HELMHOLTZ
Open Science

Legal interoperability as part of the Helmholtz Centres' Research Data Strategies

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Expanding Legal Interoperability in Specific Data Communities
IG RDA/CODATA Legal Interoperability - RDA 11th Plenary meeting
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Contents

Six Principles on Research Data Interoperability

1. Facilitate the lawful access to and reuse of research data
2. Determine the rights to and responsibilities for the data
3. Balance the legal interests
4. State the rights transparently and clearly
5. Promote the harmonization of rights in research data
6. Provide proper attribution and credit for research data

Introduction

- The RDA-CODATA IG's Principles and Guidelines on legal interoperability of research data are focussed on ip-law issues and advocate maximum openness.

- Individual researchers or whole research organizations are regularly confronted with a situation in which they would like to make research data available for third parties while protecting certain interests at odds with full openness.

- RDA-CODATA IG legal interoperability intents to learn more about barriers against openness / legal interoperability as a basis to develop suggestions to maximize openness and legal interoperability possible in given circumstances.

Issues influencing the ability to realize openness and legal interoperability (1)

- Limitations because of statutory regulations like
  - Data protection
  - National security
- Ownership / right to control
  - Uncertainty about who has the right to decide what may be done with a certain data set.
  - Jurisdictional conflicts over what components of a dataset or datum are eligible for copyright protection
- Liability
  - Need to indemnify data depositor from legal responsibility
  - Need to place disclaimers on data quality or completeness

Issues influencing the ability to realize openness and legal interoperability (2)

- Reservation towards openness because conflicts with business models
  - Attribution - often important to prove relevance/usage of research results
    - Resistance to CC0 public domain waiver, which removes attribution as a legal requirement and places it as responsible research/ethical norm
    - Misunderstanding about how CC0 converts to CC-BY in jurisdictions with moral rights provisions in their copyright statutes
- Reservation towards openness because conflicts with other motivations to control usage
  - Assertion of right to review and prohibit ‘unacceptable’ downstream uses of data
  - Assertion of right to be notified of downstream uses of data
  - Assertion of right to authorship for downstream uses of data

Issues influencing the ability to realize openness and legal interoperability (3)

- Lack of knowledge concerning licenses
  - Misunderstanding about how CC0 converts to CC-BY in jurisdictions with moral rights provisions in their copyright statutes
  - Confusion about how different open licenses interoperate when data from different sources are combined
  - Actionability of CC-BY-NC given legal uncertainty as to what constitutes ‘commercial use’

Issues influencing the ability to realize openness and legal interoperability (4)

- Conflicting policies
  - Decisions concerning openness are often taken in circumstances with influences by several players like
  - Funder
  - Employer
  - Research community
  - Individual interests

- The situation can be further complicated if one or several players have a lack of understanding concerning who may decide what and how to achieve a desired outcome.

