

# Making Research Data Repositories Visible – The re3data.org Registry

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# Background

- Funders' data policies
- Example: European Commission

## 29.3 Open access to research data

*[OPTION for actions participating in the open Research Data Pilot: Regarding the digital research data generated in the action ('data'), the beneficiaries must:*

- (a) deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:*
  - (i) the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;*
  - (ii) other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex I);*
- (b) provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).*

European Commission. (2014). Horizon 2020 Annotated Model Grant Agreements. Version 1.6.2  
.Retrieved from  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/amga/h2020-amga\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf)

# Background

- Journal Data Policies
- Nature Publishing Group
  - “[...] authors are required to make materials, data and associated protocols promptly available to readers without undue qualifications.”
- PLOS
  - “PLOS journals require authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception.”

**Data Availability**

PLOS journals require authors to make all data underlying the findings described in their manuscript fully available, without restriction and from the time of publication, with only rare exceptions to address legal and ethical concerns (see the [PLOS Data Policy](#) and [FAQ](#) for further details). When submitting a manuscript, authors must provide a Data Availability Statement that describes where the data underlying their manuscript can be found.

Your answers to the following constitute your statement about data availability and will be included with the article in the event of publication. **Please note that simply stating 'data available on request from the author' is not acceptable. If, however, your data are only available upon request from the author(s), you must answer "No" to the first question below, and explain your exceptional situation in the text box provided.**

Do the authors confirm that all data underlying the findings described in their manuscript are fully available without restriction?

Answer Required:

Please select a response

Please select a response

Yes – all data are fully available without restriction

No – some restrictions will apply

NPG (2013). Availability of data and materials. Retrieved from <http://www.nature.com/authors/policies/availability.html>

PLOS (2014). PLOS Editorial and Publishing Policies. Retrieved from <http://www.plosone.org/static/policies.action>

# Reproducibility and trust

From: [Infect Immun. 2011 October; 79\(10\): 3855–3859.](#)

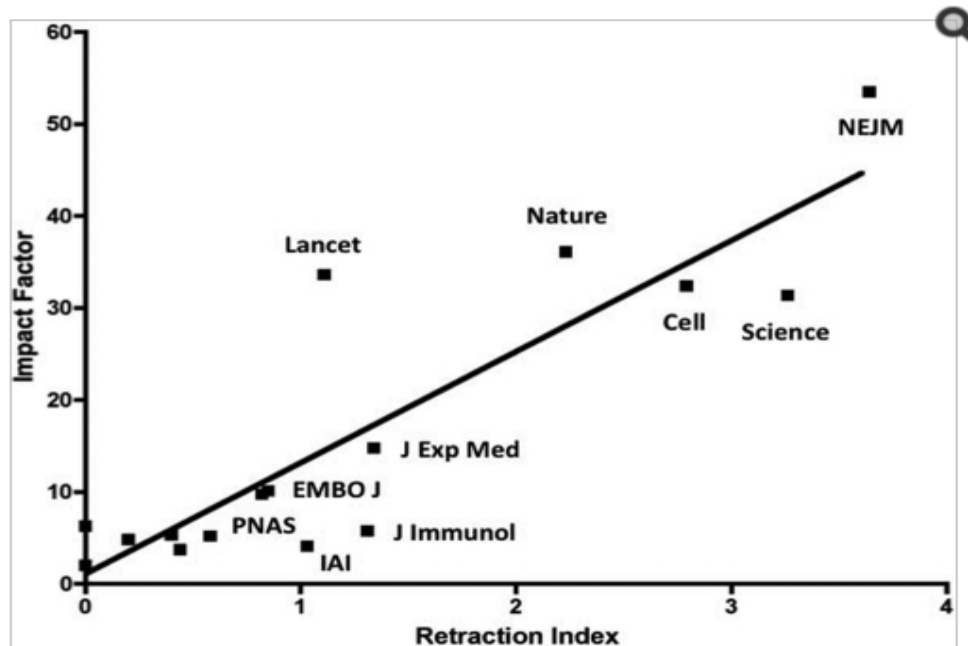
doi: 10.1128/IAI.05661-11

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**Fig. 1.**



Correlation between impact factor and retraction index. The 2010 journal impact factor (37) is plotted against the retraction index as a measure of the frequency of retracted articles from 2001 to 2010 (see text for details). Journals analyzed were *Cell*, *EMBO Journal*, *FEMS Microbiology Letters*, *Infection and Immunity*, *Journal of Bacteriology*, *Journal of Biological Chemistry*, *Journal of Experimental Medicine*, *Journal of Immunology*, *Journal of Infectious Diseases*, *Journal of Virology*, *Lancet*, *Microbial Pathogenesis*, *Molecular Microbiology*, *Nature*, *New England Journal of Medicine*, *PNAS*, and *Science*.

