Lightning Talks

- Deploying a custom Hyrax on Azure with Terraform and Kubernetes from a standing start
- Controlled Vocabulary Options in Hyrax
- Scholarsphere is Dead, Long Live Scholarsphere!
- Work Estimation Records: Using agile for more accurate proposals
- New Tools for NU: Elixir, Broadway, Phoenix, and GraphQL
- Advancing Hyku Project
- Supporting & Connecting Women in Technology
- Iterating on a Hiring Process

Deploying a custom Hyrax on Azure with Terraform and Kubernetes from a standing start

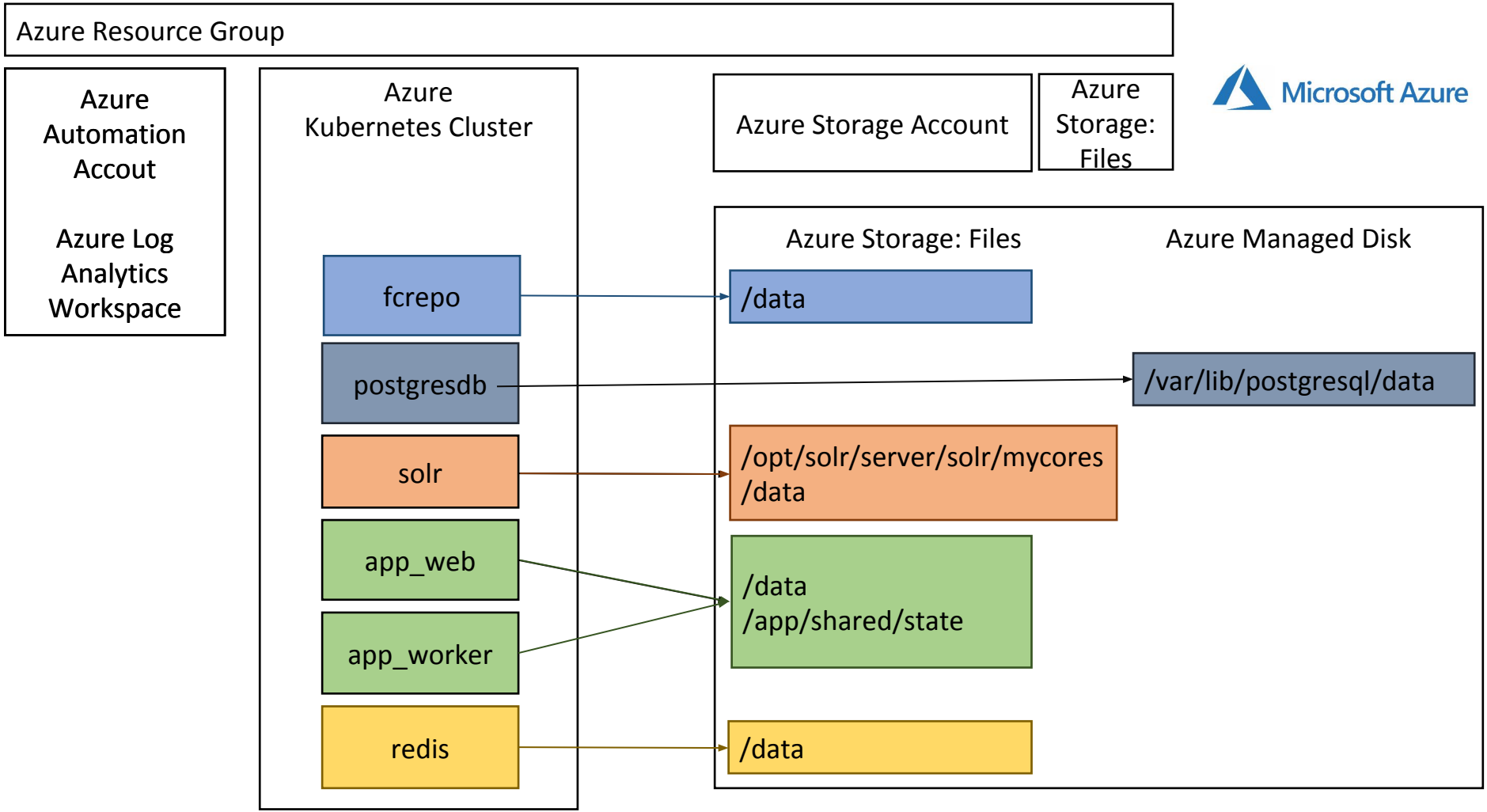
-Julie ~~Rory~~ McNicholl

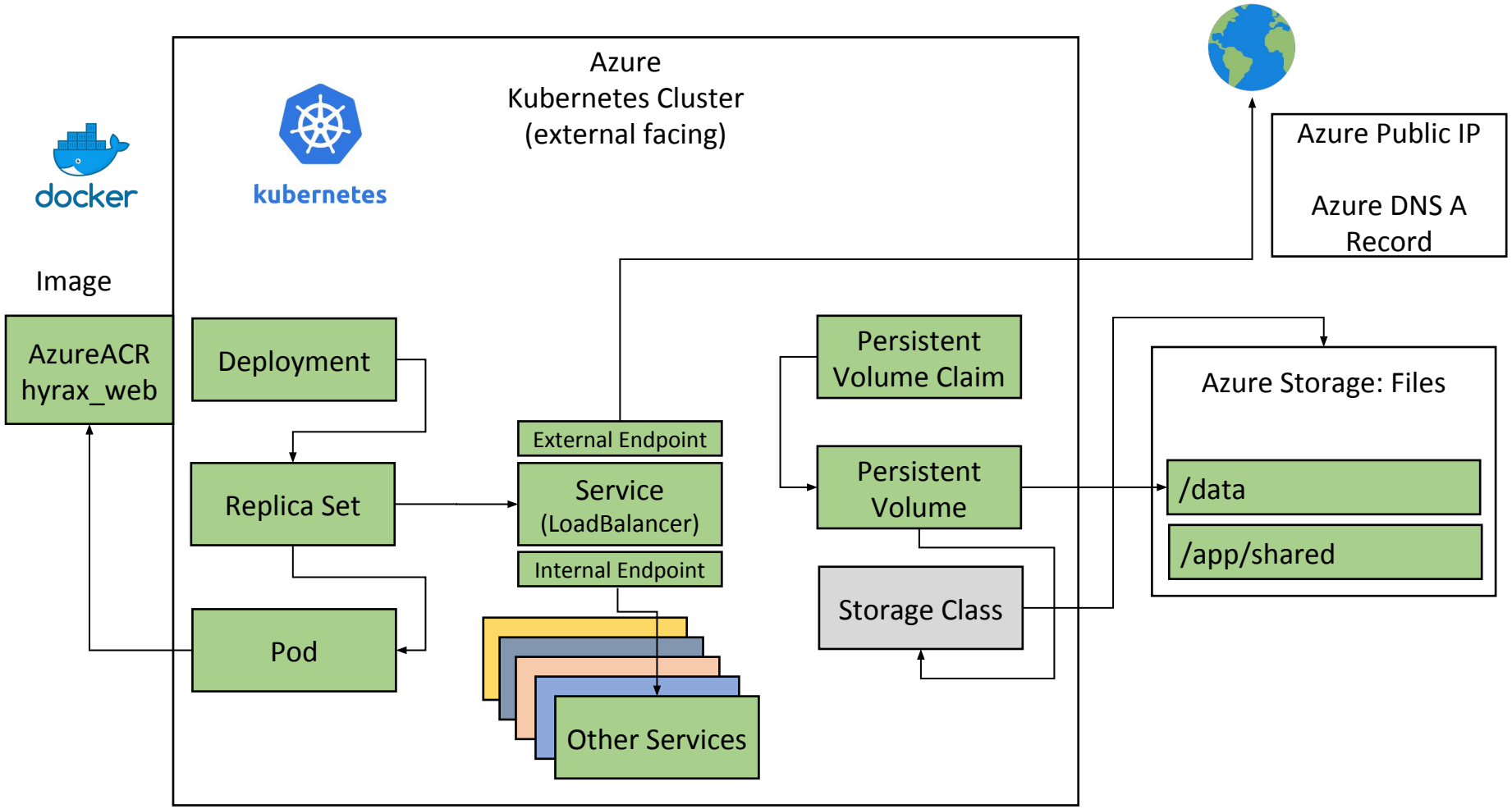
Docker Images deployed to a …

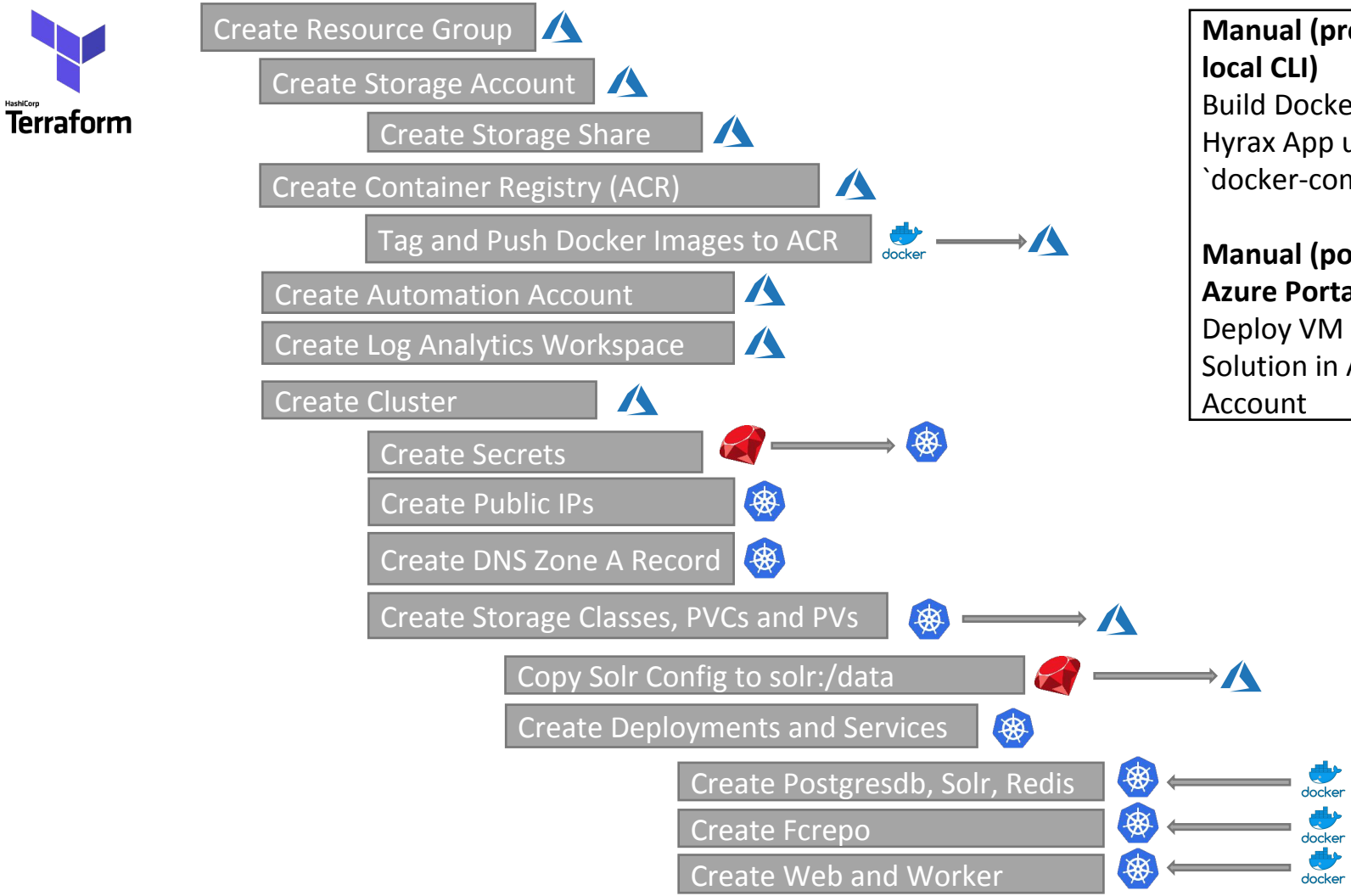
Kubernetes Cluster hosted on …

Azure Cloud Services built using

Terraform Infrastructure Creation


Azure Resource Group
Azure Automation Accout
Azure Log Analytics Workspace
Azure Kubernetes Cluster
Azure Storage Account
Azure Storage: Files
Microsoft Azure
Azure Storage: Files
Azure Managed Disk
fcrepo
postgresdb
solr
app_web
app_worker
redis
/data
/var/lib/postgresql/data
/opt/solr/server/solr/mycores
/data
/data
/app/shared/state
/data


Azure
Kubernetes Cluster
(external facing)
docker
kubernetes
Image
AzureACR
hyrax_web
Deployment
Replica Set
Pod
External Endpoint
Service
(LoadBalancer)
Internal Endpoint
Other Services
Persistent
Volume Claim
Persistent
Volume
Storage Class
Azure Public IP
Azure DNS A
Record
Azure Storage: Files
/data
/app/shared


