



HELMHOLTZ
METADATA
COLLABORATION

Introduction to Helmholtz Metadata Collaboration (HMC)

Constanze Curdt
HMC Office, GEOMAR

www.helmholtz-metadata.de

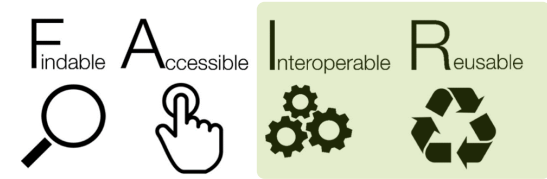
Please attribute the Helmholtz Metadata Collaboration
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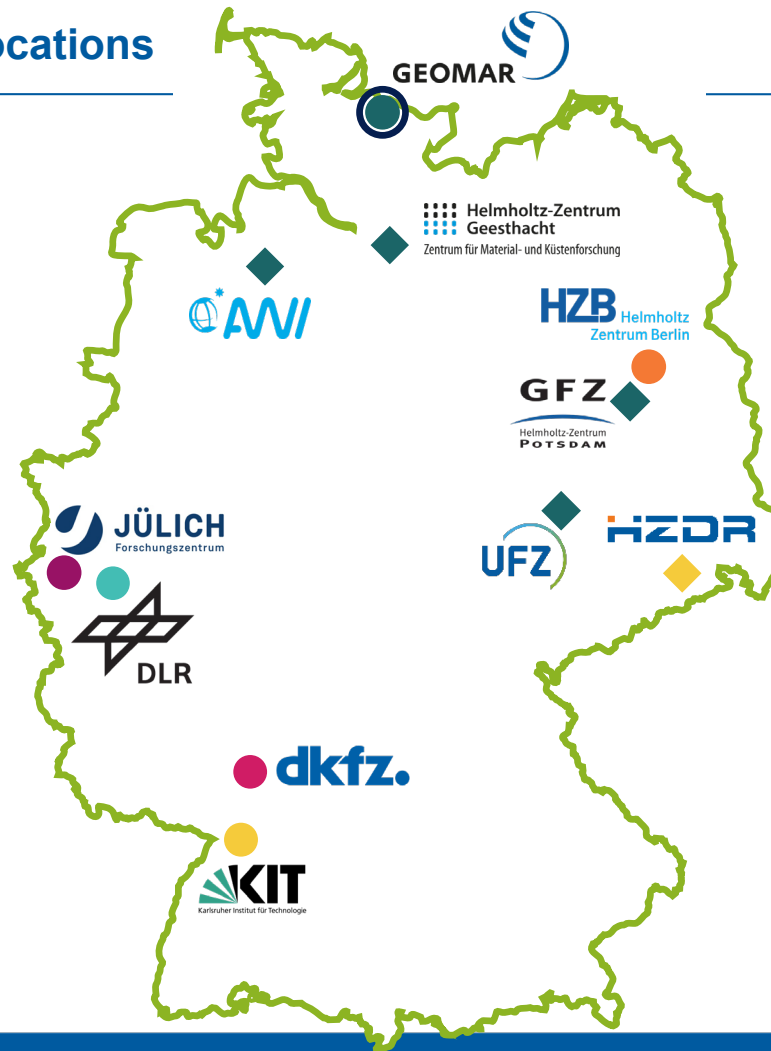
- Make **Helmholtz data treasures** visible.
- **Support researchers in** (automatically) **describing** their data by means of a suitable, standard-compliant description with metadata.
- Allow researchers **to reuse** Helmholtz research data **for advanced methods of data processing and analysis**.



- Make Helmholtz' Data **FAIR** – findable, accessible, interoperable and reusable
- Provide comprehensive & **sustainable services**, consulting, information & tools for efficient metadata handling as a **distributed & shared facility**.
- Jointly develop, share & **consolidate community-expertise** for metadata of the six Helmholtz research areas.