# re3data - Mission

- **global registry** of research data repositories
- covers **all** academic **disciplines**
- helps researchers, funding bodies, publishers, libraries and scholarly institutions to **find** research data repositories
- promotes a culture of **sharing**, increased **access** and better **visibility** of research data

# Schema



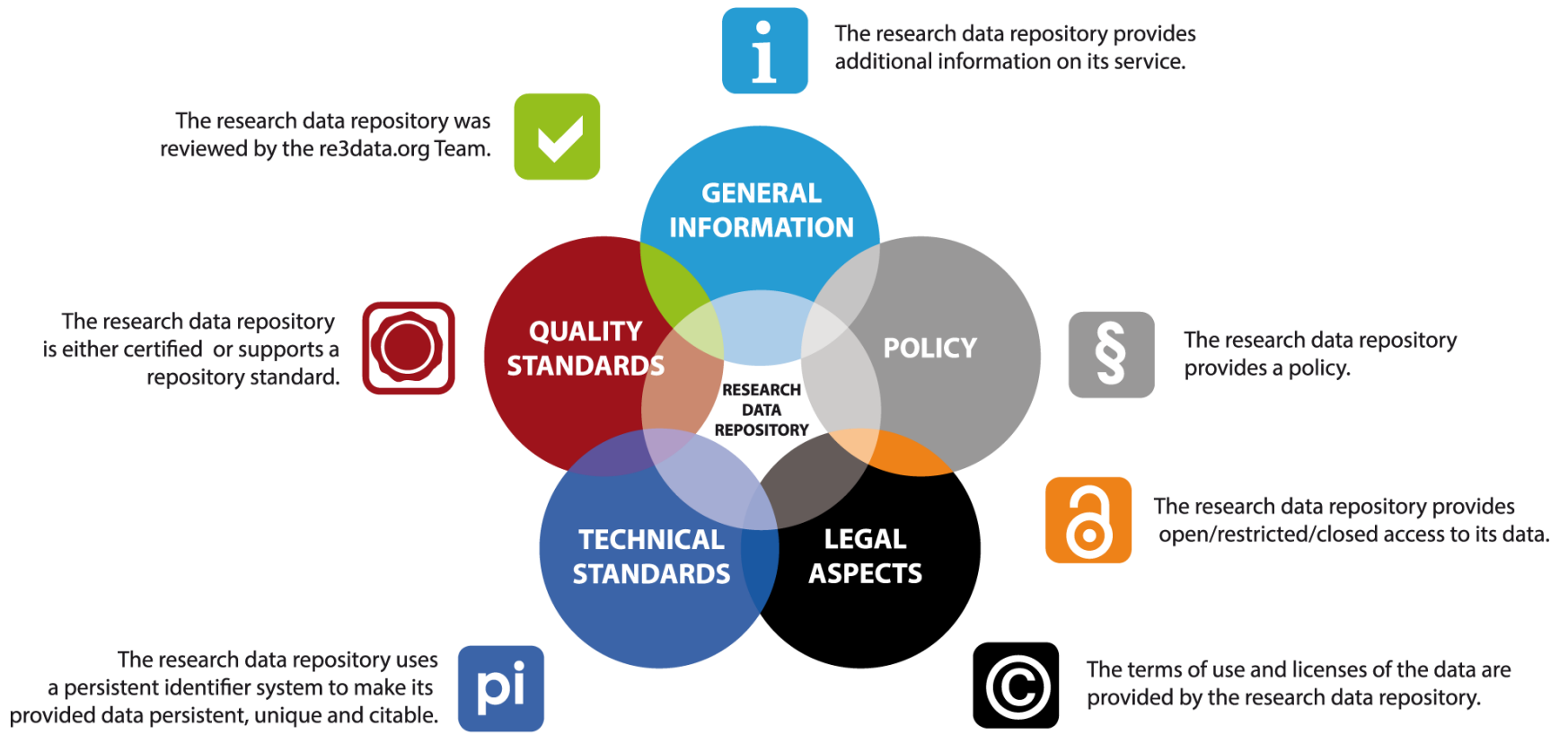
Properties **37**

Based on Analyses,  
Feedback and Experience

Version **2.1**

# Icons

- Information icons help researchers to easily identify an adequate repository for the storage and reuse of their data.





