

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

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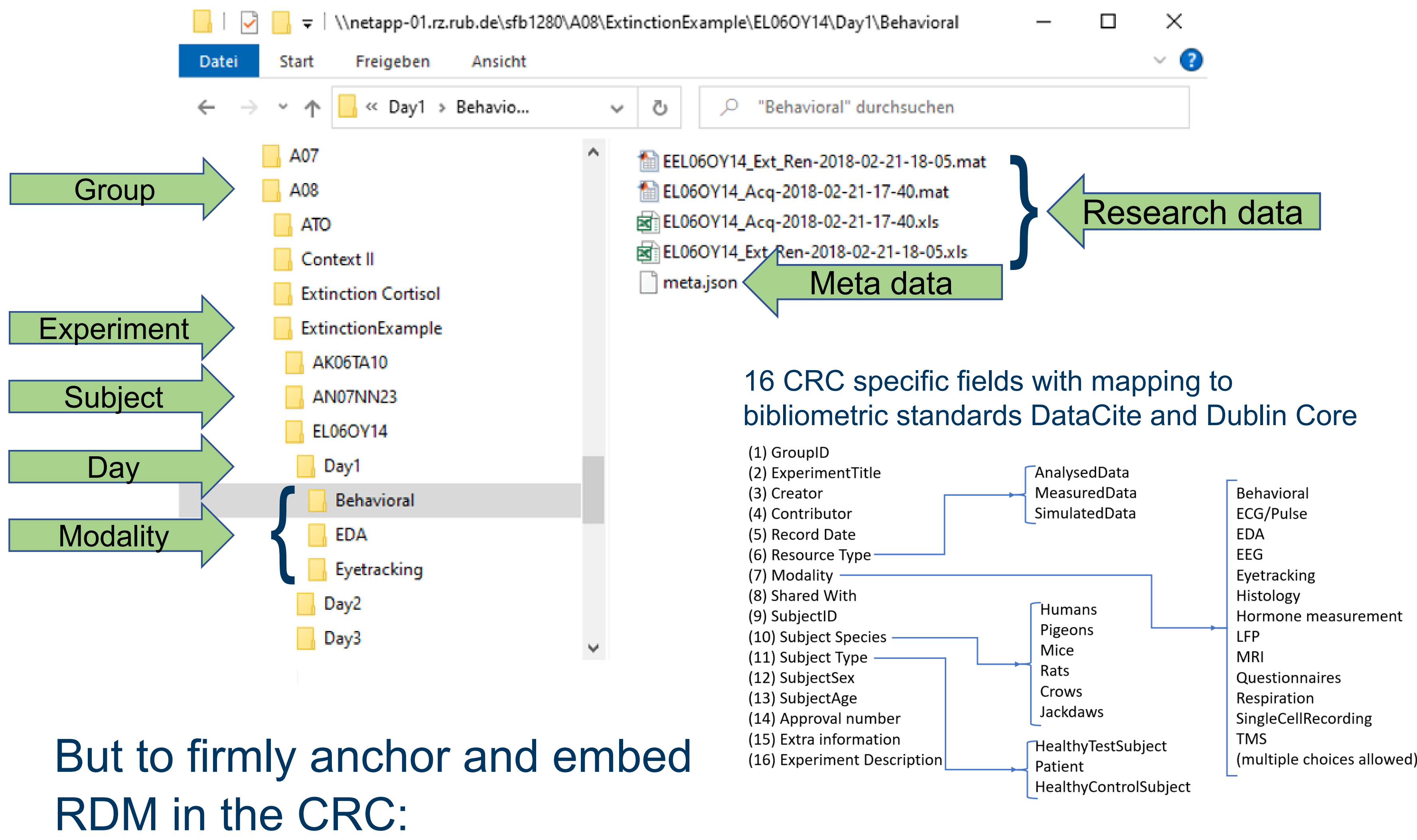
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## INTRODUCTION

- Research data management (RDM): key for fast and effective co-operation 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

