

## “Enabling open science practices in Helmholtz!”

Spotlight from the perspective of a Research  
Performing Organization

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# Helmholtz Research Mission and Strategy

## Research for Grand Challenges

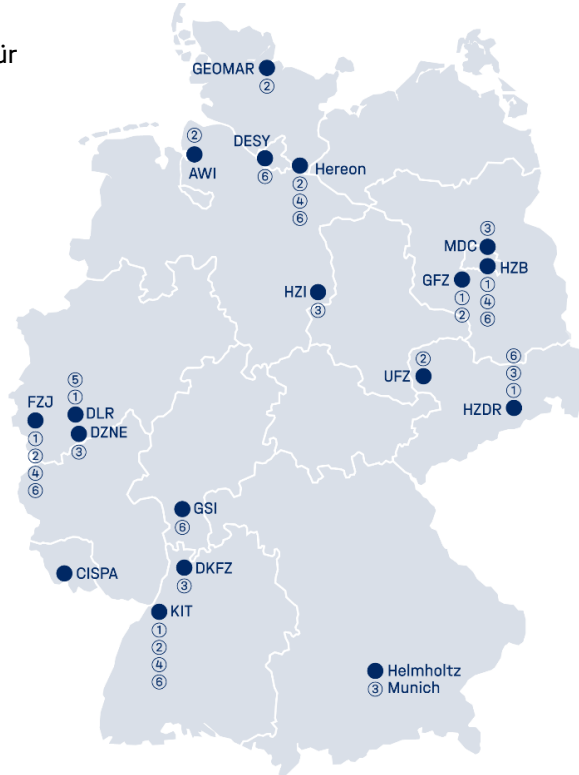
- Systems solutions for **grand challenges** based on:
  - Scientific excellence,
  - Interdisciplinarity and critical mass,
  - Long term research programs.
- Helmholtz provides a highly attractive environment for talents and brilliant brains.
- Profound expertise in large scale research infrastructure.
- Helmholtz as a prime strategic partner at the local, national and international level.
- Transfer of knowledge into economy and society.



# Helmholtz research centers

## 18 centers in 6 Research Fields

- Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (AWI)
- CISPA - Helmholtz Center for Information Security
- Deutsches Elektronen-Synchrotron DESY
- Deutsches Krebsforschungszentrum (DKFZ)
- Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE)
- German Aerospace Center (DLR)
- Forschungszentrum Jülich (FZJ)
- GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel
- GSI Helmholtz Center for Heavy Ion Research
- Helmholtz Munich



- Helmholtz-Zentrum Berlin für Materialien und Energie (HZB)
- Helmholtz Center Dresden Rossendorf (HZDR)
- Helmholtz Center for Infection Research (HZI)
- Helmholtz Center for Environmental Research - UFZ
- Helmholtz-Zentrum Hereon
- GEOMAR Helmholtz Center for Ocean Research Kiel
- Helmholtz Center Potsdam - German Research Center for Geosciences GFZ
- Karlsruhe Institute of Technology (KIT)
- Max Delbrück Center for Molecular Medicine in the Helmholtz Association (MDC)

