Linked Data for Libraries (LD4L) Use Cases

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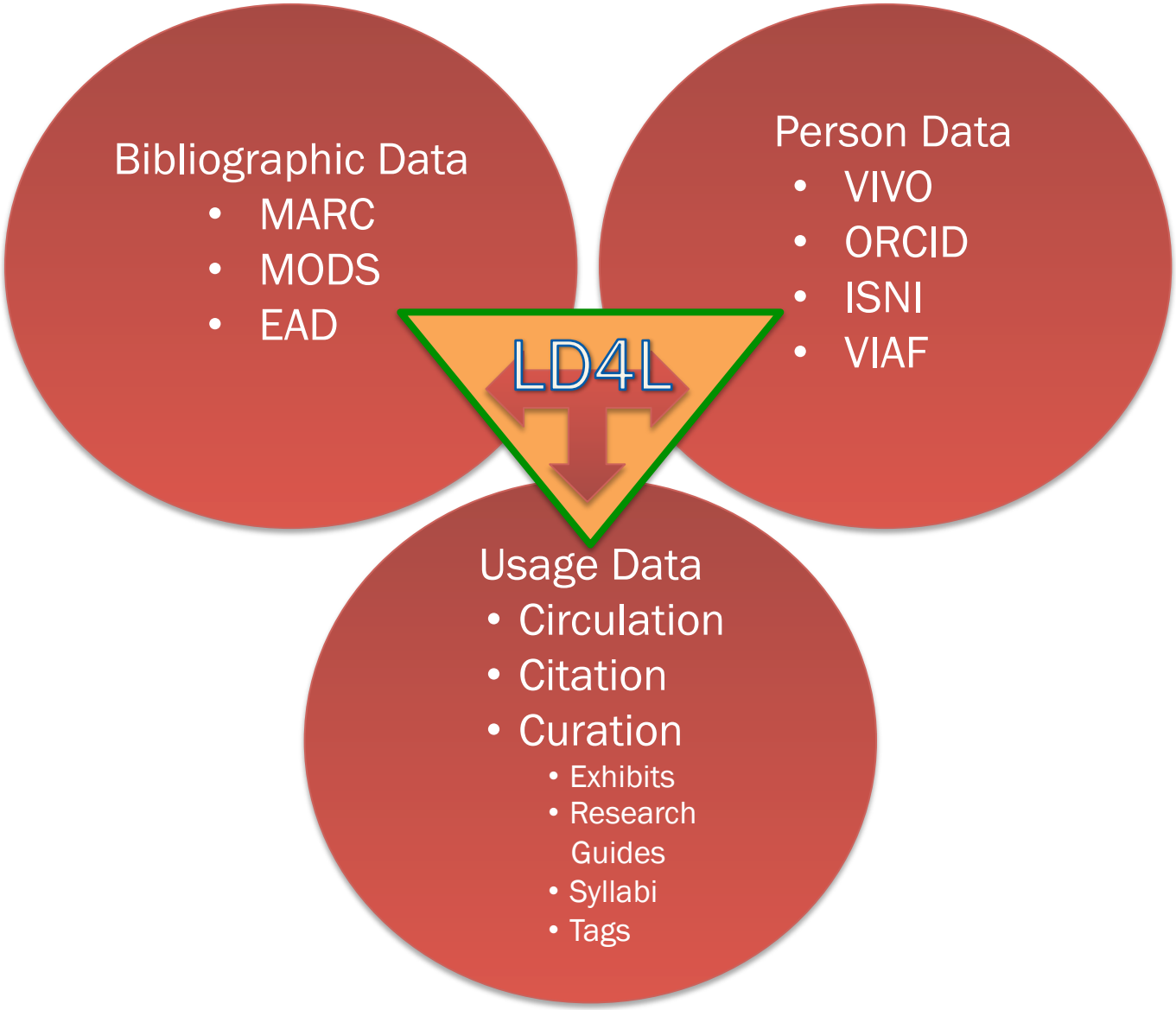
Process

