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# Shaping the Data Steward Community in Germany

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Research data management and data stewardship are no longer new concepts. In a national context, there is a lack of a commonly accepted framework for describing data stewards. Despite this, more and more RDM professionals are describing themselves as data stewards and a community of practice (CoP) seems to be emerging. Here we describe the first steps of this new community, which is creating a vision, establishing a communication structure and finding like-minded RDM professionals to join. A CoP will act as a social learning space to advance research data stewardship by sharing good practices and initiate discussions on job profiles, education and training of data stewards, as well as effective integration of data stewards into research teams and career paths for this group of professionals who have become an important part of today's research enterprise.

**Keywords:** Data Steward, Community of Practice, Community Building, Research Data Management

## 1 Introduction

Improving data quality through data stewardship is gaining increasing scientific and practical relevance, as evidenced by the growing interest in workshops such as “Data Stewardship goes Germany” (DSgG, see Hausen et al. 2024). The last two workshops in 2023 and 2024 revealed that there is currently a lack of adequate support for data stewards in Germany. Although it has been recognised that data stewards can play a strategic

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and highly supportive role in research, this role is often not actively implemented. Meanwhile, international projects – for example, in the Netherlands (Jetten et al. 2021) and the national project DataStew (Seidlmayer et al. 2023) – have addressed the roles and profiles of data stewards, and it is now necessary to translate these theoretical insights into practice.

To systematically capture these challenges and develop solutions, the last two DSgG workshops focused on this theme. At DSgG 2023, it became apparent that, unlike in other countries, a dedicated community for data stewardship does not yet exist in Germany, although the need is clearly present (Krause et al. 2024). This situation was then systematically assessed at DSgG 2024 using the Community Canvas (Pfortmüller, Luchsinger, and Mombartz 2017), with small groups working on individual aspects such as identity, structure, and experiences. It became clear that data stewardship is much more than simply sharing experiences; it is essential to clearly define the role of data stewards, to promote their integration into research teams, and to establish professional career paths as well as institutional strategies. By building a nationally networked community, a virtual space is created where both technical and content-related challenges can be jointly discussed and innovative solutions developed (Hausen, Della Chiesa, et al. 2025; Hausen, Windeck, et al. 2025).

This paper will elaborate on these outcomes through both a lightning talk (Dierkes and Hausen 2025) and an interactive poster (Hausen, Dierkes, and Trautwein-Bruns 2025), thereby advancing the strategic importance of data stewardship and community within the research ecosystem.

## 2 Perspectives on the Emerging Data Steward Community in Germany

The interactive poster “Shape the Data Steward Community! Your Ideas Count ...” was designed to gather diverse perspectives from key stakeholders – researchers, infrastructure members, NFDI<sup>1</sup> members, and Data Stewards themselves – on essential questions related to the development of the emerging Data Steward Community in Germany. By providing an interactive space for feedback and exchange, the poster encouraged participants to share their own experiences and expectations regarding the community. The aim was to explore external viewpoints on the community while specifically engaging researchers and infrastructure staff in the discussion.

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<sup>1</sup> NFDI is the German National Research Data Infrastructure, <https://nfdi.de>; *Visited May 21st 2025.*

## What are data steward tasks and skills?

Data Stewards describe themselves as “an important link between the technical infrastructure and the scientists”, emphasizing the need for “field-specific knowledge (e.g. methods)”, “technical expertise”, and a “hands-on mentality”. Infrastructure members highlight their role as an “important contact point for external partners” and stress the importance of “technical programming skills”. NFDI members focus on interpersonal skills, stating that Data Stewards should be able to “listen carefully and identify problems”.

The responses highlight that Data Stewards require a combination of technical expertise, domain-specific knowledge, and strong communication skills. They act as mediators between researchers and infrastructure (Rothfritz 2019).