Helmholtz Research Centers

1. Berlin
Helmholtz-Zentrum Berlin für Materialien und Energie (HZB)

2. Berlin-Buch
Max Delbrück Center for Molecular Medicine in the Helmholtz Association (MDC)

3. Brunswick
Helmholtz Center for Infection Research (HZI)

4. Bremerhaven
Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (AWI)

5. Bonn
German Center for Neurodegenerative Diseases (DZNE)

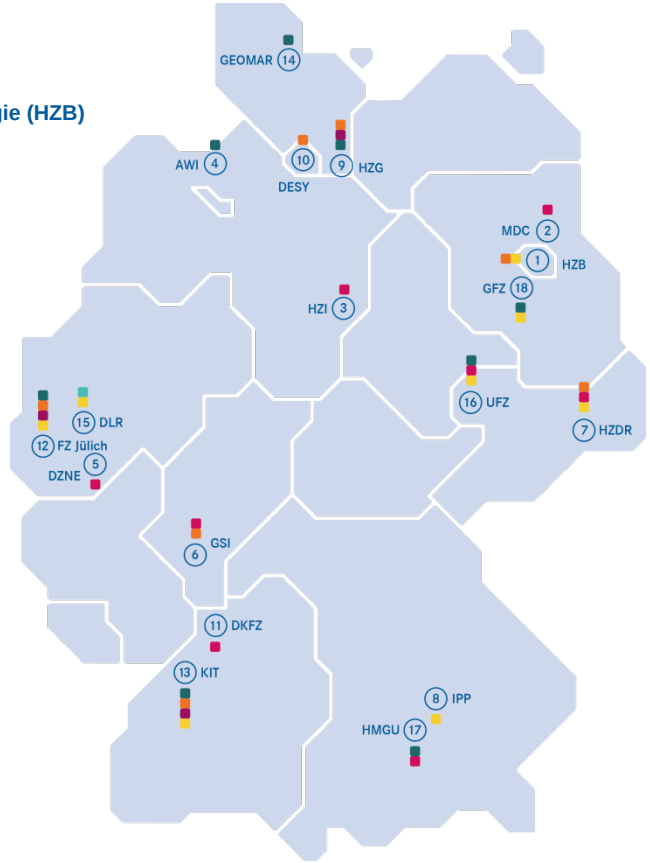
6. Darmstadt
GSI Helmholtz Center for Heavy Ion Research

7. Dresden
Helmholtz Center Dresden Rossendorf (HZDR)

8. Garching
Max Planck Institute for Plasma Physics (IPP) (Associate Member)

9. Geesthacht
Helmholtz Center Geesthacht Center for Material and Coastal Research (HZG)

10. Hamburg
Deutsches Elektronen-Synchrotron DESY



11. Heidelberg
German Cancer Research Center (DKFZ)

12. Jülich
Forschungszentrum Jülich

13. Karlsruhe
Karlsruhe Institute of Technology (KIT)

14. Kiel
GEOMAR Helmholtz Center for Ocean Research Kiel

15. Cologne
German Aerospace Center (DLR)

16. Leipzig
Helmholtz Center for Environmental Research (UFZ)

17. Munich
Helmholtz Center Munich – German Research Center for Health and the Environment

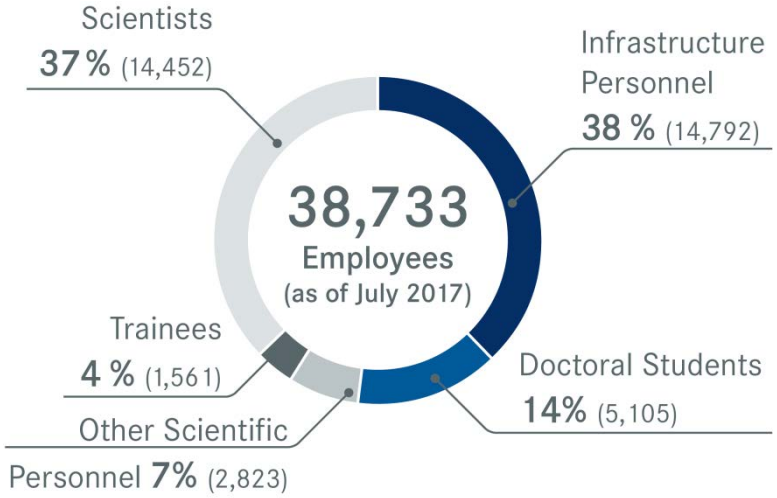
18. Potsdam
Helmholtz Center Potsdam German Research Center for Geosciences GFZ

