

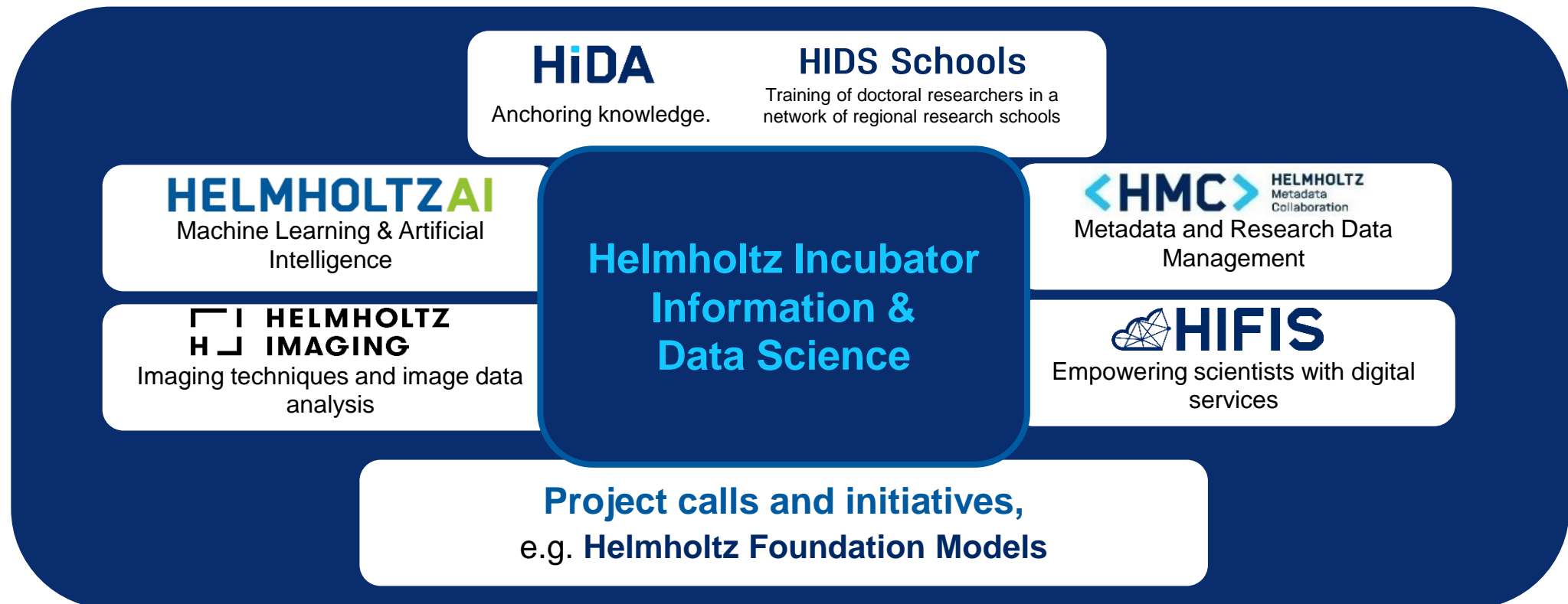
# Helmholtz Information & Data Science Framework

Elisabeth Jaumann

# Helmholtz Information & Data Science Framework

## Mission & Vision

- **Our mission:** To create an outstanding, community-wide research environment for all research areas and activities in the field of information and data science that reaches across research centers.
- **Our vision:** To position Helmholtz as the best place for data-driven research in the academic world.



# HIFIS

## Helmholtz Federated IT Services



Find out more about HIFIS at  
<http://www.hifis.net>



Contact HIFIS via e-mail at  
[support@hifis.net](mailto:support@hifis.net)

# HIFIS

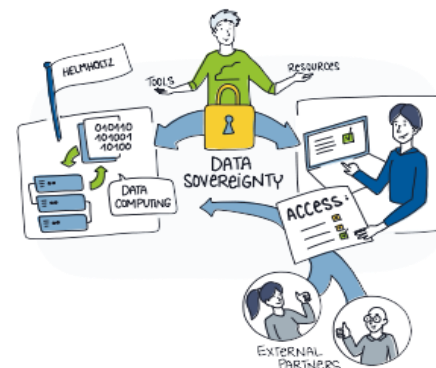
## Mission & Vision

### Mission

- **Empowering scientists with digital services** at every step of science workflow