- Brainstorming and refinement spring and summer 2014
- Want manageable set of uses cases that
  1. illustrates benefits of Linked Data
  2. has enough data available to demonstrate
  3. shows benefits of cross-institutional approach
- Started engineering work based on use cases summer 2014
- Want feedback on value, importance/interest, feasibility

LD4L Data Sources



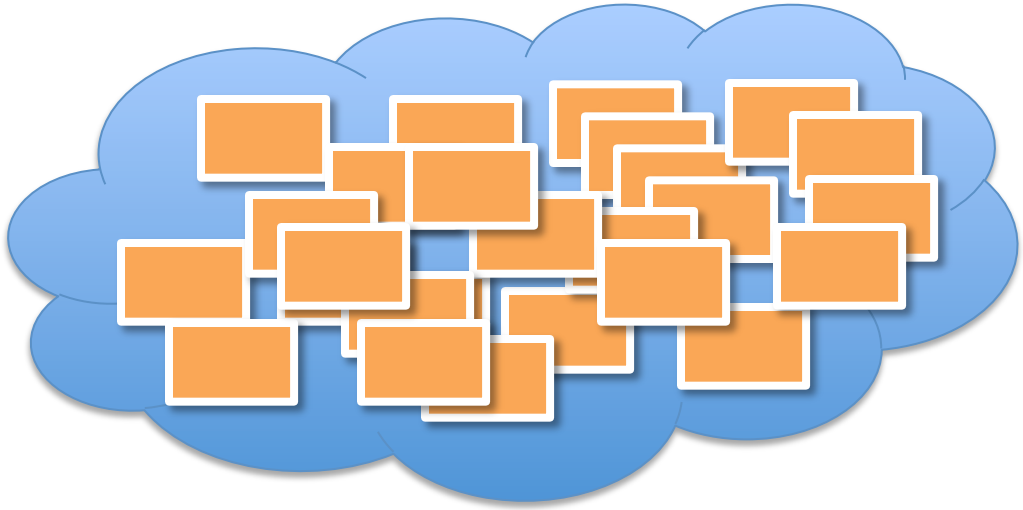
Stories as the Basis of Use Cases

As a _____, I want to _____, so that I can <realize this benefit>.

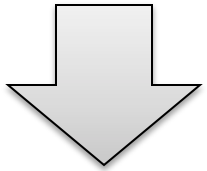
Potential Demonstrations:

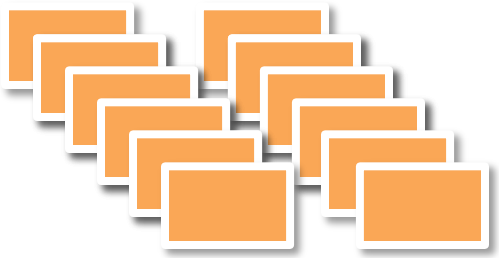
A. Demo 1
B. Demo 2
C. Demo 3

Data Sources Needed:
Ontology Requirements:
Engineering Work:

