

Science Capability Audit: Geological Survey of Queensland and Safety in Mines  
Testing and Research Station

Follow-up from Audit

November 2014



## Science Capability Audit: Geological Survey of Queensland and Safety in Mines Testing and Research Station

Findings	Recommendation	Status as at November 2014
<p><b>Resourcing</b></p> <p>DNRM's annual estimated budget includes the collection, analyses, interpretation, reporting or modelling of scientific or technological data totalling approximately \$20 million, which is approximately 4 per cent of DNRM's total annual budget. The annual budget includes approximately \$12 million (or 60 per cent) of income sourced from fee for service work completed by GSQ and SIMTARS.</p>	<p><b>1. Efficiency</b></p> <p>DNRM, as part of its business improvement process, should adopt a whole of government approach to promote greater efficiency by:</p>	
	<ul style="list-style-type: none"> <li>ensuring all functions outsourced provide value for money and meet DNRM's strategy and desired outcomes</li> </ul>	<p>Access to GSQ data has been enhanced through the development of linkages through the Queensland Globe and by the development of an app enabling access for androids and iphones.</p>
	<ul style="list-style-type: none"> <li>maximising productive use of assets including GSQ databases, plant, equipment, library, laboratory and other facilities</li> </ul>	<p>External bodies frequently engage with Simtars to access some unique assets held at Simtars, such as the explosion propagation tube and the SteamExFire inertisation system.</p>
		<p>Outsourced function utilised by GSQ are undertaken through rigorous contract management process and having payment contingent on delivery of the required service.</p>
		<p>Assets purchased by SIMTARS use the Record of Procurement Activity process and are peer reviewed in all cases.</p>
	<ul style="list-style-type: none"> <li>promoting internally within DNRM the SIMTARS business model (i.e. fee for service) and service standards as the standard for all DNRM services as part of a DNRM business improvement process</li> </ul>	<p><b>Not adopted by GSQ.</b> Process was not found to be cost effective in the past (processing costs often exceeded income) and placed us at a competitive disadvantage in attracting investment against jurisdictions that provided this information for free.</p>
	<p>Fee for service continues to apply for many SIMTARS services.</p>	
	<ul style="list-style-type: none"> <li>regularly reviewing and updating the content of the department's website to ensure the information available to the public is current. If any services are identified as no longer being best provided by DNRM business groups then a considered approach be adopted, on a case by case basis, to withdraw those services while ensuring the private sector picks up the services</li> </ul>	<p>GSQ regularly reviews our online and hard copy information packages for currency and accuracy. GSQ is generally the primary source of this data as we have access to material not available to the private sector until we release it.</p>

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<p><b>Staff</b></p> <p>SIMTARS has approximately 85 staff, over five specialist streams. GSQ includes approximately 100 staff spread over six line units.</p>	<p><b>2. Staff retention</b></p> <p>In response to both stakeholder feedback and research group inputs, it is recommended that staff retention strategies be considered a priority with the aim of establishing DNRM as a preferred employer.</p> <p>These strategies may include:</p>	
	<ul style="list-style-type: none"> <li>professional development planning</li> </ul>	<p>Staff retention has been recognised as a key issue facing GSQ and forms a key plank in our current business planning within budgetary and staffing level constraints.</p>
	<ul style="list-style-type: none"> <li>attendance at industry specific conferences</li> </ul>	<p>GSQ staff regularly attend industry conferences and host a number of such events such as “Digging Deeper” as well.</p> <p>Senior SIMTARS staff have addressed conferences in the USA and Australia and SIMTARS has also hosted industry workshops in Brisbane, Townsville, Dysart and at SIMTARS HQ to share the results of their research.</p>
	<ul style="list-style-type: none"> <li>mentoring of staff in early stages of their career by senior staff</li> </ul>	<p>Junior engineers and scientists at mentored by experienced staff as routine at both GSQ and SIMTARS.</p>
	<ul style="list-style-type: none"> <li>secondments to research organisations, including consideration of the QAAFI model being very successfully used by the Queensland Department of Agriculture, Fisheries and Forestry</li> </ul>	<p>Current commitments within GSQ have largely precluded secondments to industry or academia at present, although such secondments have been undertaken in the past and will be considered on a case by case basis.</p>
	<ul style="list-style-type: none"> <li>secondments to industry to build specific skills sets and operational experience</li> </ul>	<p>SIMTARS was able to recruit several PhD qualified individuals in 2014 to re-energise and potentially lead research programmes at a senior level.</p>
	<ul style="list-style-type: none"> <li>succession planning for key staff.</li> </ul>	<p>Recruitment at SIMTARS has been targeted at equipping key research areas or microseismic, computer modelling in fluid dynamics and wireless sensor networks and proximity sensing.</p>

