

Hydramata: Building a Nimble Solution with Hydra to Transcend the Institutional Repository

Not Assigned

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Hydramata

Building a Nimble Solution with Hydra to Transcend the Institutional Repository

Rick Johnson, University of Notre Dame
Robin Ruggaber, University of Virginia
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

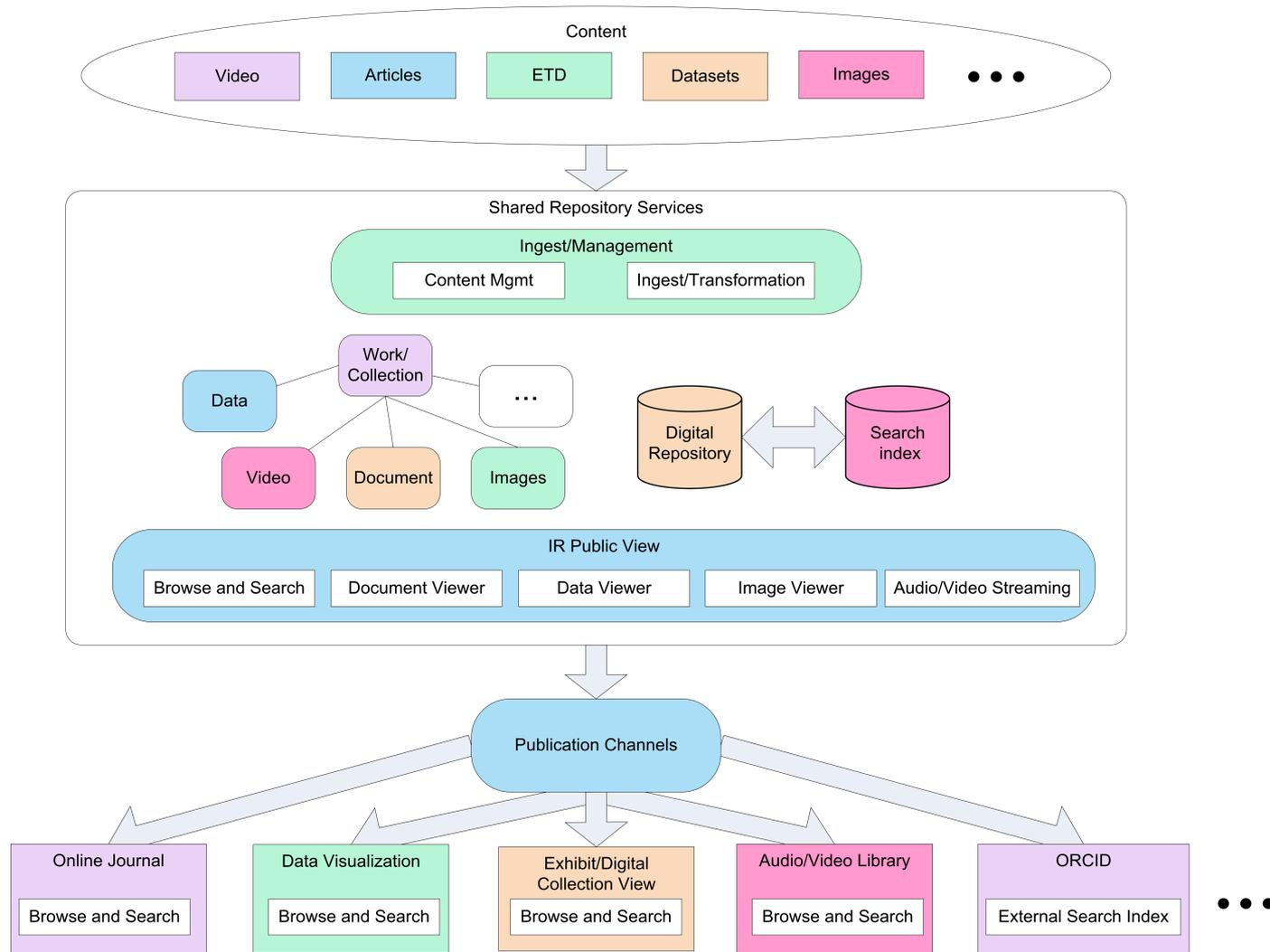
Hydra Community Goals

- 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