### Vision

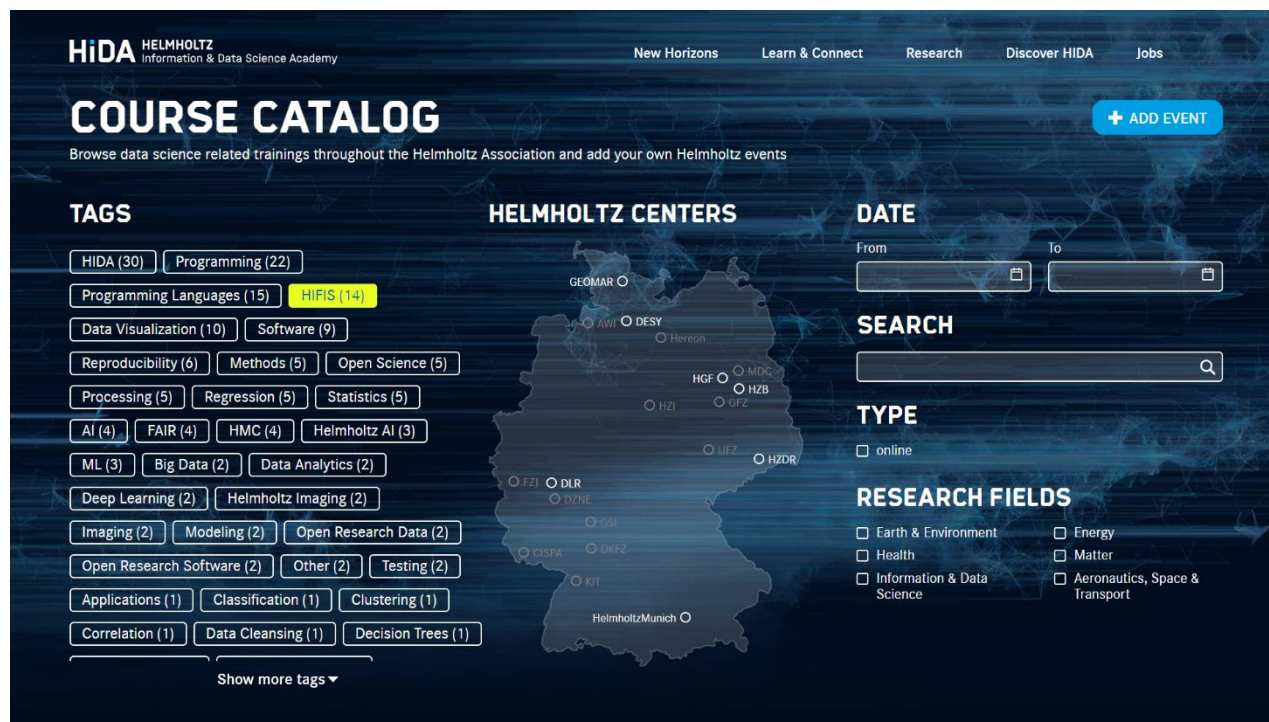
- Building the best cloud platform for science
- Providing federated sovereign digital infrastructures
- Enabling all people creating software at Helmholtz to apply modern and sustainable software engineering principles



# HIFIS

## Services for PhDs

Education & Training on RSE: <https://hifis.net/courses>



... on python, programming,  
software development, ....

↓ First Steps with Python	21 - 23 May 2024
↓ Foundations of Research Software Publication	23 - 24 May 2024
↓ Introduction to Git and GitLab	29 - 30 May 2024
↓ Data processing with Pandas & Data plotting with Matplotlib	12 - 14 Jun 2024
↓ Continuous Integration (CI)	19 - 21 Jun 2024
↓ Object-Oriented Programming (OOP)	26 - 28 Jun 2024
↓ Object-Oriented Programming (OOP)	7 - 9 Aug 2024
↓ Data processing with Pandas & Data plotting with Matplotlib	16 - 18 Oct 2024
↓ Introduction to Git and GitLab	24 - 25 Oct 2024