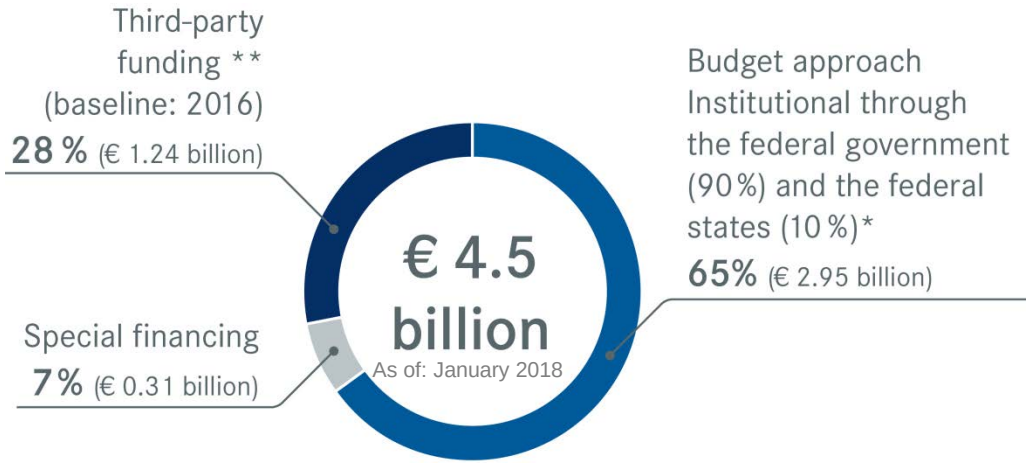
Research Areas:

- Energy
- Earth and Environment
- Health
- Aeronautics, Space and Transport
- Matter
- Key Technologies

Facts and Figures

Personnel and Students & Budget 2018





* As of 2016, the German federal government alone is financing the pact increase so that the federal government's share is over 90%.
** Including project sponsorships

