We are still here, too! Research Data Management at Universities of Applied Sciences

Approaches from the Project "FDM@HAW.rlp" in the German State Rhineland-Palatinate

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Abstract: The objective of the German non-profit association NFDI (German short form for "National Research Data Infrastructure") is to make the data stock of the entire German science system accessible to the public. To do so, it should involve all stakeholders. However, currently the Universities of Applied Sciences (UAS) are underrepresented in the NFDI, and there is a danger of neglecting their needs. Therefore, we present the project "Research Data Management at Universities of Applied Sciences in the State of Rhineland-Palatinate" (FDM@HAW.rlp), which is funded by the German Federal Ministry of Education and Research (BMBF) and financed within the Recovery and Resilience Facility of the European Union. In the project, seven public UAS in Rhineland-Palatinate and the Catholic University of Applied Sciences (CUAS) Mainz follow a common goal: They intend to establish an institutional RDM within a period of three years by building up competencies at the UAS, setting up services for researchers and finding solutions for a common technical infrastructure.

Keywords: institutional RDM, Universities of Applied Sciences, FDM@HAW.rlp, spreading RDM

1 Extended Abstract

The objective of the German non-profit association NFDI (German short form for "National Research Data Infrastructure") is to make the data stock of the entire German science system accessible according to the FAIR principles [1], [2]. This requires not only technological and methodological solutions, but also communication and networking among various stakeholders.

In networking, the NFDI encounters two challenges: First, linking the already existing initiatives (especially initiatives at the state level). Second, connecting the Universities of Applied Sciences (UAS) more closely with the NFDI. Currently, the UAS are severely underrepresented in the NFDI. Rather, the NFDI consortia are dominated and shaped by the universities (one of few exceptions is Mainz University of Applied Sciences,

which is a co-applicant in the NFDI4Objects consortium since March 2023). In principle, the mission and focus of universities is basic research, while the UAS conduct application-oriented research. At the same time, it must be noted that UAS were primarily focused on teaching in the past. For several years now, however, they have also been conducting increasingly successful research and so the needs in the field of RDM are also growing steadily.

For the efficient development of a national infrastructure, it is essential to involve all relevant stakeholders, to create synergies and to integrate what already exists. In a position paper [3], the state initiatives have already shown that their continuation and inclusion in the NFDI is a prerequisite for success.

However, the development of RDM competencies and structures at the level of single UAS requires further efforts. This is due to the structure, size, and orientation of UAS in Germany. Compared to universities, only very few UAS have the necessary infrastructures such as large computing centers and libraries. In terms of human resources, the difference between UAS and universities is due to the lower level of funding, the lack of mid-level academic staff and the increased teaching load of the scholars in the UAS. Research projects at UAS are more often carried out in cooperation with industry and small and medium enterprises, so that aspects of data protection and data governance play an important role. An essential building block for the establishment of RDM is the education and training of all stakeholders in data literacy.

The German Federal Ministry of Education and Research (BMBF) has recognized these general conditions and has announced the funding guideline "Reuse and Management of Research Data at Universities of Applied Sciences" [4]. The aim is to identify the needs of UAS, raise awareness of RDM, and establish and expand RDM. Funding is being provided for 14 projects for structural development and three studies to determine the status quo at UAS [5].

The preliminary results of the study "Development and Dissemination of Research Data Management at Universities of Applied Sciences" (EVER_FDM, [6]) show that the topic is still in its initial stages. The guideline on Good Scientific Practice [7] by the German Research Foundation (DFG) was found to be known to 79% of respondents, but the FAIR principles were found to be known to only 25.3%. With only 9.8% awareness, the Stifterverband's Data Literacy Charta [8] scored even worse. This shows that there is a need for essential work at the basis, especially in the area of data literacy, the creation of structures, and networking with the NFDI.

These challenges are met by the project "Research Data Management at Universities of Applied Sciences in the State of Rhineland-Palatinate" (FDM@HAW.rlp). In the project, the seven state UAS in Rhineland-Palatinate and the CUAS (see Figure 1) follow a common goal: They aim to establish an institutional RDM within a period of three years by building up competencies, services and technical infrastructure.

The project is organized as follows: At each UAS, there is located a "scout" who acts as a primary contact person for the researchers at the respective institution. Furthermore, there are 4 "data stewards" who are responsible for a scientific domain across institutions. These domains are: (1) life sciences and natural sciences, (2) informatics / computer science, (3) engineering, and (4) humanities and social sciences.

Both are also responsible for educational offerings that address the fundamentals of RDM. The stewards are also responsible for networking with the NFDI to provide researchers with tailored solutions to their RDM concerns. The project is coordinated by a central coordination unit. After the duration of the project, the positions of "scouts",
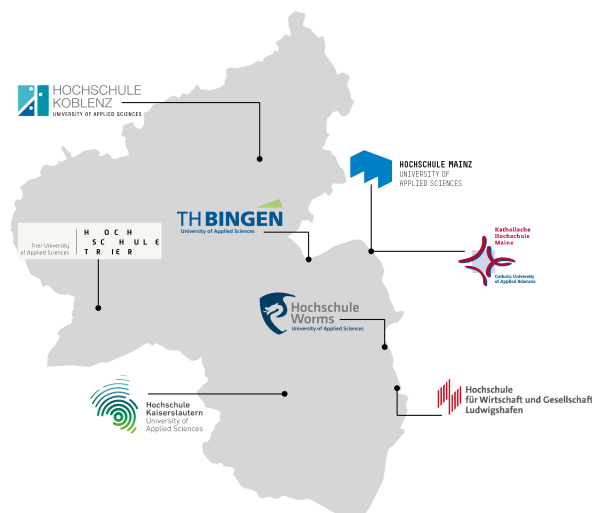
Figure 1. Participating Universities of Applied Sciences / Illustration: FDM@HAW.rlp.

"data stewards" as well as "central coordination unit" are supposed to be merged into a single RDM officer position at each of the eight universities.

In the presentation, the authors will tell the inside story regarding the tasks and experiences of Scouts and Stewards in everyday work. In doing so, they focus on the specific needs and requirements of RDM at UAS in order to actively bring them into the discussion and to include UAS with their challenges and needs in the NFDI's deliberations. Only when the entire science system in Germany is networked and involved, the NFDI can be successful on a broad scale. It is therefore a necessity that the various projects network with each other. Likewise, the needs of the UAS must be formulated and the NFDI's offerings must be made available to them. An important building block for spreading RDM is the development of data literacy of all those involved.

Author contributions

Manuela Richter: Writing - original draft
Dr. Johannes Putzke: Writing - review & editing
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