Hydramata

Building a Nimble Solution with Hydra to Transcend the Institutional Repository

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Open Repositories, 2014

Discovering Common Challenges

- Aging, limited or absence of Institutional Repositories (IR)
- "IR" - a limiting descriptor of need
- Limited resources & turnover
- Scholarship now demands a flexible solution
  - Thesis and Dissertations are no longer simple text
 - Digital scholarship blows away traditional limits

Hydra Community Goals

- Identifying successful working methods to support multi-institutional projects

- Solution Bundles – software leveraging the Hydra framework that can be easily configured, tailored and integrated with an institution's architecture

Alignment Toward a Solution

- Hydra Community
  - Known partners
  - Experienced with common technologies
  - Emerging solution bundles developed by more than 1
- Critical needs by 6 institutions with desire to work together
- Unique opportunity and willingness to solve a problem together with a chance to meet community goals
- Solution Flexibility
  - Modular – architectural components would need to do specific functions for a variety of "intellectual works"
  - Configurable – 6 institutions with varying Enterprise systems

Mixed Architecture
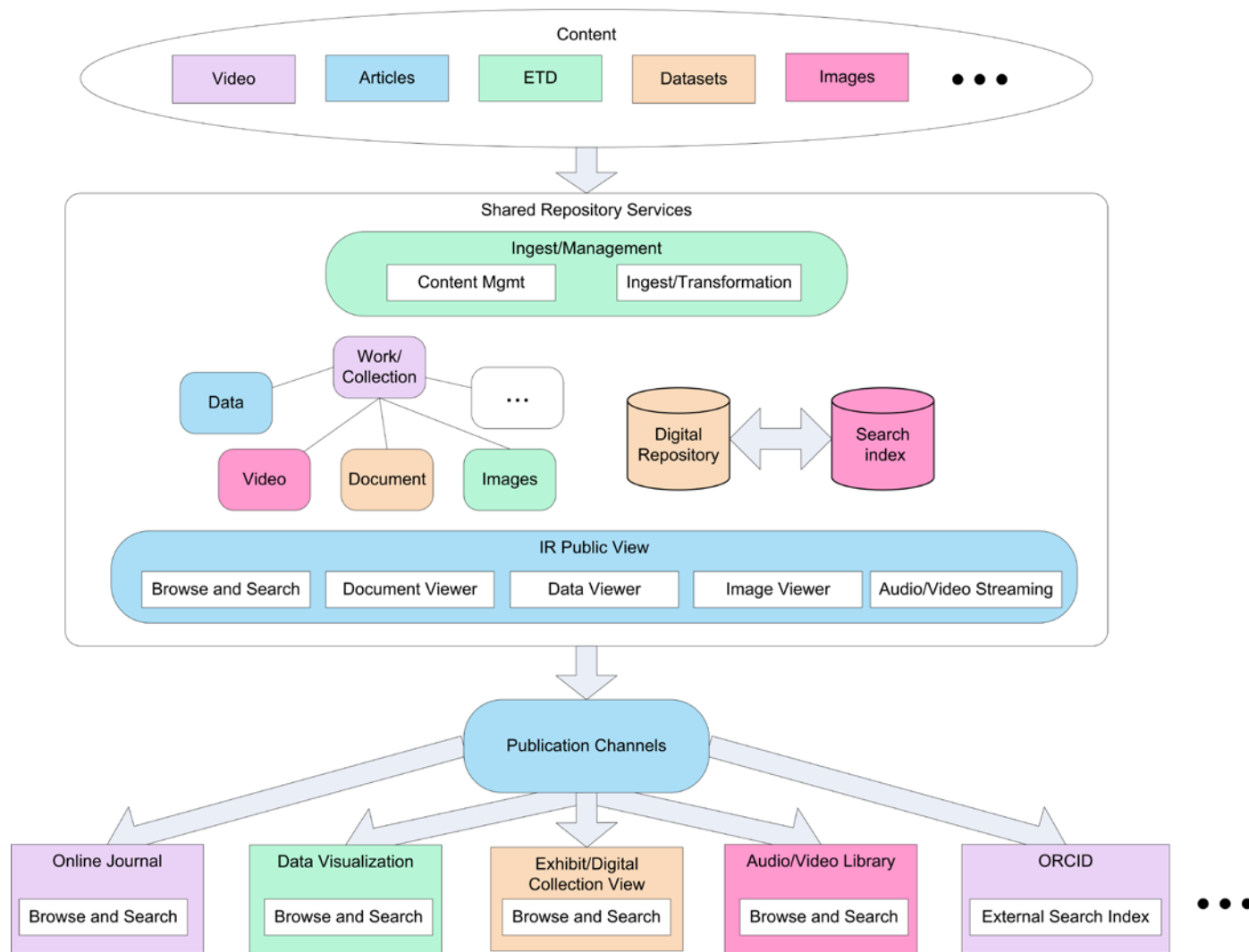
Timeline

- OR 2013:
  - Began discussions with interested partners (Northwestern U., U. of Notre Dame, U. of Virginia, Indiana U.)
- August, 2013:
  - Northwestern and Notre Dame partnered together and hired DCE to make 3 contributing institutions
- November, 2013:
  - Alpha release of Curate gem and CurateND at Notre Dame
- December, 2013:
  - Added U. of Virginia, Indiana U., and U. of Cincinnati
- Jan-Apr, 2014:
  - Group of 5 partners Extended Curate
- May, 2014:
  - Notre Dame deployed Beta Update of CurateND

March, 2014
Houston We Have a Problem

➢ **Hard to understand**
  ○ Unclear data flow
  ○ Hard to assign story points
➢ **Hard to maintain**
  ○ Engine design hard to test
  ○ Slow tests
➢ **Hard to configure**
  ○ Configurable only at install time
  ○ Monolithic; lacking modularity
➢ **Ingest unreliable and opaque**
  ○ Fedora/Solr sync problems
  ○ Orphaned Fedora objects
➢ **Not set up for advanced work**
  ○ Role-based Access Control
  ○ Batch ingest
  ○ Multi-stage workflow

Decreasing velocity

Increasing errors

Diminishing ROI

Preservation failure

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How We Have Worked
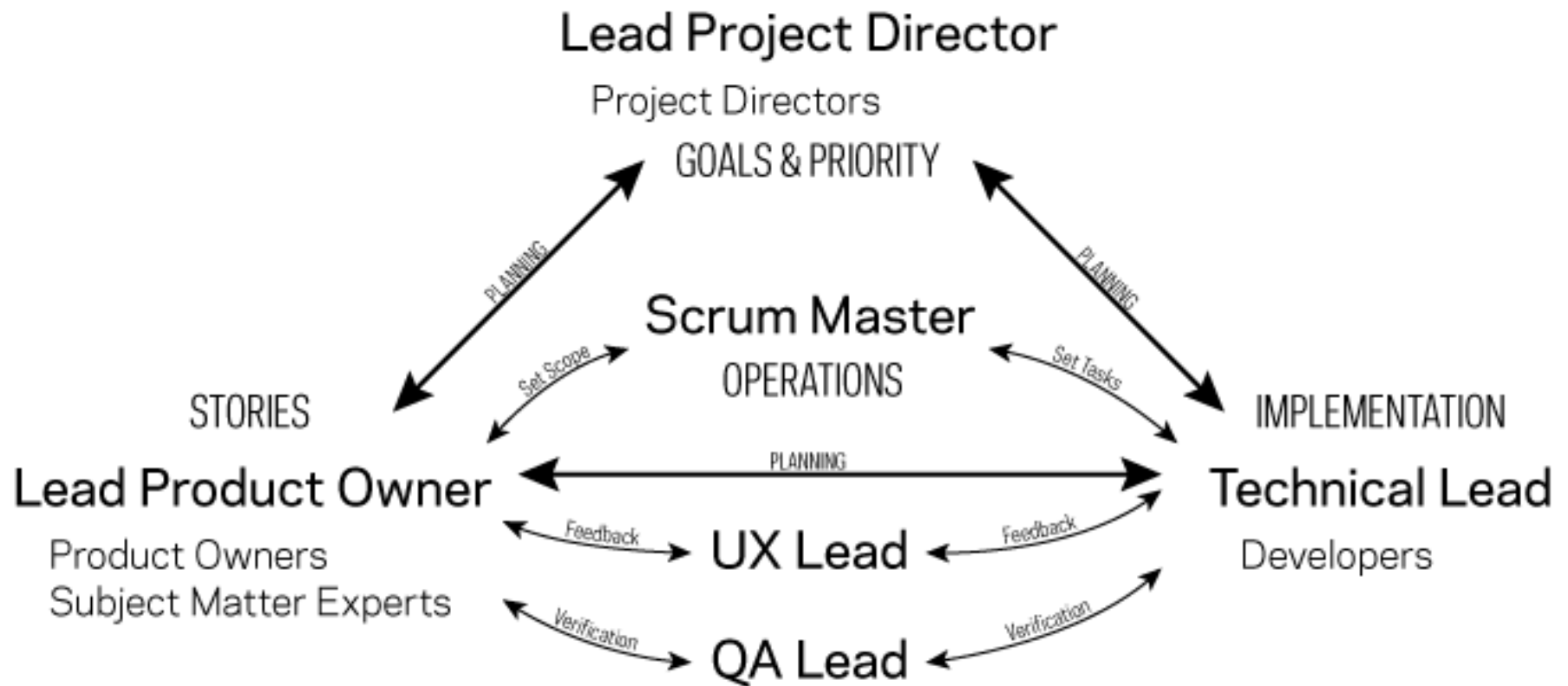
Refreshed Process

