Research Data Management

Gwen Short - Librarian
CFAES Wooster Campus Research Library
December 2021

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL,
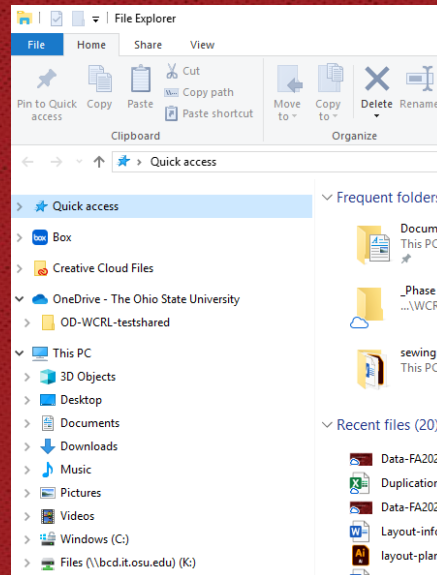AND ENVIRONMENTAL SCIENCES

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Today's Focus:

Organizing and Storing

your research data so that data is

Findable, Safe, & Compliant

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Organization

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WHY: Organize Digital files

- Requirements.
  - – Research Data Policy
  - – OSU Records Retention
  - – Outside funders
- Research Integrity
- It costs time and money to lose files and data.
- It is easier to
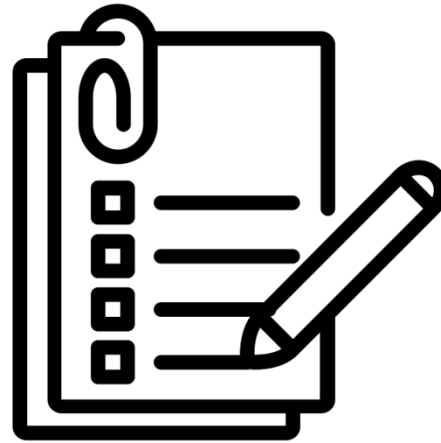 - – build on previous work
  - – Share for future use

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Slide 5

Steps to data organization

1. Inventory
2. Categorize
3. Prioritize
4. Name consistently
5. Document
6. Save and Backup
7. Assign responsibility

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Slide 6

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Inventory – Things to think about

- Current location
- Access
- Retention
- File type
- File size
- Security requirements

https://cybersecurity.osu.edu/user/login?destination=idp-calculator

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Categorize

- Start with inventory – do natural groups emerge?
- Data, maps, background or administrative information
- Disposition date or How long does data need to be kept?
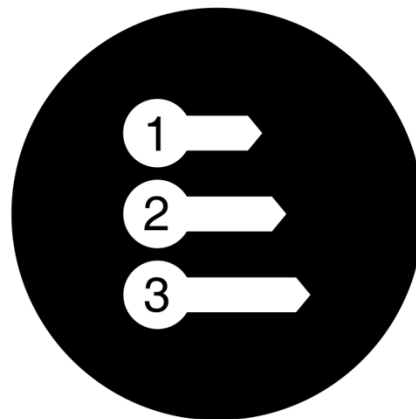- Needs of final storage

https://www.flickr.com/photos/ourunitedvillages/

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Prioritize

- Accept that you probably can't (and shouldn't') keep everything
- High value versus Low Value data
- Funder or other requirements - Data Management Plan?

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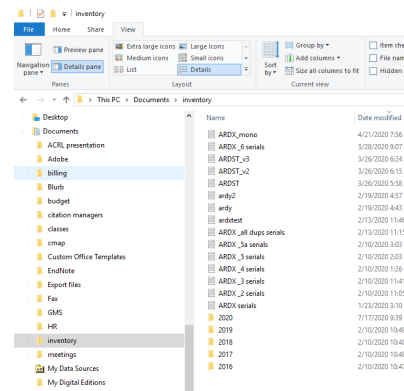
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File Naming

- Pick something and stick to it!
- Keep it simple but descriptive
- Avoid spaces, and special characters .\ / $ # @.
- Use - _ TitleCase
- Document
- For more info:

  https://library.osu.edu/sites/default/files/2019-12/file-naming-guidelines-20160120.pdf

  https://guides.osu.edu/c.php?g=707751&p=5027410

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Document

Anything that will help you or others find and understand your data in the future.

Could include

- Data Dictionary / Codebook
- File naming schema
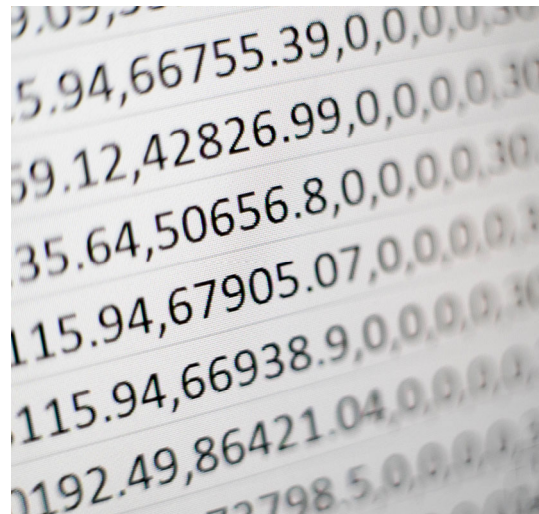- Protocols and Methods
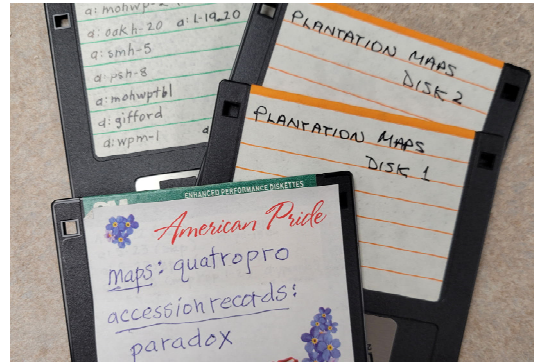- Project information

