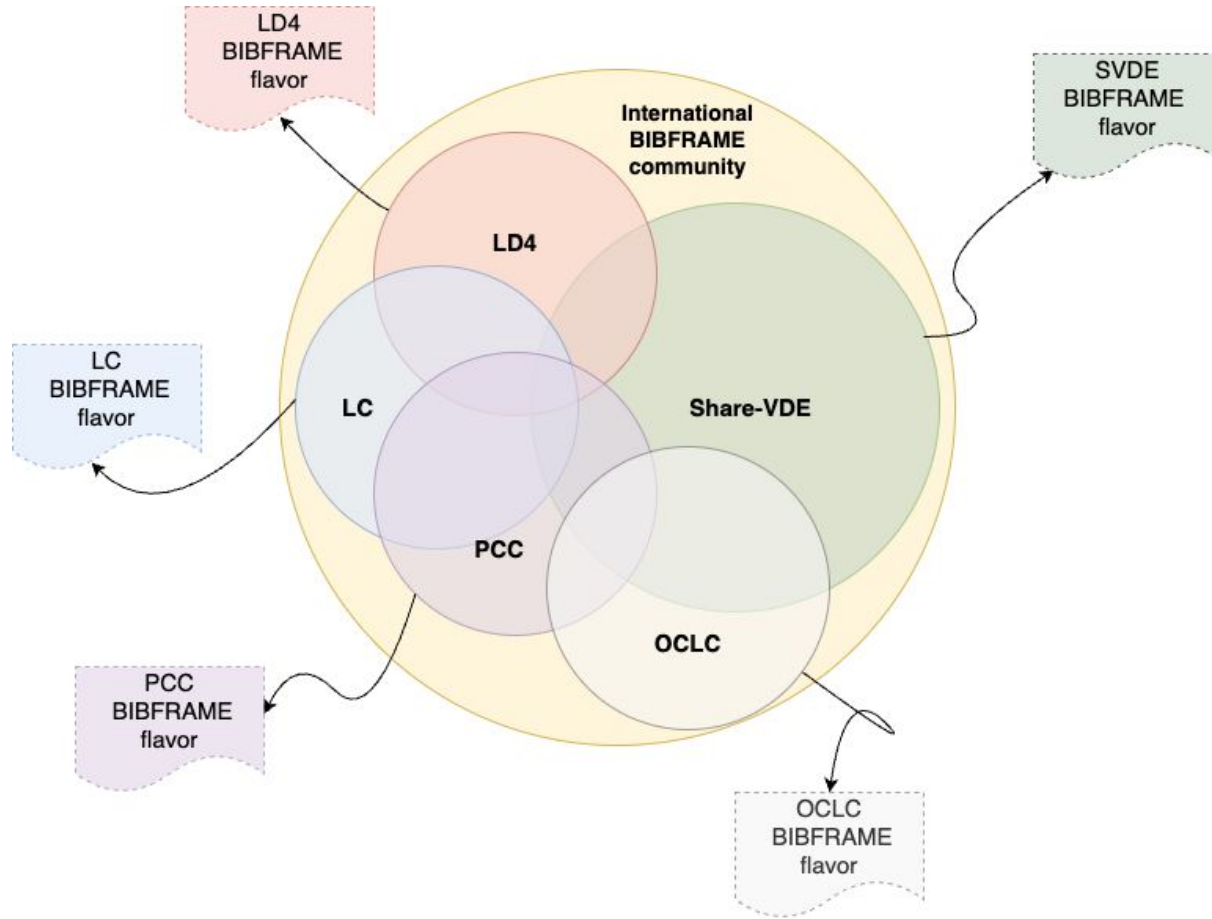
The J.Cricket editor is an example of how the Share Family of initiatives is pursuing a new way of managing library cataloguing in a cooperative way:

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

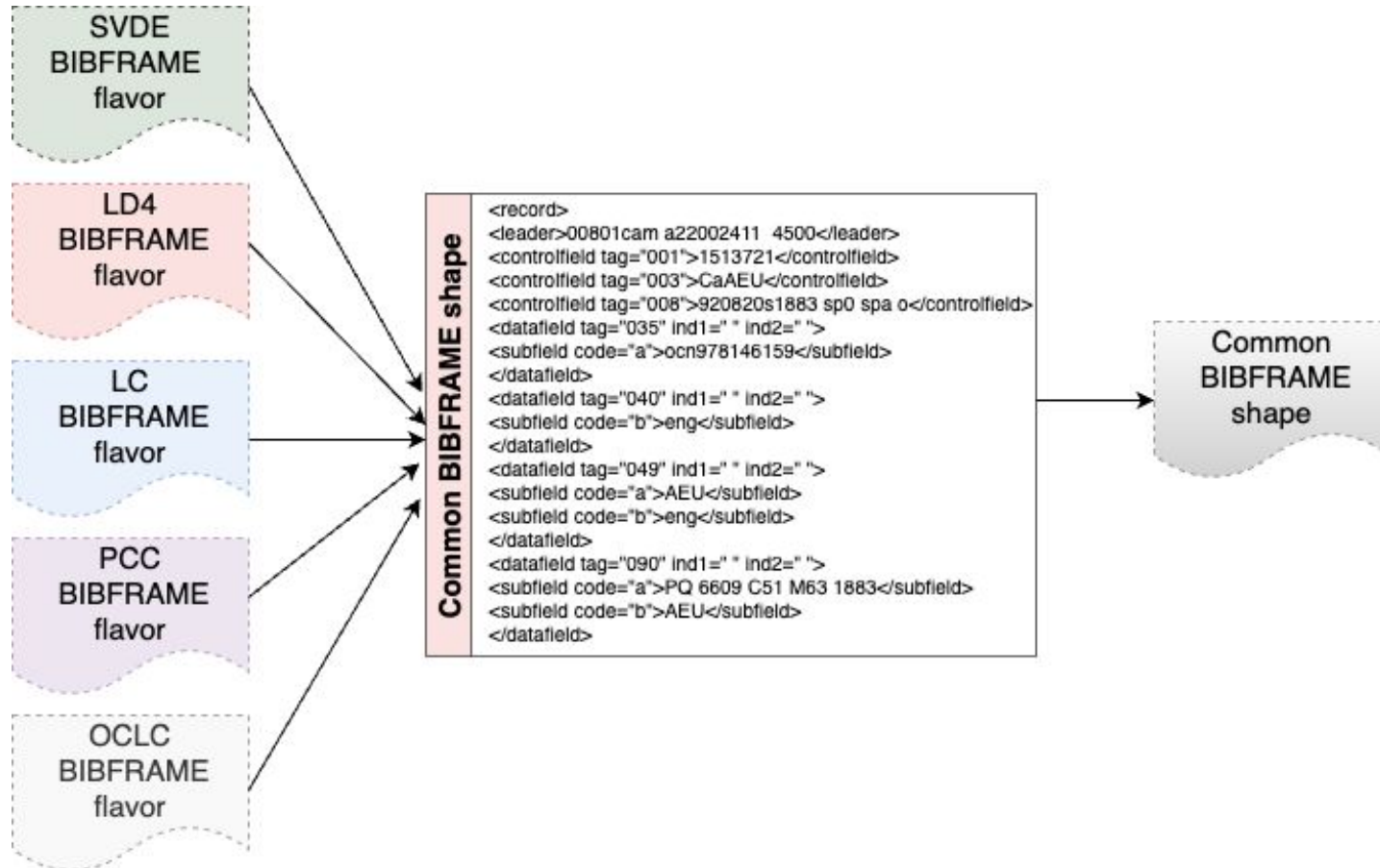
Future plans



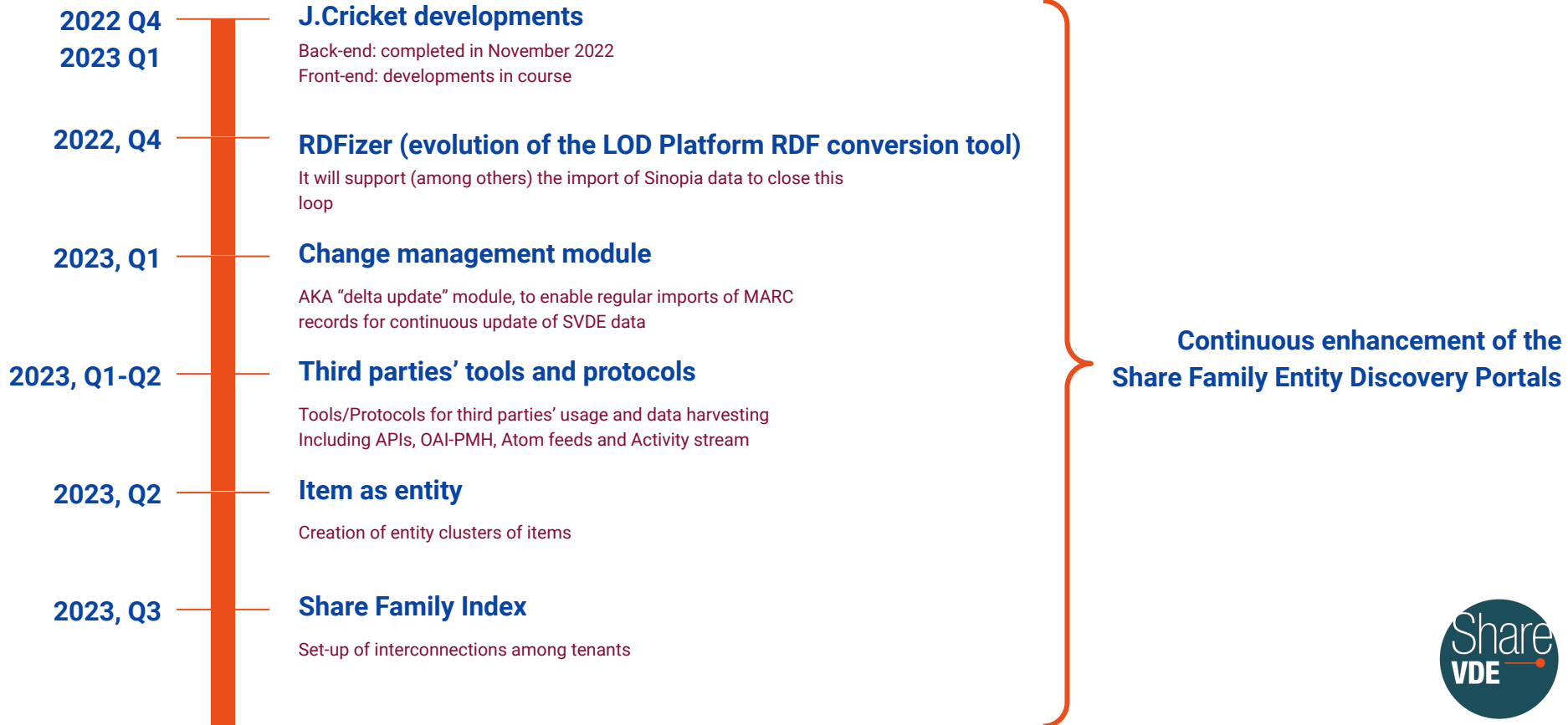
Contribute to BIBFRAME interoperability



Contribute to BIBFRAME interoperability



Overall SVDE goals for the next future



Technical overview



Share-VDE's engines: the API Layers