- Focus on smaller teams with fewer decision makers
- Split into parallel smaller teams in the future
- Tighter involvement of Development and QA and Sprint Planning and Story Writing
  - 3 Amigos/Story Triage process
  - Tasking happens before sprint planning

Queue	TCC	DEV	QA	Done
Story H *Story I* *Story J*	*Story D* *Story E* *Story F*	*Story C* *BLOCKED - Story G*	Story A	Story B

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Our Successes

- Teamwork - new people working alongside seasoned Hydranauts and RAILS engineers benefited both

- Work surfaced challenges with the core Hydra components that can now be explored further with the community for resolution

- Increased awareness for project complexity and how that impacts how we work together and how much planning is warranted

- CurateND

CurateND

Wide Content Support

Open Repositories 2014

Creating a Work

Required Information

★ Title

Creator

Chris DeLuca — Remove

+ Add

Description

Content Editors Who should be able to make changes to this work?

★ Editor Individual At least one person should be able to edit this work

Chris DeLuca — Remove

+ Add

Group Add groups to allow others to collaboratively edit this work.

+ Add

Additional Information

★ Contributor

+ Add

Date created

2014-05-12 — Remove

+ Add

Subject

+ Add

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Assign a DOI

Add Your Content

The subject of your dataset can either be a file *or* a URL.

Upload one or more files

[Choose File] Sample Dataset.csv   **OR**

External link

[   ]

Assign a Digital Object Identifier (DOI)

A DOI is a permanent link to your dataset. It's an easy way for other people to cite your work.

Want more information on DOIs? Here's a brief summary and the DOI FAQ.

○ Yes, I would like to create a DOI for this Dataset.

○ Yes, I already have one that I want to use: [doi:10.5072/FI]

○ Not now...*but maybe later.*

Access Rights   Who should be able to view or download this content?

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Share with the Right People

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Please note, making something visible to the world (i.e. marking this as `Open Access`) may be viewed as publishing which could impact your ability to:

- Patent your work
- Publish your work in a journal

Check out SHERPA/RoMEO for more information about publisher copyright policies.

○ `Open Access` Visible to the world.

○ `Open Access with Embargo` Treated as `Private` until [2014-05-15] then it is `Open Access`.

○ `University of Notre Dame` Visible to all University of Notre Dame users.

◉ `Private` Only visible to you and your delegates.

