












# Building bridges: Roll-Out Group of NFDI-MatWerk

## A strategy for interfacing researchers and research data management infrastructure in materials science and engineering

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## Abstract

The integration of research data management (RDM) into specific research communities is a key challenge for many consortia of the National Research Data Infrastructure association in Germany (NFDI), especially under the guidelines of findable, accessible, interoperable and reusable (FAIR) research data [3]. There is a risk that a consortium develops an RDM architecture (e.g., the NFDI-MatWerk architecture [1]) with technically advanced solutions, but without adequate exchange with its community. As a result, researchers may miss the advantages of modern workflows, automation and standardization, leading to less efficient research processes, while the consortium risks receiving only limited or unfocused feedback from the community, hindering efficient and targeted development of its solutions.

These issues became apparent during the first funding phase of NFDI-MatWerk, where the heterogeneous community of material scientists and engineers poses an additional challenge.

Consequently, a comprehensive roll-out strategy was developed to address these issues. The resulting roll-out group consists of members from all NFDI-MatWerk task areas, ensuring integration of diverse areas of expertise from within the consortium. The roll-out group identified the following main tasks:

- Requirement assessment: Establishing the specific needs of researchers within the community through, e.g., user journey workshops and thus enabling a demand-driven adaptation of NFDI-MatWerk solutions.
- Target group identification and communication: Creating personas for marketing and outreach, establishing membership options, and maintaining a presence at relevant events. This also includes an easy onboarding process for new users (installation, adaptation, and first steps), and close monitoring via feedback loops.
- Low-threshold use of solutions: Providing clear descriptions and practical documentation of tools, services, and topics within NFDI-MatWerk and cross-linking related topics to improve contextual understanding. Supporting researchers through accessible examples and demonstrators, including curated datasets and use-case-based guidance, to help them transfer existing solutions to their own problems.
- Community Empowerment: Organizing targeted teaching initiatives (e.g., "Seasonal Schools") and covering essential RDM topics to enable community members to adopt and promote these solutions themselves.

The roll-out group thus not only educates researchers on RDM-related topics but also reports newly developed solutions regularly to its stakeholders, including the community. The roll-out group also prevents resource and time constraints of users and developers by producing standardized, user-friendly materials that consortium members can readily adopt and share with the broader community. This approach ensures that NFDI-MatWerk's solutions are not only technically advanced but also well communicated and practically applicable. Researchers are supported in becoming independent users and can transfer existing solutions to their own research environments. The success of the used methods will be monitored by NFDI-MatWerk to guide further development and refinement.

The aim of this contribution is to raise broader awareness of the outreach topic within the NFDI consortia and foster exchange with professionals from other consortia to advance innovative approaches. We see CoRDI as ideally suited for this exchange.

**Keywords:** NFDI-MatWerk, Community Engagement, Roll-Out, Education, Teaching

## Resources

- NFDI-MatWerk website: [www.nfdi-matwerk.de](http://www.nfdi-matwerk.de)
- NFDI-MatWerk Spring School 2025 in Aachen: [www.eusmat.net/research/other-events/nfdi-matwerk-spring-school-2025](http://www.eusmat.net/research/other-events/nfdi-matwerk-spring-school-2025) as a current example of community empowerment

## Author contributions

According to the [CreDIT guidelines](#):

- Conceptualization: Julia Mohrbacher, Katharina Grünwald
- Project administration: Julia Mohrbacher

- Writing – original draft: Katharina Grünwald
- Writing – review & editing: all authors contributed equally

## Competing interests

The authors declare that they have no competing interests.

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