

# Expanding the RDM Service Portfolio at Bielefeld University According to the Three-Pillar Principle towards Data FAIRness



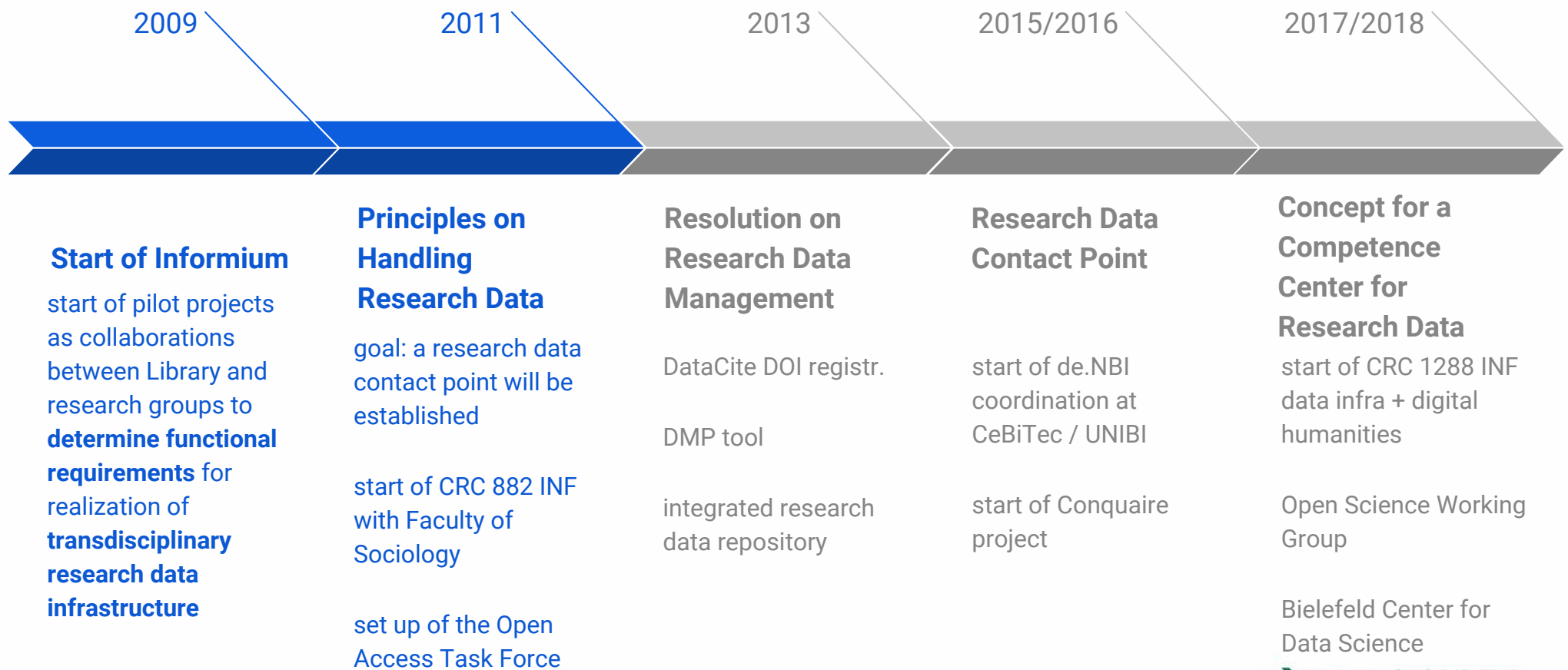
Jochen Schirrwagen,  
Philipp Cimiano,  
Vidya Ayer,  
Christian Pietsch,  
Cord Wiljes,  
Johanna Vompras,  
Dirk Pieper

