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Data management planning

Matthew Good, PhD

Digital Scholarship Center
University of Oslo Library

November 4, 2022

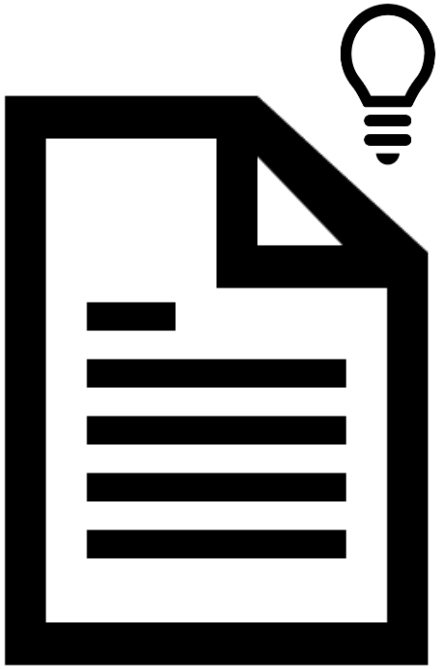
Materials developed as a part of the *Skills development for research data* project: https://www.ub.uio.no/english/about/projects/rdm-skills

Agenda

- What is a data management plan (DMP)?
- 10 rules to writing a DMP
- DMP examples and tools
- Q&A

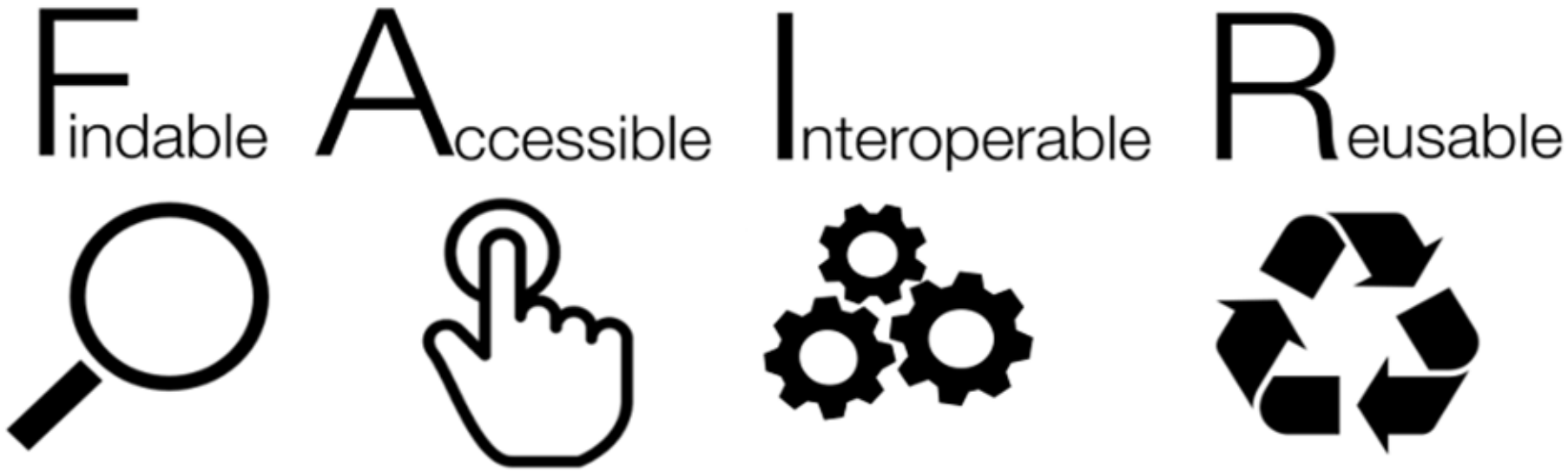
The Data Management Plan (DMP)

- Is a **living** document that accompanies the research project
- Specifies the **types** of data that will be generated
- Describes how you plan to **manage** your data (organize, document, classify, store, license)
- Conveys whether and how the data can be **shared**
- **Agreement** between project members
- A **tool** to keep overview over data



Why use a DMP?

- Comply with sponsor requirements
- Save time during and after project
- Easier to share and publish data
- Make your data reusable and reproducible
- Ensures security and quality of data
- Helps identify resource requirements, time dependencies or problems



https://www.go-fair.org/fair-principles/

Which DMP template or tool to choose?

If you:	Consider using:
Want a simple and text-based template	UiO's DMP template (see templates in «How do I get started with writing a DMP»)
Have life science data (ELIXIR)	Data Stewardship Wizard / ELIXIR Data Stewardship Wizard / General
Are working in an EU project	Digital Curation Center's DMPOnline
Have human and society data*	NSD's DMP tool
Use Sigma2's resources*	Sigma2's easyDMP

10 Simple Rules to Writing a Data Management Plan

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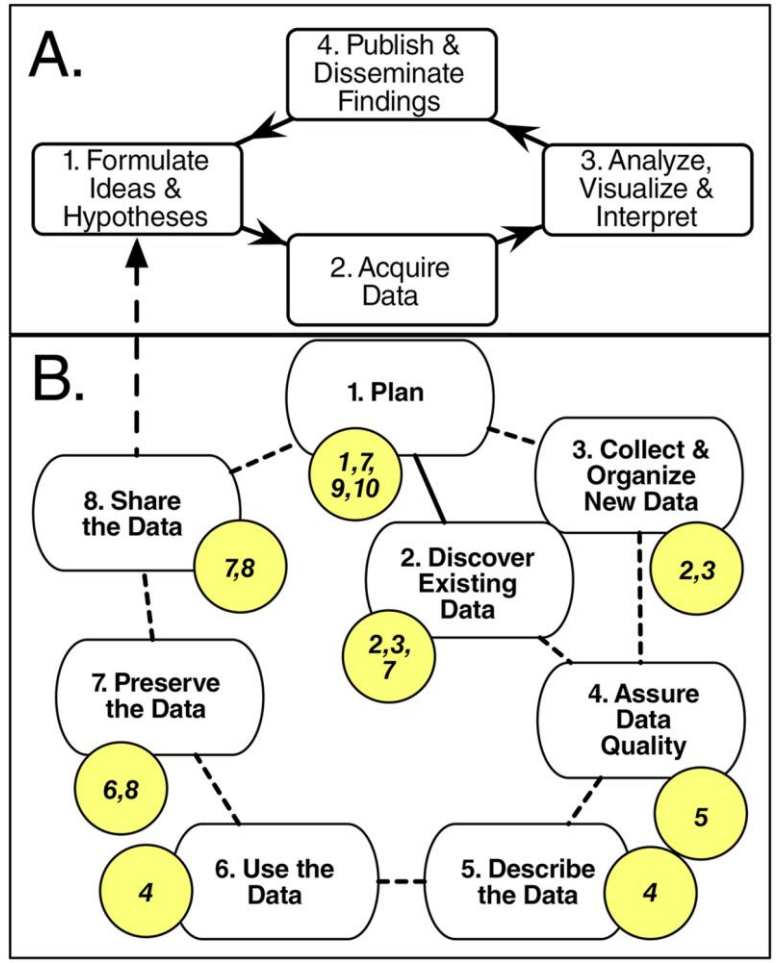