### Research Fields:

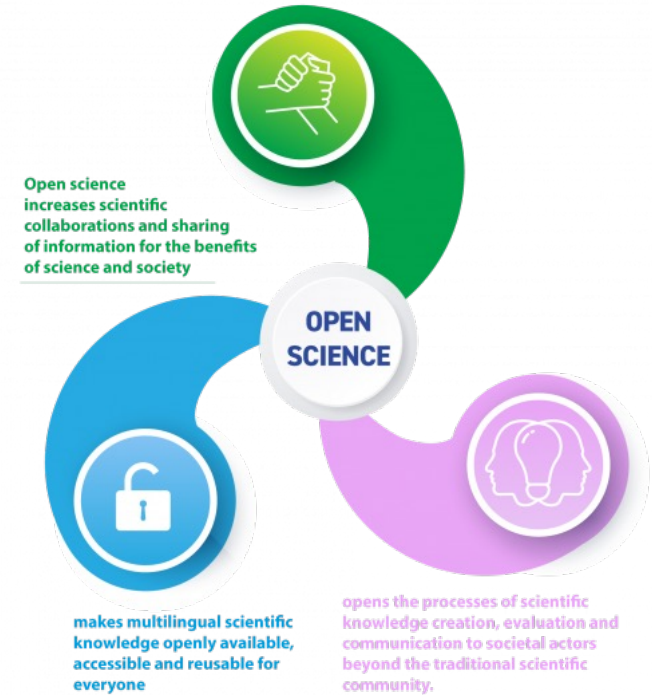
(1) Energy, (2) Earth and Environment

(3) Health, (4) Information

(5) Aeronautics, Space and Transport, (6) Matter

# 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 the Helmholtz Association, depending on the discipline and respective publication culture.



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

# Helmholtz Open Science Office: Mission

## Enabling Open Science practices in 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 **training** 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.

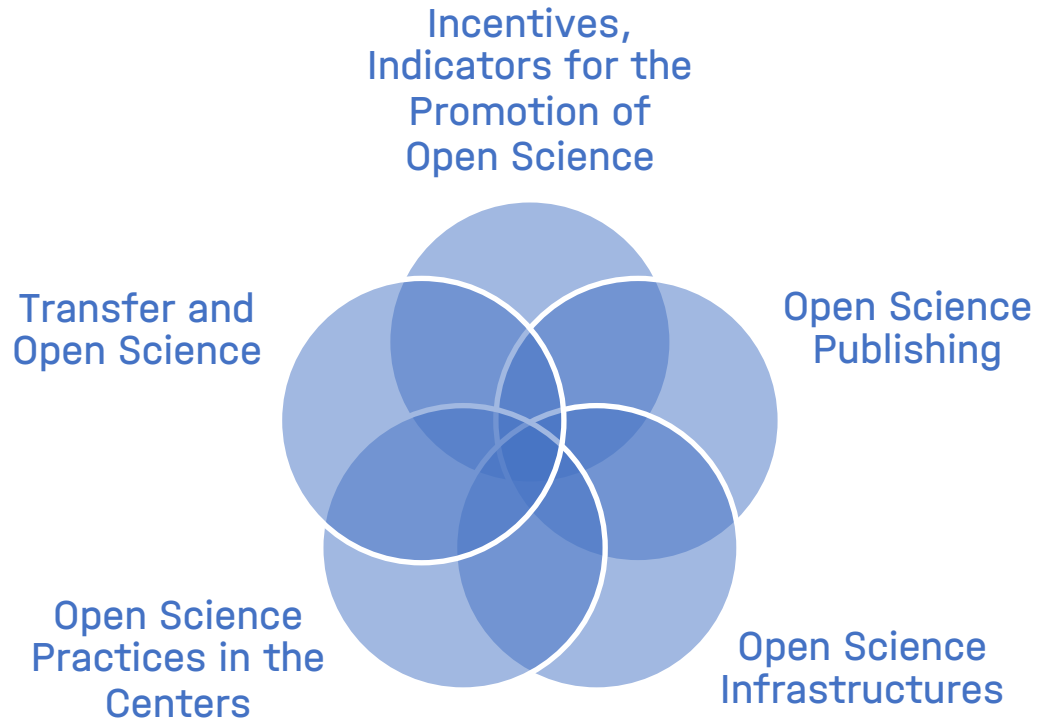
# HELMHOLTZ

## Open Science

# Open Science within a Research Performing Organization

## Helmholtz Open Science Focus Topics for 2022/2023

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



# Open Access

- Promotion of the transformation from subscription to open access.
- Open Access Green and Open Access Gold are implemented as equal strategies.