# Have you ever heard about Bielefeld conspiracy? / About Bielefeld University!



- ▶ founded in 1969
- ▶ “Transcending Boundaries - between disciplines and scientific cultures, between research and teaching, and between science and society”
- ▶ 13 faculties + med. faculty in preparation in 2018
- ▶ CITEC & BGHS funded by German Excellence Initiative
- ▶ 25K students (2017)
- ▶ 170M € total budget (2017)
- ▶ 60.4M € 3rd party funds income (2017)

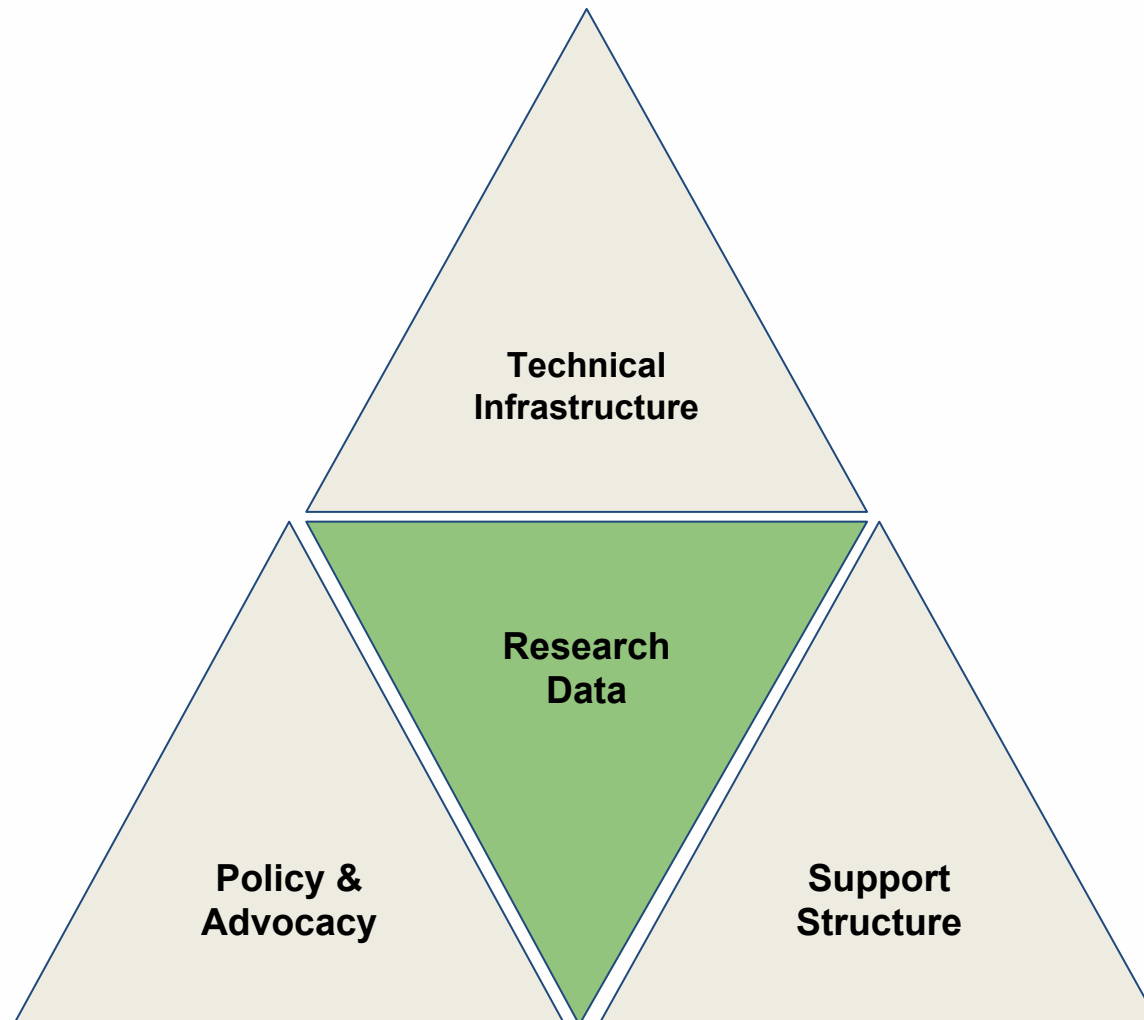
# Milestones of RDM at Bielefeld University



