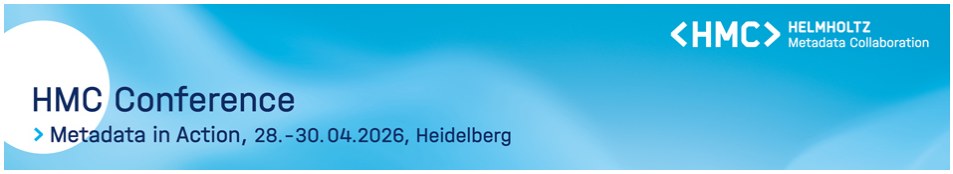

Beitrag ID: **52** Typ: **Talk**

TeSSHub - a Federated Training Catalogue Infrastructure

The mTeSS-X project ("Multi-space Training e-Support System with eXchange") aims to address one of the central challenges in modern research infrastructures: how to provide coordinated, yet domain-specific training resources across diverse scientific communities. Within the framework of ELIXIR and PaNOSC, the project develops a federated training catalog infrastructure called TeSSHub that connects communities from Photon and Neutron (PaN) Science, the Life Sciences (LS) and beyond, enabling them to share, discover, and reuse training materials and event information across institutional and disciplinary boundaries.

Scientific domains such as LS and PaN share common challenges in training data stewardship, reproducible research, and the application of computational methods. However, their training ecosystems have traditionally evolved independently, often leading to fragmentation and duplication of effort. mTeSS-X directly addresses this by developing a modular, multi-space platform architecture that supports community autonomy while enabling interoperability and content exchange between training catalog instances. The software framework builds upon the ELIXIR Training eSupport System (TeSS) and introduces extensions that facilitate federated content discovery, metadata harmonization, and cross-domain search through standardized APIs and metadata schemas aligned with FAIR principles.

From a technical perspective, mTeSS-X combines robust software engineering with semantic technologies to support training resources that are FAIR (Findable, Accessible, Interoperable, and Reusable) across infrastructures. It introduces an exchange mechanism that allows participating communities to selectively publish, synchronize, and enrich content, while preserving local governance and editorial control. The well-established OAI-PMH 2.0 protocol is supported for import as well as export of content and is used in combination with RDF data utilizing schemas.science, which is based on schema.org properties, and ontologies, such as EDAM, for semantic interoperability.

In this contribution, we will present the conceptual and technical foundations of mTeSS-X. The presentation will also highlight how the exchange feature relates to FAIR training materials.

ONLY WORKSHOPS - Proposed interaction format

Alternative Track

ONLY WORKSHOPS - Tentative audience

ONLY WORKSHOPS - Maximum number of participants

ONLY WORKSHOPS - Special technical requirements

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Sitzung Einordnung: TALK SESSION

Track Klassifizierung: HMC Conference 2026 Track Topics: 2. Software Interoperability for (Meta)data Acquisition