Linked Data for Libraries (LD4L): Data, Tools, and Discovery

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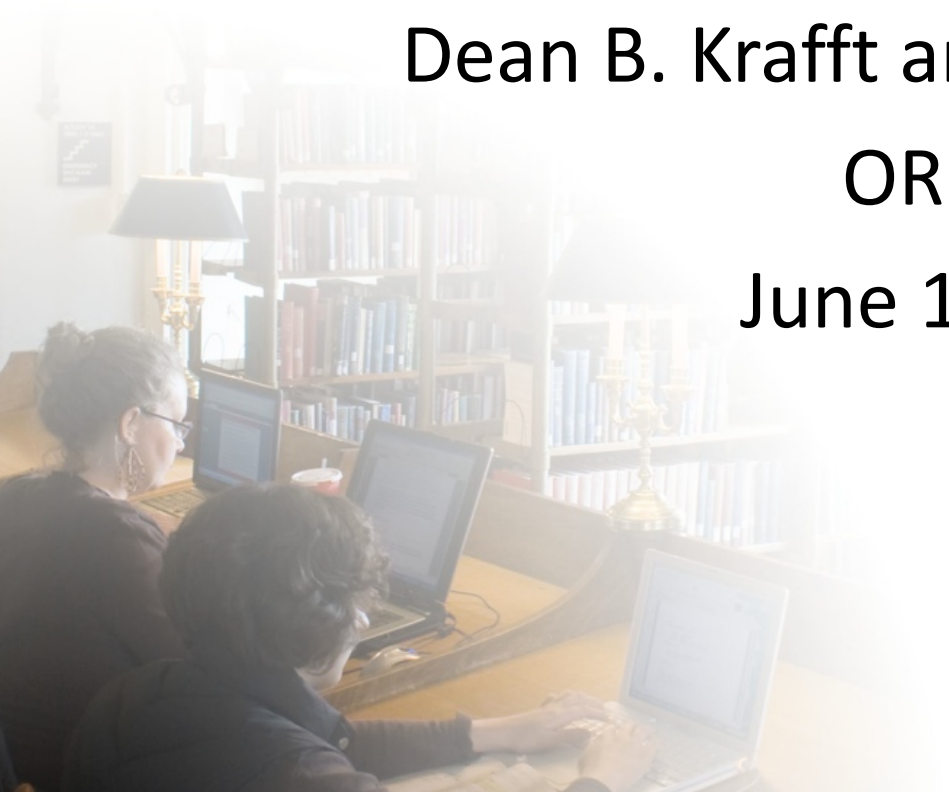

Cornell University Library

HARVARD LIBRARY

STANFORD UNIVERSITY LIBRARIES

Linked Data for Libraries (LD4L)

- Just completed (3/31/16) a two-year $999K Mellon grant to Cornell, Harvard, and Stanford
- Partners assembled ontologies and created linked data and tools to provide relationships, metadata, and broad context for Scholarly Information Resources
- Leveraged existing work by both the VIVO project and the Hydra Partnership

Vision: Enable libraries and their users to easily create, use, and benefit from LD specifically designed for libraries and scholars, and from broader sources of LD on the web.

Courtesy National Gallery of Art, Washington

LD4L Research Outputs

- LD4L Ontology – modification/extensions to BIBFRAME: github.com/ld4l
- Recommendations to Library of Congress on BIBFRAME, leading to ongoing revisions
- Conversion of 23 million Cornell, Harvard, and Stanford catalog records to ~3 billion triples of resolvable LD available at draft.ld4l.org/downloads/index.html
- Demonstration search over LD at search.ld4l.org
- Contributions to Hydra: ActiveTriples gem; work on LD annotations (available at github.com/ld4l)
- Demonstration of links to external web URIs (e.g. MusicBrainz/LinkedBrainz)

open repositories Search

Limit your search

Topic

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1. Institutional repositories : content and culture in an open access environment / Catherine Jones — Bookmark

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Class: Monograph, Text, Work
RDF linked data: http://draft.ld4l.org/cornell/n869fcf9cfe2f43a8

2. Gli archivi istituzionali : open access, valutazione della ricerca e diritto d'autore / Mauro Guerrini ; a cura di Andrea Capaccioni ; con saggi di Antonella De Robbio ... [et al.] — Bookmark

