Building Hyku for Consortia:
Cross-Consortial Partnerships for Community Infrastructure

• • •

Kirsten Leonard, PALNI Executive Director & Jill Morris, PALCI Executive
Director
CNI Project Update
December 3, 2020

Outline

1. About Us
2. Need and Vision for Collaboration
3. Project Specifications and Development Efforts
4. Future Plans
5. Call to Action

Staffing the Hyku for Consortia Project

Kirsten Leonard and Jill Morris, Project Directors and Principal Investigators

Amanda Hurford, PALNI, Hyku for Consortia Product Owner, co Project-Lead

Gretchen Gueguen, PALCI, Hyku for Consortia Project Manager, co Project-Lead

Nicholas Stanton-Roark, PALNI, Pilot liaison, Documentation and QA Testing

In addition to us:

   Notch8: Software Development

   Product Management Team: Design and Requirements

Thank you to IMLS

PALCI and PALNI were awarded $172k from IMLS in June 2019 to support a second development phase (the first was funded by PALNI) to establish a multi-tenant, consortial IR application, and to explore the potential for supporting shared IR services infrastructure across two consortia.
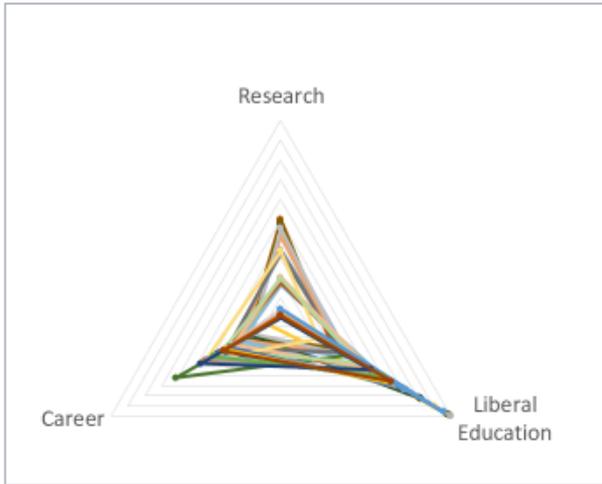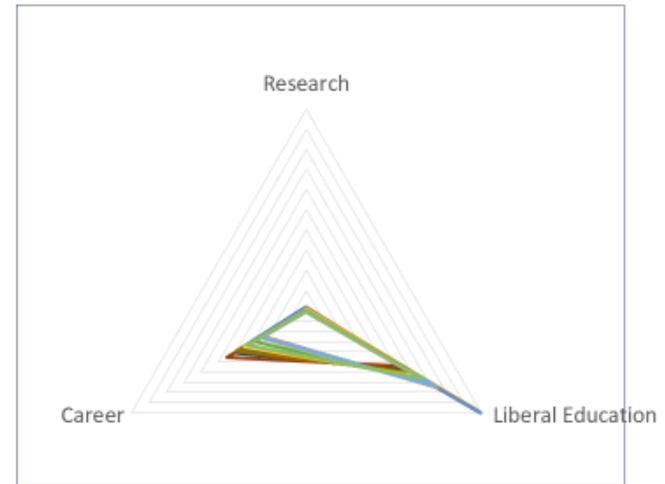
Collaboration at our Core

The "PALs"

Who? 7...

Where? P...

Structure? 5...

Staffing? 4...

Groups serving diverse membership:

Research
Career
Liberal Education

Problem: finding common ground

Groups serving specific institution types:

Research
Career
Liberal Education

Problem: prioritizing where to act

Collaborating to Address Barriers & Shared Challenges

Need to control costs

Market consolidations and acquisitions

Limited staffing capacity, expertise, and tech resources

Need for easy-to-use open source alternatives

Importance of discovering Open Access material

Need for innovation AND scale

Desire to share the work

Desire for flexible systems to meet diverse needs

Hyku for Consortia Vision & Values - Partnering in order to:

1) Contain and share costs
2) Build IR efficiencies leveraging shared expertise, resources, tech management, and scale
3) Develop an open source community infrastructure for innovation and interoperability
4) Hit the sweet spot in the marketplace, with a "good enough" technology solution to

What is Hyku?