Create Resource Group
Create Storage Account
Create Storage Share
Create Container Registry (ACR)
Tag and Push Docker Images to ACR
docker
Create Automation Account
Create Log Analytics Workspace
Create Cluster
Create Secrets
Create Public IPs
Create DNS Zone A Record
Create Storage Classes, PVCs and PVs
Copy Solr Config to solr:/data
Create Deployments and Services
Create Postgresdb, Solr, Redis
Create Fcrepo
Create Web and Worker
docker
docker
docker
Manual (pre terraform on local CLI)
Build Docker Image for the Hyrax App using `docker-compose build`
Manual (post terraform on Azure Portal)
Deploy VM Start|Stop Solution in Automation Account

@todo

- Use remote-state
- Make running docker-compose build part of the terraform apply
  - Delay kubernetes deploy for hyrax/sidekiq until it’s finished
  - Initiate only on a change in git revision/tag
  - Circle CI?
- Endpoint Security
  - SSL for the public endpoint(s) ✅

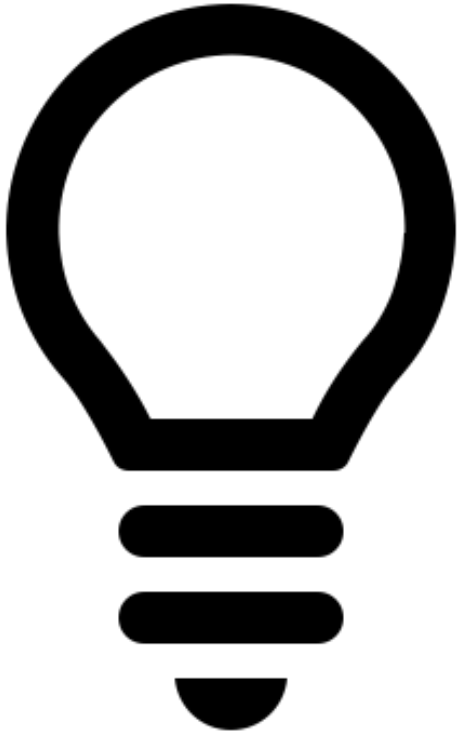
Controlled Vocabulary Options in Hyrax

-Julie Hardesty

Samvera Virtual Connect 2019

Proposed idea:

Include more controlled vocabulary options for Keyword and Subject fields by default in Hyrax



Vocab Options

- Many available
- Not many Linked Data
- Discussion needed (community and technical approach)

	A	B	C	D	E
1	Name	Year	Creator/Community	Classification Scheme	Controlled Vocabulary
2	**Indigenous/Native**			☐	☐
3	Brian Deer Classification Scheme	1977		☑	☐
4	Mashantucket Pequot Thesaurus of American Indian Terminology			☐	☑
5	BC First Nations Subject Headings - Names			☐	☑
6	Native American Educational Services system (NAES closed in 2007)		Native American Educaional Services College: https://s	☑	☐
7	Ojibway-Cree Cultural Centre classification (mod of BDC)			☑	☐
8	National Indian Law Library Thesaurus			☐	☑
9	Indigenous Materials Classification System			☑	☐
10	UBC Classification	2015	Union of British Columbia Indian Chiefs Resource Cent	☑	☐
11				☐	☐
12	LGBTQ+			☐	☐
13	Homosaurus.org based on International Homo/Lesbian Informatiecentre & Archives and compiled by Mark van der Wel (with support of Ellen		http://homosaurus.org/contact	☐	☑
14	International thesaurus of gay and lesbian index terms from the International Gay and Lesbian Archives Center and Archive, or IHLIA; also called A Guide to the Thesaurus of International Thesaurus of Gay and Lesbian Index Terms by Van Staalduinen	1997	IHLIA LGBT Heritage	☐	☑
15				☐	☑
16	Gay Studies Thesaurus	1990		☐	☑
17	LGBT Life Thesaurus from EBSCO (maybe called GLBT Thesaurus?)	2004		☐	☑
18	Sexual nomenclature : a thesaurus	1976		☐	☑
19	LLACE Classification Scheme	2001	Lavender Library, Archives, and Cultural Exchange of S	☑	☐
20				☐	☐
21	**Women**			☐	☐

Interested? Let's Unconference!

Julie Hardesty
jlhardes@iu.edu
@jlhardes

- **Hyrax Vocabulary Options - Meetup**
- http://sessions.samvera.org/sessions/116

Scholarsphere is Dead, Long Live Scholarsphere!