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Library: HARVARD LIBRARY
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4. Open access to STM information [electronic resource] : trends, models and strategies for libraries / edited by Anthi Katsirikou — Bookmark

Library: Stanford University LIBRARIES

LD4L Labs and LD4P

- Beginning April 1, 2016, the Mellon Foundation funded two new linked data grants for two years at $1.5 million each
- LD4L Labs is a collaboration of Cornell, Harvard, Stanford, and Iowa focused on building new LD tools and services
- LD4P is a collaboration of Stanford and five partners piloting a range of projects on metadata production using linked data

LD4L Labs

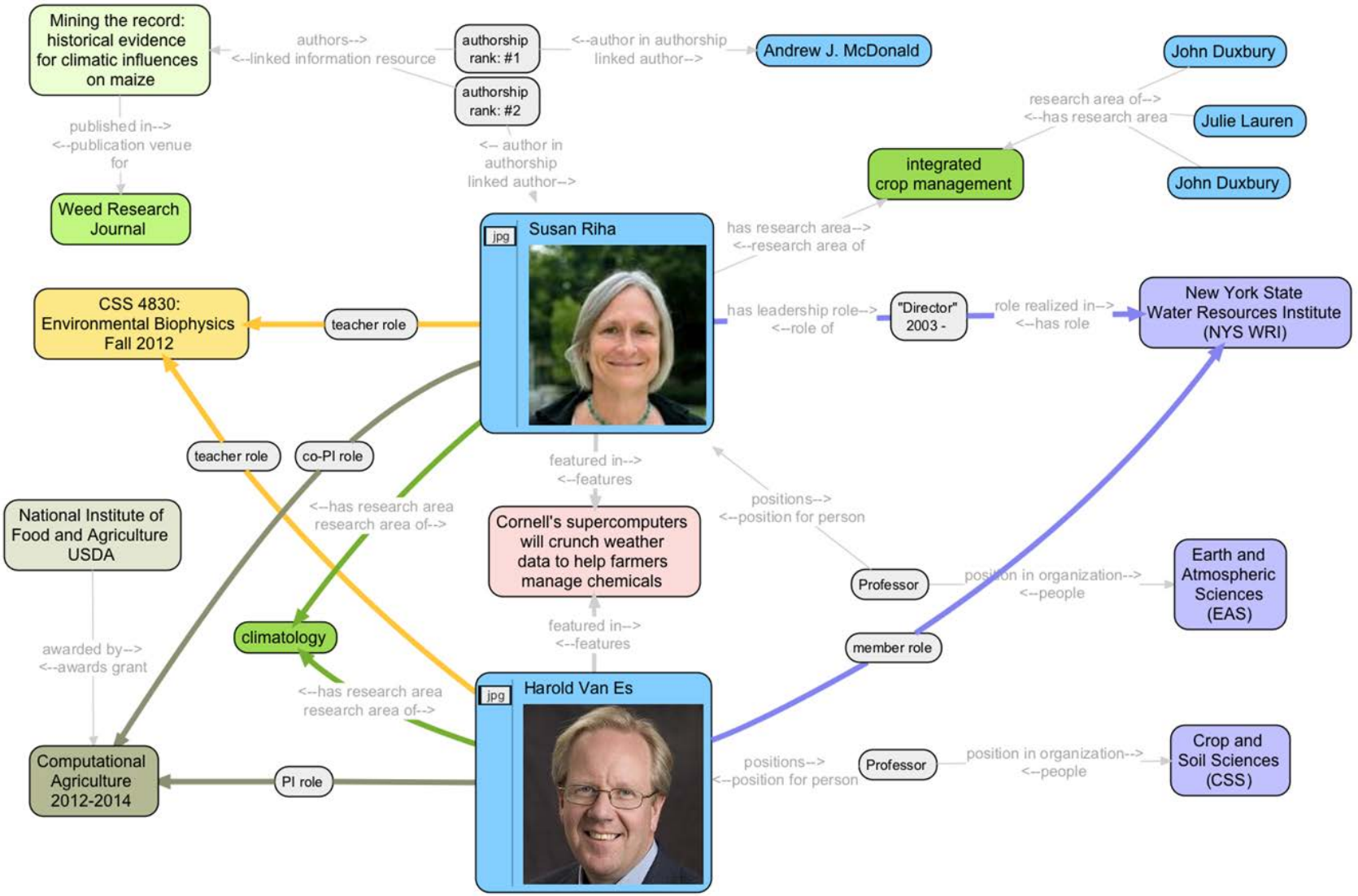
1. Create a modern, efficient, extensible, community-supported, and well-documented MARC to BIBFRAME converter to support the revised BIBFRAME ontology
2. New LD creation and editing tools based on Vitro
3. New Hydra-based LD tools to support the organization, annotation, and description of scholarly information resources
4. Improve discovery and understanding by using LD for better search results, to visualize context, and to link to resources on the web
5. Pilot tools and services to support LD URI resolution and reconciliation

