Situation: Research Vocabularies Australia with PoolParty Semantic Suite

A controlled vocabulary (or ontology) reflects agreement on terminology used to label concepts, in other words terms and their relations are defined based on those agreements. When research communities agree to use common language for the concepts in datasets, then the discovery, linking, understanding and reuse of research data are improved.

Challenge: Research Vocabularies - Find and Tag Across Research Fields

In these related research fields the vocabularies (their terminology) can be diverse. To create a common, linked data and research data portal makes exchanging data and knowledge easier and collaboration more efficient. Indexing and tagging are applied to library catalogues and search portal data to provide keywords for academic journal articles. These vocabulary services are executed machine-to-machine supporting activities such as creating, managing and querying vocabularies.

Solution: Combine Research and Education Data Sources

Australia’s National Data Service (ANDS) provides data for national educational and research as well as government organizations. The data is used in Australia and overseas to create or use vocabulary services. A group of those institutions approached the ANDS requiring access to the vocabulary service.
Implementation Insights: Implement a National Platform for Vocabulary Access

Using PoolParty Thesaurus Server, and collaborating with Australian research organisations, ANDS implemented a vocabulary service consisting of the following modules:

- Vocabulary creation and management based on the PoolParty Thesaurus Server.
- Publication backend and vocabulary repository access implemented using RDF4J Server with SPARQL Endpoints.
- Linked Data API realized using Epimorphics Elda/SISSVoc with custom support for SKOS vocabularies.
- Discovery portal supporting versioning and licensing, as well as a widget for easy tagging of data.

ANDS - Research Partner Focused

The development of the service was driven by the needs of project partners. The ongoing communication with partners and users enabled a better understanding of the needs and the enhancement of the service. Contributors to service development include:

- The Integrated Marine Observing System
- The Terrestrial Ecosystem Research Network
- The Atlas of Living Australia
- The Bureau of Meteorology
- Geoscience Australia
- The Commonwealth Scientific and Industrial Research Organisation.

ANDS also supports the Australian Vocabulary Special Interest Group (AVSIG), which provides a forum for discussion and collaboration.

Outcome: Re-purpose, Publish and Manage Vocabularies Nation-wide

The new platform Research Vocabularies Australia (RVA) makes it easy to find and use vocabularies. RVA also makes it possible for Australian research organizations to publish, re-purpose, create, and manage their own controlled vocabularies.

Platforms of the Research Vocabularies Australia (RVA)

Discover, access, and publish vocabularies https://vocabs.ands.org.au/