

HELMHOLTZ METADATA COLLABORATION (HMC)

2nd Project Call 2021

Funded by the Initiative and Networking Fund (INF)

1. Background

The Helmholtz Metadata Collaboration (HMC) develops and implements concepts and technologies to leverage high-quality metadata for research data across research fields and their communities. Its main goal is to make the vast amount of diverse research data produced by Helmholtz Centres findable, accessible, interoperable and reusable (FAIR). HMC liaises closely with the national research data infrastructure (NFDI) and its European counterpart EOSC.

HMC is a cornerstone in the exploitation of Helmholtz' data treasures. Enabling FAIR data across the association unlocks the potential of the diverse datasets and enables new and innovative science across all research areas. One essential component of HMC is the funding of projects that initiate and underpin the growing metadata network within the Helmholtz Association. These projects should initiate new developments, extend existing solutions for the usage in the HMC context, expand the HMC network, and enable new cross-discipline collaborations.

2. Objectives

The objective of this Call for HMC Projects is to initiate and facilitate activities that address practical challenges in the **field of metadata generation and data enrichment**. The call aims at funding promising collaborative projects with the potential to being integrated into the wider HMC framework at the end of the project's lifetime.

Hence, first practical results and promising prototypes are expected in Q1/Q2 of 2023, i.e. one year after the funding starts. The results shall underpin and stimulate the growing HMC network. As part of this, results shall be presented at an HMC implementation workshop, scheduled for Q1/Q2 2023. To ensure the project's link to HMC hubs, we encourage all applicants to contact HMC hubs when considering a proposal submission (see below for contacts).

3. Goals of project call

A HMC project addresses one or more of these three overarching goals:

- further metadata generation with interoperable metadata standards, vocabularies and/or ontologies
- adopt or develop tools for data enrichment, e.g. automated metadata generation for recording dataset descriptions and workflows
- adopt or develop tools to further metadata quality assessment and metadata curation

Projects need to show the potential impact on science, its data services and communities. Further, projects should demonstrate the potential for being integrated into the wider HMC framework at the end of the project's lifetime. This includes links to respective infrastructures at participating Helmholtz Centres and includes impact on research data curation practices in the respective domains. In summary, projects should contribute to the overall development of the emerging HMC community; and they should enable the transfer of technologies, methods and best practices within research fields or across programs (please also see 4. Criteria for more details).

4. Criteria

Projects shall be aligned with the goals formulated above. Proposals that meet the following criteria will be evaluated based on the evaluation criteria (see below).

Thematic criteria:

- a. The project must further one or more of the goals of this call
- b. The project must demonstrably support the FAIR principles

Further criteria:

- c. Budget

Projects can apply for a total volume of approximately € 400k for a running time of up to 2 years. Half of the financial volume and at most € 200k will be funded by the Initiative and Networking Fund (INF). The contribution by participating Helmholtz Centres has to be confirmed by a signed letter from the board of directors when submitting the proposal.

Staff, travel expenses and cost for consumables are eligible for funding; investments are excluded.

Funding will be provided for Helmholtz Centres only. In clearly documented cases, funding can also be provided for highly qualified university partners. The provided funds will NOT be eligible for overhead costs.

d. Duration of Projects

Projects must start as soon as possible (within 3 months) after positive formal notification by the President of the Helmholtz Association. Projects may run for no longer than two years. First deliverables/prototypes need to be presented after 12 months upon the start of the project.

e. Applicants and Eligibility

Any eligible proposal must comprise partners from at least two different Helmholtz Centres (or two AST programs respectively).

Applicants must specify a coordinating centre and person. Coordinators can only lead three projects, but can participate in multiple other project proposals.

Proposals submitted for this call must not have been submitted to another funding line of the Helmholtz Association or any other funding line.

Revised resubmissions of previously unsuccessful HMC project proposals must be accompanied with a brief description of changes applied in the appendix (max. 1 page).

Employees of HMC, people who provide substantial support to HMC this project call are not permitted to submit a project proposal. This includes members of the HMC collaboration board, the steering board and the scientific advisory board.