- **Turning FAIR into reality* on all levels to enable data reuse**
- **This makes HMC a research infrastructure platform!**

* From: Turning FAIR into Reality, Final Report and Action Plan from the European Commission Expert Group on FAIR Data, doi: 10.2777/1524



HCM Host Centres

- FZJ – Information & FAIR Data
Forschungszentrum Jülich
- DKFZ – Health
German Cancer Research Center
- HZB – Matter
Helmholtz-Zentrum Berlin für Materialien und Energie
- KIT – Energy & FAIR Data
Karlsruhe Institute of Technology
- DLR – Aeronautics, Space and Transport
German Aerospace Center
- GEOMAR – Earth & Environment and HMC-Office
GEOMAR Helmholtz Center for Ocean Research Kiel

HCM Satellites

- ◆ HZDR – Energy
Helmholtz Center Dresden Rossendorf
- ◆ AWI – Earth & Environment
Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung
- ◆ GFZ – Earth & Environment
Helmholtz Center Potsdam German Research Center for Geosciences
- ◆ UFZ – Earth & Environment
Helmholtz Center for Environmental Research

1. Metadata Hubs

Community expertise,
training, technologies

2. FAIR Data Commons

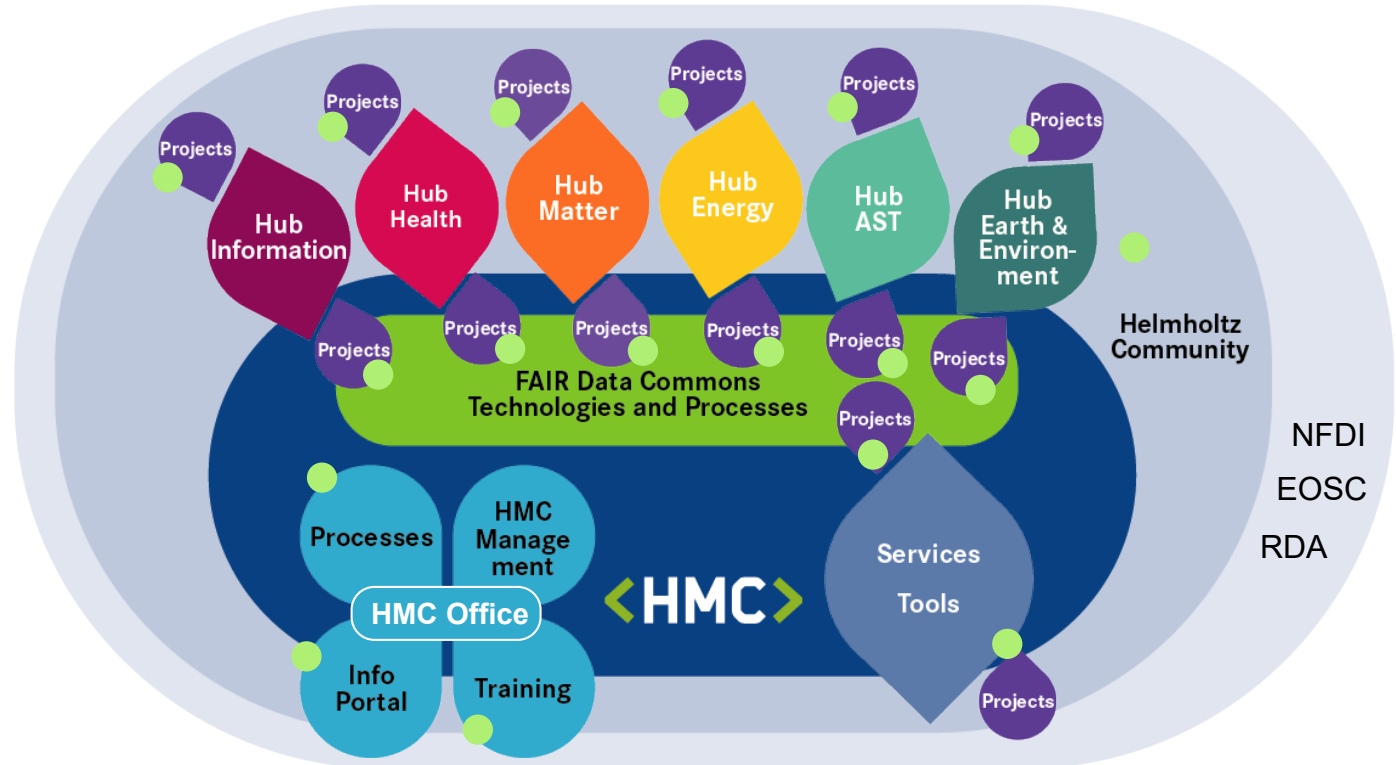
Technical services and
FAIRification

3. HMC Office

Management and
controlling

4. HMC Projects

Community and
use cases