LD4P

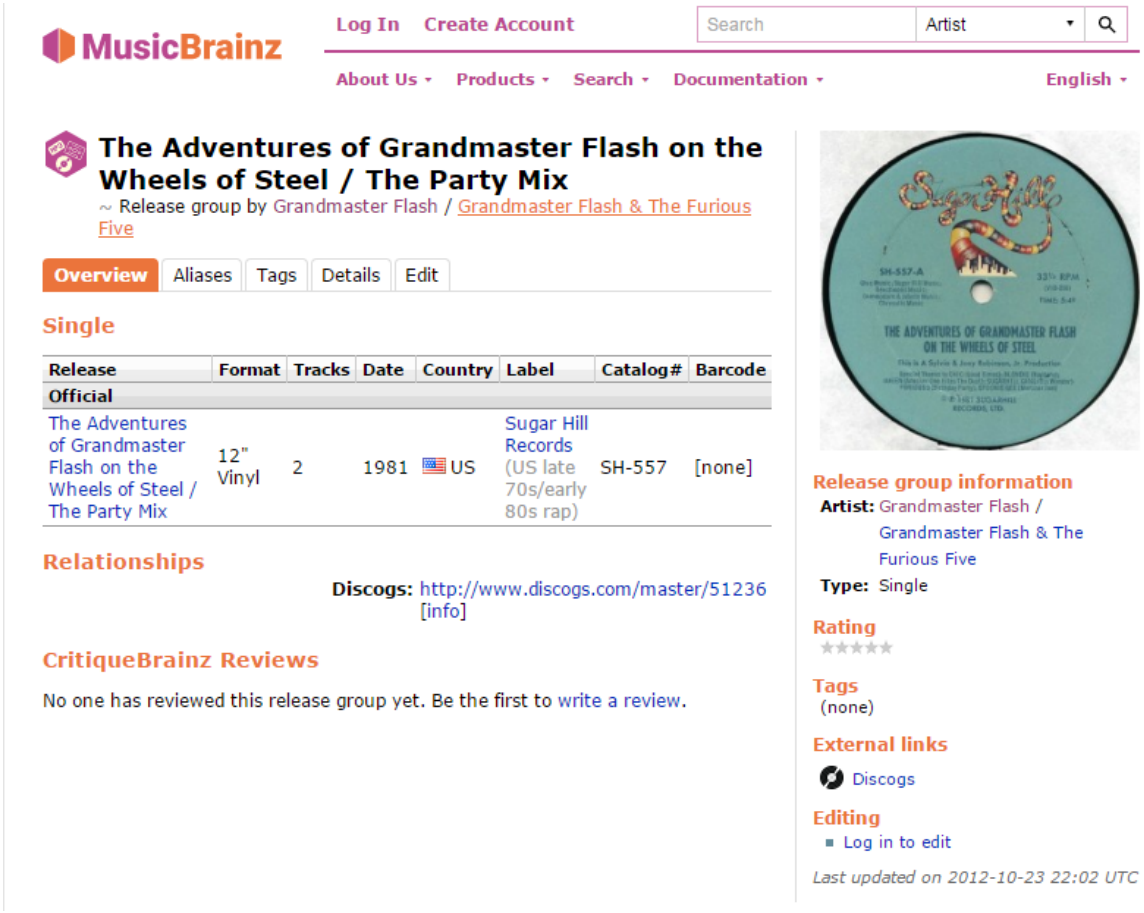
- Stanford: Convert four cataloging workflows to LD and create a Performed Music Ontology
- Columbia: Catalog a collection of 2D and 3D art objects
- Cornell: Develop Rare Materials Ontology and catalog an annotated hip-hop LP record collection
- Harvard: Catalog cartographic materials
- Library of Congress: Catalog audiovisual and sound recordings, prints, and photographs
- Princeton: Catalog annotated materials from the library of Jacques Derrida

