TERN
Terrestrial Ecosystem Research Network

THE UNIVERSITY of ADELAIDE

Bringing ecological data together

Website - www.aekos.org.au

Portal - http://demo.aekos.org.au:8080/aekos/

Intended Portal Users

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- Researchers/others who want to know.....

  What national ecological data are currently available?

  What are the access and licensing conditions?

  How can I determine the suitability of these data for my research?

  How can data I need from different sources be combined?

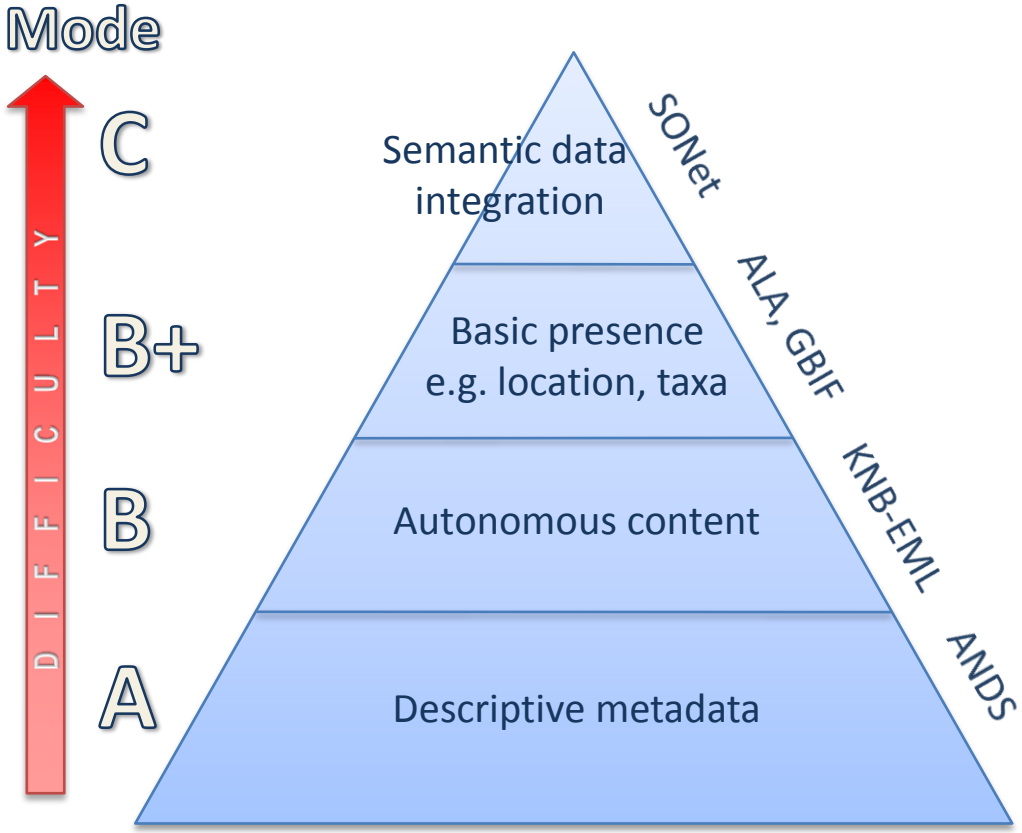
  How do I extract and download the data for my needs?

  How can I make my data available to other researchers?

  What analysis tools are available?

- Focus on plot-based ecological data (current priority is vegetation)

Data Types



- ✓ Multi-speed approach
- ✓ Designed for incremental investment
- ✓ Goal of integrated data to enable synthesis
- ✓ Flexible enough to adapt to whatever data is provided
- ✓ Semantic search on data and metadata
- ✓ Data and description integrated

