## **Basic Goals and Principles - Recommendation 0**

# Basic recommendations and assumptions to develop and activate a FAIR Dataspace for the Helmholtz Association

## **Description**

[Status: Under development, Date: 2023-08-25, Version: 001]

#### Motivation for this Recommendation:

The Helmholtz Association is determined to make their data available according to the FAIR principles, thus making it findable, accessible, interoperable and reusable. This is expressed in the "Recommendations for Policies of the Helmholtz Centers on Research Data Management" [1].

In order to achieve interoperability of datasets among various data infrastructures (DIS) within the Helmholtz Association,

- a common and agreed procedure to refer to common information is needed.
- common semantic concepts need to be implemented
- common data exchange containers and formats need to be defined and implemented
- common interfaces and data exchange protocols need to be agreed upon

These following recommendations aim to describe procedures to achieve the above-mentioned goals, and identify activities and the relevant stakeholder groups to implement these. This implies, that the identified stakeholders assume certain responsibilities, in order to make these recommendations work.

As these goals require certain decisions to be made, we describe the decision processes from highlevel to lower levels, resulting in agreed procedures. We then describe the conduct of these procedures with respect to the involved stakeholder groups, their responsibilities and actions needed to be taken.

The activities may be prioritized to be implemented in a specific order or for a particular stakeholder group, either because they are simple to set up, or because they are prerequisite to other recommended activities. These decisions have to be made on a case by case basis, in order to move forward establishing the envisioned data space.

# **Basic FAIR Implementation Recommendations**

Implement the FAIR building blocks:

- common use of PID metadata to harmonize common metadata (M)
- common use of standardized interfaces in repositories and data products to harvest and exchange data (I)
- common use of semantic resources (S) e.g. vocabularies, ontologies.

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• use of data containers, e.g. FDOs or data crates, to achieve machine actionability (C)

**Other important topics** where harmonize procedures are important are:

- well defined licenses (L)
- quality assessment and control (Q)
- provenance tracking (P)
- stakeholder roles and responsibilities (R)
- valuing RDM engagement (V) by treating published data similar to other publications including DOIs and author references, citable, with licenses and credits to the authors. This includes accountability for publishing credit systems and others. Data citations improve the data set author's score.

### References

[1] Empfehlungen für Richtlinien der Helmholtz-Zentren zum Umgang mit Forschungsdaten, Helmholtz Open Science, https://os.helmholtz.de/open-research-data/forschungsdaten-policies/

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