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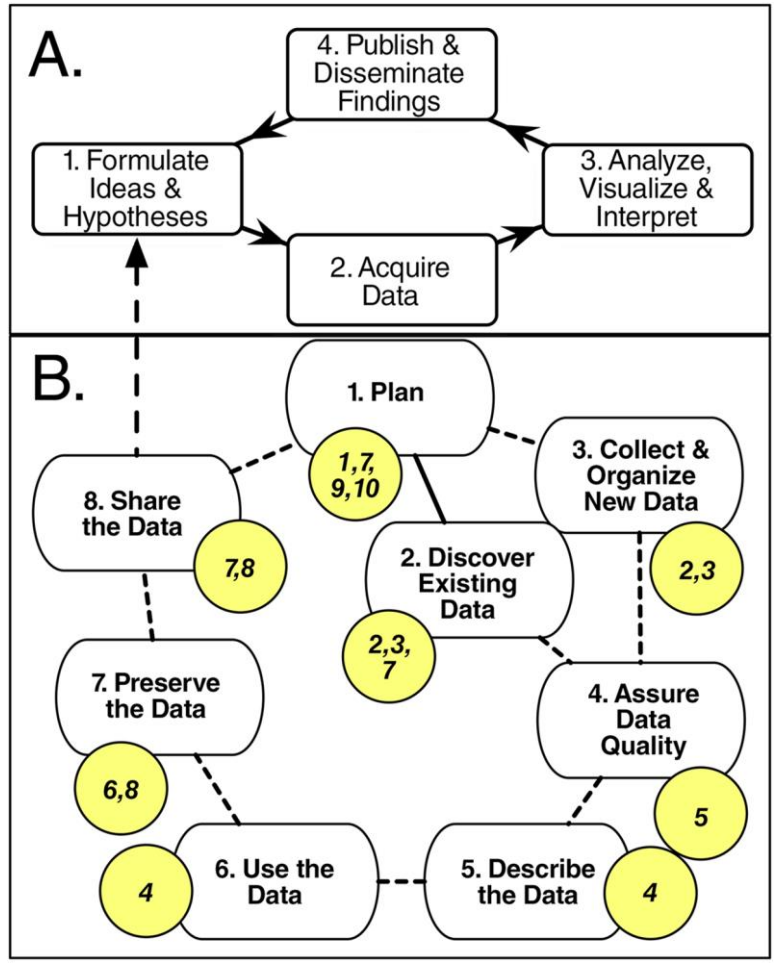

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HORIZON EUROPE

Open Science across the programme

Open Science

Mainstreaming of open science practices for improved quality and efficiency of R&I, and active engagement of society

Mandatory immediate Open Access to publications: beneficiaries must retain sufficient IPRs to comply with open access requirements;

Data sharing as 'open as possible, as closed as necessary': mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Reusable) research data

- Work Programmes may incentivize or oblige to adhere to **open science practices** such as involvement of citizens, or to use the **European Open Science Cloud**
- Assessment of open science practices through the **award criteria** for proposal evaluation
- Dedicated support to **open science policy actions**
- **Open Research Europe** publishing platform

European Commission

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https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

Data Management Plans (DMP)

- Assess the need to develop a data management plan in relation to all projects awarded funding.
- If you decide that a data management plan is not needed, you must provide an explanation.*
- Final version of the DMP delivered with the final report of the project.

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https://www.forskningsradet.no/en/Adviser-research-policy/open-science/open-access-to-research-data/

Sponsor Requirements

- DMP template or content requirements?
- Storage requirements?
- Metadata and documentation requirements?
- Publishing data openly?
- Archiving requirements?
- Which repositories are approved?
- Licensing requirements?
- Other legal requirements?

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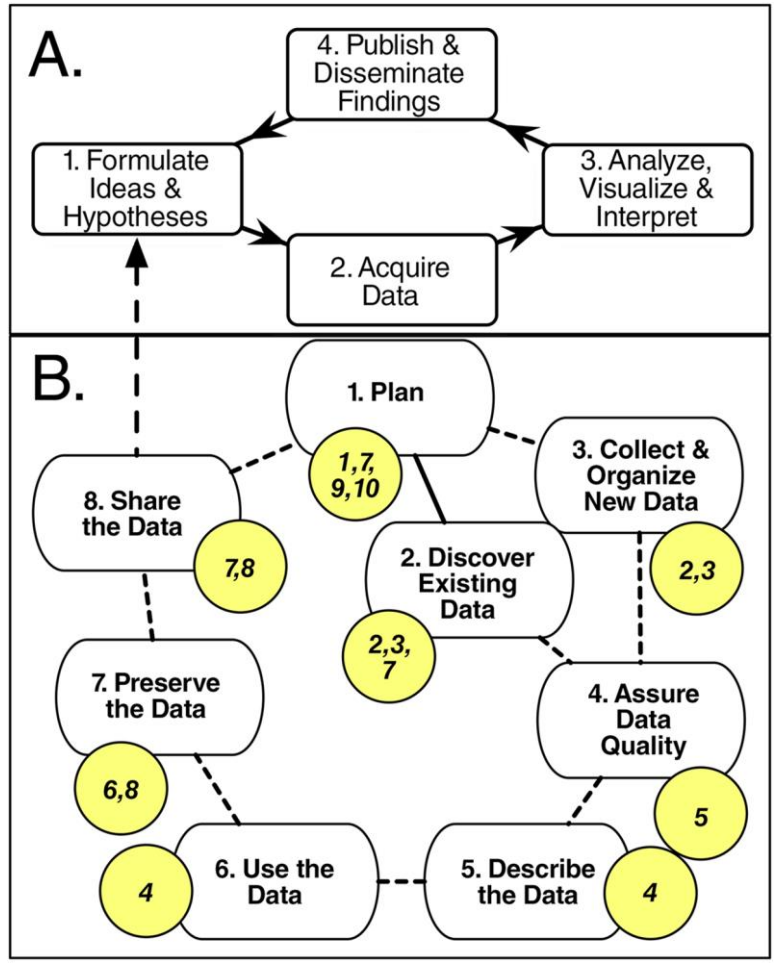

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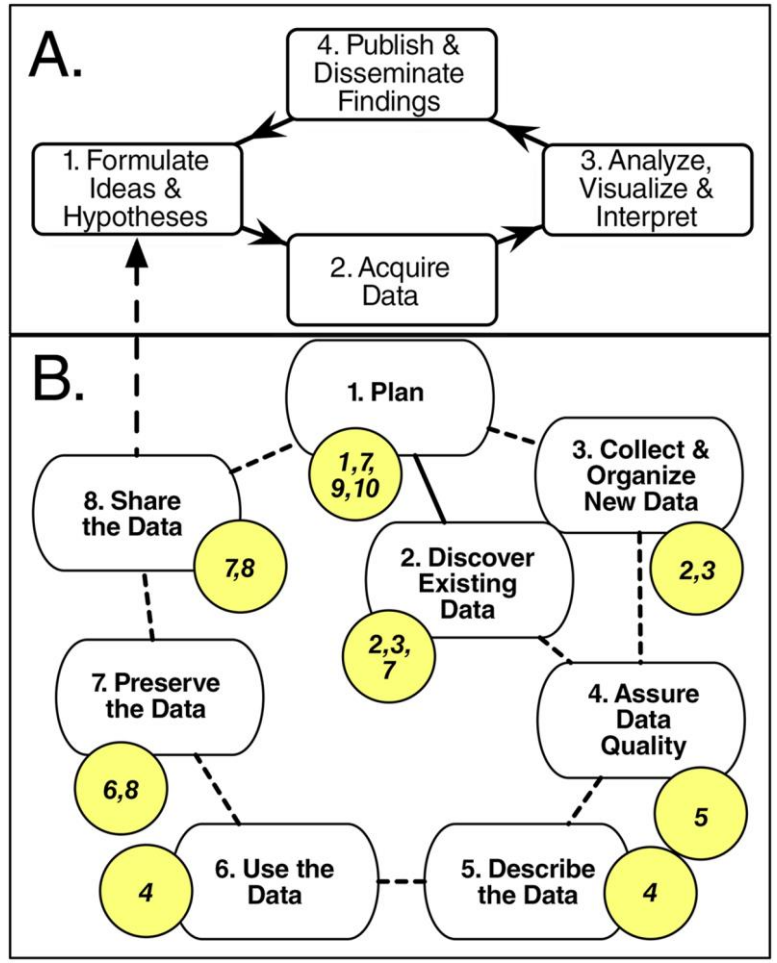

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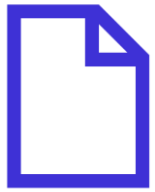
Identify data to be collected

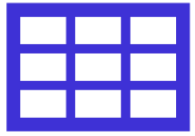


Origin of Data

Existing data or new data?

