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## **Progress of Sciebo Research Data Services**

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In order to follow the Open Science idea, accurate research data management (RDM) becomes increasingly important. As one consequence, research institutions and third-party organizations began to develop e-science technologies such as data storages and digital research environments [1]–[3]. However, on operational level, there hardly is an appropriate infrastructure. Existing services are poorly linked to the RDM steps which are demanded by public funders and institutions [4].

Last year's CS3, we provided the first results of the project sciebo RDS (research data services) which is a highly modular RDM infrastructure in order to support open science aspirations and connect already existing services. A key aspect of the project is to develop and improve low-threshold services that will result in an increasing use of RDM guidelines among potential users. This year, we want to present our progress and the next steps.

So far, we implemented various connectors (e.g. to Zenodo and Open Science Framework) and a functional user interface within ownCloud. In a cooperation with the Science Mesh project, we further plan to integrate the tool "Describo" to enable the collection of metadata and various metadata schemes to a research project without leaving ownCloud as a RDM platform. In the future, it should be possible to use the RDS interface in other cloud storage implementations such as Nextcloud or Seafile without major code changes. Usability optimizations and improvements towards a user-centered GUI will be developed in a dedicated research project. For this, we will use various principles of digital nudging to increase the awareness for the implemented workflows, based on the DINU-model by Meske & Potthof [5].

[1] S. Stieglitz et al., "When are researchers willing to share their data? –Impacts of values and uncertainty on open data in academia," PLoS One, vol. 15, no. 7 July, 2020.

[2] K. Wilms et al., "Digital Transformation in Higher Education –New Cohorts, New Requirements?," in Proceedings of the 23rd Americas Conference on Information Systems (AMCIS), 2017, pp. 1–10.

[3] R. Vogl, D. Rudolph, and A. Thoring, "Bringing Structure to Research Data Management Through a Pervasive, Scalable and Sustainable Research Data Infrastructure," in The Art of Structuring, K. Bergener, M. Räckers, and A. Stein, Eds. SpringerLink, 2019, pp. 501–512.

[4] L. Hofeditz et al., How to design a research data management platform? technical, organizational and individual perspectives and their relations, vol. 12185 LNCS, no. July. Springer International Publishing, 2020.
[5] C. Meske and T. Potthoff, "The DINU-Model - A Process Model For The Design Of Nudges," in Proceedings of the 25th European Conference on Information Systems (ECIS), Guimarães, Portugal, 2017, vol. 2017, pp. 2587–2597.

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