

The Helmholtz Digitization Ontology (HDO): Harmonized semantics for the Helmholtz digital ecosystem

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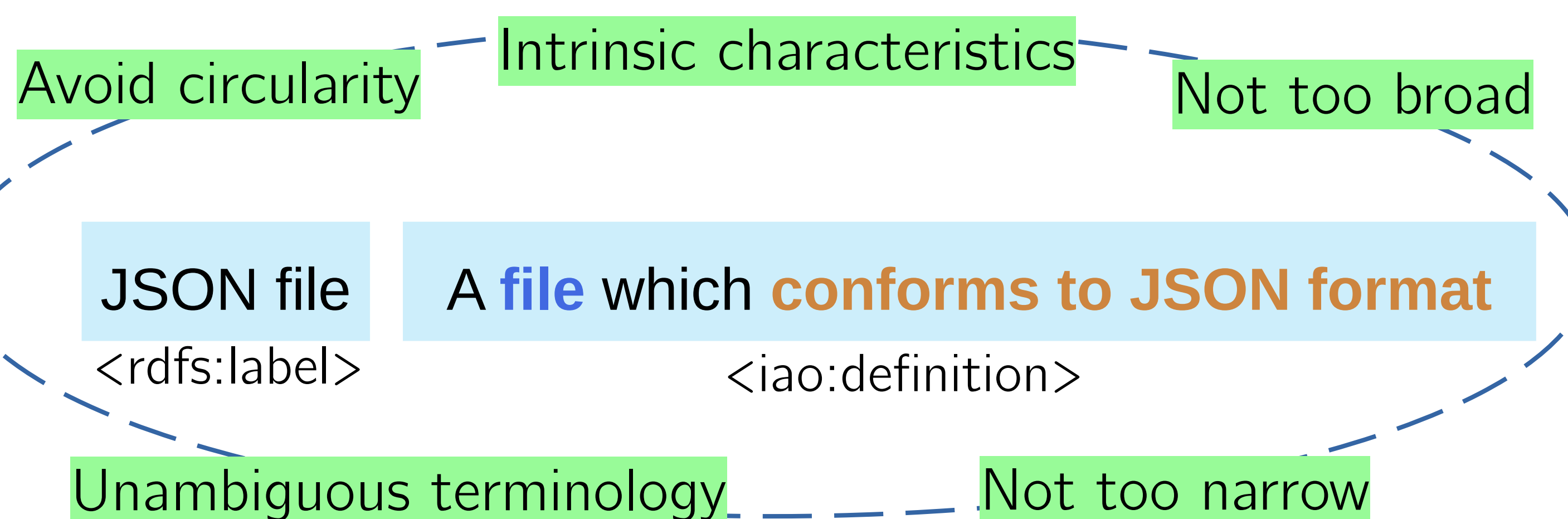
Objectives

- ✓ Increasing the **semantic interoperability** between various Helmholtz systems.
- ✓ Facilitating **data integration** in different Helmholtz systems.
- ✓ Supporting **reasoning** on existing data to allow inferring new knowledge.
- ✓ Providing precise **semantics of the concepts** representing digital assets within Helmholtz digital ecosystem.

