

# Managing collaborative research data for integrated, interdisciplinary environmental research

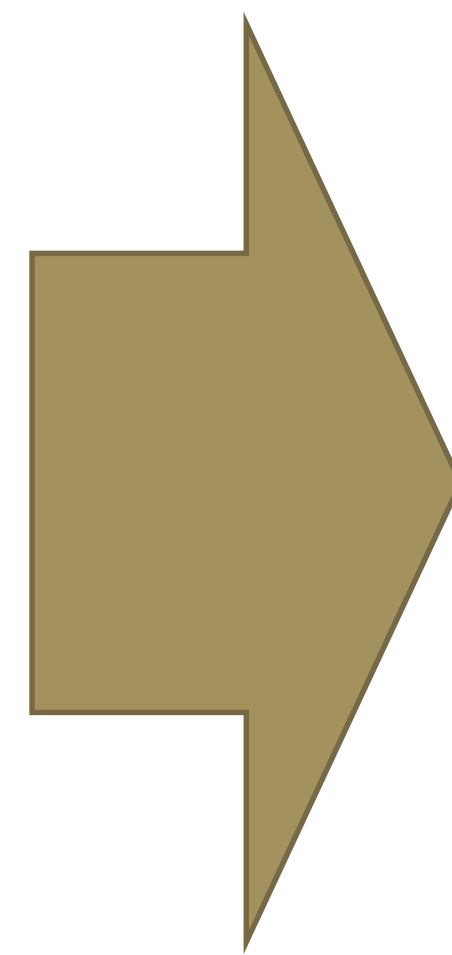
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## Challenges and answers of data management in integrated environmental research

- Large variety of data in origin, type, scope, and size
- Variation in researchers' attitudes towards a common data management: Researchers not involved in holistic analysis may have little intrinsic motivation to contribute
- Multitude of existing data documentation schemes, work flows, and needs for data processing and modelling



- Flexible structure with separated management of data (file system) and metadata (data base)
- Hierarchical metadata with data type-specific templates
- Appropriate organizational measures and entities, and obligation to contribute
- CAMPOS Internal Area vs. Public Access areas
- Direct access to data on file system (network drives)

## Organizational measures

- Focus on data management from the beginning
- Data management as research and service
- Maximum communication
- Appropriate organizational entities