Adam Wead

awead@psu.edu / @amsterdamos

PennState

Here lies
Scholarsphere
2012-2019

Post Mortem

- Upgrading to Hyrax is problematic
  - Performance
  - Valkyrie integration is still forthcoming
  - Could require a migration
- Unable to update existing dependencies (ex. jQuery)
- Adding new features is limited; requires excessive effort
- Developer unhappiness
- Developer departures (unrelated to happiness)
- Difficulty finding part-time contractors
- Institutional upheaval: reorgs, mergers, & a new everyone

Scholarsphere Resurrected

- Focus on research data and scholarly publication (ex. Zenodo, Dryad, Figshare)
- Same data model & metadata
- Smaller application: minimal, standard dependencies (no Fedora)
- Distributed, scalable architecture with a *microservices-esque* approach
- Leverage new storage options such as AWS and Globus
- **All functions are backed by an API to support researchers and migration**

Current Status

- Finished six-week experimentation period deploying sample applications with 2 devs and 1 devops
- Rails 6: Postgres, Solr, Webpacker, Stimulus.js, Blacklight
- Metadata: JSON with Postgres (similar to Valkyrie)
- Storage: Amazon S3 via Shrine with Uppy.js
  - Tested 30 GB files for resumable, multipart uploading
- Jobs: Sidekiq, Amazon lambdas for derivatives (?)
- Deployment: DroneCI, Docker, Kubernetes
- First production release in early 2020

It's not you, it's me

- No, we're not leaving
- Samvera is a community, not software
- Hyrax, Valkyrie, and Fedora have a future at Penn State
- We don't know what that future is yet
- Breakout proposal: *I know, Let's Build an API!*

PennState

Thank You!

Questions? Come find me and let's talk more...

Notes & Shout-Outs

Zenodo: https://zenodo.org

Dryad: https://datadryad.org/stash

Figshare: https://figshare.com

Example Shrine integration: https://github.com/psu-stewardship/ss-shrine

Data model sketch: https://github.com/psu-stewardship/ss-json

Current repo: https://github.com/psu-stewardship/scholarsphere-4

Thanks to WUSTL for hosting and to the SamveraConnect committee.

Thanks to my colleagues at Penn State Libraries for being awesome!

PennState

Work Estimation Records

How we're using agile practices to improve our teams estimates

Aaron Collier (Stanford)

aaron.collier@stanford.edu

@aaronisbrewing

DLSS Infrastructure Team

- Naomi Dushay
- Mike Giarlo
- Justin Coyne
- Justin Littman
- John Martin
- Jeremy Nelson
- Peter Mangiafico
- Astrid Usong
- Aaron Collier

Why are we here?

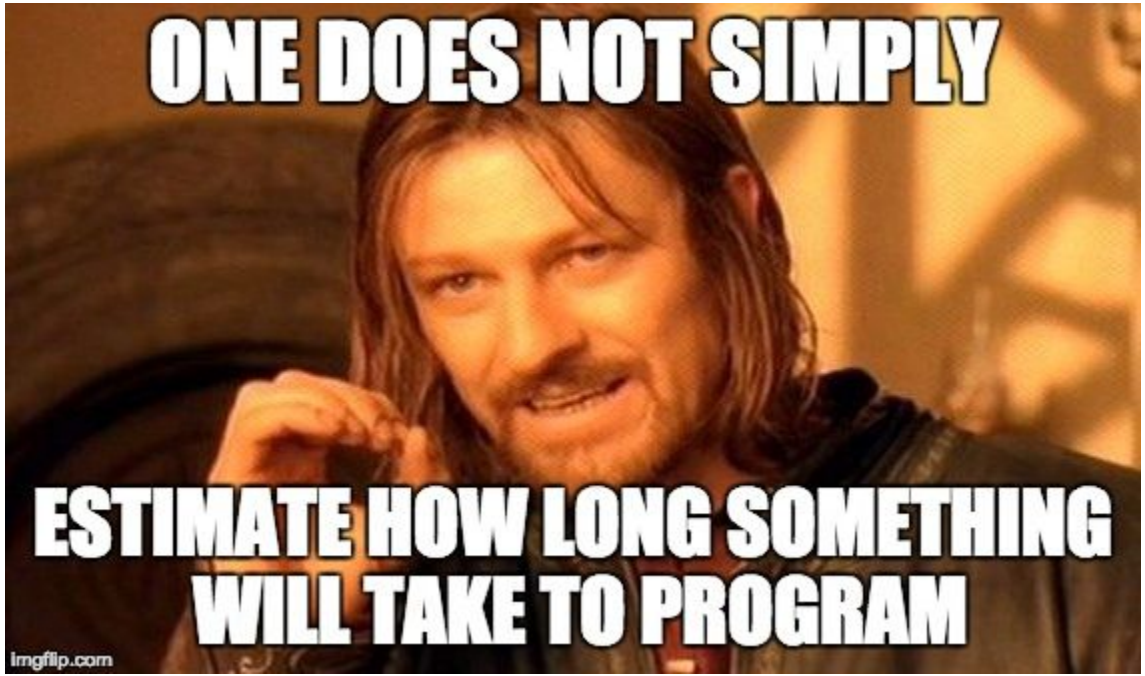
samvera

Software estimates are easy /s

samvera

Software engineers can be bad at estimates…

But it's worse when arbitrarily time constrained.