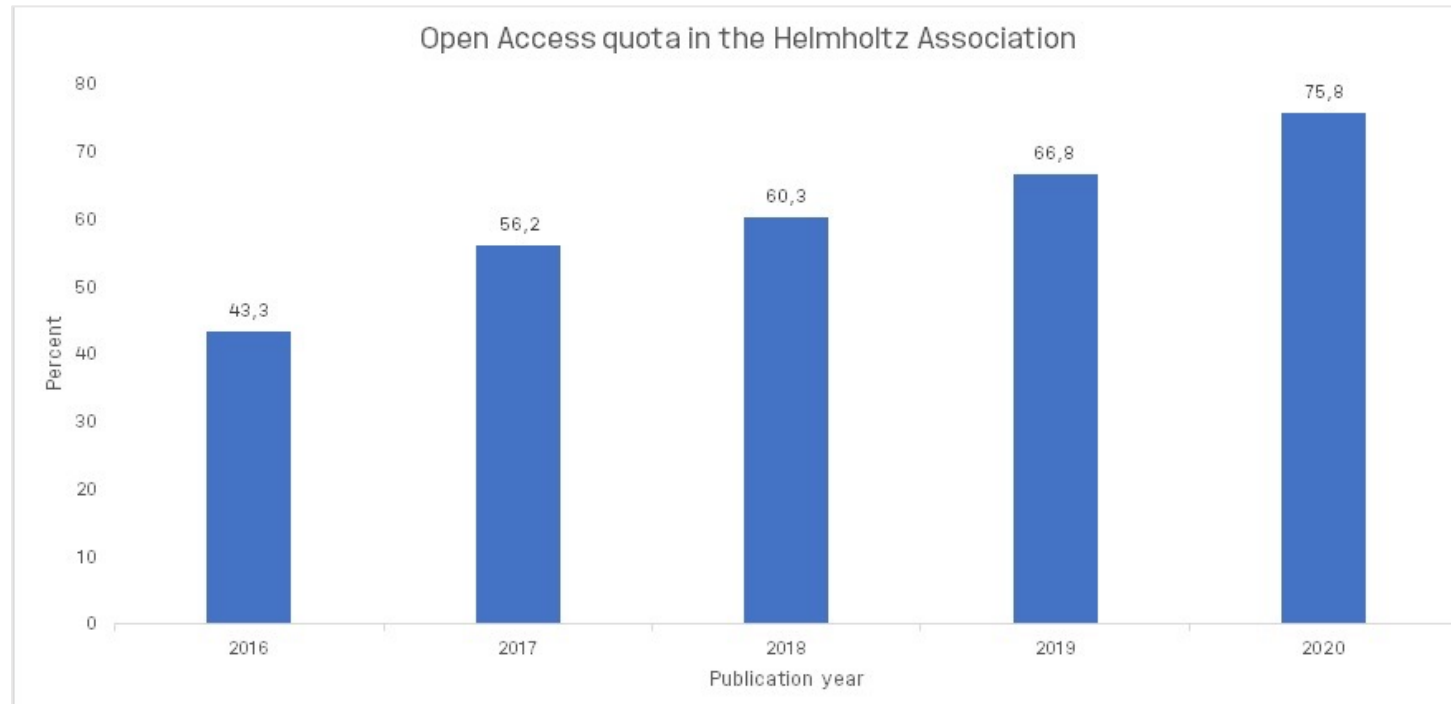


- Diverse and distributed infrastructure of open access repositories.
- Participation in disciplin-specific open access infrastructures (e.g., [Inspire HEP](#)).
- Co-financing of central open access infrastructures (e.g., [arXiv.org](#)).



- Framework agreements for the financing of Open Access internationally (e.g., [SCOAP<sup>3</sup>](#)).
  - Framework agreements for the financing of Open Access nationally (e.g., [Projekt DEAL](#)).
  - Framework agreements for the financing of Open Access in Helmholtz (opt-in contracts).
  - Self-publishing activities at the Centers (e.g., [KIT Scientific Publishing](#)).
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- Monitoring:
    - National [Open Access Monitor](#) at Forschungszentrum Jülich
    - Monitoring in Helmholtz