ÆKOS Architecture

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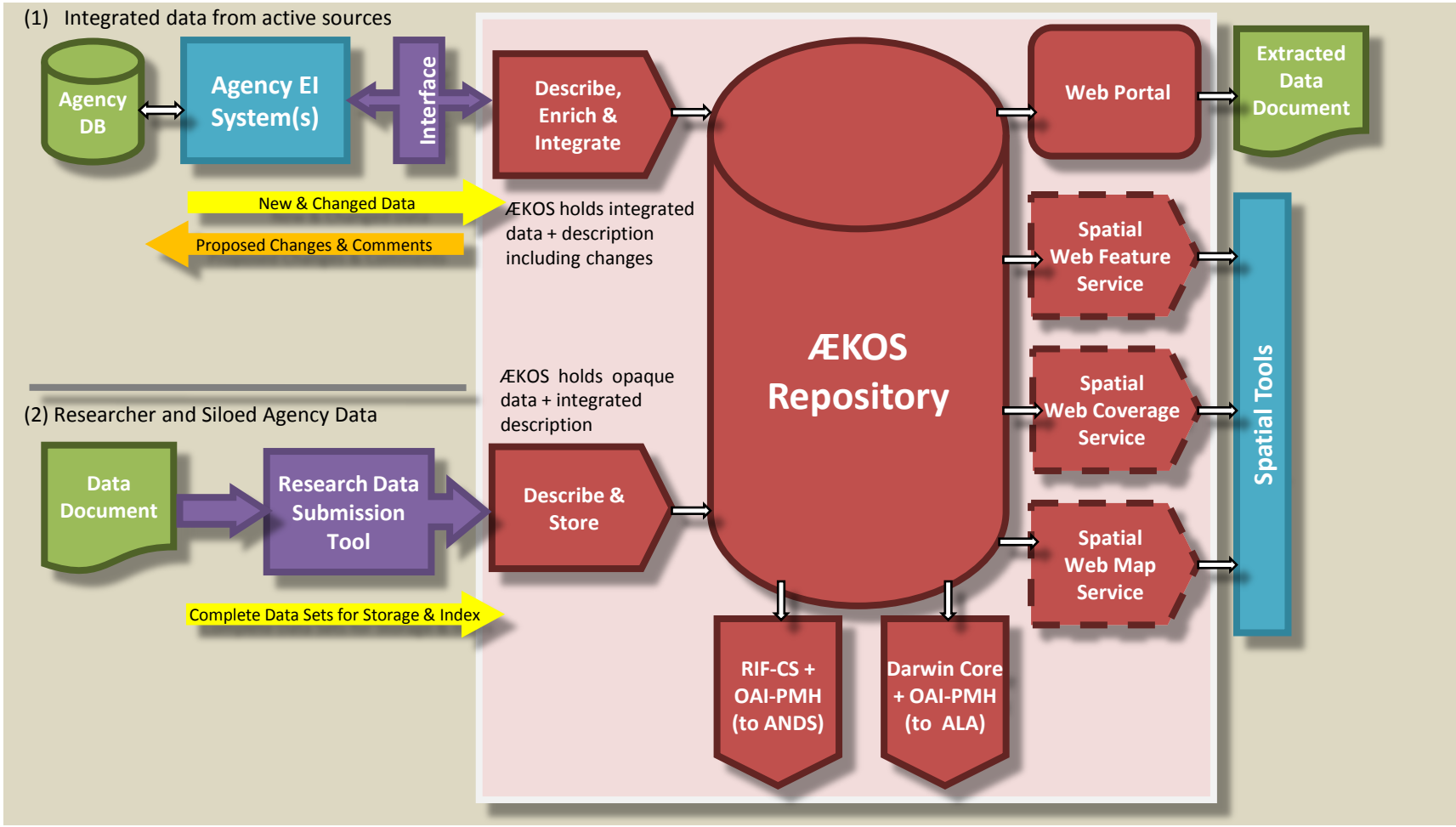

