Samvera

Introduction to Community, Technology, and Value
22 October 2020
Samvera Connect On-line

Richard Green

Robin Ruggaber

samvera

Please mute your microphone and turn off your video to reduce network traffic for those with poor connections. Thanks!

Let's Start with You – Welcome!

- ~~Introductions~~
- ~~What are your goals for this workshop?~~
- ~~What interested you in Samvera?~~
- ~~What are some things you would like to know more about?~~
- Too many people to do that! Instead we'll make some assumptions but try to leave time for questions at the end
- We'll also leave you with our contact details in case you want to follow up with questions that way. We may not know the answers but we should be able to put you in touch with someone who does!
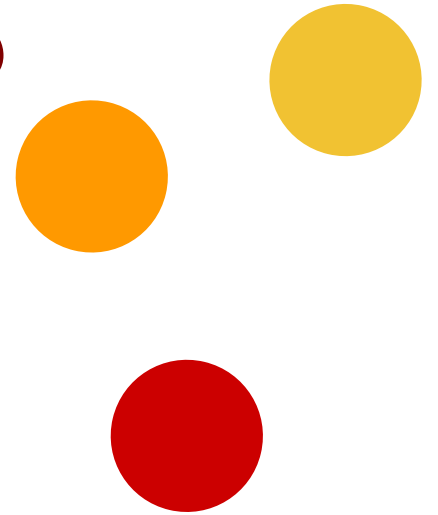
If you want to go far, go together!

What we'll cover

- What is Samvera?
- The Community
- The technology
- Why Samvera?
- Where to begin?
- Enrolling Others
- Q & A – we'll check between segments and at the end

First up:

What is Samvera?

- the view from 35,000 feet!

What is Samvera?

- A community building, extending and enhancing repository solutions
  - ⇨ *If you want to go fast, go alone. If you want to go far, go together.*

- Software enabling robust repositories fronted by feature-rich, tailored applications and workflows

- Collaboratively built "products" that can be adapted and modified to suit local needs.
  - ⇨ e.g. Hyrax, Hyku, Avalon

What is Samvera? #2

- The Community overview
- The solutions overview
  - Hyrax
  - Hyku
  - Avalon
- The cost overview

The Community overview

Some of the attendees at Samvera Connect 2019 at Washington University in St Louis, MO
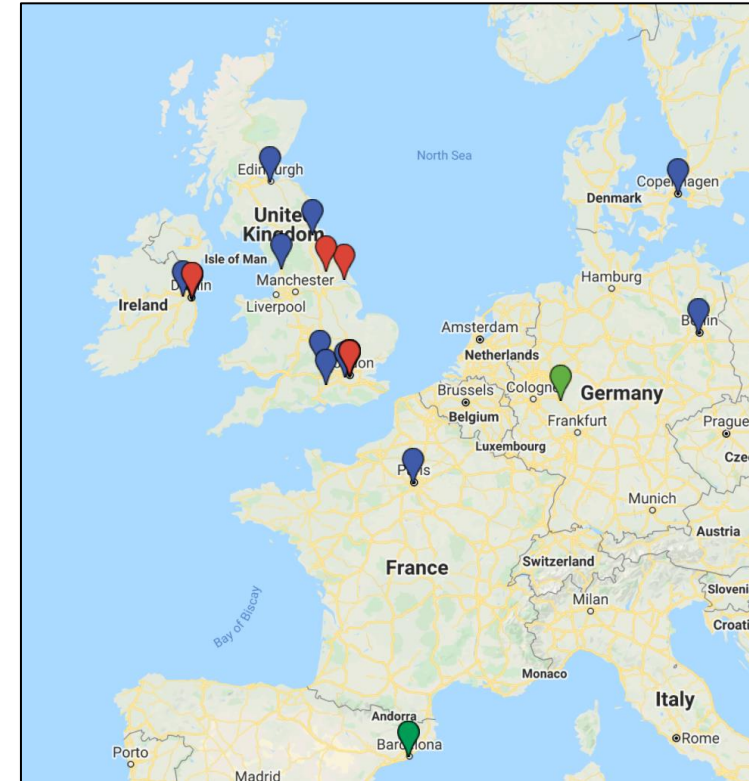
(photo Washington University in St Louis)

A World Wide Presence
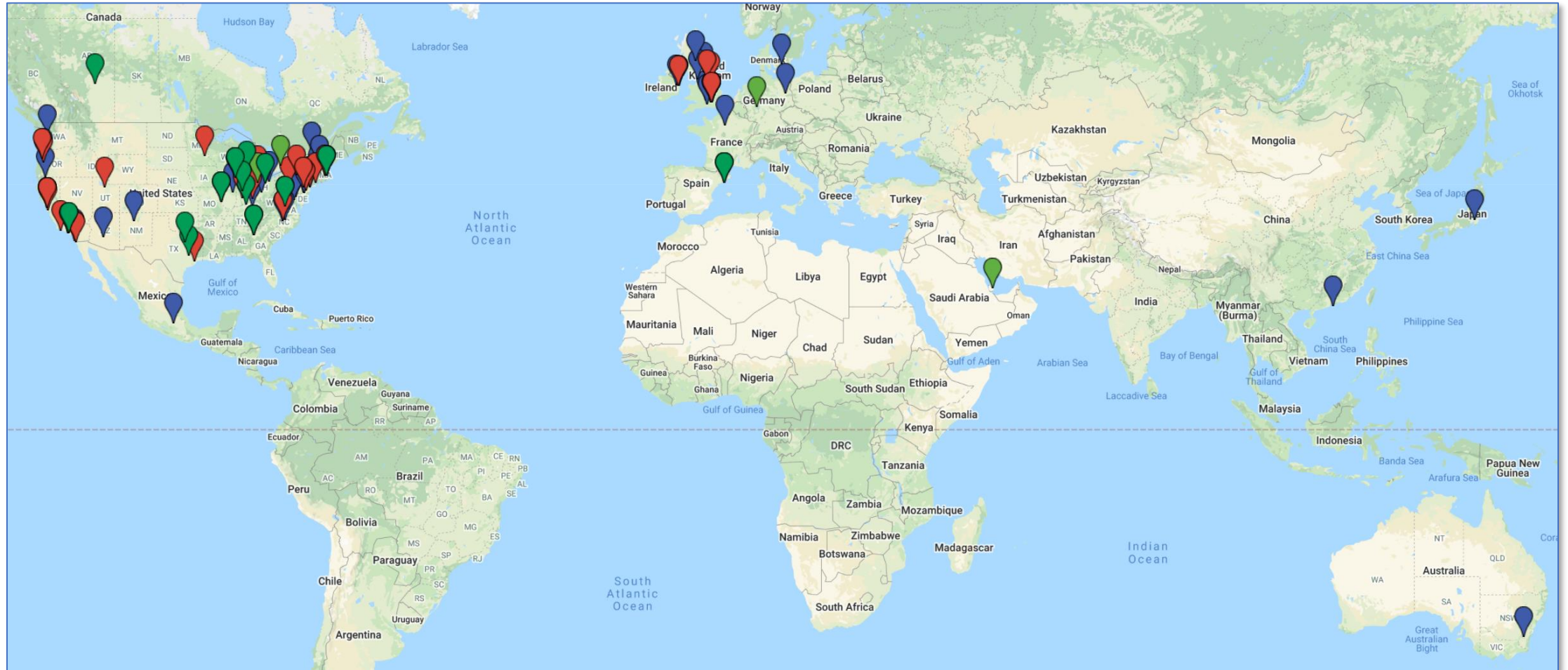
A World Wide Presence

...North America and Europe at larger scale

Community Structure

❖ **Steering Group** (elected by and from Partners)
Stewards of the project - individual membership

❖ **Partners** (Institutional)
Formally committed institutional membership

❖ **Working & Interest Groups**
Topically aligned groups that span organizations & roles

❖ **Committers**
Developer community

❖ **Community adopters**

...and working with all of those Samvera's **Community Manager**

Samvera Partners

- Stanford University
- University of Hull
- University of Virginia
- University of Notre Dame
- Northwestern University
- Columbia University
- Penn State University
- Indiana University
- Data Curation Experts
- WGBH
- Boston Public Library
- Duke University
- Yale University
- University of Cincinnati
- Princeton University Library
- Cornell University

- Oregon State University
- University of Oregon
- Tufts University
- University of Michigan
- University of California, San Diego
- University of York
- Lafayette College
- Washington University in St. Louis (WUSTL)
- The Digital Repository of Ireland
- University of California, Santa Barbara
- University of Houston Libraries
- Emory University
- CoSector, University of London
- Ubiquity Press
- University of Utah
- Notch8

If you want to go far, go together!

Used by:

- Large Universities
- Small Universities
- Colleges
- Public Broadcasting
- Government Ministry
- National Libraries
- National Lab
- Small Research Labs
- National Digital Repository
- Statewide Digital Libraries
- Science History Institute
- Museum of Performing Arts
- A Shakespeare Festival

Used for:

- Self-deposit system
- Digital Collections Systems
- Electronic Theses & Dissertations
- Digital Image System
- Media Management
- Media Preservation System
- Research Data Management
- Digitization Workflow System
- Digital Preservation System
- Digital Archives System
- Library Monograph Acquisitions System
- And more!

If you want to go far, go together!

The solutions overview
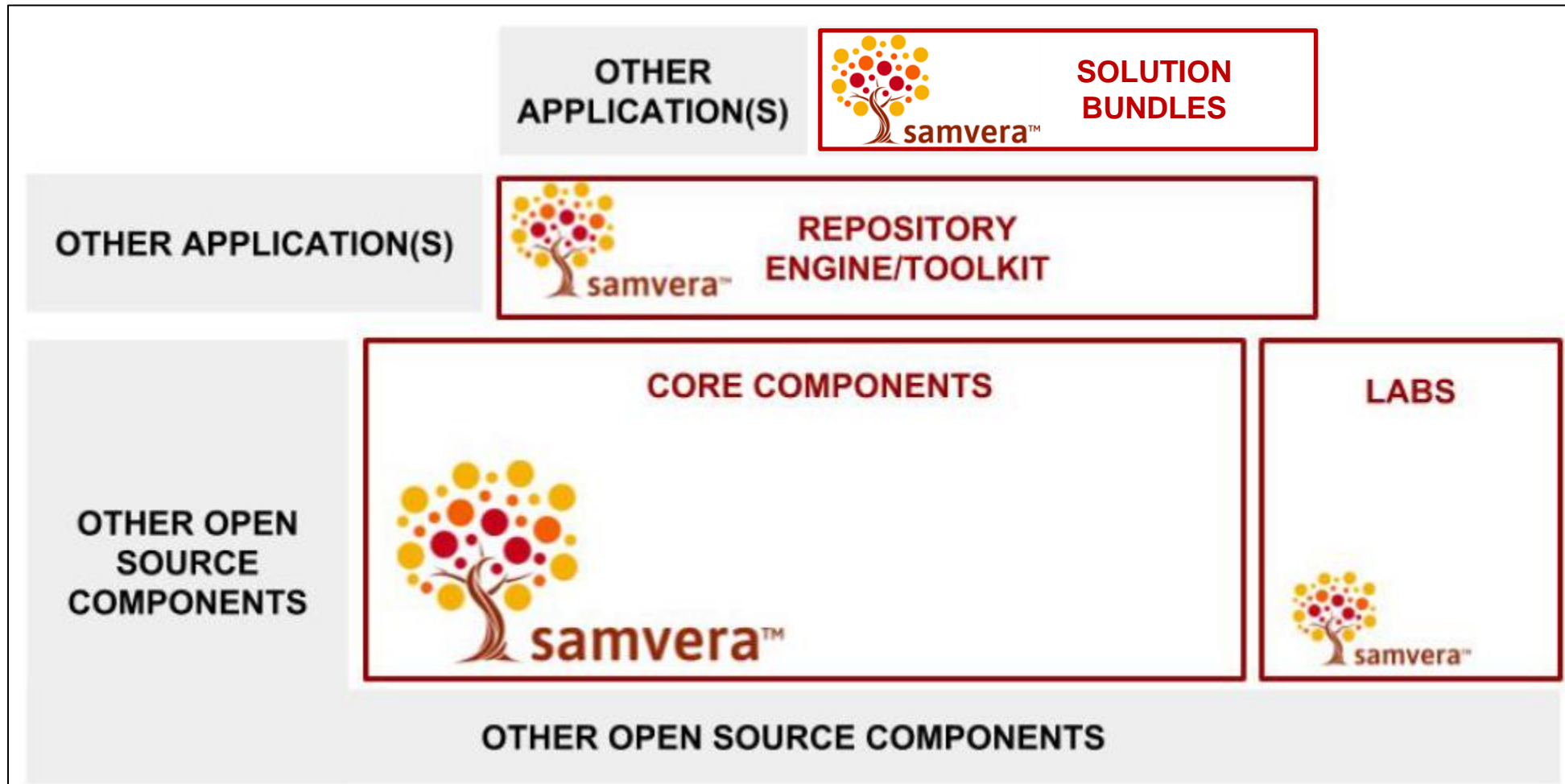
Based on: The anatomy of a Samvera application

