Plan ahead: practical tools to make your data and software more FAIR
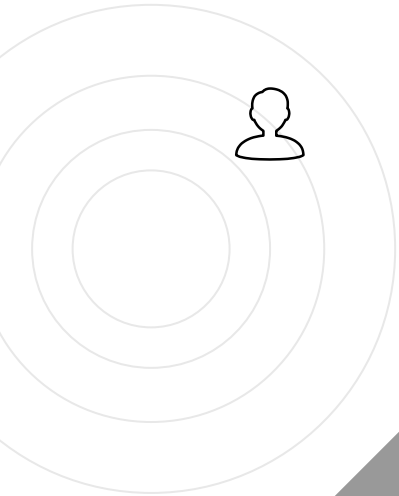
NWO Life 2023 - May 24, 2023
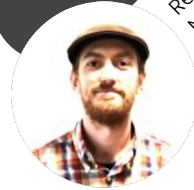
10.5281/zenodo.7962359

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Introduction

Findable, Accessible, Interoperable and Reusable (**FAIR**), Data/Software Management Plans (**DMP**)
Kim

Pitches + Break out sessions!

Findable

Accessible

Interoperable

Reusable

Findable

- Deposit your data in a data repository with metadata and a persistent identifier
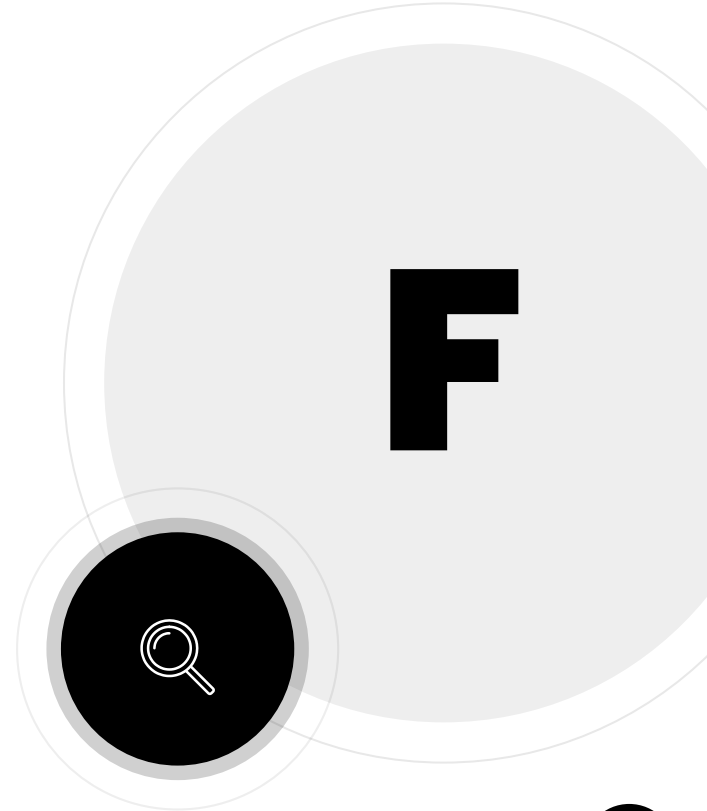
F

Findable (1)

○ Deposit your data in a **data repository** with metadata and a persistent identifier

an online archive that curates research datasets and provides long-term access

○ Finalised datasets
○ ~10-15 years

F

Repositories

Findable (2)

- Discipline common metadata standards
  - FAIRsharing.org
  - Research Data Alliance metadata directory
  - Digital Curation Center

- Deposit your data in a data repository with **metadata** and a persistent identifier

Metadata = information about data

- Contextual information
- Title, author, keywords
- When? For what purpose?
- Size? Standards?

