



Data Management Planning across Disciplines and Infrastructures. Introduction to the Special Collection

EDITORIAL CONTENT

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ABSTRACT

The Special Collection *Data Management Planning across Disciplines and Infrastructures* of the *Data Science Journal* consists of papers describing practical experiences, concepts, and future directions on the design and deployment of effective data management plans and associated tools. Papers contain practical examples on managing and sharing data, consider the integration of data management plans into infrastructures and reflect innovative research into new directions for disciplinary and cross-disciplinary data management planning.

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KEYWORDS:

Data Management Planning; data management plan (DMP); (cross-) disciplinary data management; data management planning infrastructures; maDMPs; activeDMPs

TO CITE THIS ARTICLE:

Netscher, S, Hausen, D, Wiley, C, Anders, I, Ashley, K, Henzen, C, Jones, S, Miksa, T and Praetzellis, M. 2024. Data Management Planning across Disciplines and Infrastructures Introduction to the Special Collection. *Data Science Journal*, 23: 16, pp. 1–3. DOI: <https://doi.org/10.5334/dsj-2024-016>

Effective research data management is a crucial aspect of good research practice, as it promotes transparency in research, traceability of research findings, and efficient resource utilization, for example when making use of public funds for data collection. Data management plans play a key role in structuring data management processes and guiding researchers. Therefore, templates for data management plans must fit the needs of different research disciplines while enabling inter-disciplinary comparability and interoperability of data management. Workflows in research would benefit from systematically integrating tools for data management planning, as they can serve as an additional component besides project management software, electronic lab notebooks, metadata tools, and so on.

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Regarding data management across disciplines, some of the papers contribute to interoperability and cross-disciplinary (re-)usability of data management plans. Such papers, for example, examine and compare different templates across disciplines, or identify approaches to shape the future of cross-disciplinary data management planning. Further papers present different approaches to improve guidance for data management that are tailored to a specific research discipline, for example, to facilitate researchers managing clinical data or to simulate research data management approaches in Earth science.

Most papers contribute to the transition from discipline-specific to cross-disciplinary data management. For example, some papers illustrate the common development of subject-specific checklists focused on the FAIR data principles to make data more findable, accessible, interoperable, and reusable, or of data management plan templates for different disciplines. Other papers discuss the challenge of different practises across institutes, describe a framework for data management harmonisation in large-scale projects, or introduce a dynamic data management planning questionnaire.

Finally, some papers focus on data management planning infrastructures, discussing technical approaches to improve data management, and to assist researchers and data stewards in their daily work. Such papers describe tools for machine-actionable data management plans or discuss the development of different tools regarding data management planning.

In sum, papers of this Special Collection illustrate various approaches to enhance data management plans and planning, within as well as across disciplines. They provide insights of a wide variety of tools and technical solutions by addressing different challenges of data management. In short, the collection highlights the importance of ongoing developments in the context of data management plans and planning, including future directions and opportunities for more systematic integration into project management practices.

The collection editors would like to thank all authors for their submissions as well as the numerous reviewers who contributed to the quality of the papers. The *Data Science Journal* continues to welcome submissions on data management planning and related issues.

COLLECTION EDITORS

This Special Issue is in memory of our guest editor Sarah Jones, who passed away in December 2023.

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COMPETING INTERESTS

The authors have no competing interests to declare.

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TO CITE THIS ARTICLE:

Netscher, S, Hausen, D, Wiley, C, Anders, I, Ashley, K, Henzen, C, Jones, S, Miksa, T and Praetzellis, M. 2024. Data Management Planning across Disciplines and Infrastructures Introduction to the Special Collection. *Data Science Journal*, 23: 16, pp. 1–3. DOI: <https://doi.org/10.5334/dsj-2024-016>

Submitted: 07 March 2024

Accepted: 07 March 2024

Published: 04 April 2024

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