Hyku is a standardized installation of the open source digital repository Hyrax meant to meet the largest possible set of basic repository needs.
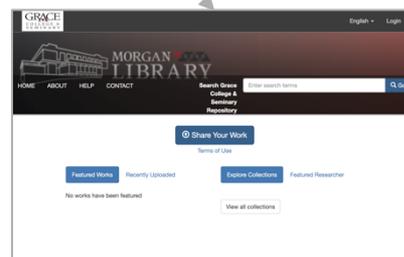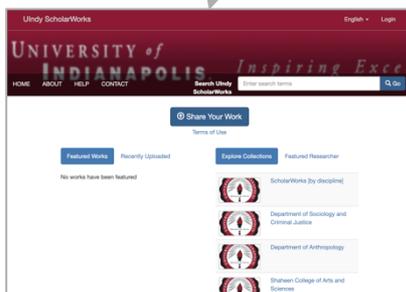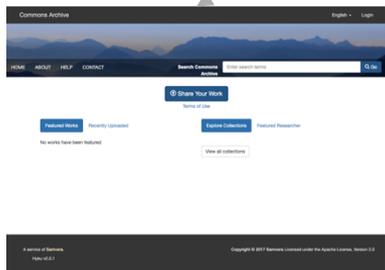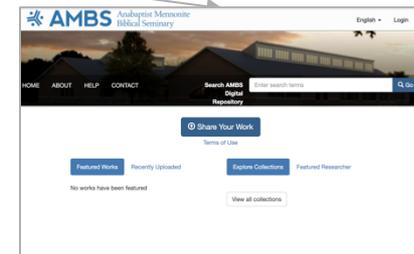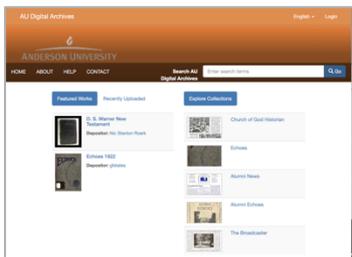
Hyku has a predetermined set of functions, types of objects and metadata out of the box. It can also run as a multi-tenant solution.

Hyku can be installed and configured as a single application, instead of needing to configure the various components as you would with

Multi-Tenant

PALs working together

Phase 3: 2021-2023?
Remove barriers to adoption for institutions

Phase 2: 2018-2021
Improve features for multi-tenant administration

Phase 1: 2017-2018
Get Hyku up and running

Methodology:
- Gathering input from many libraries
- Synthesize into prioritized needs
- Translate to the Hyrax/Hyku environment

Hyku for Consortia Development

Grant Goals and Deliverables

- Collaborative workflow support and bulk uploads Development in progress
- Work types w/metadata support for OER and ETD   Development in progress
- Themed templates   Specifications gathered
- DOI integration   Gathering requirements
- Cross-tenant searching   Gathering requirements
- Multi-tenant shared works   Gathering requirements
- Contributing code / integrating community development In progress

Adding Collaborative Workflows

Scenario name	Scenario description	What is the resource type?	Where does the content come from?	Who uploads?	Who describe...
Faculty self-submit	a faculty member uploads their own work	pdf	direclty from faculty member	faculty member	faculty membe... data, library st...
Archival collection	Archives has a collection they want to put online in connection with the library and a department on campus	images/ text documents (possibly need full-text searching)	Faculty or archives select content, library digitizes	Library staff to an area that is only viewable by staff involved	Library staff w... from archives... we reuse or in... use archival h... metadata
Library managed submission workflow	Library staff collect and upload materials received from faculty	Document, link, or metadata only record	Faculty or staff via a web submission form, direct email to library staff, library staff proactively searching and adding materials	Library staff	Library staff
Journal hosted on IR	Student, faculty, and staff journal submissions	Document	Journal authors (students, faculty, staff, outside submitters)	Journal editors	Journal editor... from library st...
Theses and Dissertations	Accepted degreed research from institutional department	PDF, but also data objects. images, text, datasets	authors via a web submission form	department once approved	author provide... metadata, libr... controlled voc...
Theses	Thesis accepted by department chair or thesis advisor	born digital or scanned pdf; may include scores, videos, and/or audio files (native streaming would be wonderful)	authors via web submission form or library collection (for older theses)	library staff	libary staff
Journal hosted on IR	Student, faculty, and staff journal submission	pdfs, word docs, text files	authors* (see note)	authiors upload original version; library staff uploads final version	authors provic... other informat... staff verifies a... information

1. Midwest Library Consortium has 35 members who are all sm... will provide a Hyku repository service for members. A conso... administer the service as part of their duties, and a reposit... members across the consortia will provide orientation, docur... start-up, and will develop policies, workflows, and best pract...

Users

Consortia Roles
Administrator
- C...
- fe...
- C...
- R...
- ...

