Research data management – what's on at Lund University, brief introduction and overview

CEC Breakfast seminar Friday 27 November 2020

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Today's agenda

1. Increased demands on sharing research data

2. Data management plans

3. FAIR Data Principles

4. What is happening at Lund University?

5. Training possibilities in RDM

1. Increased demands on sharing research data

- **Requirements of funders**, for example Swedish Research Council, European Union Horizon 2020

- Institutional policies, **many universities have requirments** in research data policies

- **Requirements from journals**, many journals require research data as supplements to articles

1. Increased demands on sharing research data

How to share/publish research data?

- Via a data repository – subject-based or general

- Via an institutional repository

- Via a journal

1. Increased demands on sharing research data

Selecting a repository for publishing research data

- Important choice

- Costs for publishing, trustworthiness, sustainability, support

- Repositories connected to research infrastructures

    - Global Biodiversity Information Facility (GBIF)

    - National Bioinformatics Infrastructure Sweden (NBIS)

    - Swedish National Data Services (SND)

- Institutional repositories

- Use **re3data.org** to find repositories in your field

re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES

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1. Increased demands on sharing research data

Publish research data in journals:

- More common and growing in importance

- Examples of journals:

  - F1000 Research

  - Biodiversity Data Journal

  - Scientific Data

- The service provider "Dryad" offer both article and data publishing in one "package"

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1. Increased demands on sharing research data
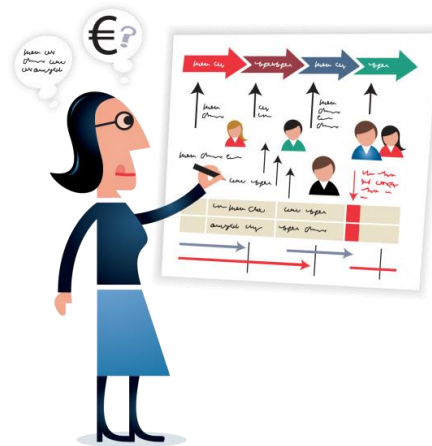
Selecting a licence for your research data

- According to the FAIR Priniciples creator/author should attach licence to the data set

- Avoid uncertainty among re-users of the data

- Creative Commons Licences are common

- Help and guidance:

  - **"License selector tool",** developed by Pawel Kamocki, IDS Mannheim, Germany

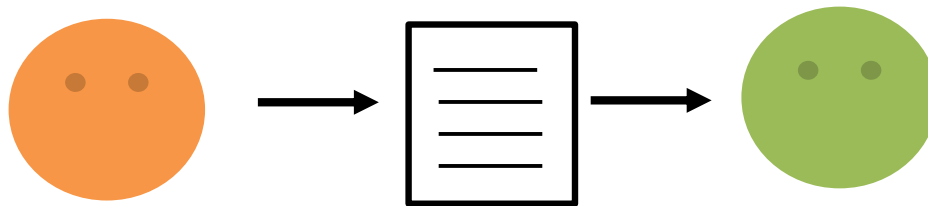# 2. Data management plans

What is a data management plan?

A data management plan or DMP is a document outlining how data are to **be collected, stored, made accessible and preserved** during the entire research process of a project.

2. Data management plans

Many research funders require data management plans, for example

EU Horizon 2020, European Research Council (ERC), National Science

Foundation (NSF), Formas, Vetenskapsrådet

2. Data management plans

DMP Roadmap – Lund University system tool for DMP

- Was launched in February 2020

- Is available to all researchers at LU

- Is a local implementation of the international DMP system called "DMP Online"

- Includes two DMP templates, "Swedish Research Council (VR)" and "Lund University"

- **DMP Roadmap > https://dmp.research.lu.se**

2. Data management plans

A DMP usually contains following sections:

- data collection

- data documentation and metadata

- data storage

- ethical and legal aspects

- data sharing

- data preservation and archiving

2. Data management plans

Some examples of templates and guidelines:

- **DCC Template**,

  https://dmponline.dcc.ac.uk/template_export/1638514350.pdf

- **HORIZON 2020 DMP**,

  https://dmponline.dcc.ac.uk/template_export/1612436782.pdf

- **Science Europe**, Practical guide to the international alignment of

  research data management, https://www.scienceeurope.org/wp-

  content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf

3. FAIR Data Principles

- Acronym **FAIR** stands for *Findable, Accessible, Interoperable, Reusable*

- Were established in 2014 by the community **FORCE11**

- Not a standard but a set of principles to **guide researchers**

- Encourages **comprehensive and sustainable data management**

- Are increasingly referred to by funders and policy makers

3. FAIR Data Principles

TO BE FINDABLE:

F1. (meta)data are assigned a globally unique and eternally persistent identifier.
F2. data are described with rich metadata.
F3. (meta)data are registered or indexed in a searchable resource.
F4. metadata specify the data identifier.