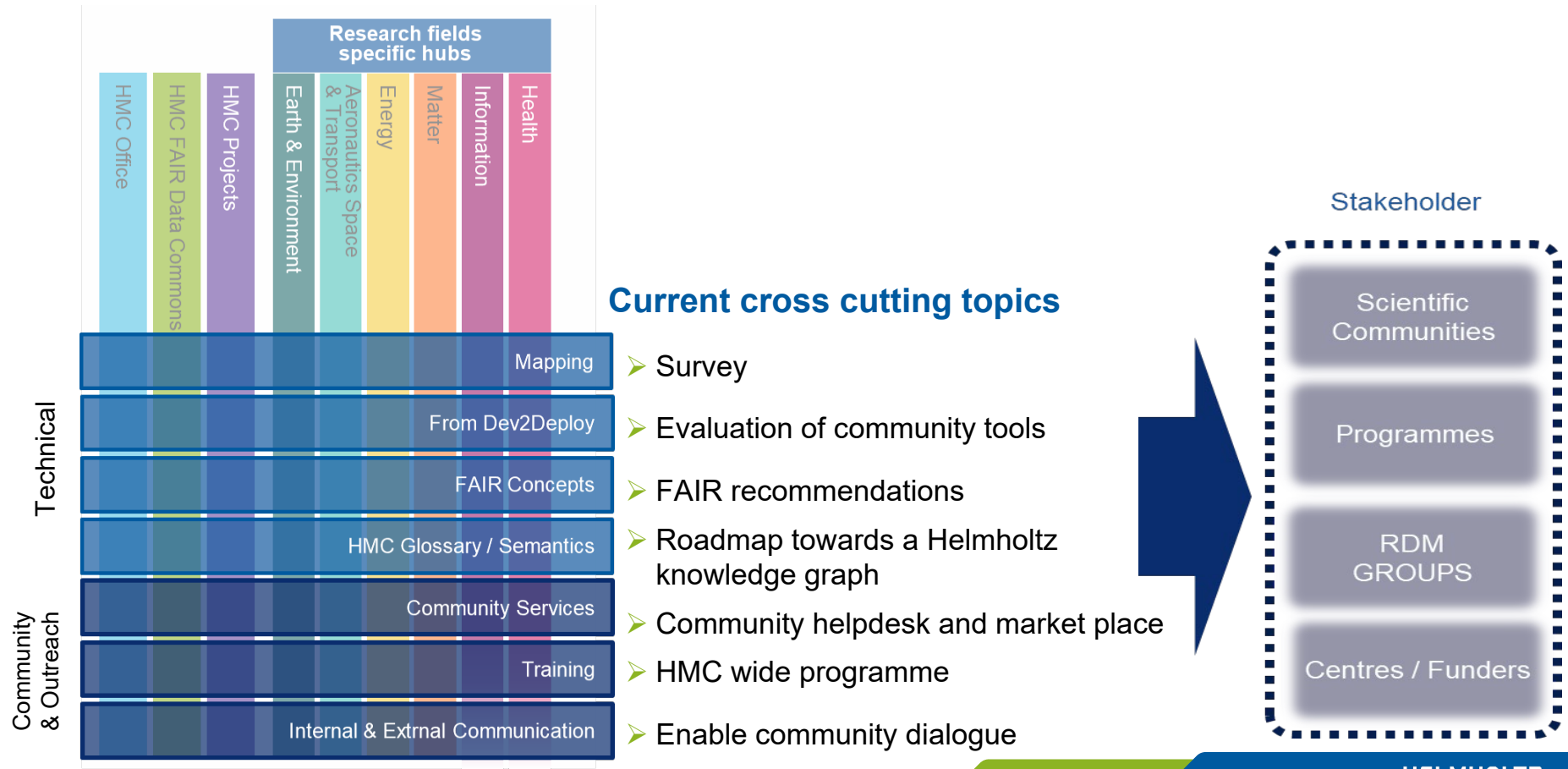


● Community Interfaces

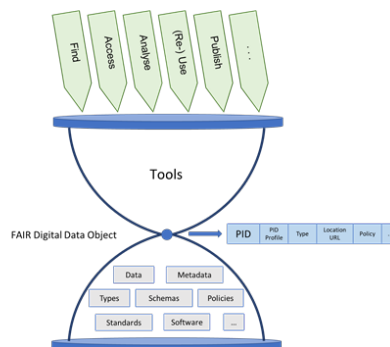
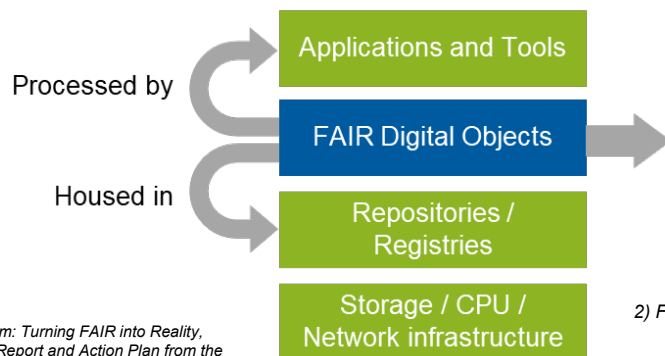
Major current issues

1. Conduct research field specific surveys and mapping of expertise, standards, tools, workflows
2. Implement a training and consulting programme and infrastructure to provide metadata knowledge
3. Launch first technical implementations and pilot studies to make Helmholtz' Data FAIR
4. Realise project calls to integrate community solutions into HMC services and infrastructures

	Objective	Year 1	Year 2	Year 3	Year 4
Central components HMC Office	HMC Office				
	Management, communication and PR and project office				
	Building, providing and disseminating knowledge, training and consulting	Develop and set up communication structures		Ongoing coordination, communication and information	
Decentral components HMC Office	FAIR Data Commons				
	Coordinating FAIR metadata and technology across hubs	Mapping expertise; developing training concepts		Regular services and further development of formal	
	Implementing FAIR Data Object	Developing requirements catalog and guidelines with hubs and bringing them to application		Continuous provision and further development of formal	
Domain-specific services	Technical implementation of FAIR principles	Implementation of Fair Data Object Model; services for using catalogs/registries		Continued developments in coop. with EOSC, RDA	
	Metadata Hubs	Survey, test and further develop tools		Integration of results from projects	
	Metadata expertise and its community in each domain			Connect, disseminate and evolve together with hubs	
Projects	Mapping, building up and disseminating methodological knowledge; training and consulting	Integrate expertise and establish exchange formats		Ongoing coordination and management of activities and	
	Processes, tools, and services for indexing research data collections	Establishment of domain-specific training and interaction formats		Ongoing development of formats offered online and F	
	HMC Projects	Collection, requirements analysis and exemplary application		Usability, adaptation and further development, FAIRne	
	Call for projects, consulting for applicants, monitoring			data can be recorded continuously	
	Support and networking of the projects, integration in HMC	Develop calls, establish processes		Monitoring of further calls	
		Support initial projects, create networking opportunities		Continuous monitoring of the projects, integration of the	
				results in HMC	