# Quality

Possible values for each icon

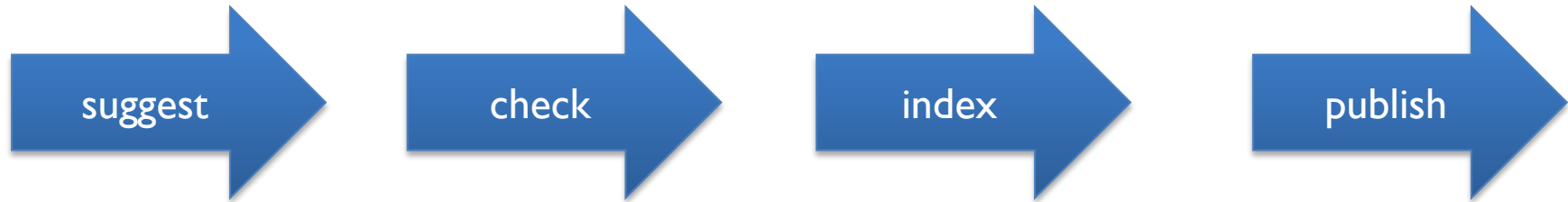


## Requirements:

- be run by a **legal entity**, such as a sustainable institution (e.g. library, university);
- **clarify access conditions** to the data and repository as well as the **terms of use**;
- have an **English GUI**;
- have **focus** on research data.



# Workflow



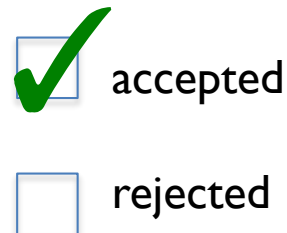
**Suggest a Data Repository**  
\*Erforderlich

**Repository Name \***  
The full name of the research data repository.

**Repository URL \***  
The URL, which gives reference to the research data repository.

**Description \***  
A textual description containing additional information about the data repository (primary language is English).

**Language**  
The user interface language of the research data repository.



<http://www.re3data.org/schema/>

<http://www.re3data.org/suggest/>

<http://service.re3data.org/repository/r3d100010134>

simple  
search box

## Search for Repositories (1028 Reviewed Repositories)

geosciences

Search

filters

Subject

Add subjects

Content Type

Add content types

Country (of the responsible institutions)

Add countries

Germany

☒ Certificates

☒ Open Access

☒ Persistent Identifier

Clear

results

2 results (filtered) ( 1 - 2 )

Sort by weight

icons

### PANGAEA

Publishing Network for Geoscientific and Environmental Data



Subjects: Atmospheric Science and Oceanography Biology Geochemistry, Mineralogy and Crystallography Geochemistry, Mineralogy and Crystallography  
Geology and Palaeontology Geology and Palaeontology Geophysics Geophysics and Geodesy Geosciences (including Geography)  
Life Sciences Natural Sciences Oceanography

Content types: Archived data Audiovisual data Images Plain text Standard office documents

Countries: Germany

The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.

[← Back to results](#)

General


[Institutions](#)[Terms](#)[Standards](#)


## General information

Name of repository	PANGAEA
Additional name	Publishing Network for Geoscientific and Environmental Data
Repository URL	<a href="http://www.pangaea.de">http://www.pangaea.de</a>
Subjects	<a href="#">Q Atmospheric Science and Oceanography</a> <a href="#">Q Biology</a> <a href="#">Q Geochemistry, Mineralogy and Crystallography</a> <a href="#">Q Geochemistry, Mineralogy and Crystallography</a> <a href="#">Q Geology and Palaeontology</a> <a href="#">Q Geology and Palaeontology</a> <a href="#">Q Geophysics</a> <a href="#">Q Geophysics and Geodesy</a> <a href="#">Q Geosciences (including Geography)</a> <a href="#">Q Life Sciences</a> <a href="#">Q Natural Sciences</a> <a href="#">Q Oceanography</a>
Description	The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.
Content types	<a href="#">Q Archived data</a> <a href="#">Q Audiovisual data</a> <a href="#">Q Images</a> <a href="#">Q Plain text</a> <a href="#">Q Standard office documents</a>
Keywords	<a href="#">Q Earth Science</a> <a href="#">Q Environmental Science</a>
Repository type	disciplinary
Research data repository language(s)	eng
Data and/or service provider	dataProvider

[← Back to results](#)[Text Edit](#)[GUI Edit](#)

[← Back to results](#)[General](#)[Institutions](#)[Terms](#)[Standards](#)**Responsible institutions** (2)

