

# E-Science-Initiative: Research Data Management

# bwDIM

The project **bwDIM** developed a concept for interfaces and processes that allow for an efficient **data flow** between existing functionally differing tiers, ranging from **archiving to publication**.

Research data produced by one scientist can be of great value for other scientists. It is the key to reproducible science. Not only published but also primary data must be stored for over 10 years using long-term bit preservation. Special infrastructure like tape archives provide enough capacity for petabytes of data, but increase access complexity and latency.

It is important for researchers to publish their work. A vital element of publishing is the review process. Reviewers need access to the data to verify and evaluate the results described in papers. The access to the yet unpublished data needs to be restricted to the reviewers and the review duration. The published data has to be described in detail and linked to the publication to enable reuse.

Connecting services from different tiers of the research data management results in a complex network and impacts the research activities. To allow scientists to focus on their work, it is essential to condense, visualize and simplify by providing information, contacts and support at a central point.

## Data In Motion

Forming infrastructure as a network by only implementing technical interfaces is insufficient to improve research. The services have to be embedded into existing scientific activities and workflows. Thus new processes have to be defined and implemented, giving guidance to researchers and unifying the interaction with the technical systems.

In the context of archiving data for over 10 years, researchers tend to change universities, their contact data or even their surnames. A RDM compatible authentication and authorization infrastructure (AAI) must be flexible enough to cope with these changes and still provide ways for scientists to manage archived data over extensive time periods.

Scientists need to work together in projects that often span the borders of organizations and even countries. The RDM workflow needs to include options for sharing and cooperating with granularly controllable access rights and roles.

The extension of the platform aims at supporting researchers to accomplish long-time preservation of **scientific data** and ensures the access without efforts, thus improving findability, access and fostering reuse.

The project is funded by the Ministry of Science, Research and the Arts of the State of Baden-Württemberg.



Baden-Württemberg

MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST



Poster for E-Science-Tage: Data to Knowledge / Heidelberg, Germany, 27th-29th March 2019 / Felix Bach, Karlsruhe Institute of Technology, Steinbuch Centre for Computing / Robert Ulrich, Karlsruhe Institute of Technology, KIT Library  
License: Except where otherwise noted, content on this poster is licensed under a Creative Commons Attribution 4.0 International license.