Jio Institute

Share VDE Virtual Discovery Environment

Bringing an interoperable model to collaborative research catalogues

Jio Institute International Workshop, April 9th 2021

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The story so far

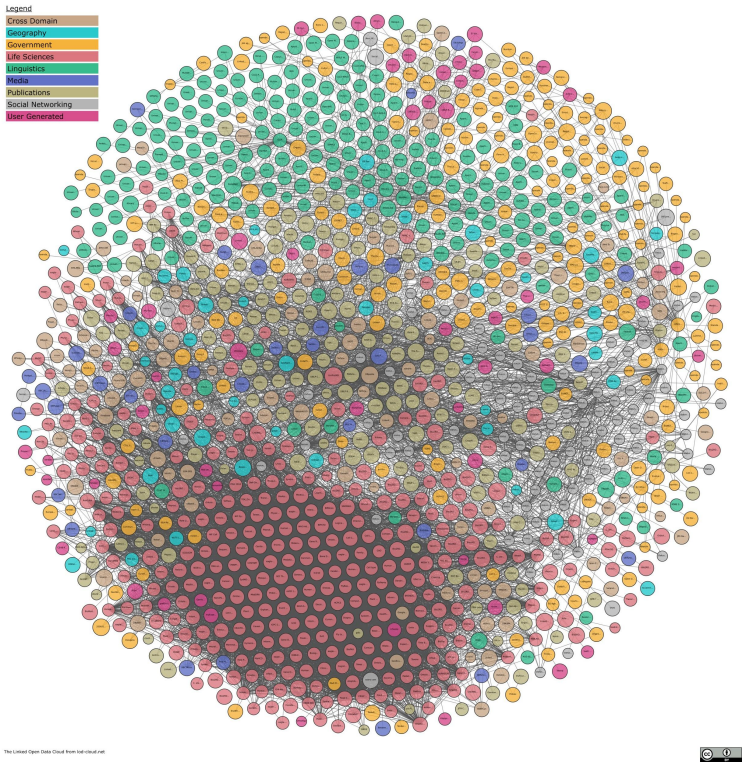
Casalini Libri has a long tradition as supplier of publications and provider of bibliographic descriptions of resources

The workflow of cataloguing services has been based for decades on MARC, the major bibliographic standard in use in the library domain

The Semantic Web imposed a change in library practices, i.e. in the way libraries manage and share their catalogue records

Share-VDE was initiated to support libraries in adapting their workflows to the new Web standards

Linked data: what it is and why we need it



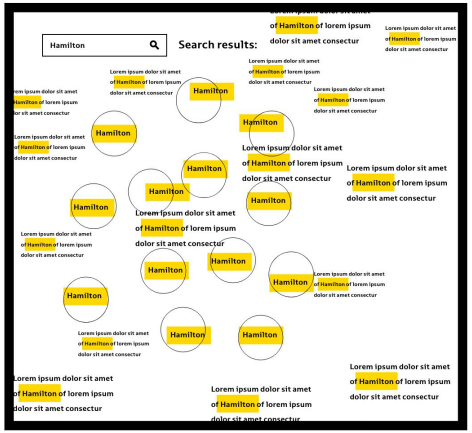
In 2006 Tim Berners-Lee described linked data:

The Semantic Web isn't just about putting data on the web. It is about making links, so that a person or machine can explore the web of data. With linked data, when you have some of it, you can find other, related, data[1]

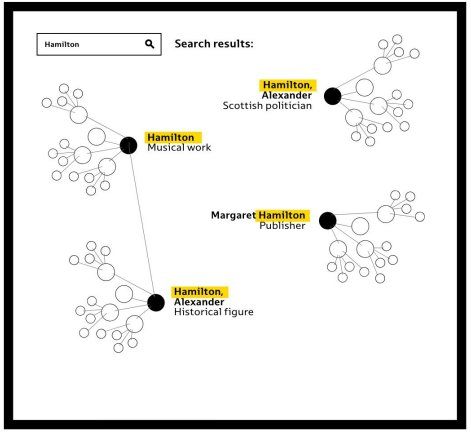
[1] Linked Data - Design Issues

Linked data: what it is and why we need it

Without linked data



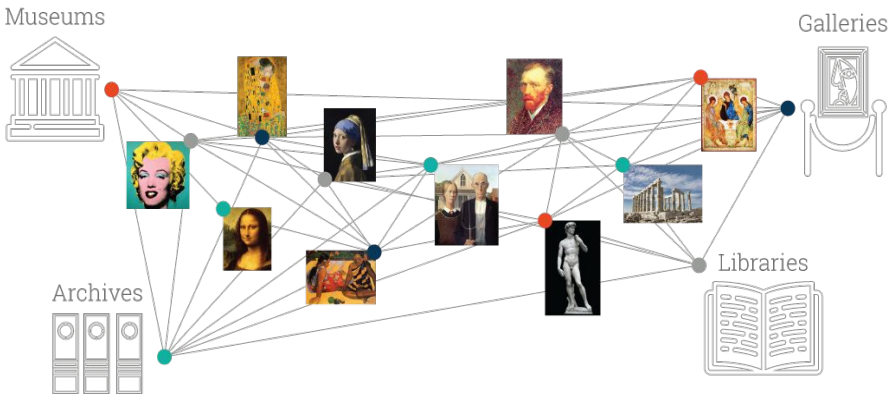
With linked data



In a nutshell:

- data carry information
- LD creates relations and connections between data
- this is the way data can be managed in the internet
- connections facilitate use of data and knowledge for everyone

Structured information and interconnections



Source: Linked Open Data for Cultural Heritage

We want to apply to library catalogues the same data structure and standards used by the web

The library community is adopting LD solutions to support visibility of their catalogues

Catalogues of libraries, museums, archives etc. can be connected, and resources are related to each other

Share-VDE in a nutshell

Since 2016, Share-VDE has carried on R&D work to facilitate libraries in the transition from MARC-based cataloguing to linked data

this expanded over time from a pilot project to Share-VDE and the Share family of initiatives

https://wiki.share-vde.org
https://www.share-vde.org

A cooperative initiative

Share-VDE is a collaborative endeavour based on the needs of libraries, developed and supported 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;

the vision of Linked Data for Production initiative with special endorsement of Stanford;