# Established RDM Activities of the Contact Point for Research Data

- Guidance on RDM for project proposals
  - early identification of RDM issues
- Data Management Planning
  - considering funders recommendations and mandates
- counselling on legal issues in cooperation with legal serv.
- research data literacy and capacity building for students and researchers
- counselling on publishing research data
- contextualisation and interlinking of research data with other research artefacts in the institutional repository

# Three Main Pillars - Strategy





# Policy and Advocacy

- Principles on handling research data (2011) include
  - to be considered across the entire data lifecycle
  - PIs to provide a DMP in line with given subject-specific guidelines for institutions and projects
  - making data widely available and retaining it for the long term in order to facilitate its reuse ...
  - to promote high-quality research data management practices, paying sufficient attention to subject-specific training in methods and the principles of good academic practice
- followed by the resolution on RDM in 2013
- will be extended by following Open Science principles ...

# Technical Infrastructure

- ▶ project specific setup of virtual research environments
- ▶ DMP tool
- ▶ PUB as institutional catch all repository and archive
  - ▶ metadata curation
  - ▶ persistent identification with DOI
  - ▶ linking of research data / software with publications
- ▶ GitLab
  - ▶ collaborative distributed version control system
  - ▶ large file support
- ▶ Conquaire DFG-project
  - ▶ Continuous quality control for research data to ensure reproducibility

# PUB Repository for Publications, Data and Software

## Publications at Bielefeld University

Home Publications Data Publications Authors About PUB Login

"PUB – Publications at Bielefeld University" is the institutional repository of Bielefeld University. It constitutes the central depot for publication meta data, publications and research data with the mission to reflect the scientific work of the university's researchers. Bielefeld scientists of all disciplines can use this service to create and maintain their personal publication lists. The records are freely accessible and partially linked with fulltexts and research data. [Learn more...](#)

- ➔ 57470 Publication References  
Bibliographic data, partially enriched with fulltexts (PDFs etc.)
- ➔ 3777 Individual Author Pages  
Documentation of Bielefeld researchers' publishing activities
- ➔ 213 Data Publications  
Bibliographic data, partially enriched with research data
- ➔ 10521 Open Access Publications  
Freely accessible documents
- ➔ 1959 Theses  
Bielefeld dissertations, post-doctoral, and selected master and bachelor theses

### PUB Training

- PUB for Beginners Part 1: Creating personal publication lists (in German)** Mi., 12.09.2018 09:15 Uhr (ca. 90 Min.)
- PUB for Beginners Part 2: Adding files, exporting data (in German)** Do., 22.03.2018 09:15 Uhr (ca. 90 Min.)
- PUB for Advanced Users: Embedding publication lists... (in German)** Di., 27.03.2018 09:15 Uhr (ca. 60 Min.)
- Not to be confused with ...?! Unambiguous author identification with ORCID** Mi., 09.05.2018 10:15 - 11:00 Uhr

Open Access at Bielefeld University



Research Data Management



PUB Theses



The DINI-Certificate 2016



- inst. repository for publication- and data-management
- based on LibreCat Open Source
- supporting certificates (DINI), guidelines (OpenAIRE) and the Data Seal of Approval



# Data Publication with link to supporting Software in GitLab repository

Login

## Median Relational Generalized Learning Vector Quantization

Paaßen B (2018) : Bielefeld University. doi:[10.4119/unibi/2916990](https://doi.org/10.4119/unibi/2916990).

Download  [mrglvq-0.1.0.zip](#) 90.95 KB

 [mrglvq-0.1.0.zip](#) 100.27 KB

DOI [10.4119/unibi/2916990](https://doi.org/10.4119/unibi/2916990)

Research Data



Mark/Unmark publication

Details Files Links **Software/ Ext. Data**

**Software:**

URL [https://gitlab.ub.uni-bielefeld.de/bpaassen/median\\_relational\\_glvq](https://gitlab.ub.uni-bielefeld.de/bpaassen/median_relational_glvq)  
 Description Publicly accesible GitLab page including the source files for the implementation.