	Tenants		Collections		Admin sets	
	Action	Space	Action	Space	Action	Space
Consortia Admin	C/R/E/D/V	Co/M/T	C/R/E/D/P/V	Co/M/T	C/R/E/D/P/V	Co/M...
Mult-ten Manage	R/E	M	C/R/E/D/P/V	M	C/R/E/D/P/V	M
Mult-ten Editor	R	M	C/R/E	M	R/E	M
Ten Manager	R/E	T	C/R/E/D/V	T	C/R/E/D/V	T
Ten Editor	R	T	C/R/E	T	R/E	T
Ten Approver	R	T	R	T	R	T
Ten Depositor	R	T	R	T	R	T
Ten Proxy-Depos	R	T	R	T	R	T
Ten Authorized V	R	T	R	T	R	T
Ten Viewer	R	T	R	T	R	T

LCSH subject headings before publishing the collect...
8. Every time a new item is digitized by the archival sta... followed: Tenant-only Editor uploads, Tenant-only M... publishes.

2. Cool-Guy West Coast Consortium has 10 members, all of w... wanting a high level of service and flexibility. The consortia ... member just to work on the repository service with members... for setting their own policies and workflows, but typically only...

Can...
Can...

Depositor...
- Ca...
- Ca...
- Ca...
- Ca...

Project Timeline Overview

- Project initiation and planning: July 2019
- Requirements and design process (iterative): November 2019 - February 2020 (on hiatus)
  - Cross-consortial Product Management Team
  - Specifications for worktypes, collaborative workflows, and theme templates gathered
- Development sprints (iterative): April 2020 - present
  - OER worktype done, ETD worktype is next
  - Refining user permissions, roles, and groups for multi-tenant administration
  - Prerequisite bug fixes, Bulkrax, ability to hide tenants, feature flexibility
- Testing, Pilot and Feedback (iterative): July 2020 - present
  - Production pilots started with 14 institutions (7 each)
- Governance and business model development: ongoing
- Documentation and closeout: ongoing - December 2021
  - Identify funding for future development phases

We are here.

Business Model for Sharing Infrastructure

Vision: PALCI and PALNI will jointly offer IR services desired by member libraries at greatly reduced costs to support a variety of consortial and individual library use cases, with a particular focus on collaboration for general IR services, affordable learning materials, and ETDs.

3 Scenarios: ★★★ 1) Deep Collaboration:
Shared Administration, Management and Expertise

★★ 2) One Consortium as Service Provider: Some cost sharing

★ 3) Hosted Solution only; Commercial Service Provider

IR Cost Factors

AWS hosting / server

Support & maintenance

Software development

Staffing / Management

# of institutions

Scenario 1 - Sample Cost Share Models (Rough estimates only, estimated conservatively)

	PALCI	PALNI	Notes
AWS / Server Costs	$12,000 (% use * $24,000)	$12,000 (% use * $24,000)	Split based on actual use of storage (used 50/50 split for estimating purposes)
Support & Maintenance	$6,000	$6,000	Split evenly up to retainer w/Notch8 or other contracted support
Development	$15,000	$15,000	Split evenly up to retainer
Staffing @ PALCI, PALNI	$40,000	$40,000	Dependent on salaries + benefits, 2 Part-time or 1 Full-time
Total Costs	$73-80,000	$73,000-8[...]	
Funding Models	Cost recovery	Centrally [...]	
# Institutions	15		
Estimated cost per institution	$5,350	3,500	No need to figure out the true cost per institution with cost info based on items/storage capacity in Hyku so that we can determine the best scaling efficiency. It's possible that if PALCI were to offer Hyku to 30 members that we could take on more of the costs, but does that raise the other costs of support/hosting significantly?

EXAMPLE - DRAFT

Opportunities for Future Development: Addressing Barriers to Adoption

- Configurable metadata fields per tenant
- Customization of controlled vocab
- Google Scholar indexing

- Sophisticated reporting and metrics
- Faculty profiles
- Integrated journal creation workflows

Rethinking Institutional Repositories

The 2017 CNI *Rethinking Institutional Repositories* report identified a number of major challenges in the IR space and a great diversity of institutional needs.

This is important because a great deal of IR development has happened / is happening in silos;

If we worked together and leverage the diversity of our institutions better, open source systems like Hyku, have the potential to provide previously unavailable scale and greater access to underserved / less well-resourced communities.

Call to Action: Join the Hyku Community

Investments and library commitments to development of open and community-owned infrastructure is needed to contain costs and create viable open source alternatives.

Innovation is needed; Development experience is needed; Diversity is needed.

We believe our partnership is a model for sharing infrastructure, including software + expertise and human resources.

Ask us about a demo for your group of libraries.

THANK YOU!

Questions?

Hyku Demo:
https://vimeo.com/424366097/1669194f8f

Visit: hykuforconsortia.org

Twitter: @hyku4consortia

Email:

gretchen@palci.org; jill@palci.org;
amanda@palni.edu;;
kleonard@palni.edu