# Increasing Open Access Quota





# Open Research Data

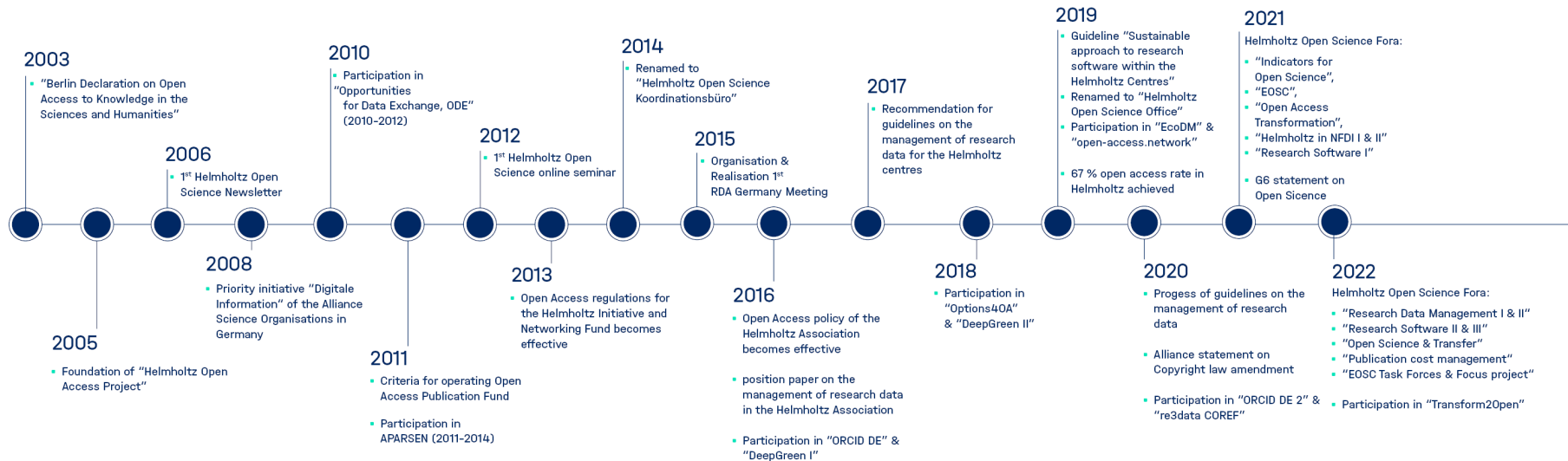
- The Helmholtz Association is leading in generating, managing and providing access to [research data](#).
- In 2016, the Helmholtz Association adopted a [position paper](#) with the title “[Making information resources more usable](#)” on the handling of research data.
- In 2017, the Helmholtz Association adopted the [Recommendations for guidelines of the Helmholtz centers for handling research data](#) which guides the Centers in the formulation of their respective [Research Data Policies](#).
- The Helmholtz Open Science Office promotes the [coordination of the Centers](#) and supports them in [developing policies and related practices](#) in handling digital research data; esp. concerning the utilization of the [FAIR principles](#) in Helmholtz.
- The work of the Helmholtz Open Science Office thus complements the developments of platforms in the [Helmholtz Incubator](#).
- Numerous consortia of the [National Research Data Infrastructure \(NFDI\)](#) are being implemented with substantial Helmholtz participation.

# Open Research Software

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- The topic of Open Research Software continues to gain importance; while open science calls for **reuse** and **reproducibility** of scientific results, in many research areas, this can only be ensured if **source code** is made openly accessible in addition to the corresponding research data.
- At the Helmholtz Centers, various research software initiatives are currently being implemented.
- Works:
  - 2017: position paper [Access to and re-use of research software](#)
  - 2019: [Model Policy on Sustainable Software at the Helmholtz Centers](#)
  - 2021: [Checklist for the Implementation of Software Policies at the Helmholtz Centers](#) (German only)
  - 2022: Contribution to the campusSOURCE Award 2022 for research software.

# Milestones



# Indicators and Research Assessment

- The goal is to develop incentives and indicators to promote open science at Helmholtz.
- The ongoing discussion process to anchor open science in the process of research evaluation at Helmholtz needs to be further accompanied in order to develop indicators and incentives for open science in the areas of open access, open research data, and open research software.

