

The background features a dark blue gradient with a series of curved, parallel lines that create a sense of depth and movement. A bright, glowing light source is visible on the right side, casting a beam of light across the scene. The overall aesthetic is modern and technological.

Increase the Relevance, Impact, and Efficiency of Your Research

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UA LIBRARIES
JULY 19th, 2019

A bit about me

- Geospatial Specialist at here the UA Libraries
 - Office of Digital Innovation and Stewardship
- Support student, staff, faculty, and the public with questions related to geospatial data, software, and analysis
- Responsible for the libraries geospatial archive and portal platform

UA Libraries

Consulting

- Data management
 - Best practices
 - DMP review
 - Metadata services
 - Strategy development
- Geospatial data
 - Find, build, and share geospatial data
- 1:1, groups
- Referrals
 - Research computing
 - Sensitive data
 - CyVerse

Support

- DMPTool
- Open Science Framework
 - Training
 - Strategies
 - Support
- Geospatial
 - ArcGIS
 - QGIS & GRASS
- Data Analysis
 - R
 - Python
- Geospatial Data archiving and curation
 - Spatial Data Explorer

Training

- Workshops
 - Grad students
 - Postdocs
 - Faculty
- Department talks
- Lab/research group training
- Responsible Conduct of Research
- DM training in classroom teaching
- GIS open hours and workshops

Increased Research Support

- 2010 - 37% of ARL libraries reported providing infrastructure or support services for e-science (Soehner et al. 2010)
- 2012 - 44% provide reference support for finding data, 20% or less provide other types of data related services (Tenopir et al., 2012)
- 2013 - 74% of ARL respondents offer RDS providing guidance and assistance with DMPs (Fearon et al., 2013)

- Increase impact through access to data and publications
 - Marketability to funding organization
- Add relevance by demonstrating applicability to other disciplines
 - Discovering relationship to other spatial data
- Efficiency through platforms designed to facilitate organization and reproducibility
 - OSF
- Looking for partnerships across domains

Access

Impact through access (open)

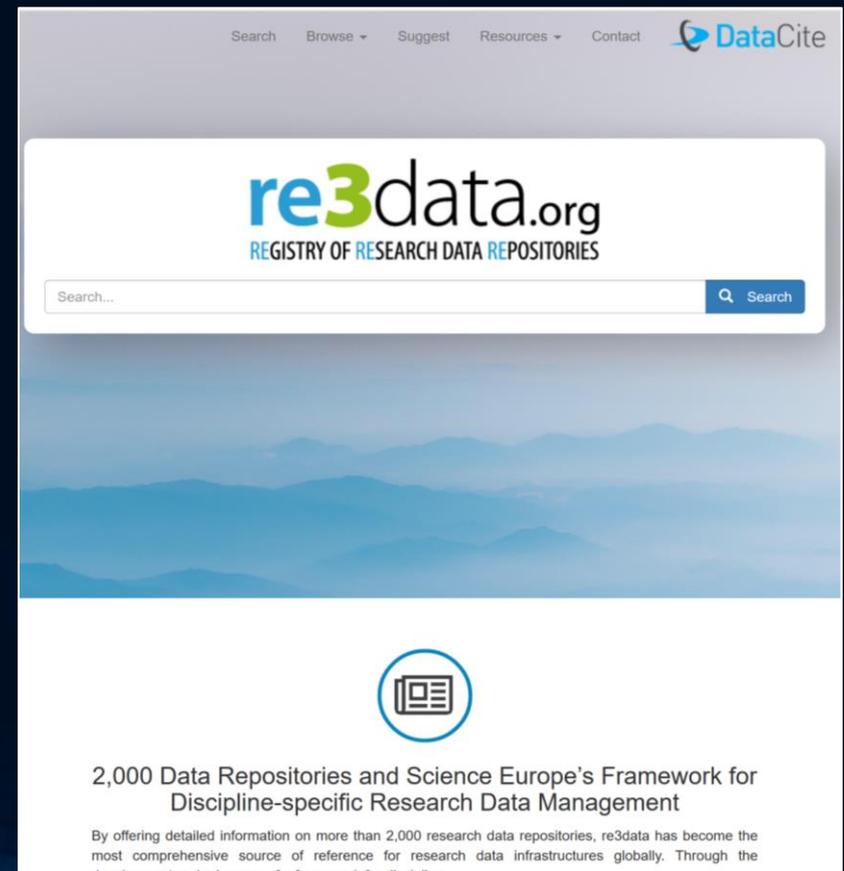
- Allow work to be easily shared, cited, and reused (not only the final paper)
 - *Open access publishing increases impact as measured by citation percentage*
 - *Get Cited in Wikipedia!*
- Funding agency are requiring it
 - *SPARC's list of data sharing requirements by agency*