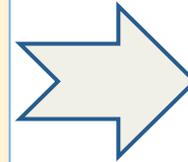
Timeline

- 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

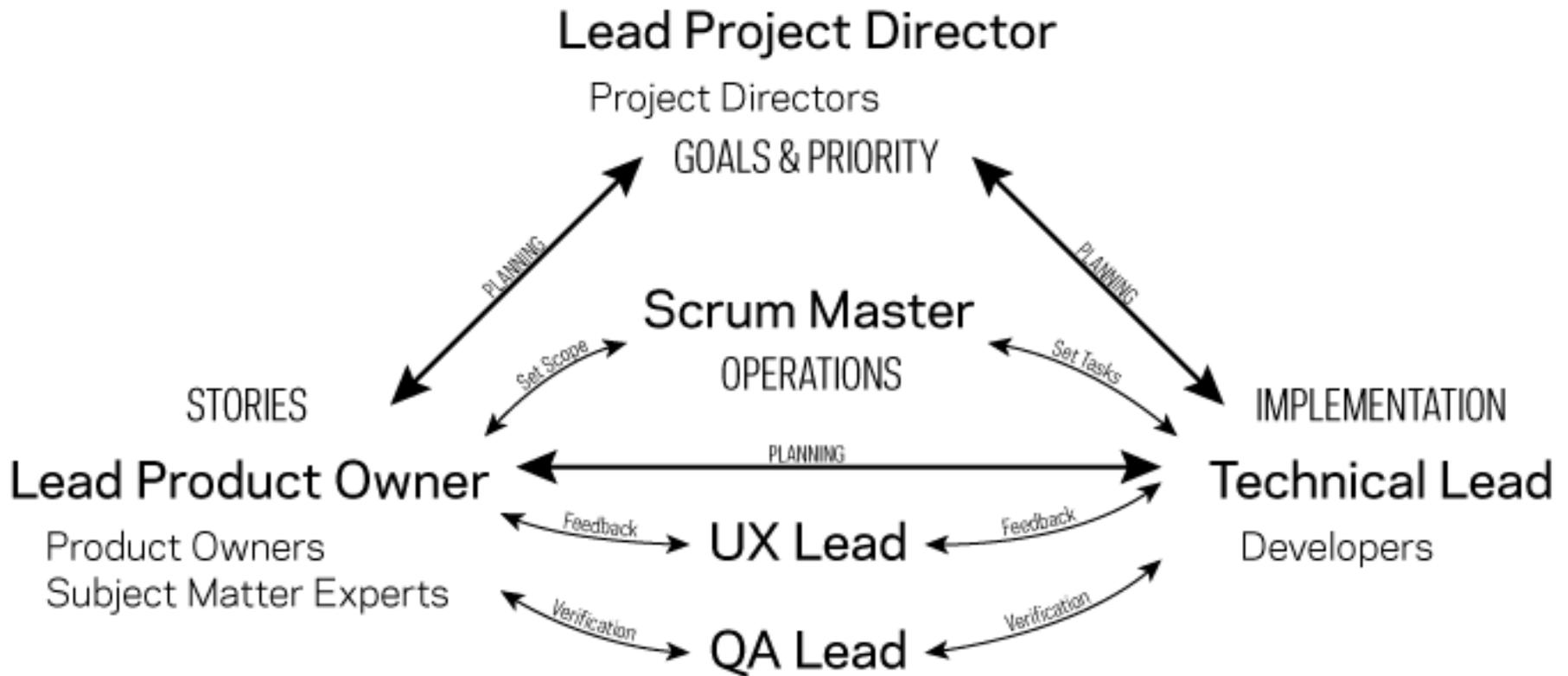
- Hard to understand
 - Unclear data flow
 - Hard to assign story points
- Hard to maintain
 - Engine design hard to test
 - Slow tests
- Hard to configure
 - Configurable only at install time
 - Monolithic; lacking modularity
- Ingest unreliable and opaque
 - Fedora/Solr sync problems
 - Orphaned Fedora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