Software Engineering Consulting: [support@hifis.net](mailto:support@hifis.net)



# HMC

## Helmholtz Metadata Collaboration



Find out more about HMC at  
[www.helmholtz-metadaten.de](http://www.helmholtz-metadaten.de)



Contact HMC via e-mail at  
[info@helmholtz-metadaten.de](mailto:info@helmholtz-metadaten.de)

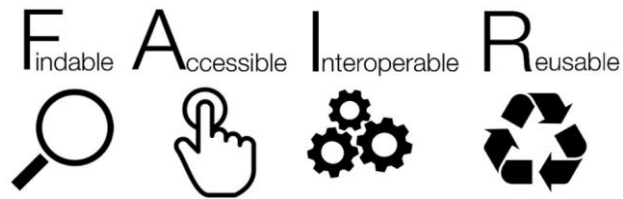
[www.helmholtz-metadaten.de](http://www.helmholtz-metadaten.de)

# HMC

## Mission & Vision

### Mission

- Turn FAIR into reality in Helmholtz

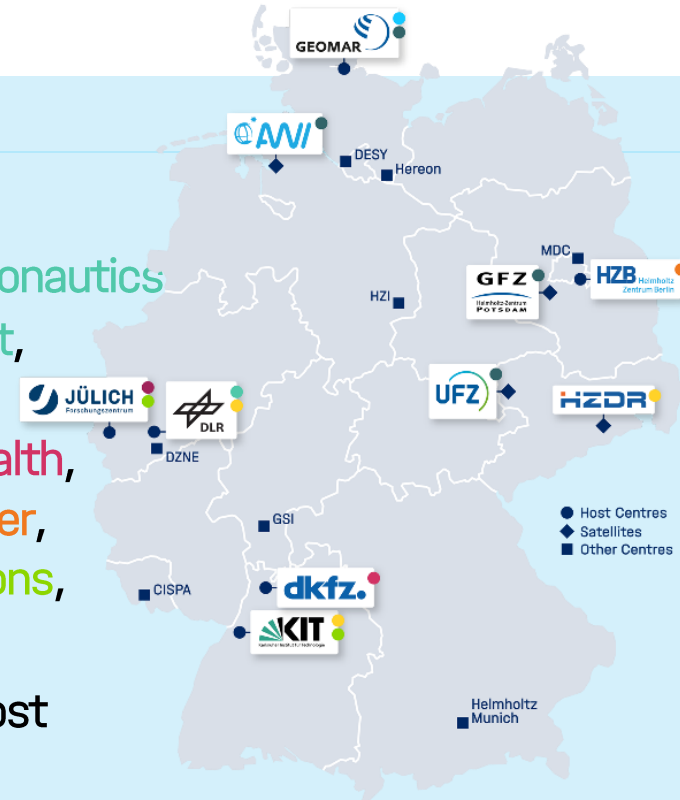


- Connecting the distributed Helmholtz research data ecosystem

### Vision

- Create a sustainable, distributed, semantically enriched Helmholtz FAIR data space.

**HMC in a nutshell**  
8 HMC Units (Aeronautics, Space & Transport, Earth & Environment, Energy, Health, Information, Matter, FAIR Data Commons, HMC Office)  
at 6 Helmholtz host centres



The FAIR data space is a "**decentralized infrastructure** for trustworthy data sharing and exchange in data ecosystems based on **commonly agreed principles**"  
(Nagel L., Lycklama D., 2021)



# HMC

## Services for PhD Students



Training &  
Events



Guidelines &  
Recommendations



Community  
Projects &  
Processes



Information  
Portal

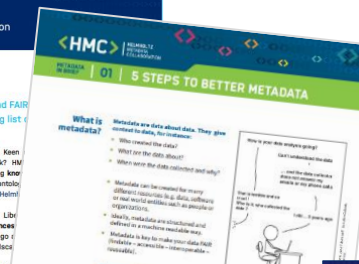


Metadata  
Tools



Helmholtz  
Knowledge  
Graph

- practical knowledge, events, trainings and material on metadata handling
- easy to digest documents, information and recommendations for better metadata handling
- funding for projects to solve metadata challenges and develop solutions
- moderate community processes
- living information collection of repositories, metadata standards, recommendations, ontologies, ...
- tools and services for FAIR data handling, data annotation, validating metadata, ...
- searchable interface to Helmholtz data (scientific publications, software, data, ...)