Open access

- [University of Arizona OA](#) (2016)
 - *"The Faculty of the University of Arizona is committed to disseminating its research and scholarship as widely as possible. As part of a public, land grant university, the Faculty is dedicated to making its scholarship available to the people of Arizona and the world to maximize its impact. "*
- [Bill and Melinda Gates Foundation OA](#) (2017)
 - *"The free, immediate, and unrestricted access to research will accelerate innovation, helping to reduce global inequity and empower the world's poorest people to transform their own lives."*
- [Harvard, MIT, Duke, UNC at Chapel Hill, UI at Urbana-Champaign, Penn State, Oregon State University, University of California system](#)

Get your data out there

- Registry of Research Data Repositories
 - <https://www.re3data.org/>
- Disciplinary Repositories
 - [ICPSR](#)
 - [DRYAD](#)
- Campus Repositories
 - [Harvard Dataverse](#)
 - [UNC Dataverse](#)
- Computing facilities
 - [Cyverse](#)



Make research relatable

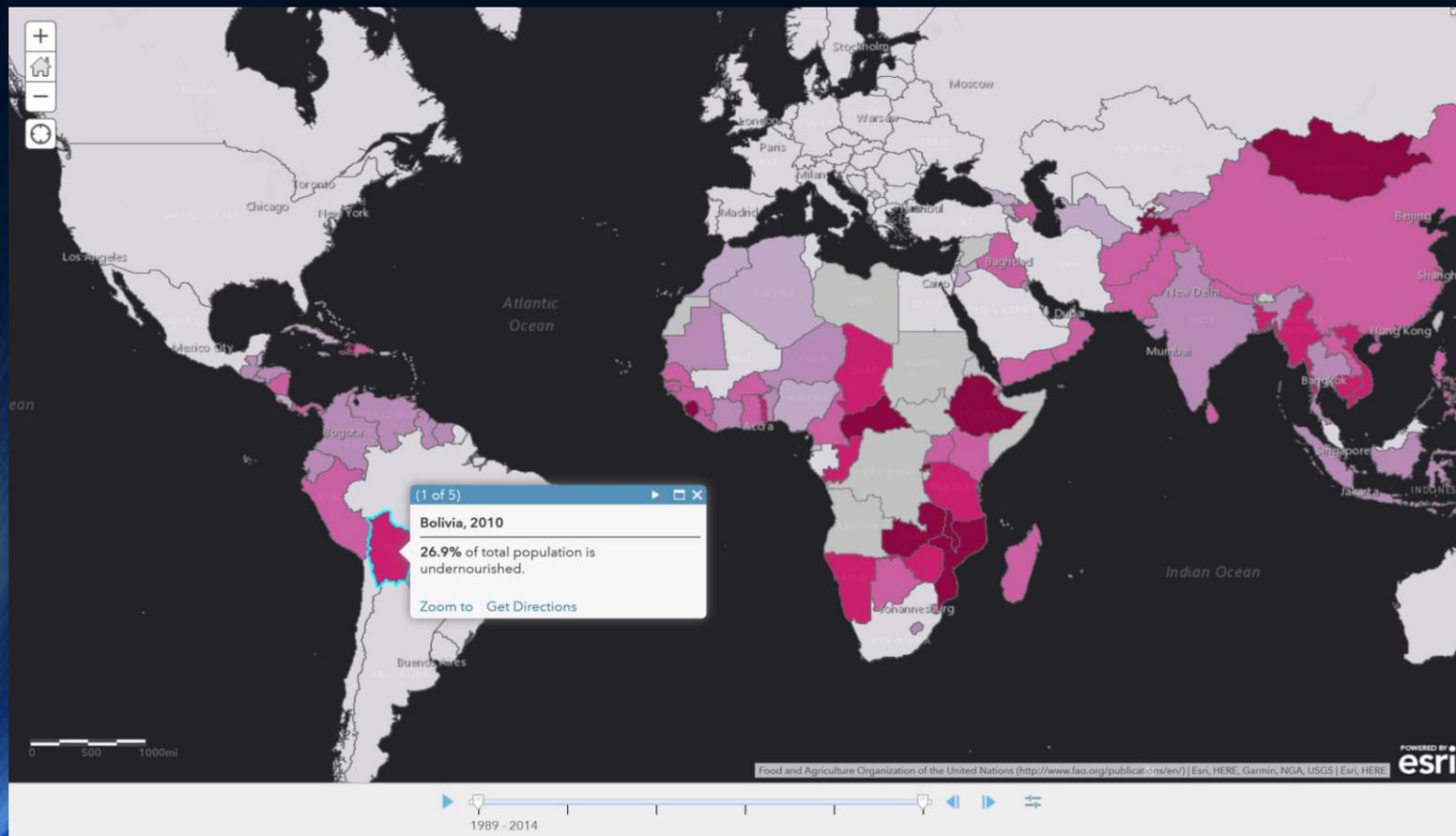
Finding Relationships

- [Living Atlas](#) & [Open-Data](#) (Esri)
- [IPUMS](#)
- [RefUSA](#) – via InfoGroup
 - Businesses data
- [FAO](#)
- GABBs – Via [MyGeoHub.org](#)
- [OpenStreetMap](#)

 <p>U.S. Census and American Community Survey microdata from 1850 to the present.</p> <p>VISIT SITE</p>	 <p>Current Population Survey microdata including basic monthly surveys and supplements from 1962 to the present.</p> <p>VISIT SITE</p>	 <p>World's largest collection of census microdata covering nearly 100 countries, contemporary and historical.</p> <p>VISIT SITE</p>
 <p>Health survey data for Africa and Asia, including harmonized data collections for DHS and PMA2020.</p> <p>VISIT SITES</p>	 <p>Tabular U.S. Census data and GIS boundary files from 1790 to the present.</p> <p>VISIT SITE</p>	 <p>Integrated data on population and the environment from 1960 to the present.</p> <p>VISIT SITE</p>
 <p>Historical and contemporary time use data from 1965 to the present.</p> <p>VISIT SITES</p>	 <p>Historical and contemporary U.S. health survey data from NHIS (1963-present) and MEPS (1996-present).</p> <p>VISIT SITES</p>	 <p>Survey data on the science and engineering workforce in the U.S. from 1993 to the present.</p> <p>VISIT SITE</p>

Finding Relationships