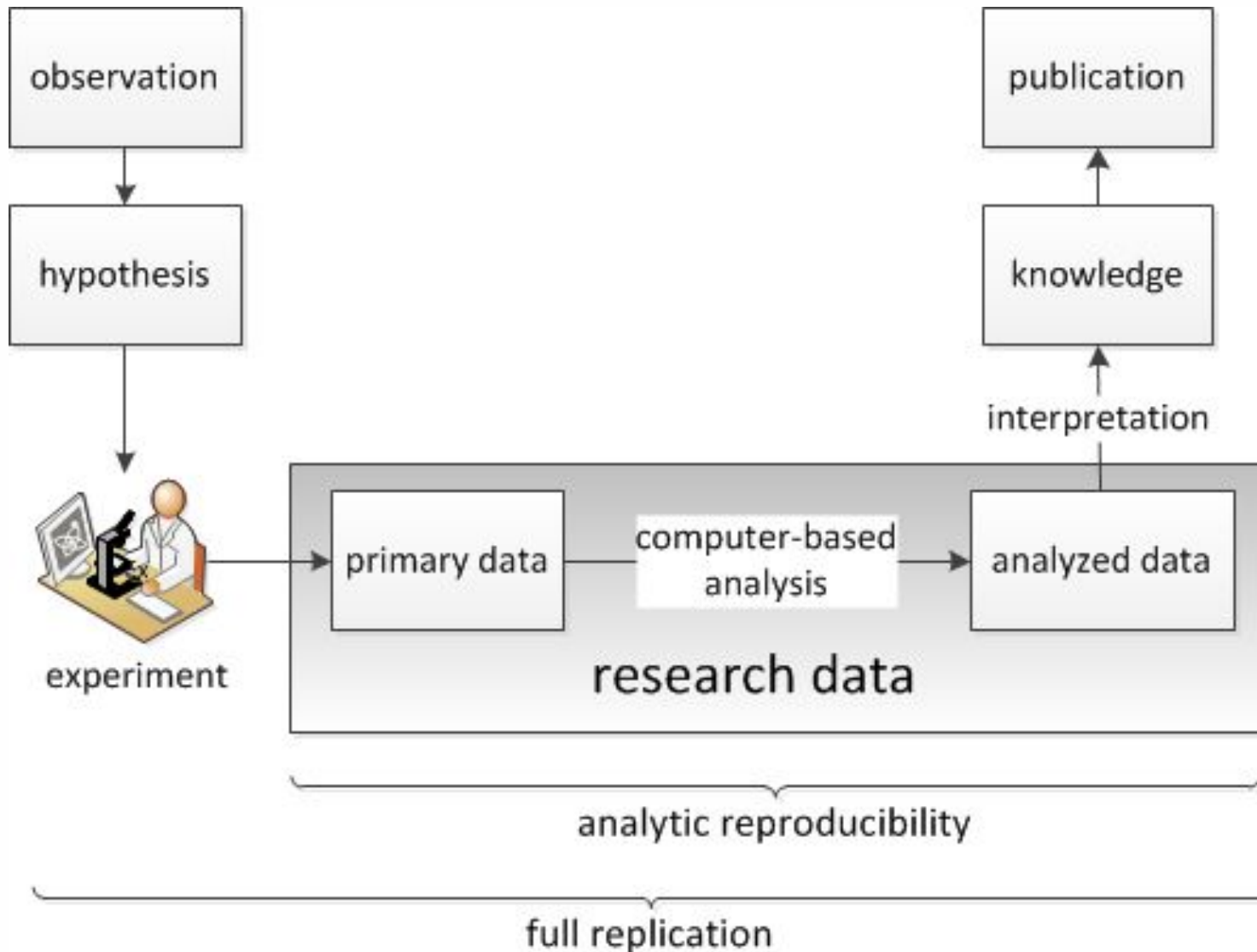
Export

 **Marked Publications**  
 **Open Data PUB**

Search this title in

 **Google Scholar**

# Analytical Reproducibility with Conquaire



# About the Conquaire Project

- DFG funded institutional infrastructure to manage, archive and publish (structured) research data
  - CITEC + University Library
  - pilot research with 9 partners from interdisciplinary labs
- ensuring of formal data quality and reproducible research
- optimized internal knowledge resources
- supporting researchers to make their research more visible
- optimize co-operations with partners

# Towards Data FAIRness

- Design and development of RDM services to maximize use and visibility of research data for the benefit of data producers (researchers) and data infrastructure service providers
- Data Quality Framework defined in the Conquaire project and in support of the FAIR data principles

# Support Structure - data website



Uni Bielefeld > Data > Services > Data Management Plan (DMP)

## Navigation

- Start
- Principles
- Resolution
- Services
- Data Management Plan**
- Open Science
- Data Publishing & Reuse
- Informium
- Events
- Publications
- Context
- FAQs
- Contact

## Events

« January »

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

## Data Management Plan (DMP)

In line with the principles of good academic practice, researchers should ensure that they pay sufficient attention to and thoroughly discuss numerous aspects of research data management at the beginning of a project. These aspects include the documentation of the data, their archiving, and their long-term availability after completion of the project, as well as a clarification of the responsibilities and duties of the academics involved.

