

How to use CRIS Systems to publish Research Data: The example of Boris Portal at University of Bern

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Explore how the University of Bern's Current Research Information System *Boris Portal* integrated the publication of research data within the university's research ecosystem. Our poster showcases the innovative approach of linking and/or publishing research data within the CRIS framework and enhancing research visibility within the university community. Discover how researchers utilize standardized metadata and robust data governance mechanisms to publish their data, enriching the scholarly landscape and facilitating interdisciplinary insights. We will show how we optimized research infrastructure for open access data publication and integration within the University of Bern.

Additionally, we highlight innovative access management strategies implemented within the CRIS system, ensuring secure and controlled access to research data while promoting transparency and collaboration.

In BORIS Portal there are currently two main research information types shown: project and funding information and research data. Both ensure that the relevant information on research at the University of Bern can be collected centrally.

Researchers can thus

- make administrative processes simpler and more efficient (project management, reporting to funding institutions)
- create their profile as a researcher and link it to other pages and databases
- import data to their own web pages or to the institute's web pages
- if possible, project information already available in other systems (e.g. project databases of research funding institutions) can be imported. Likewise, data and their metadata can be exported from BORIS Portal to internal or external partner systems.

In its basic functions, BORIS Portal allows researchers to

- capture completed and ongoing projects (funded and collaborative projects)
- capture local, national and international research collaborations
- capture internal and external institutional collaboration partners
- record personnel responsibilities within projects (roles)
- link to projects, researchers and publications

In addition, BORIS Portal provides the governing bodies of the University of Bern with information for developing and sharpening the research profiles and research strategies of the university, faculties and units. Among other things, BORIS Portal enables and facilitates

- the targeted promotion of science (e.g. promotion of young researchers, scientific collaboration)
- the evaluation of national and international networking of institutes and their activities in projects
- the overview of awarded funds and their sources (implementation still open)

As a public platform, BORIS Portal is intended to create transparency about the research activities of the University of Bern for a broad public.

Furthermore, researchers can use BORIS Portal as an institutional research data repository to

- collect their research data according to FAIR principles (findable, accessible, interoperable, reusable)
- archive their research data on the systems of the university's IT services and back them up
- disclose their research data according to clear principles or store it in a non-disclosable way
- integrate anonymized data into the submission workflow with Data Transfer Agreement (DTA)
- determine, manage and declare usage and access rights differentiated down to the level of individual files (Creative commons licenses)
- receive a DOI for the uploaded dataset or datasets

The challenge lies within the shareability of research data. While the CRIS system aims to be as open as possible, some types of research data cannot be shared openly for legal, ethical or similar reasons. Or they cannot be stored strictly outside the institution's realms, as Walther and Wagner write in their paper about FAIR research data integration in CRIS at FAU Erlangen-Nürnberg¹. In order to comply with the FAIR Data principles of "as open as possible, as closed as necessary", researchers at UniBE can choose from several types of access:

Open: Fully anonymised data and all other non-personal data that can be shared publicly.

Embargo: Data that must be withheld for a certain period of time, e.g. due to a confidentiality agreement. Interested parties can request access to the data.

Restricted: Personal data that has been anonymised but is still too sensitive to share openly, e.g. clinical research data. Researchers can restrict the subsequent use of their data via a Data Transfer Agreement. Interested parties can request access to the data.

Closed: Data that cannot be shared openly. Researchers cannot upload files, but they can enter metadata to prove the dataset and make it citable. They can also allow subsequent use of the data via a Data Transfer Agreement. In this case, the data must be shared in a way other than via the repository. Interested parties can request access to the data.

Metadata Only: If research data has been published in another repository, researchers can enter metadata in BORIS Portal to prove the dataset on BORIS Portal for the University of Bern.

The idea behind this is that the mere existence of project-related research data is documented. Regardless of whether they are publicly accessible or not.

In conclusion, Boris Portal is a valuable research information system for managing research, project and funding data within the university. This innovative platform contributes to enhanced research visibility, fosters interdisciplinary collaboration, and streamlines administrative processes. Through thoughtful access management strategies, it ensures data security while promoting transparency and cooperation among researchers. Despite challenges related to data sharing, Boris Portal upholds the FAIR principles and offers researchers flexible access options.

¹ Marcus Walther, Michael Wagner: FAIR research data integration in CRIS at FAU Erlangen-Nürnberg, *Procedia Computer Science*, Volume 211, 2022, Pages 246-250, <https://doi.org/10.1016/j.procs.2022.10.198>, p. 247.