## What characterises successfully integrated data stewardship in daily research?

According to Data Stewards, successful integration means that “scientists are happy to contact the Data Steward”, that there are “networking opportunities, community building”, and that Data Stewards serve as a “low-barrier point of contact”. Infrastructure members emphasize visibility, stating that a well-integrated Data Steward is a “person who is seen and approached (especially beneficial in smaller institutions)”. Researchers define success in practical terms: A data steward “benefits / improves my workflows”.

Successful integration of data stewardship into everyday research is therefore characterised by high visibility of data stewards and the practical support for the research process.

## How is data stewardship knowledge managed?

Data Stewards question whether knowledge management is even necessary: “Is it managed? Does it have to?”. Infrastructure members see institutional anchoring of the data steward community as a key challenge: “Where should it be institutionally anchored – DHD, NFDI? A question of long-term sustainability!”. Researchers focus on reusability: “to reuse resources”.

There is no clear consensus on knowledge management within *data stewardship*. While some question its necessity, others emphasize the importance of institutional anchoring and sustainability. An established CoP could play a key role by enabling regular exchange and documenting best practices, which would facilitate the efficient reuse and sharing of resources.

## What do you expect from the data steward community and what are you able / willing to contribute?

For the data stewards, the community provides a space for learning from each other: “input: my experience; output: new skills through exchange”. Infrastructure members seek practical guidance, referring to “low-hanging fruits: how do I reach researchers, overview” and “first steps, how to get started”. The NFDI members expressed interest in “connecting with the *RDM-Helpdesk* network (working group in the NFDI Section Education & Training; Engel et al. 2024), with plans to establish a base service for Helpdesk networking (Support4RDM)”. “Support4RDM plans to provide, among other things, a ticketing system and an *RDM-Helpdesk* catalogues as well as a *federated helpdesk network*”.

The Data Steward Community is expected to serve as a hub for knowledge exchange and skill development. Stakeholders see it as a place to gain practical guidance and connect with existing support networks, highlighting the need for structured collaboration and accessible resources.

## How will the world be different by having this community?

Data Stewards see a clear impact: “support for onboarding new Data Stewards”, “strengthening science, innovation, societal good”, and “making science more rewarding (& fun?)”. Infrastructure members reflect on sustainability, asking whether the community will make research data management “somewhat more sustainable after the projects have run out?”.

The emerging data steward community could contribute to the long-term professionalization and institutionalization of *data stewardship*. By providing support for newcomers and strengthening research as a whole, it would enhance the sustainability and impact of *data stewardship* practices.

## 3 Discussion and next Steps

As described above, there is a growing interest in networking and joining forces to think together, learn and shape data stewardship as a CoP (Figure 1). This was clearly articulated in the community building exercise at DSgG 2024 using the Community Canvas (Oset García et al. 2023; Hausen, Windeck, et al. 2025; Pfortmüller, Luchsinger, and Mombartz 2017). As a result, three working groups were formed to

- flesh out a vision for the CoP, including strategic elements such as education and career paths, *as well as mapping national and international initiatives*,
- collect challenges faced by data stewards to inform further community activities, and
- establish communication channels and a kind of yellow pages for effective community communication.

The discussion and results of the interactive poster provide further support for this development. They also show the importance of considering different perspectives and, therefore, different expectations. In particular, the boundary-spanning characteristics of data stewards are seen by all stakeholders.

