

Research Software at Helmholtz - tying up different knots

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Helmholtz Association

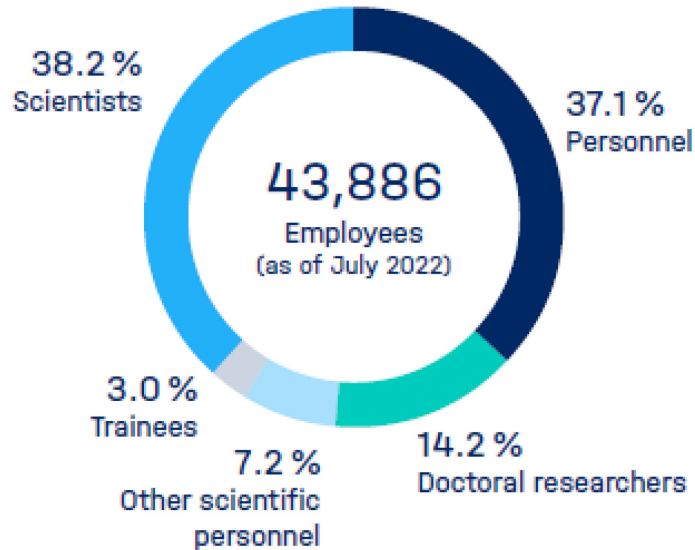
Helmholtz Open Science Office

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Helmholtz Association

18 independent Helmholtz Centers



<https://www.helmholtz.de/en/about-us/helmholtz-centers/>

6 Research Fields

Energy

Earth and
Environment

Health

Information

Aeronautics,
Space and
Transport

Matter

Working Group (Arbeitskreis) Open Science

- Helmholtz Working Groups (Arbeitskreise)
 - Formal founding process
 - All centers are represented (ideally)
 - Work autonomously
 - Have a liaison form the executive level
 - Products
 - Exchange / networking
 - Recommendations / guidelines
 - Recommendations / guidelines may be picked up by individual centers or the Helmholtz Assembly
- [Working Group Open Science](#)
 - [Task Group Research Software](#)



- Corresponding Helmholtz Working Groups ..
 - Libraries and Information Management
 - Technologietransfer und Gewerblicher Rechtsschutz
 - IT-Koordinierungsausschuss
 - Knowledge Transfer
 - Nachhaltigkeit

The Helmholtz Incubator

- Started in 2016
- Outstanding experts from all the Helmholtz Centers come together in this think tank and promote pioneering research through innovative projects and initiatives.

Helmholtz
Information & Data
Science Academy
(HIDA)

Helmholtz AI

Helmholtz Imaging

Helmholtz Federated
IT Services (HIFIS)

Helmholtz Metadata
Collaboration (HMC)

Helmholtz Data
Federation (HDF)

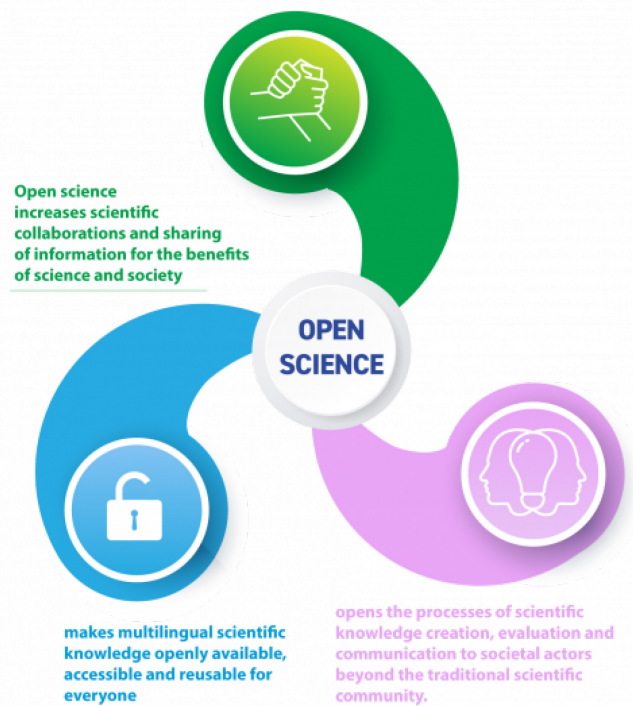
Task Group Research Software

- Started in 2016
- The Task Group Research Software of the Helmholtz Association's Open Science Working Group is dedicated to the topic of Open Research Software and addresses the following aspects, among others:
 - Topics
 - Incentives and metrics
 - Software development and documentation practices
 - Accessibility, publication and transfer strategies
 - Infrastructures
 - Archiving
 - Quality assurance
 - Licensing and other legal issues
 - Education and training
 - Guidelines and directives
 - Products
 - Model Policy on Sustainable Software at the Helmholtz Centers
 - Recommendations for the Implementation of Guidelines and Policies on Research Software Management at the Helmholtz Centers
 - Dealing with research software: Recommendations for best practices
 - Position Paper: Access to and Reuse of Research Software
 - 5 Helmholtz Open Science Fora “Research Software”

