

Data Management Plans

Introduction to Data Management Practices course

NBIS DM Team

data-management@scilifelab.se



Introduction (15 min) **presentation**

- What is a DMP
- Why and when write a DMP
- How to write a DMP
- The main parts of a DMP
- Key points

Exercise (30 min): **discussions in smaller groups**

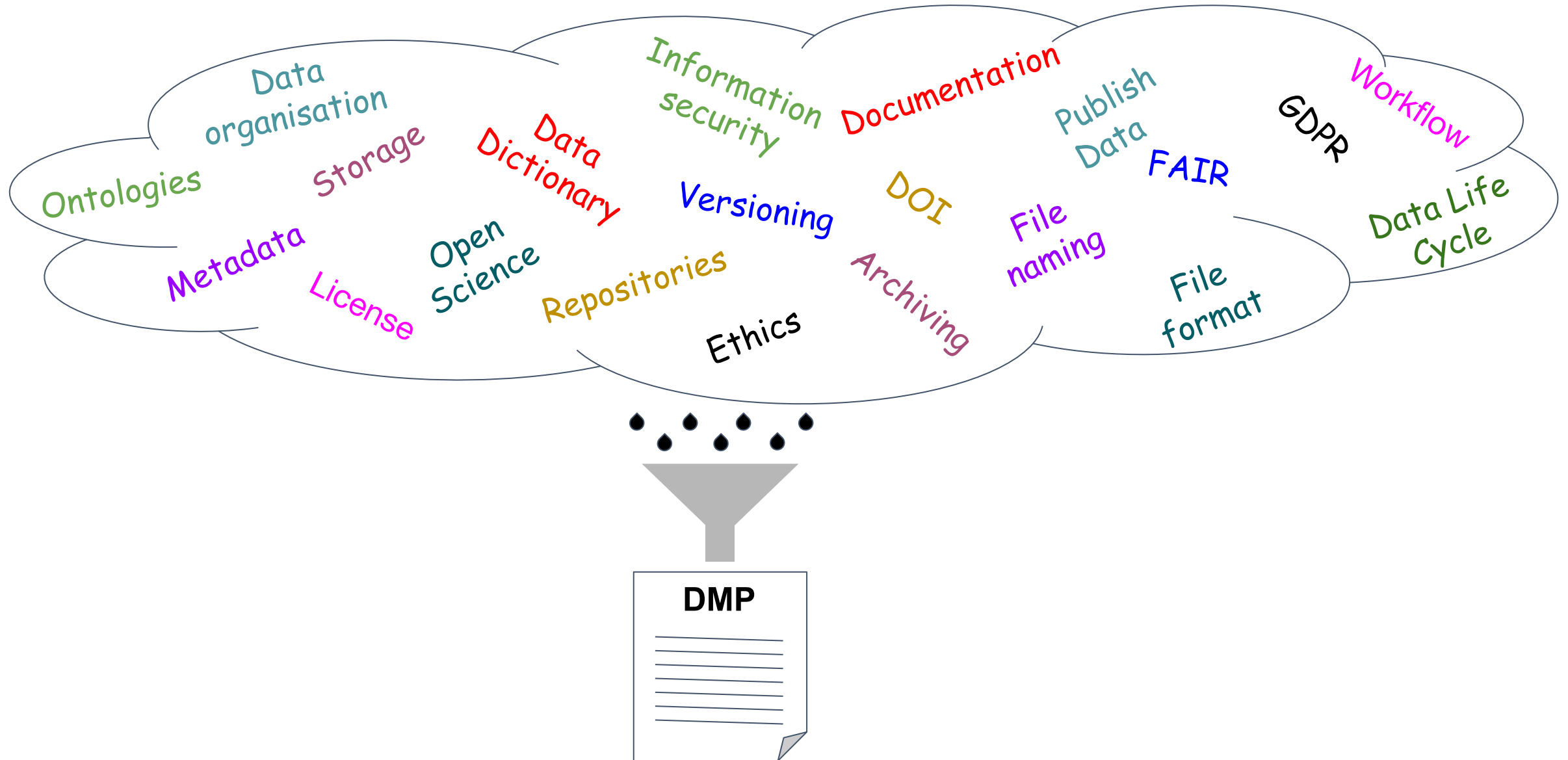
- How can we **facilitate the data journey** for the researchers and **minimize the administrative workload** for ourselves?

Discussion (15 min): review outcome of group discussions

- Key points/open questions

Data Management Plan (DMP)

- What is a DMP and why should I write one?





[Start](#) / [Mandates](#) / [Open science](#) / [Open access to research data](#)

Open access to research data

The Swedish Research Council has been mandated to promote and coordinate Sweden's work on introducing open access to research data. This section has information on the different parts of the mandate.

