



A strategic review of education and training:

Mine closure and transitions

Almost 240 Australian mines are expected to complete production by 2040 (CSIRO)¹. This presents significant opportunities in the estimated \$4 billion annual mine closure solutions industry; as well as environmental, social and economic challenges.

To successfully plan and deliver mine closure transitions, professionals require a breadth of technical and interpersonal skills and knowledge across a range of social, environmental, economic and governance disciplines.

The goal of the research, A Strategic Review of Education and Training: Mine Closure and Transitions, was to identify the future education and training needs of the identified

cohorts impacted by mine closures.

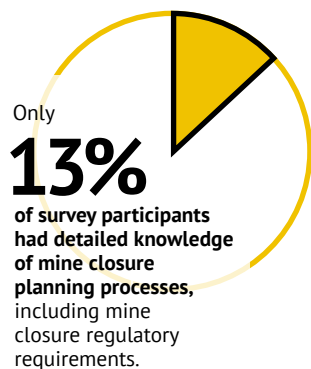
The research found no nationally consistent education and training approach, with knowledge gaps across all priority cohorts. The report recommends a coordinated approach to addressing this gap and prioritising mine closure and post-mine transition education and training. CRC TiME is committed to addressing this gap.

¹ CSIRO, *Enabling mine closure and transitions: Opportunities for Australian Industry*, November 2023



KEY FINDINGS


Surveys conducted: November to December 2023. **Responses:** 77 completed responses were received with representation from the mining sector, regional communities, First Nations communities and government.




Survey participants identified **knowledge of mine waste, waste management, waste as a resource and waste characterisation** as urgent training needs.



The most likely **training pathways are either unaccredited or VET training** (vocational education and training), although there are currently very few VET options.




An average of 17% of participants specified **mine closure processes as the most important training need** for the mining sector, METS industry, regional communities and government cohorts.

Participants specified the **top three priority areas of skills development** for mine closure or post-mine transitions work:


- 25%** Mine closure planning processes
- 16%** Risk assessment
- 16%** Communication and engagement, including with First Nations communities

CHALLENGES

The most significant challenges are:



The **knowledge gaps** of priority cohorts identified in the report



The **limited VET training options** currently available



The **absence of a nationally consistent education and training approach**

Education and training needs also extend beyond the direct workforce to the mining equipment, technology and services (METS) sector, governments, regulators, and regional and First Nations community organisations.

OPPORTUNITIES

Given the many and varied roles involved in mine closure transitions, the absence of a dedicated VET-based qualification presents an opportunity to develop a coordinated, comprehensive, and national approach to meeting the challenges of mine closure and post-mine transition skills and education.

Meeting the demand for much-needed knowledge and skills requires new collaborations between industry, education providers, government and regional First Nations organisations.



Mine closure education and training (MCET) is crucial to successfully transitioning post-closure mine sites and sustainable community development

OUTCOMES

As identified, mine closure education and training (MCET) is crucial to successfully transitioning post-closure mine sites and sustainable community development.

The content of any MCET program should be informed by the key themes identified through the research input provided by the local communities, the mining sector, the government and the METS industry.

An MCET program should also be created with sustainable community development as a guiding principle, with particular consideration given to reducing the negative socio-environmental impacts of mining.



NEXT STEPS

CRC TiME will continue collaborating with organisations to develop up-to-date and accessible training to suit growing mine closure workforce requirements.

Current activities include Stages 1 and 2 of the 'First Nations – National VET Pathways' project and the **University of Queensland Sustainable Minerals Institute's** free online pilot course, 'Foundations of Mine Closure and Sustainable Transitions.'

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Cooperative Research Centres Program



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ABOUT US

The Cooperative Research Centre for Transformations in Mining Economies is part of Australia's national innovation ecosystem. Our diverse partnerships bring scale, collaboration and coordinated investment to tackle the most complex mine closure and post-mine transition challenges. Together, we're rethinking what's possible to improve outcomes for people, communities, the environment and industry.

We acknowledge the Traditional Custodians across all the lands on which we live and work, and we pay our respects to Elders, both past and present.