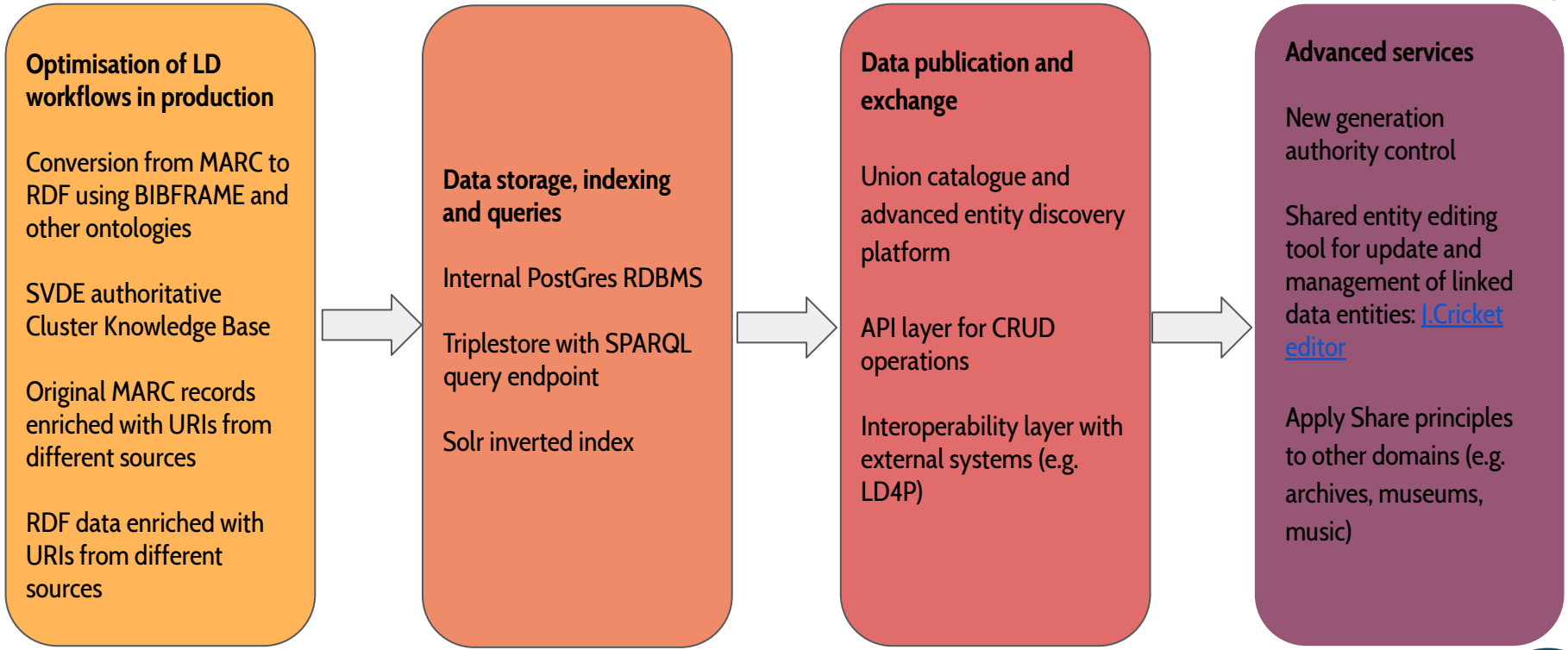
with input and active participation from an international group of research libraries.

The Share family map around the world

Share-VDE: over 20 university and national libraries in the US, Canada and Europe

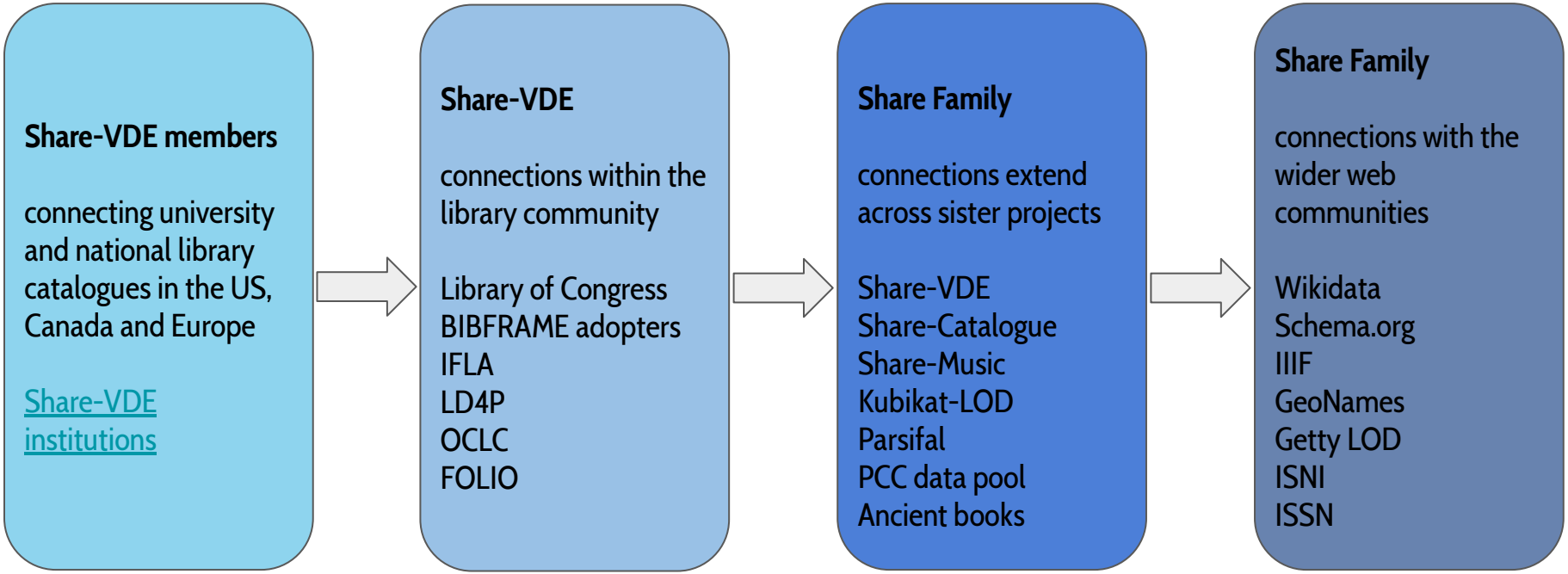
Share family: connected projects in other communities Share-Catalogue, Kubikat-LOD