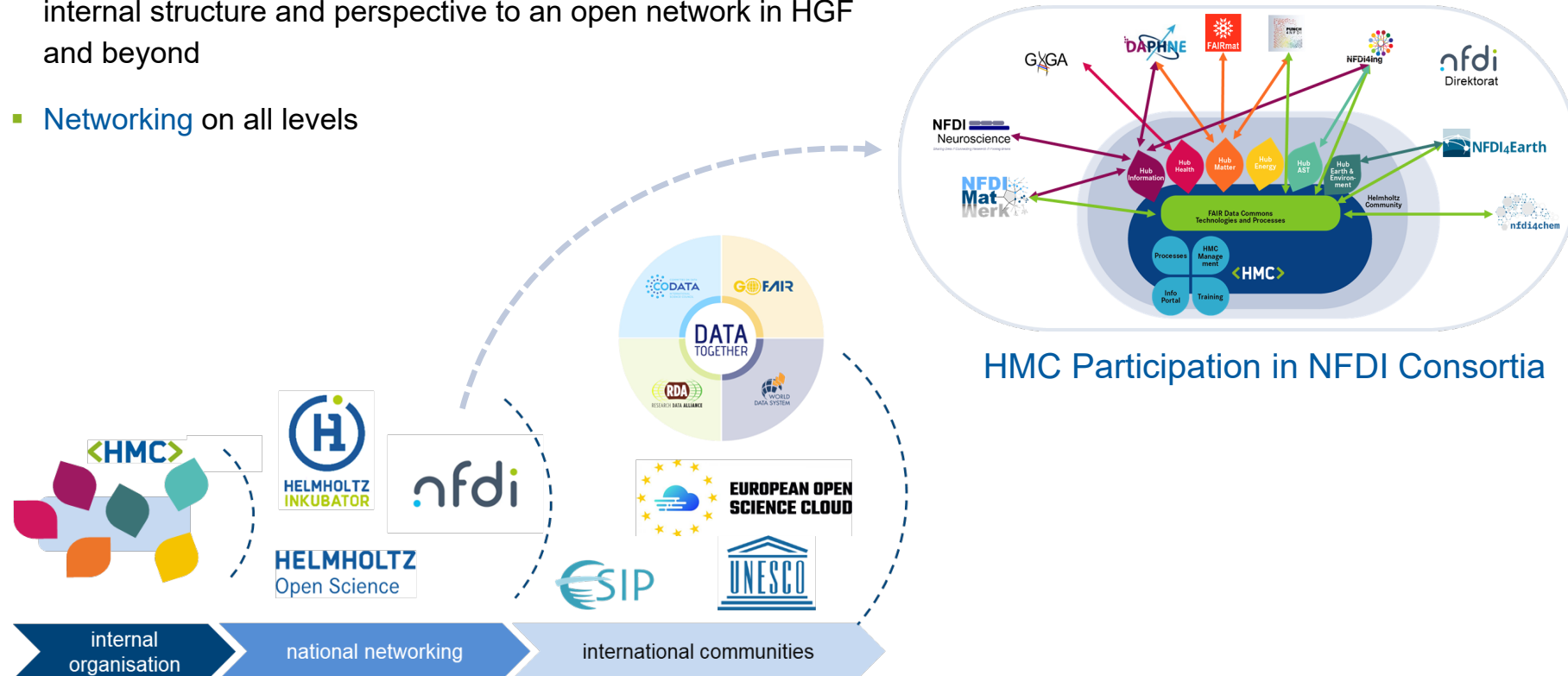
- Establish a **FAIR Digital Object (FDO)** abstraction layer between data and tools
- Development and launch of **first community usable tools**, e.g.
 - Metadata Standards Catalog**: Helmholtz-tailored registration of existing metadata standards
 - Metastore**: Metadata schema registry and metadata repository
- FAIR Recommendations** for the Helmholtz Association (and beyond)



2) From: Thomas Jejkal, Rainer Stotzka, KIT

1) From: Turning FAIR into Reality, Final Report and Action Plan from the European Commission Expert Group on FAIR Data, doi: 10.2777/1524

- **Highly distributed structure** -> gradual development from a stable internal structure and perspective to an open network in HGF and beyond
- **Networking** on all levels



HMC projects ..

- are an important instrument to **connect HMC and community experts**
- can help to **identify community demands**
- work on **practical challenges** in the field of metadata
- should work in **close cooperation** with the HMC hubs
- **results** should be integrate into HMC and HGF Community in the long term
- will be integrated into HMC activities as **collaboration** partners

HMC offers ..

- **Integration of project results** into HMC
- **Knowledge exchange** with HMC Family
- Participation in HMC organized **trainings, seminar** etc.
- **Workshop** participation for exchange with HMC community, HMC projects etc
- Usage of **HMC Infrastructure** and Services
- ... to become **part of the HMC Family!**
- ...

Questions ?

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Contact:

HMC Office

Dr. Constanze Curdt

ccurd@geomar.de