A powerful and highly standardized **API** exposing Share-VDE' search capabilities over the **HTTP** protocol.

It comes in two flavours:

- **GraphQL**, with a rich data dictionary and the flexibility to query and extract only the fields of interest.
- **RESTful**, returning data represented according to the **HATEOAS** standard.

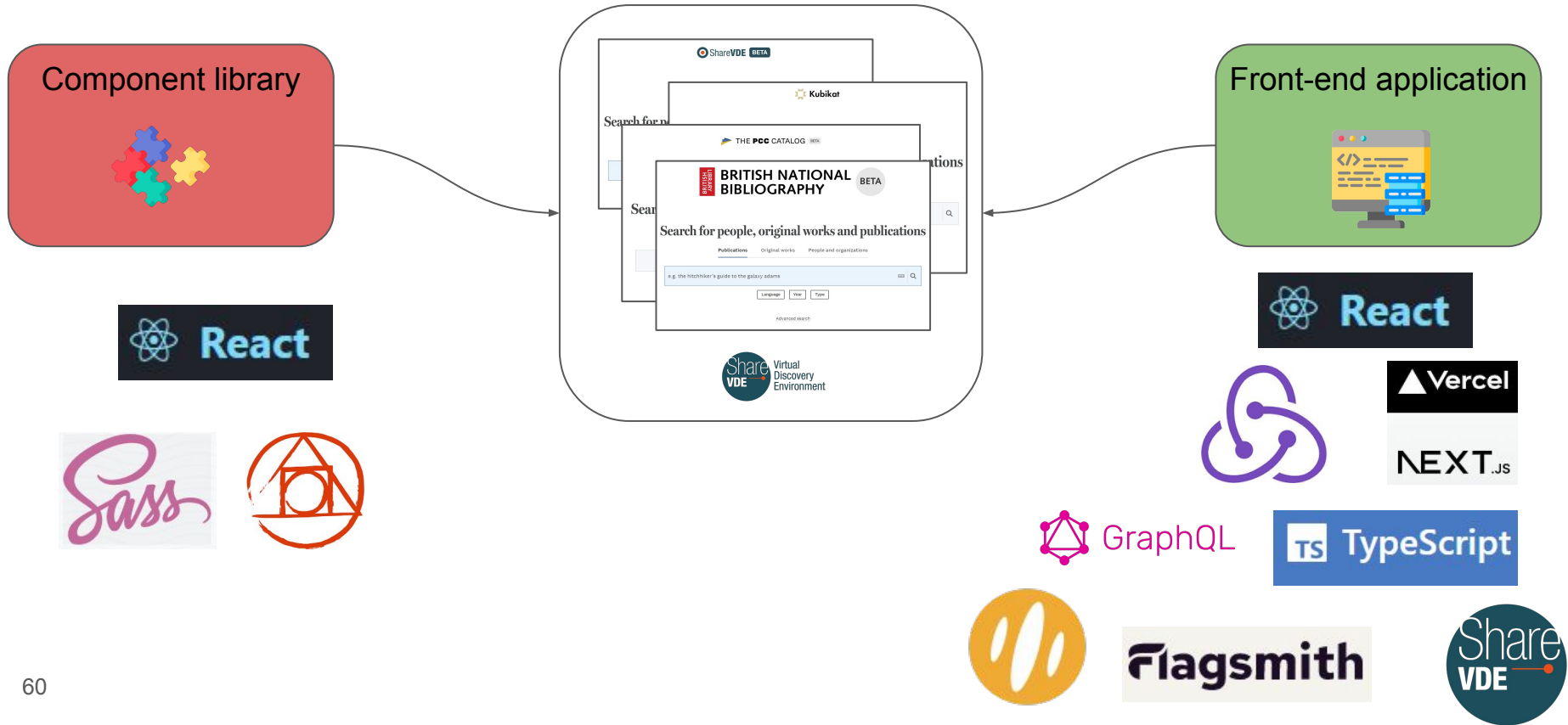
An advanced API offering **Prism curation** capabilities.