The evolution over time: towards Share-VDE 2.0

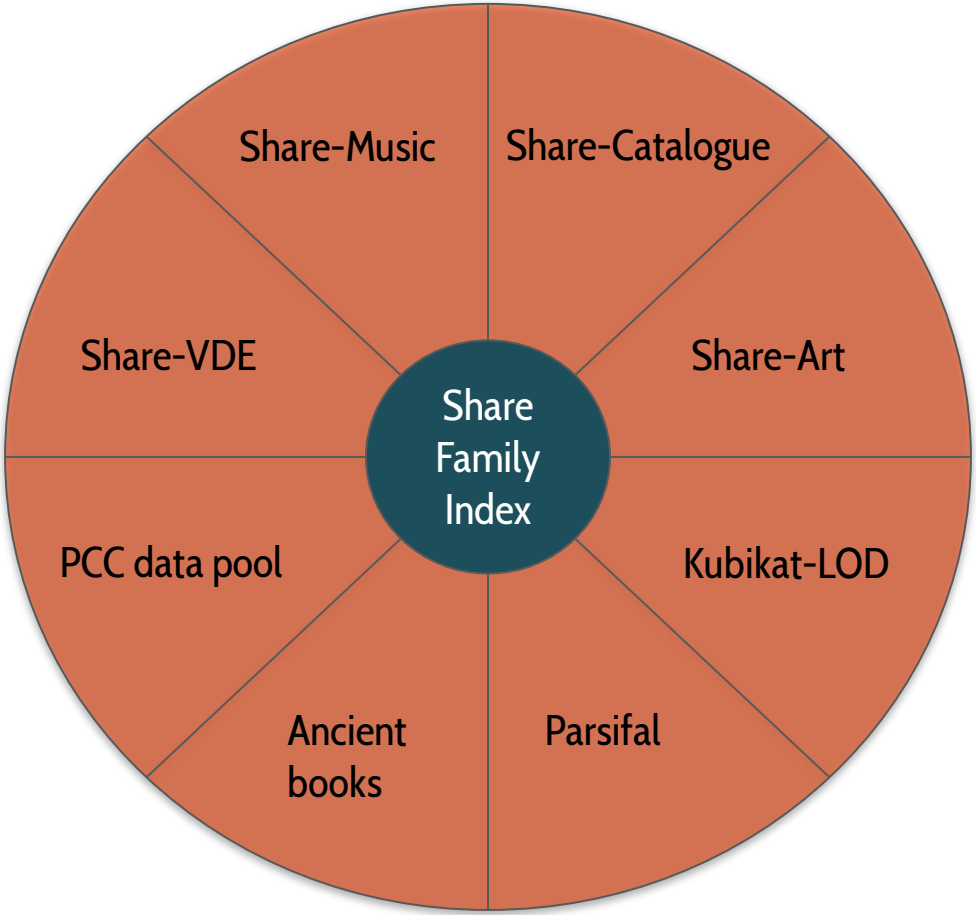


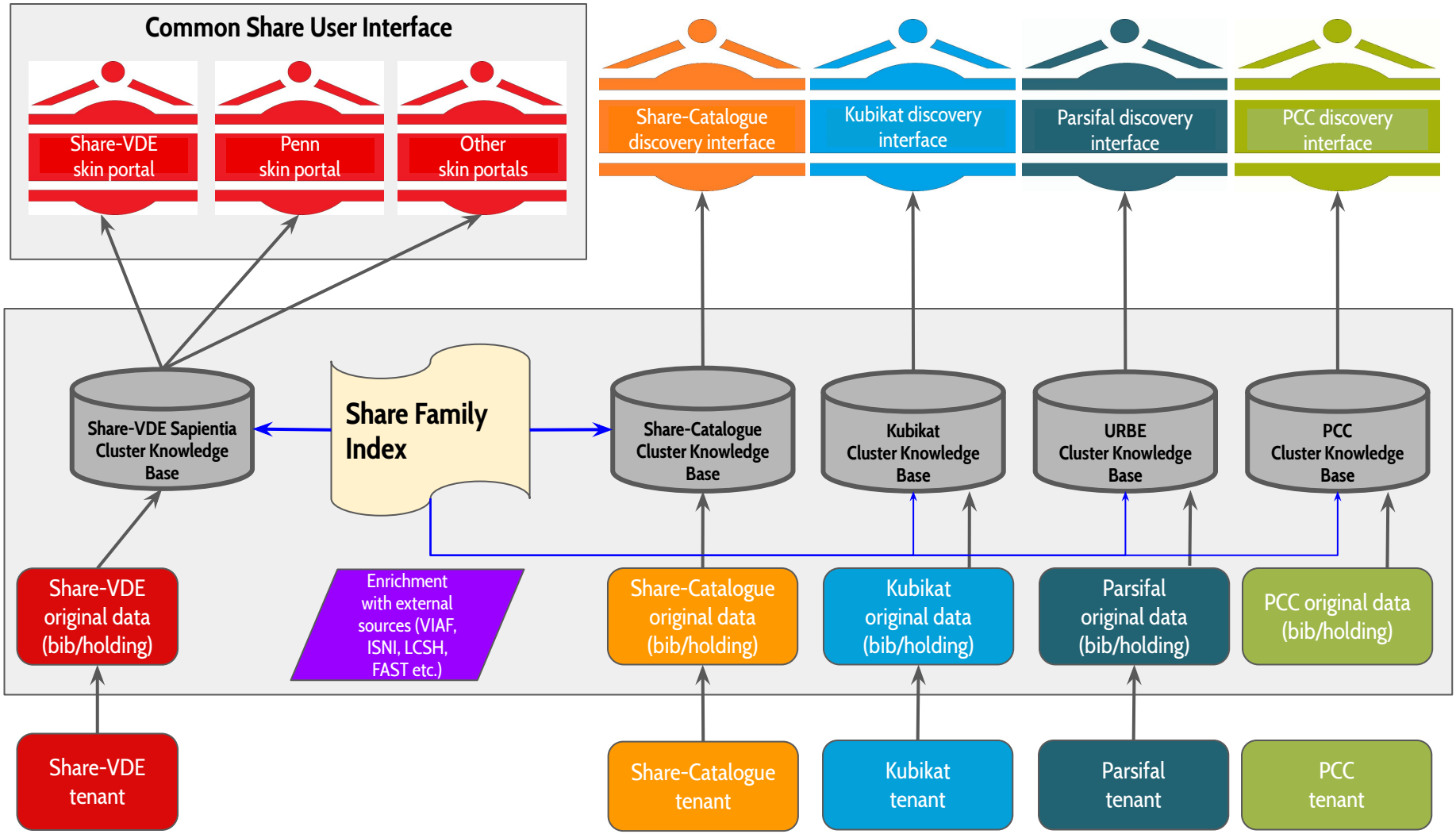
More on the latest achievements

The diffusion in the worldwide communities



Participation and autonomy in the Share Family




Common Share User Interface
Share-VDE skin portal
Penn skin portal
Other skin portals
Share-Catalogue discovery interface
Kubikat discovery interface
Parsifal discovery interface
PCC discovery interface
Share-VDE Sapientia Cluster Knowledge Base
Share Family Index
Share-Catalogue Cluster Knowledge Base
Kubikat Cluster Knowledge Base
URBE Cluster Knowledge Base
PCC Cluster Knowledge Base
Share-VDE original data (bib/holding)
Enrichment with external sources (VIAF, ISNI, LCSH, FAST etc.)
Share-Catalogue original data (bib/holding)
Kubikat original data (bib/holding)
Parsifal original data (bib/holding)
PCC original data (bib/holding)
Share-VDE tenant
Share-Catalogue tenant
Kubikat tenant
Parsifal tenant
PCC tenant


A collaborative community can produce a gravitational wave of energy that expands...


… and meets other communities, with other energy to Share

Community engagement: SVDE working groups

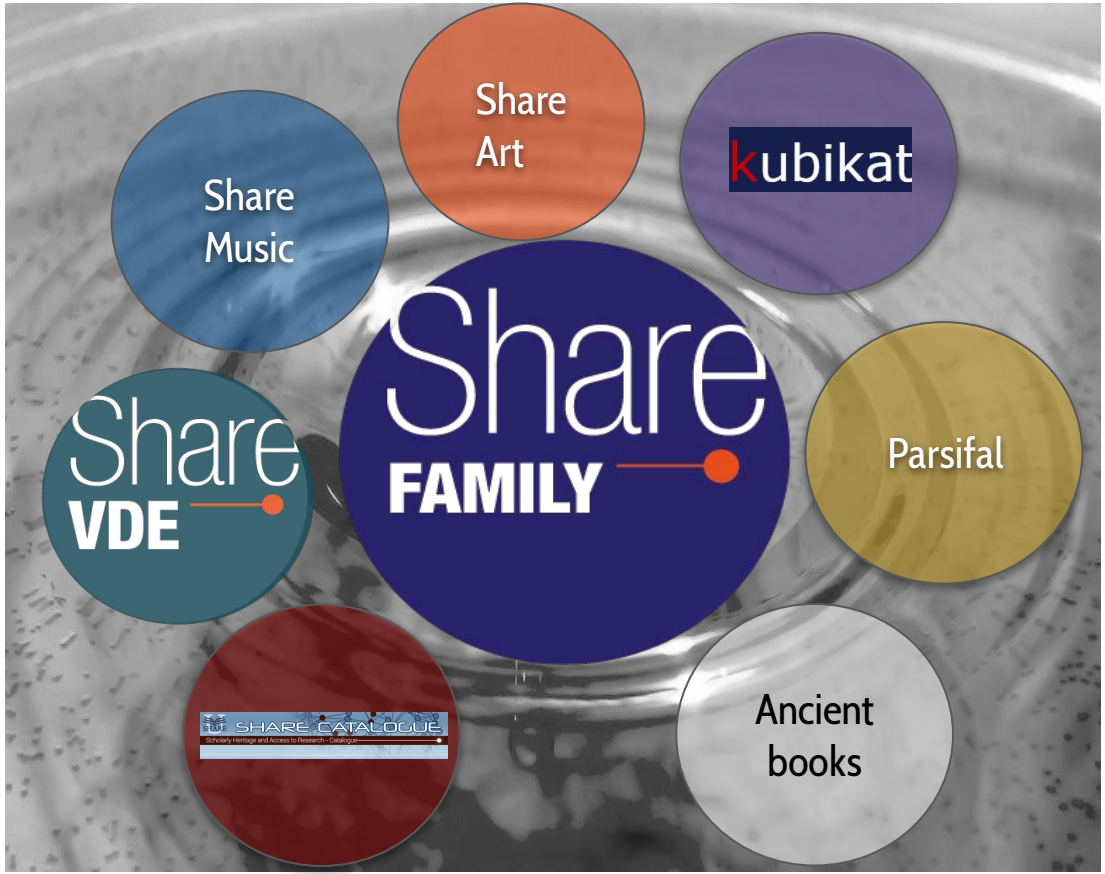
Libraries members of SVDE working groups constantly contribute with their Subject Matter Experts to requirements gathering, analysis and feedback to developments