## Task Group Helmholtz Quality Indicators for Data and Software Products

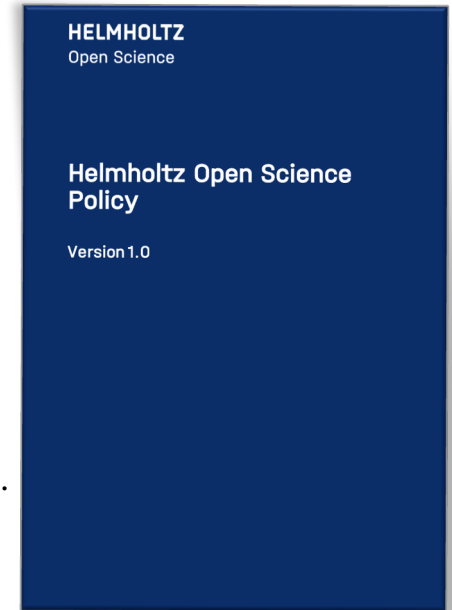
### Goals of the Task Group

The Task Group Helmholtz Quality Indicators for Data and Software Products of the Working Group Open Science of the Helmholtz Association is dedicated to the development of Helmholtz Quality Indicators for Data and Software Products.



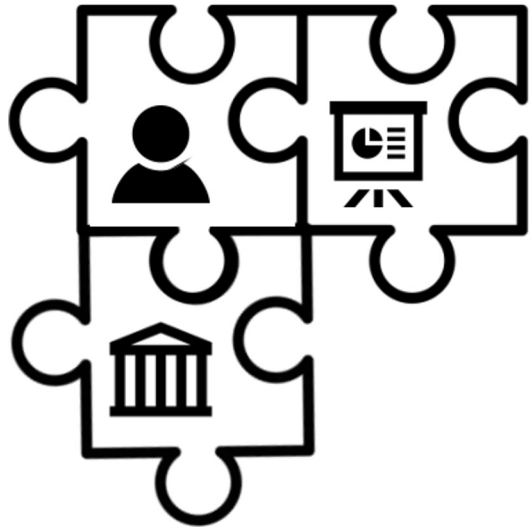
# Helmholtz Open Science Policy

- The Helmholtz Association's General Assembly adopted an Open Science Policy in September 2022.
- The policy stipulates that scientific articles, research data and research software are to be published openly. Open Science thus becomes the standard of publication practice.
- The present Helmholtz Open Science Policy is organized into three sections:
  - In the section "A. Strategic Positioning," the Helmholtz Association formulates a commitment to open science in accordance with the principle "as open as possible and as closed as necessary."
  - In the section "B. Monitoring," Helmholtz makes a commitment to open science on the basis of the three current focus areas through specific and verifiable objectives.
  - In the section "C. Implementation and Common Requirements," in line with the funding policy of the European Commission, open science practices are formulated for implementation purposes.
- Available at: <https://os.helmholtz.de/open-science-in-helmholtz/open-science-policy>