- Living Atlas & Open-Data (Esri)



Finding Relationships

- IPUMS



U.S. Census and American Community Survey microdata from 1850 to the present.

[VISIT SITE](#)



Current Population Survey microdata including basic monthly surveys and supplements from 1962 to the present.

[VISIT SITE](#)



World's largest collection of census microdata covering nearly 100 countries, contemporary and historical.

[VISIT SITE](#)



Historical and contemporary time use data from 1965 to the present.

[VISIT SITES](#)



Historical and contemporary U.S. health survey data from [NHIS](#) (1963-present) and [MEPS](#) (1996-present).

[VISIT SITES](#)



Survey data on the science and engineering workforce in the U.S. from 1993 to the present.

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Health survey data for Africa and Asia, including harmonized data collections for [DHS](#) and [PMA2020](#).

[VISIT SITES](#)



Tabular U.S. Census data and GIS boundary files from 1790 to the present.

[VISIT SITE](#)



Integrated data on population and the environment from 1960 to the present.

[VISIT SITE](#)

Finding Relationships

- [RefUSA](#) – via InfoGroup

The screenshot shows the referenceUSA website homepage. At the top, the logo "referenceUSA" is on the left, and navigation links "ABOUT US", "HOW DO I ACCESS?", "DATABASES", "LEARNING CENTER", and "FAQ" are on the right. Below the navigation is a blue banner with the text "The premier source of information for reference and research" and "Offers Accurate Data on 52M Businesses and 291M Consumers". The main content area is titled "Available Databases" and "Select a Database to Get Started". It features a grid of database options: "U.S. Businesses" (52 Million Businesses, 2.8 Million Closed Businesses), "Canadian Businesses" (1.9 Million Businesses), "U.S. New Businesses" (4.4 Million New Businesses), "U.S. Consumers / Lifestyles" (291 Million Individuals), "U.S. Historical Businesses" (211 Million Historical Records), "U.S. Jobs / Internships" (2.5 Million Job Postings), "U.S. Healthcare" (1.2 Million Physicians & Dentists), and "Canadian White Pages" (11 Million Individuals). A "U.S. Businesses" section on the right provides a detailed description of the database and lists selection criteria. A green "SEARCH" button is located at the bottom right.