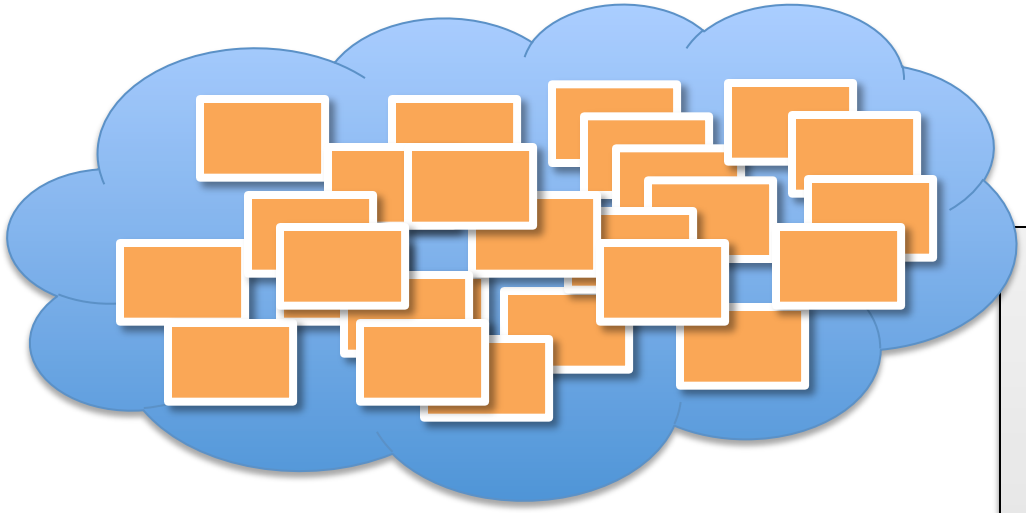


42 Raw Use Cases





12 Refined Use Cases
in 6 clusters…



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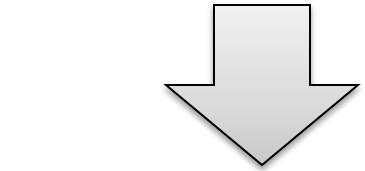
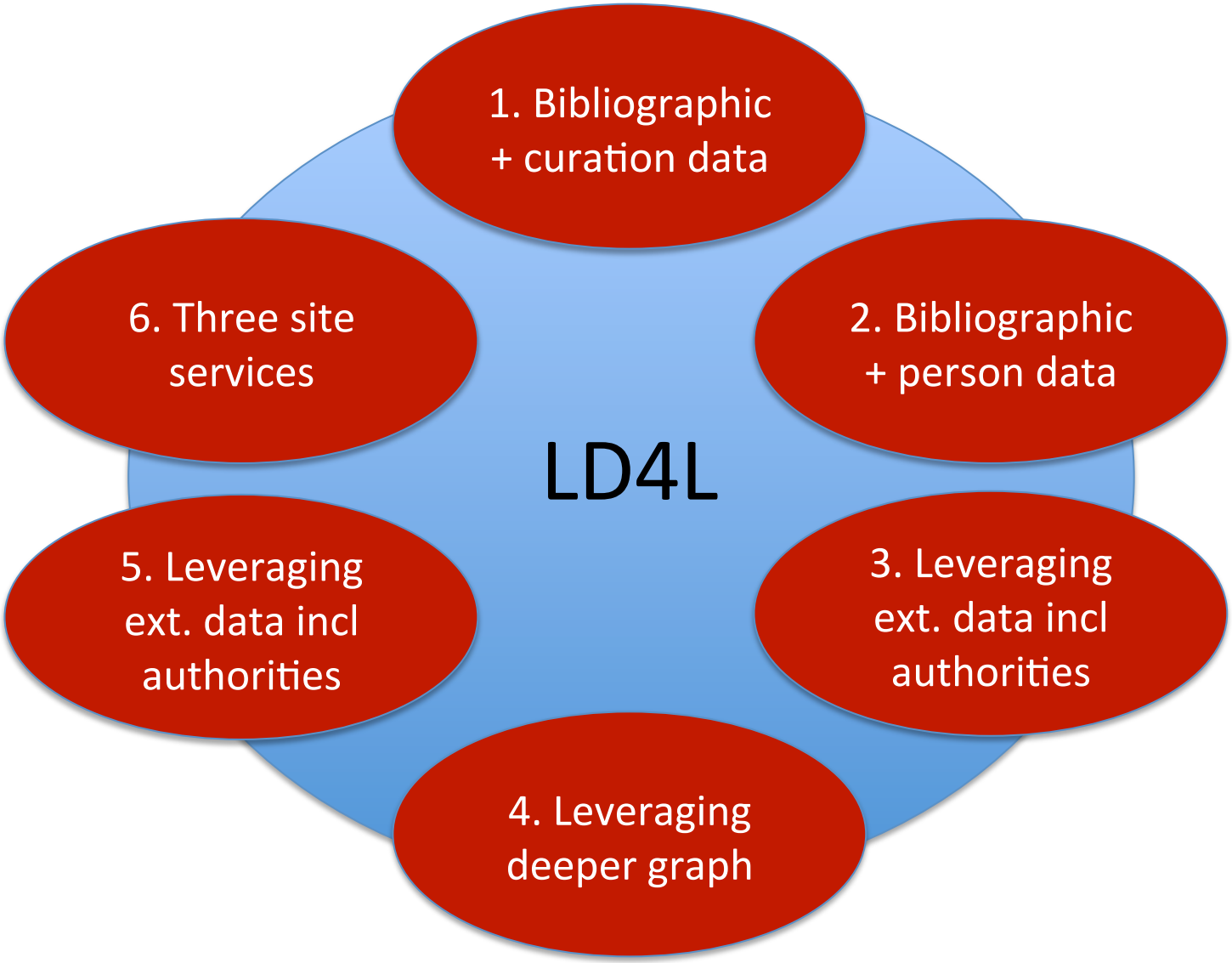