Source: State of Samvera Technology in 2019: White Paper

Samvera Roadmap Council

TLDR!
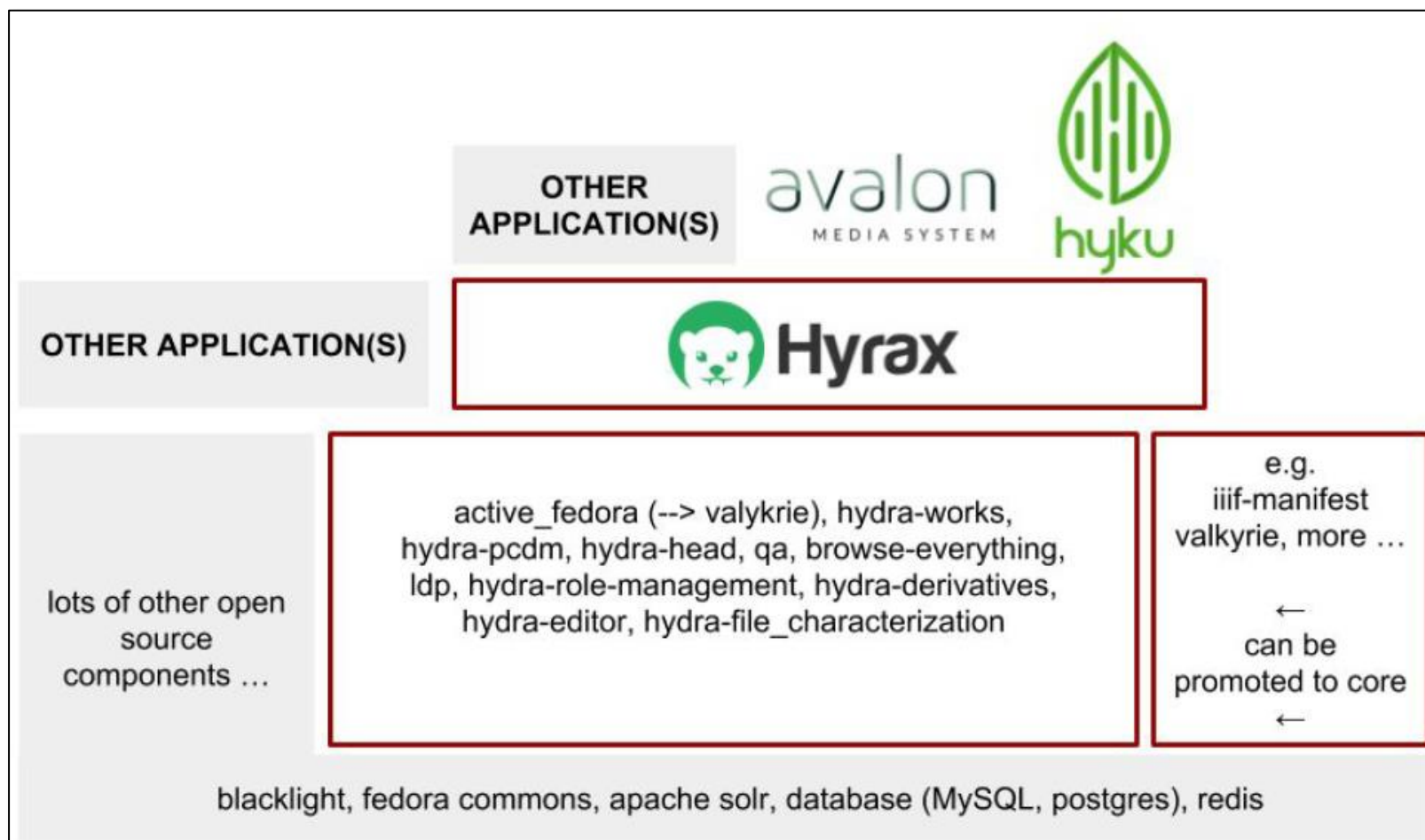
The anatomy of a Samvera application - exploded

Source: State of Samvera Technology in 2019: White Paper

Samvera Roadmap Council

- Hyrax is a repository-building engine, or toolkit, designed to offer a Samvera-powered repository with a set of common, configurable, core functionalities. For example:

Hyrax features	
Custom work types to fit local needs	Google Analytics for usage statistics
Multiple file, or folder, upload	Full-text indexing and searching
Flexible user- and group-based access controls, including sharing with groups and individuals	Full-text indexing and searching
Admin dashboard and admin privileges: ● Editing rights to pages where content can be dynamic ● Ability to configure featured works and featured researcher on home page ● Access to range of use and usage statistics User profiles and user dashboard for managing files, including creation of collections	Digital preservation functionalities: ● Fixity checking ● Version control ● Characterization of uploaded files
Proxy deposit and transfer of file ownership	
Configurable, flexible workflows	
Batch upload and editing	

Source: State of Samvera Technology in 2019: White Paper

Samvera Roadmap Council

- This started out as the chief deliverable from the Hydra-in-a-Box project: Hyku is a Hyrax-based repository solution bundle designed to be easy to deploy and easy to support

- Hyku offers multi-tenancy to facilitate supporting multiple repositories in one software stack

- Hyku is optimised for deployment, with docker and AWS templates available.

- Avalon is a platform for managing and providing access to large collections of digital audio and video built on Samvera core components

- Avalon is moving towards a fully Hyrax-based solution bundle which will provide components that bring Avalon functionality into existing Hyrax applications

The cost overview

FREE OF CHARGE

- Samvera software is open-source. All Samvera code is available free of charge under an Apache Version 2 License.

BUT puppies are not for free

This Photo by Unknown Author is licensed under CC BY-SA-NC

- - and nor is Samvera, really.

- Everyone has costs
  - Hardware costs?
  - Infrastructure costs?
  - Staffing costs?
  - Service provider costs?
  - …?
- Your costs depend on how you implement Samvera

Next up:
The Community
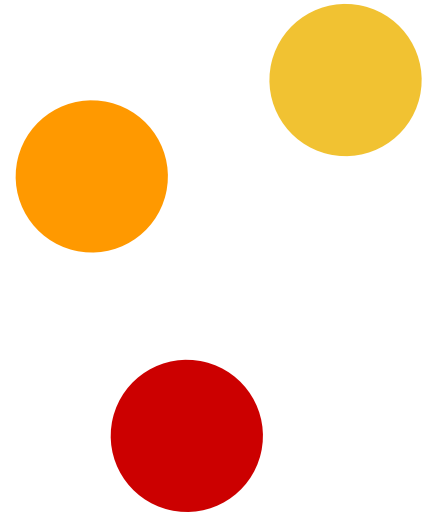
How does this work?

Governance & Community Model
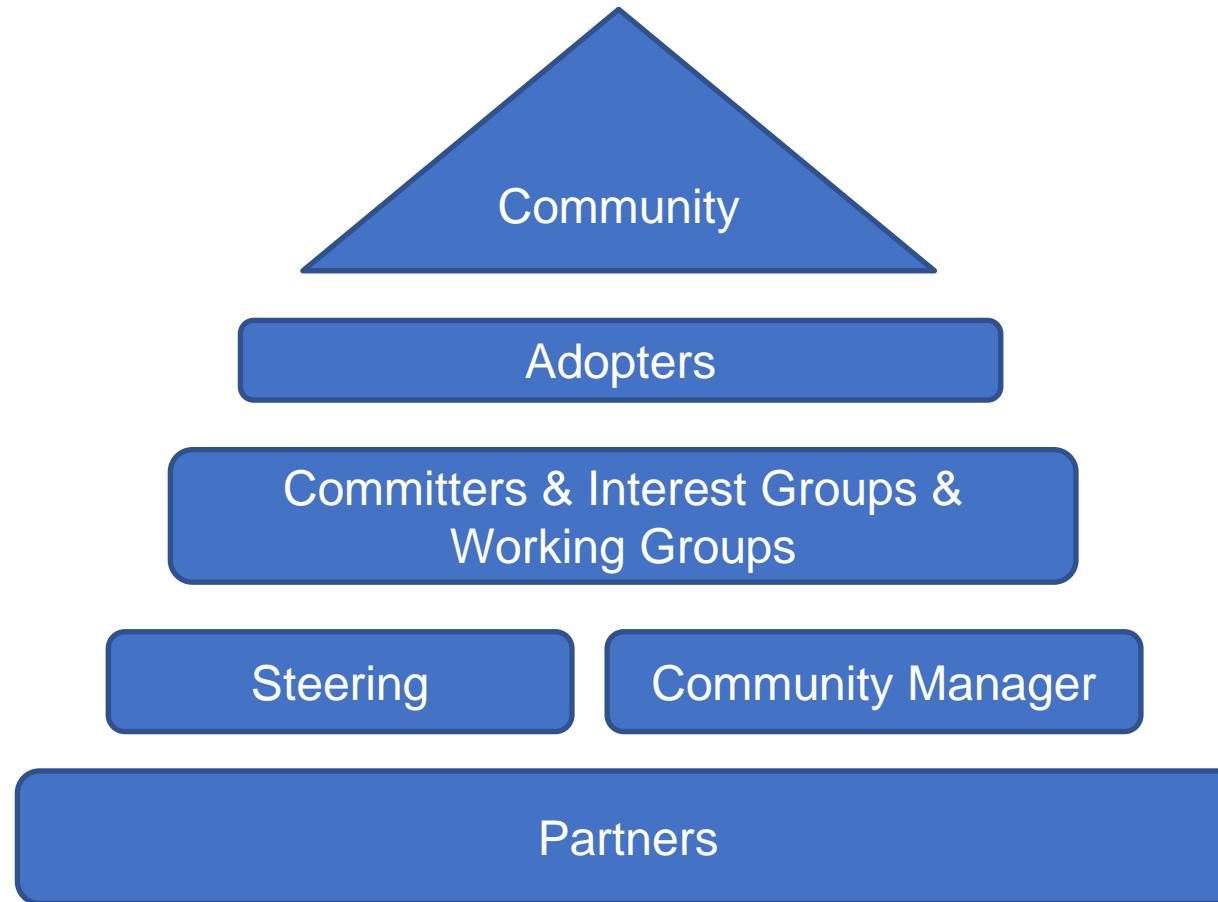
Samvera Partners

…are individuals, institutions, corporations or other groups that have committed to contributing to the Samvera community; they not only use the Samvera technical framework, but also add to it in at least one of many ways: code, analysis, design, support, funding, or other resources.

Samvera Partners collectively advance the project and the community for the benefit of all participants.

A Few Community Member Statistics

- 32 Partners
- 50 "Known" Adopters
- 20 Avalon Adopters (18 production & 2 launching)
- 5 Service Providers

If you want to go far, go together!