Nine challenges and opportunities that Linked Data poses for repository managers and developers

1. You must think outside the bibliographic record – you don't have a record, you have a network



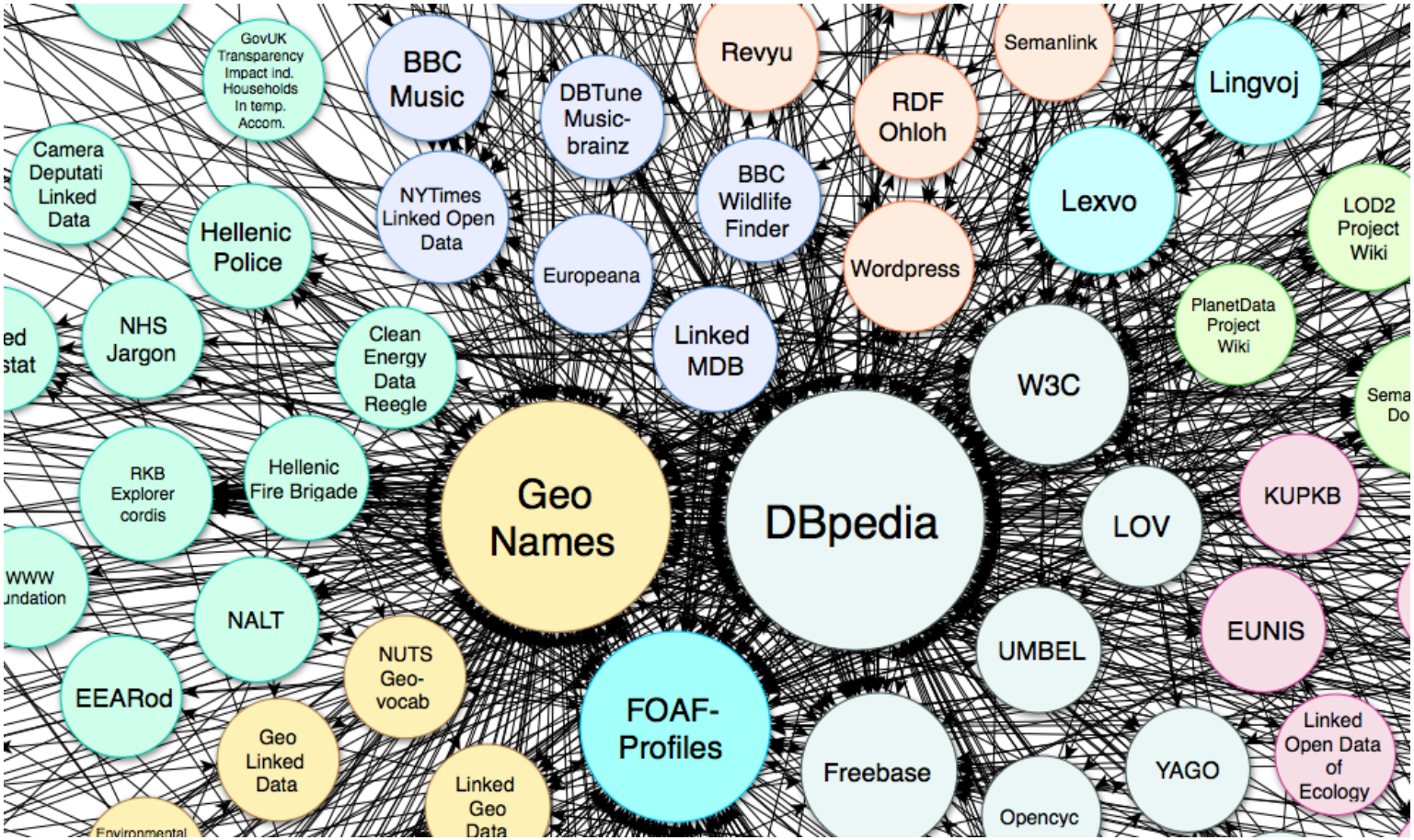
2. You can connect to external LD resources on the web for additional context and to aid discovery and understanding



3. By using LD you can avoid being limited in the future to answering only questions that were anticipated when the repository was created

