Helmholtz Metadata Collaboration (HMC) –FAIR Metadata for Energy

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HMC Mission

The Helmholtz Metadata Collaboration (HMC) supports researchers in their efforts to annotate their research data with structured Metadata according to the FAIR principles.
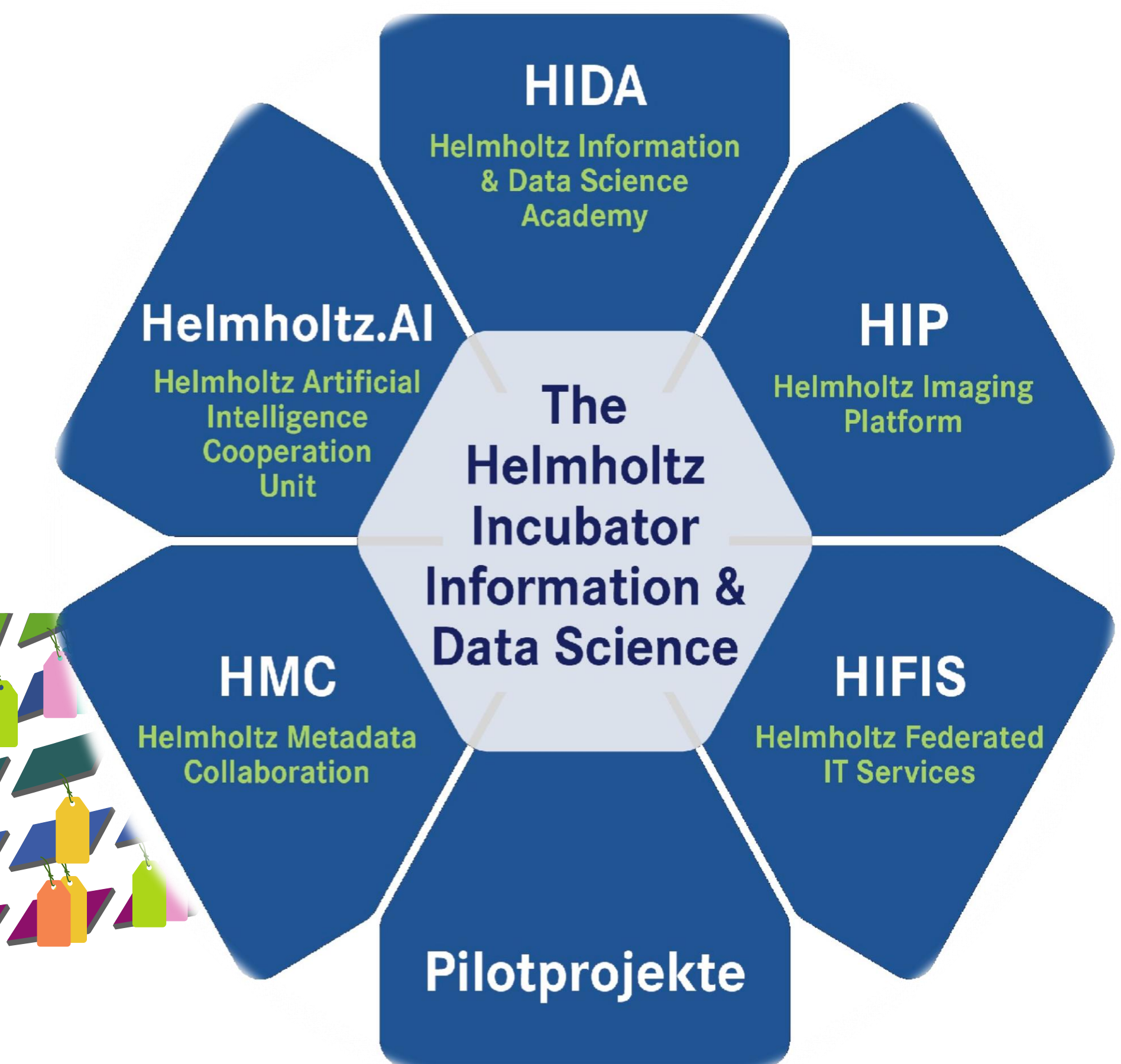
Metadata - or "data about data" enables long term discoverability and accessibility of data and further makes data interoperable and ready for re-use by humans and machine agents in the fields of big data analytics, machine learning and computer simulation. This guarantees impact and sustained value of research efforts. Importantly, HMC is a broad and long term funded platform with units anchored in all scientific domains of the Helmholtz Association.

This allows developing and establishing sustainable tools, services, concepts and best practices towards enriching research data with metadata, as well as coordinating such services across the Helmholtz association and within the national and international scientific communities.

