From daily storage to data publication - Managing research data collaboratively across institutions

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INTRODUCTION
• Research data management (RDM): key for fast and effective cooperation within collaborative research projects
• Interdisciplinary Collaborative Research Center (CRC) 1280 “Extinction Learning” (speaker: Onur Güntürkün) includes more than 70 researchers at four different institutions: since start in 2017 RDM challenges and chances

METHODS
• Agreement on a common metadata schema, folder structure and data storage is basis for RDM in the CRC
• But to firmly anchor and embed RDM in the CRC:
  - Establishing RDM board from all CRC status groups and developing RDM policy
  - Establishing a common knowledge base for the CRC via Moodle

TOOLS FOR IMPLEMENTATION
To enable the implementation RDM within daily, active research open-source Java applications were developed that
1) store metadata with an inheritance strategy as local json-files together with the research data (MetaDataApp)
2) make metadata searchable and search results easily retrievable (DatabaseApp)

RESULTS
• Neuroscientific data and metadata from > 2000 human subjects and lab animals shared within the CRC
• Continuous development necessary: e.g., adoption of Brain Imaging Data Structure (BIDS) to CRC system further increased data reusability

DISCUSSION
• MetaDataApp and DatabaseApp save noticeable RDM workload for researchers in the medium-term while RDMS is still under construction
• To maximize pay-off for daily use, RDMS integrates diverse functionalities in one platform. But it’s aimed at raw data: analysed data → need for e.g. sophisticated version control
• Automatic ingest of existing data and metadata into RDMS only possible due to extensive RDM prep work in the CRC

ACKNOWLEDGEMENT
DFG grant 316803389, CRC 1280 „Extinction Learning“, INF project