If data is reused: What is the scope, volume, format?

How are different data sources integrated?



Types of Data

What type(s) of data will be collected?

What is the scope, quantity and format of the material?

What is the total amount of data collected (MB/GB/TB/PT)?

Data Collection

How, where and when will data be collected?

What resources are required?

Who is responsible for data collection?

Example dataset description

Type: accelerometer output

Sensor: AX3 Axitivity

Protocol: see SOP-123 in protocol folder

Purpose: measure head movement of audience and musicians

File format: .csv

File size: ~ 15 x 1 MB

Classification: green

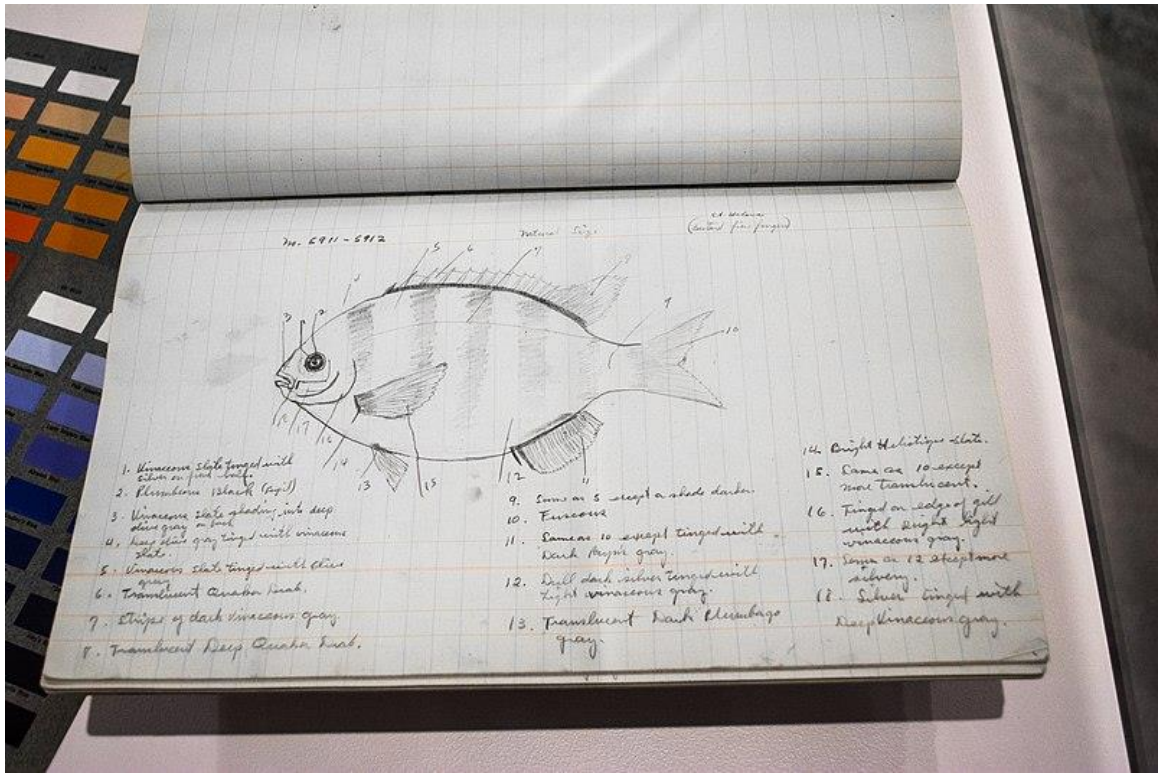
Setting: musical performance at a music festival on (date)

Administrative and Physical Data

Important to think about how non-digital or administrative data will be managed.

Examples can include:

Applications
Forms
Field notebooks
Lab notebooks
Physical artifacts
Protocols



by Tim Evanson, CC-BY-SA

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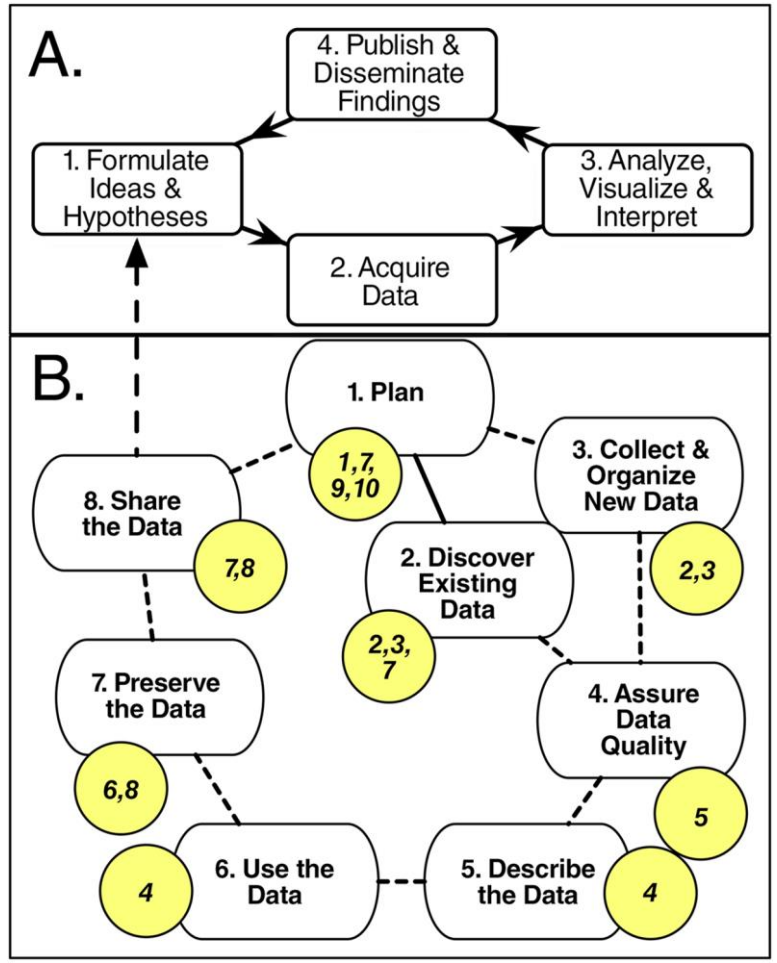