Steering

- Carolyn Caizzi (Northwestern University) (2019 - 2022)

- Esmé Cowles (Princeton University) (2020 - 2023)

- Hannah Frost (Stanford University) (2019-2022)

- Kevin Kochanski (Notch8) (2020-2021)*

- Brian McBride (University of Utah) (2020 - 2023)

- Rosalyn Metz (Emory University) (2018-2021)

- Alicia Morris (Tufts University) (2020 - 2023)

- Simeon Warner (Cornell University) (2019-2022)

- John Weise (University of Michigan) (2018-2021)

- Non-voting ex-officio: Heather Klein (Samvera Community Manager)

- Non-voting ex-officio: Richard Green (Samvera Operations Advisor)

Our New Community Manager

Heather Greer Klein

Heather Greer Klein is the inaugural Samvera Community Manager. She previously served in several roles at LYRASIS and DuraSpace including as the Outreach & Engagement Coordinator for Digital Technology Services, the DSpace 7 Release Manager, and the DuraSpace Services Coordinator. Prior to working at DuraSpace and LYRASIS, Heather was the Member Services Coordinator at the NC LIVE consortium. She received her MLIS from Simmons College. She lives and works in Durham, North Carolina.

If you want to go far, go together!

Many Hands Make Light Work

- Software Developers

- Code Committers

- Metadata Specialists

- User Experience (UX) Experts

- User Interface (UI) Designers

- Project, Service, & Repository Managers

- Communication Experts

- Senior Management

Interest & Working Groups

Component Maintenance Working Group

Controlled Vocabularies Decision Tree Working Group

Hyrax Interest Group

Hyrax Maintenance Working Group

Hyrax-Valkyrie Development Working Group

Hyrax v3.0 Metadata Application Profile Documentation Review Working Group

Samvera Branch Renaming Working Group

Samvera BrowseEverything Interest Group

Samvera Code of Conduct Working Group

Samvera Geo Predicates Working Group

Samvera Hyku Interest Group

Samvera Infrastructure Working Group

Samvera Marketing Working Group

Samvera Metadata Interest Group

Samvera Newspapers Interest Group

Samvera Repository Management Interest Group

Samvera Roadmap Council

Samvera User Experience Interest Group

and 43 archived

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Service Providers

- CoSector, Univeristy of London
  - Contact researchtech@cosector.com

- Cottage Labs
  - https://cottagelabs.com/
  - Contact: Richard Jones (richard@cottagelabs.com)

- Digital Curation Experts
  - https://curationexperts.com/
  - Contact: Mark Bussey (mark@curationexperts.com)

- Notch8
  - http://www.notch8.com/
  - Kevin Kochanski (kevin@notch8.com)

- Ubiquity
  - https://www.ubiquitypress.com/
  - Brian Hole (brian.hole@ubiquitypress.com)

Events

- Samvera Connect
- Samvera Virtual Connect
- Samvera Partner Meetings
- Samvera Regional Meetings
- Presentations & Workshops
- Training Camps

Communication Channels

- **Slack -** for real-time interaction

- **E-mail -** for asynch and longer discussions

- **Community Calls -** Samvera Tech & Community calls, Virtual Connect

- **In Person -** Connect, regional meetings, other conferences, & workshops

Finances

- What are our costs?
- Variety of Ways to Resource
- New Membership Model
- Current Outlook
- Future Direction

Next Up: The Technology
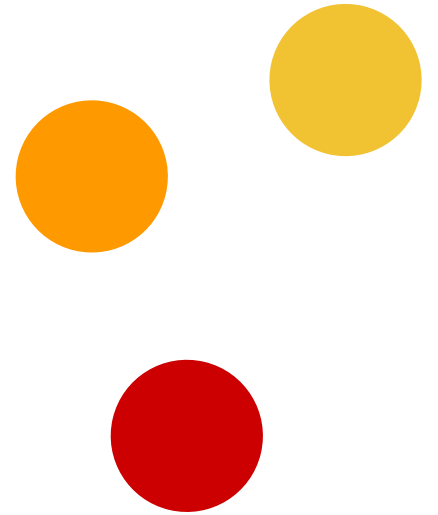
Any questions so far?

What do the solutions provide?

- Functionality overview

- Hyrax examples

- Hyku examples

- Avalon example

Read the White Paper

What follows is going to be a very superficial treatment. A much more thorough explanation can be found in the Samvera Roadmap Council's:

White paper: State of Samvera Technology in 2019

Note: The Roadmap Council has since been renamed the Roadmaps Alignment Group

The Stack : foundational elements

Samvera is designed to provide a rich front-end framework for a Fedora repository metadata and data storage layer.

Solr allows for fast searching and rich discovery of content.

A gem Active Fedora bridges from Samvera to Fedora but soon a new one, Valkyrie, will allow you to use combinations of PostgreSQL, disk, Fedora, or Solr for metadata, discovery, and storage

If you want to go far, go together!

Fedora & Solr
and – soon- Valkyrie
(PostgreSQL, Fedora, Solr, disk, memory)

The Stack : core components

A set of core components (Ruby gems) provide interfaces for interacting with Fedora and Solr, PCDM-compliant data models and other commonly-needed features like characterization, text extraction and derivative generation.

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Core Components

Fedora & Solr
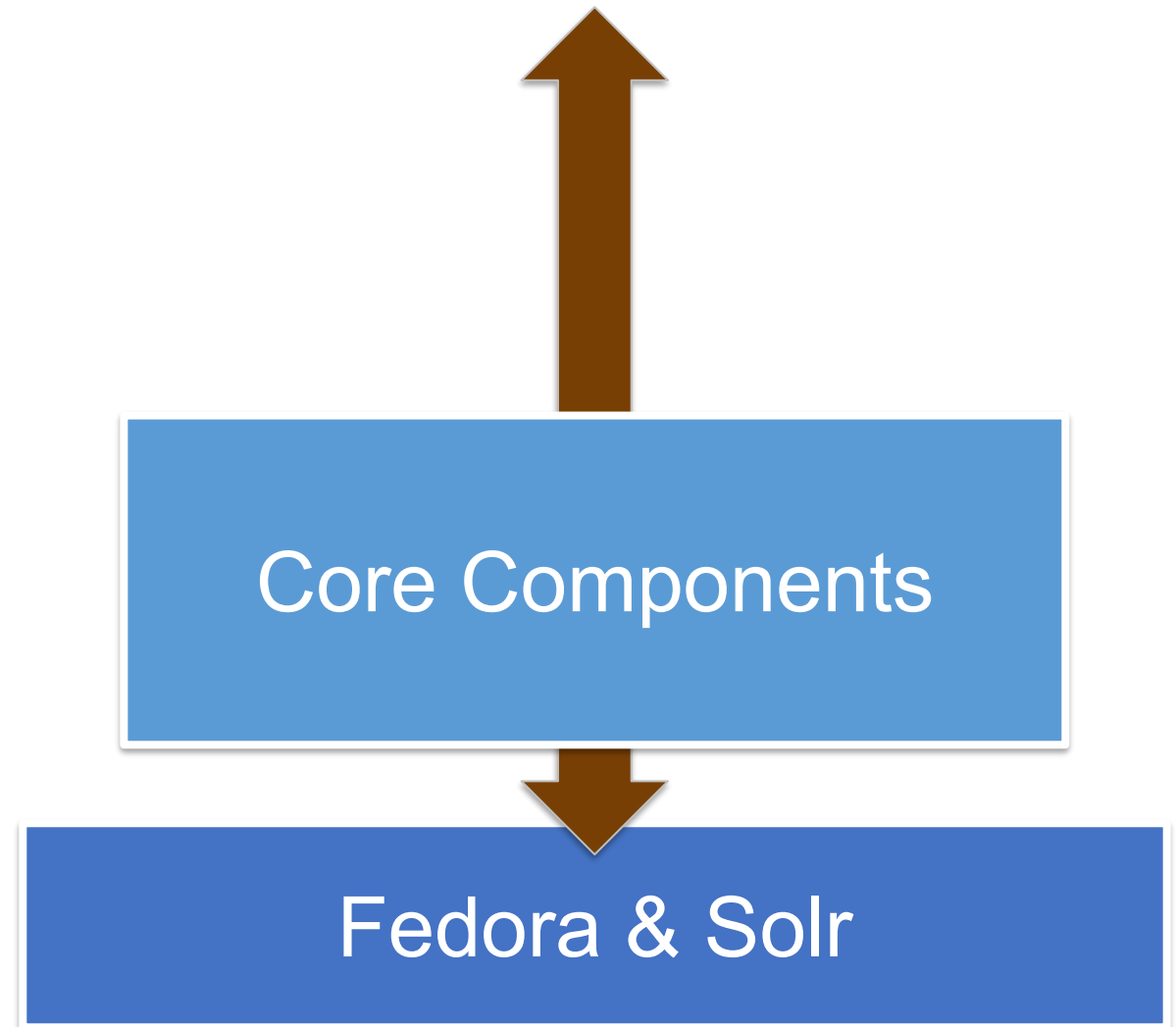
The Stack : Hyrax

The Hyrax Rails engine provides a fully featured repository front end with self-deposit and administrative workflow features along with:

- User & Admin dashboards
- Upload via cloud providers
- Citation integration
- File auditing & versioning
- Access controls
- Leases and embargoes

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Hyrax

Core Components

Fedora & Solr
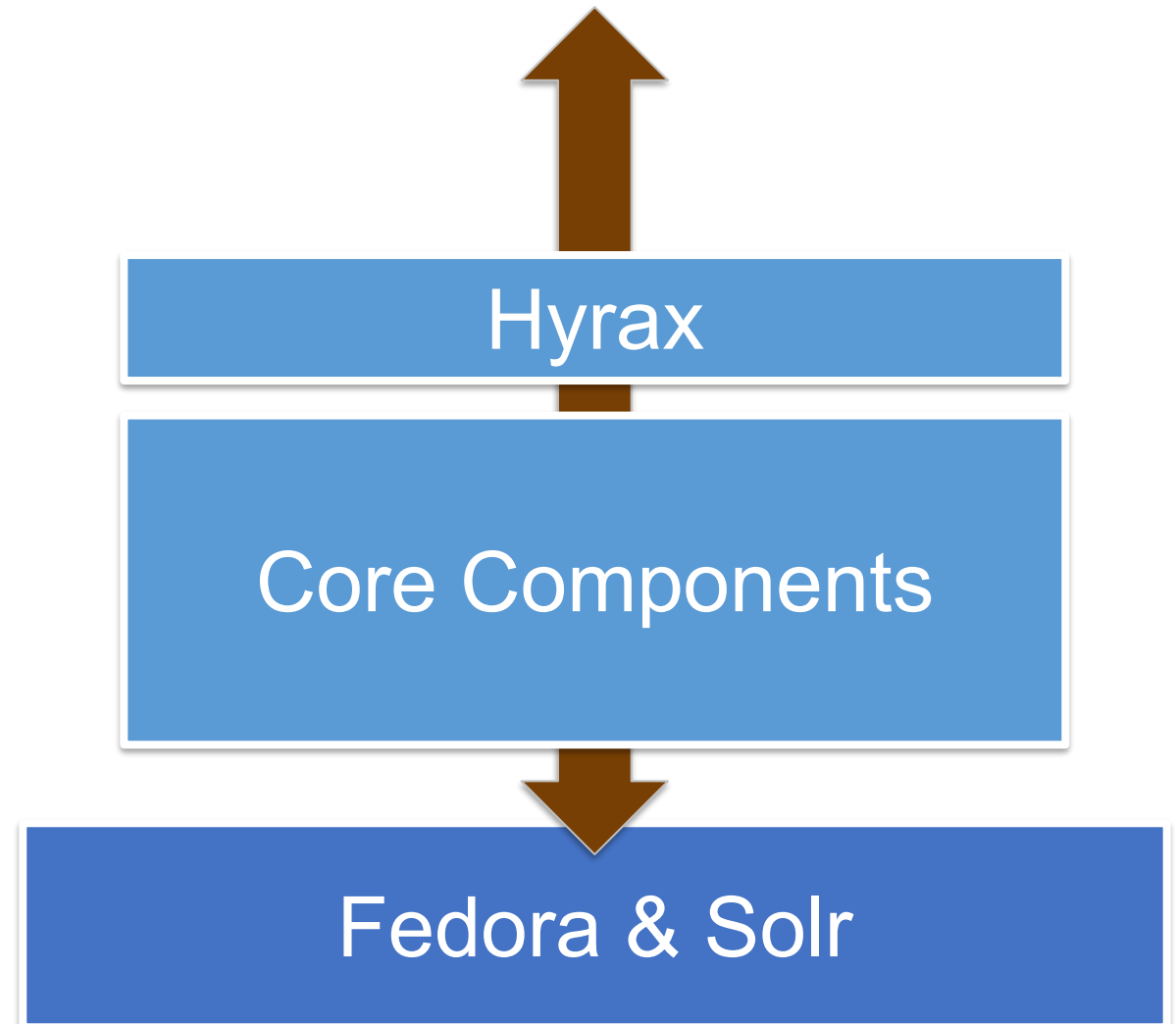
samvera

The Stack : you

Your application can be a highly tailored solution built on core components

Or a lightweight wrapper built on Hyrax

Or, an instance of an out of the box solution, like Hyku, or a specialised app like Avalon