12 Refined Use Cases in 6 clusters…

LD4L Use Case Clusters

1. Bibliographic + curation data
2. Bibliographic + person data
3. Leveraging external data including authorities
4. Leveraging the deeper graph (via queries or patterns)
5. Leveraging usage data
6. Three-site services, e.g. cross-site search

Clusters


1. Bibliographic + curation data
2. Bibliographic + person data
3. Leveraging ext. data incl authorities
4. Leveraging deeper graph
5. Leveraging ext. data incl authorities
6. Three site services
LD4L

CLUSTER 1. BIBLIOGRAPHIC & CURATION DATA

UC1.1: Build a virtual collection

"As a faculty member or librarian, I want to create a virtual collection or exhibit containing information resources from multiple collections across multiple universities either by direct selection or by a set of resource characteristics, so that I can share a focused collection with a <class, set of researchers, set of students in a disciplinary area>."

UC1.1: Build a virtual collection

- Individual selection or resources
- Collection may be exhibit, reading list, etc.
- Includes description, ordering
- Shared or private
- **Enable across institutions**

- Well developed, uses annotations
- Demo and discussion after coffee (Lynette Rayle/ Naomi Dushay/Simeon Warner/Rob Sanderson)

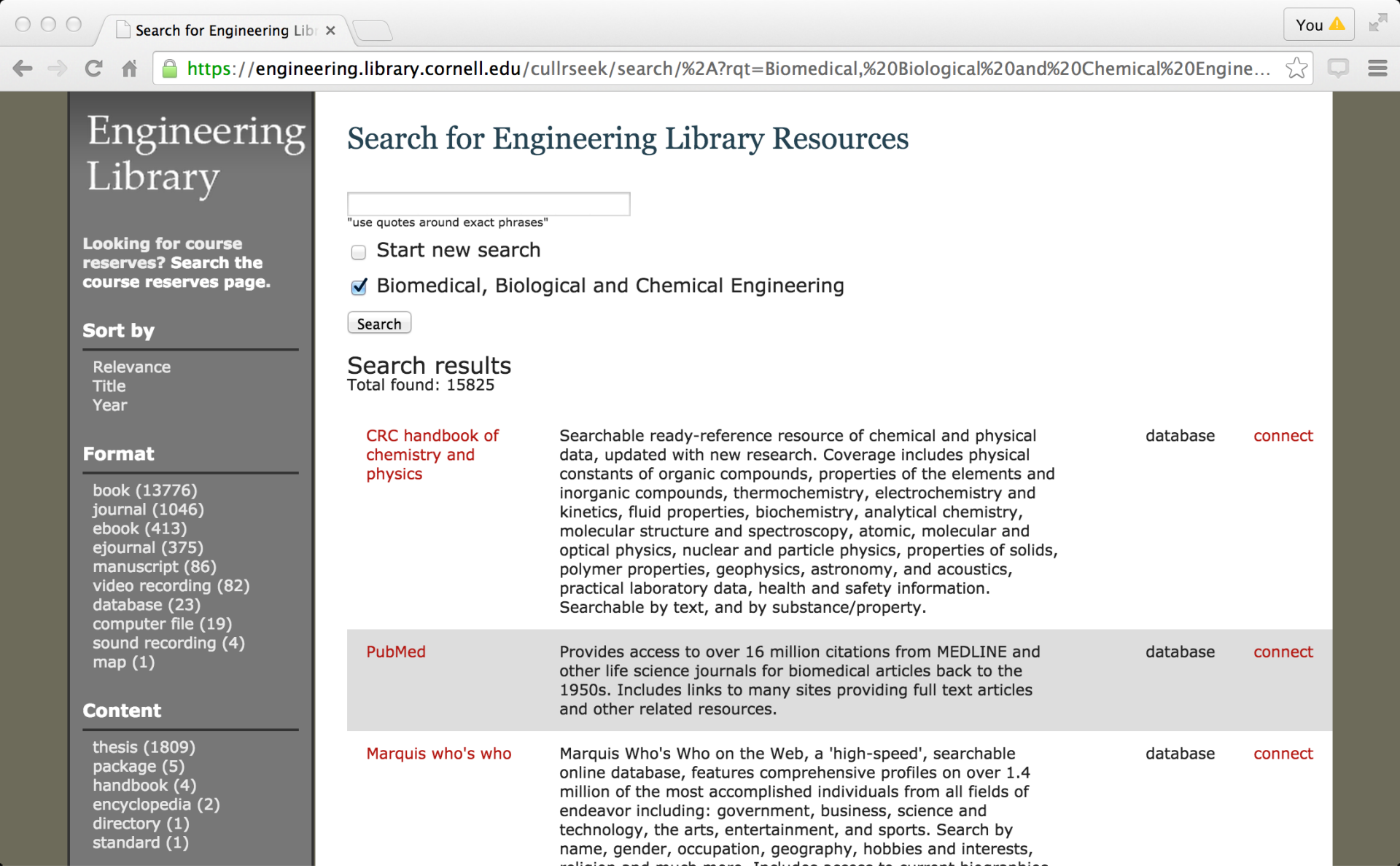
UC1.2: Tag scholarly information resources to support reuse

"As a librarian, I would like to be able to tag scholarly information resources from one or multiple institutions into curated lists, so that I can feed these these lists into subject guides, course reserves, or reference collections. I'd like these lists to be portable (into Drupal, into LibGuides, into Spotlight! or Omeka, into Sakai, e.g.) and durable. I'd like these lists/tags to selectively feed back into the discovery environment without having to modify the catalog records."

UC1.2: Tag scholarly information resources to support reuse

- Scale O(100,000) items
- Use for e.g. virtual subject library
- Selection by rules and patterns
- Collaborative curation
- Feed data into discovery environment

- Same model as 1.1, partially developed



Cornell: provide virtual library “views/collections” as part of main Blacklight discovery system

CLUSTER 2. BIBLIOGRAPHIC & PERSON DATA

UC2.1: See and search on works by people to discover more works, and better understand people

"As a researcher, I'd like to see / search on works <by, about, cited by, collected, taught> by University faculty <in an OPAC, profiles system>, to discover works of interest based on connection to people, and to understand people based on their relation to works."

"As a researcher, I'd like to see a list of works from the most prolific authors in my field at my institution and at other institutions."