Metadata Standards

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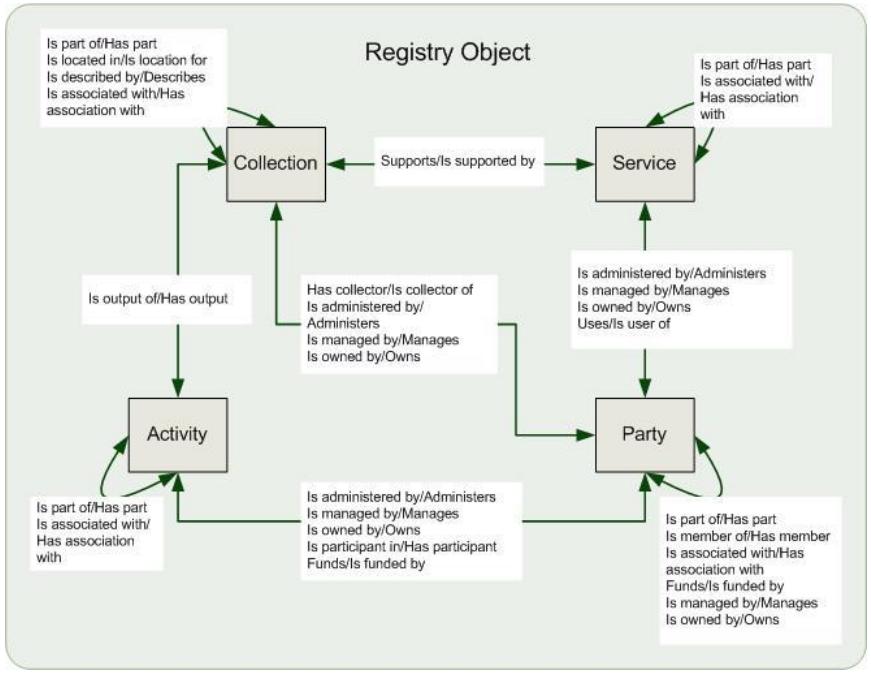
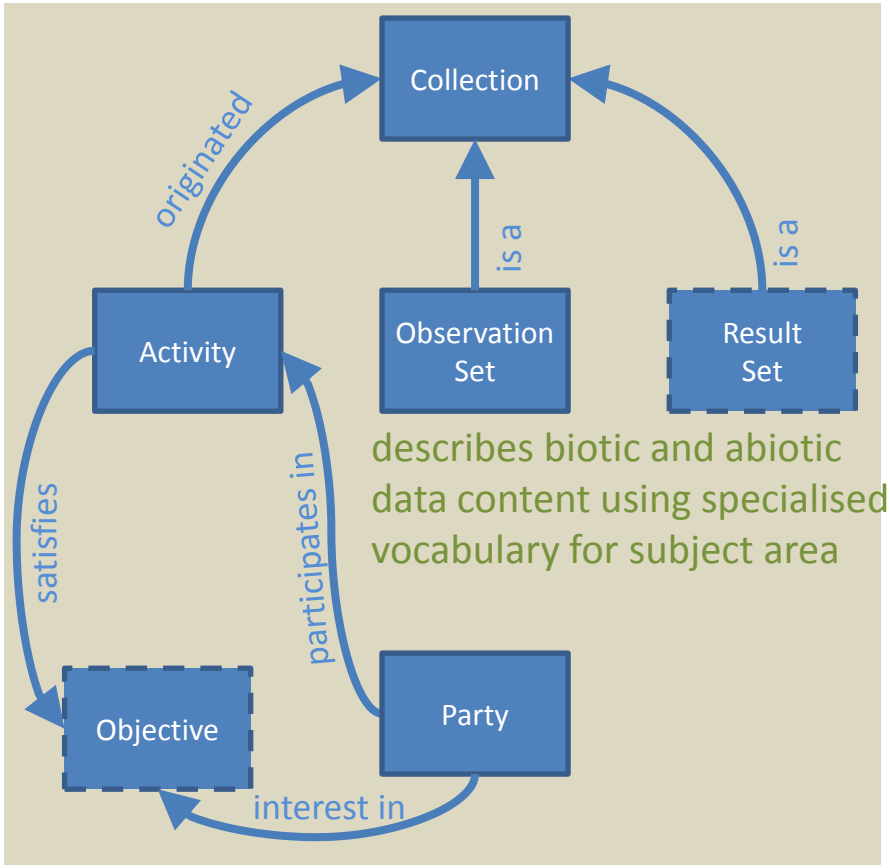
- Metadata integrated with data to form collection
- Ontological model defines collection items and content
- Metadata standards are an output function for transfer
- We already support RIF-CS to ANDS (460 records)
- Future transfer standards - CSMD, Darwin Core, Veg-X ?

Context for Data Set

- In ÆKOS, data content is optional – in some cases only metadata will be provided whilst in others full content will be available

RIF-CS derived from ISO2146 (source: ANDS)





Data Storage and Delivery Formats

- Stored in Graph structures in Postgres RDBMS
- Location - Test/Dev on Amazon Web Svc, PROD on NeCTAR
- Data extract from ÆKOS not yet started
- Extraction after sub-setting using search criteria
- User-defined mapping from central ontological model to user's target data model
- Expected formats to include
  - XML (under an ÆKOS Schema)
  - CSV
  - VEG-X
  - Darwin Core
  - HDF5
  - ESRI Shapefile/DBF

ÆKOS Alpha Portal Features

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- Complex display of plot-based ecological data
  - Enables user to explore representation of reality
  - Shows linked structure of data and processes
- Contextualisation of the data
  - Structured description that explains the data
  - Enables assessment of fitness for purpose
- Semantic Search via traits
  - Important elements identified for discovery and extraction
  - Hierarchical and faceted classifications
  - Controlled vocabularies and relationships

Contact us

For more information on ÆKOS and the Eco-informatics Facility please get in touch with:

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