referenceUSA ABOUT US HOW DO I ACCESS? DATABASES LEARNING CENTER FAQ

The premier source of information for reference and research

Offers Accurate Data on 52M Businesses and 291M Consumers

Available Databases

Select a Database to Get Started

U.S. Businesses 52 Million Businesses 2.8 Million Closed Businesses SEARCH MORE INFORMATION	U.S. Historical Businesses 211 Million Historical Records
Canadian Businesses 1.9 Million Businesses	U.S. Jobs / Internships 2.5 Million Job Postings
U.S. New Businesses 4.4 Million New Businesses	U.S. Healthcare 1.2 Million Physicians & Dentists
U.S. Consumers / Lifestyles 291 Million Individuals	Canadian White Pages 11 Million Individuals

U.S. Businesses

The U.S. Business database contains a total of 52 million businesses including 15 million verified and 37 million unverified businesses that are updated weekly. It is the only business database that is enhanced with more than 24 million phone calls per year providing you with the most accurate data possible.

Selection Criteria include:
Company name, Executive title, Business type, Sales volume, Employee size, Year established, And more...

Use [Quick Search](#) to find what you need with a few clicks or use our powerful [Advanced Search](#) to fine tune your search.

[SEARCH](#)

Finding Relationships

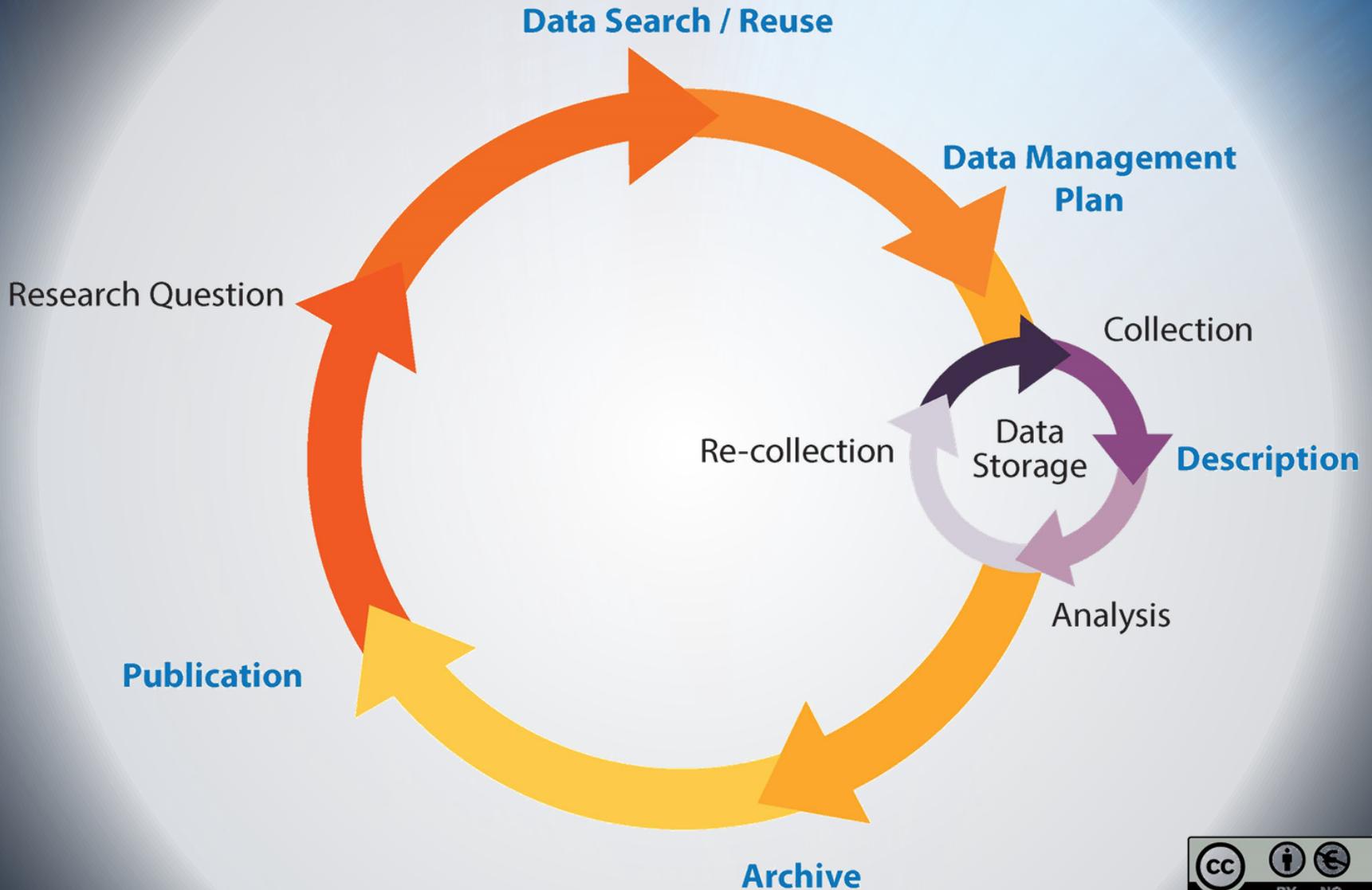
- Disciplinary Research Repositories
 - [FigShare](#)
 - [DataONE](#)
 - [ICPSR](#)
 - [DRYAD](#)
- Campus Repositories
 - Harvard Dataverse
 - UNC Dataverse
- Computing facilities
 - Cyverse
- Government Databases
 - [US Census Bureau \(American FactFinder\)](#)
 - [EPA Enforcement & Compliance History](#)
 - [World bank](#)
 - [United Nation UN Data](#)