It takes advantage of the most modern features of **GraphQL** to establish a continuous informational dialogue between the server and the connected clients, so to offer them the most reactive experience possible.

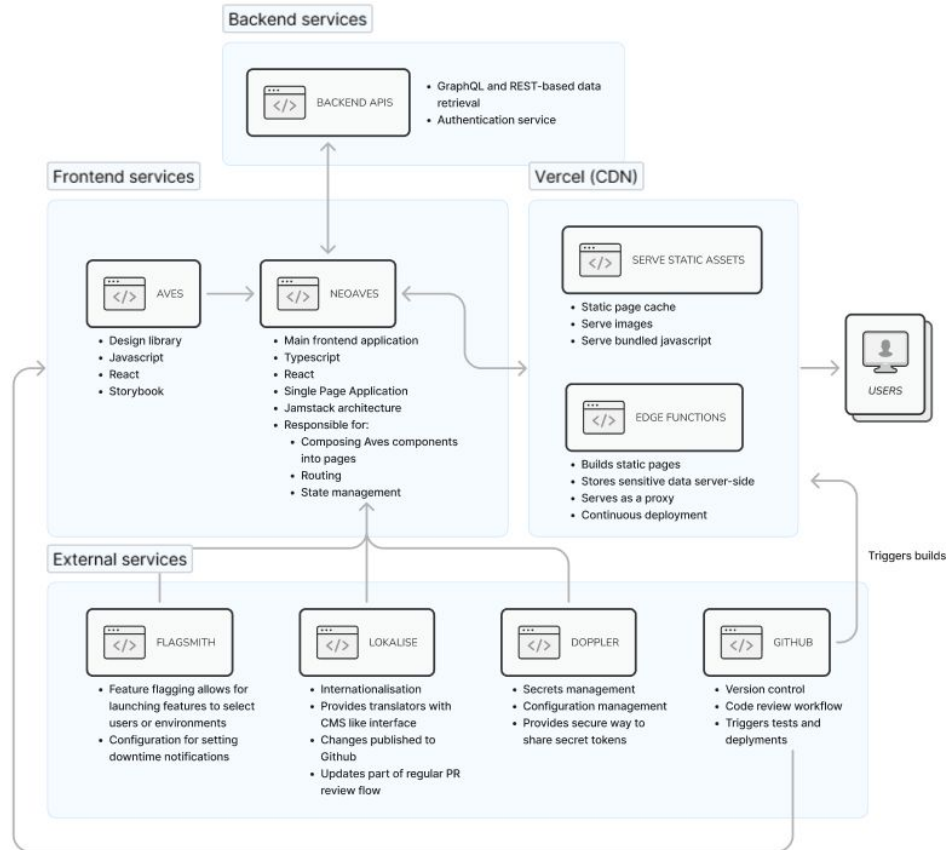
The Technology Stack (back-end)



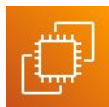
The Technology Stack (front-end)



The Technology Stack (front-end architecture)



Share-VDE: Infrastructure



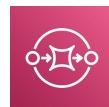
Amazon EC2



Amazon Relational Database Service (Amazon RDS)



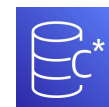
AWS Lambda



Amazon Simple Queue Service (Amazon SQS)



Amazon EMR



Amazon Keyspaces (for Apache Cassandra)





Virtual
Discovery
Environment

Thank you!

December 2022

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