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

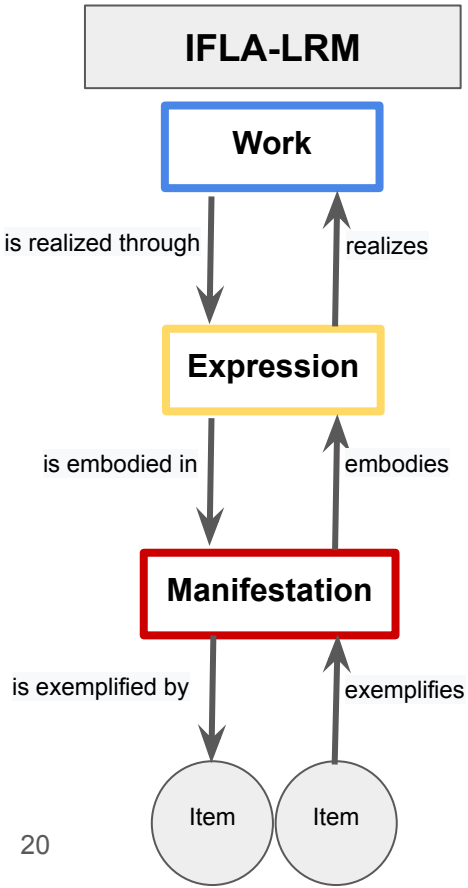
Community engagement: World Wide Web

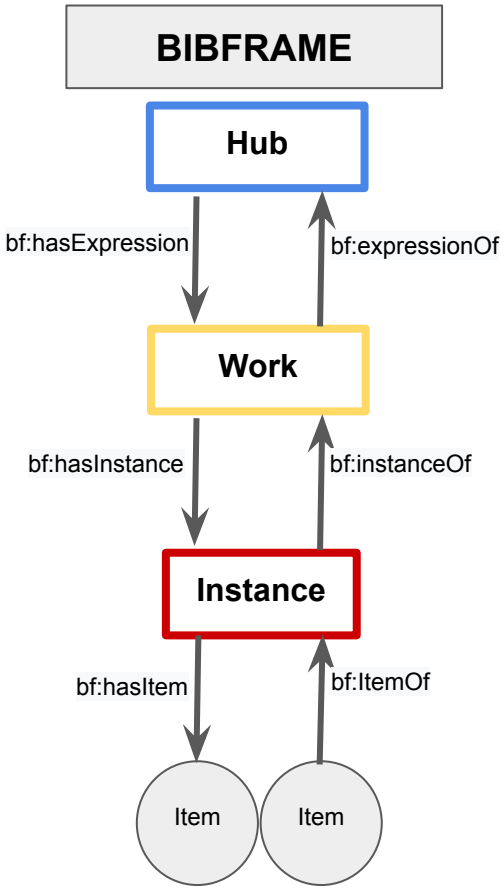
Mixed community: cross-domain cooperation across the Web community

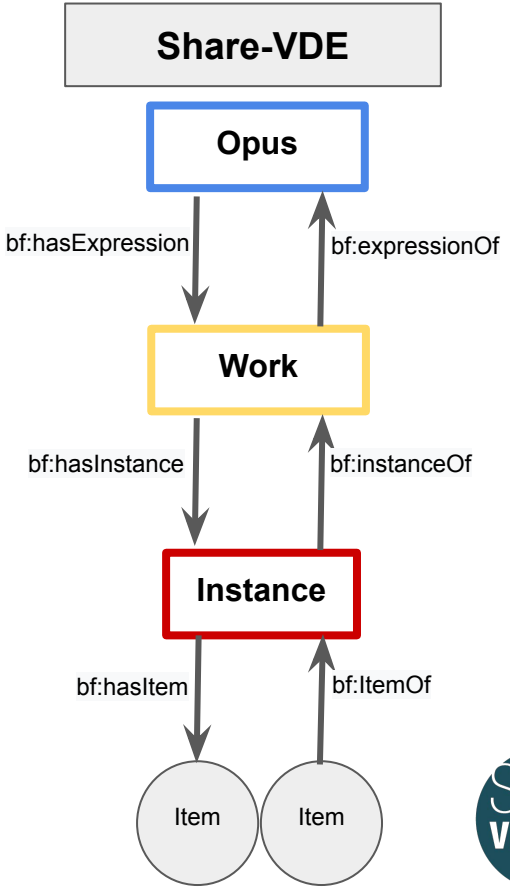
Scientific value: same solutions serve scopes of different communities, data reuse