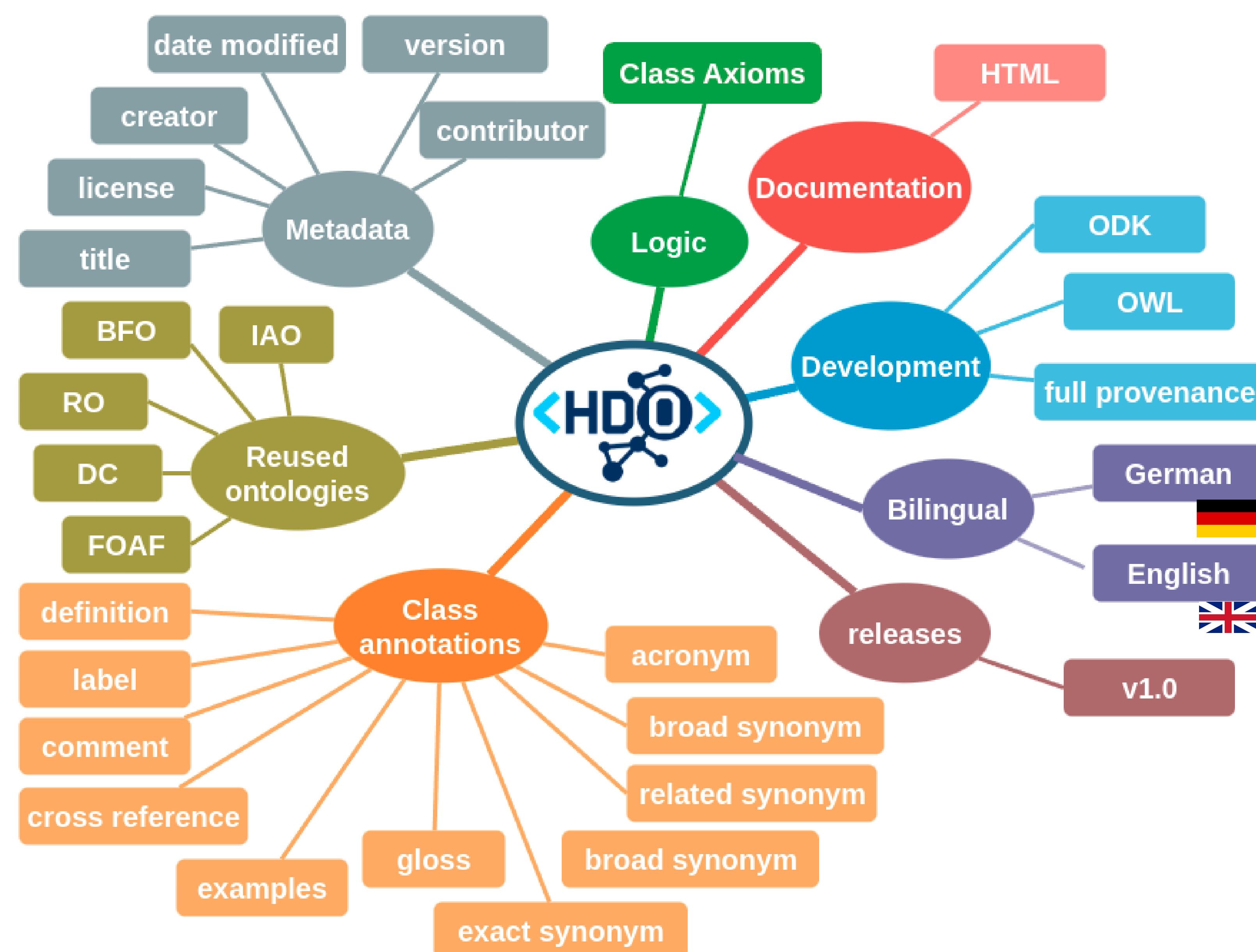
Ongoing use cases

- ✓ Semantic representation of FAIR digital objects (FDOs) that will allow integration with the Helmholtz KG.
- ✓ Semantic representation of instruments data.

Genus-differentia definitions



Persistent identifier: <https://purls.helmholtz-metadaten.de/hob/hdo.owl>



Development workflow

Identification of key terms

- +200 key terms
- Precise definitions and examples
- Full provenance
- Synonyms (exact, related, broad)