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Architecture Decision Records

Work Estimation Records

Guidelines we are following

- Capture the who, when, and why an estimate is requested
- Capture the who, confidence, and effort of the estimate
- Capture assumptions used in the estimate
- Outline the major tasks
- Risks/Challenges/External Dependencies
- Open questions
- Time estimate based ranges are followed
- Results (when possible)

Making this Agile

- Two (or more) team members use a pairing session to write the estimate
- A pull request is submitted to the team for discussion
- Iterate on the estimate (and the template)
- Retro the estimate when completed (TBD)

How is it going?

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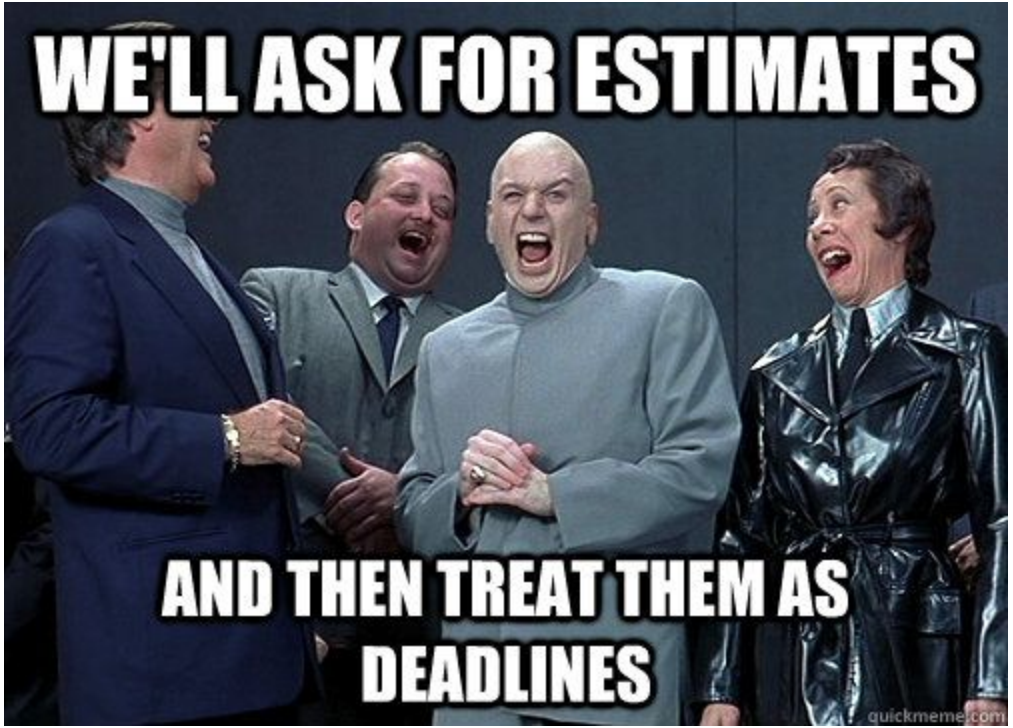


Resources

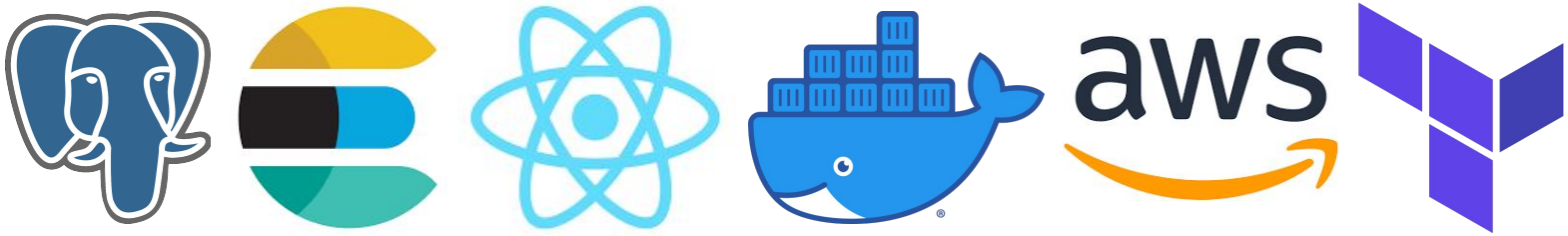
- https://sul-dlss-labs.github.io/estimation/
- https://github.com/sul-dlss-labs/estimation
- https://adr.github.io/

Thank You!