Real examples of cooperation

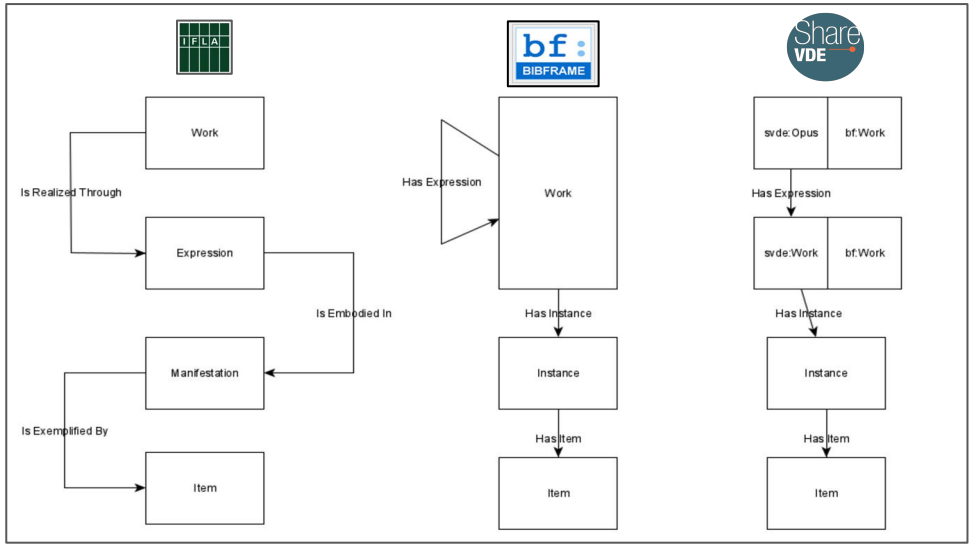
Entity models harmonisation

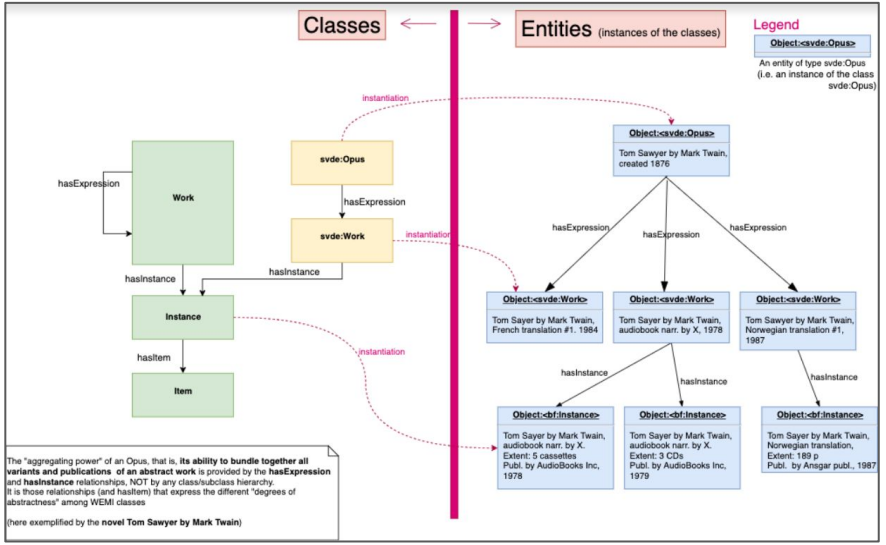






Facilitate interoperability between entity models

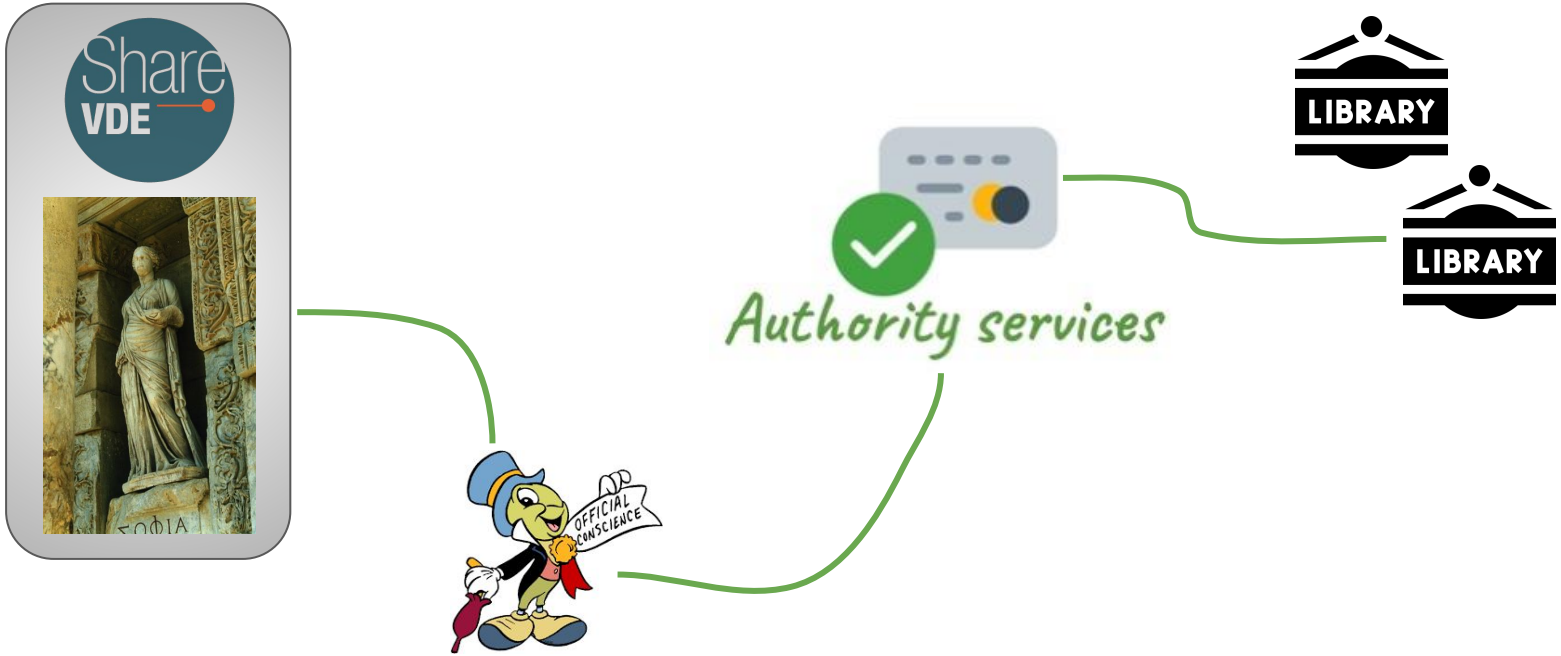




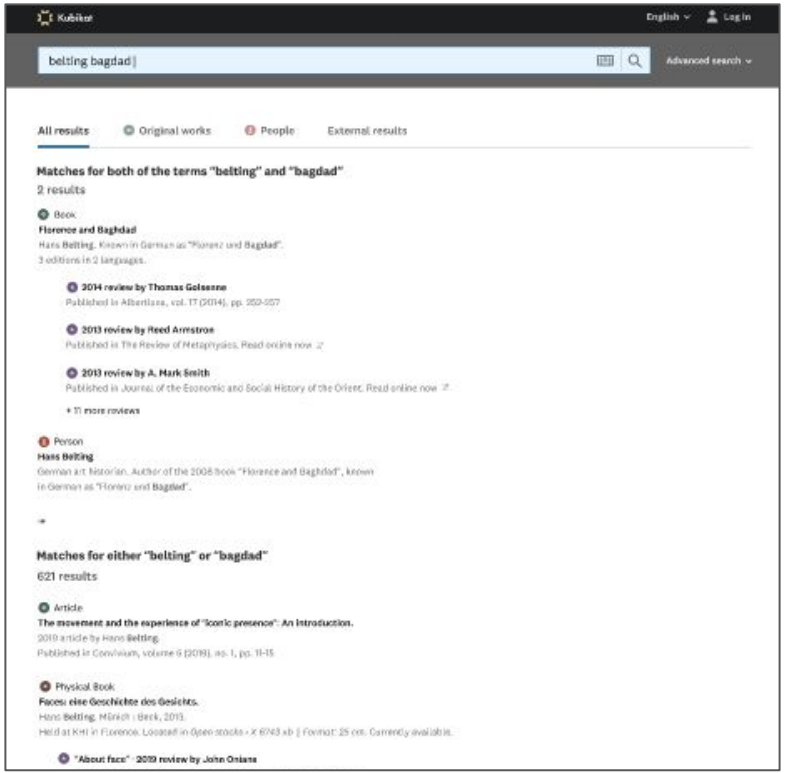
Participation in LD4P3: the challenge of data models interoperability between SVDE and Sinopia

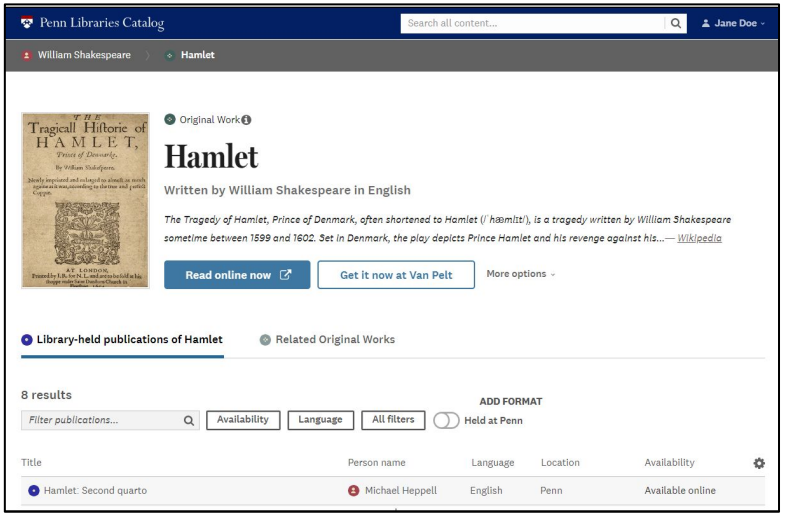
See the SVDE entity model compared to BF and LRM and an example of application of the model