**Recommendations for preparing a data management plan (DMP):**  
The following points present the essence of a data management plan:



## Checklist

Das folgende Tool bietet Bielefelder Wissenschaftlern eine einfache Möglichkeit, durch Ausfüllen einer Checkliste ein konzeptuelles Gerüst eines Data Management Plans für Ihr Forschungsvorhaben zu erstellen.



## Ein DMP definiert ...

- wie generierte Daten während der Laufzeit eines Forschungsprojektes verwaltet werden,
- wie Zuständigkeiten und Pflichten definiert sind, und
- beschreibt Maßnahmen zur Einhaltung der guten Wissenschaftlichen Praxis in Bezug auf Forschungsdaten.

- data.uni-bielefeld.de as entry point to inform about policies, services and events related to RDM



# Support Structure - open science



## Open Science

Bielefeld University is highly committed to the ideal of Open Science that research results and data should be openly shared in order to maximize their benefits for science and society.

To receive news about Open Science, please subscribe to our **Open Science mailing list**.

**Open Science Working Group**

Join the Open Science Working Group (OSWG) to help bring about Open Science!



### Conquire

The DFG-project Conquire aims to improve the quality of research data and reproducibility of research..



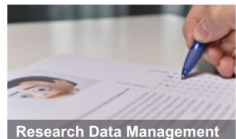
### Open Science Q&A

The Open Science Q&A is a community project to collect all information about Open Science.



### Open Access

Open access aims to facilitate access to scientific and scholarly knowledge.



### Research Data Management

Learn more about research data management services at Bielefeld University.



### Teaching

- > Seminar for students
- > Seminar for employees
- > Kolloquium Wisseninfrastruktur