Institution name	<b>Alfred Wegener Institute for Polar and Marine Research</b>
Additional name	AWI Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung
URL	<a href="http://www.awi.de/en/home/">http://www.awi.de/en/home/</a>
Contact	<a href="mailto:hgrobe@pangaea.de">hgrobe@pangaea.de</a>
Country	 <b>Germany</b>
Type(s) of responsibility	general technical
Type of institution	non-profit

Institution name	<b>Center for Marine Environmental Sciences (MARUM)</b>
URL	<a href="http://www.marum.de/">http://www.marum.de/</a>
Contact	<a href="mailto:mdiepenbroek@pangaea.de">mdiepenbroek@pangaea.de</a>
Country	 <b>Germany</b>
Type(s) of responsibility	general
Type of institution	non-profit

[← Back to results](#)[✎ Text Edit](#)[🖱 GUI Edit](#)

[← Back to results](#)[General](#)[Institutions](#)[Terms](#)[Standards](#)**Terms** (1)

Policy name	<b>Data policy of the information system PANGAEA</b>
URL	<a href="http://www.pangaea.de/curator/files/pangaea-data-policy.pdf">http://www.pangaea.de/curator/files/pangaea-data-policy.pdf</a>

**Legal aspects**

## Database access

Type of access to research data repository	open
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## Data access

Type of access to data	open
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## Data licences (1)

License name	<b>CC</b>
License URL	<a href="http://wiki.pangaea.de/wiki/License">http://wiki.pangaea.de/wiki/License</a>

## Data upload

Type of data upload	restricted
Data upload restriction type	registration
Data upload license name	Data Submission
Data license URL	<a href="http://wiki.pangaea.de/wiki/Data_submission">http://wiki.pangaea.de/wiki/Data_submission</a>

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### Standards

Name of the repository software	other
Versioning	yes
Persistent Identifier system	DOI
Data citation guideline	<a href="http://wiki.pangaea.de/wiki/Citation">http://wiki.pangaea.de/wiki/Citation</a>
Quality management	yes
Certificates and Standards	WDS

### Application programming interfaces <sup>(1)</sup>

API type	OAI-PMH
URL	<a href="http://ws.pangaea.de/oai/">http://ws.pangaea.de/oai/</a>

### Alerting services <sup>(1)</sup>

Type of alerting service	RSS
Alerting service	<a href="http://www.pangaea.de/tools/latest-datasets.rss">http://www.pangaea.de/tools/latest-datasets.rss</a>

### Remarks

Remarks	Data of World Data Center for Marine Environmental Sciences (WDC-MARE) are available via the data library PANGAEA which will be operated as a member of the new WDS (World Data System)
Entry date	2012-07-16
Last update	2014-04-14