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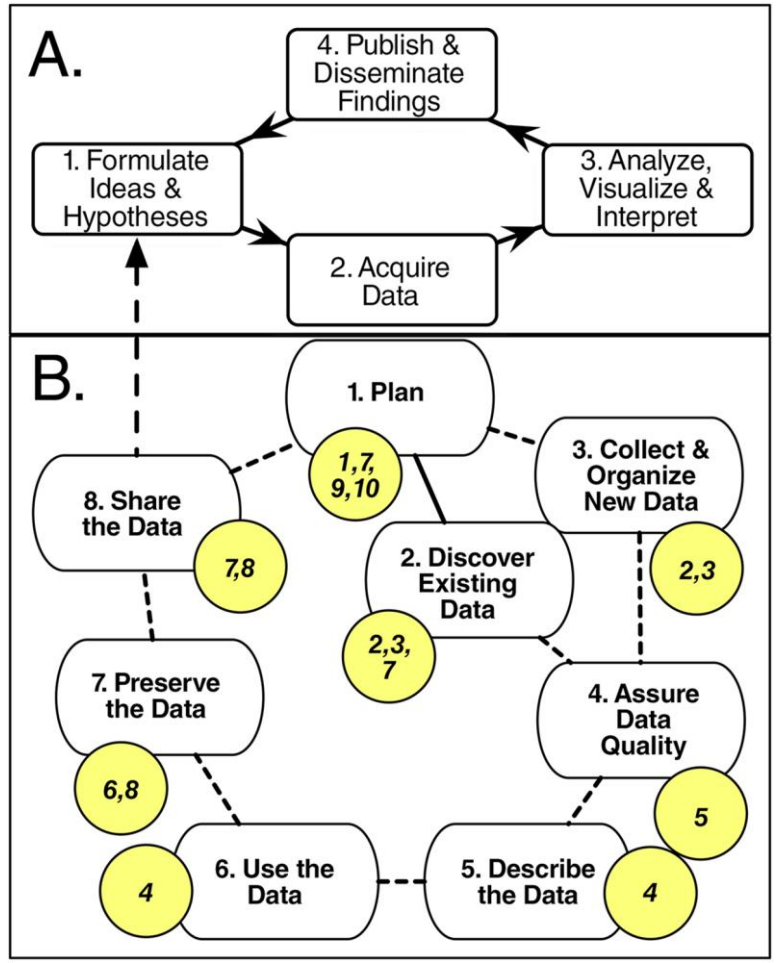

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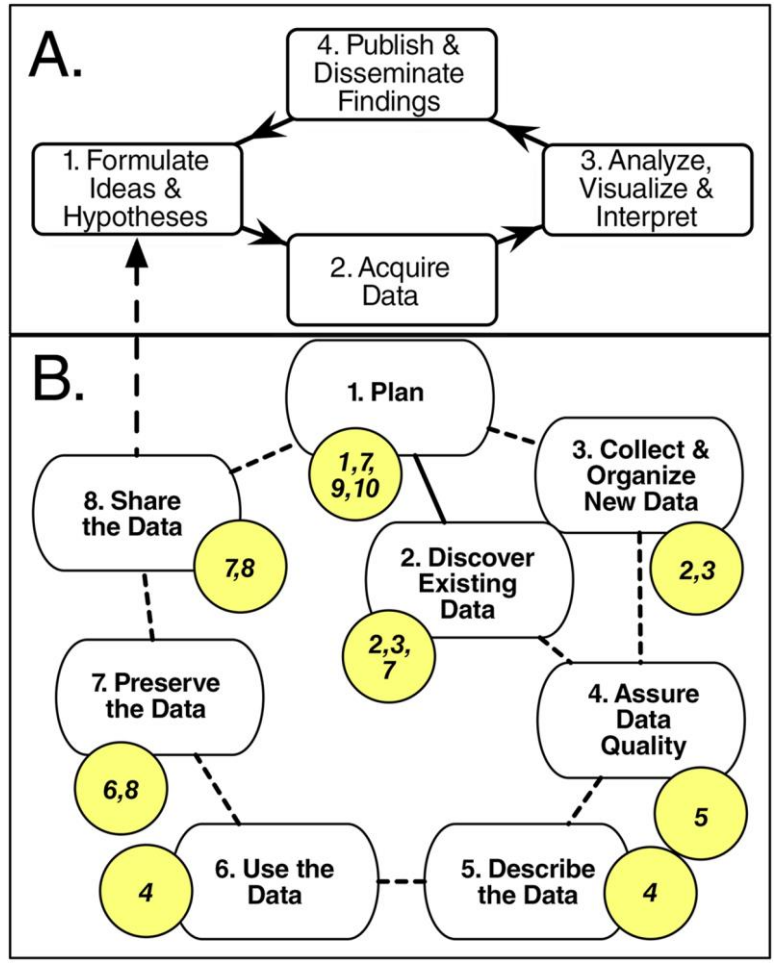

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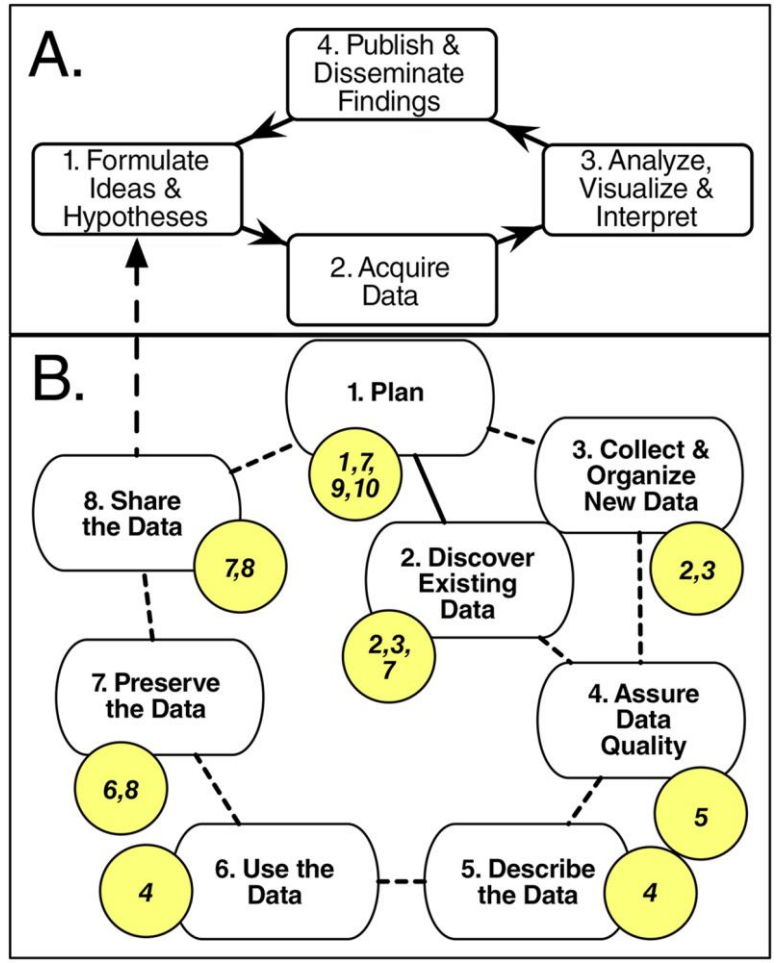