Decreasing velocity
Increasing errors
Diminishing ROI
Preservation failure



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
<i>Story H</i>	<i>Story D</i>	<i>Story C</i>	Story A	Story B
<i>Story I</i>	<i>Story E</i>	<i>BLOCKED - Story G</i>		
<i>Story J</i>	<i>Story F</i>			

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

CurateND Search Results

UNIVERSITY of NOTRE DAME HESBURGH LIBRARIES

Search CurateND CurateND Rick Johnson Help!

Works Collections People All

View:

- All Content
- My Content
- Type of Work >
- Creator >
- Language >
- Publisher >

« Previous Next » 1 2 3 4 5 ... 18 19

- 1 Article [MyLibrary: A Digital Library Framework and Toolkit](#)   
Abstract:
This article describes a digital library framework and toolkit called MyLibrary. At its heart, MyLibrary is designed to create relationships between...
- 2 Article [Ethical and economic issues surrounding freely available images found on the Web](#)   
Abstract:
By reverse engineering Google queries and by tracing back the referrer values found in Apache log files, the use of images made available from info...
- 3 Article [Creating and managing XML with open source software](#)   

Wide Content Support

The screenshot shows the CurateND website interface. At the top, there is a search bar labeled "Search CurateND" and a navigation menu with "About", a plus sign, "Rick Johnson", and "Help!". A dropdown menu is open under "Rick Johnson", listing "My Works", "My Collections", "My Profile", "My Proxies", and "Log Out". The main heading is "What are you uploading?" followed by the text "Before we can begin we need to know a little about what you're uploading." Below this, there are six content type cards, each with an "Add New" button:

- Article**: Deposit or reference a preprint or published article.
- Dataset**: One or more files related to your research.
- Document**: Deposit any text-based document (other than an article).
- Image**: Any image file: art, photograph, poster, etc.
- Senior Thesis**: PDFs and other Documents for your Senior Thesis.
- Video**: Upload your video files. A red "Coming Soon" stamp is overlaid on this card.

Creating a Work

Required Information

★ Title

Creator
 – 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
 – Remove
 + Add

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

Additional Information

★ Contributor
 + Add

Date created
 – Remove
 + Add

Subject
 + Add

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:
- Not now...*but maybe later.*

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

Share with the Right People

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:
- Not now...*but maybe later.*

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

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 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.

User Profiles

The screenshot shows a web browser window displaying a user profile for Linda Newman. The browser's address bar shows the URL: <https://curatevanilla.library.nd.edu/people/x059c7885>. The page header includes "YOUR INSTITUTION" and "YOUR DIVISION AT INSTITUTION". A search bar with the text "Type keywords in here" and a "Curate" logo are visible. The profile name "Linda Newman" is prominently displayed. Below the name, there is a section titled "Selected Works" with a sub-section "Cincinnati Subway". Under "Cincinnati Subway", there is a description: "Learning what a Profile Section does". Below this, there are three items in a list, each with an "Edit" button and a "Remove" button:

- [Andy's Test Collection 1](#) [Edit] [Remove]
- [Street Improvement Photographs -- Box 32, Folder 35 \(Calvin Cliff\) -- negative, 1930](#) [Remove]

Each item has a brief description: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean a erat id tellus imperdiet malesuada sit amet vel sem. Ut consectetur, sapien in tempor suscipit, tortor orci fringilla eros, vitae laoreet nisl nibh ac nunc. Aenean a ultrices odio."

To the right of the list is a profile picture of Linda Newman, a woman with red hair and glasses, wearing a teal shirt and a patterned jacket. Below the photo, her email address is listed: "Email: newmanld@ucmail.uc.edu". At the bottom of the profile section is a button labeled "Update Linda Newman's Information".

At the bottom of the page, there is a footer: "Powered by [Curate](#) and [Sufia](#). Made possible by the [Hydra](#) project. Build: 2014-03-26 14:07:47".