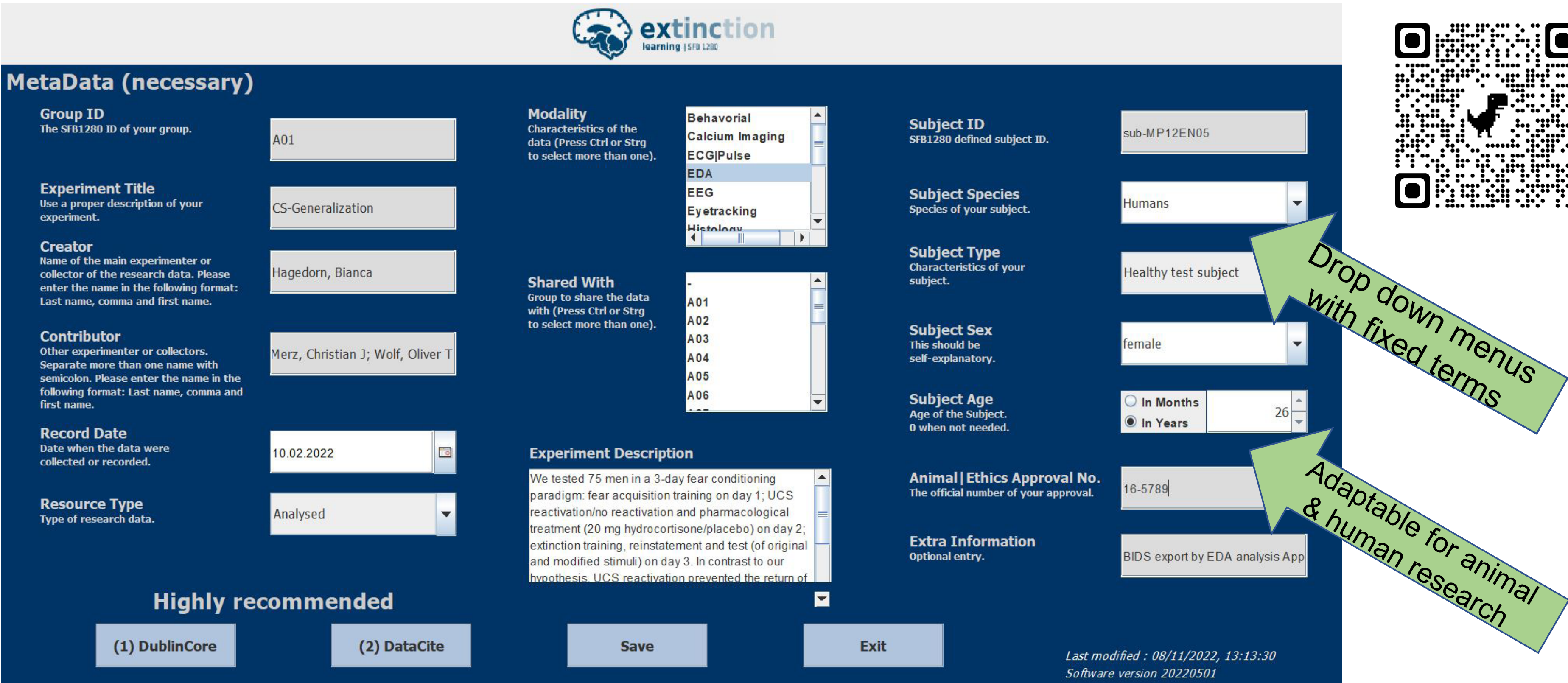
- Agreement on a common metadata schema, folder structure and data storage is basis for RDM in the CRC