New Authority Services generation



Cooperation and autonomy

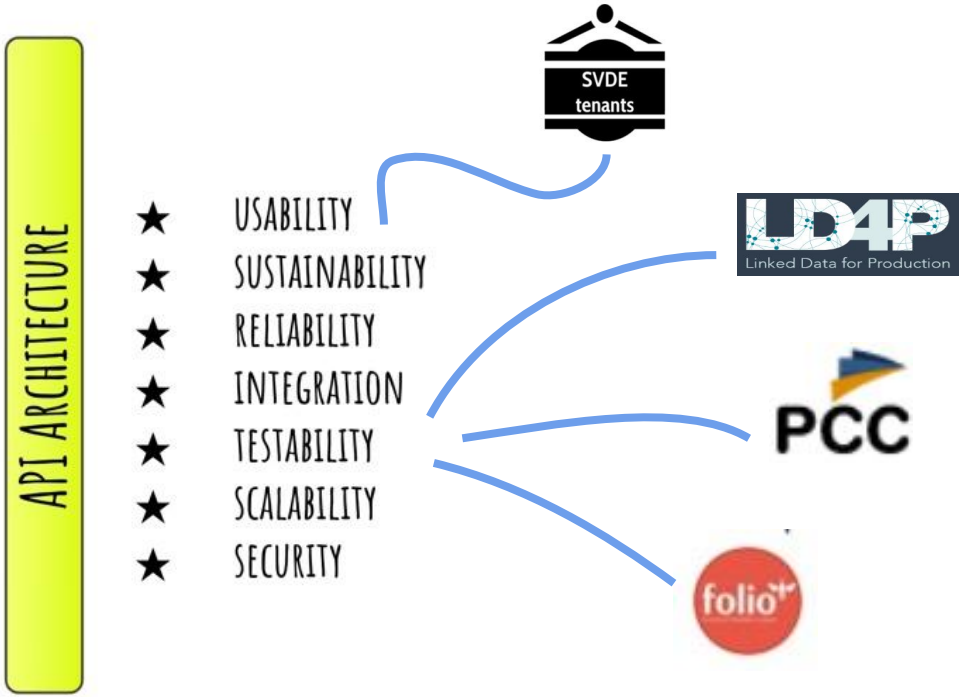




SVDE localisation for the University of Pennsylvania

[Kubikat-LOD]

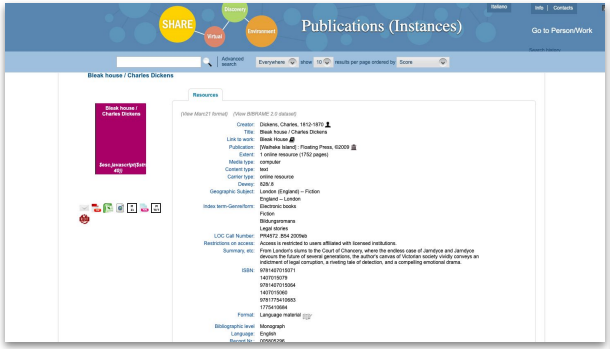
API integration with other projects



Schema.org and web technologies

Three main tasks

Public User Interface (HTML)

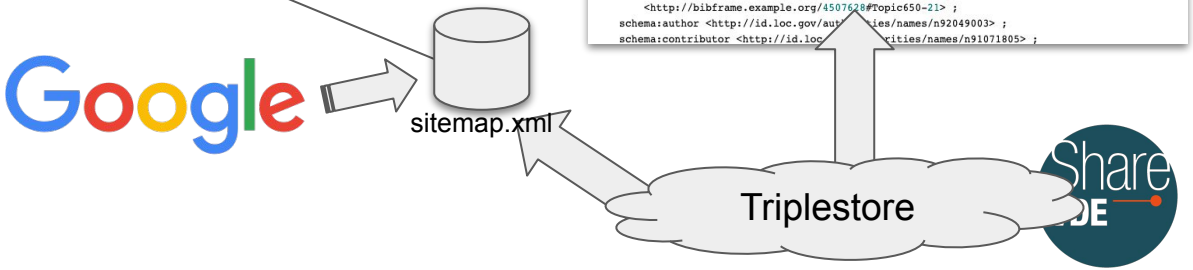


Schema.org Structured Data (Embedded in HTML)

```
<nlb-footer></nlb-footer>
</div>
<script type="application/ld+json">{
"@graph" : [ {
  "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/3FuAzwpQ",
  "@type" : "schema:DefinedTerm",
  "schema:name" : "Fiction."
}, {
  "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/3JTQRQPG",
  "@type" : "schema:DefinedTerm",
  "schema:name" : "Women executives"
}, {
  "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/LD-DFMLe",
  "@type" : [ "schema:Product", "schema:CreativeWork" ],
  "schema:name" : "Habit of a foreign sky /"
}, {
  "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/X00cGnPO",
  "@type" : "schema:DefinedTerm",
  "schema:name" : "Chinese American women"
}, {
  "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/mvOPV5VH",
  "@type" : "schema:Book",
  "schema:about" : [ {
    "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/X00cGnPO"
  }, {
    "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/3JTQRQPG"
  } ],
  "schema:creator" : {
    "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/ngGMon45"
  },
  "schema:genre" : {
    "@id" : "http://eresources.nlb.gov.sg/ID/NLBDM/entity/3FuAzwpQ"
  },
  "schema:inLanguage" : "eng",
  "schema:name" : "Habit of a foreign sky /"
```

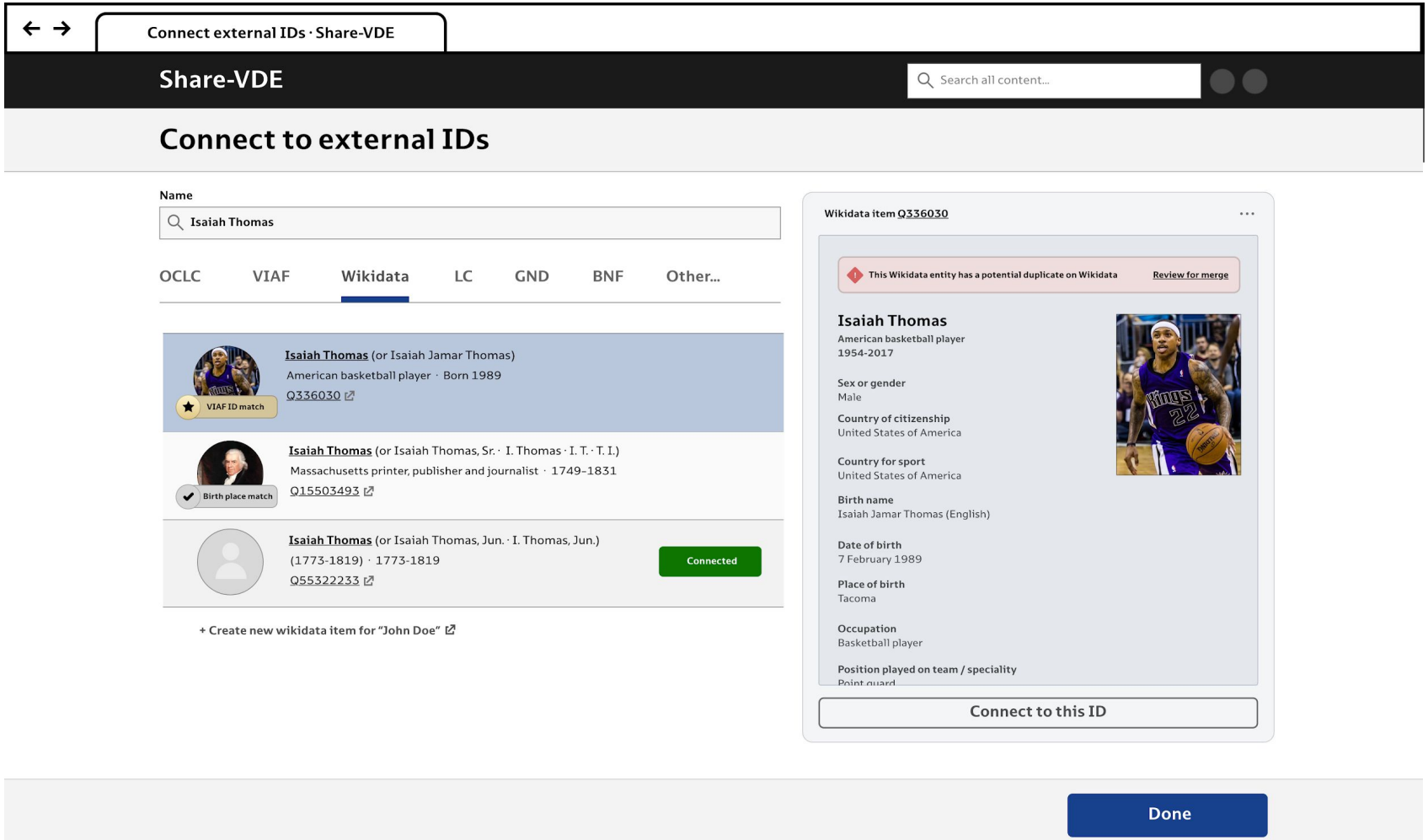
Linked Open Data Source (Direct URI Requests)

```
@prefix schema: <http://schema.org/> .

<http://bibframe.example.org/4507628#Item050-11> a schema:Book,
        schema:CreativeWork,
        schema:IndividualProduct ;
    schema:about <http://bibframe.example.org/4507628#Topic650-19>,
        <http://bibframe.example.org/4507628#Topic650-20>,
        <http://bibframe.example.org/4507628#Topic650-21> ;
    schema:author <http://id.loc.gov/authorities/names/n92049003> ;
    schema:contributor <http://id.loc.gov/authorities/names/n91071805> ;
    schema:description "A clever mouse uses the threat of a terrifying creature to keep from bei
    schema:exampleOfWork <http://bibframe.example.org/4507628#Instance> ;
    schema:inLanguage "eng" ;
    schema:name "The gruffalo" ;
    schema:sdDatePublished "2021-03-09" ;
    schema:sdLicense <https://creativecommons.org/publicdomain/zero/1.0> ;
    schema:sdPublisher <https://bibframe2schema.org> ;
    schema:sku "PZ8.3.D7235 Gr 1999" .

<http://bibframe.example.org/4507628#Work> a schema:Book,
        schema:CreativeWork ;
    schema:about <http://bibframe.example.org/4507628#Topic650-19>,
        <http://bibframe.example.org/4507628#Topic650-20>,
        <http://bibframe.example.org/4507628#Topic650-21> ;
    schema:author <http://id.loc.gov/aut
    schema:contributor <http://id.loc
```