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Document with **readme.txt** files

- You are writing for future users of the data. Which could be you!
- 45 minutes of your time can save future you or others HOURS.
- Who, What, When, Where, How
- Use a .txt format
- **MORE HELP**
  - https://data.research.cornell.edu/content/readme
  - https://datamanagement.hms.harvard.edu/collect/readme-files

Name	Date modified	Type
NORSPR.WB2	11/9/2000 2:20 PM	WB2 File
PO-12.WB2	12/12/1995 4:19 PM	WB2 File
PO-13.WB2	12/12/1995 4:20 PM	WB2 File
PO-13A.WB2	12/12/1995 4:21 PM	WB2 File
PO-13B.WB2	12/12/1995 4:22 PM	WB2 File
PO-13C.WB2	11/9/2000 3:03 PM	WB2 File

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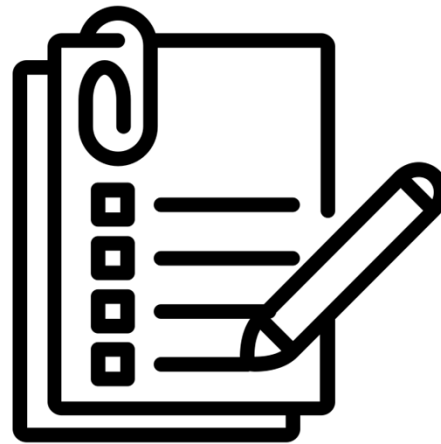
Storage options

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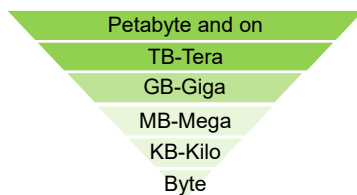Photo courtesy of: https://www.flickr.com/photos/torkildr/

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Considerations

1. How many and how big are the files

- Petabyte and on
- TB-Tera
- GB-Giga
- MB-Mega
- KB-Kilo
- Byte

2. How often do you need access?

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3. Who needs access?

or
Outside
Collaborators

4. Budget

$

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Considerations

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1. How many and how big are the files

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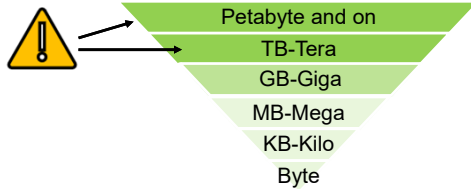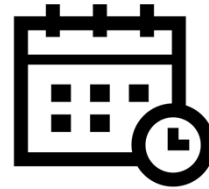THE OHIO STATE UNIVERSITY COLLEGE *of* FOOD, AGRICULTURAL, *and* ENVIRONMENTAL SCIENCES

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Active Projects

- Centers will often provide storage for data while you are working on the data ex. The Supercomputer Center
- Lab Archive - https://teaching.resources.osu.edu/toolsets/labarchives
- Microsoft OneDrive
- Microsoft Teams
- Open Science Framework - https://osf.io/ Non OSU

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Other OSU storage options

- Amazon Web Storage (AWS) https://it.osu.edu/ohio-state-amazon-web-services
- Other IT Solutions https://cfaesits.osu.edu/it-service-desk

- Try to avoid this:

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OSU Data Storage at a glance

	File Size	Max Storage	Data Security	Cost
LabArchives	250 MB increasing to 4GB	1 TB /Notebook multiple notebooks allowed	S1-S3	Free with OSU Account
OneDrive	100 GB	5 TB for personal files	S1-S3 some S4	Free with OSU Account
Teams	100 GB	25 TB for groups	S1-S3 some S4	Free with OSU Account
OSU AWS	Can handle large files and storage amounts – you will just pay more		Up to S4 Depends on product	Varies ($0.02-0.004 / GB) **BUT** access fees can add up

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Completed Projects - Repositories

Ohio State

Dryad – https://datadryad.org/stash/

Knowledge Bank institutional repository https://kb.osu.edu/

NEW > OSU Data Commons 2.0 (beta)
https://datacommons.tdai.osu.edu/

USDA AG-Data Commons - https://data.nal.usda.gov/

NIH - https://osp.od.nih.gov/scientific-sharing/data-repositories-and-trusted-partners/

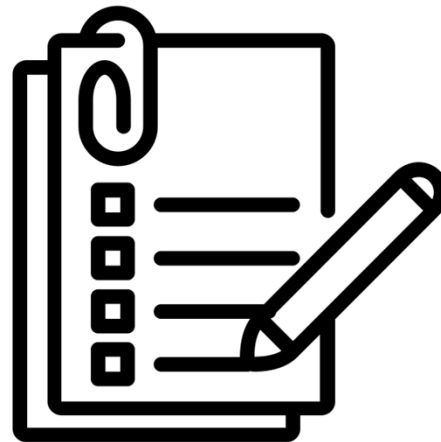NSF- https://catalog.data.gov/organization/nsf-gov

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Questions?

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