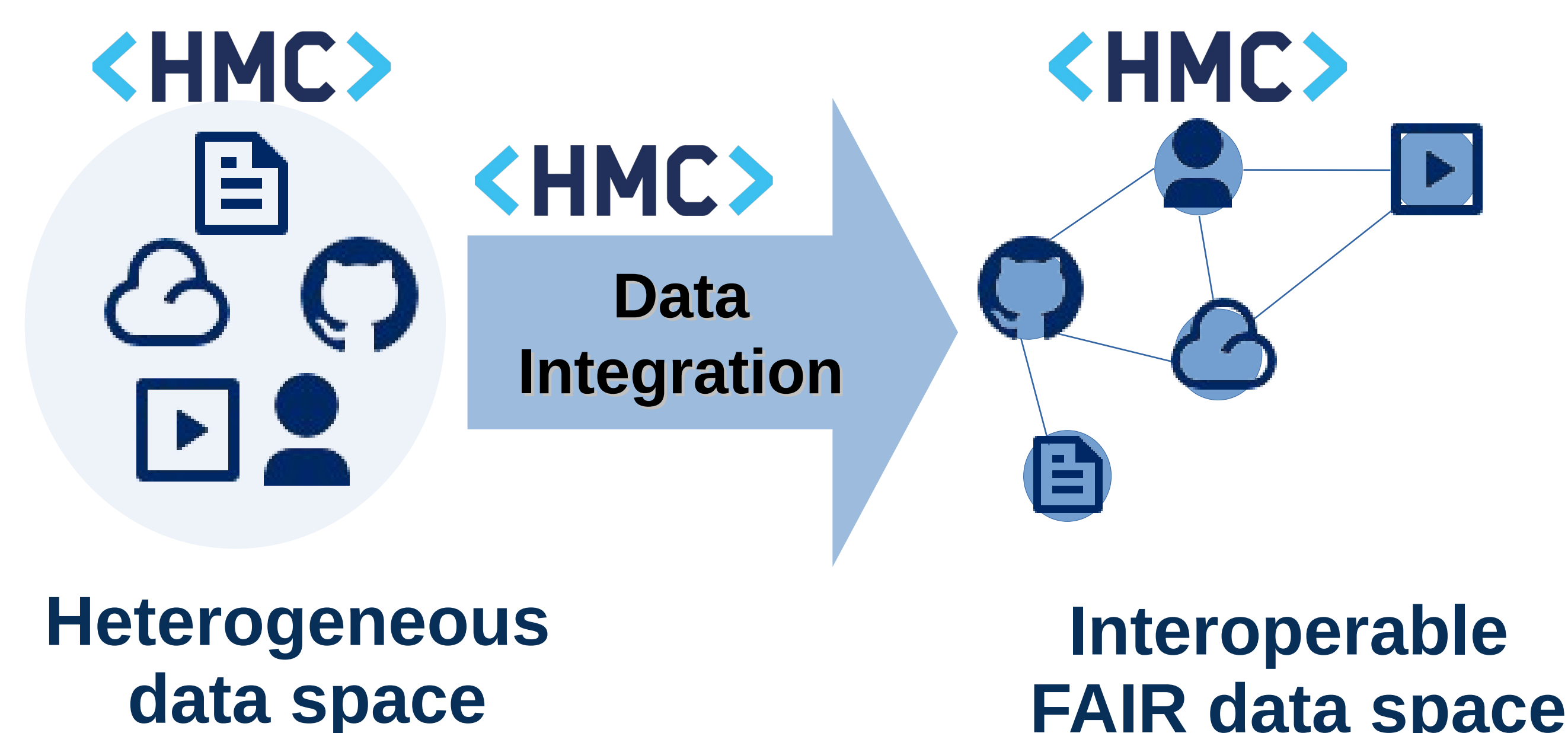
OWL ontology

- Establish class hierarchies
- Establish interconnected relations
- Rich class annotations
- Define class axioms

Release & adaption

- Managed by the Ontology Development Kit
- HTML documentation
- Identify usecases

Overarching goal



digital repository^c

IRI: https://purls.helmholtz-metadaten.de/hob/HDO_00000108

A system which is used to store and preserve digital assets following a policy or rule set that defines the storage and access norms.

A repository includes digital storage locations as well as some form of software used to manage digital assets. A repository can, itself, contain another repository. For example, a data lake can contain a database within it.

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Term status

http://purl.obolibrary.org/obo/IAO_0000125

has super-classes

[system^c](#)

has sub-classes

[cloud storage^c](#), [data lake^c](#)

Check It Out!



HDO PID



HDO GitLab