

INVEST IN GREATER CERTAINTY

Bid for a Cooperative Research Centre for Transformations in Mining Economies (CRC-TiME)



Greater certainty
Sustained prosperity
Social value

Mine closure is an integral phase of an active mining industry but is a global challenge with few examples of successful closure and relinquishment. Over the coming decade, a successful CRC-TiME will transform mining economies and support communities to deliver:

- increased certainty of relinquishment,
- reduced likelihood of abandonment,
- diversified post mine communities, and
- new Australian businesses supplying a global market.

It will continue to build trust between mining companies, regulators and communities and improve the business settings for closure and succession.

CRC-TiME will support the vision of the Australian Government's National Resources Statement:

“To have the world’s most advanced, innovative and successful resources sector which delivers sustained prosperity and social development for all Australians”.

The Challenge

Transforming mining economies to enable Australian regions and their communities to build a successful post mine future is a growing challenge.

- The social and economic landscape for mining is changing in line with community expectations.
- Mechanisms for collaboratively building a shared vision of post mine options need improvement to secure a better future for investment in Australian jobs and resources, and to create a genuine and enduring partnership between regional businesses, communities, governments and mining companies.
- The broader community's expectations of the mining sector are high. Addressing them will ensure the mining sector continues to contribute strongly to the national economy and Australian society.



A CRC supports industry-led collaborations

The Australian Government's Cooperative Research Centre (CRC) Program provides an ideal vehicle to improve collective approaches to mine closure through sustained industry, research and community collaboration.

The CRC Program seeks to:

- Improve the competitiveness, productivity and sustainability of Australian industries;
- Foster high quality research to solve industry-identified problems; and
- Encourage and facilitate SME participation in collaborative research.

The program can **match industry financial investment** up to 1:1 for a ten-year period.

A unique coalition with a unique value proposition

The CRC-TiME brings together 50 leading mining companies, the Minerals Council of Australia, mining equipment, technology and services (METS) companies, regional development organisations, local, State and Commonwealth governments and research partners.

This unique coalition will bring scale and coordinated investment in research that will deliver a better approach to mine closure.

Current partners have declared over \$100M financial support (\$30.4M cash/\$73.7M in-kind) to the proposed CRC for 10 years. Investment from the Australian Government's CRC Programme will bring a total investment of \$133.6M in CRC-TiME.

MINING COMPANIES	MINING EQUIPMENT, TECHNOLOGY AND SERVICE COMPANIES		GOVERNMENT AND COMMUNITY	RESEARCHERS
Alcoa	3RZ	Golder	Geoscience Australia	University of Queensland
BHP	AgGrow	Landloch	Supervising Scientist	University of Western Australia
Mining3	Aurecon	Ozium	WA Government	University of South Australia
FMG	Decipher	Phibion	Qld Government	University of Adelaide
Iluka	Deswik	RIAWA	NT Government	Curtin University
Newmont Goldcorp	Ecocene	SSG	Chemcentre	Murdoch University
Rio Tinto	EciPlant		WA Biodiversity Science Institute	Flinders University
South32	Australia		NRM: Rangelands, PHCC	Federation University
MMG	EIANZ		Regional Development: PDC	University of Reading (UK)
			SW RDA, Regional Implementation Committee (Pilbara)	CSIRO
				AGRF

Supported by leading Industry bodies: ICMM, MCA, CMEWA, AMEC, ACARP, AMIRA and Austmine

An integrated and multidisciplinary programme

CRC-TiME will deliver an innovative research agenda to address the complex challenges underpinning mine closure and relinquishment.

Social, environmental, economic and technical research will be conducted through three highly integrated programs that work directly with industry and communities.

In addition, the CRC will network a series of national demonstration sites to test solutions that are scalable and transferable and will implement shared data and systems integration policies to promote transparency across the sector.

CRC-TiME will drive capacity building, education and training to address key challenges for the industry and help prepare our workforce to capitalise on new opportunities.



Proposed programme structure

Planning	Driving	Doing
Regional economic development	Valuation, economics and mine planning	Operational Solutions and METS development
<ul style="list-style-type: none">• New approaches and tools to guide community engagement and partnership• Consultative mechanisms for stakeholder input to end land-use and completion criteria development• Integration of regional land use planning and industry mine planning and closure processes• Definition of global export opportunities driven by rapidly growing ESG investment• Mechanisms to enable transitions to regional post closure economies• Sustainable community development and job growth	<ul style="list-style-type: none">• Standardised national methodology for quantifying residual closure risks• Accurate and transparent rehabilitation and closure accounting framework• New models of valuation• Standard industry-wide monitoring and assessment frameworks• Development of training curriculum and certification process for mine closure professionals• A knowledge platform to address shared problems between miners and regulators, providing quicker access to relevant knowledge, tools and data	<ul style="list-style-type: none">• Quantitative methods for quantifying ecological impacts of mining• Definition of long-term ecological and biophysical restoration trajectories• Development of new techniques for rehabilitation and closure monitoring• Contractor capacity building• Commercialisation of METS rehabilitation and closure technology via scaled demonstration sites• Accelerated development of technical solutions to intractable risk issues lie mine wastes, tailing and water

Building trust and transparency through systems and data integration

Building confidence through networked trial and demonstration sites



Global Relevance

The 2018 Ernst & Young annual “Ten Business Risks facing Mining and Metals” report identified social license as mining’s number one risk factor, while the ICMM - a peak body comprising 28 of the largest global mining companies - identified mine closure as a priority area for the first time in 2018.

The growth in the global closure market place also presents a significant export opportunity for Australian METS companies.

Opportunity for new partners to join

A limited opportunity exists for new partners to join the CRC with up to 1:1 matching of investment.

New partners will need to be confirmed by mid-October 2019.

The Stage 2 application development will refine CRC outputs and impact pathways and provides a valuable opportunity for partners to input into the CRC.

Contact the bid management team below to discuss further.



A highly experienced bid management team

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“ Mine closure remains a global challenge and unrealised opportunity that will only be resolved through industry, government, researchers and community working together.”

I invite you to join this exciting partnership.”

*Dr Bruce Kelley - CRC-TiME Chair
Designate and Past Global Practice
Leader Environment, Rio Tinto and
Chair of the International Network for
Acid Prevention*



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