Next Generation Data Delivery
for New South Wales Geoscientific Data

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2. Business drivers – data, customers, technology
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What does the Geological Survey NSW do

Collects and manages geological, geophysical, geochemical and geospatial data
to inform the government, resource industry and the community about the state’s geology, and mineral, coal, petroleum and renewable energy resources
to facilitate the safe and sustainable development and management of NSW mineral and energy resources for the benefit of all NSW citizens
Provision of data & information

Multiscale data that is **Accessible** and **Useful** for decision making
“Data on Australia’s landscape and climate has been collected for more than 100 years and this information can be used to inform national decisions about natural disasters, water, food, and resource management.”
Anyone who needs authoritative geoscientific information for commercial, government, research or private purposes.

Customers

The datasets, surveys, reports and maps have applications to:

- Identify minerals, energy sources, construction materials & water resources
- Engineering projects for building infrastructure or
- Planning and assessing land use and environmental management

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<tr>
<th>Researchers</th>
<th>Teachers</th>
<th>Explorers</th>
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<tbody>
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<td>Building Infrastructure</td>
<td>Route planning</td>
<td>Energy production</td>
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<tr>
<td>Water resources</td>
<td>Food resources</td>
<td>Mineral resources</td>
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</table>
Changed formats

- Detailed geology
- Sheets to seamless
- Multi scaled
- Currency
- Consistent data model
- Interactive enriched attribution
- Harmonising stratigraphic names
- Statewide symbolisation
- Dynamic time slices
NSW Statewide Geology Map

**Change in delivery**

- Detailed geology
- Sheets to seamless
- Multi scaled
- Currency
- Consistent data model
- Interactive enriched attribution
- Harmonising stratigraphic names
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- Dynamic time slices
Technology upgrade

Enterprise approach delivery platform

- Reduce risk aging technology
- Rationalise infrastructure
- Reduce multiple interfaces
- Interoperability (DIGS)
- Mobile ready
- User account management
- Improve user experience
Project Aims

“Easy public access to all validated non-confidential geoscientific and supportive reference data stored by the GSNSW from a single interface”

Key functions
1. Visualise data
   Discover and understand context
2. Interrogate data
   Simple queries
3. Delivery data
   Rapid delivery and self service

www.minview.geoscience.nsw.gov.au
Design Target – interoperability

Modular: Flexibility to upgrade and improve

MinView uses
- Open Layers 3
- Cesium
- OL3 connector
- Geoserver/postgis
- Geonetwork
- MapfishPrint
- ArcServer*

Downloads
- FME Server*

Connect to
- DIGS document mgnt system
- GDW Geoscientific Data Warehouse
Design Target – standards based

Solution designed to use data services (WMS, WFS, WMTS)

S.P.O.T. from custodian, consume not manage

MinView preconfigured to deliver
- GSNSW services
- Spatial Services (Lands Dept)
- DPE services
- CSIRO
- Digital Globe imagery

User can add public services
- https not http
- No control to fix or filter
Insights: Data standards for geoscience data

Geoscience Data standards

- International by consensus of participating agents (IUGS – CGI)
- Geoscience Australia representation
- GeoSciML* & EarthResourceML
- Vocabularies – less suitable when generalised
- Mapping to internal data models

*extension of Open Geospatial Consortium (OGC) and International Org. for Standardisation (ISO) – observation and measurement std
**Insights: Don’t under estimate data work**

**Data strategy** in place
- Document deliverables
- Publishing processes
- Metadata
- Licencing – Creative Commons

**Data Structure to Information architecture**
- Balance complexity with over simplification
- Data models, schemas
- Vocabularies, industry specific lexicons
- ETL processes makes accessible views

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Min occ data model in warehouse
**Insights: software stack support**

**Enterprise vs Ecosystem approach**
- Syncing update regime
- Hybrid architecture – necessary integration – unique knowledge

**Implementation**
- Design specifications provided at procurement
- Hybrid Agile - rapid development
- Technical debt

**Support models**
- Vendor specific
- Extra resources for support
Insights: Stakeholder engagement

Know your users
- Include geoscientists on team
- Involve your users at all stages
- Cultivate advisors
- Develop real use cases
- Create realistic profile
- Employ them as testers (UAT)

Manage expectations
- Be careful of the oversell
- Educate management via exposure eg Sprint showcases
- Cultivate advocates
**Project Success**

- Measured by stakeholder usage and satisfaction
- Peer recognition – Vic. Asia Pacific Spatial Award

**Spatial Vision’s Technical Excellence**

"Firstly, like to thank your department - for a great site"

"Great to see the new and improved upgrade to MinView"

"First may I thank you guys for putting a wonderful tool together namely Minview with all its many layers and links. I am using Minview to do research…"

"The data quality is excellent, and frankly it is well designed and a great site overall. The amount of information available is staggering. Compliments to all involved. Although I do research all over the world, I find Australia the best for being able to find information, resources, maps, etc"
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