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# RDR Typology

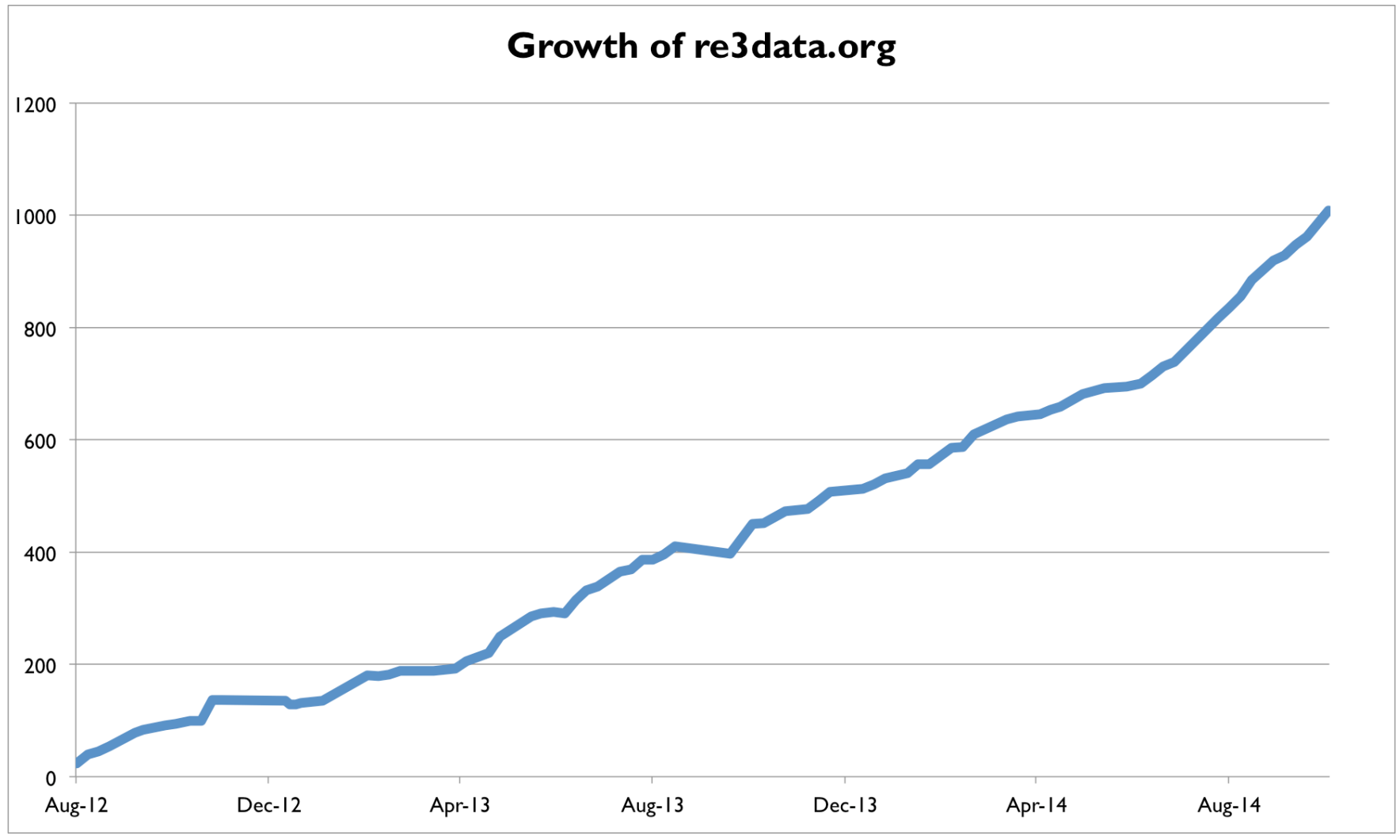
- Institutional
- Disciplinary
- Multidisciplinary
- Project

The collage illustrates four types of Research Data Repositories (RDRs):

- Institutional:** A screenshot of the **Purdue University Research Repository (PURR)** showing a search for "Phosphorus and Potassium Influence on Alfalfa Nutrition". It includes a download button, a version history table, and a "Share" button.
- Disciplinary:** A screenshot of the **NCBI Gene Expression Omnibus (GEO)** showing a search for "Gene Expression Omnibus". It includes a "GEO navigation" menu with options like "DataSets", "Gene profiles", "GEO accession", and "GEO BLAST".
- Multidisciplinary:** A screenshot of the **GEO** (Gene Expression Omnibus) showing a search for "Herring Hepatic Transcriptome 34300 contigs.fa". It includes a "Public data" table with columns for "Platforms" and "Samples", and a "figshare" logo.
- Project:** A screenshot of **The Bern Digital Pantheon Project** showing a 3D model of the Bern Cathedral dome. It includes a "Repository" section with a "first previous Record 198 of 776 next last" navigation bar, a "Share this" button, and a "Download" button.