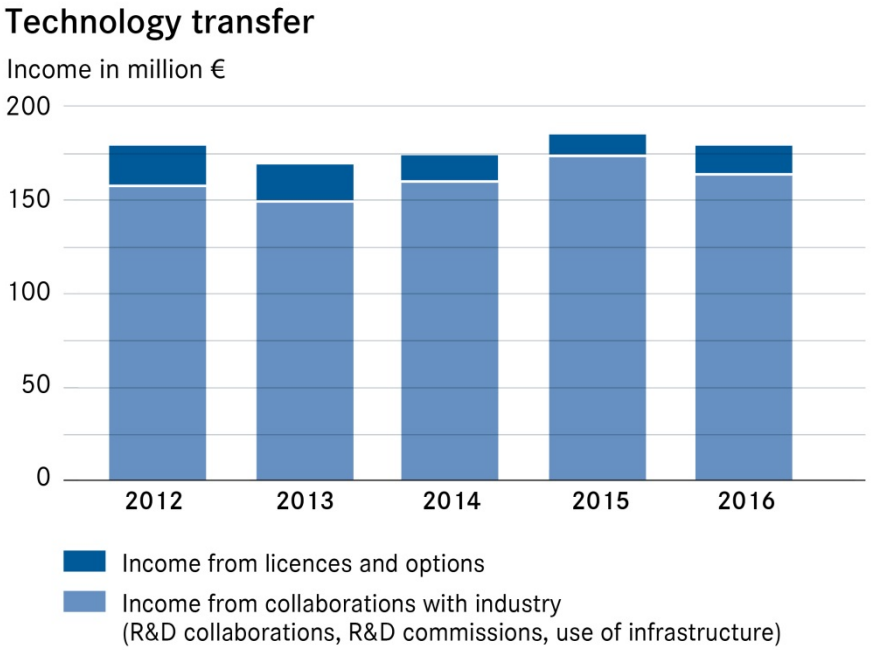
The six Research Fields

of the Helmholtz Association

Innovation and Transfer

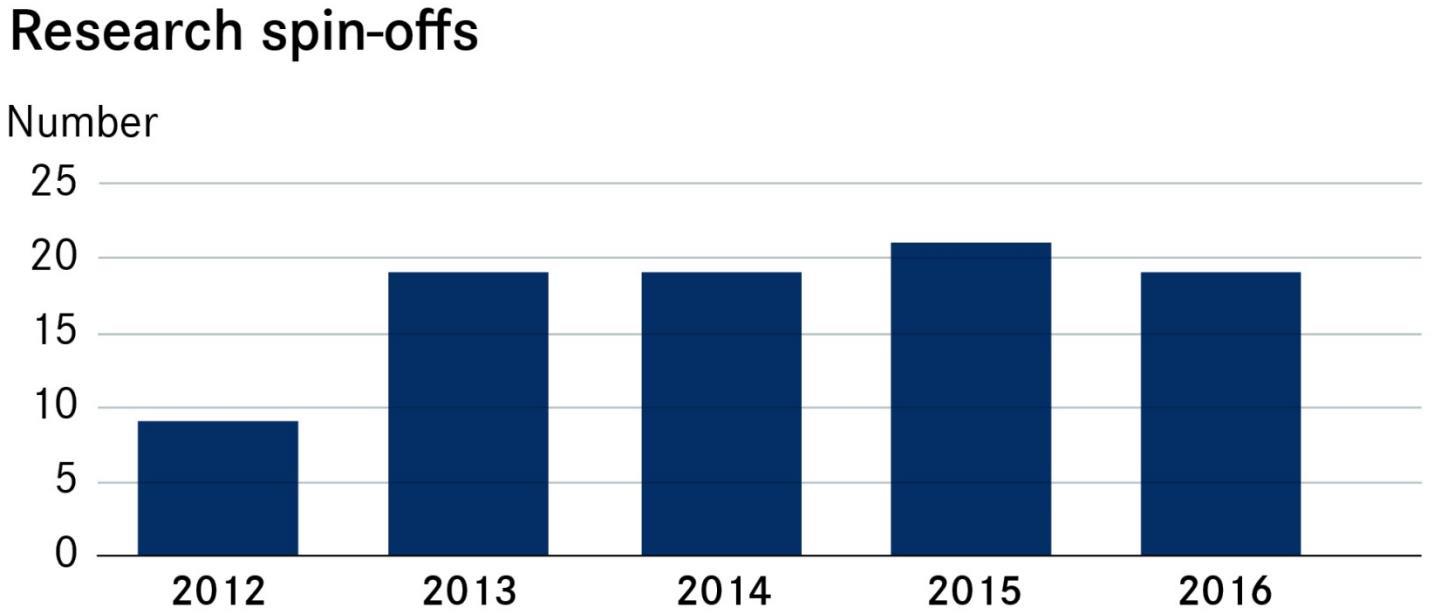
Results – Key Figures

- **158** spin-offs from 2005 to 2016
- **19** spin-offs in 2016
- Every year, more than **2,000** cooperation projects with business, with revenues of approximately €**150 million** p.a.
- More than **1,400** license agreements with almost €14 million in revenue in 2016
- Every year over **400** new patent applications
- Portfolio of **12,300** property rights, more than one third of which are licensed



