

# FAIRness of micrometeorological data – New community challenge?

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**CA20108 - FAIR NETWORK OF MICROMETEOROLOGICAL MEASUREMENTS (FAIRNESS)**



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## CA20108 - FAIRNESS

“The total amount of data created, captured, copied, and consumed globally is forecast to increase rapidly, reaching 64.2 zettabytes in 2020. Over the next five years up to 2025, global data creation is projected to grow to more than 180 zettabytes. In 2020, the amount of data created and replicated reached a new high” (Statista, 2022).

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**Define a minimal set of related but independent and separable guiding principles and practices, which enable both machines and humans to find access, interoperate and reuse research data and metadata" (PwC EU Services, 2018).**

## FAIR principles

**Findability** - data could be found by humans or machines

**Accessibility** - humans or machines can gain access to data under specific conditions or restrictions

**Interoperability** - data and metadata conform to recognized formats and standards in order to be combined and exchanged.

**Reusability** - data and metadata are licensed, conforming to community norms and allowing users to know what kinds of reuse are permitted

## WHY?

Improve data discovery, and access

Enable re-use

Enhance understanding, especially across domains

Reach as many people as possible

Be cited more often

Build cooperation

**FAIR principles Findability** - data could be found by humans or machines

- F1. (Meta)data are assigned a globally unique and persistent identifier
- F2. Data are described with rich metadata (defined by R1 below)
- F3. Metadata clearly and explicitly include the identifier of the data they describe
- F4. (Meta)data are registered or indexed in a searchable resource

**FAIR principles Accessibility** - humans or machines can gain access to data under specific conditions or restrictions

- A1. (Meta)data are retrievable by their identifier using a standardised 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
  - A1.3 (BL) The protocol DDATTA follows one of Creative Commons licence (<https://creativecommons.org/>)
- A2. Metadata are accessible, even when the data are no longer available



**FAIR principles Interoperability** - data and metadata conform to recognized formats and standards in order to be combined and exchanged

- 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

**FAIR principles Reusability** - data and metadata are licensed, conforming to community norms and allowing users to know what kinds of reuse are permitted

- 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

**FAIR data  $\neq$  OPEN ACCESS data**

„The main obstacles to data management and sharing are cultural,...“ not technological