



**ANNUAL  
REPORT 2022**



Australian Government  
Department of Industry,  
Science and Resources

**AusIndustry**  
Cooperative Research  
Centres Program



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**ACKNOWLEDGEMENT OF COUNTRY**

We acknowledge the traditional custodians throughout Australia and their continuing connection to the land, waters and community.

We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders past, present and emerging.

Photos used throughout this report are courtesy of: Nishita Wojnar, Tom Measham, Jane Stacey and Guy Boggs.

This 2022 report covers the financial year ended 30 June 2022, referred to throughout as 2021/2022. Milestones achieved and key activities outside of this period are noted.

# 2021/2022 SNAPSHOT



**16\***

Foundational research projects completed



**4\*\***

New projects commenced, including two flagship projects



**6**

New partners welcomed to CRC TiME



**80**

Total number of CRC TiME partners



**19\*\*\***

Project reports published



**3**

Peer-reviewed journal articles and conference papers published



**1<sup>ST</sup>**

Partner Forum held, focused on #Creating Connections



**180**

Participants at our first Partner Forum



**\$16.9 MILLION**

(financial and in-kind) committed to 2021–24 research



**5\*\*\*\***

Digging Deeper webinars hosted



**500+**

Registrations in project webinars



**2021-24**

Strategic Plan, Research Prioritisation Plan and Impact Framework released



**10**

Indigenous Inclusion Principles endorsed by the Board



**12**

Regional Hub and College meetings



**9\*\*\*\*\***

Higher Degree by Research Scheme students

\* A further two foundational research projects have been completed since the end of the financial year.

\*\* A further two projects have commenced since the end of the financial year.

\*\*\* A further five project reports have been published since the end of the financial year.

\*\*\*\* Eight webinars have now been delivered to date.

\*\*\*\*\* A tenth scholarship has since been awarded.

# FROM THE CHAIR



**I am proud to present CRC TiME's 2021/2022 Annual Report. It provides a progress snapshot as we bring together diverse stakeholders to re-imagine and transform Australian mine closure outcomes.**

## PROGRESS THROUGH PARTNERSHIP

During the reporting period, CRC TiME finalised its Strategic Plan 2021–24, Research Prioritisation Plan 2021–24 and Impact Framework – setting strong, aligned and bold directions for our work.

We also achieved our ambitious goal of delivering a portfolio of foundational projects to inform the investment phase of CRC TiME. Importantly, the portfolio is a substantial, useful and practical body of work in itself.

For the Board, stakeholder engagement is critical to build on our trusted and collaborative national, regional and local partnerships. As part of this, the Board was delighted to be part of many engagement activities, including a visit to Collie in Western Australia in June 2022.

Strong partnerships underpin comprehensive project co-design, which is especially important as we introduce larger, multi-year projects as CRC TiME transitions from foundational to investment phase.

Our Research and Impact Committees and partner Colleges provide further avenues for stakeholder input and play a vital role in providing advice on project proposals. We thank all Committee and College members for their active and important contributions.

Of great importance is CRC TiME's cultural journey to ensure First Nations and regional communities are at the heart of everything we do.

To ensure our work supports First Nations rights, interests and outcomes, the Board endorsed First Nations Inclusion Principles in November 2021 and established a First Nations Advisory Team to advise management.

Our unique Regional Hubs were integral to informing our research to date, facilitating direct input from Australia's mining regions. We thank our Regional Hub Secretariats for their important contribution.

This is only the start. There is much more to do.

CRC TiME is well-positioned for the future. In addition to the above, recent organisational changes, including appointment of an External Relations and Impact Director to work in concert with the Research Director, will help us achieve our shared vision.

## CRC TiME'S INTEGRAL ROLE

In a world increasingly focussed on environmental and social performance, and transparent governance, the need for, and role of, CRC TiME is clear.

In general, the mining industry is poorly understood. Today's industry is sophisticated, employing innovative technologies such as autonomous trucks, drill rigs and robotics in exploration, mining and processing.

However, the focus on exploration, mining and processing innovation has often come at the expense of the management of environmental and social risks, resulting in some significant and high-profile legacies. As a result, the industry is often better known for examples of poor environmental and social performance.

The industry must recalibrate what it defines as core business and lift its vision beyond the mine gate. This requires a re-think of what the mining cycle really entails.

To achieve this, we need to bring mining companies, First Nations and regional communities, policy-makers, regulators, and suppliers, into a constructive and collaborative space. Australia is one of the few jurisdictions globally where the window of opportunity to do so still exists.