Innovation and Transfer

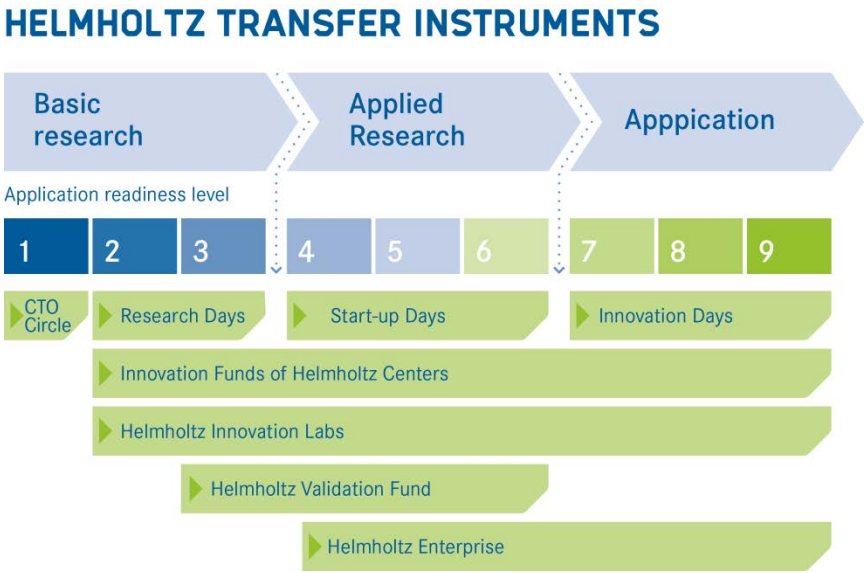
Results – Key Figures



Innovation and Transfer

Activities and instruments

- Helmholtz Transfer Offices Working Group since 1982
- Workshops and research days with companies, innovation days, CTO circle since 2012; start-up days since 2013
- Helmholtz Enterprise (spin-off promotion) since 2005
- Helmholtz Validation Fund since 2011
- Helmholtz Innovation Labs since 2016
- Innovation Fund of the Helmholtz Centers since 2016
- New instruments planned from 2017 (proof-of-concept initiative, strategic development partnerships, and knowledge transfer)



Open Science Issues: Open Access Publication

- Golden Road
  - Costs
  - sometimes naïve acceptance of problematic conditions set by publishers
- Green Road
  - Image/reputation
  - quality control
  - red tape
  - legal issues
  - lack of knowledge

Open Science Issues: Open Research Data

- Complicated situation because of involvement / interest of many players

- Individual researcher
  - Personal career -> requirements in respect to being cited
  - Anxiety that errors may be detected -> openness limited to trusted parties
  - Lack of knowledge concerning data curation -> education / consulting
  - Funding of data curation -> making available funds
  - Rewarding data sharing -> adding openness to evaluation citeria

- Research community
  - Does the community have Standards like
    - Meta data standards
    - Recommended data repositories
    - Accepted embargo periods

Open Science Issues: Open Research Data

- Research Organization / Employer
  - Rights and obligations stemming from the employment contract
  - Local habits in enforcing these rights and obligations
  - Potential areas of conflict because of competing policy goals, i.e. openness <-> commercialization

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- Research Funders
  - While on first glance many people may think about the relationship between research funders and individual researchers, in the great majority of cases grants are given on the basis of contracts between funders and research organizations.
  - Funder policies can vary greatly in respect to openness of research data.
  - While private funders increasingly focus on open science public funders have more nuanced approaches which may even encompass conflicting interests, i.e. in respect to openness and commercialization

Commitment of Helmholtz Association to access to research data

- Helmholtz Centers host 3 data repositories of the International Council for Science (ICSU) World Data System (WDS)
- PANGAEA
  - Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research &
  - Center for Marine Environmental Sciences of University of Bremen
- World Data Center for Remote Sensing of the Atmosphere (WDC-RSAT)
  - German Aerospace Center
- World Stress Map Project (WSM)
  - German Research Center for Geosciences

Helmholtz Governance

- 18 legally independent Helmholtz Centres
- Members Assembly
- Directors Board / Administrative Directors Board
- Head Office
- Thematic working groups with representatives from all centres
  - Open Science
  - Library and Information Management
  - IT
  - Technology Transfer
  - Legal
  - Data Protection
  - Further working groups

Decision-Making Process

- 2003 Signing of the Berlin Declaration
- 2006 Founding of the Open Access Coordination Office
- Various policy development concerning open access publishing
- 2014 Broadening of perspective
  - Working Group on Open Access --> Working Group on Open Science
  - Open Access Coordination Office --> Open Science Coordination Office
- 2016 Making information resources more usable
  - A position paper on the management of research data in the Helmholtz Association
- 2016 Start of develop of research data management policies based on the principles laid out in the position paper
- Ongoing process

Resulting Questions / Thoughts

- The diverse requirements concerning the shaping of licenses according to the specific needs resulting from the above described circumstances poses the question how this issues can be solved
- CC License Suite is not an adequate answer.
- Individual Licenses are no convincing solution either as they require legal expertise that is often not at hand and, they are not machine readable and they would would “contaminate” other data sets if combined.
- Instead of shaping the licenses one could aim at changing the circumstances. Is this realistic?
- A third approach would a more complex set of licenses made up of machine readable components. The development of such a license toolbox would take time as these license would not only need to developed, they would also need bread acceptance in the research community on a global scale.

Thank you very much

for your attention

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CC-BY