The way towards open access to research data	→
About our work on open access to research data	→
Learn more about open access to research data	→
FAIR research data	→
Data management plans	→
European Open Science Cloud – EOSC	→

What does open access to research data mean?

If research data are made freely available on the internet, they fulfil the criteria for open access to research data.

Far from all research data can be completely open. The assessment of openness should be based on current legislation and the principle of "as open as possible and as closed as necessary."



[Start](#) / [Mandates](#) / [Open science](#) / [Open access to research data](#) / [Data management plans](#)

Data management plans

A data management plan is a support in the research process, and facilitates the documentation of data before, during and after a research study. The Swedish Research Council has developed a template for data management plans, with an accompanying guide.

Open access to data is dependent on good data management

Good data management is a key component of open access to research data. Using a data management plan (DMP), researchers can describe how data that are collected and/or created will be managed during the course of the research, and how they will be taken care of afterwards.

The data management plan is intended to be a support in the research process, to facilitate the documentation of data before, during and after a research study. In particular, it is intended to be a support for the researcher and research team to document the various central data management elements and issues in a structured way, and thereby facilitate the planning, implementation, and future use of and access to research data.

NBS What is a DMP?

NATIONAL BIOINFORMATICS
INFRASTRUCTURE SWEDEN

- A document addressing requirements and practices for the project's data



The Swedish Research Council: All who are awarded a grant from the Swedish Research Council must have a data management plan if the research generates research data.



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- **Outlines** the data management **strategies** in a project, and **how** the **data** is:
 - collected
 - documented
 - organized
 - preserved



When to write a DMP?

- A DMP is a living document that will develop throughout the project



- **Project planning**
 - Outline the strategies, and estimate the resources needed for funding



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- A DMP is a living document that will develop throughout the project



- **Project planning**
 - Outline the strategies, and estimate the resources needed for funding
- **Project start**
 - Complete with details

Data quality measures

File and folder strategies



When to write a DMP?



- A DMP is a living document that will develop throughout the project

- **Project planning**
 - Outline the strategies, and estimate the resources needed for funding
- **Project start**
 - Complete with details
- **Project end**
 - Update with e.g. links to published data and details about archiving

Data quality measures

File and folder strategies

What data and where

Reusability



How to write a DMP?



Tools

- UU, KTH, SU, KI - DMP Online
- SciLifeLab - Data Stewardship Wizard

Templates

- VR, Swedish Research Council
- ERC, European Research Council
- SUHF, Sveriges universitets- och högskoleförbund

Recommendations

- SND, Swedish National Data Service



The **journey of sequencing data** in the Data life cycle involve **three key players: researchers, sequencing facilities and data repositories.**

- How can you in collaboration with NBIS DM-team support researchers in order to **facilitate the sequencing data journey?**
- Which **general documentation** do you provide on data and metadata formats for sequencing projects?
- For **sensitive human data deliveries**, is there any discussion with the researcher about legal or security DM guidelines?



1. Description of data

- What types of data will be created and/or collected?

Formats

Amount/volume of data

Instrument

Equipment



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- How will the material be documented and described?

ELN & LIMS

Collection method

Metadata standards

Versioning



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3. Storage and backup

- How is data security, storage and backup handled?

Organization

Naming convention

Backup strategy

Access

Security



4. Legal and ethical aspects

- How is data handled? Any legal requirements?

Sensitive data

Confidentiality

Intellectual property rights



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- How is data handled? Any legal requirements?

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5. Accessibility and long-term storage

- How, when, and where will research data and metadata be made accessible?

Repositories

Raw data

Code & Software

Type of storage



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5. Accessibility and long-term storage

- How, when, and where will research data and metadata be made accessible?

Repositories

Raw data

Code & Software

Type of storage

6. Responsibility and resources

- Who are the responsible persons for data management?

Organization

Naming convention

Backup strategy

Access

Security

Key points



- A data management plan (DMP) is a document that **describes the data produced** in the course of a research project.
- A DMP allows for **well-managed data**, and funding agencies often requires a DMP for transparency and return on investment.
- A DMP is a **living document**, the first version is written during project planning, and is then updated as the project proceeds.
- There are **standard templates** available e.g. at funder agencies, and **tools to assist** when writing.



SciLifeLab FAIR storage – how to apply for storage resources Recording

00:13 - 00:24 Data Management Plans

00:24 - 00:42 Demo of SciLifeLab Data Stewardship Wizard

SciLifeLab DSW demo project

Group Discussion



Document: [DMP group discussion](#)

- 4 groups, preferably a mix of roles
- Discuss 3 of the questions (8-10 minutes per question) and make notes in the document. (Be prepared to share/highlight something for each question in the plenary discussion.)
- Links to DSW are provided for each section but questions can also be found at the bottom of the document.