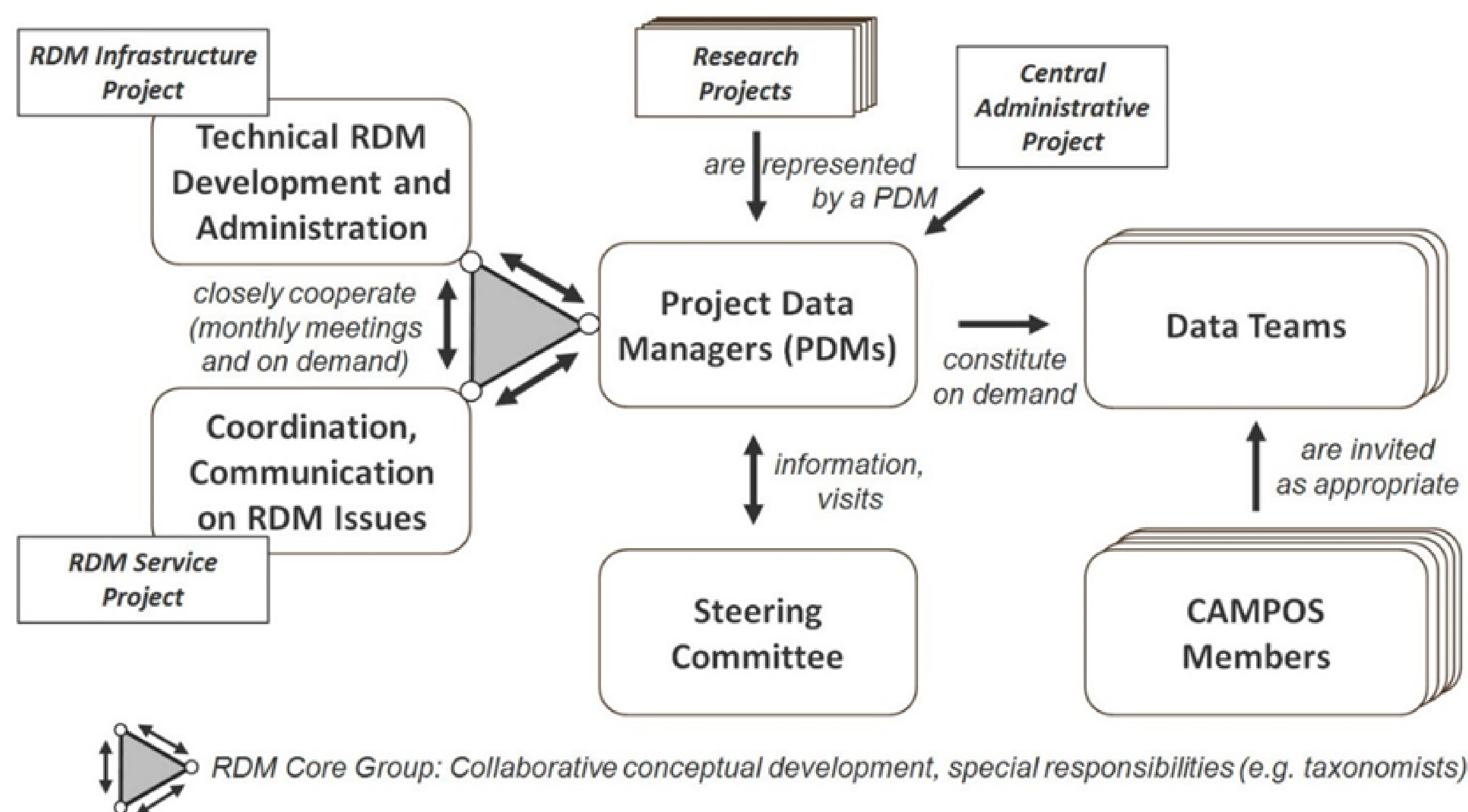


Fig. 1 Organizational entities for the conceptualization, development and implementation of data management within CAMPOS (Source: Finkel et al. 2020)