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<p>GSQ and SIMTARS are leaders at a national and international level and are aligned to government priorities and legislative requirements, and have:</p> <ul style="list-style-type: none"> <li>relevance to their current program requirements, including scientific services</li> <li>adopted a professional approach to their business activities</li> <li>general acknowledgement by their peers and industry as being independent, authoritative and leaders in their respective fields</li> <li>good representation in key geographical areas across Queensland.</li> </ul>	<p><b>4. GSQ</b></p> <p>In response to stakeholder feedback it is recommended that:</p>	
	<ul style="list-style-type: none"> <li>GSQ increase interaction with regulation of exploration permit conditions to ensure capture of drilling log data to improve resource mapping</li> </ul>	<p>GSQ is currently involved in a major review of statutory reporting including raw data from exploration.</p>
	<ul style="list-style-type: none"> <li>GSQ continue consulting with end-users in the resource and research sectors to further develop new and existing access to and generation of data in support of exploration activities, in particular base metals.</li> </ul>	<p>GSQ continues to monitor developments in end uses of current and emerging mineral commodities as part of our exploration attraction function.</p>
	<ul style="list-style-type: none"> <li>GSQ and the mining industry will benefit from establishing new partnerships to develop strategic capabilities and better co-ordinate and leverage research, to shift some focus on discovery such as the GSQ-Queensland Resource Council (e.g. Future Resources initiative) and grow key capabilities in Queensland. Therefore, facilitating better co-ordinated research activities between institutions (e.g. James Cook University (JCU), University of Queensland (UQ)-Earth Sciences and Sustainable Minerals Institute), and maximising opportunities for an applied context for research.</li> </ul>	<p>GSQ is involved in a number of such projects through the Industry Priorities Initiative under Future Resources and support provided to innovative exploration through the Collaborative Drilling Initiative.</p>
	<p><b>5. SIMTARS</b></p> <p>SIMTARS services are 'demand driven' through a user-pays approach. Where appropriate consider adopting this model for other service offerings and more broadly across the department.</p>	<ul style="list-style-type: none"> <li>Simtars also continues to engage with national and international bodies to share and collaborate on mining specific research. This includes collaborations with the US National Institute of Occupational Health and Safety, the German Bundes (Federal) Institute for materials research and testing and the UK Health and Safety Laboratories.</li> <li>The introduction of additional fees (user-pays) is reviewed through the department's budget cycle.</li> </ul>

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<p>Connections between public sector research and industry are increasing. The SIMTARS business unit has demonstrated a strong capability to operate in a fee for service environment and provides its services both nationally and internationally and can be used as a model for other Queensland Government business units.</p>	<p><b>6. Collaborative Research Alliances</b></p> <p>In the pursuit of excellence in science services delivery and advice, and to improve productivity and competitiveness, further develop strategic alliances between DNRM's groups, universities and the private sector to establish and/or enhance existing research institute(s) through collaborative alliances.</p>	<ul style="list-style-type: none"> <li>• This is standard operating procedure for the GSQ and a practice of long standing. Links with research organisations and other geological surveys both here, interstate and abroad are maintained and research alliances with industry are fostered through the Collaborative Drilling Initiative and the Industry Priorities Initiative.</li> <li>• Simtars also routinely conducts research and establishes collaborative links with academia and research organisations. In 2014 such projects were undertaken with the University of Queensland, CSIRO, CRC Mining and the Australian Centre for Geomechanics.</li> </ul>
	<p><b>7. Implementation of recommendations</b></p> <p>That the Director-General, as part of the Department's renewal process, consider the implementation of approved recommendations, including the assignment of an appropriately experienced/qualified DNRM person to champion the implementation of the approved recommendations.</p>	<p>Services provided by GSQ and Simtars and the recommendation of the review will be considered in the department's renewal agenda.</p>