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samvera

| Avalon | Hyku | Your app |
| Hyrax | | Your app |
| Core Components |
| Fedora & Solr |
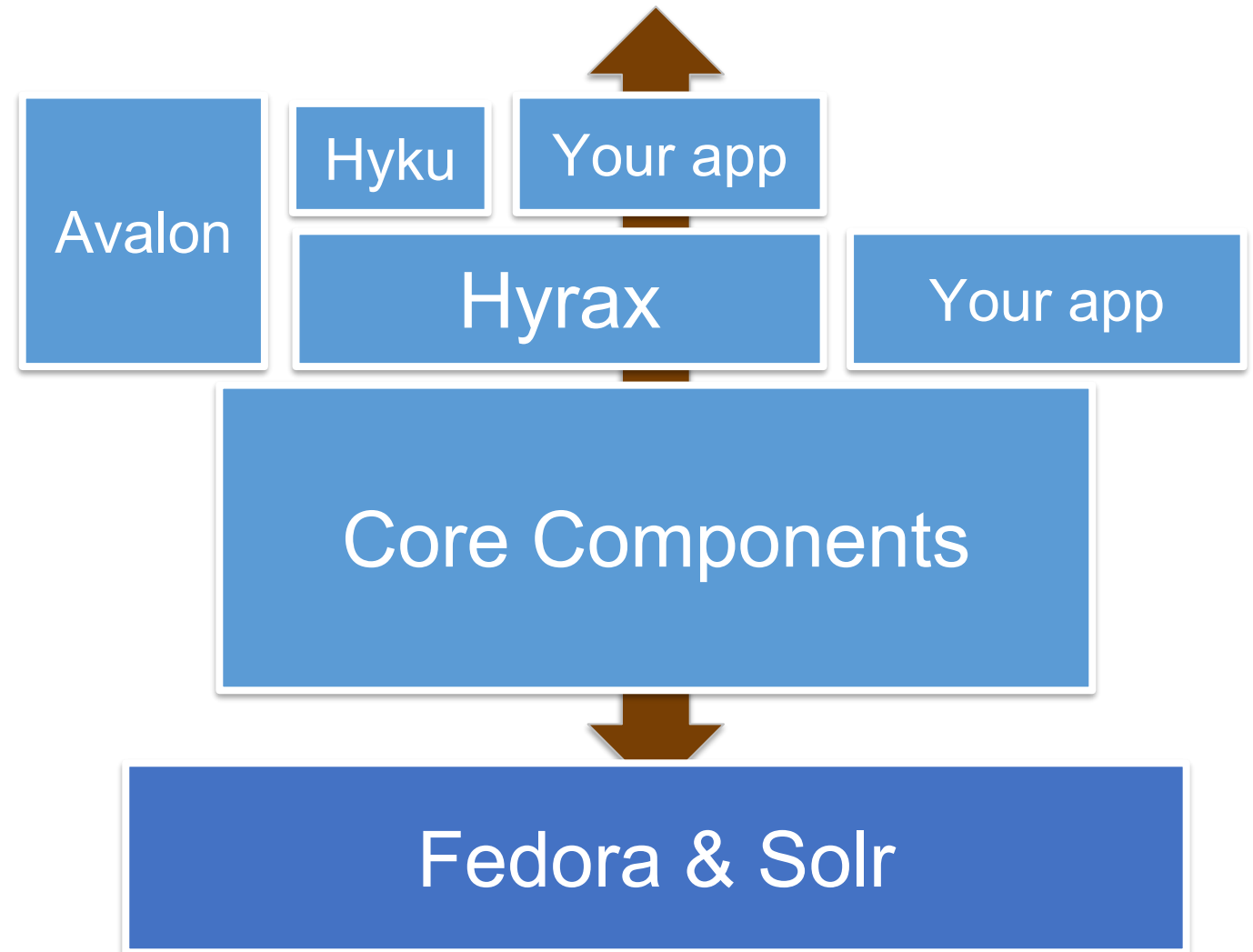
Code Licensing

- All Samvera code is available under Apache License, Version 2.0

- All code commitments are being managed through Contributor License Agreements

  - Individual – each developer is clear about what they are contributing

  - Corporate – each institution is clear about what it is contributing

- Code contributors maintain ownership of their intellectual property (IP)

  - ... and grant a non-exclusive license to the Samvera and its users

  - The conventions under which code is licensed are clear - and folks often license their own work under the same terms

Take home messages

Samera is:

- **Modular** - pick and choose from a set of components with different ways of creating your repository, from simple to complex, from hosted to in-house design and build

- **Opinionated** - follows patterns and Rails practices to offer a way of doing things that the community has coalesced around

- **Flexible** - can meet a range of needs

- **Evolving** – the functionality of our code extends, and it evolves to keep pace with the evolution of its dependencies (Ruby, Solr etc)

The anatomy of Samvera technology

OTHER APPLICATION(S)

OTHER APPLICATION(S)

avalon MEDIA SYSTEM

hyku

Hyrax

active_fedora (--> valykrie), hydra-works, hydra-pcdm, hydra-head, qa, browse-everything, ldp, hydra-role-management, hydra-derivatives, hydra-editor, hydra-file_characterization

e.g.
iiif-manifest
valkyrie, more …

←
can be
promoted to core
←

lots of other open source components …

blacklight, fedora commons, apache solr, database (MySQL, postgres), redis

Remember this diagram?

We're now going to explore these three Samvera 'products' a little:

- Hyrax,
- Hyku and
- Avalon

Next up:
Example Sites
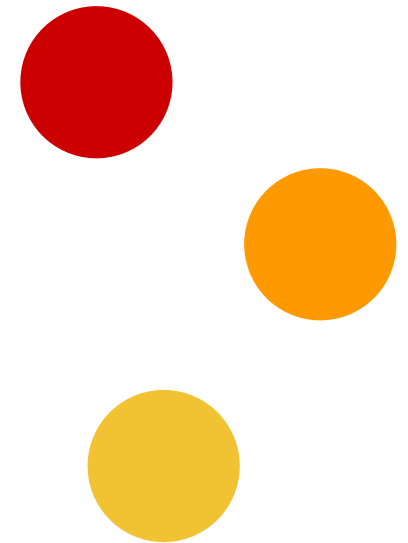
What are folks doing with Samvera?

What this is about

- There are many, widely differing implementations of Samvera's software.

- This section will point you at some varied implementations based on Hyrax, Hyku and Avalon that you might like to explore in your own time and we'll point you to a much longer list.

- We'll include a quick run around Samvera's own Hyku-based repository to look under the lid.

Emory ETD Repository
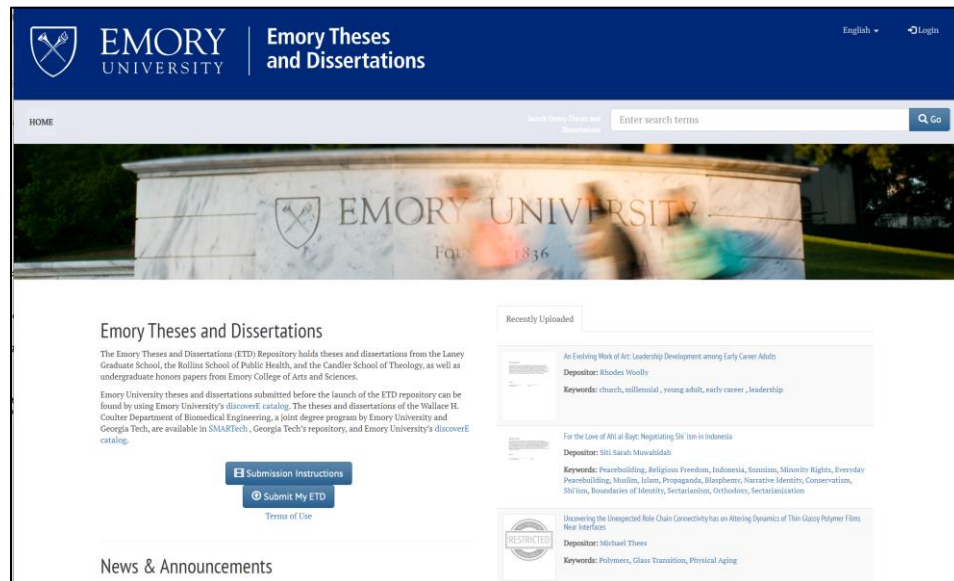
- Hyrax Development
- Electronic Theses and Dissertations focus
- Student submission and workflow focused

Live Site:

https://etd.library.emory.edu

If you want to go far, go together!

National Institute for Material Science
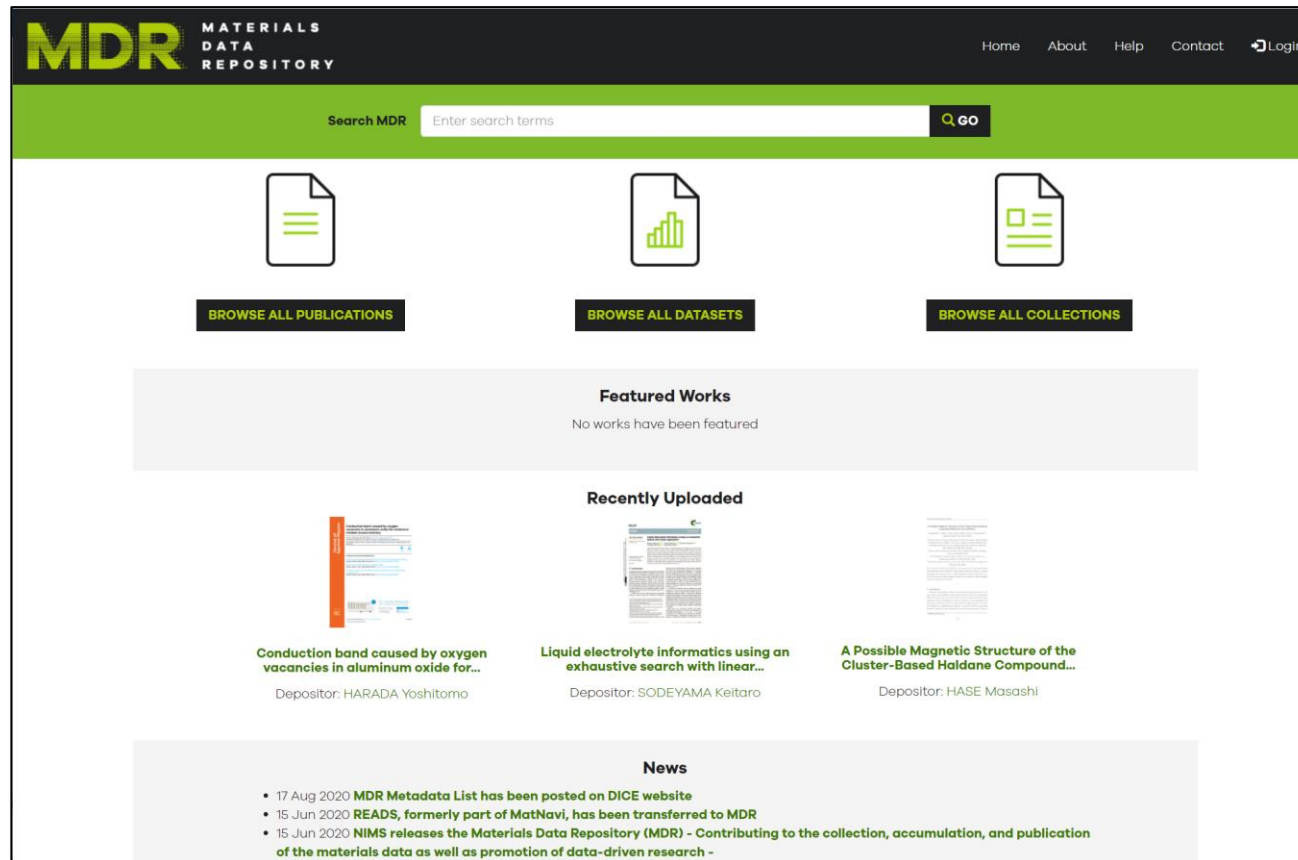
- Data repository based on Hyrax

- Customized data model with nested properties for materials metadata.