## Core elements and structure

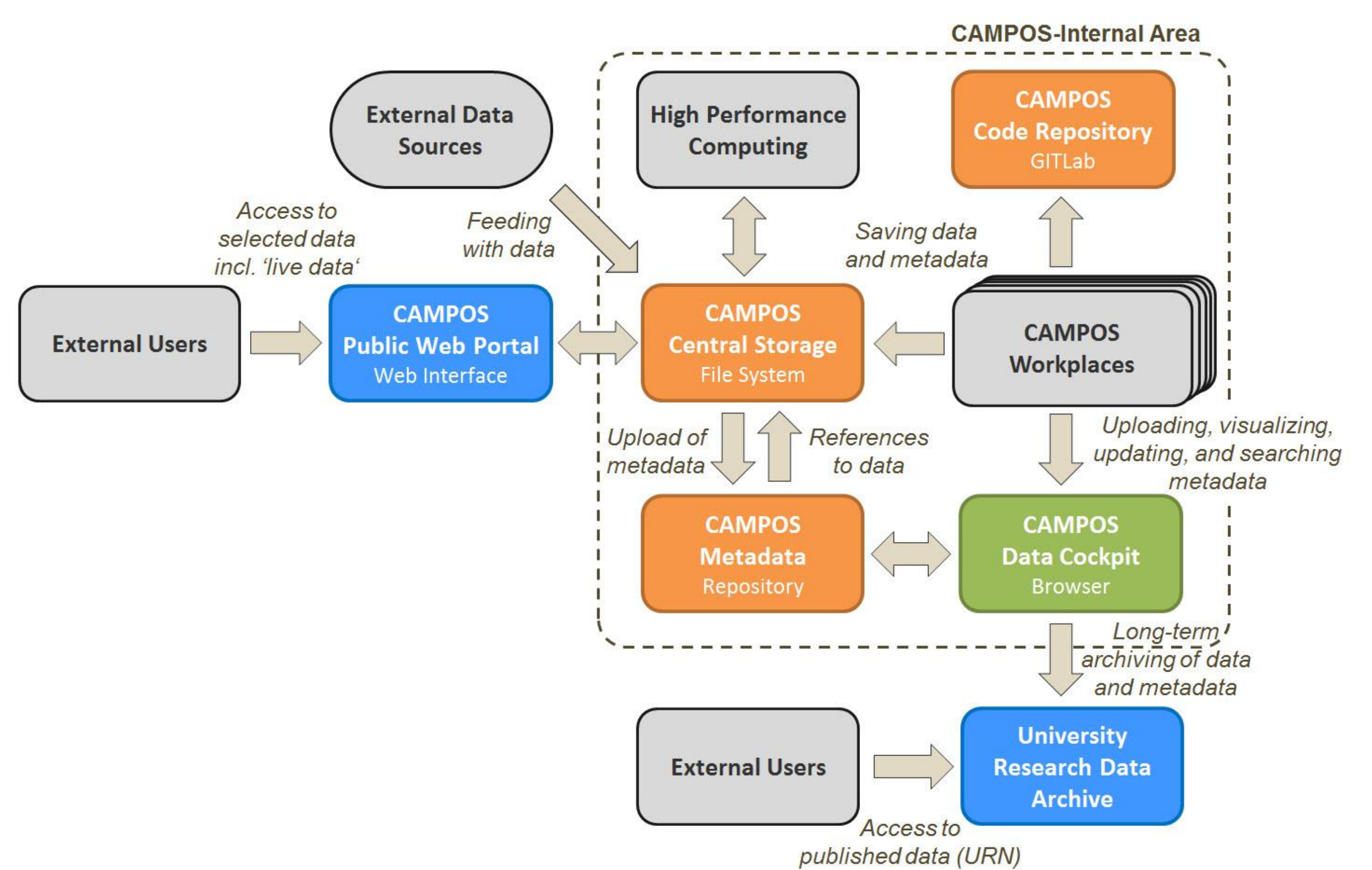


Fig. 2 Structure of the CAMPOS data management framework with the CAMPOS Internal Area forming the private working environment of the CAMPOS researchers, the Research Data Archive of the University of Tübingen to preserve and publish data for long-term storage and use, and the CAMPOS Public Web Portal to provide public access to selected data (not yet implemented). (Source: Finkel et al. 2020)