New Tools for NU: Elixir, Broadway, Phoenix, and GraphQL

-Michael B. Klein

What's *Not* New?



So What *Is* New?

Elixir!

(language)

Broadway!

(concurrent, multi-stage data ingestion and processing)

Phoenix!

(web framework)

Ecto + Absinthe!

(sql + graphql)

Advancing Hyku Project

-Brian Hole

U.Shattuck Library

Home Sign In Upload About

Explore Search

Welcome to University of Shattuck's digital repository, Hyku

The Hyku repository is a digital archive for the University of Shattuck has been designed to hold, manage, preserve and provide access to growing body of digital material generated through the research, teaching and administrative activities of the University.

Search Upload

3,500
Researchers on Campus

12,000
Downloads

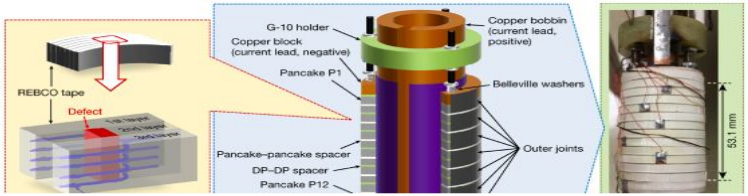
2,300
Citations

3,390
Technical Reports

hyku inside!
www.u-repo.io

Featured Materials

Check out our award winning papers!



MASTERS THESIS

TECHNICAL REPORT

Chip assignment algorithms for dynamic wafer design in semiconductor manufacturing

Suhermanto, Herry

When the Sixth Session the Conference of Parties (COP6) of the United Nations Framework Convention

JOURNAL ARTICLE

Designing Accessible Interfaces: The Do's and Don't's of Color and Text

Nadir Abdessemed, Derick Kurda

The dos and don'ts of designing for accessibility are general guidelines, best design practices for making

CC BY

Advancing Hyku:
Open Source Institutional Repository Platform Development
($1M, 2 years)

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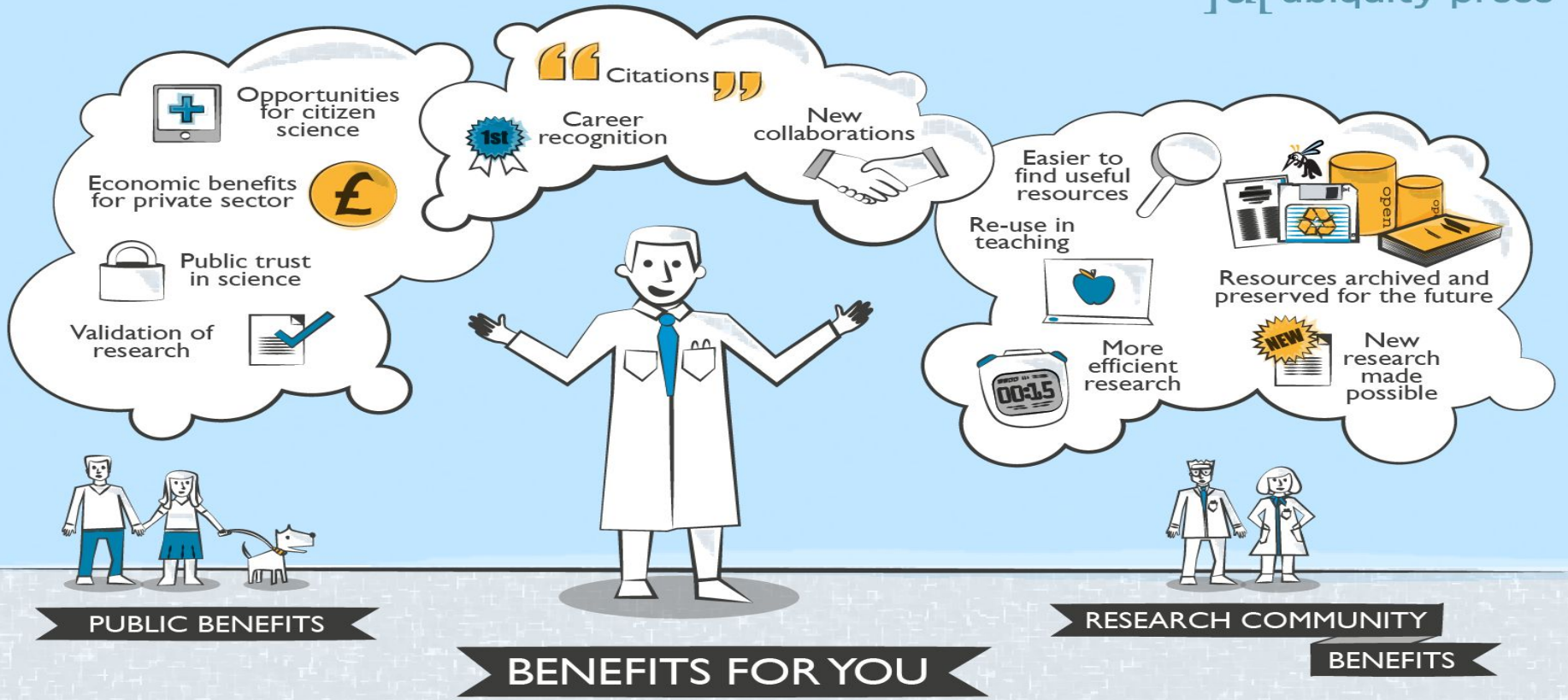
Opportunities for citizen science
Economic benefits for private sector
Public trust in science
Validation of research
Citations
Career recognition
New collaborations
Easier to find useful resources
Re-use in teaching
Resources archived and preserved for the future
More efficient research
New research made possible
PUBLIC BENEFITS
BENEFITS FOR YOU
RESEARCH COMMUNITY BENEFITS