Open Science

Open Science

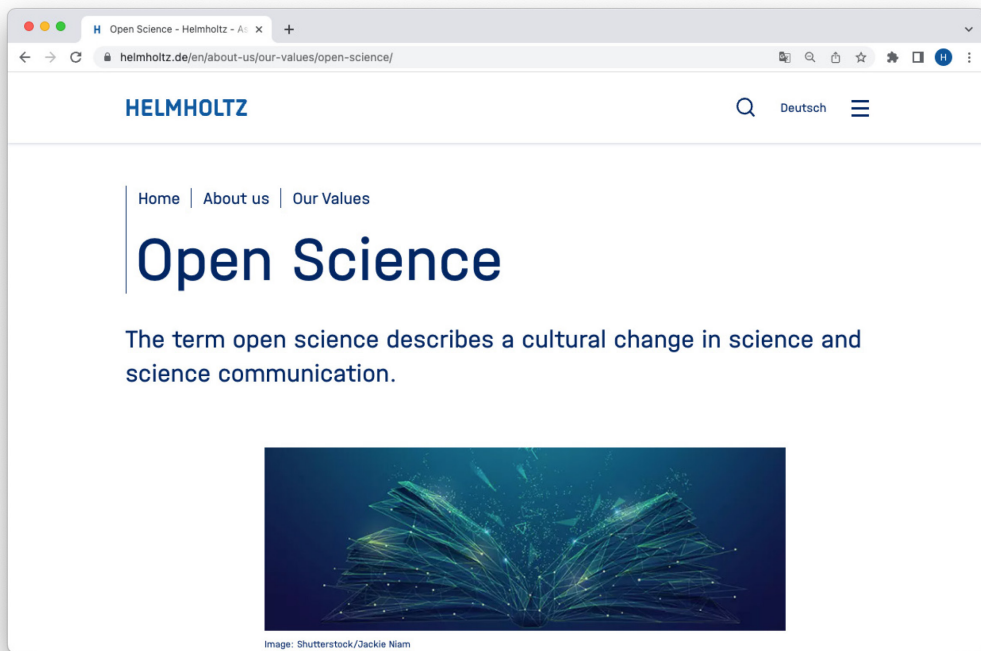
- Cultural change in scientific working methods, organization, and communication.
- Consistently employs digitization to make all components of the scientific process (publications, research data, research software, etc.) open, traceable, reusable, and accessible to everyone (in terms of reducing technical, legal, and financial hurdles).
- Expands transparency and the possibilities for quality assurance, increases the performance of science, and promotes innovations based on scientific findings.
- The development of open science differs in levels of extent in the research fields of Helmholtz, depending on the discipline and respective publication culture.



Source: [UNESCO](https://www.unesco.org/en/open-science)

Open Science

- Open Science is an important cross-cutting topic with numerous points of contact
- In the Centers:
 - Digital transformation, research infrastructures, libraries, data centers, transfer, sustainability, Citizen Science, etc.
- In the entire Association:
 - Digital transformation, KPIs, incubator platforms, Initiative and Networking Fund, transfer, etc.

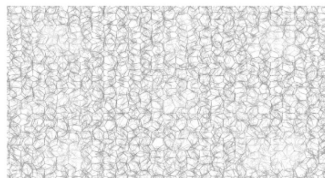


<https://www.helmholtz.de>

Open Science at Helmholtz

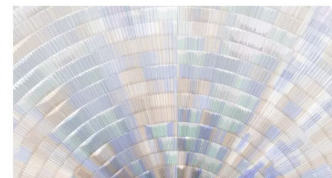
- Our core topics
 - Open Access – access to and re-use of scientific text publications
 - Open Research Data – access to and re-use of research data
 - Open Research Software – access to and re-use of research software
 - National and international network concerning open science

Our Core Topics



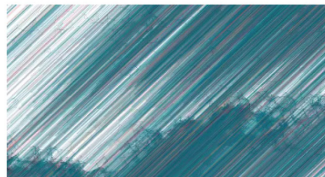
Open Science in Helmholtz

The mission of the Helmholtz Open Science Office is to promote the cultural change towards open science. Guided by the motto "Enabling open science practices in Helmholtz!" the Helmholtz Open Science...