Project applicants are strongly encouraged to contact their relevant HMC hub for advice and discussions during the application phase.

f. Format

A proposal **MUST** be submitted **as a single PDF file** and formatted as follows:

- single PDF file
- Page format: A4 (portrait format)
- Font: Arial, 12pt
- Line spacing: 1.5, Border Top/Left/Right/Bottom 2.5/2.5/2.5/2.0cm
- Language: English
- Budgets: EUR x00.000,00
- References: Harvard Citation Format

g. Exclusion Criteria

Proposals will be rejected by the following arguments:

- Extensions of existing projects cannot be funded.
- Deadline for submission was not met or the submission is incomplete.
- Guidelines for budget, duration, applicants and eligibility, proposal content, format, and/or length were not followed entirely.

5. Rights and Obligations

1. During the funding period, project partners can participate in HMC events (e.g. training offers, seminars, workshops).
2. During the funding period, project partners commit to participate in HMC's cross-field activities, such as progress workshops, method exchange workshops or hackathons, and to present their results.
3. The results of an HMC Project are to be made available to the HMC and Helmholtz community. This means, e.g., that software and algorithms must be open source (complying with an OSI approved license) and methods, reference data, reports and publications of the project results must be open access.
4. Funded projects commit to acknowledging financial support through the HMC projects funding line in any published output.
5. Funded projects commit to share short updates about ongoing projects (e.g. on the HMC website and associated social media channels) regularly.
6. Funded projects shall be in regular contact with their respective HMC Hub for subject-specific exchange and integration into the community.
7. Bi-Annually and at the end of their respective funding period, all projects will submit a short written (final) report demonstrating progress and results (referencing deliverables) to the HMC Collaboration Board and the HMC Steering Board. Further, short reports can be requested. These reports form part of the general reporting of the HMC platform.

6. Proposal Submission and Structure

To submit a proposal please use our submission system at <https://proposals.helmholtz-metadaten.de/> .

The Proposal consist of three sections:

Section 1: additional information (will be submitted only via the online submission tool):

- Cover Page
 - Abstract (English, max. 1000 characters incl. blanks)
 - up to 10 keywords
 - project duration (max. 24 months)
 - requested INF-funding (max. 200.000,00€)
 - matching funds
 - Names and contact information of principal investigator(s)
 - Names of participating centres and external partners

Section 2: Proposal (main body maximum 6 pages in total including figures, excluding the appendices, template is provided):

- Project title and acronym
- State of the research field
- Objectives
- Approach

- Expected Results
- Expected impact and link to HMC
 - Incl. sustainability beyond project lifetime
- Implementation and management
- Result handling

Section 3: Appendices (templates are provided)

- References (max 2 pages)
- Work plan, Gantt Chart, and milestones
- Brief description of proposed staffing incl. timeline
- Detailed budget plan (personnel, consumables): use both templates Annex 2a and 2b
- If applicable: Revised resubmissions of previously unsuccessful HMC project proposals must be accompanied with a brief description of changes (max. 1 page, to be inserted in the appendix).
- A list of independent experts as potential reviewers can be provided. The proposed experts need to be unbiased.
- Confirmation letter by all Helmholtz Centres involved concerning the co-funding provided. The confirmation letter needs to be signed by the board of directors (scientific and administrative director) of the respective centre.
- Brief CVs of the principal investigators and potential staff members.

7. Evaluation Process and Selection

Proposals are subject to the following evaluation procedure. Proposals are checked with regard to formal requirements. Proposals are evaluated by a panel of independent experts (no presentation), on the basis of the evaluation criteria listed below. For all proposals at least two external reviews will be solicited. The panel performs a pre-assessment of all proposals (all proposals subject to the pre-assessment will also be assessed in the panel meeting). Based on this evaluation, the panel will recommend a list of projects for funding. The president will review the list of ranked proposals and decide which projects shall be funded.

