

Managing Research Infrastructure metadata in a Current Research Information System – Challenges and Benefits

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Introduction

Friedrich-Alexander Universität Erlangen-Nürnberg is a large research university in the German region of Frankonia, ranked the leading German university in innovation by the THE University Ranking.¹ With over 40,000 students and employing more than 6,500 researchers and research supporting personnel in over 600 professorships, FAU has been using and improving their Converis² based Current Research Information System (FAU CRIS) since 2015. FAU CRIS covers standard meta data models for research information, such as CERIF³ and the German Kerndatensatz Forschung (KDSF).⁴

This paper describes our experiences when integrating data about our university's research infrastructure into its pre-existing current research information system – the goals we tried to achieve, the way we went about it.

Motivation[MW1]

There were a number of reasons why we found it beneficial to include data about the research infrastructure at our university in our Current Research Information System (FAU CRIS).

The first one was to share information[MW2][MW3] about existing hardware across different departments, the lack of which was pointed out by a number of departments as well as the assembly of scientific employees. While the university collects data centrally about the equipment in its inventory during the acquisition process, this data is then not immediately accessible to other organizational units. Making (some of) it available allows researchers to look for opportunities to try different equipment and accessories, share user experiences about the most appropriate use cases, and ask for advice about best handling as well as pitfalls. This can also lead to cost savings for the university by avoiding unnecessary acquisitions, by more easily identifying the most promising research equipment, as well as by increasing the utilization of existing hardware, goals supported by the university's commission for sustainability. In addition, having awareness of and access to existing hardware provides new subunits with a better starting basis to get up and running.

FAU CRIS was a reasonable platform to make such information available – based on a pre-existing, highly configurable Converis system that is accessible to all scientific research personnel at the university, the level of visibility of information can be determined by the owning organization, giving them the option to limit access to university employees only or to offer it to the wider public.

Another advantage that FAU CRIS offers is that it provides an easy way to connect the equipment data with information about scientific activities at the university, i.e. research projects, qualification theses, publications and patents. Structured, connected information like

this is often requested for internal and external reporting purposes; in fact, in some case it is explicitly required, e.g. as part of the Major Research Instrumentation Programme of the Deutsche Forschungsgemeinschaft (DFG), the major German public scientific funding organization.⁵

At last, storing the equipment data in the FAU CRIS platform ensures that information about it is publicized and updated in a consistent fashion across multiple outlets. It is the source for information in the university's public research portal⁶ as well as the university websites that utilize the bespoke, configurable Wordpress plugin available to all university departments.⁷

Implementation

Our starting point for information about the university's research equipment is the inventory data collected by the central fiscal administrative department. This includes the name of the equipment, its manufacturer, its physical location, the organizational subunit responsible, date and cost of acquisition, date of commission, as well as its DFG Instrumentation Classification Key number. This data is imported into the FAU CRIS system on a regular basis for all pieces with an acquisition cost of at least 100,000 €, in order to avoid cluttering up the system with irrelevant entries. This limit is lowered upon request of the subunit responsible for that unit's hardware. [MW4][MW5]

After this step, the responsible subunits can update and supplement the data entries in FAU CRIS on their own. They can provide more specific appellation and description, manufacturing data (model and year of manufacture), additional features and accessories, pictures and additional files (e.g. user manuals and terms of use), a web URL (if applicable), and information about the availability of the equipment for university-wide or even external usage. They also have to assign one or more persons that are available as contact or responsible for the operation, maintenance and service of the instrument. In order to protect their privacy, those persons then get to individually opt into making their function and other data visible. The subunits also choose the level on which they want to make each piece of equipment visible, either restricting it to their own unit, making it visible university-wide, or making it visible publicly. It is also possible to entirely remove equipment that is irrelevant or defunct. [MW6]

Information about research equipment is then accessible to different groups [BM7] depending on the visibility level selected by the subunit responsible. Researchers employed at the university can log into CRIS FAU to list equipment that's visible at least university-wide, having a number of filtering options available to narrow down their search: appellation of the instrument, manufacturer, year of manufacture, and model, clusters of the DFG instrumentation classification key, and subunits responsible. It is also here that they can create relations to their publications and research projects that utilize certain instruments.

Information about equipment that is set to be publicly visible can be displayed on the university's web pages via a Wordpress plugin, which allows subunits to populate a page with content about their equipment by using simple shortcodes [MW8][BM9][PS10], e.g. creating a list of all their instruments, or providing details about specific ones. It is also going to be visible in the university's public research portal, but this is still work in progress at this point in time.

Conclusion and Outlook

Fundamentally, we were able to integrate [MW11] information about the research infrastructure into FAU CRIS in a sustainable way by re-using data from a central source, and having details supplemented by the peripheral specialists. This implementation was driven by scientists'

demand and now enables them to find and access research infrastructure available at the whole university. It has been rolled out over the last two years and changes from feedback have been included. Currently, nearly 900 devices are listed in FAU CRIS, with total value of over 202 mio €.

There are still issues to be addressed in the future, though – the public presentation of the data is not yet finished.

Implementing the DFG reporting discussed above is a part of this project that is still in its early planning stages.

We have also come to the realization that our current data model is lacking complexity – it does not account for relationships between instruments, i.e. accessories that are listed as separate inventory entries should show which main instrument they belong to. The central source data does not provide this information in a way that is reliably processable. We are currently reassessing how to best address this in a comprehensive fashion.

¹ <https://www.timeshighereducation.com/world-university-rankings/university-erlangen-nuremberg> (Feb 15th 2026)

² <https://clarivate.com/academia-government/ko/scientific-and-academic-research/research-funding-analytics/converis/> (Feb 15th 2026)

³ Asserson, A., Jeffery, K. G. & Lopatenko, A. (2002): CERIF: Past, Present and Future: An Overview. In: Wolfgang Adamczak, Annemarie Nase (eds.), "Gaining Insight from Research Information": Proceedings of the 6th International Conference on Current Research Information Systems, p. 33-40. euroCRIS / Kassel University Press

⁴ <https://www.kerndatensatz-forschung.de/> (Feb 15th 2026)

⁵ DFG: Template for the Report on the use of Major Research Information.

<https://www.dfg.de/resource/blob/167758/21-12-en.pdf> (retrieved Feb 11th 2026)

⁶ <https://cris.fau.de> (Feb 15th 2026)

⁷ <https://www.wp.rrze.fau.de/plugins/portale/fau-cris/> (Feb 15th 2026)