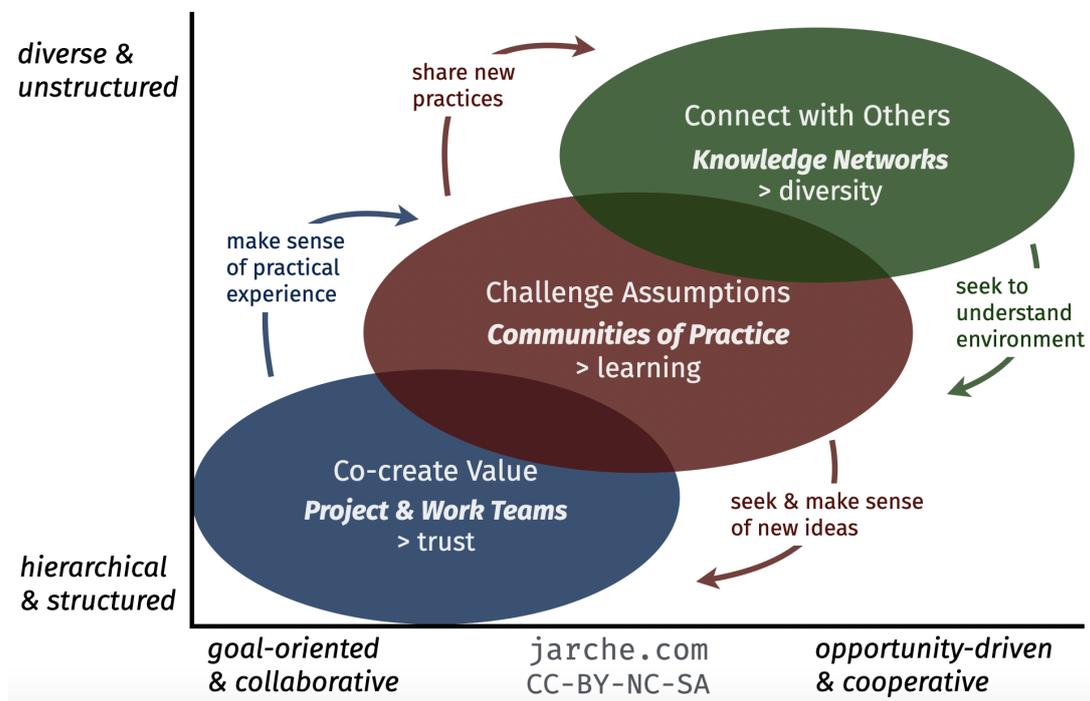


Figure 1: Illustration of the relationship between networks, communities of practice and project teams in terms of collaboration and structure/diversity. Image credits: Harold Jarche<sup>2</sup>.

Many of the issues raised in section 2 are already part of the established working groups. *A very interesting question arises regarding the actual need to manage knowledge.* For example, the articulated need for onboarding and collaboration across RDM helpdesks requires a managed explicit body of knowledge. However, there are suggestions that a better understanding of the data management situation is possible if explicit, tacit, individual and group knowledge are treated as four distinct and coequal forms of knowledge, and if knowledge and knowing (as action) are seen as mutually enabling (Cook and Brown 1999). Discussions in the working groups are already recognising these characteristics, and as a CoP all four dimensions can be addressed.

<sup>2</sup> <https://jarche.com/2020/08/working-smarter-with-pkm-transcripts/>; Visited on March 29, 2025.

*The three working groups are carefully considering topics that could form the basis of a CoP, with the aim of demonstrating added value and enabling effective communication. Only then will it be possible to involve more members and grow as a CoP. At the same time, many parallel developments are taking place in the area of data stewardship. Several of NFDI's disciplinary consortia, in particular, employ data stewards, thereby strengthening the role of data stewardship. In this context, the connections with the RDM-Helpdesk (Support4RDM) must be considered to avoid duplication and foster synergies. The NFDI Section Education and Training, as well as the RDMTraining4NFDI base service, also address the skills required by data stewards. It is important to emphasise that the emerging CoP can act as a unifying element. It is therefore important to maintain the current momentum and to demonstrate the potential added value to the wider community. It is currently being considered to link the community to an existing, established network, such as the DINI/nestor Research Data Working Group<sup>3</sup>, with an underlying organisational infrastructure for communication and the organisation of workshops, for example.*

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## **Authorship Contributions**

All co-authors contributed equally to the manuscript.

## **Conflict of Interest**

The authors state no conflicts of interest.

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<sup>3</sup> [https://www.forschungsdaten.org/index.php/AG\\_Forschungsdaten](https://www.forschungsdaten.org/index.php/AG_Forschungsdaten); Visited on March 30, 2025.

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