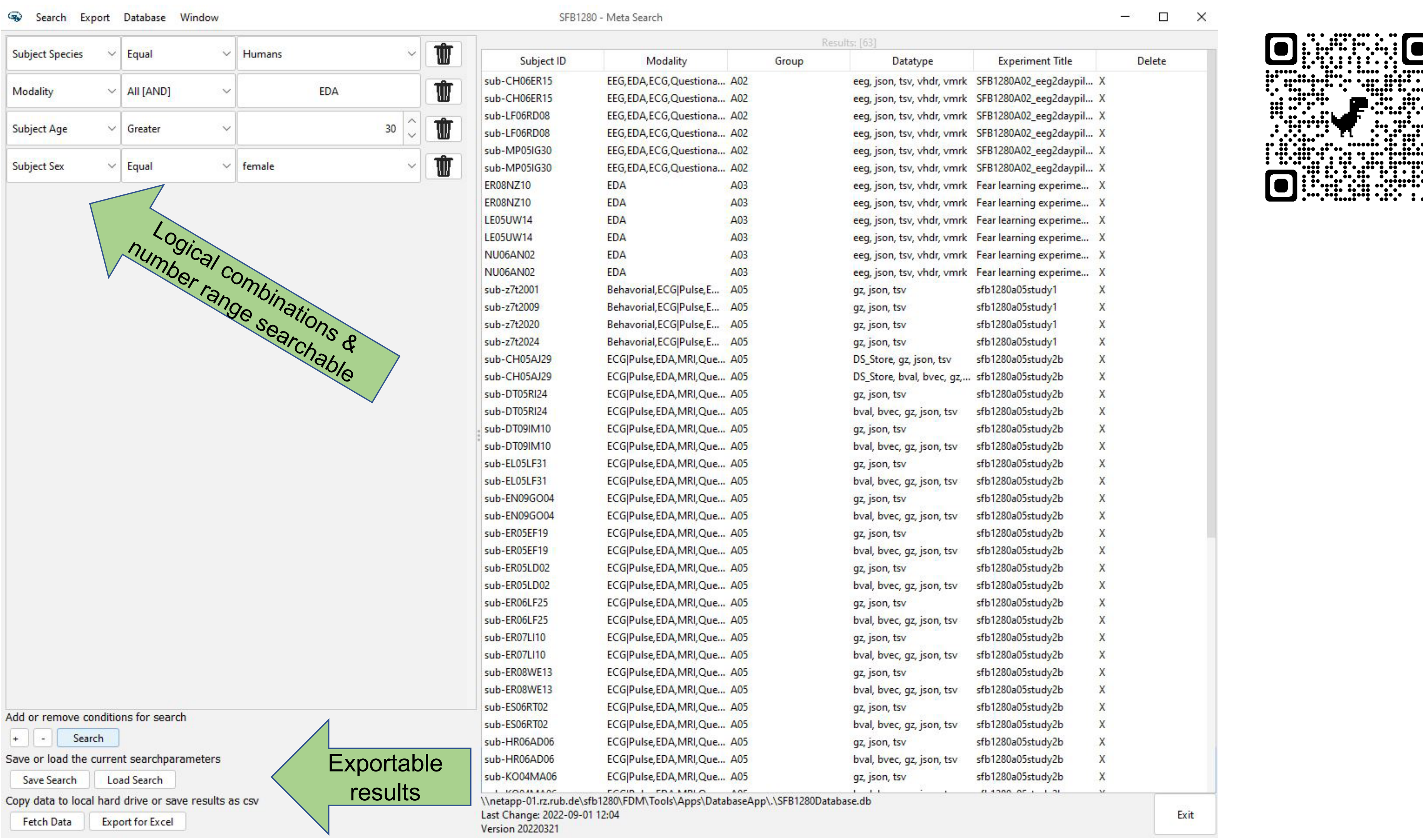
## TOOLS FOR IMPLEMENTATION

To enable the implementation RDM within daily, active research open-source Java applications were developed that

- store metadata with an inheritance strategy as local json-files together with the research data (MetaDataApp)



- make metadata searchable and search results easily retrievable (DatabaseApp)