HMC Work
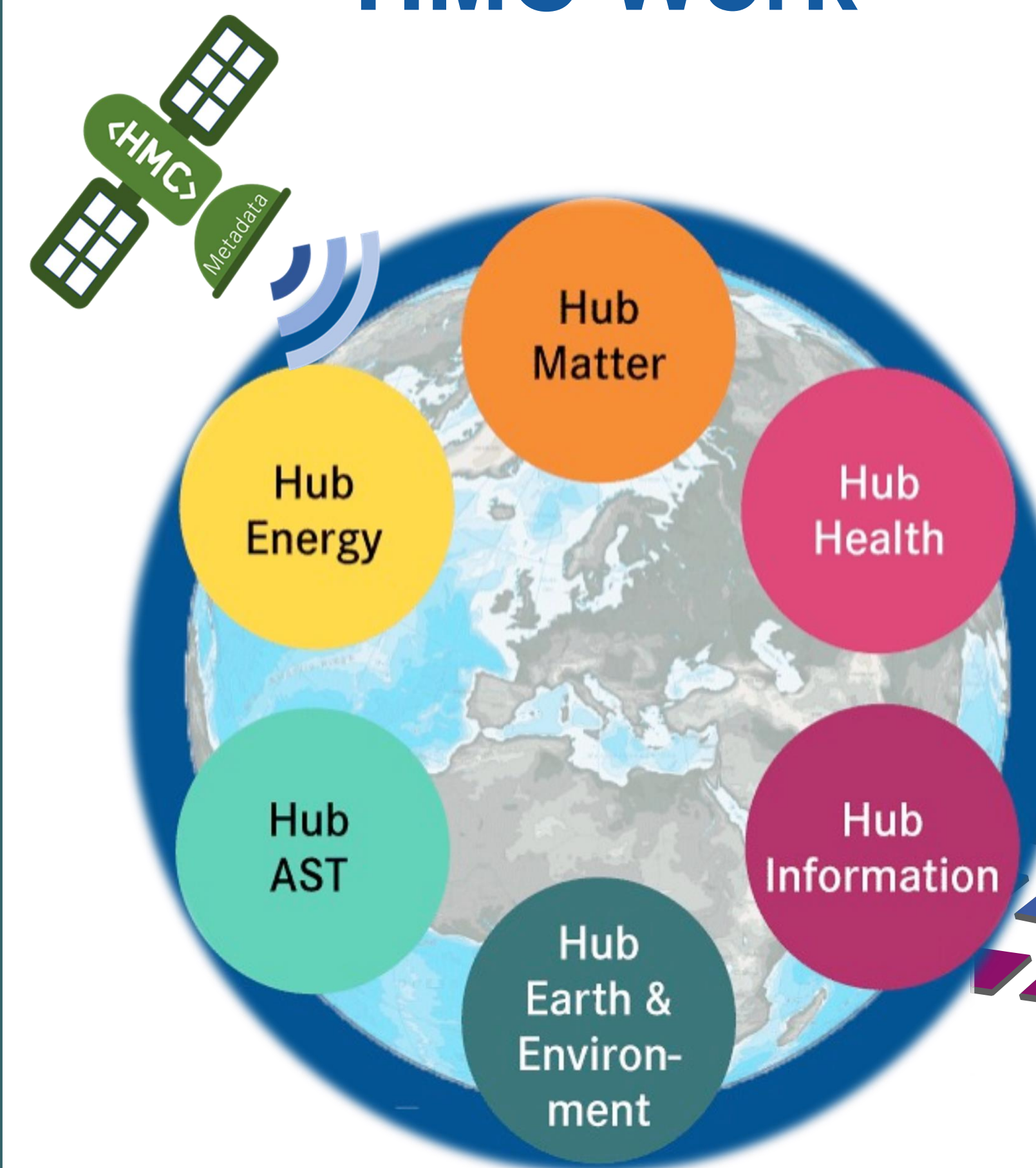
- (Meta)data landscape mapping
- Collection & registration of standards
- Developing tools & services
- Semantic harmonization
- Training, community (technical) consulting
- Recommendations & guides
- (inter)national coordination

Helmholtz Disciplinary World

FAIR Digital Data Object

PID:
- PID Profile
- Type
- Location URL
- Policy

Helmholtz Digital World

HIDA — Helmholtz Information & Data Science Academy

Helmholtz.AI — Helmholtz Artificial Intelligence Cooperation Unit

HIP — Helmholtz Imaging Platform

The Helmholtz Incubator Information & Data Science

HMC — Helmholtz Metadata Collaboration

HIFIS — Helmholtz Federated IT Services

Pilotprojekte

Hub Energy: Participants

Karlsruhe Institute of Technology
- Dr. Wolfgang Süß (Coordinator)
- Mohamed Anis Koubaa
- Jan Schweikert
- Dr. Karl-Uwe Stucky