- 'Download all' for multi-file works.

- Live site: https://mdr.nims.go.jp/

King's Fund Digital Archive
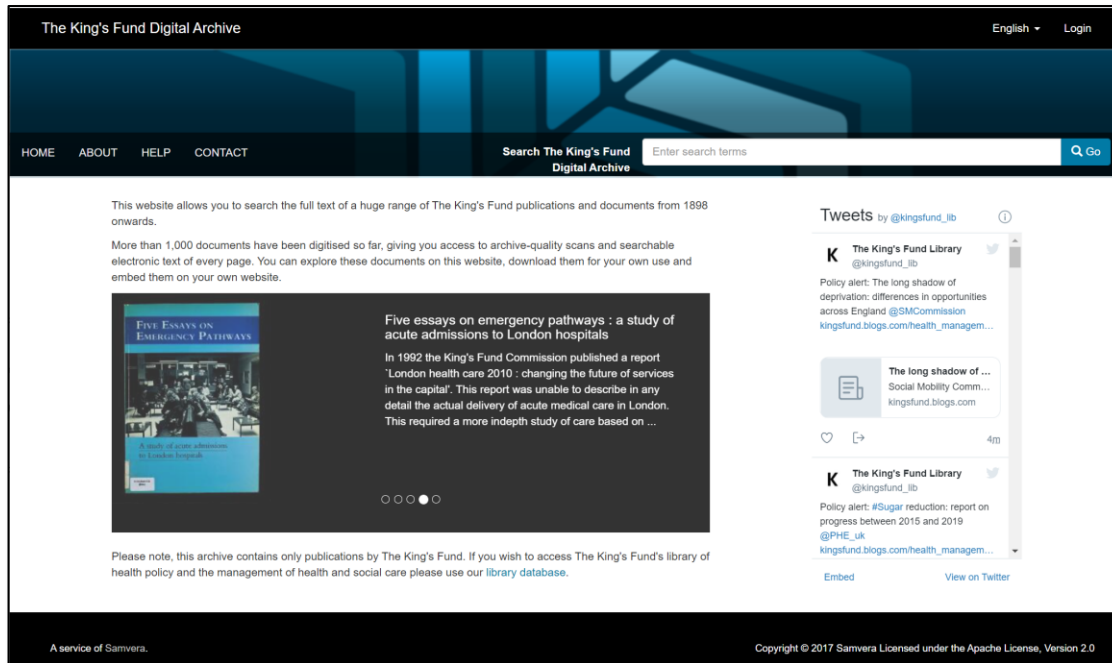
- Running on Hyku software
- Digitised publications by the King's Fund
- Heavy use of IIIF and Universal Viewer

Live Site:

https://archive.kingsfund.org.uk/

Shared Research Repository
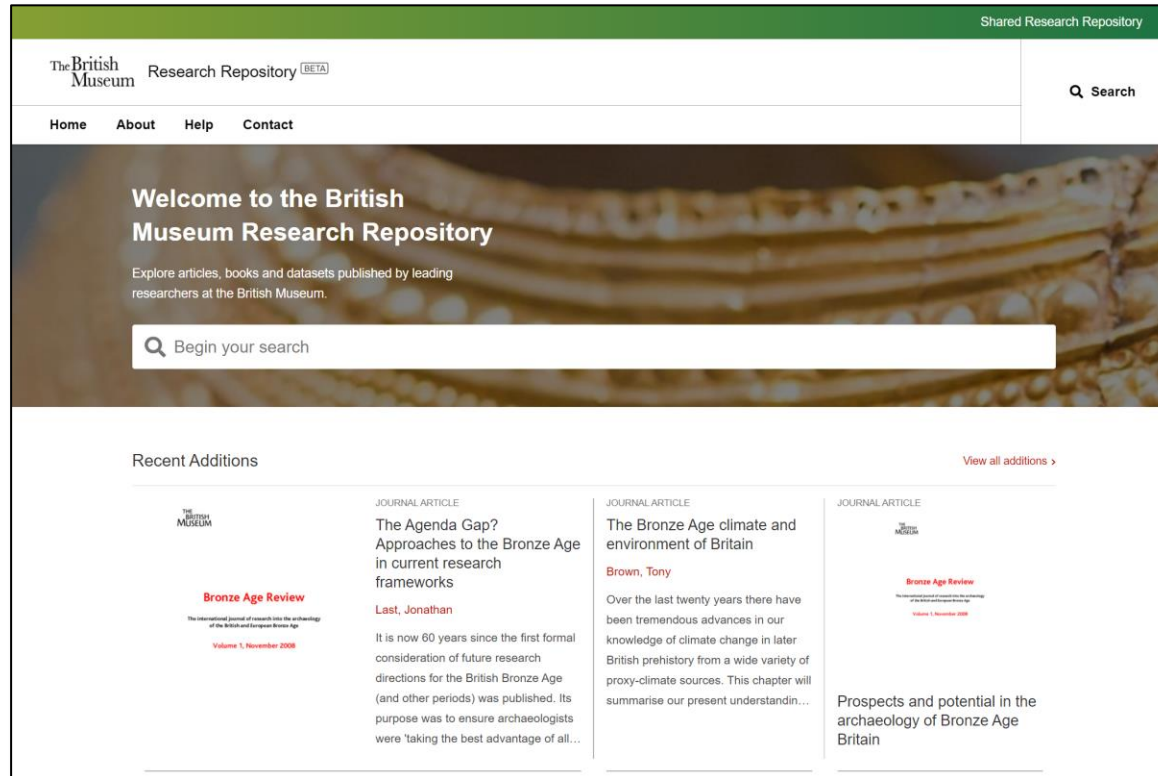
- Institutional repositories for UK cultural heritage organisations, currently all Independent Research Organisations (IROs). Content includes a variety of outputs including published works, datasets, 3D models and exhibition material.

- Six individual repositories with a unified search layer over the top.
  - Museum of London Archaeology
  - Tate
  - National Museums Scotland
  - The British Museum
  - Royal Botanic Garden Kew
  - British Library

- Unified search portal: https://iro.bl.uk/

Indiana University Media Collections Online
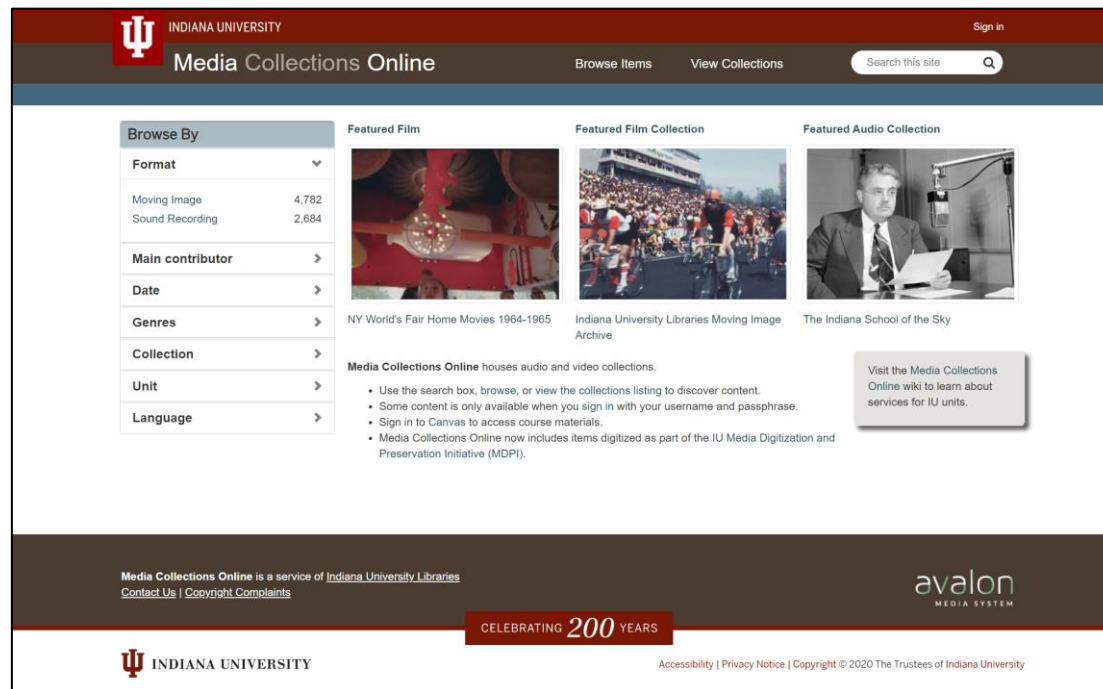
- Built using the Avalon Media System

- Rich tool for management and discovery of audio and visual resources

- Provides gated discovery and streaming authentication

Live Site:
https://media.dlib.indiana.edu

More ...

[List of Production repositories on the Samvera wiki](#)

A run around a Hyku

HEALTH WARNING

https://repo.samvera.org

- Samvera's Hyku repository is deliberately a very "vanilla" version of the software to give an idea what you get "out of the box". Most users, and most – if not all - service providers, have added enhancements. Don't expect to be "wowed" – that's not the point!

NB!

NOT A HYKU EXPERT!

...by any means, but a satisfied user!

Samvera Hyku repository #1
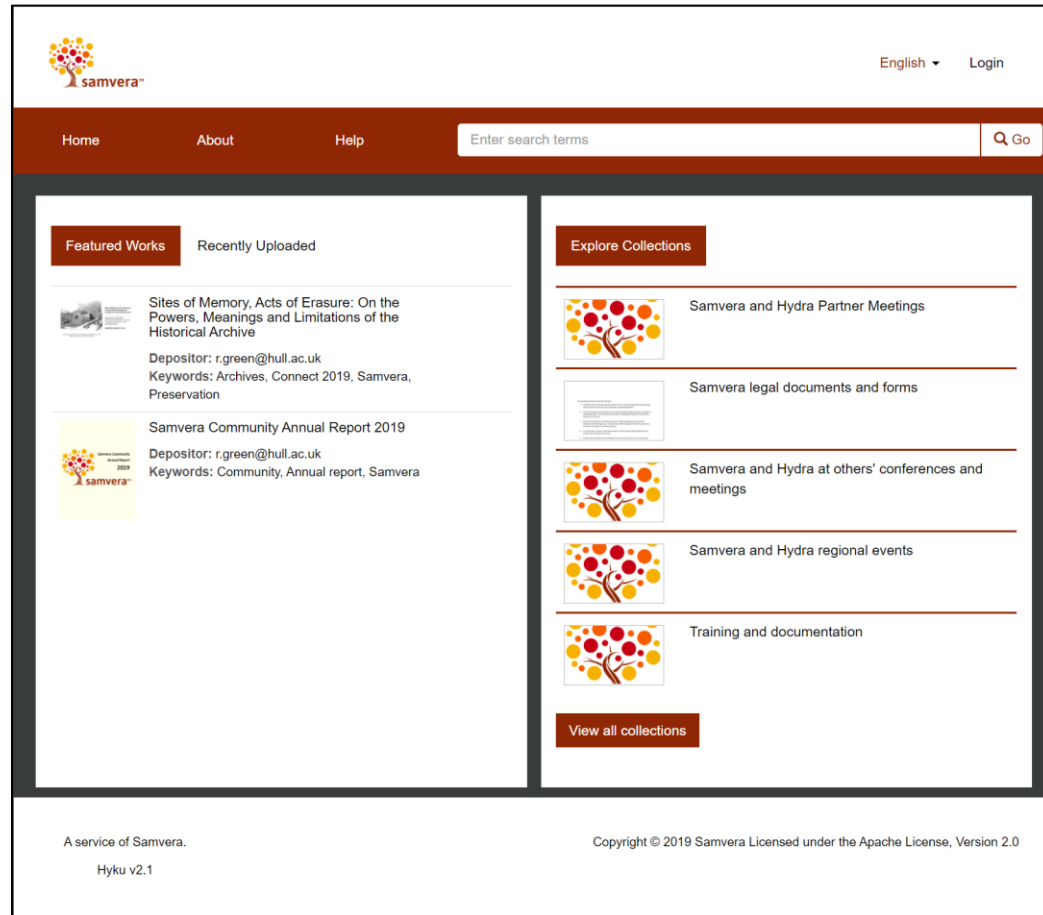
- Home page
  - Featured/recently uploaded works. Order of featured works can be saved.
  - Featured researcher (Can be toggle off, as here).
  - Explore/view collections panel
  - Search box
  - Login
  - Etc…

Samvera Hyku repository #2

- If I search for "Ruggaber", here I get 28 items back.

