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LMU and UGA Libraries: Emerging Trends in Research Data Management

Lightning Talk “Technical Components of RDM”

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Disclaimer

- Based on personal experiences @ University Library LMU Munich
- Reflection on the challenges during the implementation of our project(s)



Decisions, decisions

- What are my options?
 - Solution “out of the box”  
 - DIY  + **???**
- Project planning
 - What are my needs?
 - How does my data look like?



Our ecosystem

- Fedora (→ OCFL)
- Solr
- Blacklight
- “Magic” (in form of ETL and Integration Patterns)



Our current (and expected) data

- Several projects with different data requirements
 - ~5.000.000 files / ~150GB on disk / text-based / complex metadata
 - ~200 objects / ~900GB on disk / misc. / simple metadata
 - ~5.000 objects / ~10TB on disk / digitization / (very) complex metadata



Challenges

- Problems to unify information internally
 - Unique identifiers across all platforms?
 - Metadata requires transformations and (lots of) adjustments
- Very intense and extensive ETL processes
 - Each project requires a different approach
 - Data transformations
 - Indexing your data. How is your index going to support everything
 - Requirements are volatile



Why choosing this option?!

- Flexibility
- Achievements
 - Unified metadata format (rdUB)
 - Unique identifiers across all our platforms within the framework
 - Integration with other platforms
- Fedora was key
 - OCFL
 - Messaging
 - Documentation



Recommendations

- Do not be afraid to try
- Tools and documentation are there to help you
- Flexibility towards having the full control on what you need



Data Management Plans (DMP)

- Research Data Management Organiser (RDMO)
 - <https://rdmo.ub.uni-muenchen.de/>
 - Tool to create DMPs
 - Various questionnaires to address specific funder requirements
 - Various export formats and PDF support
 - Registration via ORCID ID or e-mail

UB RDMO (University Library LMU) Language Login

RDMO

A tool to support the planning, implementation and organisation of research data management.

Welcome to the RDMO service of LMU Munich

The service is provided by the University Library LMU and uses a web application to assist structured planning, implementation and administration of the data in a scientific project. Additionally, the gathered information can be cast into textual forms suitable for funding agencies requirements or for reports.

What functions does RDMO offer? The Quick Start Guide (Download, PDF) and our online tutorial "Creating Data Management Plans with RDMO" (only available in German) provide an overview and make it easier to get started:

Forschungsdatenmanagement – Datenmanagementpläne erstellen

0:00 / 9:08

Username

Password

Remember Me

Login

If you have not created an account yet, then please sign up first.

If you forgot your password and want to reset it, click here.

SIGN IN with ORCID

For more information about Research Data Management at the University Library LMU visit our website or contact the RDM Help Desk via rdm@ub.uni-muenchen.de.

Metadata Management

- DataCite Best Practice Guide

- <https://doi.org/10.5281/zenodo.7040047>
- Overview of DataCite (for researchers and library staff)
- Detailed examples
- Components on GitHub: https://github.com/UB-LMU/DataCite_BestPracticeGuide

- DataCite Metadata Generator

- <https://dhvlab.gwi.uni-muenchen.de/datacite-generator/>
- Tool to create machine-readable metadata
- Based on DataCite Best Practice Guide
- Easy to reuse: <https://github.com/UB-LMU/datacite-metadata-generator>

DataCite Metadata Generator - Kernel 4.4

Mandatory Elements

Identifier: [IDENTIFIER] [identifierType]

Title(s): [TITLE] [titleType]

Creator(s): [CREATOR NAME] [nameType]
[GIVEN NAME] (optional) [FAMILY NAME] (optional)
[NAME IDENTIFIER] [nameIdentifierScheme]

[NAME IDENTIFIER SCHEME URI]

[CREATOR AFFILIATION] [LANG]

[AFFILIATION IDENTIFIER] [affiliationIdentifierScheme]

[AFFILIATION IDENTIFIER SCHEME URI]

Publisher: [PUBLISHER] [LANG]

Publication Year: [YYYY]

Resource Type: [RESOURCE TYPE] [resourceTypeGeneral]

+ Recommended Elements

+ Other Elements

References:

- DataCite Metadata Working Group. (2021). DataCite Metadata Schema Documentation for the Publication and Citation of Research Data and Other Research Outputs. Version 4.4. DataCite e.V. <https://doi.org/10.14454/3w3z-s8s2>
- Bayer, Christiane, Friesch, Andreas, Gabriel, Vanessa, Kümmerl, Sonja, Lüdke, Stephan, Munko, Johannes, Putzings, Markus, Rohrwild, Jürgen, Schulz, Julian, Spenger, Martin, & Weber, Tobias. (2022). DataCite Best Practice Guide (Version 2.0). Zenodo. <https://doi.org/10.5281/zenodo.7040047>



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Thank you!

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