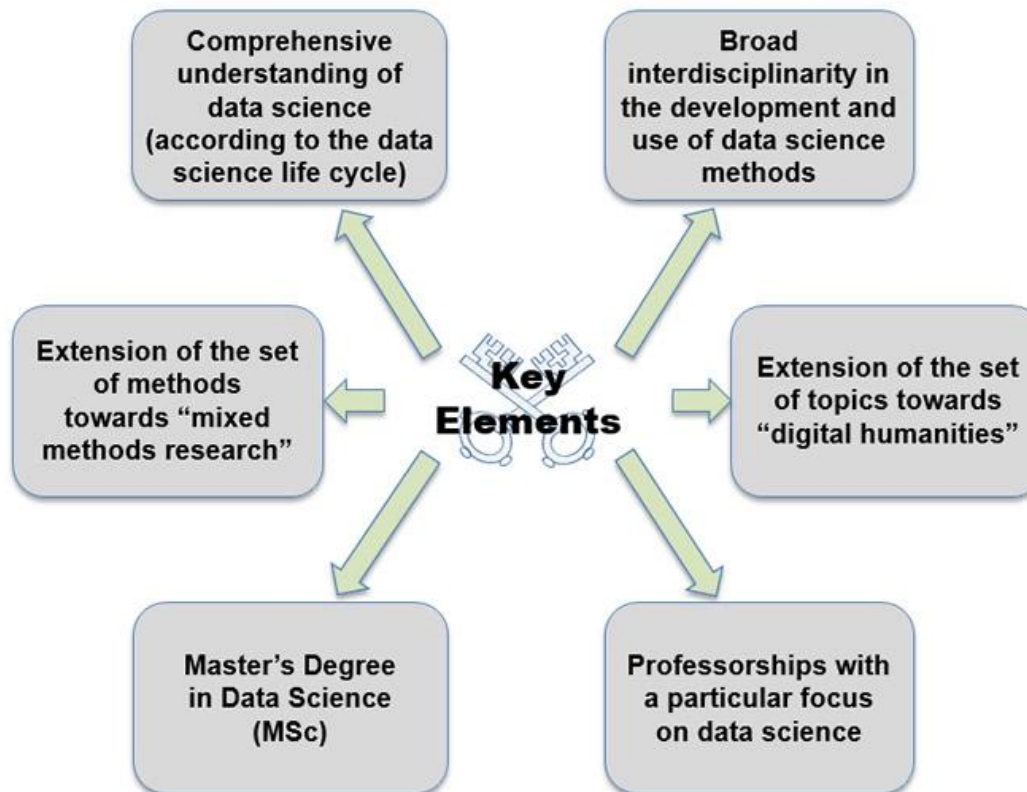
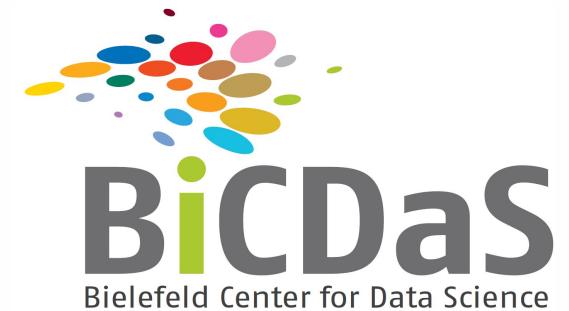
### Contact