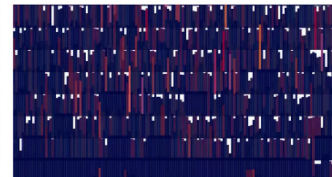
Open Access

For open access, one of the Helmholtz Open Science Office's key endeavours is the promotion of the transformation from subscription-based access to open access.



Open Research Data

The Centers of the Helmholtz Association conduct data-



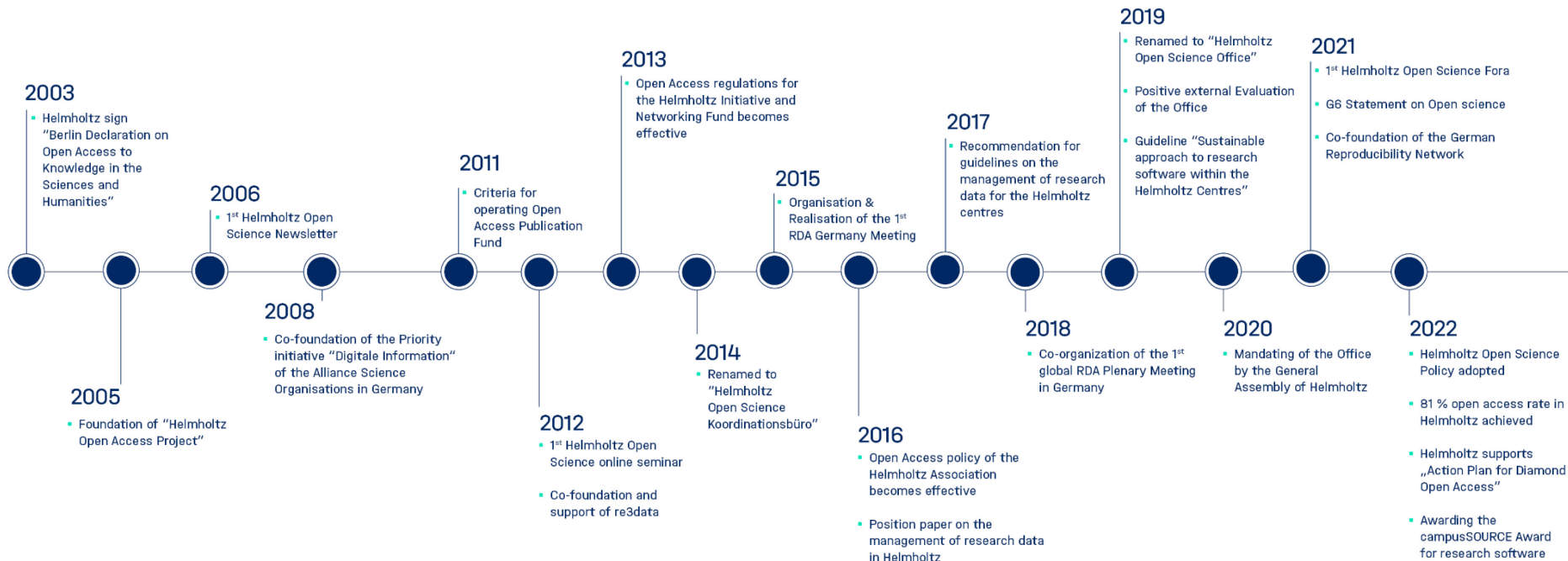
Open Research Software

While open science calls for accessibility and reuse of

<https://os.helmholtz.de>

Helmholtz Open Science Office

Milestones

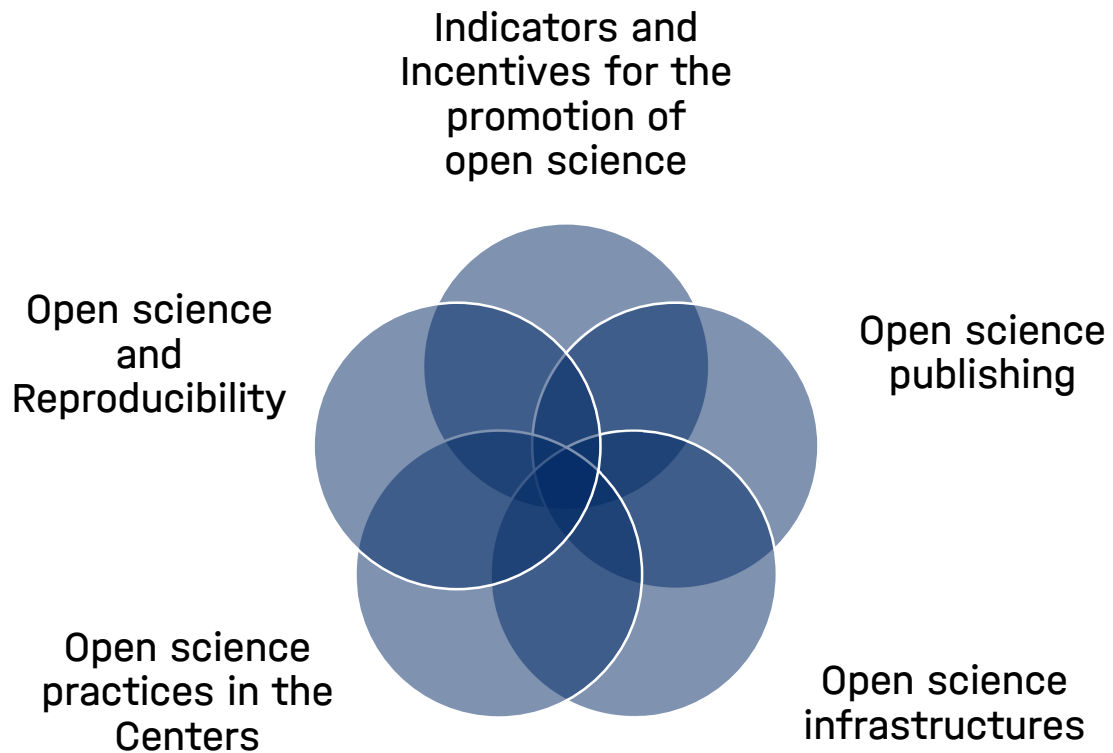


Enabling Open Science practices at Helmholtz

- The Helmholtz Open Science Office
 - is a service provider for the Association for the cultural change “from closed to open”.
 - promotes dialogue and provides impulses within the Association.
 - offers information and support concerning all aspects of open science.
 - cooperates with the Centers in the Open Science working group and in joint task groups.
 - delivers a key contribution to the digital transformation.
 - represents Helmholtz positions on open science on a national and international level.

HELMHOLTZ
Open Science

Focus topics 2023/2024



Helmholtz Open Science Fora

- As part of the Helmholtz Open Science Fora, the Helmholtz Open Science Office communicates important developments in the field of open science to the Association and the Centers.
- **Selection**
 - [EOSC](#)
 - [Helmholtz in the National Research Data Infrastructure \(NFDI\)](#)
 - [Indicators for Open Science](#) (German only)
 - [Open Science and Transfer](#)
 - [Publication Cost Management](#)
 - [Research Evaluation](#)
 - [Research Data Management](#)
 - [Research Software](#)
 - [Scholar-led Publishing at Helmholtz](#)