Helmholtz-Zentrum Dresden-Rossendorf
- Prof. Dr. Gerald van den Boogaart
- Dr. Felix Ballani
- Leon Steinmeier
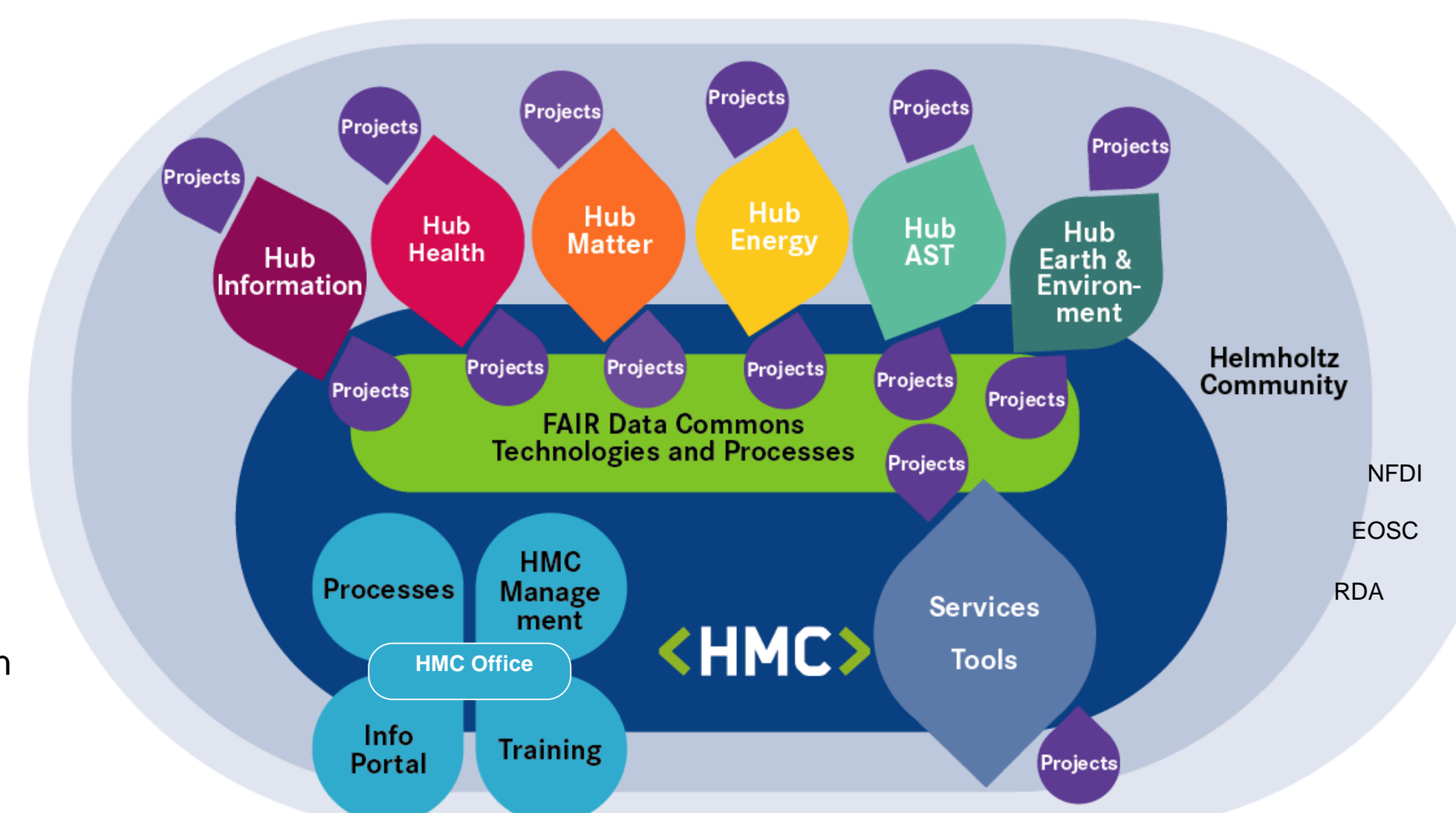
German Aerospace Center
- Carsten Hoyer-Klick

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HMC Organization

Bridge tech and practice, i.e. science community demands and current RDM implementation scenarios.

1. **Metadata Hubs** provide Community contact, scientific expertise, training, technologies

2. **FAIR Data Commons** provide technical services and FAIRification

3. **HMC Community Projects** provide community interaction and practical use cases

FAIR Data Commons Technologies and Processes

Helmholtz Community

Processes — HMC Management — Services Tools

HMC Office — Info Portal — Training

NFDI
EOSC
RDA

Main Challenges

- Strong **community involvement** to speed up implementation
- Rapid development of **example tools and data** methods as proof-of-concepts
- Implementing a transparent provenance track of data products demonstrating their Helmholtz origin to funders

HELMHOLTZ RESEARCH FOR GRAND CHALLENGES