# we are <HMC> HELMHOLTZ Metadata Collaboration



Find out more about HMC at  
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Contact us via e-mail at  
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# Helmholtz Imaging



Find out more about Imaging at  
<https://helmholtz-imaging.de>

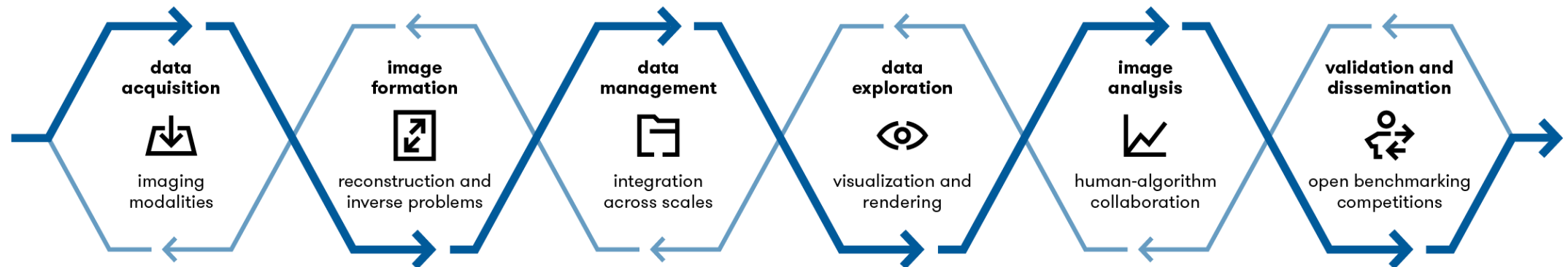


Contact Imaging via e-mail at  
[support@Helmholtz-imaging.de](mailto:support@Helmholtz-imaging.de)

# Helmholtz Imaging

## Mission & Vision

- Images are inherently complex data; creating them, visualizing, handling and analyzing them are challenging steps
- Helmholtz Imaging integrates expertise and supports domain researchers **across the whole imaging pipeline, from sensory measurement to knowledge**



# Helmholtz Imaging

## Services for PhDs



### Support Hub

The gateway for all your imaging-related requests.



### Collaborations

Let's solve your imaging challenge together. Apply now!



### Training

Develop your skills in the realm of imaging science.



### CONNECT

The heart of the Helmholtz Imaging Network. Join CONNECT!



### Projects

We provide seed funding for cross-disciplinary research collaborations.



### Research

Benefit from the latest research findings integrated into our support services.



### Software

Out-of-the-box solutions to your imaging challenge - built by us.

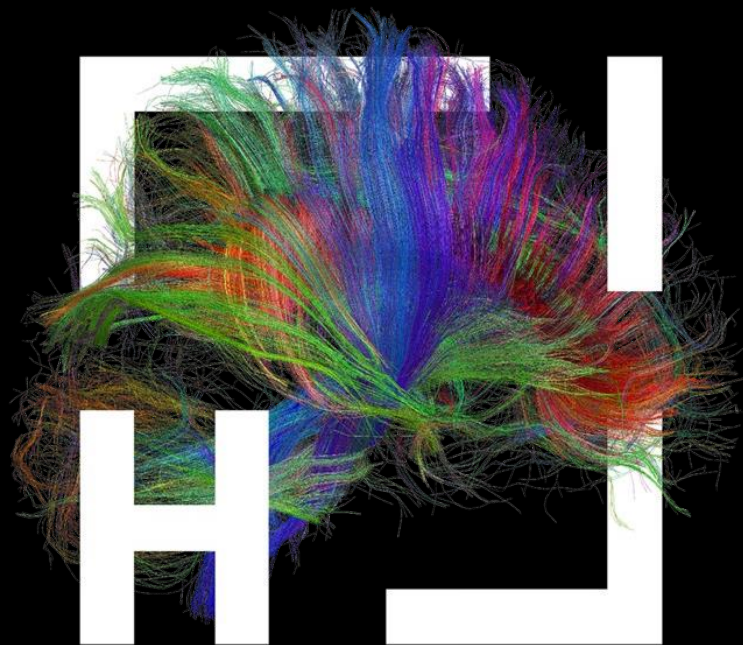


### Solutions

Share your results with the community - software, data-sets, papers & more.