## Hierarchical, data type-specific metadata

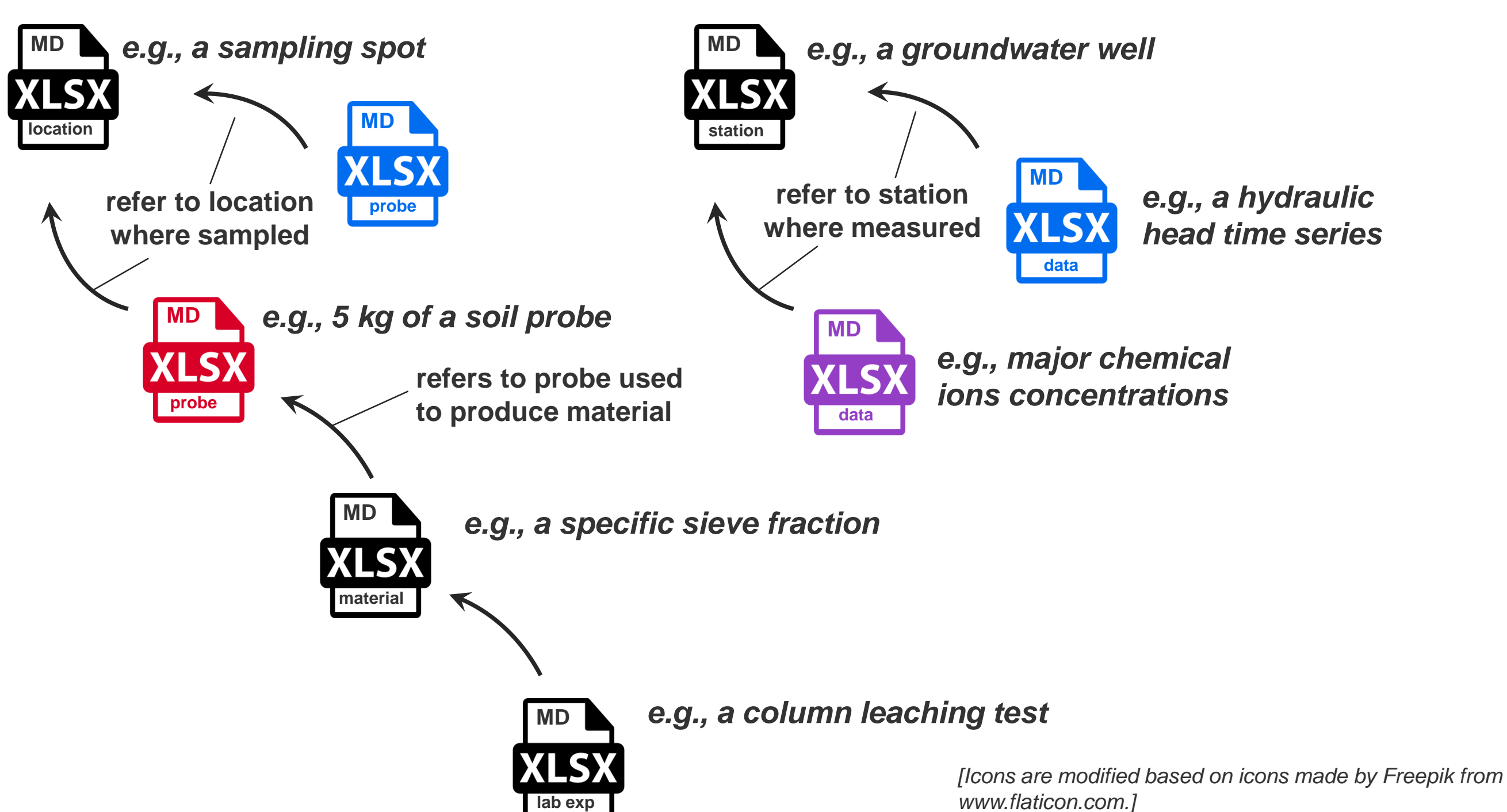


Fig. 3 Hierarchical metadata avoids redundancy, offers large flexibility and allows defining data type-specific metadata schemes (Source: Finkel et al. 2020)

## Interactive Data Cockpit

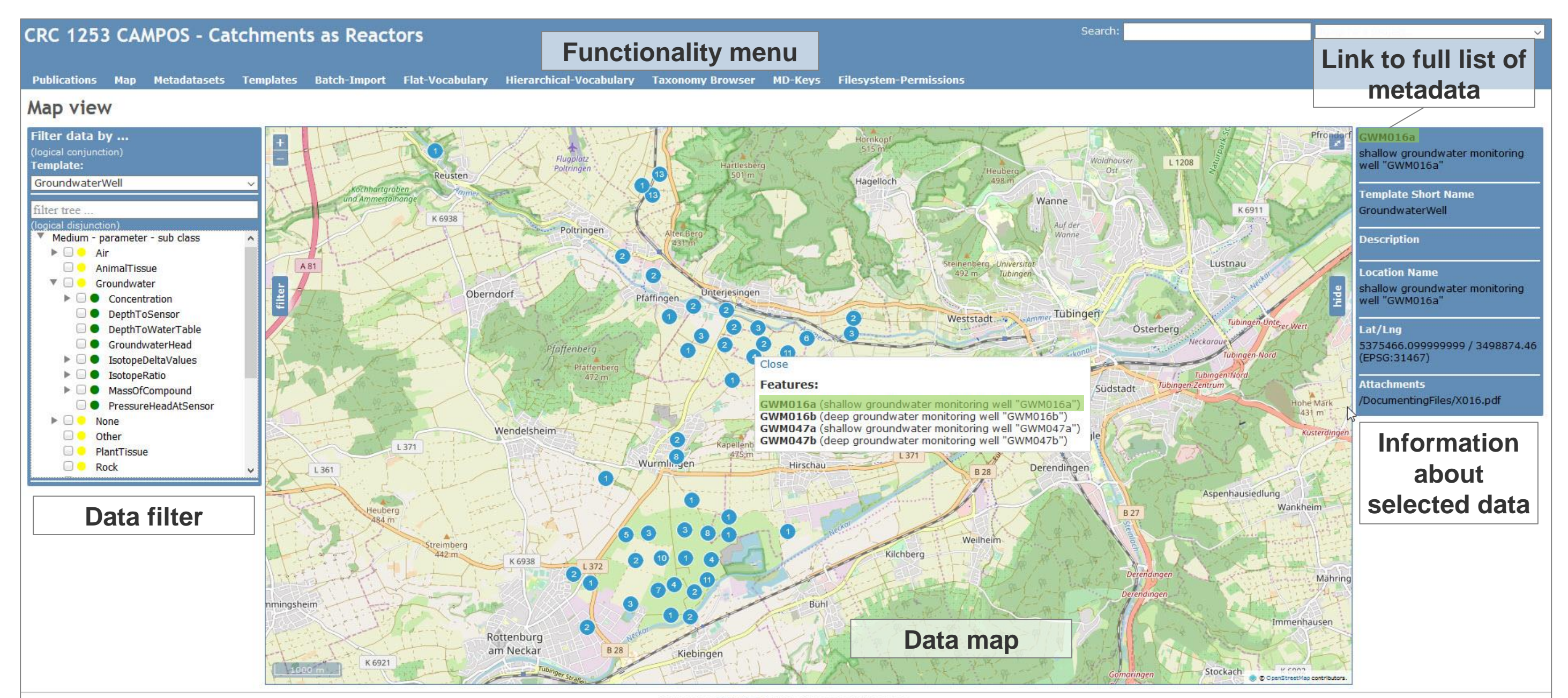


Fig. 4 CAMPOS Data Cockpit: map view on selected data

Finkel, M., Baur, A., Weber, T. et al. Managing collaborative research data for integrated, interdisciplinary environmental research. Earth Sci Inform (2020).