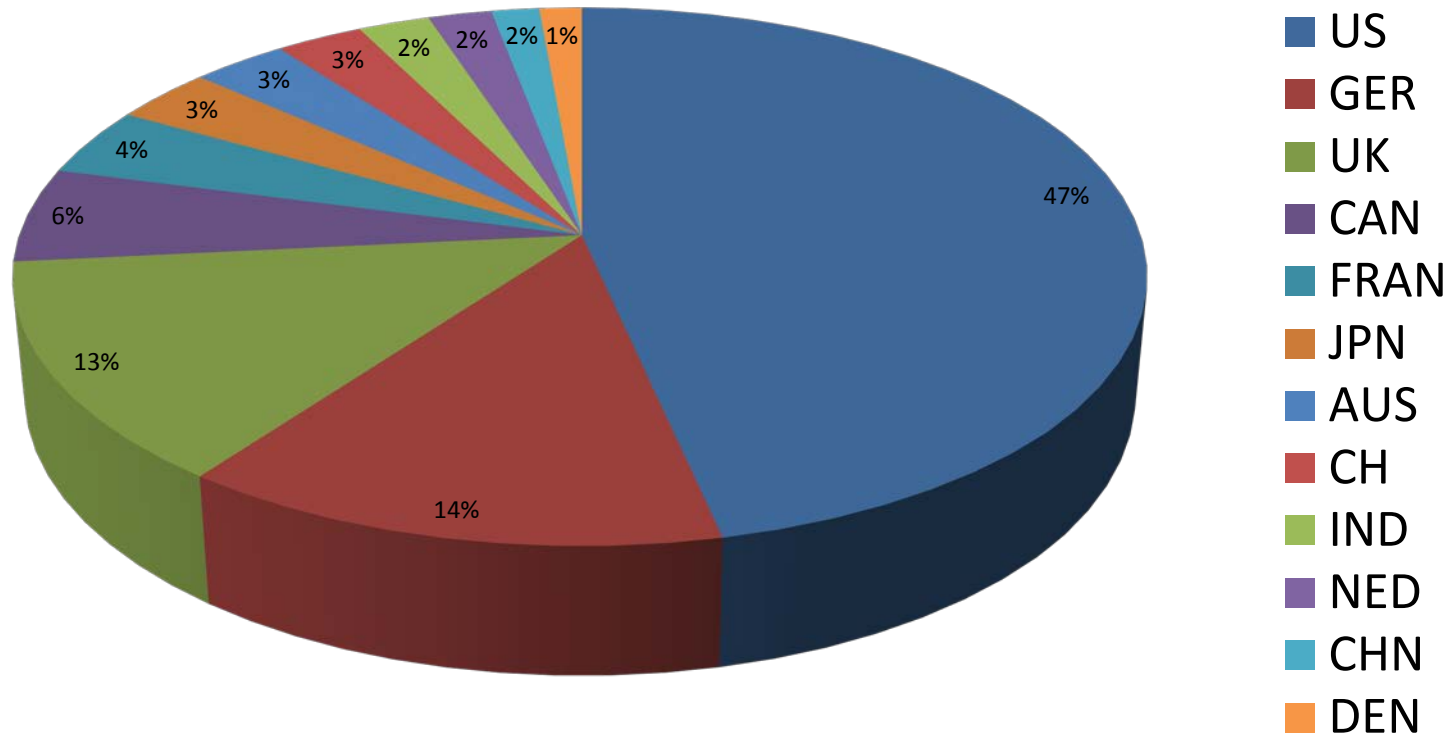


# Growth



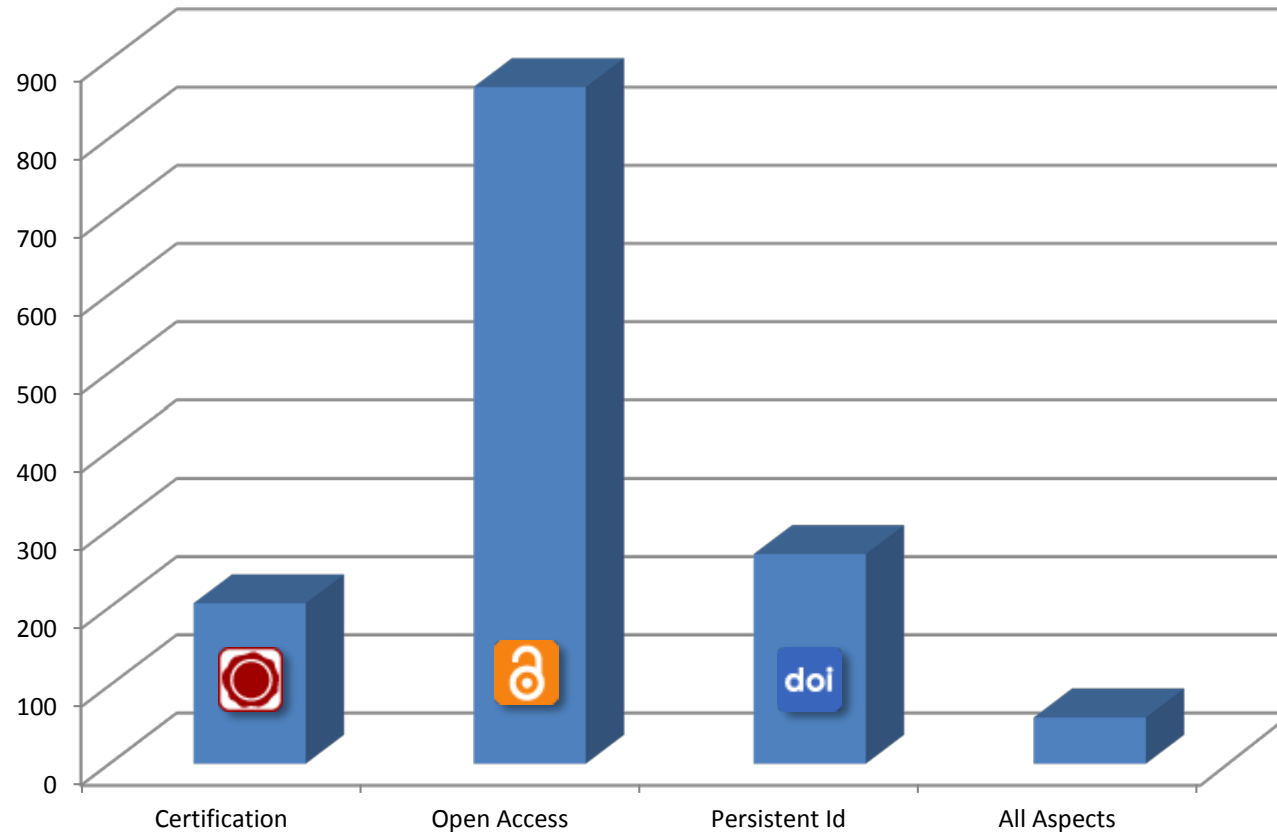


# RDR by Country



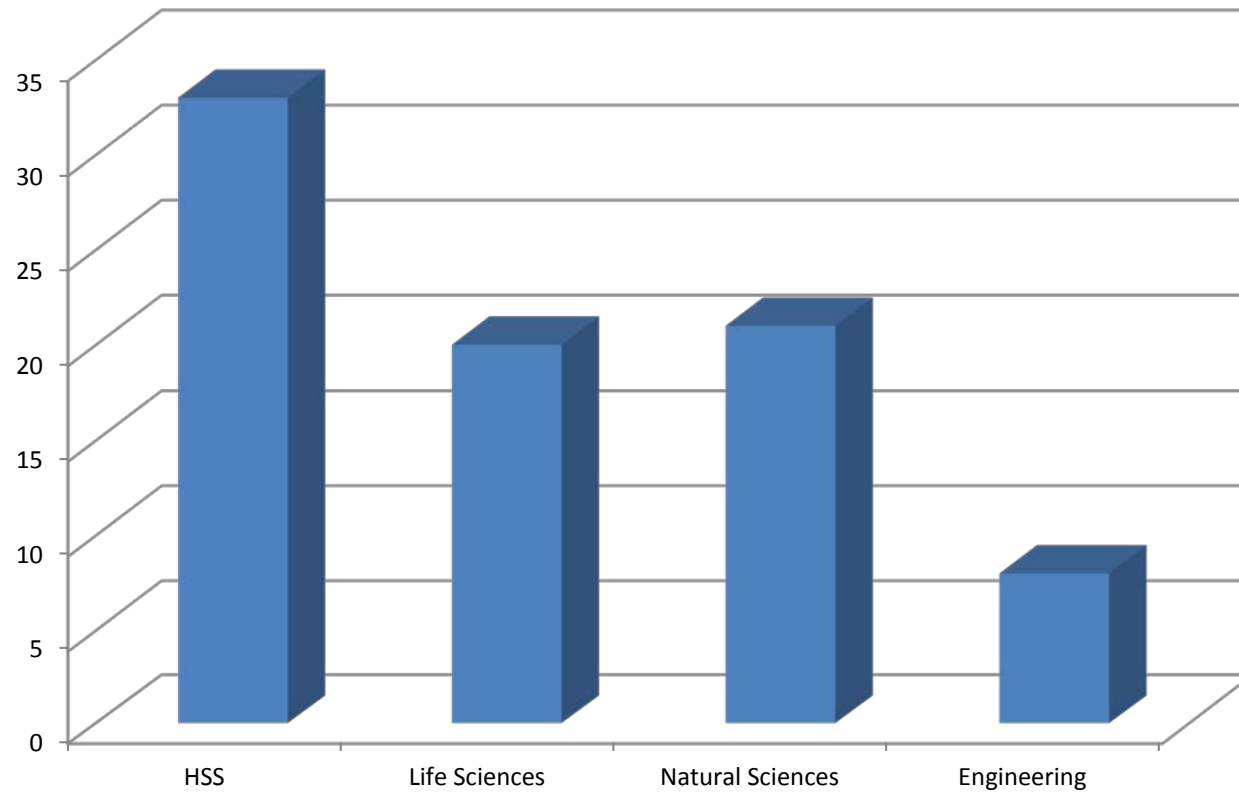


# Icons and numbers



From a total of 1029 RDR in re3data

# Champions by discipline



# Cooperation

- German Initiative for Network Information (DINI)
- DataCite (MoU, April 2012)
- OpenAIRE (MoU, October 2013)
- BioSharing (MoU, November 2013)
- Databib, DataCite (MoU, March 2014)