TO BE ACCESSIBLE:

A1 (meta)data are retrievable by their identifier using a standardized communications protocol.
A1.1 the protocol is open, free, and universally implementable.
A1.2 the protocol allows for an authentication and authorization procedure, where necessary.
A2 metadata are accessible, even when the data are no longer available.

TO BE INTEROPERABLE:

I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
I2. (meta)data use vocabularies that follow FAIR principles.
I3. (meta)data include qualified references to other (meta)data.

TO BE RE-USABLE:

R1. meta(data) have a plurality of accurate and relevant attributes.
R1.1. (meta)data are released with a clear and accessible data usage license.
R1.2. (meta)data are associated with their provenance.
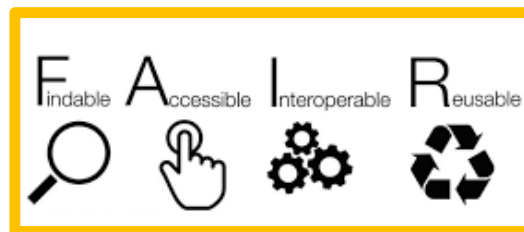R1.3. (meta)data meet domain-relevant community standards.

Link: https://www.force11.org/group/fairgroup/fairprinciples

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3. FAIR Data Principles

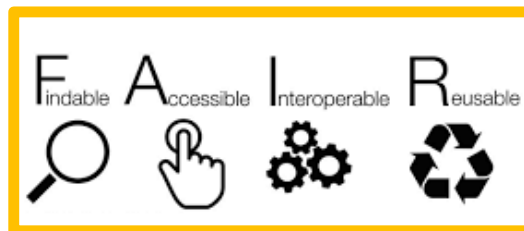**What can I do as a researcher to comply with FAIR?**

- Make a data management plan before you start a project

- Collect detailed descriptive information (= metadata) throughout your project

- Use standards and formats common to your discipline

- Store the data in a trusted & sustainable repository or data center

- Assign a persistent identifier (for example DOI) to your research data

3. FAIR Data Principles

What can I do as a researcher to comply with FAIR?

- Apply a suitable usage license

- Provide end users with information on "intended use"

- Make the data "as open as possible, as closed as necessary"

- Ensure that metadata remain available even if the data cannot be accessed any more

- FAIRness needs to be applied where it makes sense

3. FAIR Data Principles

What's in it for me as a scientist?

Making your data "FAIR enough" **gives you better control of what happens to your data**, and:

- helps make your data sustainable

- ensures your data can be found by others

- makes collection of metadata easier

- guarantees data can be cited

- facilitates data usage statistics

- simplifies reporting to funders and streamlining cost estimates

4. What is happening at Lund University?

- Several investigations and studies on RDM the last years

- Draft of a research data policy (2016-2019)

- Lund University is member of the consortium "Swedish National Data Service - SND"

- Several faculty library initiatives to support for RDM

- Draft of a new web page on RDM at the "LU Current Staff Website"

4. What is happening at Lund University?

Support and help in RDM

- Future web page at Current Staff website

- Libraries engaged in providing support, but also Legal Dept, IT, Archive

- Examples of support:

    - Advicing on creating a DMP

    - How to publish a data-set via a repository

    - How to set-up a storage of data within a project

    - How to share research data with external partners

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4. What is happening at Lund University?

LU membership in Swedish National Data Service (SND)

- The consortium is focused on delivering different support and services for RDM for researchers

- The consortium consists of members (Swedish universities) and a network of additional Swedish universities.

- Each consortium member is supposed to build up a local support unit, so called "Data Access Unit – DAU

- The consortium offers support from Domain Specialists, researchers specialists on RDM in their subject domains

- **https://snd.gu.se/**

5. Training possibilities in RDM

- Faculty of Science: PhD course in research data management, NNG006F, next course planned in spring 2021

- Researcher seminars for all at LU, arranged by the libraries

- At your choice or preference, contact Maria or Maggie

Thanks for listening!

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