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1 Integrating open-resource discovery tools to automatically scale repository contents

unpaywall

Open Access Button

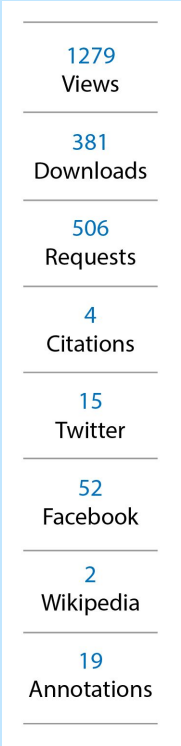
CC BY

2 Adding metrics to indicate usage of contents

ubiquity analytics

Crossref Event Data

DataCite
FIND, ACCESS, AND REUSE DATA



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3 Connecting and syncing with author identification and profile services

brian.hole@ubiquitypress.com | @ubiquitypress

CC BY

4 In-browser display, visualization and annotation

CC BY

5 Establishing pathways to long-term preservation services

CC BY

6 Assessing requirements and jointly creating detailed, component-specific development plans

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Supporting & Connecting Women in Technology

-Robin Ruggaber

AnitaB.ORG

- Mission
  - “At AnitaB.org, we envision a future where the people who imagine and build technology mirror the people and societies for whom they build it. We connect, inspire, and guide women in computing, and organizations that view technology innovation as a strategic imperative.
  - Our social enterprise supports women in technical fields, as well as the organizations that employ them and the academic institutions training the next generation. A full roster of programs help women grow, learn, and develop their highest potential.”

Founder

- Community (international, restricted to women, and safe)
  - 1987 Anita Borg plus 12 like minded women enrolled in Anita's vision
  - Syster - social infrastructure
- Grace Hopper Conference
  - 1994 Anita and Dr Nelle Whitney established an annual Grace Hopper Conference in honor of Grace Hopper

Community

- Systers (primarily mailing lists but also online infrastructure)
  - international, private to women technologist, and safe
  - representing 6000 women, 60 countries, 50 Academic Institutions and Fortune 500 Companies
  - Supporting various affinity related to culture, place and facet of technology
- Career Support
  - curriculum for career guidance
  - continual research to identify top companies known for equality
  - job boards
  - Grace Hopper Conference - annual, multi track, showcasing women's technology work and innovations, connecting women

What about all the men interested in supporting us?

Check out the Ally Curriculum

Iterating on a Hiring Process

-Jeremy Friesen

Guiding Principle

Treat hiring a new employee as your most important project.

Roadmaps and Quorum

Job Posting ≠ Position Description

Write a job posting that reflects your organization's aspirational best days

Create a Rubric

Before you get started, determine your measurement criteria.

Communication

Send your phone interview questions in advance and require written responses in advance of their phone interview.

Links

See a more in-depth document or contact me at jfriesen@nd.edu