CRC TiME acts in a facilitating role, providing a safe space as an honest, trusted and collaborative broker. Other CRCs have successfully played a similar role to good effect.

CRC TiME brings much needed social, environmental and regulatory innovation to drive cultural change and position the industry and the communities it depends on for a sustainable and productive future. Re-interpretation of the closure and post closure interface is the perfect place to start.

Thank you for joining us in this important work.

**Dr Bruce Kelley**  
CHAIR

# CEO OVERVIEW



**As CRC TiME enters its third year, it is rewarding to see the knowledge, dialogue and impact our unique partnership is enabling.**

Our collaborative partnership is proving to be greater than the sum of our parts.

Together we are creating an environment of innovation and inclusion, galvanising stakeholders towards improving mine outcomes and delivering value for people, communities, the environment and industry.

Over the last two years, the combined efforts of over 400 people across our partnership resulted in a Foundational Project Portfolio providing a landmark consolidation of mine closure and transition knowledge, resources and tools.

Covering some of the most significant mine closure and post-mine transition issues and challenges, this research has set the foundations and future direction for CRC TiME.

I would like to acknowledge the commitment of all our foundation project participants. These efforts have seen our partnership grow to 80 as we welcomed six new partners: GHD, Amira Global, the Queensland Resources Council, Isaac Regional Council, Greater Whitsunday Alliance and the Office of the Queensland Mine Rehabilitation Commissioner.

Our next phase of project development is underway, guided by our Strategic and Research Prioritisation Plans, Impact Framework, First Nations Inclusion Principles and direct and clear input from focus mining regions about what is important to them.

This strong co-design and business case development process is underpinning a portfolio that will see a cash investment of over \$11 million between 2021 and 2024. During the financial year, four significant projects were approved – representing a \$16.9 million (cash and in-kind) investment. Two projects have been approved since then, with further projects expected to be presented for approval in coming months.

Project areas range from critical practical challenges such as the *Australian seed scaling initiative* to macro structural issues, such as *Identifying future economic development pathways for mining regions and increasing transition capacity* and *Mine pit lake assessment and management: a national initiative to support mine closure and regional opportunities*.

We are also working to unlock new possibilities through knowledge-building events and multi-stakeholder dialogue, making inroads in changing how industry, government and communities view mine closure. Our outreach included the popular Dig Deeper webinar series; numerous involvements with major industry events, keynote and research presentations; regional visits and engagement; and representations and roundtables throughout State and Commonwealth government departments.

Thanks in part to our collective efforts, momentum is building beyond our partnership around the importance, complexities and benefits of post-closure planning. Environmental and social concerns about mining are growing alongside demand for resources. The scope of the “whole of value chain” approach is beginning to expand and partnerships like CRC TiME are increasingly looked to, to provide transformative innovation.

Genuine First Nations Inclusion must be central to everything CRC TiME does. We believe our work during 2021/22 has set the course for true collaboration. Now, we must let our actions speak.

We are deeply committed to bringing the best minds together to extend our research efforts and connect with global innovation. In 2022, we played a significant role in the successful 15th International Conference on Mine Closure and we are working closely with World Mining Congress 2023 to deliver a Special Symposium on mine closure and post-mining transitions. With the event being hosted in Brisbane next June, we have the incredible opportunity to bring our partners together on the world stage.

Our team has done a great job of establishing solid foundations across our key pillars of research leadership, leading practice impact and adoption, and strong and trusted business systems and governance.

I would like to acknowledge the tremendous efforts of our small team. With several retirements, farewells and welcomes throughout the year, we have implemented a new organisational structure to balance the focus on research and impact. Further roles in First Nations and regional engagement will expand the team in the coming year.

Once again, I thank the many contributions of our partners, as we work together to broaden and accelerate our individual efforts through a much needed collaborative approach to achieve our shared vision of transformation.

