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The Helmholtz Knowledge graph and the unified Helmholtz Information and data exchange (unHIDE)

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Research across the Helmholtz Association is based on inter- and multidisciplinary collaborations across its 18 Centres and beyond. However, the (meta)data generated through Helmholtz research and operations is typically siloed within institutional infrastructures and often within individual teams. The result is that the wealth of the association's (meta)data is stored in a scattered manner, hard to find and consequently cannot be used to its full value to scientists, managers, strategists, and policy makers.

To address this challenge, the Helmholtz Metadata Collaboration (HMC) launched the unified Helmholtz Information and Data Exchange (unHIDE) in 2022. We are creating a lightweight and sustainable interoperability layer to interlink data infrastructures; and increase visibility and access to the Helmholtz Association's (meta)data and information assets. Using proven and globally adopted knowledge graph technology, within unHIDE we develop a comprehensive association-wide knowledge graph (KG) the Helmholtz-KG: a solution to connect (meta)data, information, and knowledge.

A first prototype of the Helmholtz KG was released in April 2023. This includes a comprehensive web front end for manual search of resources [1], a stable and documented [2] backend with a tested data ingestion and integration pipeline, and machine accessible endpoints [3].

In this poster we present an overview of the first release of the Helmholtz KG, how it integrates metadata from heterogeneous sources to make it visible and findable, and how further data providers can be connected. We will illustrate the lessons learned during our development process and give an outlook into the next steps and future release versions of the KG.In the future we aim to move to a user driven co-design process for prioritization of features based on the needs of the KG stakeholder. For this we are organizing a related workshop at the conference - you are welcome to attend.

[1] https://search.unhide.helmholtz-metadaten.de/
[2] https://docs.unhide.helmholtz-metadaten.de/
[3] https://sparql.unhide.helmholtz-metadaten.de/

Please assign your contribution to one of the following topics

Technological solutions for findable and machine-readable metadata

Please specify "other" (stakeholder)

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Metadata unHIDE Knowledge-Graph Helmholtz FAIR

Please assign yourself (presenting author) to one of the stakeholders.

Data professionals and stewards

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