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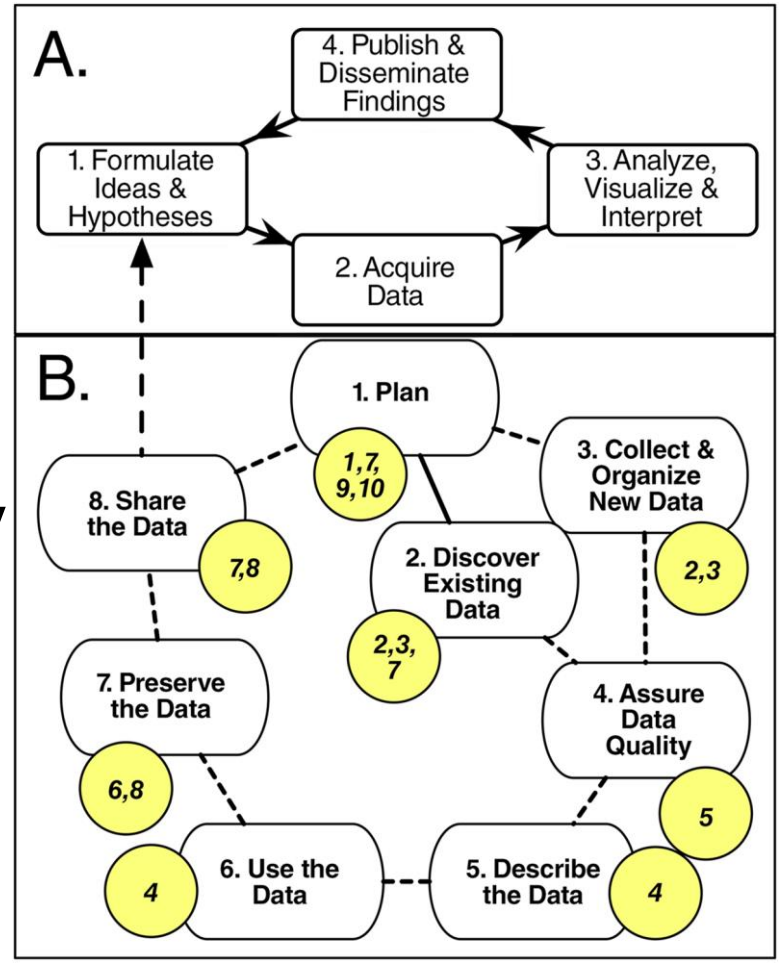

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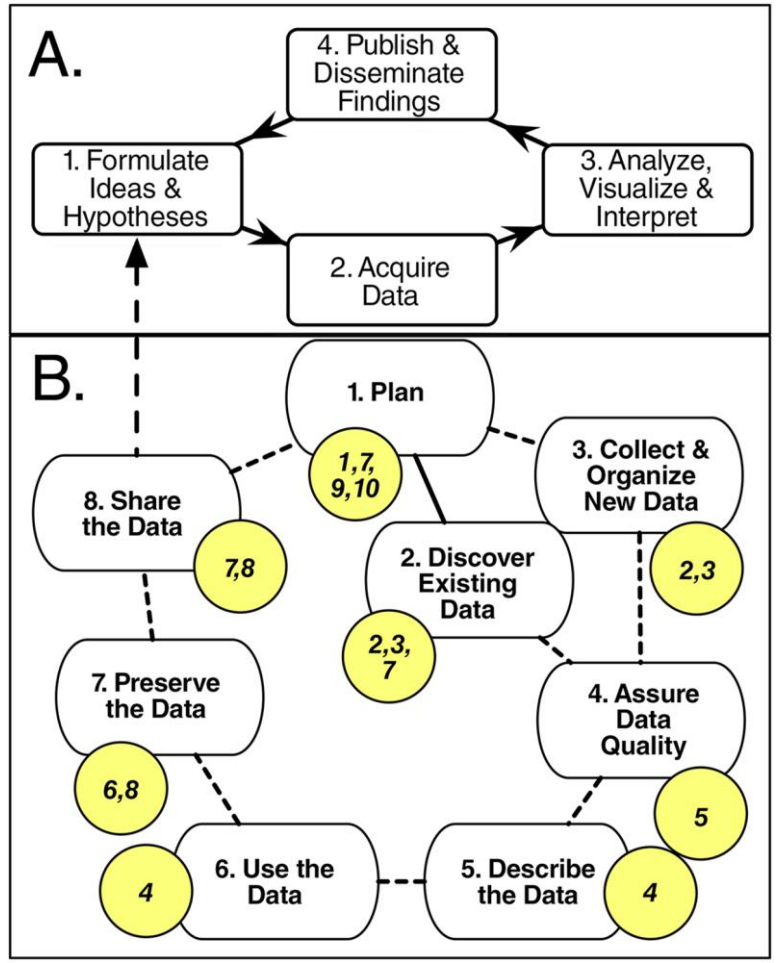

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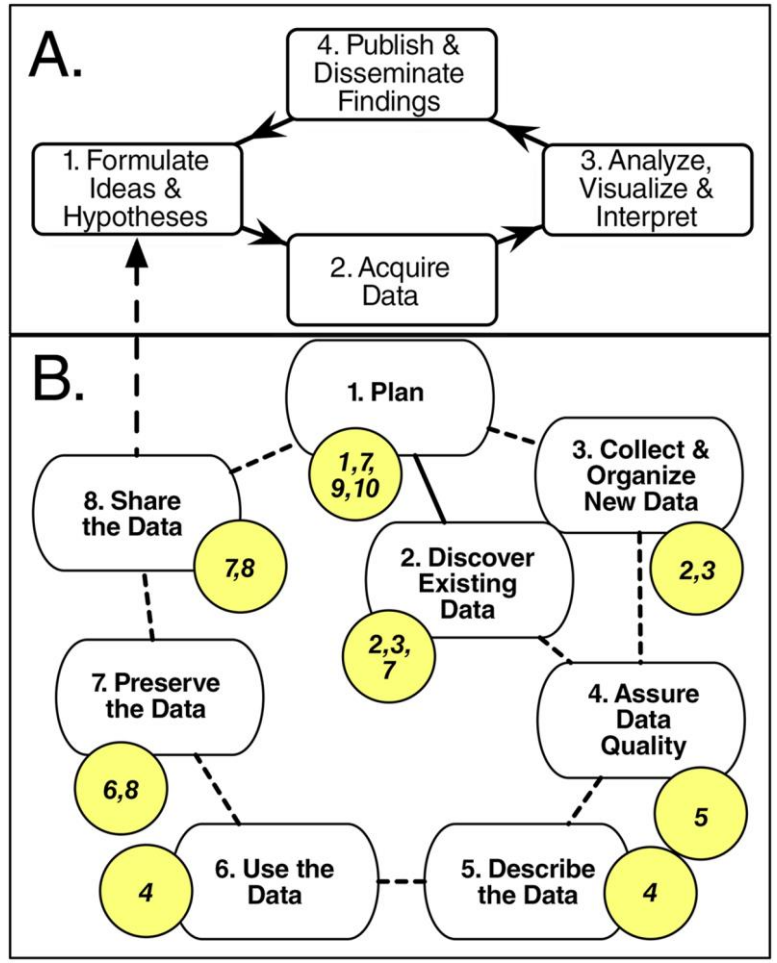