○ Deposit your data in a data repository with metadata and a **persistent identifier**

A persistent identifier is a long-lasting reference to a file, web page, or other object

ORCiD

F
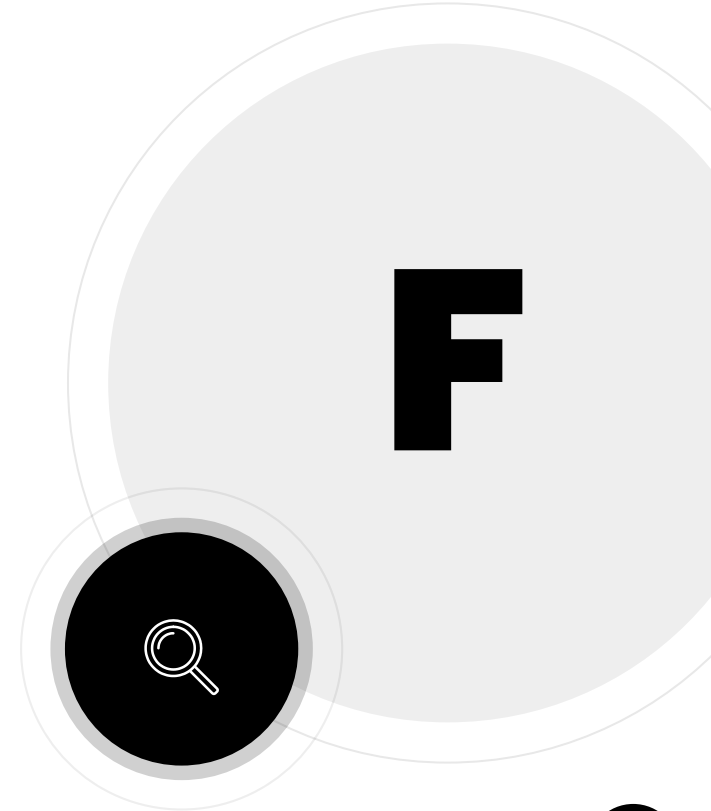
Accessible

- Consider what will be shared
- Obtain participant consent and perform risk management
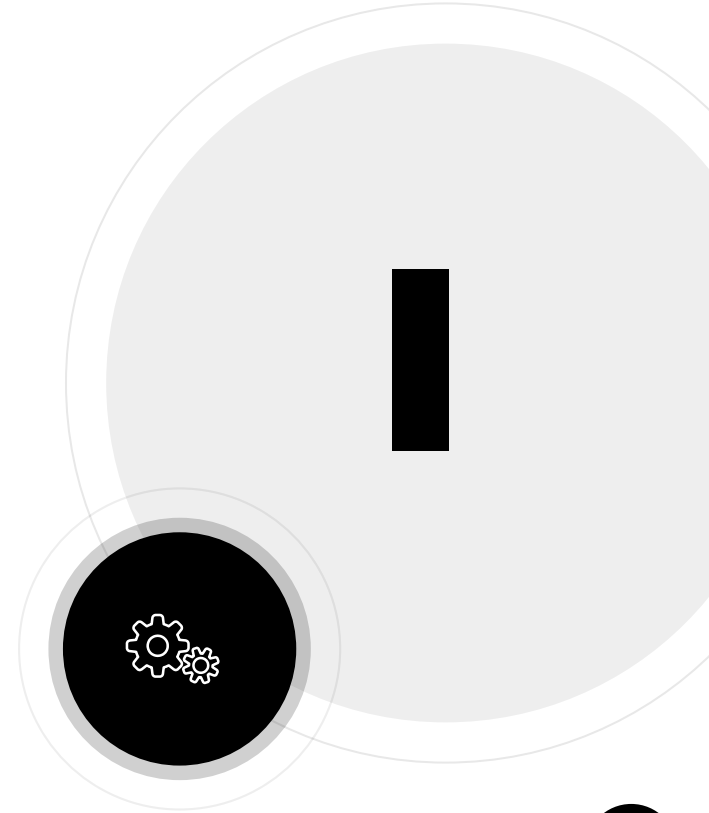- Determine access control
- Share your metadata

A

Interoperable

- Use open/common format
- Consistent vocabulary
- Discipline specific metadata standards

Reusable (1)

- Apply a licence to specify how others can re-use your data/code
- Documentation

Reusable (2)

○ Apply a **licence**
○ Documentation

Data:

[Creative Commons](#) (Overview)

[Creative Commons License Chooser](#)

Software:

[Choose a License](#)

[tl;dr Legal](#)

Licenses for data

Public Domain Dedication (CC0)
Attribution (CC BY)
Attribution-ShareAlike (CC BY-SA)
Attribution-NoDerivatives (CC BY-ND)
Attribution-NonCommercial (CC BY-NC)
Attribution-NonCommercial-ShareAlike (CC BY-NC-SA)
Attribution-NonCommercial-NoDerivatives (CC BY-NC-ND)
Restrictive licence

