AuScope

AN ORGANISATION FOR A NATIONAL
EARTH SCIENCE INFRASTRUCTURE PROGRAM

AuScope Grid: Access and interoperability

AuScope

AuScope is a geoscience and geospatial Infrastructure system that combines traditional research infrastructure with applied science infrastructure.

The AuScope infrastructure system is a seamless, broadly accessible, fully integrated blend of technology, data and knowledge infrastructure that will transform the practice of and outcomes from geoscience for researchers, industry and the wider community.

AuScope comprises four major data aquisition infrastructure components:

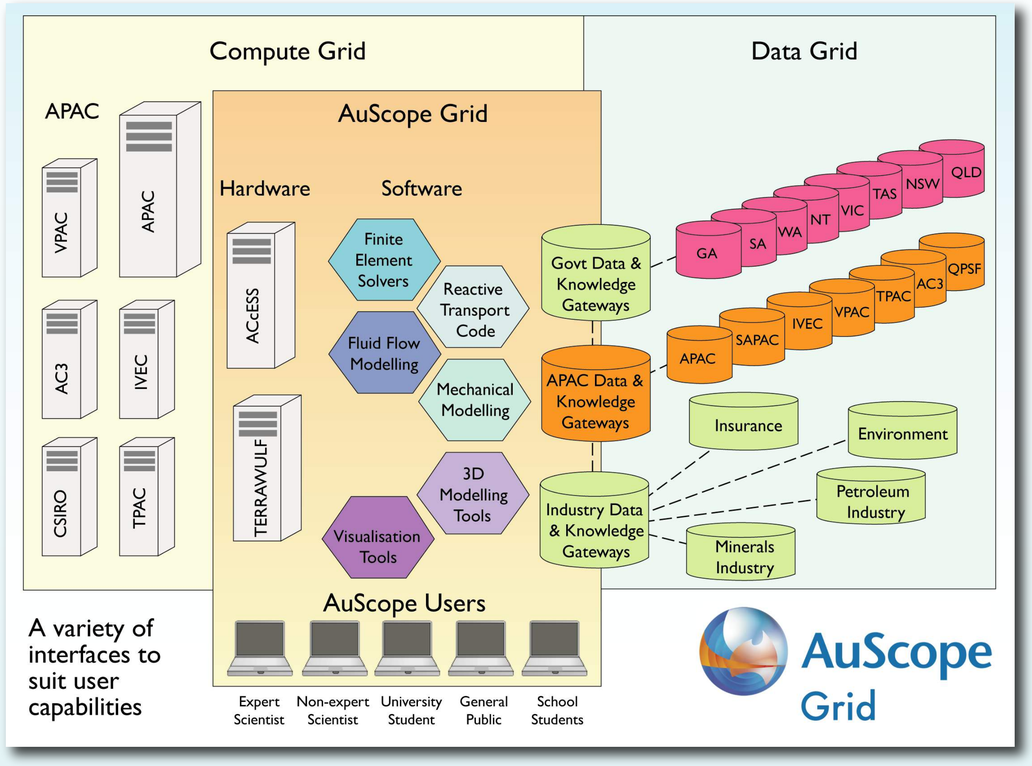
- Earth Imaging and Structure
- Earth Materials and Properties (The Virtual Core Library)
- Earth Composition and Evolution
- AuScope Geospatial Framework and Earth Dynamics.

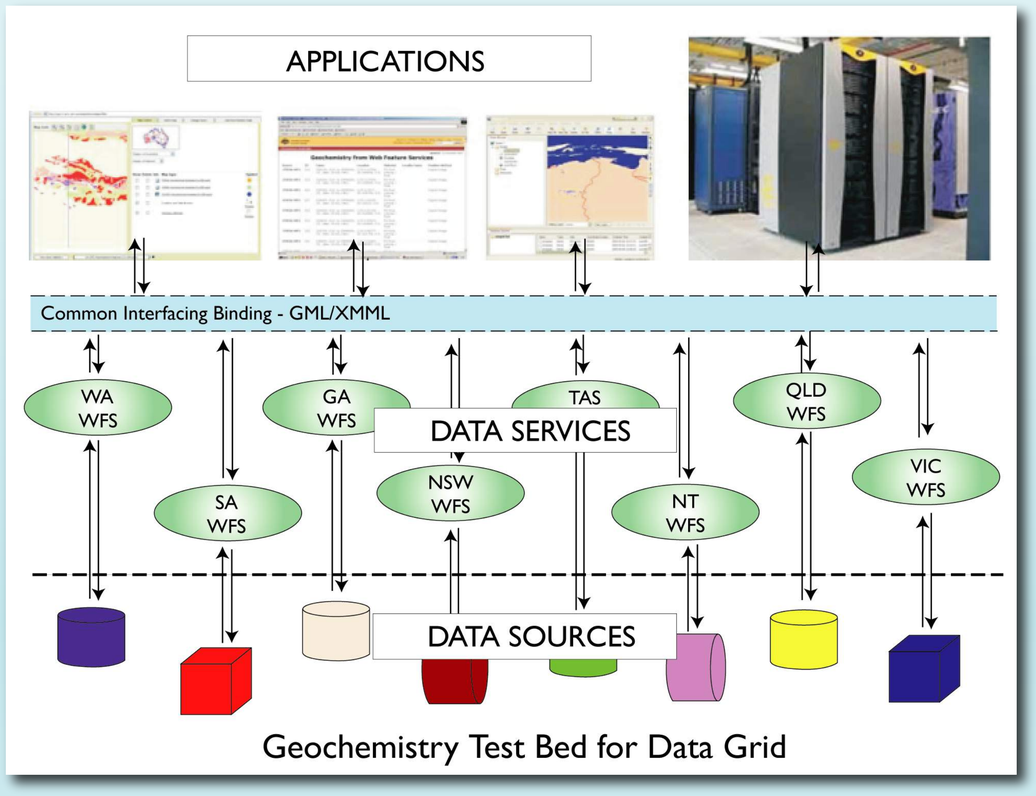
AuScope further comprises two ICT components:

- The AuScope Simulator and the
- The AuScope Grid.

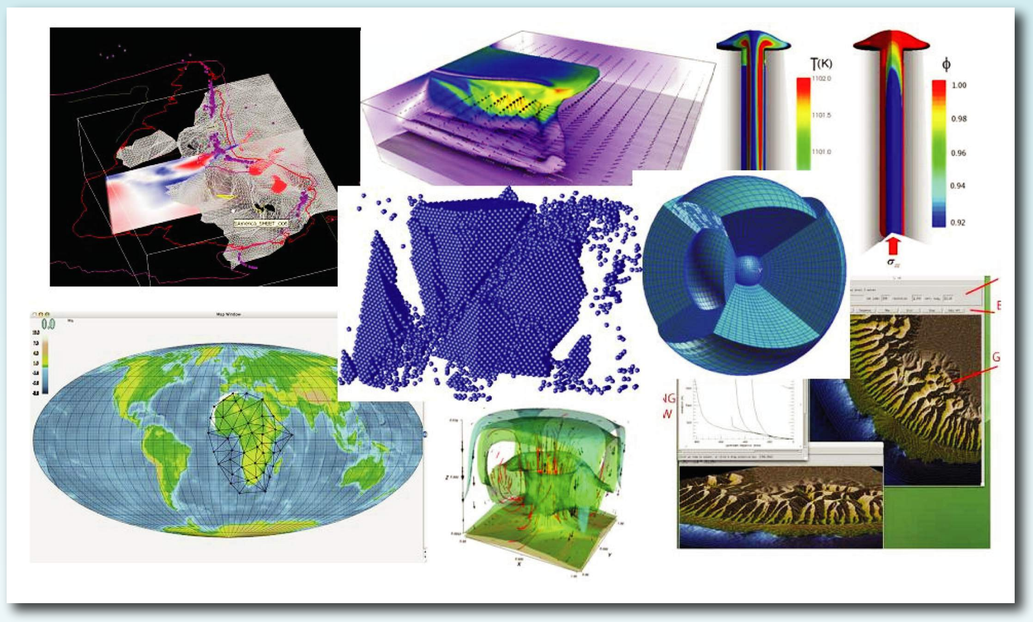
The AuScope Grid will comprise distributed data storage hardware, high bandwidth network links, data management protocols, middleware and software, and be the 'glue' that enables AuScope to be substantially more than the sum of its parts.

The AuScope Grid will be planned, built and maintained in conjunction with the NCRIS 'Plaforms for Collaboration' capability.





Geochemistry Test Bed for Data Grid



AuScope Grid - The 'glue' of AuScope

The AuScope Grid activity will establish a world-leading Geoscience Geo-Informatics network to support the other AuScope activities and Australian research community.
The activity comprises of a **compute** and **data** grid and a **community** of practice.

The Data Grid

The AuScope Data Grid has many data sources located at various sites, on diferent mediums and formats. These data sources include geochemical, geothermal petroleum and geospatial to name a few. Multiple organisations that are custodians of this data are choosing to be interoperable and AuScope is aiding them in doing so. The Grid is host to multiple petapyte datastores.

The Compute Grid

AuScope Grid is providing the community with easy access to HPC resources via Grid Australia. Additionally, the project will deliver a collection of services to enable research. These include: registries to allow discovery/publishing of resources and services; mapping clients; and interoperable profiles/ agents for easy information interchange.

The Community and their outputs

Finally a major component of AuScope Grid is the establishment of a comunity of practice that will aid, educate and foster development in the Geoscience community for years to come.

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