OpenAIRE  
Open Access Infrastructure for Research in Europe



biosharing

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 Helping you to find, access, and reuse data  
DataCite

**DataCite, re3data.org, and Databib Announce Collaboration**  
Published by Sergio Ruiz on 26 March 2014 - 11:46am

Databib and "re3data.org - Registry of Research Data Repositories" are pleased to announce their plan to merge their two projects into one service that will be managed under the auspices of DataCite by the end of 2015. Their joint proposal to the DataCite General Assembly was approved at the General Assembly on March 25th, in advance of the [3rd Plenary Meeting of the Research Data Alliance \(RDA\)](#) in Dublin, Ireland.

The aim of this merger is to reduce duplication of effort and to better serve the research community with a single, sustainable registry of research data

Why cite data?

What is DataCite?

What do we do?

# Next steps

- Operate workflow system
- Develop API (Open Data)
- Finalize the merger between Databib and re3data.org
- Implement an international Editorial Board (based on the Databib Board)
- Roadmap for running the service under the auspices of DataCite
- Further engagement with the data repository community

info@re3data.org

<http://re3data.org>



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<http://creativecommons.org/licenses/by/4.0/>





# Backup Slides

# re3data.org & RDA



- Platform for networking and exchange
  - Schema: requests for comments
- Repository Audit and Certification DSA–WDS Partnership WG
  - Heterogeneous landscape of data repositories
  - 20 % of the indexed repositories are certified
- Vision: “Data Fabric IG”



# Champions



- CLARIN-ERIC
- Archaeology Data Service
- EASY (DANS)
- IQSS Dataverse network
- CrystalEye (beta)
- Durham HepData Project
- figshare
- Global Change Master Directory (NASA)
- NeuroMorpho
- Neuroscience Information Framework
- ClinicalTrials.gov
- Ecological Archives (ESA)
- PANGAEA
- WDC for Remote Sensing of the Atmosphere

# Cooperation

- Databib and re3data.org have agreed to the following five principles for successful cooperation:
  1. Openness
  2. Optimal quality assurance
  3. Development of innovative functionalities
  4. Shared leadership
  5. Sustainability

<http://www.datacite.org/node/115>

# Project Team (Status: Oct. 2014 )

- Bertelmann, R. <sup>a</sup>; Fuchs, C. <sup>a</sup>; Goebelbecker, H.-J. <sup>c</sup>;  
Kindling, M. <sup>b</sup>; Kloska, G. <sup>c</sup>; Pampel, H. <sup>a</sup>; Reuter, E. <sup>c</sup>;  
Rücknagel, J. <sup>b</sup>; Schirmbacher, P. <sup>b</sup>; Schnepf, E. <sup>c</sup>; Scholze,  
F. <sup>c</sup>; Semrau, A. <sup>c</sup>; Skarupianski, M. <sup>c</sup>; Ulrich, R. <sup>c</sup>; Vierkant,  
P. <sup>b</sup>; Witt, M. <sup>d</sup>

a GFZ German Research Centre for Geosciences, Library and Information Services (LIS)

b Humboldt-Universität zu Berlin, Berlin School of Library and Information Science (BLIS)

c Karlsruhe Institute of Technology (KIT), KIT Library

d Purdue University, Distributed Data Curation Center (D2C2)

# Partners

- Germany
  - Berlin School of Library and Information Science
  - GFZ German Research Centre for Geosciences, Library and Information Services (LIS)
  - Karlsruhe Institute of Technology (KIT), KIT Library
  - Funded by the German Research Foundation
- USA
  - Purdue University, Purdue Libraries
  - Funded by the Institute of Museum and Library Services (IMLS)



# DATABIB EDITORIAL BOARD

- Amy West, University of Minnesota, United States
- Andras Micsik, MTA SZTAKI, Hungary
- Catherine Jones, Science and Technology Facilities Council, United Kingdom
- Cristina Ribeiro, University of Porto, Portugal
- Dorothea Salo, University of Wisconsin, United States
- Fco. Javier Hernández San Miguel, University of Valencia, Spain
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- Sarah Williams, University of Illinois, United States
- Steve Marks, University of Toronto, Canada
- Xiuling Qing, Chinese National Academy of Sciences, China



# WHERE DO YOU STORE YOUR RESEARCH DATA?

- ☐ USB DRIVE
- ☐ DROPBOX
- ☐ RESEARCH DATA REPOSITORY

**re3data.org**  
REGISTRY OF RESEARCH DATA REPOSITORIES

## Thanks for your attention!