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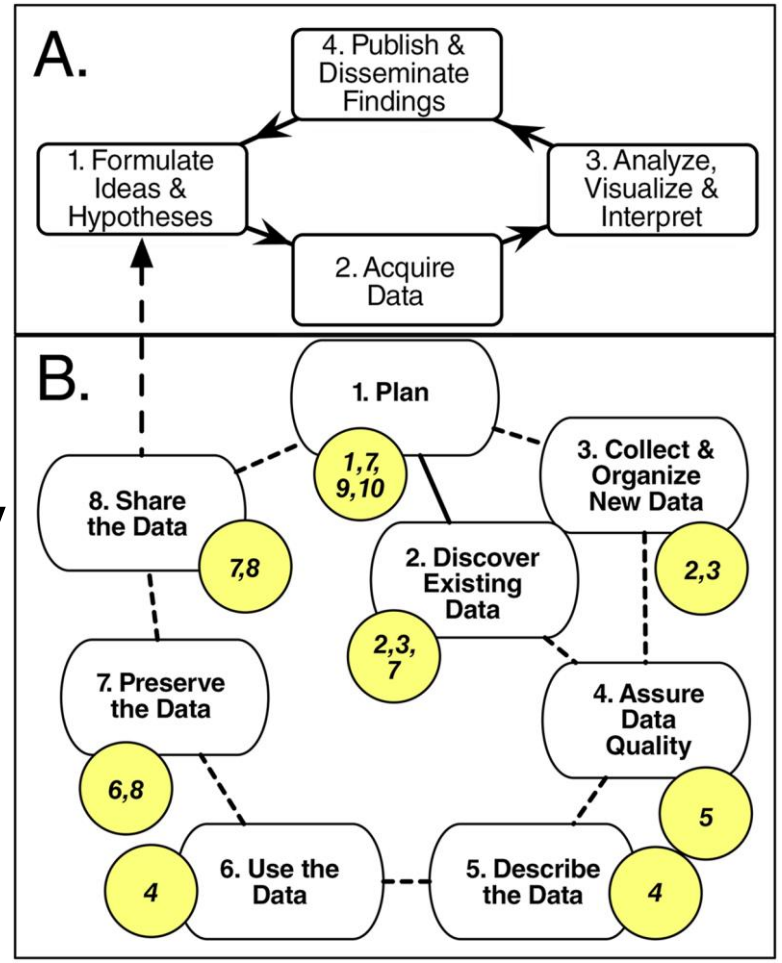

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Upcoming sessions

Introduction to research data management

Nov. 3, 9:00 AM, Zoom

Data management planning

Nov. 4, 9:00 AM, Zoom

Data organization, metadata, and documentation

Nov. 9, 9:00 AM, Zoom

Data classification and storage selection

Nov. 11, 9:00 AM, Zoom

Copyright and licensing

Nov. 14, 1:00 PM, Zoom

Sharing and archiving research data

Nov. 16, 9:00 AM, Zoom

Finding and reusing research data

Nov. 18, 9:00 AM, Zoom

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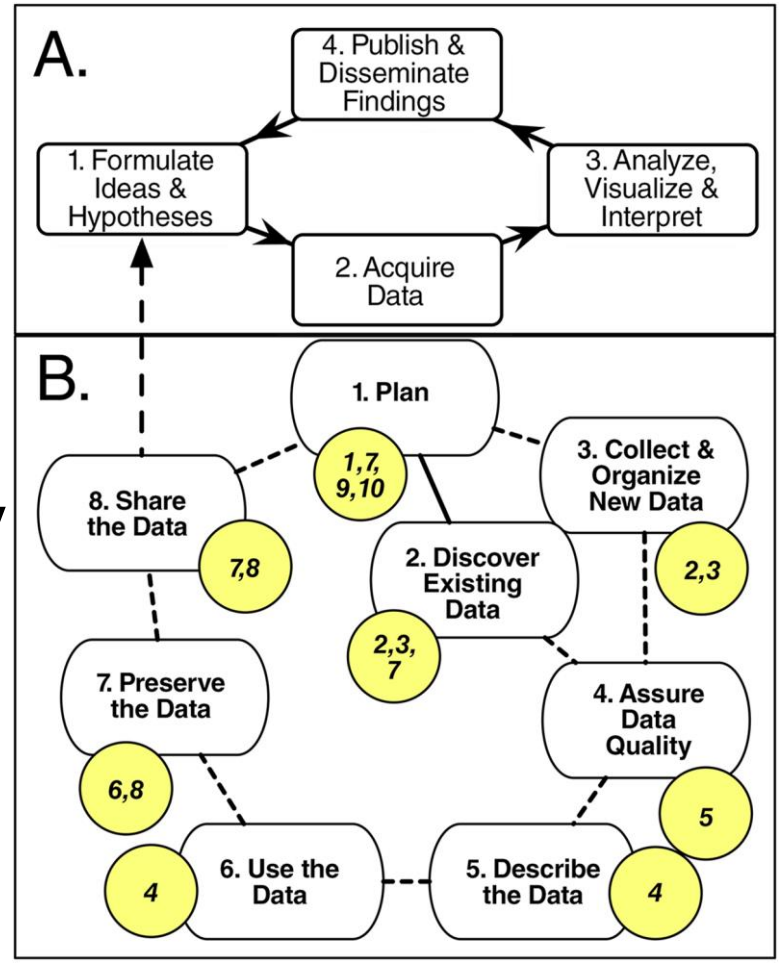

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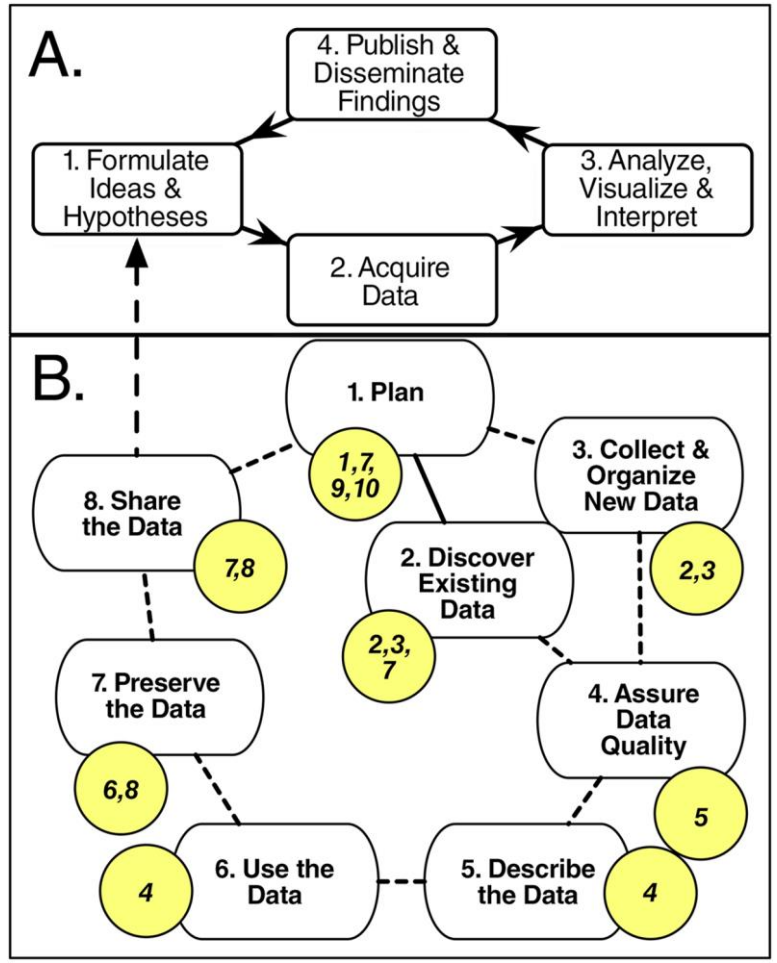

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Assigning roles and responsibilities

- What are the roles of each participant in the project (not just in data management)?
- Who else outside of the project will be contributing?
- Who is responsible for data management during the project?
- Who is responsible for data management and archiving after the project is finished?
- Who will make sure the DMP is being followed?
- Who will be responsible for updating the DMP and how often?