Staff at the Helmholtz Association's Head Office and Helmholtz Metadata Collaboration's administrative office will jointly manage the evaluation procedure and the handling of proposals. The Head Office will manage the evaluation meeting. The HMC collaboration board members and HMC steering board members will have no access to submitted proposals or assessments at any stage during the evaluation procedure. They will not contact the panel of experts.

8. Evaluation Criteria

Novelty and innovative character	<ul style="list-style-type: none"> • Potential to open new and sustainable pathways in handling data and with that enabling new science • Clarity of the objective and extent to which the proposed project addresses one or more of the call's goals • Extent to which proposal is beyond the current state of the art in the respective community
Impact on tools/services in domain, Helmholtz and HMC	<ul style="list-style-type: none"> • Extent to which the output(s) of the project would contribute to advance the development/implementation/use of tools/services in the domain, Helmholtz and HMC • Extent to which the outputs are reusable and adaptable by other communities/centres • Extent to which the expected project outcome addresses a specific demand by a community
Impact on community building in domain, Helmholtz and HMC	<ul style="list-style-type: none"> • The potential to contribute to establishing and strengthening a long-term cooperation between the partners • Potential to cross-fertilize other developments and to enable transfer to multiple communities, research fields, HMC... • Potential to impact, advance and harmonize RDM practices and community in the domain/hub/HMC
Quality and efficiency of the implementation	<ul style="list-style-type: none"> • Quality and effectiveness of the work plan • Complementarity of the partners and balance of expertise to achieve the goal • Readiness of proponents to commence the project within the timeline indicated in the call

The criteria are given in descending order of importance.

9. Inquiries

For **formal questions** concerning this call, please write to ***hmc-proposals@geomar.de*** to reach the HMC Office and the Helmholtz Association's Head Office.

For topic-related questions please contact your relevant HMC Hub at:

AST	Witold Arndt, DLR, phone: +49 2203 601 5429, email: witold.arndt@dlr.de
Earth and Environment	Dr. Emanuel Söding, GEOMAR, phone: +49 431 600 4256, email: esoeding@geomar.de
Energy	Dr. Wolfgang Suess, KIT, phone: +49 721 608 25722; email: wolfgang.suess@kit.edu
Health	Prof. Dr. Klaus H. Maier-Hein, DKFZ, phone: +49 6221 42-2327, Email: k.maier-hein@dkfz-heidelberg.de
Matter	Dr. Oonagh Mannix, HZB, phone: +49 30 8062 12539, email: oonagh.mannix@helmholtz-berlin.de
Information	Dr. Volker Hofmann, FZJ, phone: +49 241 927803 21, email: v.hofmann@fz-juelich.de

10. Timeline

Date	Event or Action
07 June 2021	Announcement of the HMC Project Call 2020. Submissions are accepted via https://proposals.helmholtz-metadaten.de/
16 August 2021	Application deadline
August-October 2021	Proposals are checked for compliance with the formal criteria and scored by panel members according to award criteria
November 2021	Assessment by the panel members and funding decision made by the president
December 2021- January 2022	Funding contracts between Helmholtz Association and submitting centre are being drawn up
February-April 2022	Start of HMC Projects

11. Annexes

- Annex 1: Proposal template for proposal submission
- Annex 2a and b: Templates for budget tables
- Annex 3: Template for Gantt Chart
- Annex 4: Template for CV
- Annex 5: Conflict of interest for suggested reviewers
- Annex 6: Data protection information

12. Glossary

AST	Research field Aeronautics, Space and Transport conducted by DLR.
EOSC	The European Open Science Cloud (EOSC) is a trusted digital platform for the scientific community.
FAIR	The FAIR Data Principles are a set of guiding principles in order to make data findable, accessible, interoperable and reusable (Wilkinson et al., 2016).
HMC	Helmholtz Metadata Collaboration
INF (IVF)	Initiative and Networking Fund (Impuls und Vernetzungsfond), a Helmholtz funding scheme.
NFDI	National Research Data Infrastructure (Nationale Forschungsdateninfrastruktur), a national funding scheme.
RDM	Research Data Management