We'll start again in this room at 11:00

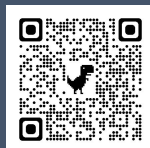


- Tool for creating Data Management Plans (DMPs)

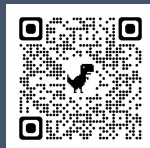
- **Interactive questionnaire** specific for life sciences.
- **Adapted templates** to national funders e.g. **Swedish Research Council** and **H2020**.
- Login by using your university account (SWAMID).
- Do you **need help**? We provide support and guidance!

Learn more:

<https://dsw.scilifelab.se>



youtu.be/HY2DVnNGkAs
(short DSW introduction)



SciLifeLab DSW

Projects

Guide - Write a DMP

Guide - NBIS Support Checklist

Short intro DSW

DSW workshop

About project templates

Log In

Email

Password

[Forgot your password?](#) [Log In](#)

Or connect with

Life Science RI (university)



Current Phase

Before Subm

Chapters

I. Overview3

II. Descriptio...✓

III. Descripti...5

▶ Please specify w...

Do you have any...

What data forma...

IV. Docume...4

V. Storage ...7

VI. Legal an...10

VII. Accessib...5

III. Description of data - production of new data

We will make sure that we know what data will be produced during the project. We also need to make sure that we have adequate storage space to deal with it, and that all responsibilities are cared for.

✓ III.1 Please specify what datasets you will acquire using measurement equipment

You can use any name for the dataset, make sure that it identifies the data set to yourself.

Desirable: Before Submitting the DMP

✓ III.1.a.1 Dataset:

Desirable: Before Submitting the DMP

RNA sequencing

Clear answer

Answered 5 months ago by Demo Researcher SciLifeLab.

✓ III.1.a.2 Who will do the measurements? And where?

Are there easily accessible specialized service providers for data capture, e.g. SciLifeLab facilities such as

View resolved comments

Comments1Editor notes

Demo Researcher SciLifeLab



30. 11. 2023, 0:21

Send email to NGI to ask for details about instruments

Reply...

Create a new comment...

Data Management Plan

1 / 7 | - 100% + |  

▼ Demo FAIR storage DMP

> Project

> Section A: Description of data – reuse of existing data and/or production of new data

> Section B: Documentation and data quality

> Section C: Storage and Backup

> Section D: Legal and ethical aspects

> Section E: Accessibility and long-term storage



> Section F: Responsibilities and Resources

Data Management Plan

Demo FAIR storage DMP

Contributors	Sam Smith (sam.smith@example.com) Uppsala University (P Yvonne Kallberg (yvonne.kallberg@nbis.se) Stockholm University (contact person, researcher)
Based on	SciLifeLab Science Europe / VR DMP, 3.2.1 (SciLifeLab:SLL-SE-DMP:3.2.1)
Generated	2023-11-17 using Data Stewardship Wizard

Example from SciLifeLab Data Stewardship Wizard

Risk factors for suicide among psychiatric patients that ha... 1 / 6 | - 100% + |  

Plan Overview

▼ Risk factors for suicide among psychiatric patients that have experienced compulsory mental care

General Information

Description of data – reuse of existing data and/or production of new data

Documentation and data quality

Storage and backup

Legal and ethical aspects

Accessibility and long-term storage

Responsibility and resources

Plan Overview

A Data Management Plan created using DMPonline

Title: Risk factors for suicide among psychiatric patients that have experienced compulsory mental care

Creator:Sara Lindstedt

Principal Investigator: John Wallert

Affiliation: Karolinska Institutet

Funder: Swedish Research Council

Template: Swedish Research Council Template

ORCID ID: 0000-0002-1473-4916

Project abstract:

Suicide is the leading cause of death among young adults in both Sweden and the world. Psychiatric inpatients in general present with an excess risk of suicide yet the risk is rarely studied in the subgroup admitted by force to compulsory mental care (CMC). A CMC decision is often used to prevent suicide but its effect is rather unclear. Today, we lack information on both the underlying risk and risk factors for suicide among CMC treated patients. The core purpose of this project is to apply epidemiological methods with a national 40-year cohort (1973-2013) of registry data to investigate both the suicide risk itself and associated risk factors for CMC patients. This knowledge base will thereafter inform better clinical decision making (e.g. discharge risk assessment) to reduce the suicide rate in these patients.

Aim 1 will investigate the risk of suicide among CMC patients, both in absolute terms and relative to other clinical populations and a representative total population sample. Aim 2 will study risk factors for suicide with a broad focus on sociodemographic, hereditary, and clinical variables, including CMC-unique variables (e.g. interventions during CMC).

This cross-disciplinary project fills a critical gap in our knowledge through straightforward Precision Medicine for a very ill yet still understudied group of psychiatric patients – in line with both VR’s specific Call and VR’s general focus on Precision Medicine.

ID: 110228

End date: 31-12-2024

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Example from DMPonline