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## Helmholtz Metadata Collaboration - Lessons Learned on the Path to a FAIR data space for Helmholtz

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In 2019, the Helmholtz Association of German Research Centres launched the Helmholtz Metadata Collaboration (HMC) platform as part of its Information and Data Science Framework to translate global metadata concepts into application and to harmonize scientific practice within the association. HMC's mission is to facilitate the visibility and reusability of data within the Helmholtz Association and beyond, and to promote the FAIRness of Helmholtz data. HMC aims to create a sustainable, distributed, and semantically enriched Helmholtz FAIR data space that spans across the 18 autonomous Helmholtz centers and its six research fields. (Aeronautics, Space & Transport, Earth & Environment, Energy, Health, Information, and Matter).

HMC focuses on three primary areas of activity: (1) assessing and monitoring the state of FAIR data, (2) facilitating connectivity of Helmholtz research data, and (3) transforming metadata recommendations into implementations. These activities address multiple stakeholders within Helmholtz, including the scientific community, data professionals, research data infrastructures, technicians, and administration. By increasing the coherence and connectivity of metadata, HMC aims to promote a more harmonized and efficient research environment.

Over the past years, we analyzed the state of research data management and data FAIRness within Helmholtz through surveys [1,2] and FAIR assessments [3]. Awareness was raised about the importance of metadata through outreach events [4], training [5] and consulting. We developed a technical backbone for connecting FAIR data in Helmholtz, including a Helmholtz Knowledge Graph [6], to establish the Helmholtz FAIR data space. Together with our communities, we worked towards the implementation of aligned FAIR metadata practices and recommendations. Since 2020, HMC has also funded 36 community projects across Helmholtz [7] to address practical metadata challenges. Through our contribution to various working groups, projects and panels we are closely intertwined with national (e.g. NFDI) and international (e.g. EOSC, RDA, CODATA) initiatives in research data management.

This contribution will provide details on the HMC's approach, highlight key results, and share lessons learned on the path to creating a Helmholtz FAIR data space. By sharing our experiences, we want to engage in active discussions on metadata, relevant stakeholders, and the advancement of a FAIR data ecosystem. We hope that our progress so far will provide valuable insights for others who are on a similar path, and we look forward to exchanging ideas and best practices with the community.

### References:

- [1] Arndt, W., Gerlich, S. C., Hofmann, V., Kubin, M., Kulla, L., Lemster, C., Mannix, O., Rink, K., Nolden, M., Schweikert, J., Shankar, S., Söding, E., Steinmeier, L., & Süß, W. (2022). A survey on research data management practices among researchers in the Helmholtz Association (HMC Report). [https://doi.org/10.3289/HMC\\_publ\\_05](https://doi.org/10.3289/HMC_publ_05).
- [2] Gerlich, S. C., Kubin, M., Kulla, L., Lemster, C., Schmidt, A., Schweikert, J., Shankar, S. & Stucky, K.-U. (2025). A survey on the status quo, gaps and needs among research data professionals in the Helmholtz Association (HMC Report). [https://doi.org/10.3289/HMC\\_publ\\_08](https://doi.org/10.3289/HMC_publ_08).
- [3] HMC FAIR Dashboard. <https://fairdashboard.helmholtz-metadaten.de/> (accessed: 15 April 2025).
- [4] HMC FAIR Friday seminar series: <https://helmholtz-metadaten.de/en/fair-friday> (accessed: 15 April 2025).
- [5] Fundamentals of Scientific Metadata training course: <https://carpentries-incubator.github.io/scientific-metadata/> (accessed: 15 April 2025).
- [6] Helmholtz Knowledge Graph: [https://helmholtz-metadaten.de/en/unhide\\_helmholtz-kg](https://helmholtz-metadaten.de/en/unhide_helmholtz-kg) (accessed: 15 April 2025).
- [7] HMC Projects: <https://helmholtz-metadaten.de/projects> (accessed: 15 April 2025).

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