Samvera Hyku repository #3

- We can refine the search by selecting facets

- ...let's choose "other" from the resource types available within the 28 works

Samvera Hyku repository #4

- So now we have just the 15 "other" works

- ...and I can add further filters using the facets (or take away one(s) that I already have

Samvera Hyku repository #5

- I've selected one from further down that page.

- Look at the metadata: it says nothing about "Ruggaber"!

- Hyku indexes texts as they are uploaded and Robin is mentioned in this document.

Samvera Hyku repository #6
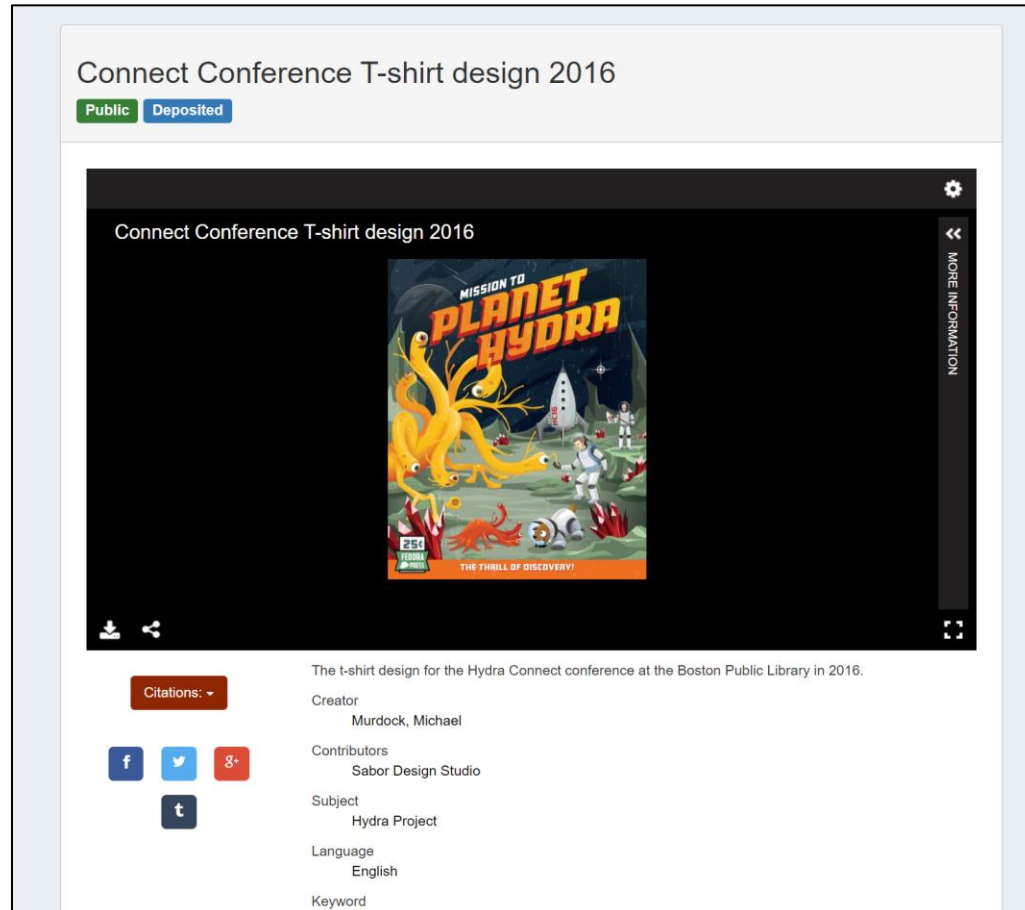
- …that was a "generic work", this one is an image.

- Displayed in Universal Viewer for pan and zoom etc. and "pop out" full screen.

- Multiple images in a work can be scrolled through the viewer.

Samvera Hyku repository #7

- Couldn't resist putting in the one "non-English" item in the repository.

- Seek it out!

Samvera Hyku repository #8
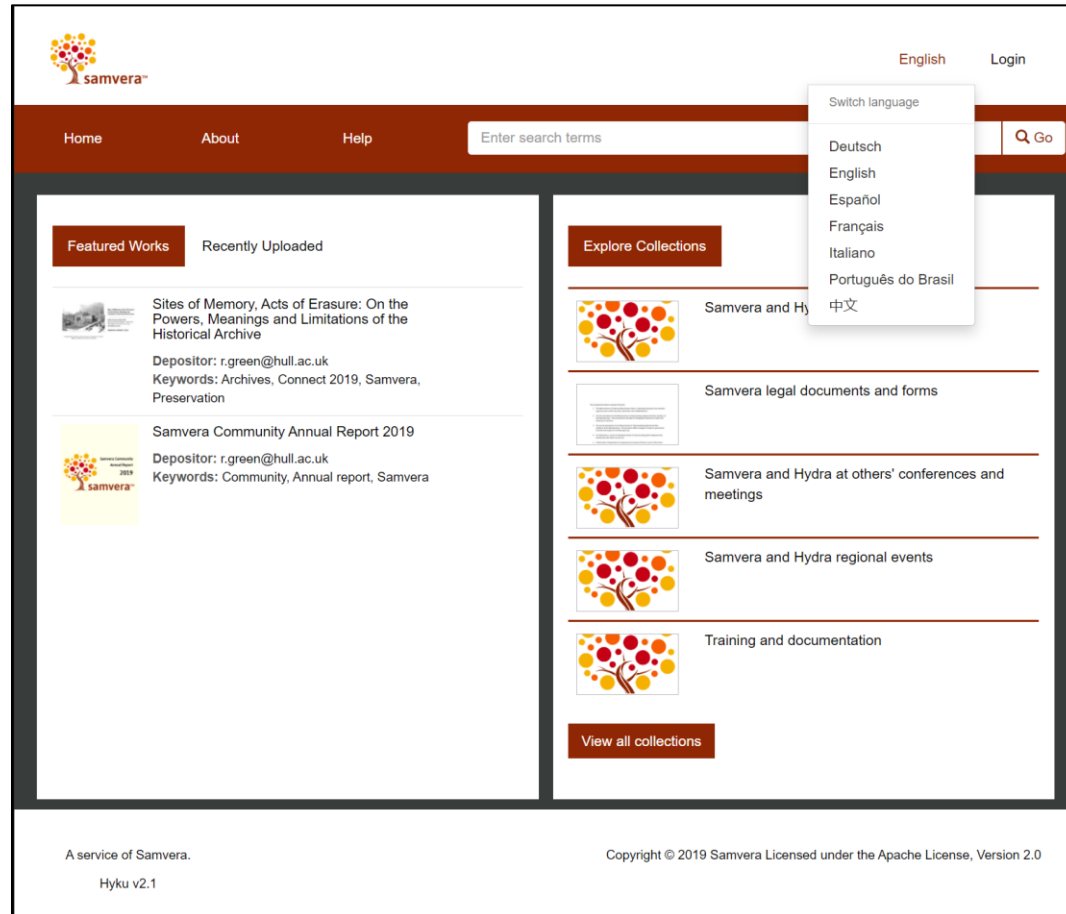
- Talking of language…

- The interface can be displayed in several languages.
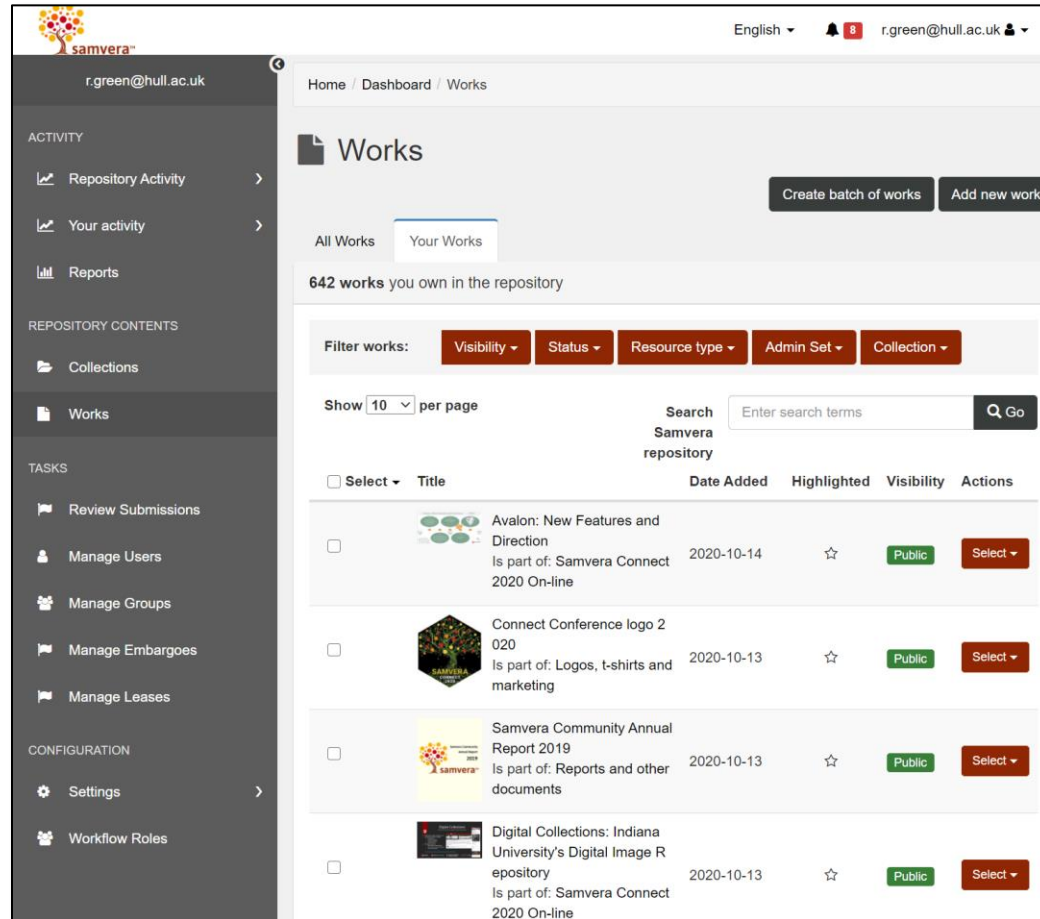
Samvera Hyku repository #9

- Let's look at the admin side of things.

- In our case, it's a local log-in.

