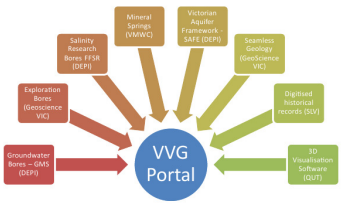
VVG Visualising Victoria's Groundwater

University of Ballarat Learn to succeed

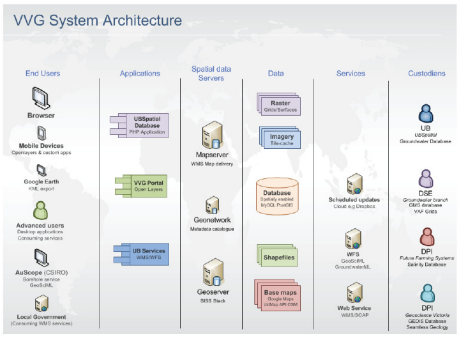
Federating groundwater data for Victoria - the challenge of interoperability

Interoperability in action

"The ability to exchange and use information"



Data sources



Data provisioning - best available

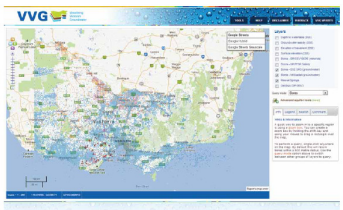
While the federation of interoperable services implementing standards like GroundwaterML is the ideal way to overcome these issues, its implementation presents many challenges, particularly for data providers.

In the case of the University of Ballarat's Visualising Victoria's Groundwater project (vvg.org.au) a "best available" methodology has been adopted whereby data is provisioned using a range of techniques, from traditional web services like SOAP or REST through to scheduled updates using cloud-based services like Dropbox.

Big Data?

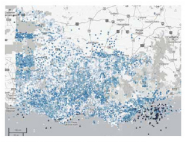
- 350,000 Bores
- 3,600,000 Monitoring records
- 350,000 Borehole intervals (lithology)
- 450,000 Chemical analysis records
- 10,000 Attachments and links
- 100 Numerical surfaces

VVG Portal

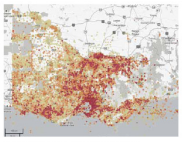


www.vvg.org.au

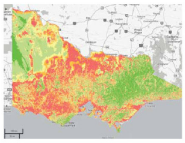
Visualisations



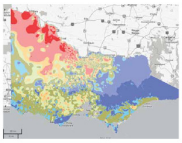
Bores by constructed depth



Bores by construction date

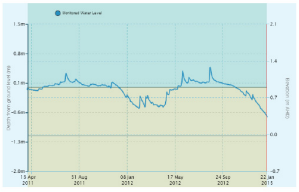


Depth to water table

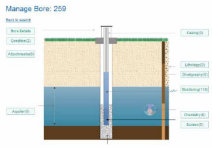


Groundwater salinity

Depth of data



Bore monitoring - dynamic hydrographs

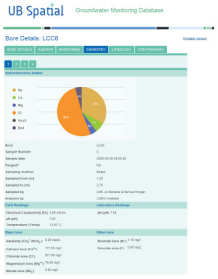


Bore construction

Historical maps

Historical map of bore construction from 1900

Historical geological map over current seemless geology



Groundwater chemistry

Attachments

Photos

Consultants reports

Digitised historical record - 1902

Research collaborators and investors include

senversa
Victoria Department of Primary Industries
QUT Queensland University of Technology
Victoria Department of Sustainability and Environment
Victoria Department of Primary Industries
Canada Natural Resources Canada
Southern Rural Water
VeRSI
CSIRO
Goulburn-Murray Water
Australian National University
Thiess services
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Australian Mineral Water Consultants

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