Licences for software and code

Public Domain Dedication (CC0)
MIT License
BSD 3-Clause
Apache Licence 2
European Union Public License, version 1.2 (EUPL-1.2)
GNU General Public Licence version 2 (GPL-2.0)
GNU General Public Licence version 3 (GPL 3.0+)
GNU Lesser General Public License (LGPL-3.0)
GNU Affero General Public License (AGPL-3.0)

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Findable 🔍

Accessible

Interoperable ⚙️

Reusable ♻️

≠

Standard

Open

Intrinsic quality

DMP

Data Management Plan
- **Tool**
  - structure the management of your data/software
  - Increase quality of documentation
  - Prevents loss of data
  - No unfindable files through thanks to [file naming conventions](...)
- **How can I make my data/software FAIR?**
- **Data/software sharing**
  - **Validation**
  - **Increased impact ([Citation](...) and collaborations)**

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Pitches

1. FAIR software management - Jaro Camphuijsen

2. FAIR-Aware tool - Kim Ferguson

FAIR for Research Software & Software Management Plans

Focus on Findability and Accessibility

F: Easy for both humans and machines to find.

- example: software published with the DOI

A: Retrievable via standardised protocols.

- example: can be download from github

Article | Open Access | Published: 14 October 2022

Introducing the FAIR Principles for research software

Michelle Barker ✉, Neil P. Chue Hong, Daniel S. Katz, Anna-Lena Lamprecht, Carlos Martinez-Ortiz, Fotis Psomopoulos, Jennifer Harrow, Leyla Jael Castro, Morane Gruenpeter, Paula Andrea Martinez & Tom Honeyman

Scientific Data **9**, Article number: 622 (2022) | Cite this article

10k Accesses | **4** Citations | **241** Altmetric | Metrics

doi.org/10.1038/s41597-022-01710-x

Practical guide to Software Management Plans is an Initiative by NWO and eScience Center.
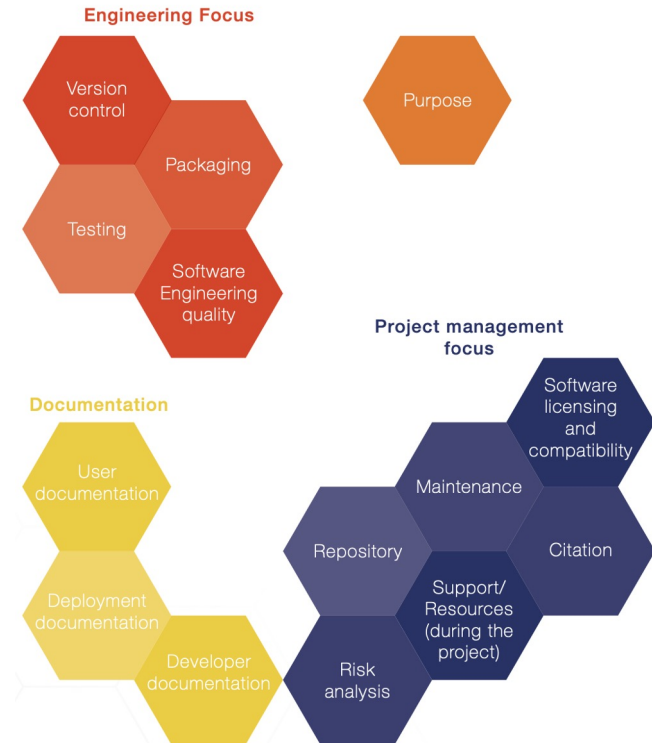
doi.org/10.5281/zenodo.7038280

netherlands
eScience center

- Your first step towards your FAIR data(set).

- What FAIR practices will help you create more FAIR data?

- 10 questions + tips and tricks

- **In this workshop:** working with biological data and elements to keep in mind

fairaware.dans.knaw.nl

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Break Out Sessions

1. Software licensing - Lourens Veen
2. Software citation - Jaro Camphuijsen
3. FAIR-Aware tool - Kim Ferguson

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Wrap up

See also the
LCRDM website

TU Delft

RDM support & Data Stewards, & [DCC](DCC)
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