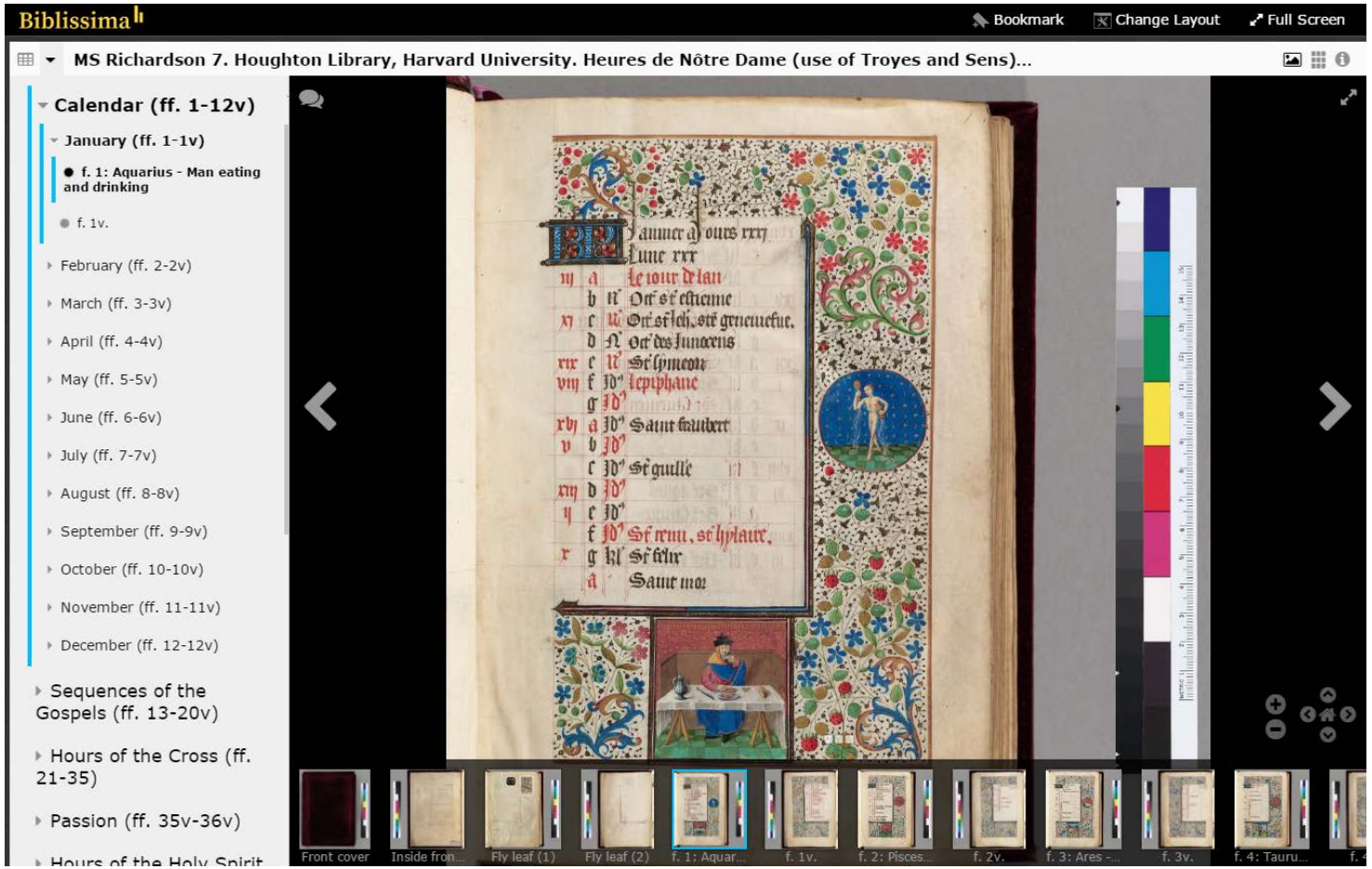
- Linked Data is extensible – you can extend the existing ontology or incorporate new ontologies
- Representing LD metadata in a SPARQL triplestore allows arbitrary inferencing queries

4. Think about how others outside of the library community can take advantage of the linked data represented in your repository