# Synergies and Collaboration

## Enabling Open Science Practices

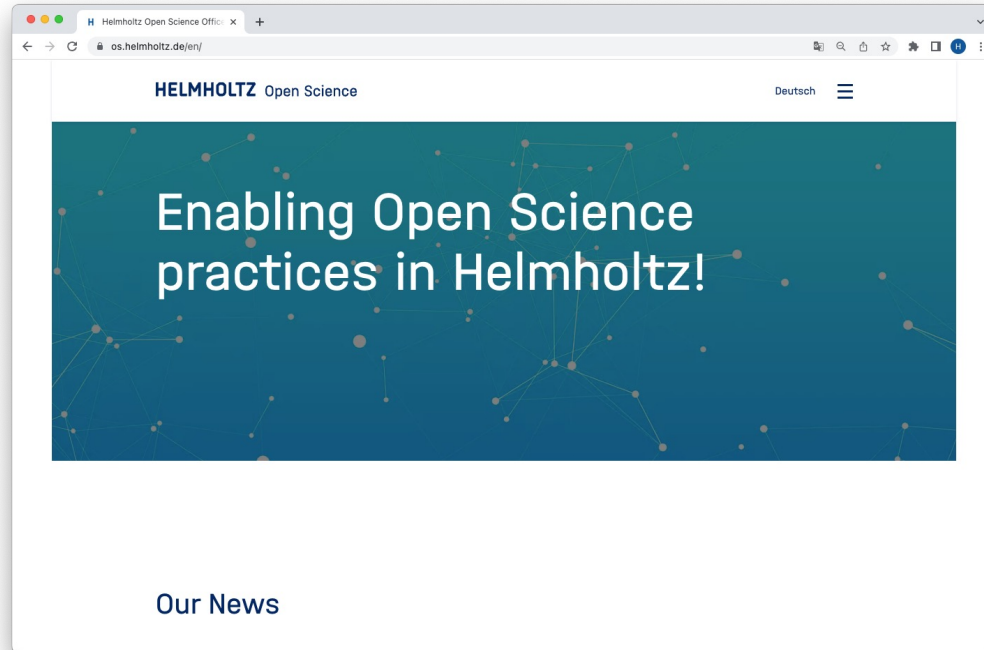


- **Open Science** - Cultural change in the scientific way of working, organization, and communication.
- **Change Process** - Adjustments of incentives and rewards system.
- **Goal** - Make science open, comprehensible, reusable, and easily accessible to everyone by providing and employing fitting infrastructures, services, support and tools (PIDs, FAIR, etc.).
- **Discussion** - How can we work together to further promote the "Open Science Culture"?

Thank you for your attention!  
Let's keep in touch...

- Email - [open-science@helmholtz.de](mailto:open-science@helmholtz.de)
- Twitter - [@helmholtz\\_os](https://twitter.com/helmholtz_os)
- Website - <https://os.helmholtz.de>
- [Open Science Newsletter](#)

# Website and Contact



Website <https://os.helmholtz.de/en> and Contact: [open-science@helmholtz.de](mailto:open-science@helmholtz.de)



# Zotero

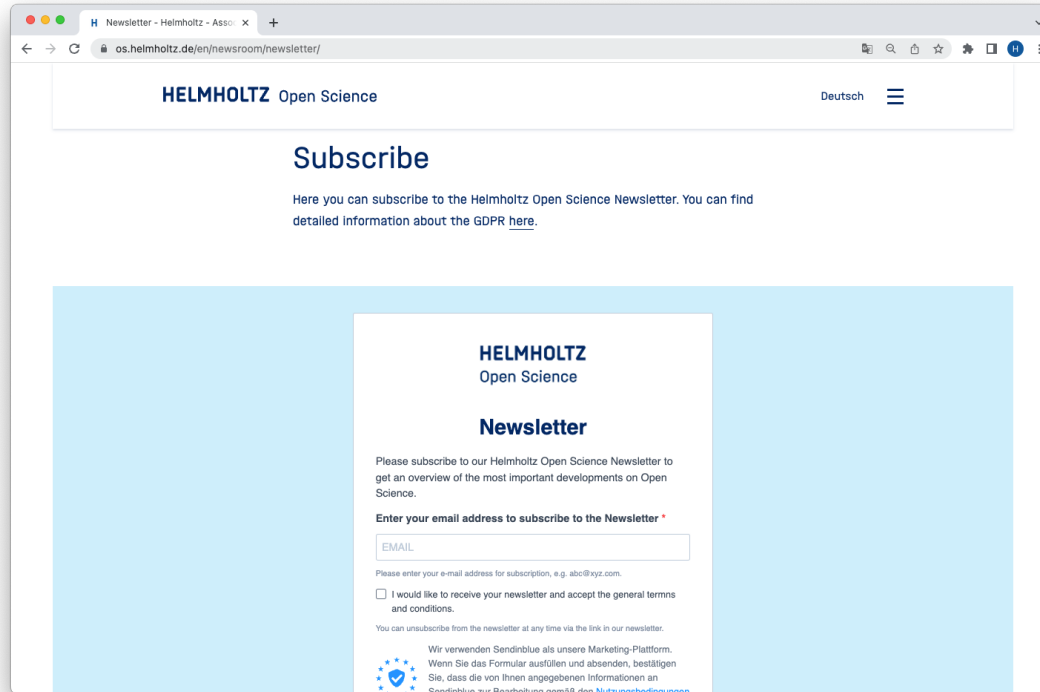
The screenshot displays the Zotero web interface for the Helmholtz Open Science Office group. The browser address bar shows the URL `zotero.org/groups/238631/helmholtz_open_science_office`. The page features a navigation bar with links for Home, Groups, Documentation, Forums, and Get Involved. A search bar is also present. The main content area is titled "Helmholtz Open Science Office" and includes a "Group Library" link. A section titled "Recently Added Items" contains a table of recent additions. To the right, there is a description of the group, its owner (Paul Schultze-Motel), registration date (2013-12-19), type (Public), and membership (Open). A "Members (36)" section shows a grid of member avatars. At the bottom, a link to the "Group Library" is provided, indicating that there are 536 items in total.