# Samvera Hyku repository #10
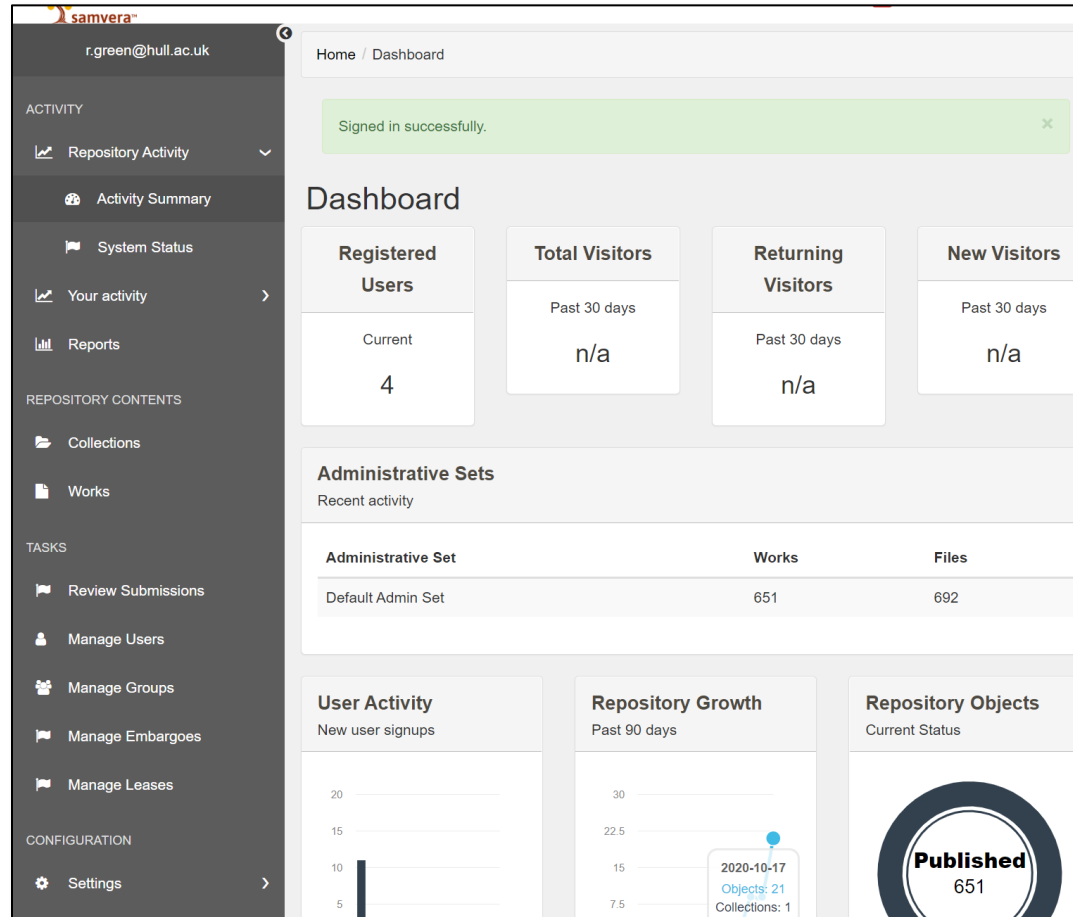
- First thing that comes up is a dashboard.

- (Ours isn't recording user activity…)

Samvera Hyku repository #11

- If I select "Works" from the menu at the left, I get a list of the works that I deposited.

- I can select "All works" and see those from other depositors too, even though I may not be able to edit them (permissions dependent).

- Select button gives Edit/Delete/Highlight on profile/Transfer ownership
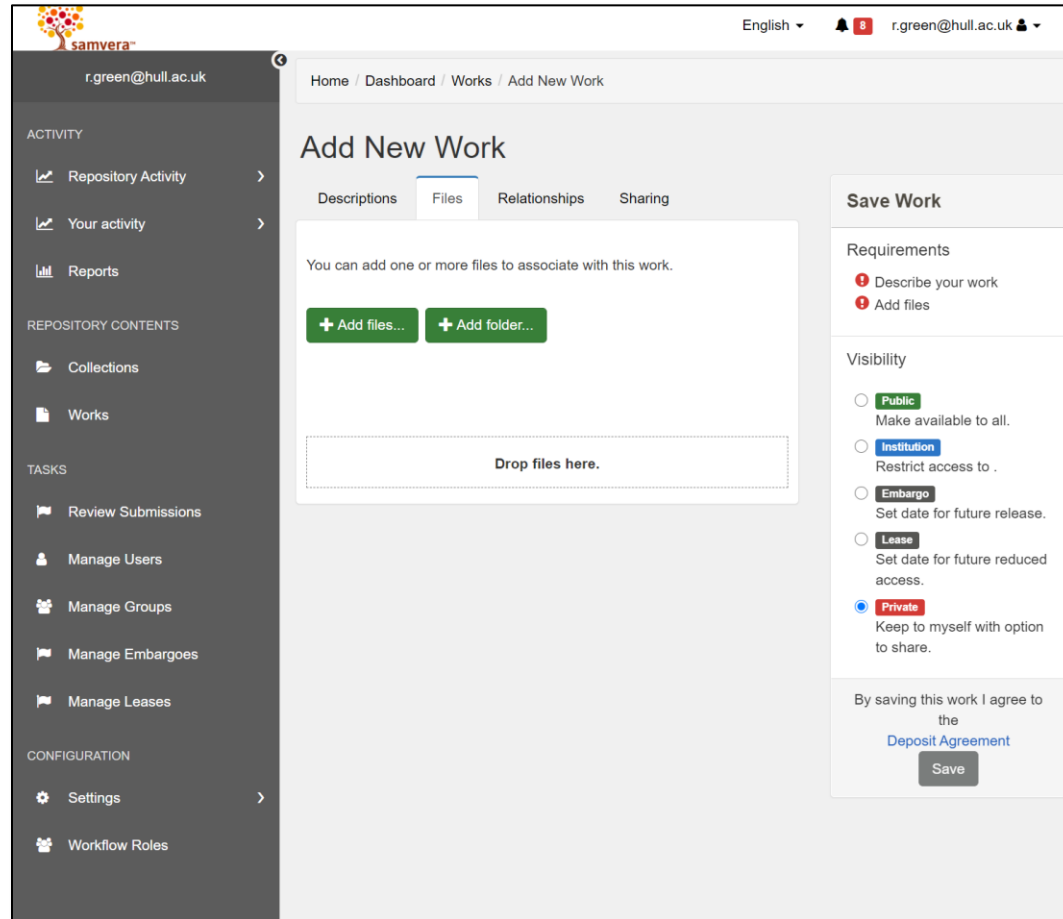
Samvera Hyku repository #12
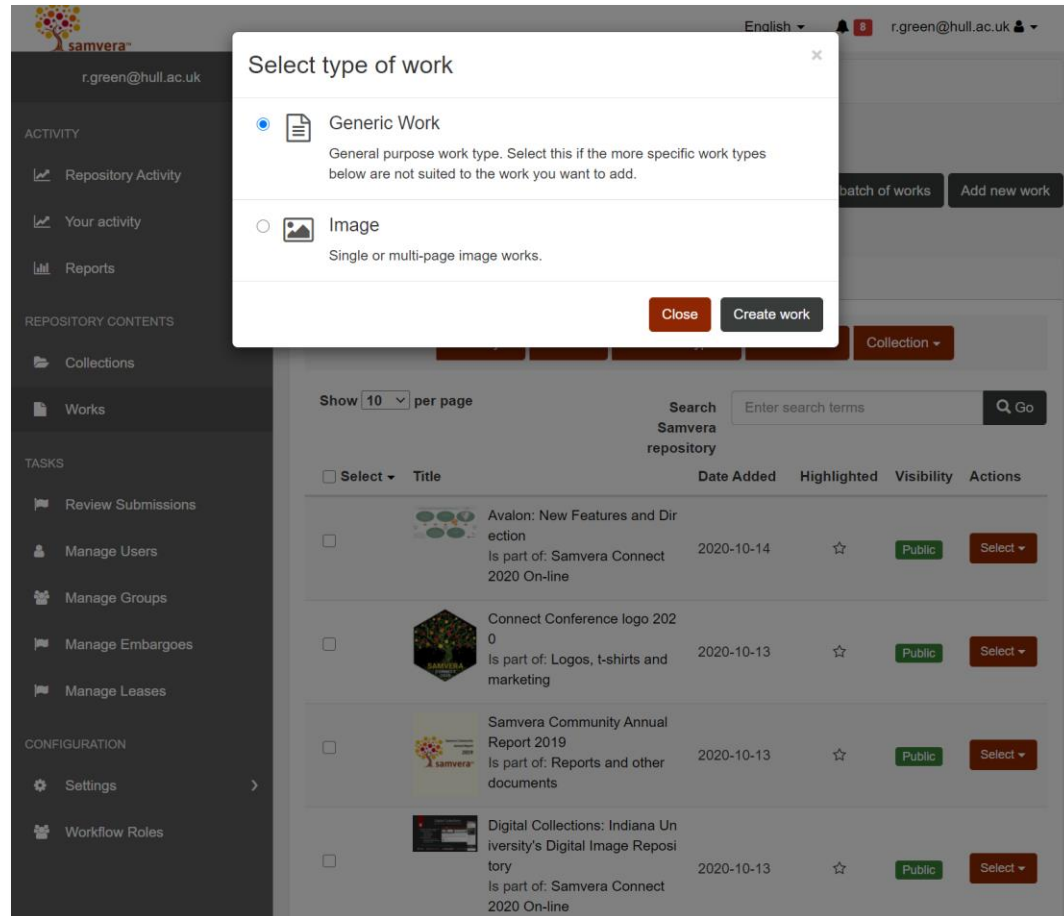
- If I go to "Add new work" I get a choice of types which determine metadata fields etc.

- The list presented is determined by one of the "Settings" (below left).

- Works can be created in batches – same basic metadata for multiple files – one new work created per file.

Samvera Hyku repository #13

- I'm presented with four tabs and a set of save options.

- This is the the basic metadata entry page

Samvera Hyku repository #14

- Here the "Files" tab.

- Files can be uploaded by browsing the local machine – one by one or by folder

- …or by 'drag and drop'

Samvera Hyku repository #15

- Many people will organize their works in collections (think folders)

- Collections are created in a similar way and can be nested.

- Works can be in one or more collections.

Samvera Hyku repository #16

- The "Sharing" tab allows a worked to be shared with individuals or groups and determines their access level (either "view/download" or "edit").

Samvera Hyku repository #17

- The "Save Work" panel allows leases and embargoes.

- Users can also be forced explicitly to agree to a deposit agreement.

- Save is not allowed until several required metadata fields are populated and there is at least one file.

Samvera Hyku repository #18

The "Settings" option allows all sorts of local configuration without resort to code.

Next Up:

Why Samvera?
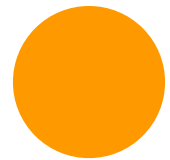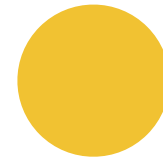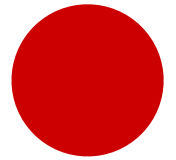
Why Samvera?

- Be part of a community
  - Shared resources, shared risk, shared advances

- The whole (we) is greater than its parts (each of us)
  - Especially in this crowd

- Need a flexible, rich, robust repository solution

- Control your own destiny

- Build institutional capacity

Community Sustainability...