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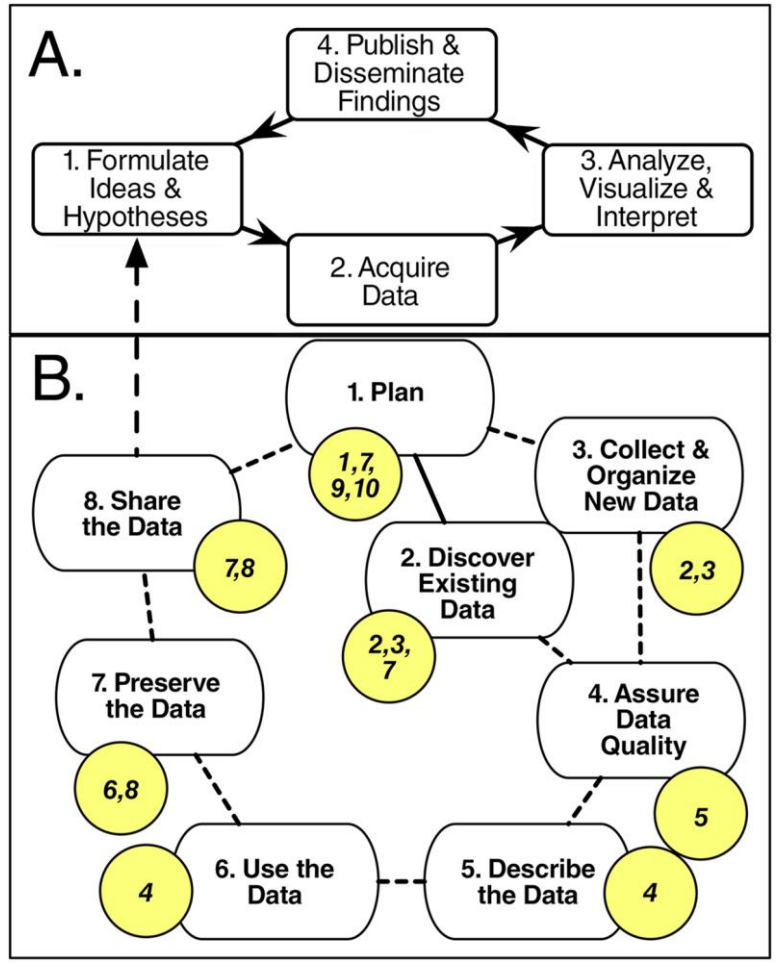

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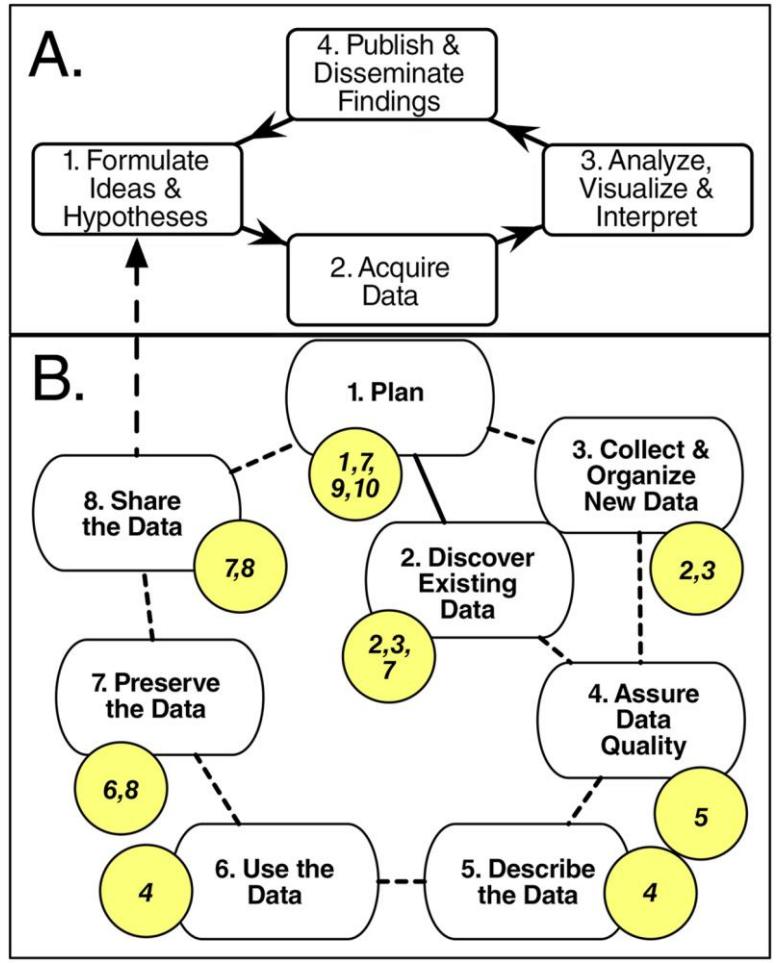

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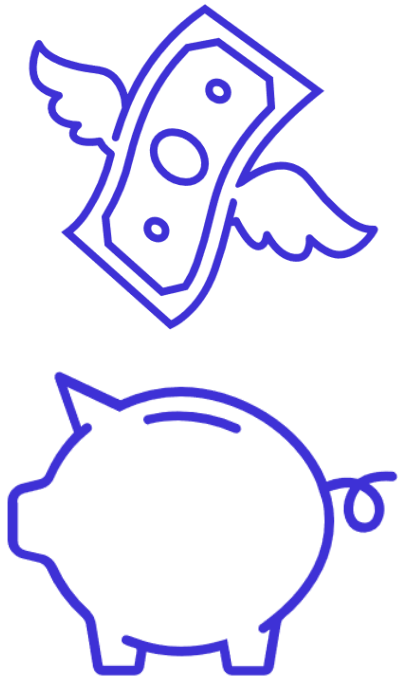
Prepare a realistic budget

Research Council of Norway: “A data management plan is an effective means of identifying costs associated with data management and storage and can also help you to plan how to cover these costs.”

EC Horizon Europe: “Costs for providing open access to (…) data are eligible and should be budgeted in the proposal.”

Prepare a realistic budget

- Are there costs associated with purchase of **software** or hiring a **data manager**?
- Will you need to purchase new **hardware** or equipment?
- **Storage and maintenance** costs: How much will it cost during the project (and after!)
- Is there a cost for **archiving**?
- What other resources are required? (e.g. HPC, licenses, ELN, etc.)



DMP Examples and Templates

Examples

- Digital Curation Centre Example DMPs and guidance
- DMPOnline Public DMPs
- Publicly available Horizon 2020 Data Management Plans
- Liber DMP Catalogue