Title	Added By	Date Modified
<a href="#">Celebrating 10 Years of re3data</a>	<a href="#">Heinz Pampel</a>	29.9.2022, 15:22:17
<a href="#">Enabling Open Science practices in Helmholtz</a>	<a href="#">Heinz Pampel</a>	29.9.2022, 15:21:56
<a href="#">ORCID in Germany – A project-driven success story</a>	<a href="#">Heinz Pampel</a>	29.9.2022, 15:21:41
<a href="#">Informationsbudget — Hintergrund und Konzept</a>	<a href="#">Heinz Pampel</a>	28.9.2022, 10:04:28
<a href="#">Research Data Management as a prerequisite for Open Research...</a>	<a href="#">Heinz Pampel</a>	28.9.2022, 10:04:11
<a href="#">Persistent Identifier in Open-Access-Publikationsworkflows</a>	<a href="#">Heinz Pampel</a>	28.9.2022, 10:03:40
<a href="#">Good (Digital) Research Practice and Open Science Support an...</a>	<a href="#">Heinz Pampel</a>	28.9.2022, 09:22:09
<a href="#">Guidelines for collaborative development of sustainable data...</a>	<a href="#">lenamesserschmidt</a>	22.9.2022, 22:39:46
<a href="#">Desirable Characteristics of Data Repositories for Federally...</a>	<a href="#">lenamesserschmidt</a>	22.9.2022, 22:39:31
<a href="#">The LOTUS initiative for open knowledge management in natura...</a>	<a href="#">lenamesserschmidt</a>	22.9.2022, 22:39:17

See all 536 items for this group in the [Group Library](#).

## Helmholtz Open Science Group on Zotero

# Newsletter



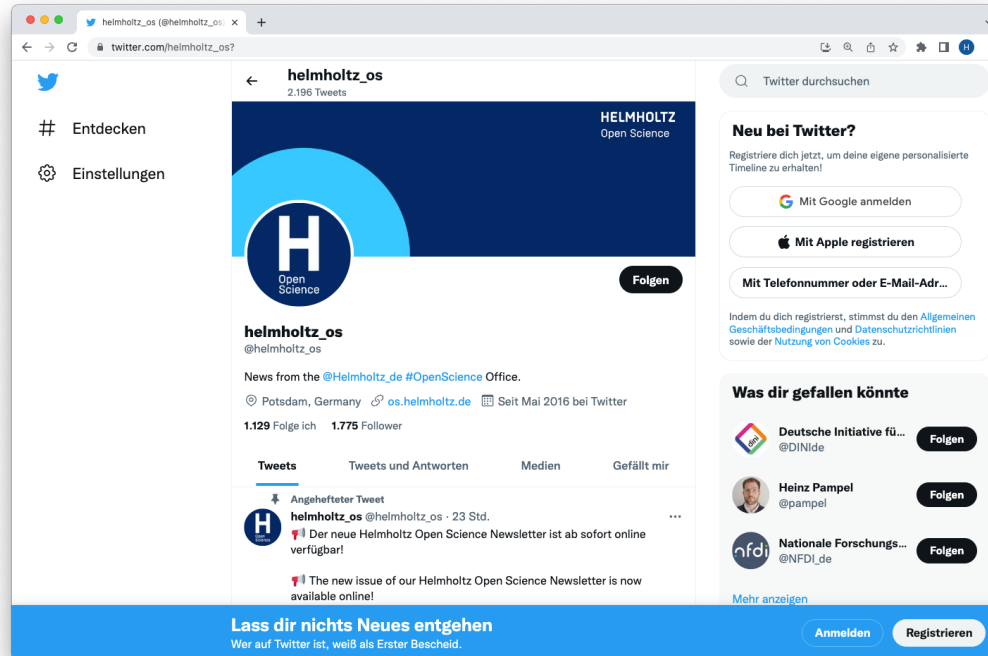
The screenshot shows a web browser window with the URL `os.helmholtz.de/en/newsroom/newsletter/`. The page header features the **HELMHOLTZ Open Science** logo and a language selector set to **Deutsch**. The main heading is **Subscribe**, followed by the text: "Here you can subscribe to the Helmholtz Open Science Newsletter. You can find detailed information about the GDPR [here](#)."

