

# Updates from HMC Hub Matter

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## Consulting

### Scientific Use Cases

We work across Matter on FAIR data showcases enabling us to identify infrastructure gaps.

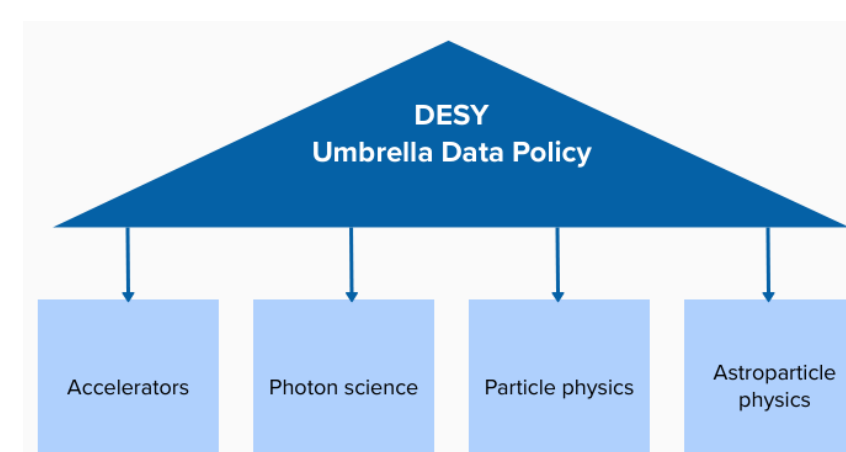
1. Synchrotron beamline in commissioning:  
<http://doi.org/10.18429/JACoW-ICALEPCS2021-WEBL05>
2. Decommissioned particle physics experiment:  
<https://jacow.org/icalepcs2023/papers/we3bco09.pdf>
3. Digital twins of synchrotron beamline:  
<http://doi.org/10.18429/JACoW-ICALEPCS2023-THMBCMO17>
4. Particle physics experiment in commissioning:  
<http://doi.org/10.18429/JACoW-ICALEPCS2023-THPDP101>
5. Sample environment metadata integration together with **SECoP@HMC**  
<http://doi.org/10.18429/JACoW-ICALEPCS2023-THMBCMO10>

### Data-driven Infrastructure Counselling

- Metadata consulting to data infrastructures in 13 Helmholtz centers in 2025.
- Monitoring of Helmholtz data in external infrastructures e.g. openAIRE
- Identification of missing and erroneous metadata
- Direct feedback loop with providers both inside and outside Helmholtz.
- Impact: increased global visibility of Helmholtz (meta)data

