

DTL



DUTCH TECHCENTRE FOR LIFE SCIENCES

FAIR PRINCIPLES ROB HOOFT

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FAIR DATA PRINCIPLES

<http://www.nature.com/articles/sdata201618>



TO BE FINDABLE:

F1. (meta)data are assigned a globally unique and persistent identifier

F2. data are described with rich metadata (defined by R1)

F3. metadata clearly and explicitly include the identifier of the data it describes

F4. (meta)data are registered or indexed in a searchable resource



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 REUSABLE:

R1. meta(data) are richly described with 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 detailed provenance

R1.3. (meta)data meet domain-relevant community standards



NIH Commons Framework Working Group on FAIR metrics

Aim: To identify and prototype methods to assess the FAIRness of a digital resource.

- Identify and include initial **stakeholders**
- Develop and discuss potential **metrics**
- Explore ways in which to **report and assess** metrics.



Current Thinking: FAIRness Index

A **FAIRness Index** is a collection of metrics that are aligned to the FAIR principles and can be consistently and transparently evaluated.

A **community**, comprised of clearly defined stakeholders (researchers, publishers, users, etc), **may define their own FAIRness Index** that expresses what makes a digital resource ideally or maximally FAIR.



Example of a FAIR metric

FI (meta)data are assigned a **globally unique** and **persistent identifier**

Aspect: Identifier Persistence

Rationale: An identifier must be available to users in the longest term possible

Relevant FAIR Principles: F,A,I,R

Metric: Availability of data management plan, which includes a section dealing with continuity and contingencies related to the persistence of identifiers. The value of the metric is **true or false**.

Procedure: Check and verify the URL in the resource metadata points to a data management plan with continuity section. Document should follow a community standard, or recommend a basic structure.

