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A national data management service based on the ETH RDM platform

Nowadays funding agencies, journals and academic institutions frequently require research data to be published according to the FAIR (Findable, Accessible, Interoperable and Reusable) Data principles. On the other hand, the amount of data and information that are generated in scientific research labs and that needs to be documented and tracked is constantly increasing in size and complexity. For this reason, the classic way of documenting all scientific research work on paper laboratory notebooks, with data often stored in different locations, is no longer sustainable. In order to guarantee data FAIRness, every step of the research process needs to be accurately documented and data needs to be securely stored and backed up and annotated with enough metadata to make it reusable and reproducible. The use of an integrated Electronic Lab Notebook (ELN) and Laboratory Information Management System (LIMS) with data management capabilities can help researchers towards making their data FAIR. The Scientific IT Services of the ETH Zurich Informatikdienste (ETH SIS) have developed an ELN and LIMS based on the data management platform openBIS in close collaboration with scientists from ETH Zurich and other research institutions. Here we propose to setup a national service for research data management (RDM) based on the openBIS ELN-LIMS platform. The service will be available either as a cloud-hosted version on the SWITCHengines infrastructure or as a self-hosted version using the local infrastructure. The proposed project furthermore includes training activities so that researchers can successfully adopt the new service in their laboratories. Finally, we propose to extend the openBIS ELN-LIMS platform to improve interoperability with other data management and publication services, in particular national repositories.