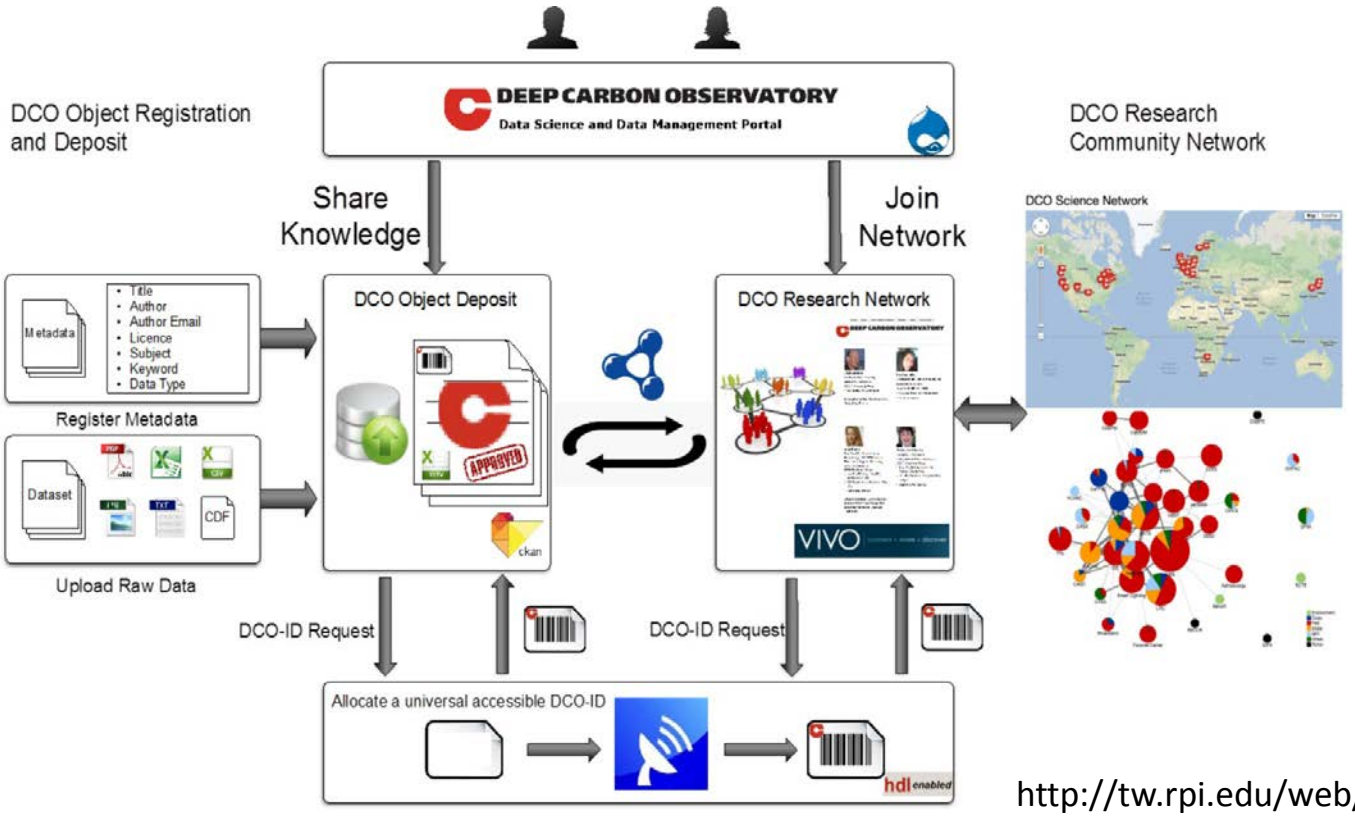


Section from the Linking Open Data cloud diagram 2014, by Max Schmachtenberg, Christian Bizer, Anja Jentzsch and Richard Cyganiak. http://lod-cloud.net/

5. How can LD support connected objects distributed across multiple repositories so that they can be presented seamlessly to the user?



