



Beitrag ID: 80 Beitragskennung: W01

Typ: Workshop (Short)

Building connected data ecosystems - how to facilitate FAIR data workflows across tools and services

Audience: Research Data Managers, Researchers, Research Infrastructure/service providers, Core facility providers

Most research centers maintain dedicated infrastructures to capture, curate, and store research data produced by their personnel. The employed solutions, however, are often run independently of one another and therefore lack connectivity, creating gaps in the data workflows. An integrated data ecosystem, however, would manage information, provide workflows, and support data documentation as data is produced.

Lab and field notebooks are essential tools for documenting structured information during measurement campaigns or field and laboratory work. Modern Electronic Lab Notebooks (ELNs) and data collection tools offer advanced features to support this documentation process and can enrich records with additional metadata—such as instrumentation details, personnel involved, sample registration, and more. They are often positioned in sections of the data workflow, where critical information is generated and possibly merged and thus could operate as data workflow orchestrators. On the other hand, this task could also be assumed by other tools, depending on the architecture of the envisioned data ecosystem.

However, in practice, many centers and laboratories face significant barriers: ELNs and other services are not readily available, may require costly licenses, don't integrate sufficiently into existing workflows and infrastructure. They also often lack institutional support or training opportunities. As a result, their use is not yet widespread.

In this workshop, which builds on the results of a workshop taking place in summer 2025. We would like to discuss potential architecture models within research centers, and invite participants to explore the potential of ELNs and other tools within scientific workflows. Together, we'll discuss desirable features, briefly review a few existing solutions, adoption challenges and consider whether centrally provided ELN services across Helmholtz could be a sustainable way forward. The aim is, to form a working group, developing interoperability standards for data ecosystems.

ONLY WORKSHOPS - Proposed interaction format

Discussion

Alternative Track

1. Software Interoperability for (Meta)data Acquisition

ONLY WORKSHOPS - Tentative audience

Research Data Managers, Researchers, Research Infrastructure/service providers, Core facility providers

ONLY WORKSHOPS - Maximum number of participants

30

ONLY WORKSHOPS - Special technical requirements

projector, posterboard, power plugs for demos.

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Sitzung Einordnung: WORKSHOPS

Track Klassifizierung: HMC Conference 2026 - Pre-Conference Workshop: Pre-Conference Workshops