The central content area has a light blue background and contains a white box with the following elements:

- HELMHOLTZ Open Science** logo
- Newsletter** heading
- Text: "Please subscribe to our Helmholtz Open Science Newsletter to get an overview of the most important developments on Open Science."
- Text: "Enter your email address to subscribe to the Newsletter"
- Email input field with placeholder text "EMAIL"
- Text: "Please enter your e-mail address for subscription, e.g. abc@xyz.com."
- Checkbox: "I would like to receive your newsletter and accept the general terms and conditions."
- Text: "You can unsubscribe from the newsletter at any time via the link in our newsletter."
- Text: "Wir verwenden Sendinblue als unsere Marketing-Plattform. Wenn Sie das Formular ausfüllen und absenden, bestätigen Sie, dass die von Ihnen angegebenen Informationen an Sendinblue zur Bearbeitung gemäß den [Nutzungsbedingungen](#)"
- Sendinblue logo

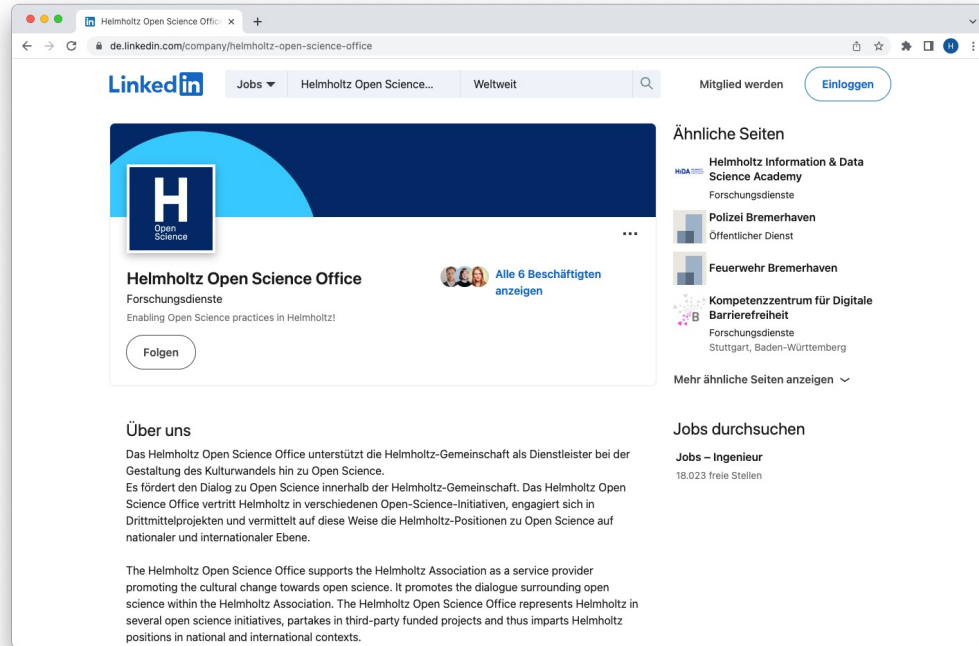
## [Helmholtz Open Science Newsletter](https://os.helmholtz.de)

# Twitter



## Helmholtz Open Science Office on Twitter

# LinkedIn



## [Helmholtz Open Science Office on LinkedIn](https://os.helmholtz.de)

# Team

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- Roland Bertelmann (Head)
- Christoph Bruch
- Lea Maria Ferguson
- Heinz Pampel (Assistant Head)
- Antonia C. Schrader
- Paul Schultze-Motel
- Nina Leonie Weisweiler

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Permalink: [https://gfzpublic.gfz-potsdam.de/pubman/item/item\\_5014729](https://gfzpublic.gfz-potsdam.de/pubman/item/item_5014729)



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