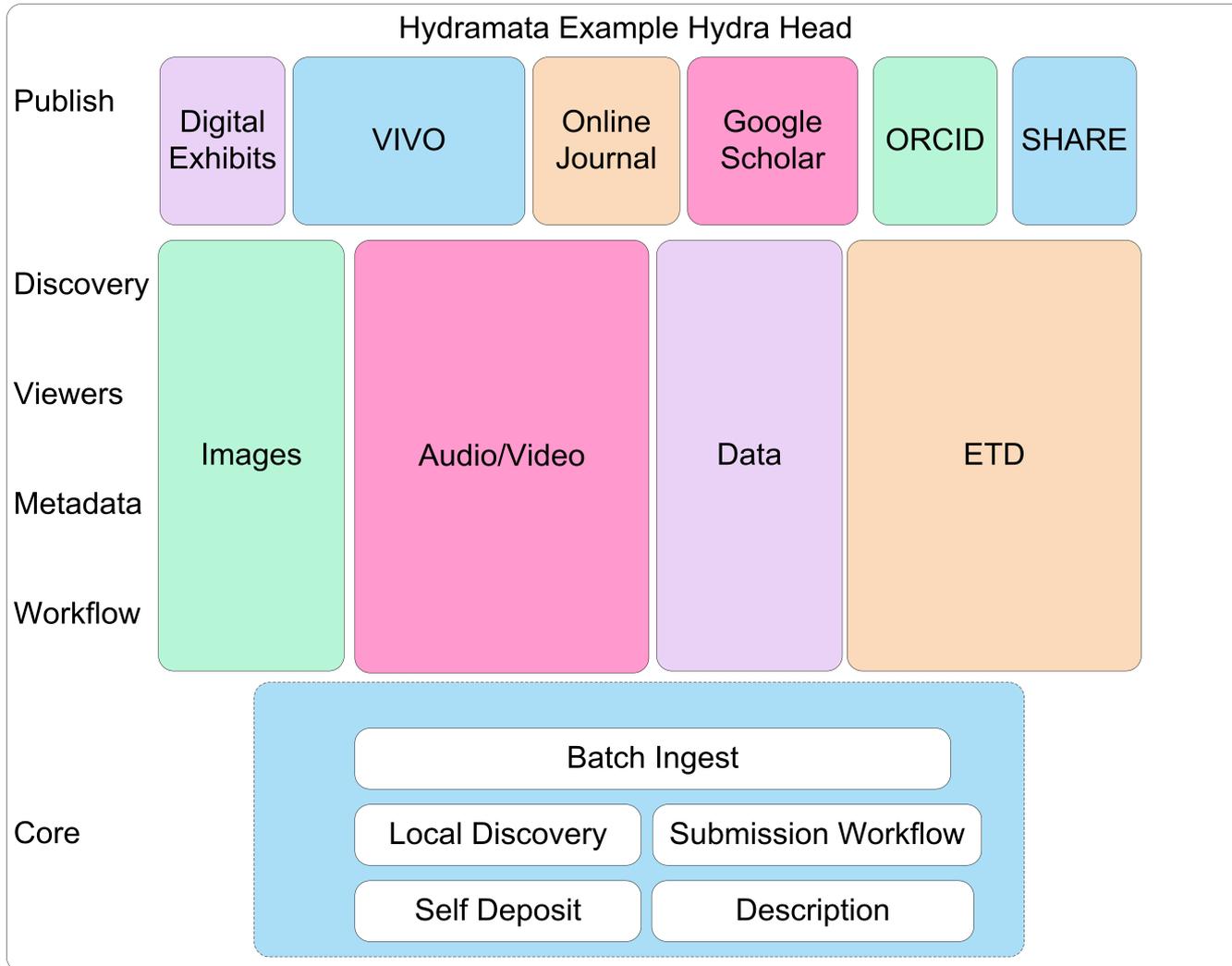
Updated Product Vision

- Flexibility
- Modularity
- Extensibility
- Wide Format Support
- Support IR use cases
- Swappable Viewers, Workflows, Other Plugins