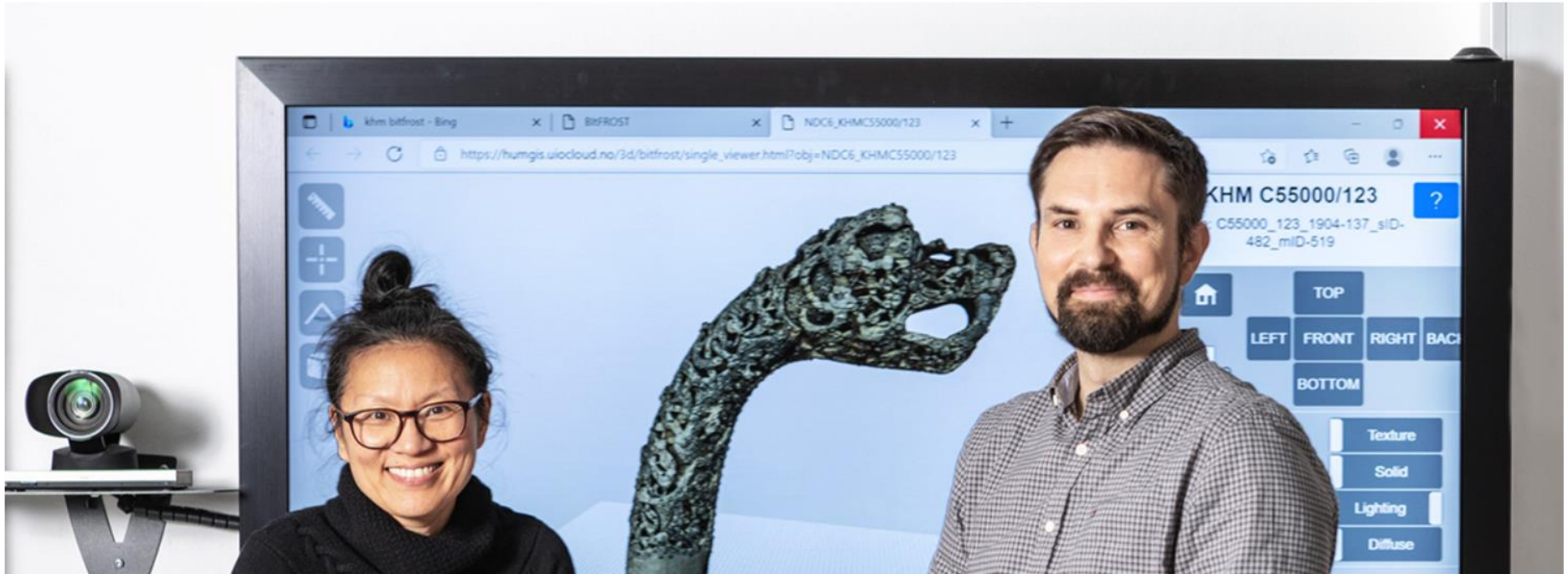
Services and tools for RDM support:

- Research support and IT staff at your faculty/institute
- Subject librarian for your discipline
- Research data management website
- Digital Scholarship Center (DSC)
  research-data@uio.no
- Norwegian Centre for Research Data (NSD, now Sikt)

Digital Scholarship Centre

Norwegian version of this page

At the Digital Scholarship Centre (DSC) you get guidance on how you can make the best possible use of digital tools and methods in your research and communication activities.



Open Access →

Information about open access publishing, publisher agreements, self-archiving, requirements, and guidelines.

Open and reproducible research →

Make your research more transparent and reproducible.

Research Data Management →

Managing your data both during and after a research project.

Text-mining →

Information about digital tools for searching, mining, and analysing textual data.

Systematic search →

Information about systematic literature searching, how to get started, and how to get help.

Visualisation →

Use of visual methods to explore, communicate and understand data.

Carpentry@UiO →

Offers workshops in foundational digital skills such as coding and data management.

Reference management →

Styles, tools, and information on reference management.

Digiforsk blog →

A blog about work and resources at UiO where digital research methods are involved. Posts in both Norwegian and English.

https://www.ub.uio.no/english/libraries/dsc/

Research data

Research data

- Time and place

Good research data management plays an essential role in Open Science, which is increasingly important for scholars around the globe. The University Library provides courses on key concepts as a part of the Skills Development for Research Data project.

We can provide training on the following topics:

- Introduction to research data management (RDM)
- Current data management policies (UiO, Research Council of Norway, EU)
- Data management planning
- Data organization
- Metadata and documentation
- Data classification and storage
- Sharing and archiving research data
- Copyright and licensing
- Data discovery and reuse

https://www.ub.uio.no/english/courses-events/courses/other/research-data/

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Carpentry: Training on foundational coding and data science skills

At University of Oslo (UiO), Carpentries workshops based on Software Carpentry, Data Carpentry, and Library Carpentry lessons are offered to facilitate sharing and re-using of code and data among graduates and researchers from all faculties and units.

Carpentry: Version Control with Git

Nov. 4, 9:00 AM, Domus Theologica: Room 214

Carpentry: R for Reproducible Scientific Analysis (Novices)

Nov. 22, 9:00 AM, Domus Theologica: Room 214

Data Carpentry: Social Sciences and Humanities Using R, November 24 and 25

Nov. 24, 9:00 AM, Kristine Bonnevies hus, Room 3127

Data Carpentry: Social Sciences and Humanities Using R, November 24 and 25

Nov. 25, Kristine Bonnevies hus, Room 3127

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www.ub.uio.no/english/courses-events/courses/other/Carpentry/
www.uio.no/carpentry

Open and reproducible research

- course-materials

Open and reproducible research

More and more researchers and students across disciplines are implementing open research practices, preregistering their hypotheses, methods, and analysis plans and sharing research materials, data and analysis scripts. This course series will give an introduction to open and reproducible research practices and guides on how to implement them in your own research practice.

Previous

Time and place: Oct. 26, 2022 1:00 PM–2:30 PM, Zoom

Reproducible research workflows

Learn about tools and practices for more reproducible and effective research.

Time and place: Oct. 21, 2022 9:00 AM–10:30 AM, Zoom

Preregistration on Open Science Framework (OSF)

Learn about how to preregister your study on Open Science Framework (OSF) and how to navigate the platform.

https://www.ub.uio.no/english/courses-events/courses/other/research-reproducibility/

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Menu

OA publishing and research visibility

OA publishing and research visibility

Keep copyrights to your own work by publishing in Open Access journals. Find out your research impact. The course gives you practical support in publishing process and making your research visible.

Upcoming

Time and place: Nov. 10, 2022 9:00 AM–12:00 PM, Zoom Add to calendar

OA-publishing and research visibility

Keep copyrights to your own work by publishing in Open Access journals. Find out your research impact. The course gives you practical support in publishing process and making your research visible.

https://www.ub.uio.no/english/courses-events/courses/other/medicine-publishing/

Open Science Lunch

Open Science Lunch

Each last Thursday of the month at 12:00 we invite you to join us for a lunch seminar to hear about how to make your research more open. We will discuss research transparency and visibility, open publishing, data sharing, and more!

Upcoming

Time and place: Nov. 24, 2022 12:00 PM–1:00 PM, Hybrid: Georg Sverdrups hus and Zoom Add to calendar

Open Science Lunch: CRediT your co-authors

Learn about CRediT - a new international standard for transparent assignment of individual research contributions.

Previous

Time and place: Oct. 27, 2022 12:00 PM–1:00 PM, Hybrid: Zoom and Georg Sverdrups hus

Open Science Lunch: Enabling reuse of non-digital data

Learn about how we can increase reuse of non-digital data such as plants, fossils or organ tissues.

https://www.ub.uio.no/english/courses-events/events/open-science-lunch/

Journal Clubs

Our mailing list:
https://sympa.uio.no/uio.no/subscribe/open-science-oslo

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Welcome

Our journal club is open to both staff and students at UiO across all departments. Everyone is welcome to join us - whether you are an enthusiast, a skeptic, or a cautious explorer. Feel free to get in touch if you are interested to participate or contribute!

Our mission

- provide an informal and friendly platform for discussions about meta scientific topics
- help each other get familiarized with open science practices (e.g., pre-registrations, sharing data, sharing preprints, etc.)
- connect students and researchers from various disciplines who are interested in meta science.

Format

Before each meeting, we read an article on meta scientific topics, which we then discuss during the meeting. At each meeting, a different discussion leader will begin by providing a short overview of the paper and facilitate discussion throughout the meeting. Anyone can propose a possible paper or topic to present if we have not covered it already. Grab a cup of tea (coffee?) and join us! Due to the current pandemic, all sessions will be held online (Zoom) for the time being.

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Z collection
? timo.b.roettger@gmail.com
Timo B. Roettger
Agata Bochynska

Materials developed as a part of the *Skills development for research data* project:
https://www.ub.uio.no/english/about/projects/rdm-skills/

Thank you!

Contact us at:

research-data@uio.no

November 4, 2022