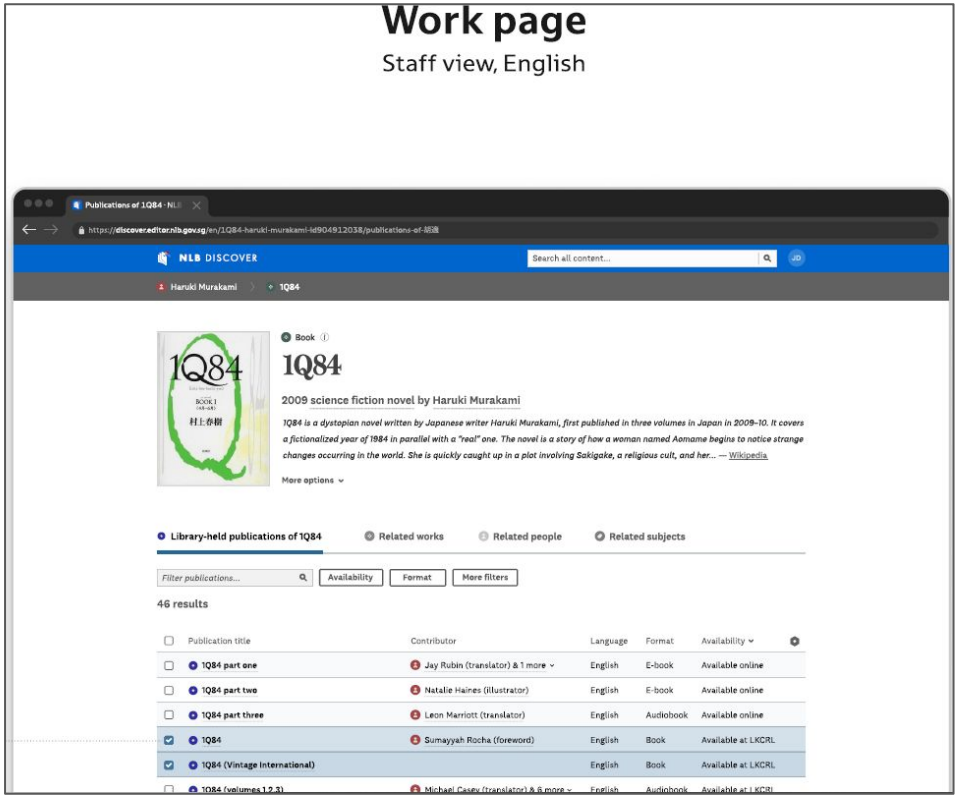


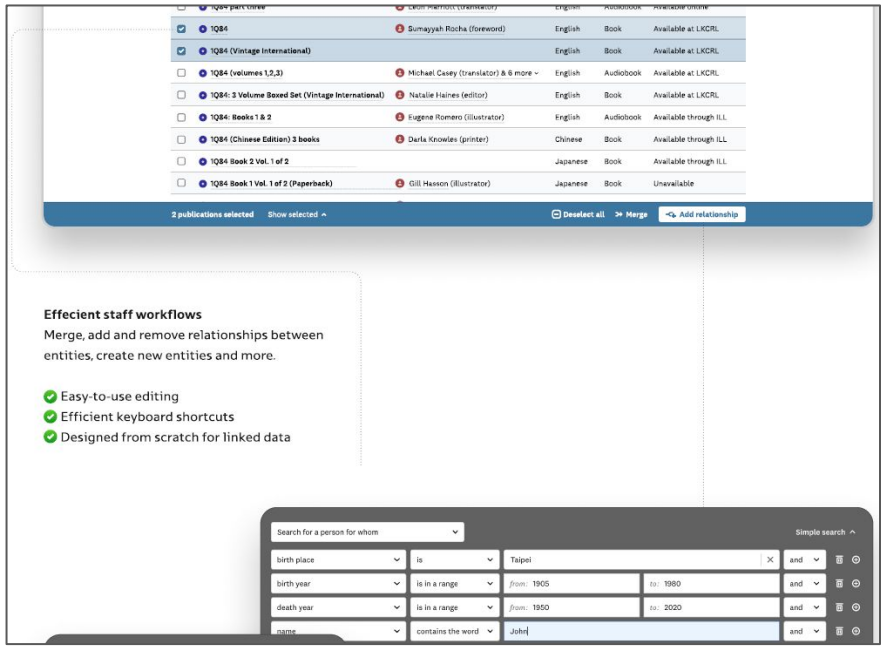
Credits: Richard Wallis, March 2021

How J.Cricket interacts with Wikidata

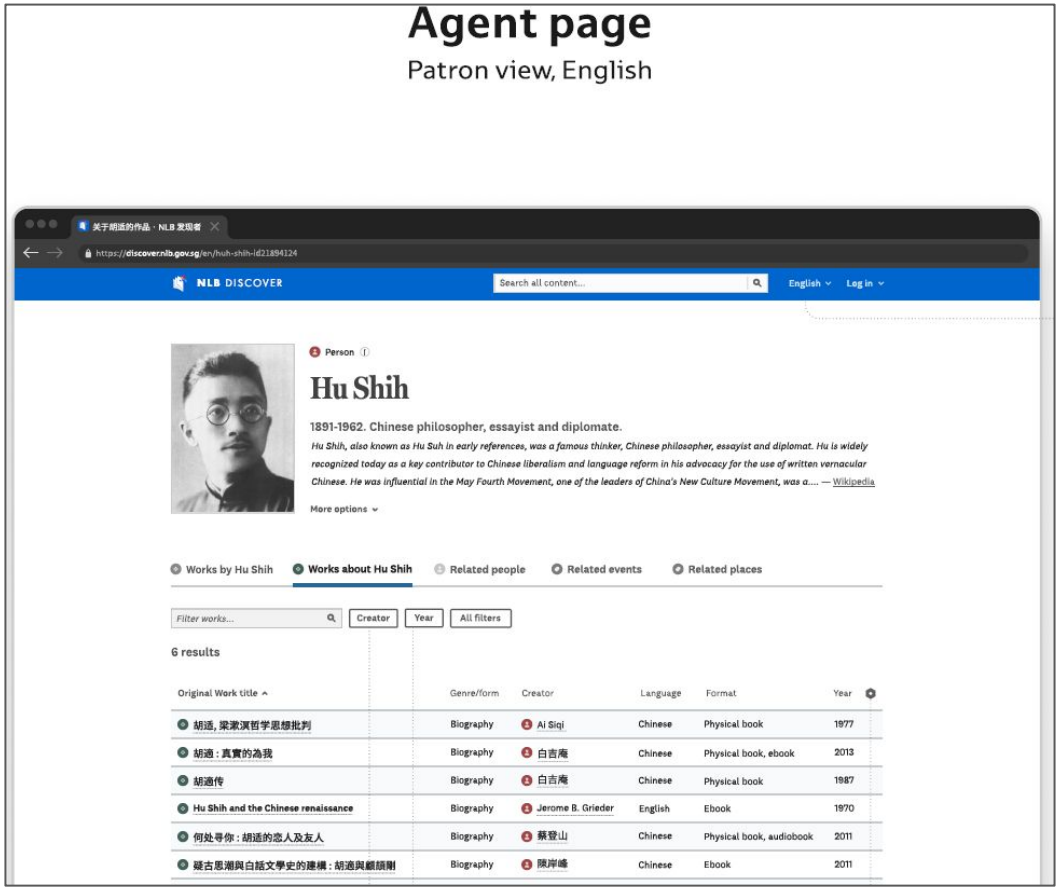


Share-VDE 2.0: Entity discovery system

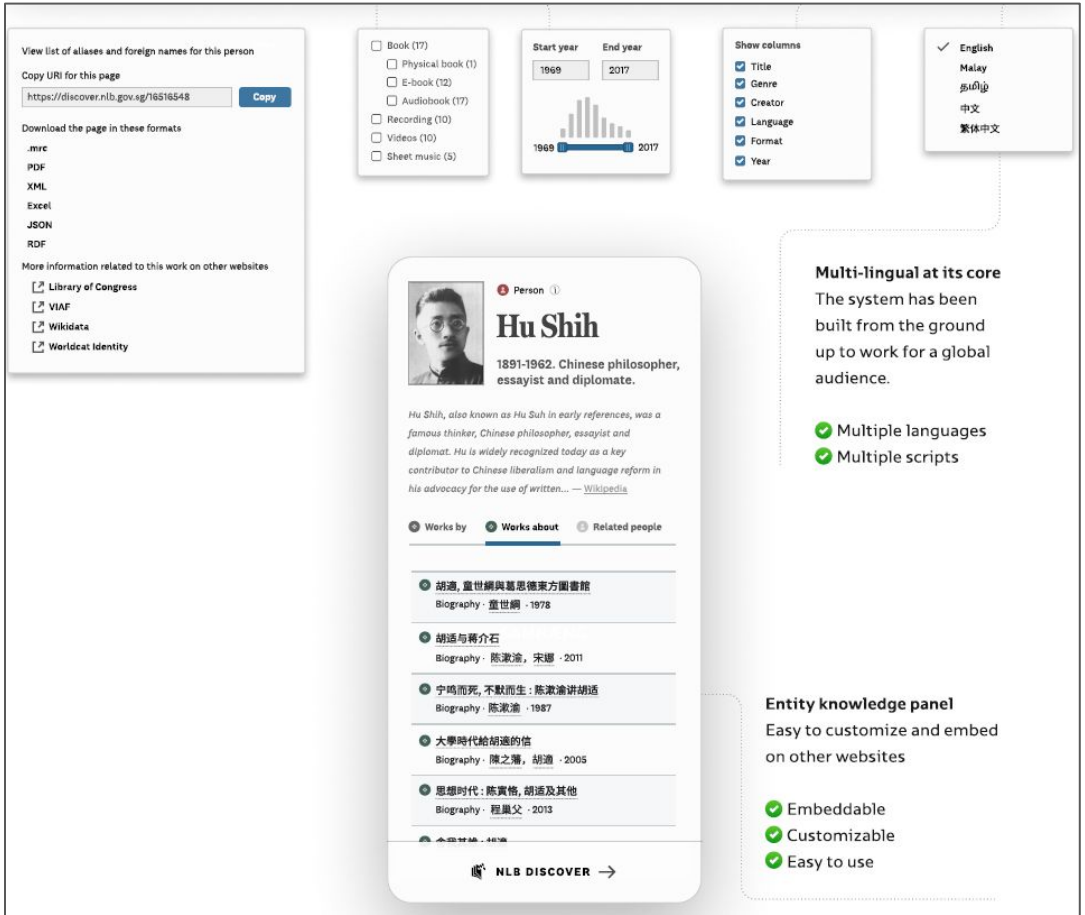




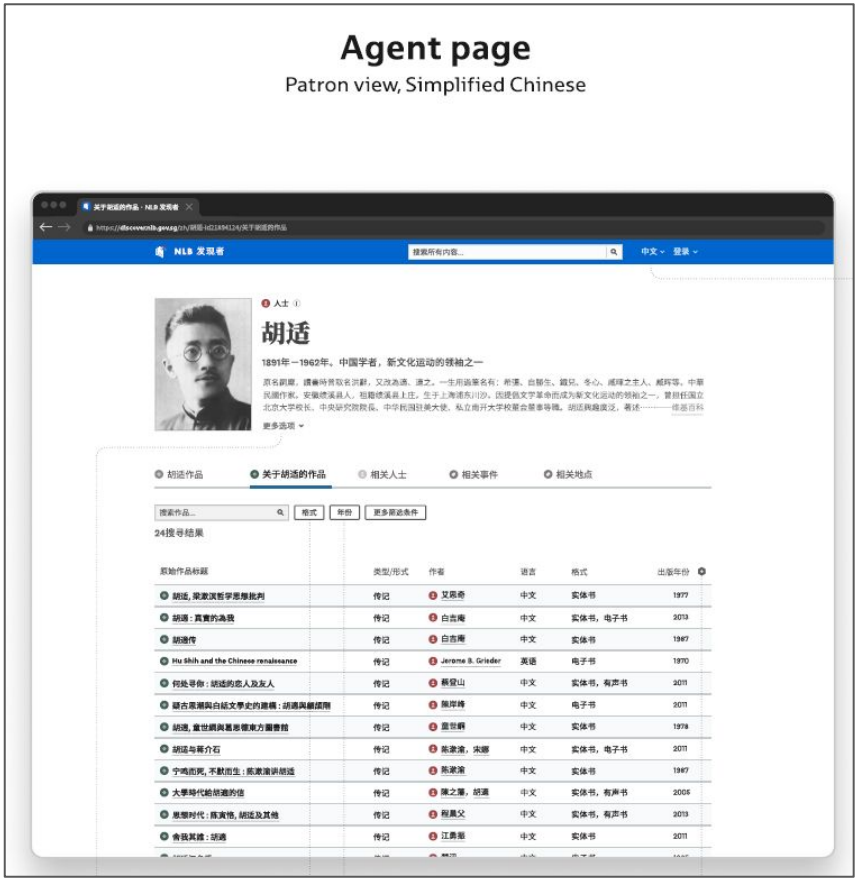
Share-VDE 2.0: Agent entity



Share-VDE 2.0: Agent entity



Share-VDE 2.0: multilingualism




No one can face on
their own
the challenges of this
global revolution

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Share VDE Virtual Discovery Environment

Thank you!

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https://wiki.share-vde.org

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