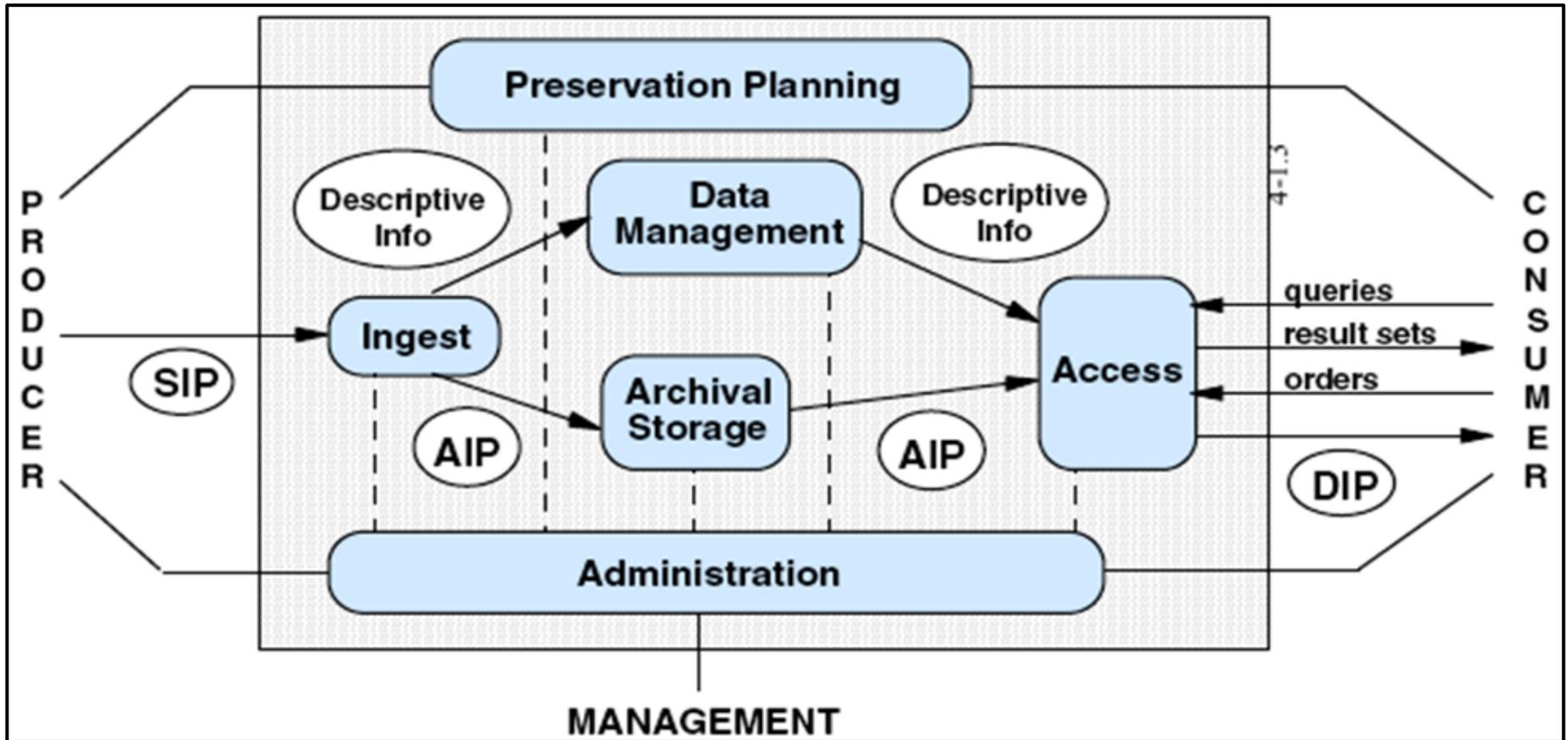
Hydramata Deep-Dive Teaser

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



Tighter OAIS and Hydra Alignment



Contact Info

- Rick Johnson, rick.johnson@nd.edu
- Robin Ruggaber, rsl6m@eservices.virginia.edu
- 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