Data Management (Research Efficiency)

Open Science Framework

- Project Management Tool
- Collaboration Tool
- Research Hub
- Archive
 - Versioning
- Notifier
- Discovery Platform
- Registry
- Project wiki

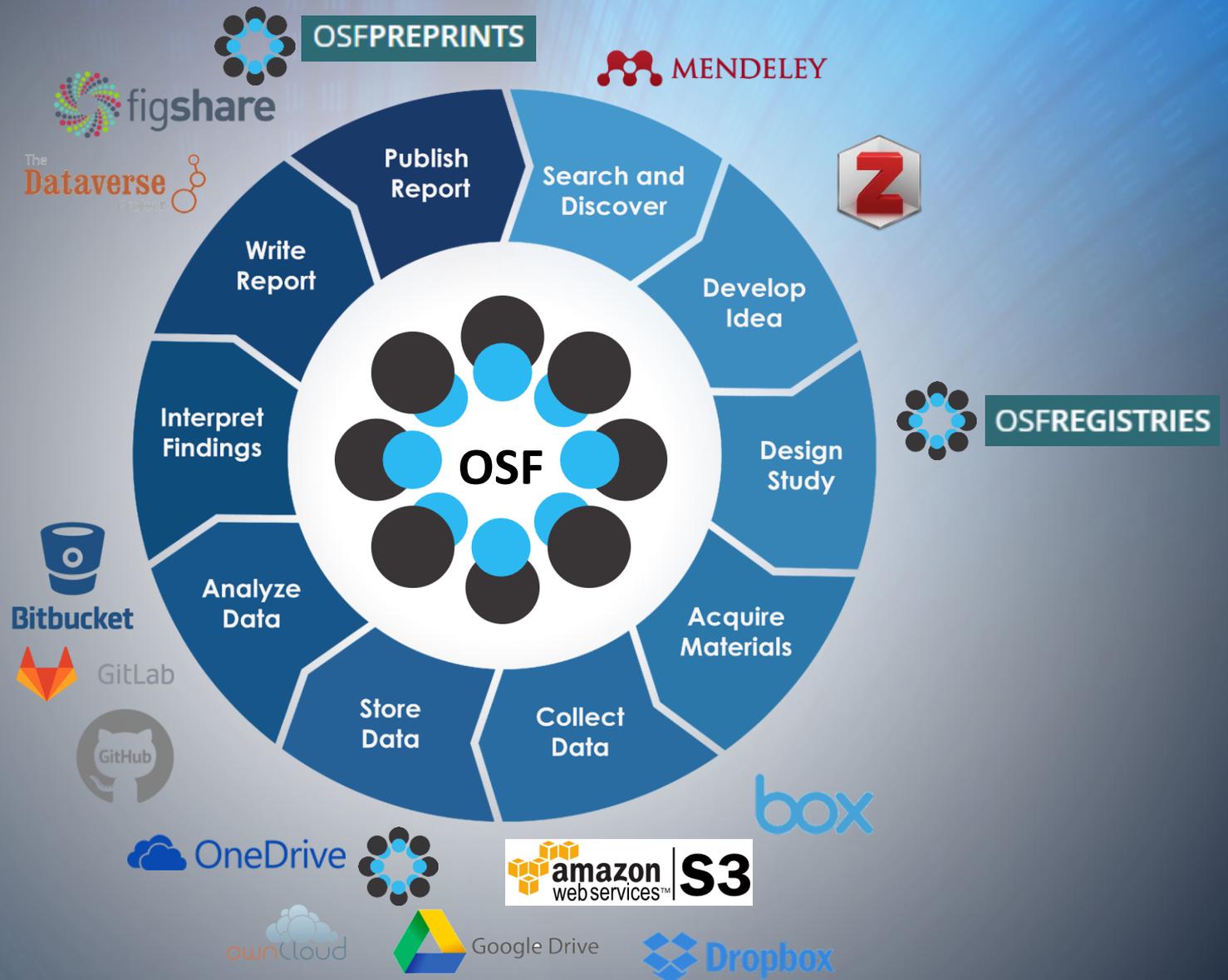
The Research Data Management Lifecycle



23/07/2018



	Ad Hoc	One-Time	Active and Informative	Optimized for Re-Use
Planning your project	When it comes to my data, I have a "way of doing things" but no standard or documented plans.	I create some formal plans about how I will manage my data at the start of a project, but I generally don't refer back to them.	I develop detailed plans about how I will manage my data that I actively revisit and revise over the course of a project.	I have created plans for managing my data that are designed to streamline its future use by myself or others.
Organizing your data	I don't follow a consistent approach for keeping my data organized, so it often takes time to find things.	I have an approach for organizing my data, but I only put it into action after my project is complete.	I have an approach for organizing my data that I implement prospectively, but it not necessarily standardized.	I organize my data so that others can navigate, understand, and use it without me being present.
Saving and backing up your data	I decide what data is important while I am working on it and typically save it in a single location.	I know what data needs to be saved and I back it up after I'm done working on it to reduce the risk of loss.	I have a system for regularly saving important data while I am working on it. I have multiple backups.	I save my data in a manner and location designed maximize opportunities for re-use by myself and others.
Getting your data ready for analysis	I don't have a standardized or well documented process for preparing my data for analysis.	I have thought about how I will need to prepare my data, but I handle each case in a different manner.	My process for preparing data is standardized and well documented.	I prepare my data in such a way as to facilitate use by both myself and others in the future.
Analyzing your data and handling the outputs	I often have to redo my analyses or examine their products to determine what procedures or parameters were applied.	After I finish my analysis, I document the specific parameters, procedures, and protocols applied.	I regularly document the specifics of both my analysis workflow and decision making process while I am analyzing my data.	I have ensured that the specifics of my analysis workflow and decision making process can be understood and put into action by others.
Sharing and publishing your data	I share the results of my research, but generally I do not share the underlying data.	I share my data only when I'm required to do so or in response to direct requests from other researchers.	I regularly share the data that underlies my results and conclusions in a form that enables use by others.	Because of my excellent data management practices, I am able to efficiently share my data whenever I need to with whomever I need to.