- Core Purpose- We believe it is possible to provide and evolve solutions which reduce cost and risk in stewardship of digital assets for access and preservation.
- Partners - The whole is greater than the sum of its parts - partners join equally to share the load for mutual gain and greater good.
- Flexible Change with Steady Growth

A World Wide Presence
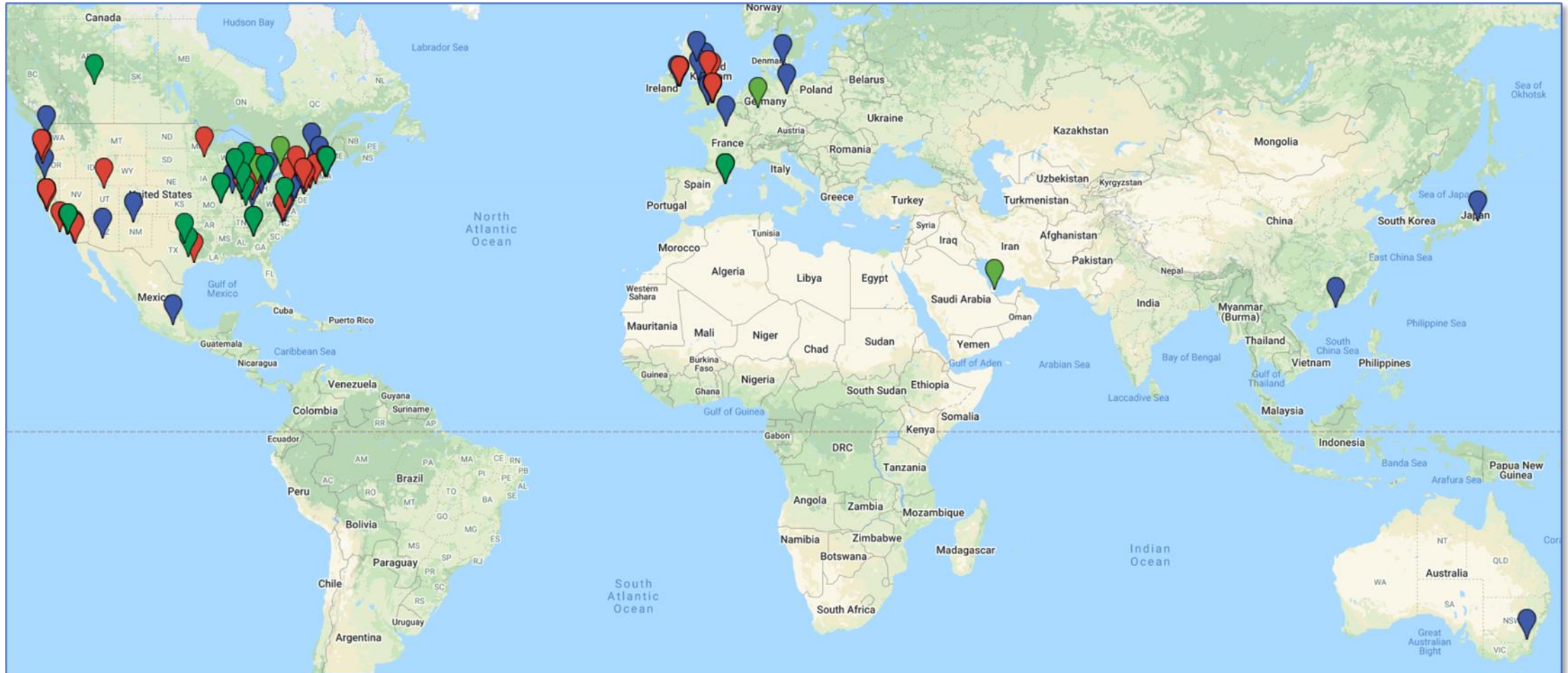
Something for Everyone…

- Software Developers
- Code Committers
- Metadata Specialists
- User Experience (UX) Experts
- User Interface (UI) Designers
- Project, Service, & Repository Managers
- Communication Experts
- Senior Management

Solution Sustainability...

- Improved Architecture
- Protecting the partner & funders' investment - together build, leverage & evolve
- Managed and Maintained Codebase
- Security & Backward Compatibility
- Organization & Governance
- Adopt best practices

Point Solution Approach - Welcome to Siloville

ETD	IR	Image DB	DAM	?	Geospatial Inf.	Records Mgmt.
ETDs (Theses)	Books, Articles	Images	Audio-Visual	Research Data	Maps & GIS	Documents
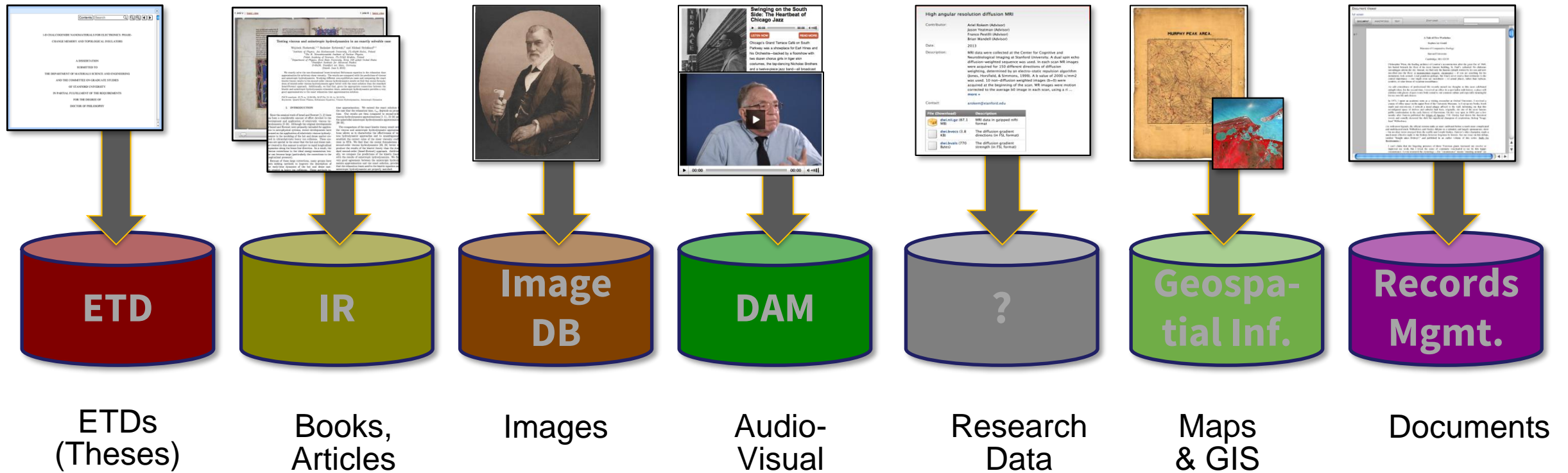
Management   Access   Preservation?   Effective?   Sustainable?

Repository Powered Approach

ETDs
(Theses)

Books,
Articles

Images

Audio-Visual

Research
Data

Maps
& GIS

Documents

Digital Repository
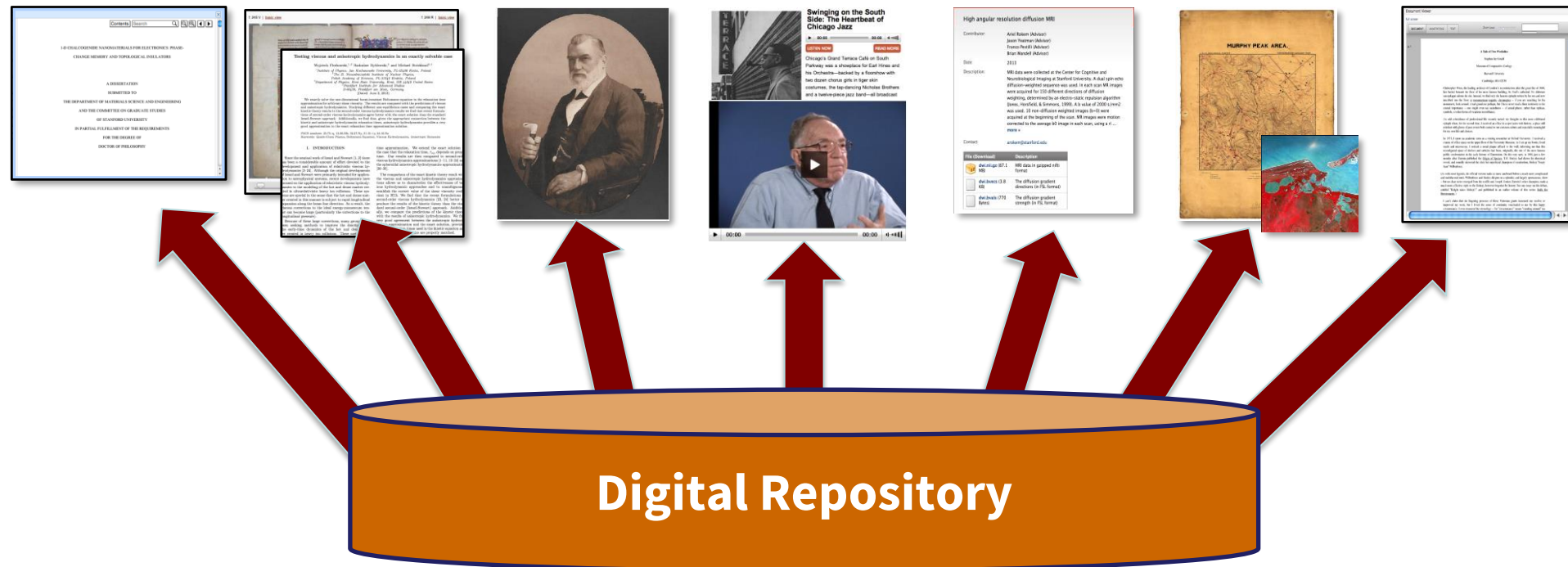
Scalable, Robust, Shared
Management
and Preservation Services

If you want to go far, go together!

Code Viability Snapshot

- Samvera
  - ~1.43M Lines of code
  - 48,892 Commits
  - 387 Contributors

- Samvera Lab – R&D
  - 28,796
  - 2,454
  - 76

- It's About the People 32 partners, 50 adopters, 20 Avalon adopters, 5 service providers, and more

Resource Sustainability

- New Approach for Cross Training
- Reducing Turnover Impact
- Time - If you want to go fast   ~~…go alone.~~
                                              …use Samvera

Control the Runway

- Governance Involvement

- Access to Source Code
- Time - If you want to go fast

~~...go alone.~~
...use Samvera

Next Up:

Where to Start?
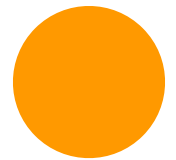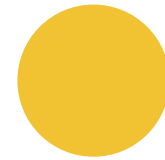
What do I do back home?

Community Resources

- **Website -** Introduction to the community: https://samvera.org

- **Wiki -** Broad range of information types:
  https://samvera.org/wiki

- **Github -** Code, code wikis, technical details:
  - https://github.com/samvera
    https://github.com/samvera-labs
    https://github.com/samvera-deprecated

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Community Resources #2

- **Repository** – Presentations, documents, images, video etc
  - https://repo.samvera.org

- **YouTube channels** – presentations, training videos etc
  - Samvera Community - https://www.youtube.com/channel/UCtOG8TmOIFauObaNc14VnPQ
  - Samvera Hyku - https://www.youtube.com/channel/UC_m1Ovaaasa2ksyGaqz5i0Q

Try it out

- Code & Docs: https://github.com/samvera

- Demo Sites:

  https://tenejo.curationexperts.com/

- Ask other partners for demos!

  https://wiki.duraspace.org/display/samvera/Partners+and
    +Implementations

Get Involved: Many Hands Make Light Work

- Getting involved with Samvera can be at different levels:
  - Adopter
  - Developer
  - Partner

- Need to ask:
  - What involvement is required to enable you to meet your needs?

- But also,
  - If we contribute back, what more do we gain?

If you want to go far, go together!

Training & Connecting

- Good: read the documentation and learn-by-doing

- Better: connect through social channels
  - Email lists, Slack, weekly phone calls
  - Github interactions

- Best: meet in person. Face time fuels collaboration!
  - Virtual Samvera Connect: annual, worldwide, community meeting
  - Samvera Connect: annual, worldwide, community meeting
  - Samvera (Partner) meetings: 2 ad topic-based meetings per year
  - Regional Groups: convening ad hoc

If you want to go far, go together!

Next Up:
Enrolling Others
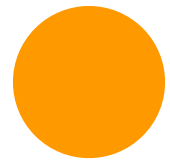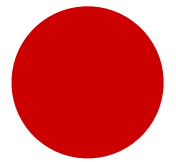
The Elevator Pitch? Who's Riding?

- UL/Dean or CIO? Resources and Risk - doing more with less while control the runway, maturity

- Content Specialists? Flexibility and Risk- reducing barriers to effective asset management & preservation

- Management - The Churn - Architecture, flexibility, evolution in a vibrant community, staffing impact

- Developers, PMs, DevOPs, -Connection, Time, Training, Visibility - It's a Family Affair and you are not alone

Questions

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Thank you

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