National and International Network

- Selection of current partner organizations
 - [Alliance of the German Science Organizations: Priority “Digitality in science”](#)
 - [Coalition for Advancing Research Assessment \(CoARA\)](#)
 - [Community building for research data repositories at Helmholtz](#)
 - [Confederation of Open Access Repositories \(COAR\)](#)
 - [Deutsche Initiative für Netzwerkinformation \(DINI\)](#)
 - [European Association of Research and Technology Organisations \(EARTO\)](#)
 - [German Reproducibility Network \(GRN\)](#)
 - [National Research Data Infrastructure \(NFDI\)](#)
 - [Network G6](#)
 - [PREMIER](#)
 - [Research Data Alliance \(RDA\)](#)
 - [RDA Deutschland](#)

Projects of the Helmholtz Open Science Office

The Helmholtz Open Science Office participates in relevant third-party funded projects:

- Currently these are:
 - BASE4NFDI funded project: [PID4NFDI](#)
 - BMBF funded project: [open-access.network](#)
 - DFG funded project: [PID Network Deutschland](#)
 - DFG funded project: [re3data COREF](#)
 - DFG funded project: [Transform2Open](#)
- [Completed projects](#) are
 - Alliance Permanent Access to the Records of Science in Europe Network (APARSEN)
 - [DeepGreen](#)
 - Ecosystem Data Management ([EcoDM](#))
 - Opportunities for Data Exchange (ODE)
 - Options4OA
 - [ORCID DE](#).

- E-Mail: open-science@helmholtz.de
- Mastodon: [@HelmholtzOpenScienceOffice@helmholtz.social](https://helo.social/@HelmholtzOpenScienceOffice)
- Website: <https://os.helmholtz.de>
- Mailing list for members of Helmholtz:
[Helmholtz Open Science Professionals](#)
- [Helmholtz Open Science Newsletter](#)



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