

Developing a sustainable working platform for gathering biological data in the field

DAGMAR TRIEBEL¹, Wolfgang Ahlmer², Wolfgang von Brackel², Andreas Bresinsky², Stefan Jablonski³, Alexandra Kehl⁴, Jürgen Klotz², Dieter Neubacher¹, Peter Poschlod², Gerhard Rambold⁴, Wolfgang Reichert¹, Tobias Schneider³, Konstanze Schubert¹, Josef Simmel², Bernhard Volz³, Markus Weiss¹

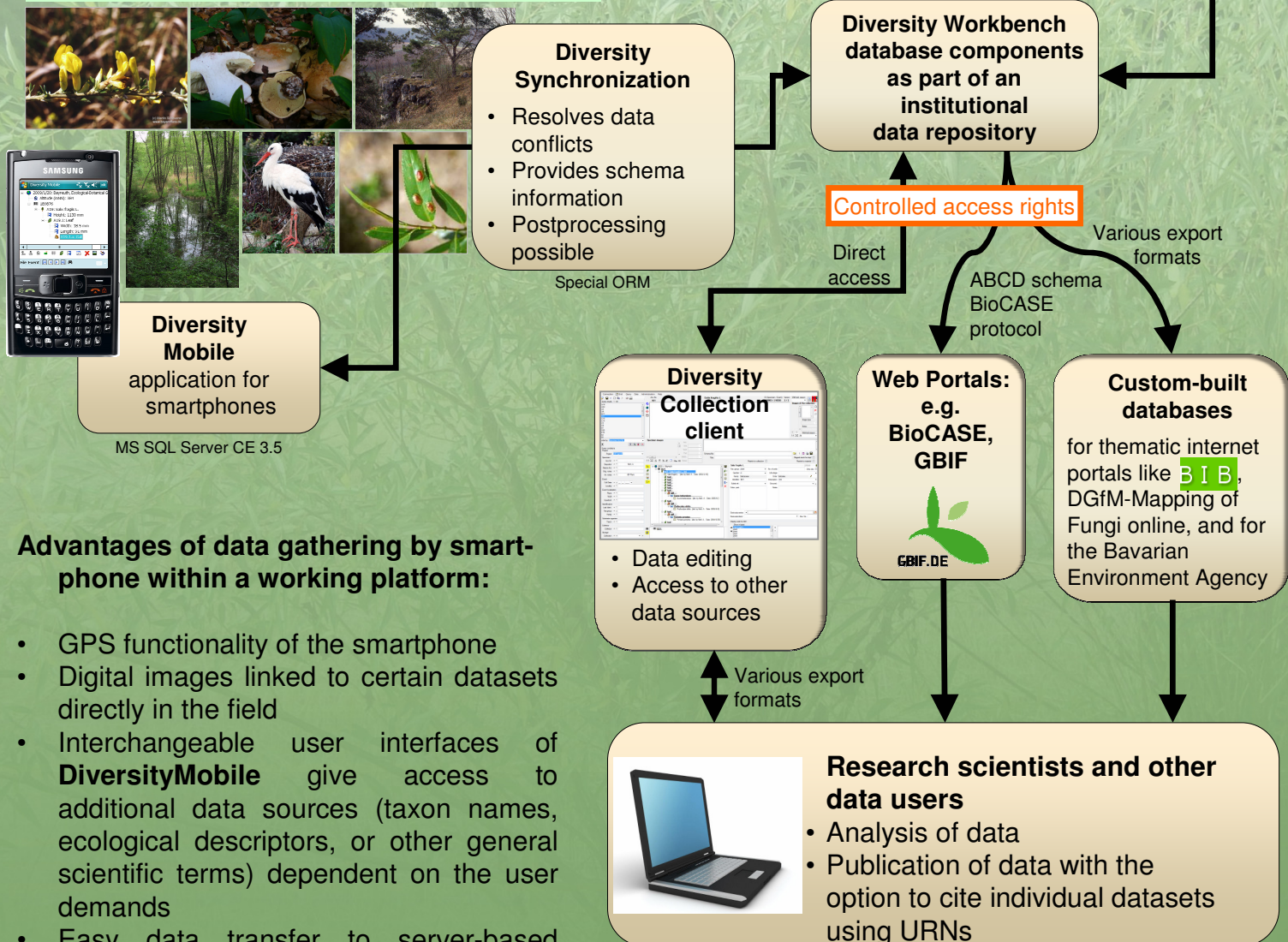
¹Botanische Staatssammlung München and IT Center of the Bavarian Natural History Collections, München, Germany

²University of Regensburg, Institute of Botany, Regensburg, Germany

³University of Bayreuth, Institute of Informatics, Bayreuth, Germany

⁴University of Bayreuth, Mycology Dept., Bayreuth, Germany

The goal of the project is to gain biological research data in the field by using **smartphones**, and to transfer them directly or via a locally installed cache database to an institutional **data repository**, based on the **Diversity Workbench** framework, for long-term storage and sustainable availability.



Advantages of data gathering by smartphone within a working platform:

- GPS functionality of the smartphone
- Digital images linked to certain datasets directly in the field
- Interchangeable user interfaces of **DiversityMobile** give access to additional data sources (taxon names, ecological descriptors, or other general scientific terms) dependent on the user demands
- Easy data transfer to server-based databases installed by a data repository

DiversitySynchronization provides the connection between the smartphone and the repository database. This synchronization framework detects conflicts and prevents the generation of data duplicates.

The transfer of biological data to an institutional data repository database ensures sustainable storage of all gained primary research data as well as access to primary data by users via various types of interfaces. **This mechanism counteracts the loss of primary biological data, ensures data quality, and improves the option for quality control.**