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What's the problem...

Modern Earth sciences produce a continuously increasing amount of data. These data consist of measurements/ observations and descriptive information (metadata) and include semantic classifications (semantics). Depending on the geoscientific parameter, metadata are stored in a variety of different databases, standards and semantics, which is obstructive for interoperability in terms of limited data access and exchange, searchability and comparability. So far, there is a large gap between the capabilities of databases to capture metadata and their practical use.

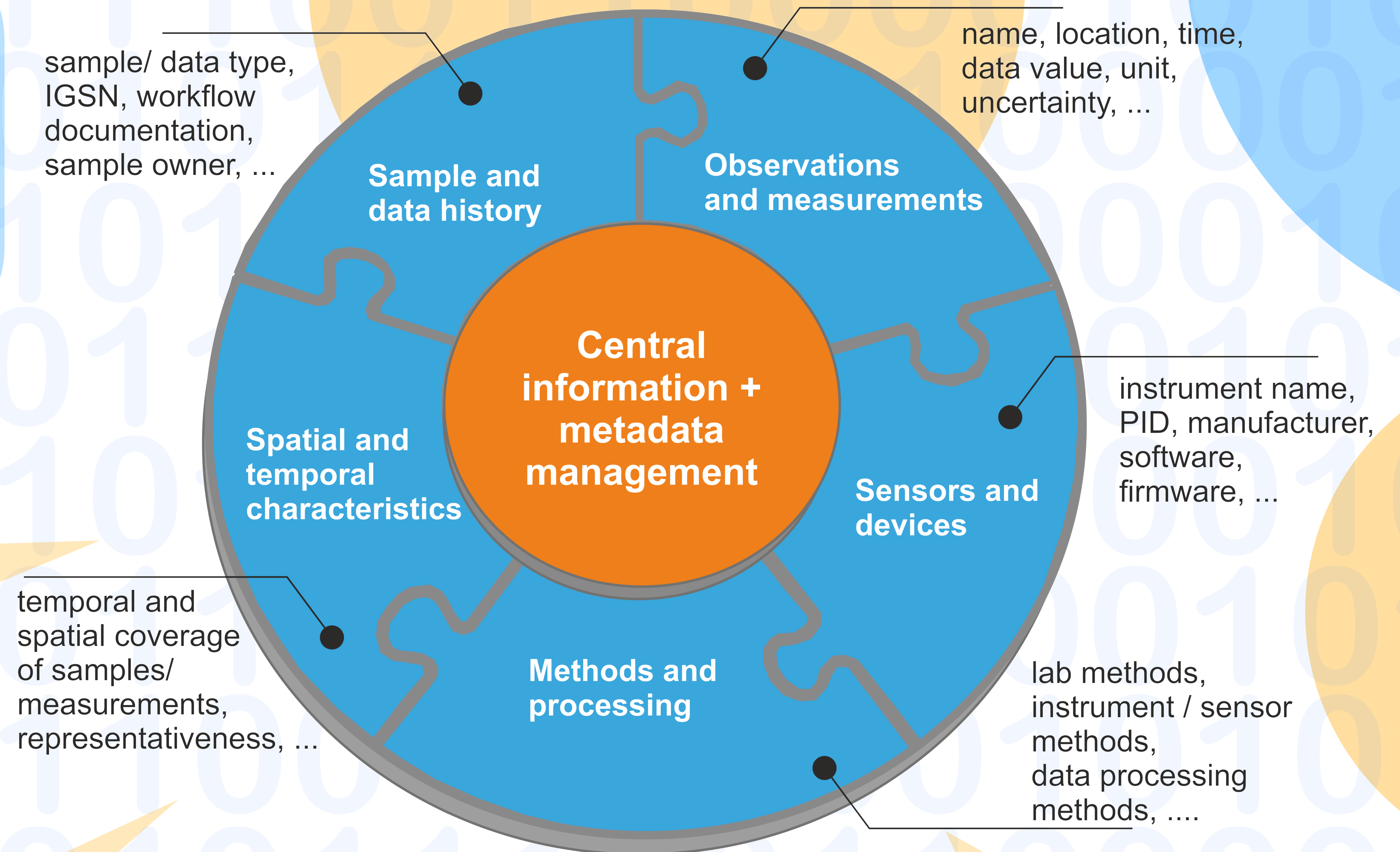
What is ALAMEDA...

ALAMEDA a modular structured metadata management platform for curation, compilation, administration, visualization, storage and sharing of meta information of lab-, field- and modeling datasets. As a pilot application for stable isotope and soil moisture data, ALAMEDA will enable to search, access and compare meta information across organization, system and domain boundaries.

How is it structured...

ALAMEDA covers 5 major categories. These categories are structured, interlinkable and filled with specific metadata attributes. For the pilot, all meta information will be provided by existing and well-established data management tools. In ALAMEDA, all information is brought together and will be available via web interfaces. Furthermore, the project focuses on features such as metadata curation with intuitive graphical user interfaces, the adoption of well-established standards, the use of domain-controlled vocabularies and the provision of interfaces for a standards-based dissemination of aggregated information. Finally, ALAMEDA should be integrated into the DataHub (Hub-Terra).

schematic structure of ALAMEDA



Examples of data management tools & portals that have been identified and evaluated for ALAMEDA:

- Sensor Management System (SMS)
- Lab Infrastructure Portal
- mDIS
- Medusa
- OpenBIS
- Chemotion
- dbGM

Progress:

- ☒ Identification of essential metadata for data re-use
- ☒ Assignment of metadata to superordinate categories
- ☒ Identification and evaluation of useful data management tools for ALAMEDA
- ☒ Identification of community Standards
- ☒ Acquisition of synth. datasets for testing
- ☒ Compilation of user workflows
- ☐ Implementation of data management tools in ALAMEDA