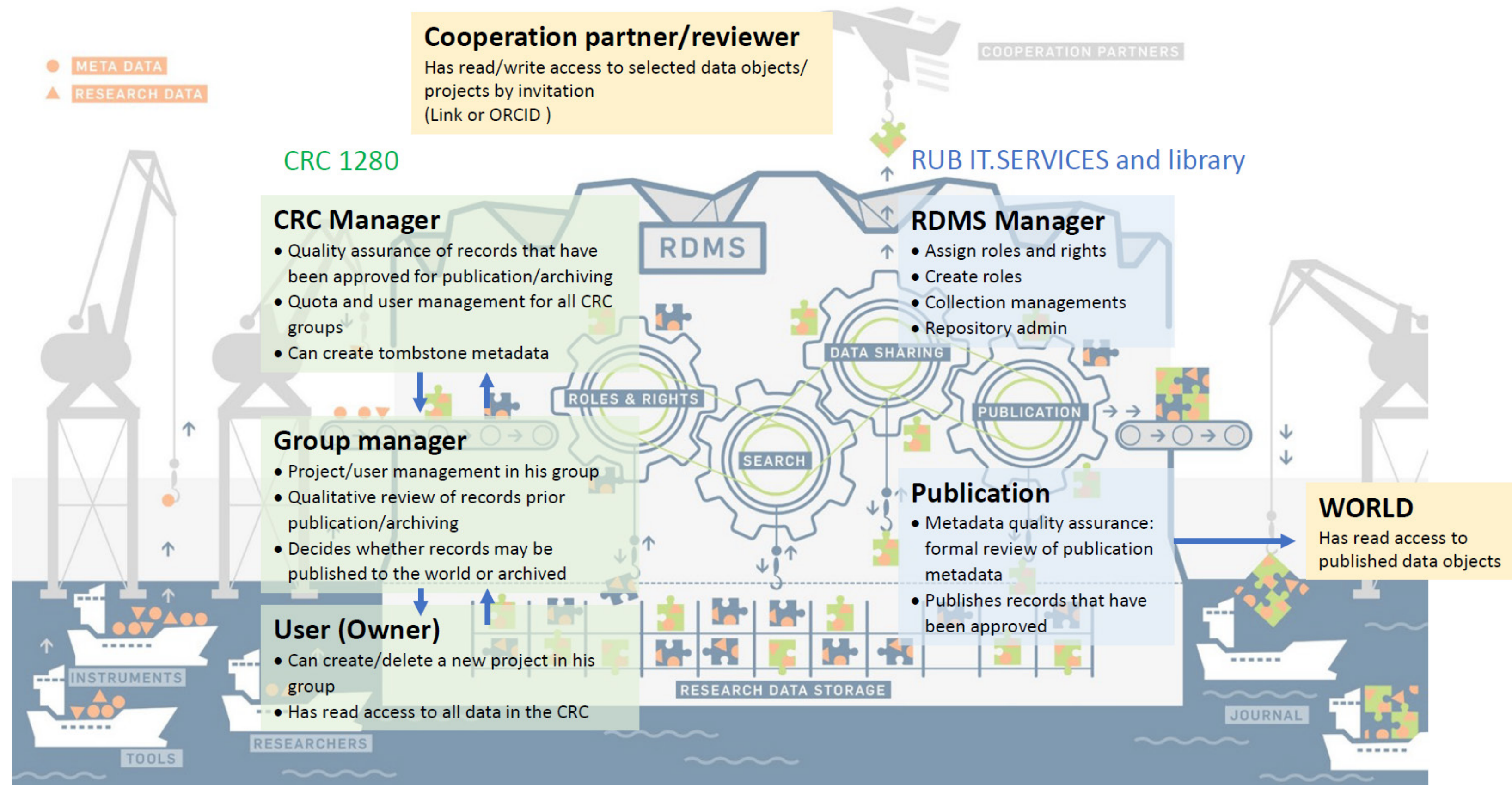


## RESULTS

- 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

## PREP WORK: Workflows for future repository solution

- New open-source research data management system (RDMS, Hyrax based): sharing data & metadata within the CRC, archiving & publishing FAIR data according to guidelines of good scientific practice, review workflows for quality control



- Workflows for
  - bulk ingest
  - daily ingestof research data and creation of metadata
- Integrated faceted search to foster data discovery and collaboration

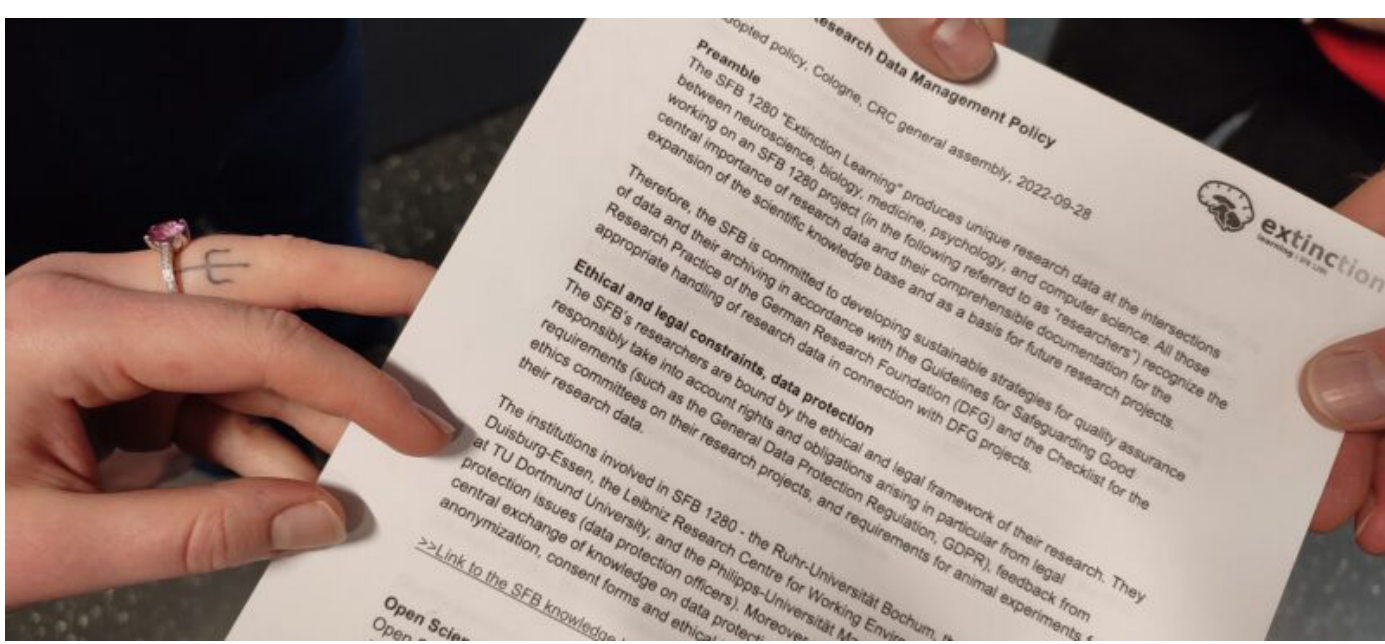


## DISCUSSION

- 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

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Drafted by the RDM board, discussed and adopted by the whole CRC covering

- Ethical/legal constraints, data protection
- Open Science
- Data documentation & organization
- Quality assurance
- Collaboration & data sharing
- Archiving

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