#### Open Science Working Group:

- > Jochen Schirrwagen
- > Christian Pietsch
- > Johanna Vompras
- > Cord Wiljes

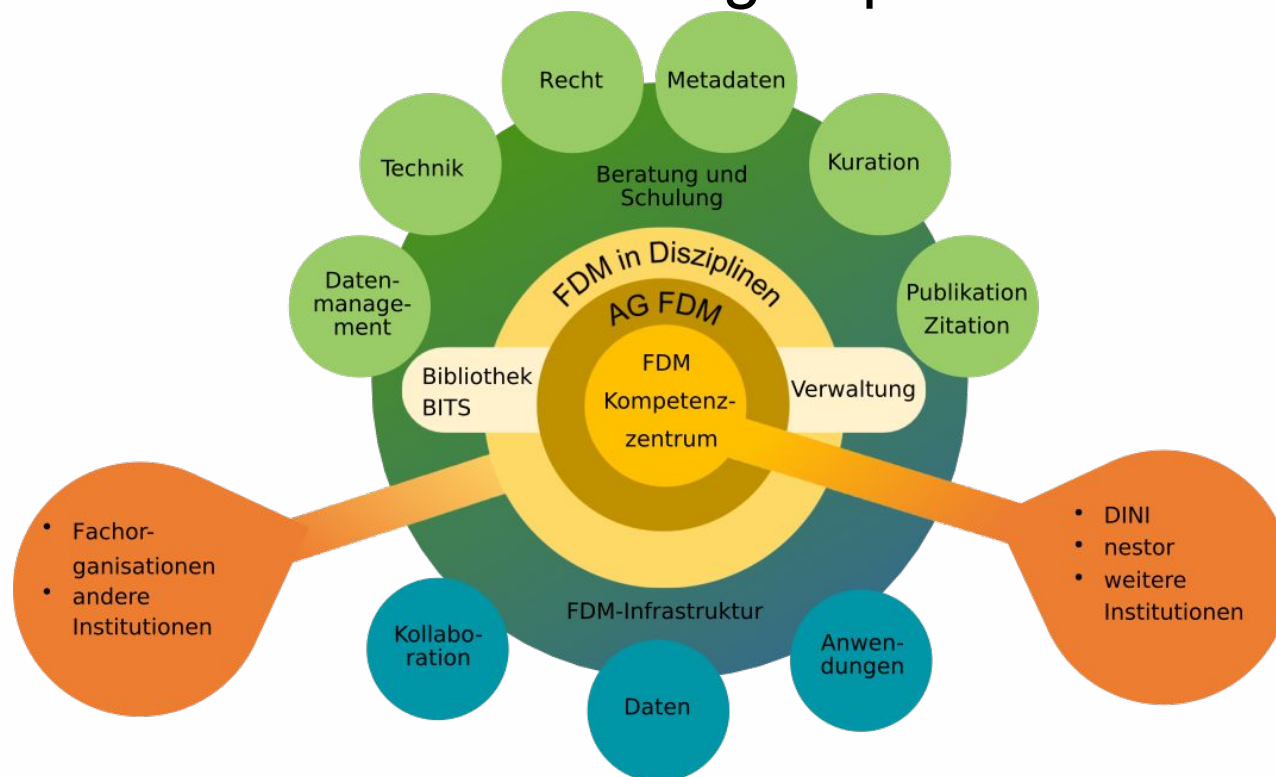
- [www.uni-bielefeld.de/open-science](http://www.uni-bielefeld.de/open-science) as entry point to inform about all Open Science activities and the Open Science Working Group at the university

# Bielefeld Center for Data Science (since 2017)



# As a consequence: Competence Center for Research Data (in preparation)

- RDM as a cross cutting task of central facilities and faculties
- defined roles and responsibilities among library, computing centre, BiCDaS and university management in close collaboration with the research groups



# Important Findings and Conclusions

- Visibility of the service portfolio on the web, at information sessions for research groups and doctoral students
- Networking with the researchers, university administration, rectorate, CIO board
- Active cooperation in regional (digital university NRW), national (DINI-WG research data), international initiatives (RDA, DDI, OpenAIRE)
- Ongoing discussions about the role and tasks of the Library regarding RDM (subject librarians, embedded data librarian, data management support team)
- cooperation between computing center, library, research office, faculties

# Links and References

- on Research Data Management
  - <https://data.uni-bielefeld.de/>
- on Open Science
  - <http://www.uni-bielefeld.de/open-science/>
- on Bielefeld Center for Data Science
  - <http://www.uni-bielefeld.de/datascience/>
- on Services and Tool
  - institutional repository: <https://pub.uni-bielefeld.de/>
  - gitlab: <https://gitlab.ub.uni-bielefeld.de>
- on Projects (selected)
  - Conquaire: <http://conquaire.uni-bielefeld.de/>
  - SFB-822 INF:  
[http://www.uni-bielefeld.de/\(en\)/sfb1288/projekte/inf.html](http://www.uni-bielefeld.de/(en)/sfb1288/projekte/inf.html)



# Thank You for Your Attention!

For any questions or comments  
feel free to contact the team:  
[conquaire-contact@lists.uni-bielefeld.de](mailto:conquaire-contact@lists.uni-bielefeld.de)