UC2.1: See and search on works by people to discover more works, and better understand people

- Profile + catalog data
- Perhaps between institutions: multiple catalogs + multiple profile systems
- Poor journal data suggests likely can do more in non-journal disciplines

- Afternoon demo and discussions today (Rebecca Younes/Steven Folsom/Darren Weber/Jon Corson-Rikert/Phil Schreur)

CLUSTER 3. LEVERAGING EXTERNAL DATA INCLUDING AUTHORITIES

UC3.1: Search with Geographic Data for Record Enrichment and Pivoting

"As a researcher, I'd like to ***see the geographic context of my search results, and be able to pivot, extend or refine a search*** *with a single click, in order to better assess found resources, find related resources, and filter or expand search results to broaden or narrow a search on the fly."*

UC3.2: Search with Subject Data for Record Enrichment and Pivoting

"As a researcher, I'd like to ***see the subject area contexts for my search results and be able to pivot, extend or refine a search ...***"

UC3.3: Search with Person Data for Record Enrichment and Pivoting

"As a researcher, I'd like to ***see the person contexts for my search results and be able to pivot, extend or refine a search ...***"

UC3.x: Search with XYZ for Record Enrichment and Pivoting

XYZ = geographic / subject /person data

- External data and entity linking
- Things not strings
- Different data types have different challenges and data sources

- Included in afternoon brainstorming discussions

CLUSTER 4. LEVERAGING THE DEEPER GRAPH (VIA QUERIES OR PATTERNS)

UC4.1: Identifying related works

"As a scholar, I would like to find all the images associated with various instances of a work sorted by time, so that I can see how the depictions of or illustrations in a work have changed over time."

"(GloPAD specific): As a scholar, I would like to find all costume photographs and scene illustrations for various stagings and performances of the plays of a particular author or the operas of a particular composer, so that I can see how the visual look of performances of the plays or operas have changed over time."

UC4.1: Identifying related works

- use complex graph relationships via queries or patterns (rather than direct connections
- allow discovery that would not be possible without the semantics of different relationship
- restricted by available data

- Tuesday after-lunch demonstration and discussion (Paolo Ciccarese/Steven Folsom)

UC4.2: Leverage the deeper graph to surface more relevant works

"As a researcher, I would like to see resources in response to a search where the ***relevance ranking of the results reflects the "importance"*** *of the works, based on how they have been used or selected by others, so that I can* ***find important resources that might otherwise be "hidden"*** *in a large set of results."*

UC4.2: Leverage the deeper graph to surface more relevant works

- calculate scholarly importance
- include items not well represented in commodity services
- do better than Amazon?

CLUSTER 5. LEVERAGING USAGE DATA

UC5.1: Research guided by community usage

*"As a researcher, I want to **find what is being used (read, annotated, bought by libraries, etc.)** by the scholarly communities not only at my institution but at others, and to find sources used elsewhere but not by my community"*

UC5.1: Research guided by community usage

- need to understand community of user
  - direct: auth and from identity?
  - inferred as part of discovery?
- cross-institutional – need usage data that can be shared and merged