# HELMHOLTZ IMAGING



# HELMHOLTZ AI

## Helmholtz AI

**AI**

Find out more about AI at  
<http://www.Helmholtz.ai>



Contact AI via e-mail at  
[vouchers@helmholtz.ai](mailto:vouchers@helmholtz.ai)



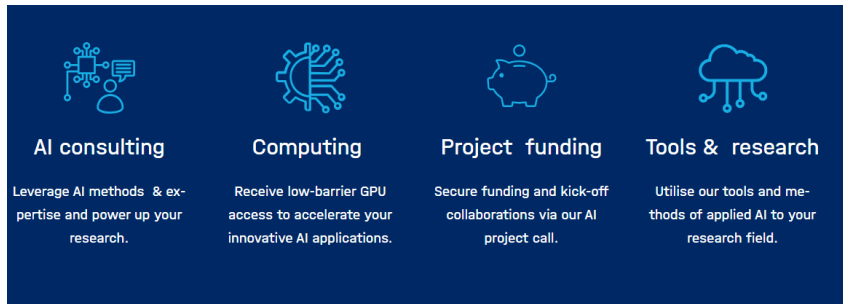
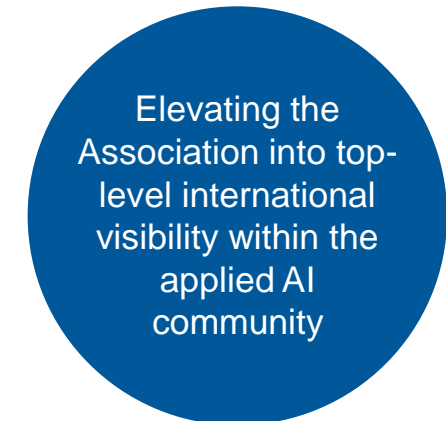
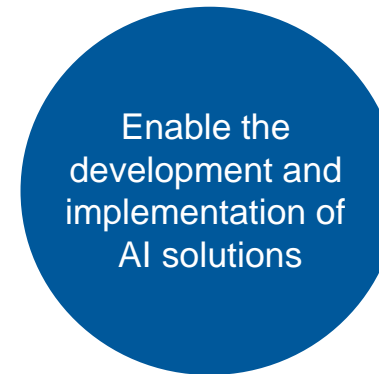
# Helmholtz AI

## Vision & Mission

### Vision

- Democratize AI and advance its capabilities for tackling frontier scientific questions.
- Application-driven artificial intelligence platform accelerating science across the Helmholtz Association.

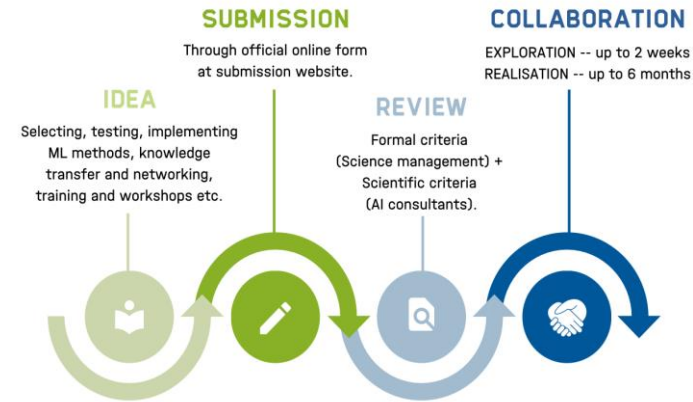
### Mission



# Helmholtz AI

## Services for PhDs

- [Helmholtz AI Conference](#), June 12-14 Düsseldorf
- [AI Consulting](#) by the Helmholtz AI Consulting Teams
- [Research Lab](#) visits
- Monthly [Food for Thought Seminars](#)
- [HAICORE](#) compute resources



Thank you for your attention!