

# The Role of Universities of Applied Sciences in the Development of a national Research Data Infrastructure

## Situation and Potentials of Universities of Applied Sciences from the Perspective of the Network FDM@HAW

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## Abstract

The presentation highlights the role of Universities of Applied Sciences (UAS) in research and their potential for the development of a National Research Data Infrastructure (NFDI). To address the growing need for structured research data management (RDM) at UASs, the FDM@HAW network has emerged as a potential connector between NFDI and UAS land-

scape. It aims to raise awareness of NFDI services across a diverse UAS network, and articulate UAS-specific requirements back to NFDI. In doing so, it strengthens mutual integration and fosters targeted support.

With over 200 institutions [1], UASs constitute a significant part of the German science system. Traditionally focused on teaching, UASs have become drivers of applied research and regional innovation. Their contributions to education and research make them essential actors in shaping RDM in Germany. Research at UASs benefits business, science, and society. In many federal states, the right to award doctorates further reinforces their research activities. Strengthening RDM competencies is important to ensure that valuable research data from UAS meet the FAIR principles. Furthermore, employers benefit from graduates equipped with strong data literacy.

Despite their potential, UASs remain underrepresented in the NFDI (and partly in the RDM community). Low participation in NFDI consortia and limited association membership indicate a broader lack of engagement, largely due to low awareness of NFDI among UAS researchers and administrations [2, p.42] [3, p.6]. The NFDI structure report 2024 addresses this gap and calls for broader contact to UASs [4, p.27]. Structural challenges limit UAS engagement in RDM and the NFDI, including high teaching loads, minor resources, and partnerships prioritizing data protection over openness or commercial interests. In response, many UASs have implemented strategic networking in research, teaching, and infrastructure to overcome resource limitations. This approach also drives the development of RDM structures, often via projects or state-level initiatives.

The Federal Ministry of Education and Research supports 14 projects [5] through its funding guideline for RDM at UASs. This initiative led to the establishment of the FDM@HAW network in 2023, connecting these projects. Since its formation, the network has engaged in continuous exchange on RDM development and contributed to events such as Love Data Week, the FORTRAMA conference [6], Volkswagen Foundation's Digital Skills in Science Week [7] and E-Science-Tage [8]. These activities have helped sharpen the network's focus, identify shared priorities and integrate new members. Members contribute ideas, tools and services developed in RDM projects or collaborations - such as the "NFDI Survival Kit" [9] and the "NFDI-N(HAW)igator" [10] - to promote RDM awareness and inform about NFDI on a national scale.

In line with NFDI's mission to "improv[e] the possibilities for using data for science and society" [11], FDM@HAW seeks to disseminate knowledge of and strengthen competence in delving into these possibilities. The network provides valuable support to activate a target group that has largely been untapped. Close cooperation between NFDI and FDM@HAW will then contribute to the successful development of a nationwide RDM ecosystem. In the presentation, proposals for cooperation will be outlined.

**Keywords:** Universities of Applied Sciences, Research Data Management, Spreading RDM, National Research Infrastructure, German Science System, FDM@HAW Network, Applied Research, Institutional Networking, Structural Challenges, Strategic Collaboration, Institutional RDM.

## Resources

- None

## Author contributions

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## Competing interests

The authors declare that they have no competing interests.

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- [7] Full title of the workshop: „Forschungsdatenmanagement mit geringen Ressourcen? Kompetenzaufbau durch Vernetzung von Hochschulen für angewandte Wissenschaften“ (transl. „Research Data Management with minor Resources. Building expertise through networking Universities of Applied Sciences“), funded by Volkswagen Foundation, funding number 9E186, 02.-04.12.2024, Hannover, url: <https://www.hs-mainz.de/forschung/forschung-transfer/projekte/fdmhawrlp/forschungsdatenmanagement-mit-geringen-ressourcen-kompetenzaufbau-durch-vernetzung-von-hochschulen-fuer-angewandte-wissenschaften/>.
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