UC5.2: Be guided in collection building by usage

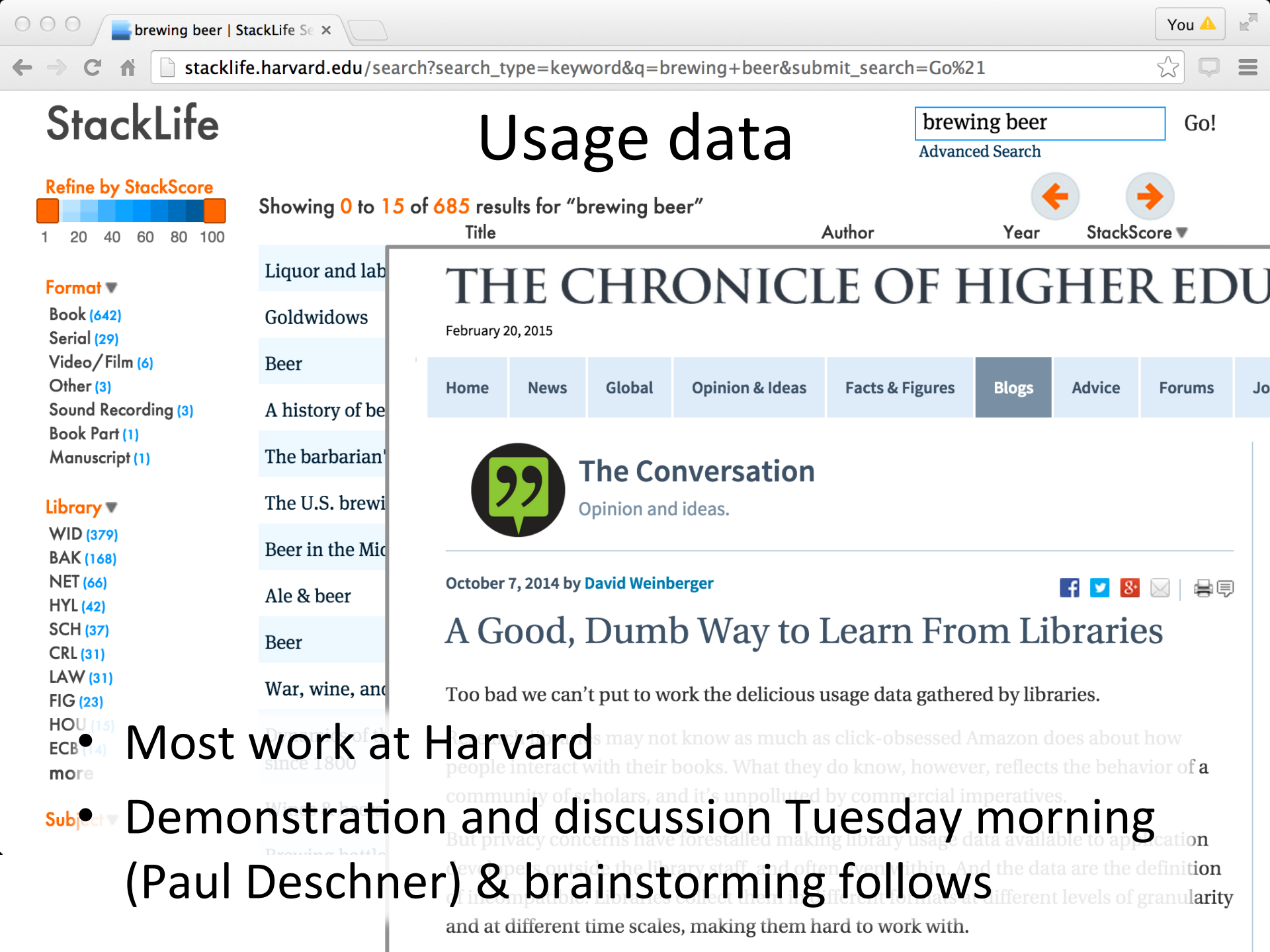
“As a librarian, I would like help building my collection by seeing what is being used by students and faculty.”

“As a subject librarian, I would like to see what resources in my subject area are heavily used at peer institutions but are not in my institution’s collection.”

UC5.2: Be guided in collection building by usage

- business analytics
- help libraries make best use of collection building activities and funds
- useful at both institutional or cross-institutional levels
- cross-institutional – need usage data that can be shared and merged

Usage data



- Most work at Harvard
- Demonstration and discussion Tuesday morning (Paul Deschner) & brainstorming follows

CLUSTER 6. THREE SITE SERVICES

UC6.1: Cross-site search

As a scholar I don't want my discovery process to be constrained by the collection boundaries of my university yet I want to retain the detailed coverage of special collections that are important in my field.

Bonus points: I want ***results ranked by the scholarly value****, not simply popularity in the public eye.*

UC6.1: Cross-site search

- demonstrate the power of sharing library data as linked open data
  - opportunities for third parties
  - benefits for partners
- deal with dupes & near dupes