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User Profiles

Updated Product Vision

- Flexibility

- Modularity

- Extensibility

- Wide Format Support

- Support IR use cases

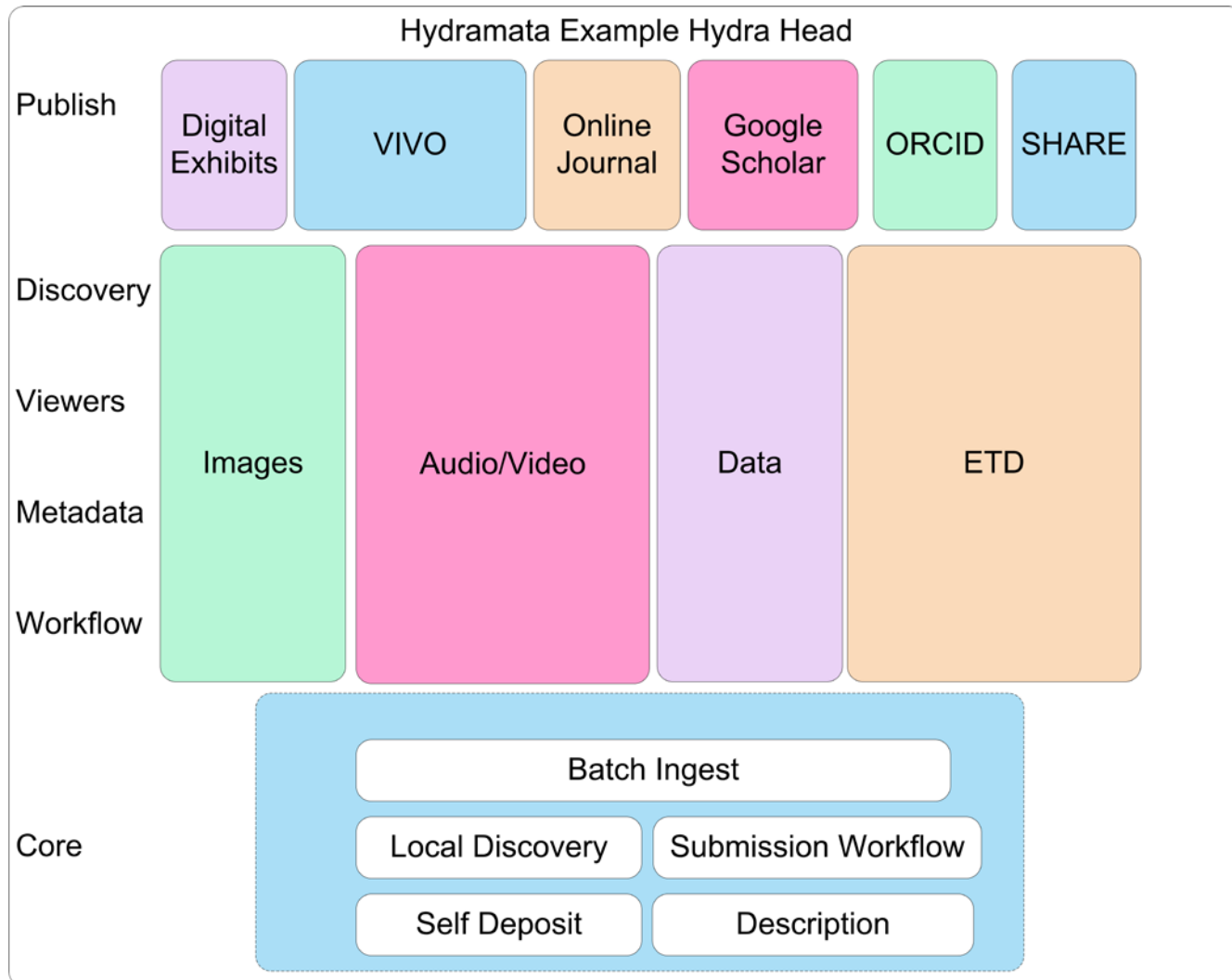- Swappable Viewers, Workflows, Other Plugins
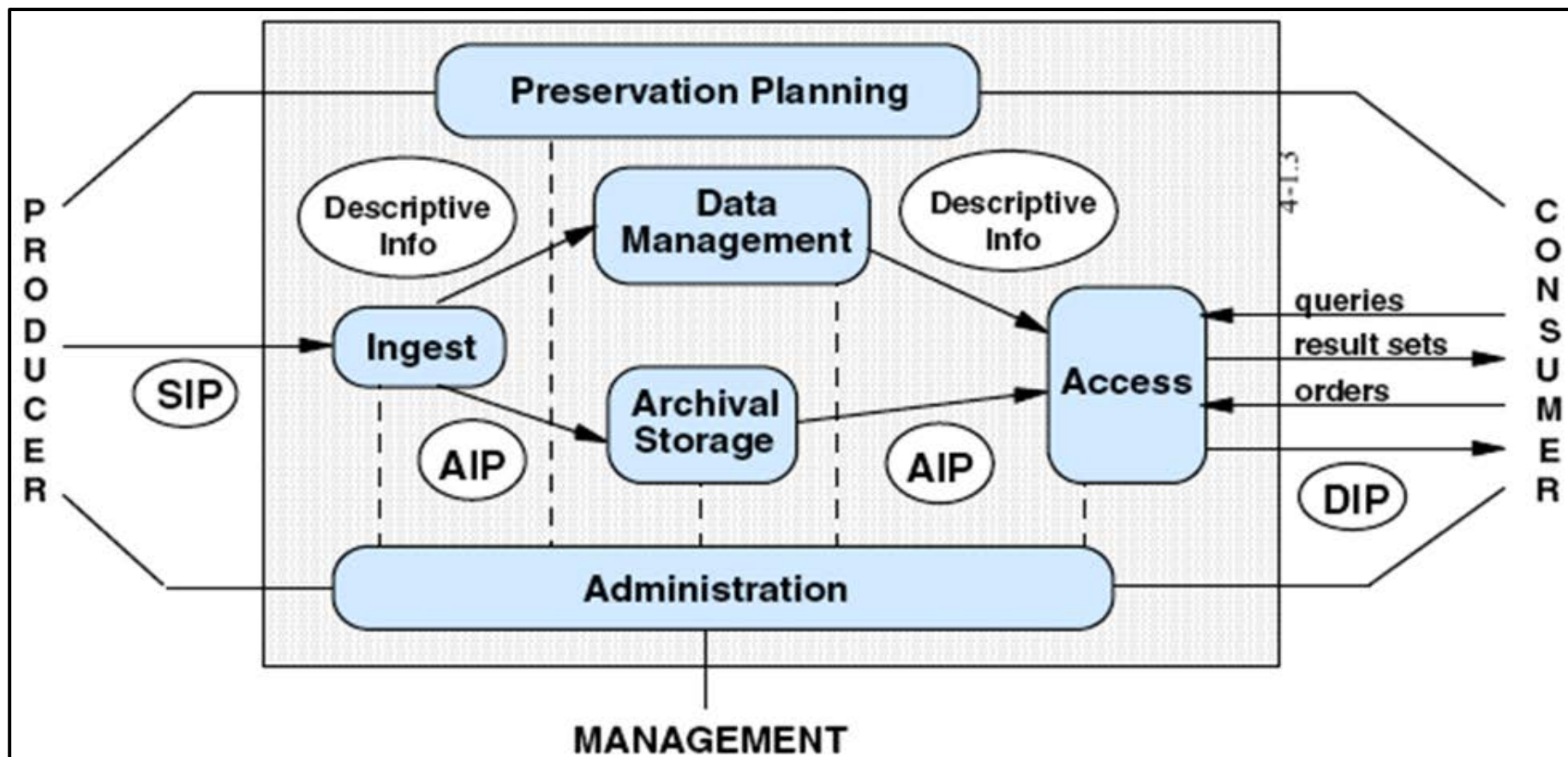
Hydramata Deep-Dive Teaser

A set of separate hydra-based automata, "hydramata", that can be combined to form a single Hydra Head. Each hydramaton can be mixed and matched with other hydramata to provide wide format support tailored to fit your institutional or digital repository needs.

Transformation

Hydramata Example Hydra Head

| Publish | Digital Exhibits | VIVO | Online Journal | Google Scholar | ORCID | SHARE |

Discovery / Viewers / Metadata / Workflow: Images, Audio/Video, Data, ETD

Core: Batch Ingest, Local Discovery, Submission Workflow, Self Deposit, Description

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Tighter OAIS and Hydra Alignment

Contact Info

- Rick Johnson, rick.johnson@nd.edu
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- Hydramata Project wiki:
  - https://wiki.duraspace.org/display/hydra/Hydramata+Project
- Curate code base:
  - https://github.com/projecthydra-labs/curate
- CurateND: http://curate.nd.edu
- Hydra Community: http://projecthydra.org/

Q & A