6. Interlinking repositories and researcher profiling systems like VIVO can lead to a comprehensive ecosystem representing the full range of scholarly activity

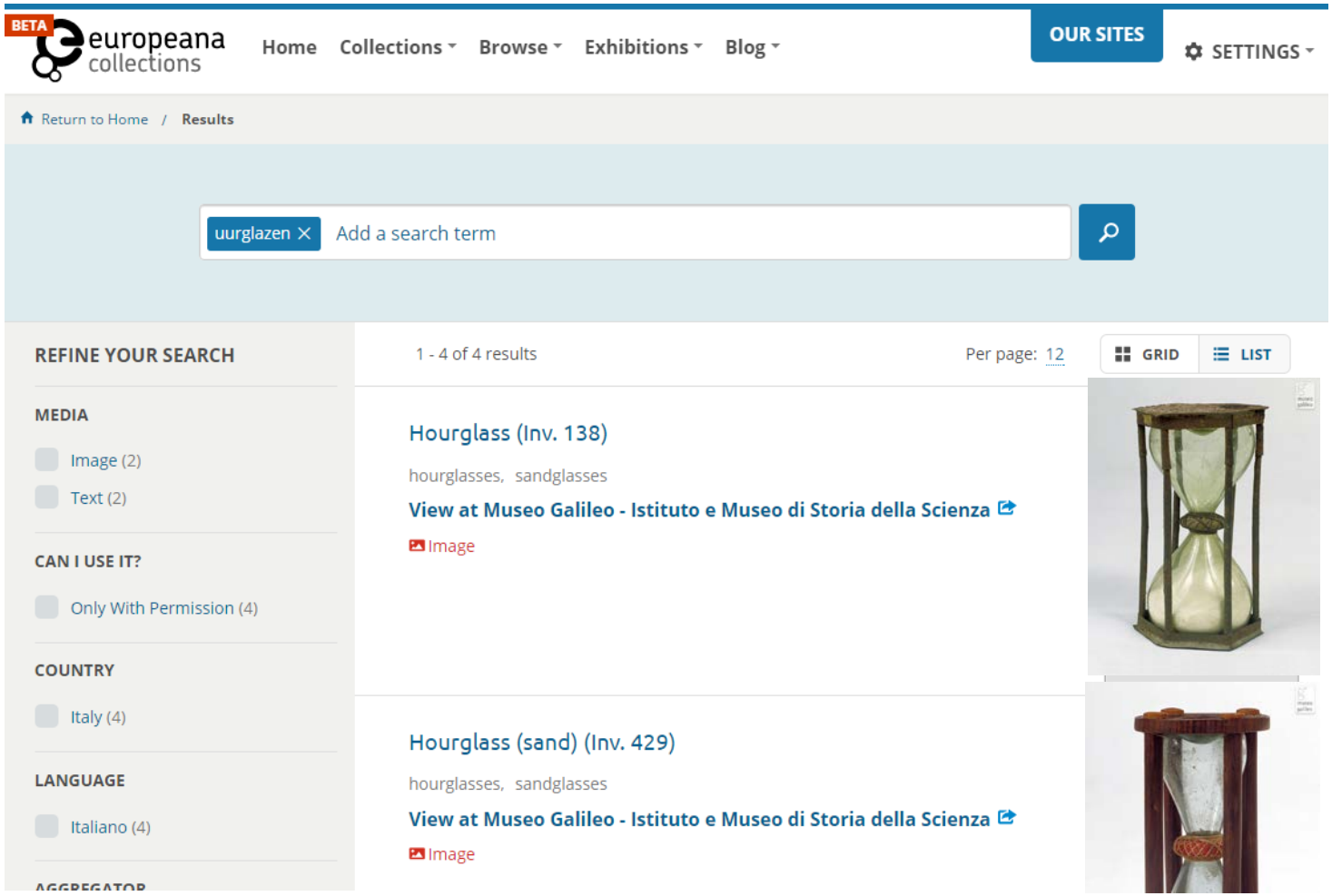


http://tw.rpi.edu/web/project/DCO-DS

7. How can LD enhance connections between repositories and more traditionally controlled authorities for library resources?

- Identifier management is key – need local URIs to support local assertions, plus relationships to appropriate global URIs
- IMLS-funded Western Name Authority File and Shared Local Authorities projects are working on this problem
- Don’t make your repository a silo!

8. Using LD URIs makes it easy for repositories to support international and multi-lingual applications



9. LD descriptions can your repository and its contents more visible and discoverable on the open web

- Map to Schema.org and embed in web pages for Google, Bing, and Yahoo impact
- Dan Brickley: “In nearly 18 years of work on RDF, I have never seen adoption like this. [Schema.org] is the breakthrough of linked data and RDF into mainstream computing, search and discovery.”

LD4L Team

More Info: http://ld4l.org