

# FAIR Data in fundamental research



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March 2023

# Fair: What does it mean?

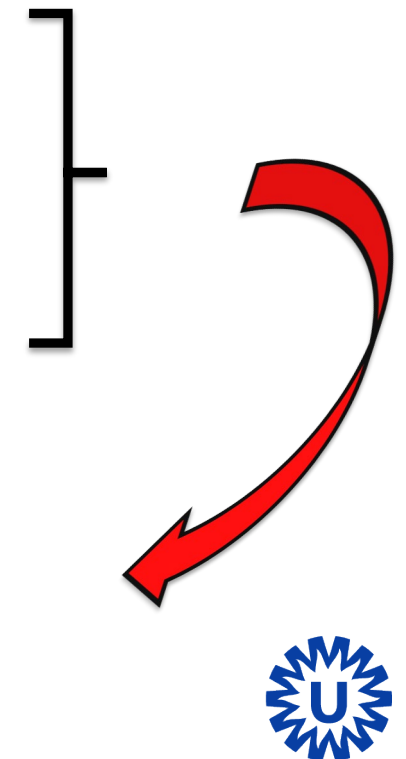
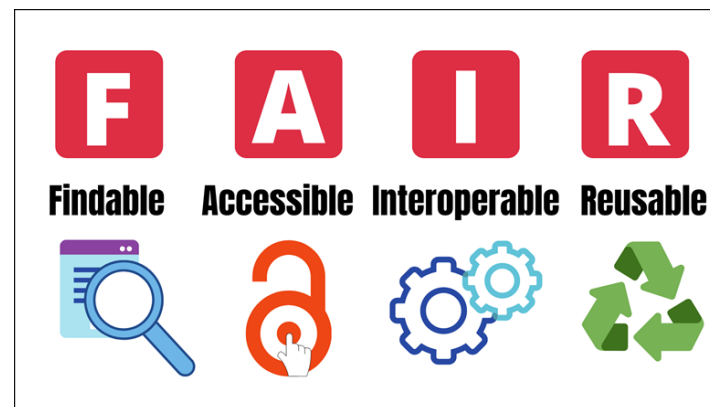
Your research data  
(and those of others) are:



# Why FAIR Data?

To take science to a higher level, necessary:

- Share your research data with other researchers
- Within the restrictions of the law
- Your data must be valuable for other researchers



# Benefits FAIR Data?



- ✓ Receiving **grants** (more easily)
- ✓ Get your research **published** (more easily)
- ✓ Receive **more credit** for your work
- ✓ **Increase** your scientific **impact**
- ✓ **Lower** the **costs** of (your) scientific research



# How to produce FAIR Data?

To be **Reusable** → The data need to be:

- valuable for others
- understandable
- reproducible



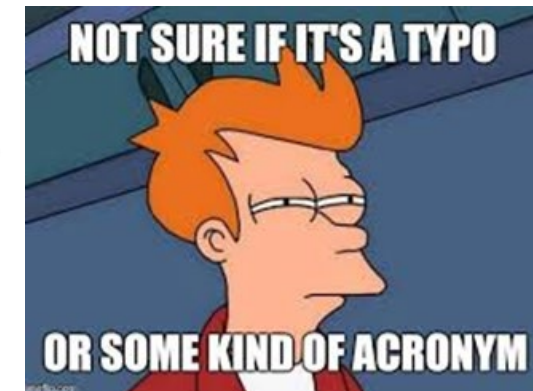
→ Metadata:

see:

*"Metadata in fundamental Research (UBEC\_UMC Utrecht)"*

*\* available as video and info slide deck*

- Well **description** of the **dataset**, like:
  - meaning of the data and units used (FGen=8)
  - what software version used?
  - .... etc.



- **Use standards regarding**
  - methods/ontologies/formats/ ... etc.



# How to produce FAIR Data?

To be **Interoperable** →

Also *in future*, it should be most probably that the data can be *opened* in a *proper manner*:

*"you can **see/read** the data as is meant to be"*

- Use **preferred file formats**
- Use, if applicable both, **machine and human readable** data



# How to produce FAIR Data?

For a valuable dataset to be **A**ccessible → people should know:

- **what restrictions** apply to be allowed **to use** this dataset
- **whom to contact** to get **access** to the dataset

➤ Upload your dataset(s) in well-known, trustworthy **repository(ies)**:

- Persistent digital identifiers will be generated
- Include as many as possible **metadata**
- Include the **restrictions** regarding access

→ Note: - **Agreements**

*(consortium/ data sharing/ requirements to use cell lines/ intellectual property regulations)*

- **Informed Consent**

*(in case of **human** subjects/ material (!))*





# How to produce FAIR Data?

## Findable

*Searching internet, you should be able to **find** your **study/data easily***

- Include Key Words of interest in the article

*What search terms would you use to find your own study?*

- Datasets used: use persistent digital identifiers (and, with that, to
- Reference in your article to  the repository)
- Your Orcid (<https://orcid.org>) 
- Consider:
  - Publish your article in a journal, that is freely accessible  
*(no charging for reading the full tekst of your article), or*
  - Make use of freely accessible pre-publication alternatives





# How to *produce FAIR Data efficiently?*

- Write a **DMP** (Data Management Plan) (<link DMP>)
  - **As soon as possible**
    - **when writing** a proposal to receive a **grant** for your project
    - **when** you start **planning** your **project**
  - Use **DMPonline**
    - online tool for DMPs with UMC Utrecht template
    - including a guide and example answers (also for fundamental research)
- Actually **act upon** the DMP

**Contact your Data Steward** (for the most updated info)

- ✓ **Before** writing a **DMP**
- ✓ **Before** uploading your data to **repositories**
- ✓ **When** about to **submit** an **article**



# How to *produce FAIR Data efficiently?*

DMP = Tool to make your data FAIR

Effects of FAIR data:

- Increasing visibility of your research
- Future research opportunities
  - sharing / cooperation with other researchers
  - **taking science to a higher level**
- Promoting reuse of data
- Fulfilling funder requirements
- Fulfilling journal requirements

Receiving more credit

Increasing your scientific impact

Lower Costs

Receiving grants (more easily)

Get your research published (more easily)