### Data Policies

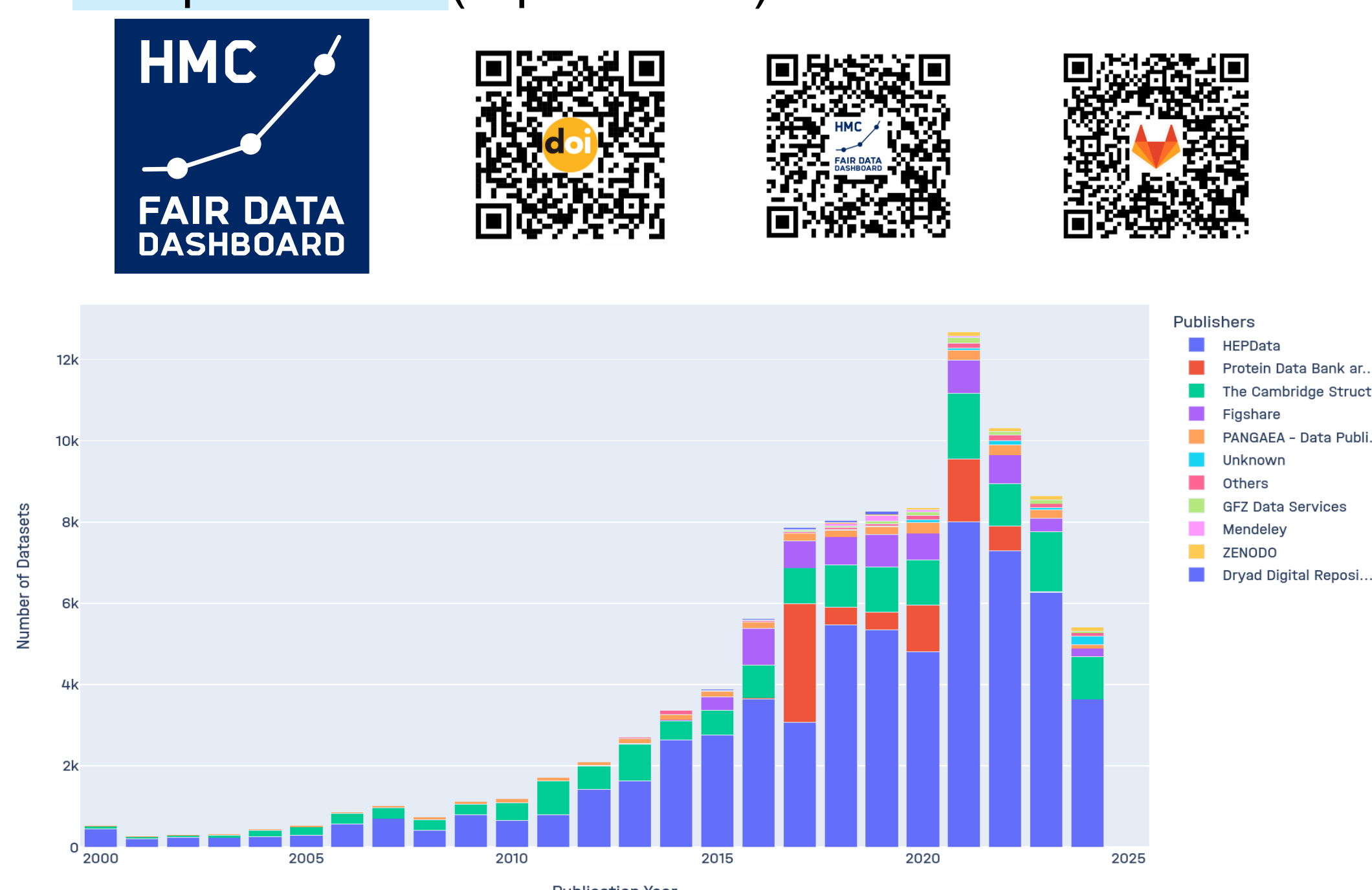
- Data policy development and consultation provided to 6 of 7 centers in Matter



## Services

### Dashboard for Open and FAIR data metrics

- 17 centers connected to the dashboard
- >50k linked data publications found via Scholix links
- >95 publishers (repositories) identified



Annual number of linked data publications for 17 Helmholtz centers, collected with the data harvesting pipeline of the HMC Dashboard on Open and FAIR data in Helmholtz (data from 24/06/2025).

### Electron Microscopy Glossary

Interested in electron microscopy? Join our community glossary and meet others in the field, integrate our OWL artifact, or browse our web explorer.



Screenshots from EM Glossary Web Explorer taken in Q1-2025

## Training

### Training courses

Interested in learning how you can upgrade your data? Our courses run regularly, registration is free, and they are designed for Matter.



## External Initiatives

### OSCARS

We support the OSCARS funded PaN Competence Centre which provides support to photon and neutron facilities on open science topics.



### CDIF-4-XAS

Recent deliverables include:

- an overview of x-ray absorption spectroscopy standards:  
<https://doi.org/10.5281/zenodo.14920225>
- a mapping of these standards to CDIF  
<https://doi.org/10.5281/zenodo.17421916>



## Get in touch!

Join the conversation on [mattermost.hzdr.de/hmc-public](https://mattermost.hzdr.de/hmc-public)  
Follow us on LinkedIn

Write to our **Helpdesk**  
Talk to us in our **Open Office**

## Up Next

### Helmholtz Knowledge Graph

Helmholtz Knowledge Graph (Helmholtz KG) aims to connect Helmholtz digital assets and infrastructure so information is easier to find and reuse. KG 2.0 will be deployed early 2026 with over 3.6 million records.



### HMC Conference 2026

