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### **CenDaBa: The central research data management database at DBFZ**

In 2008, the German Biomass Research Centre (DBFZ) has been founded by the federal ministry of food and agriculture. Since this time the DBFZ is split into four research departments that have been developed individually. Recently, more attention has been paid to research data management both globally and locally. Hereby the DBFZ favours to implement a central database (*CenDaBa*) for the research data management (RDM) to integrate any research data solution developed in the past.

The project *CenDaBa* has been launched in late 2022. The *CenDaBa* is intended to become a One-Stop-Resource combining internal sources such as laboratory information systems, Sharepoint projects and simple data collected by various devices. Not only is the current data provided via different sources, moreover a link between this data is rarely specified. The main goal of the *CenDaBa* is to overcome this lack of information and offer a new level for exploring research data.

As software solution, we decided to establish a new framework combining a modern Non-SQL MongoDB database with a generic user interface and high-level APIs to use with, e.g., Python and R. A general Mongo database scheme is used to integrate and harmonize the department specific schemes. In the meanwhile, the *CenDaBa* has initiated two use cases, Integration of Laboratory Information Management System (LIMS) and Zero-Emission DBFZ, in order to identify the feasibility of our approach.

Once established, the *CenDaba* will assist researchers with data import and export routines, data analysis tools and visualization.

It will further help them to implement common and internal research data management practices by default. An overarching goal is the realization of open data efforts in the community. Based on these premises, the *CenDaba* is planned to be roll out in the mid-2025 department by department to the entire DBFZ.

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