Get out of your research bubble

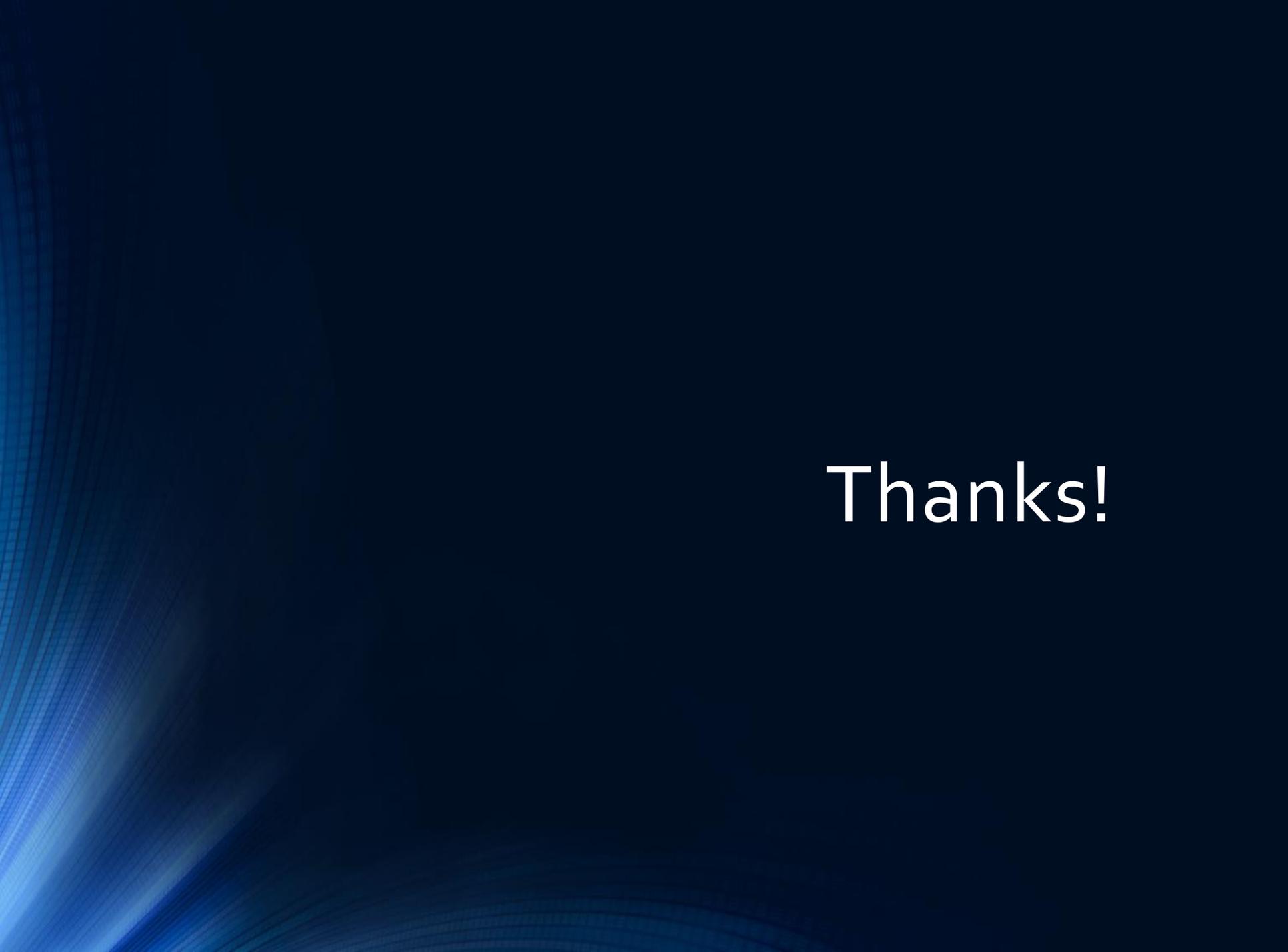
Discipline-less Events

- GIS Conferences
 - [Foss4G](#)
 - [ESRI UC](#)
- [GIS Day](#)
 - *"Tribal GIS in the Mountain Region: Geospatial Technologies and Tribal Consultation for Adaptive Planning in Integrated Resource Management"*
 - *"DroughtView: Combining On-the-ground Know-how with Remotely Sensed Data to Assess Drought Impacts"*
 - *"Image processing on Cyverse with Bisque"*
- *Poster Sessions*

Find Partners

National Socio-Environmental Synthesis Center

- “At SESYNC we have seen dramatic growth in the number and depth of interactions among scholars from disciplines who have rarely collaborated”
- “Research teams SESYNC have identified linkages such as how upstream watershed conditions can predict children’s health in developing countries.”
- “Another SESYNC research pursuit integrated risk perception and subsequent behavioral response with climate change models to suggest that mitigation may benefit from new policies and communication strategies.”



Thanks!