**Dr Guy Boggs**  
CHIEF EXECUTIVE OFFICER



# OUR PARTNERS



Thank you to all our partners. Throughout the year you will find an up to date list of our current partners available on our website at <https://crctime.com.au/about/ourpartners/>

# OUR JOURNEY



STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT

# DELIVERING TRUSTED, COLLABORATIVE RESEARCH

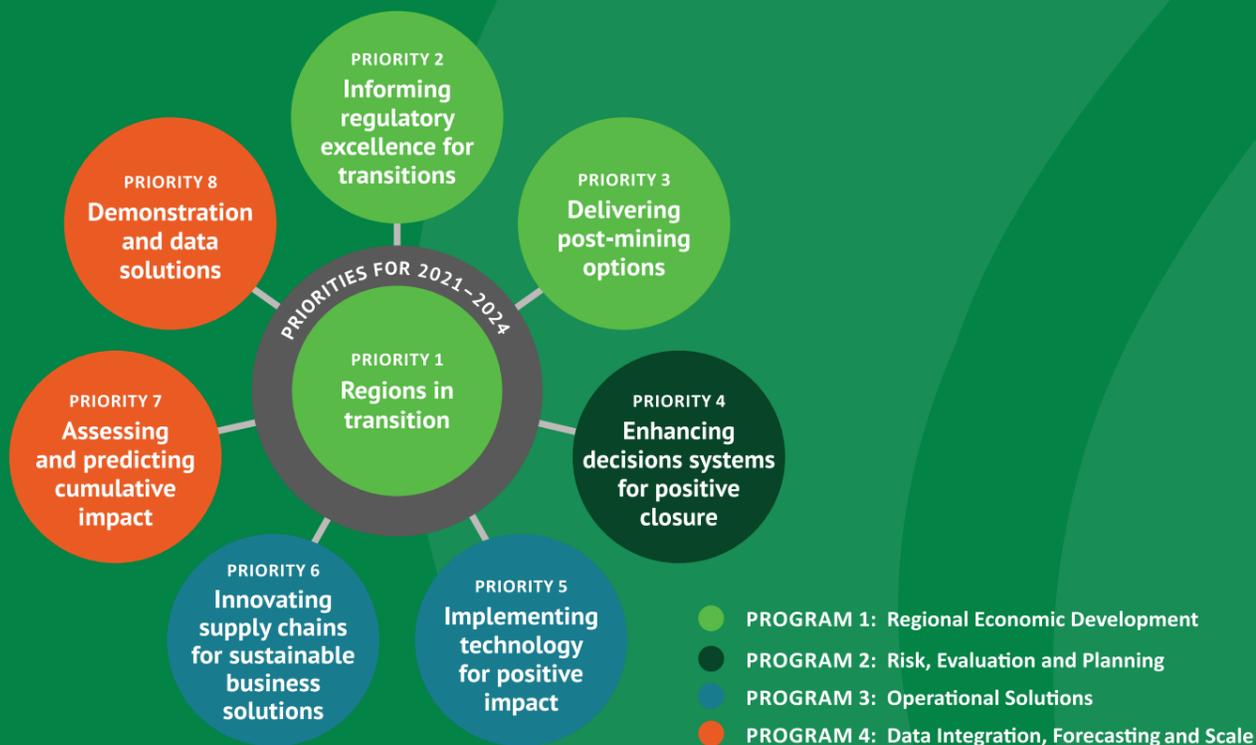
Our research program is founded on agreed goals, collaborative and established structures, and clear criteria. This includes CRC TiME 2020–2030 milestones and outputs as agreed with the Commonwealth, research program areas developed with our partners, and research criteria and principles. In 2021/2022, our research portfolio focused on the critical areas outlined below.

## DEVELOPING BASELINE KNOWLEDGE THROUGH A LANDMARK PORTFOLIO

Our project teams delivered 16 out of 22 foundational projects during the year, with a further two projects completed since.

Project reports and two peer-reviewed conference papers on foundational and new projects have also been published.

Taking a portfolio approach to the research program, enabled us to both address overarching themes and project-by-project gaps, needs and research questions. This was a purposeful approach to identify the areas where innovation is needed to achieve post-mine positive environmental, cultural, social and economic outcomes.



## OUR RESEARCH PRIORITISATION PLAN

Released in August 2021, our [Research Prioritisation Plan 2021–24](#) represents the collective efforts of more than 1,000 people. It clearly, transparently and comprehensively defines shared priorities, alignment with program areas, the research approach and other critical information.

## PROJECTS FOR THE FUTURE

To inform our next phase, CRC TiME conducted a co-design process, seeking to:

- Develop projects to build on the knowledge and skill base represented by our partners
- Deliver on the Research Prioritisation Plan
- Integrate activity guided by the Impact Framework and First Nations Inclusion Principles
- Support adoption and beneficial use of the research
- Meet the needs and aspirations of focus mining regions and regional partners

The process incorporated feedback from partnership groups (Colleges) and Regional Hubs, participant survey responses and extensive consultation undertaken by project teams. It led to the initiation of ten project proposals, several of which are substantially advanced and expected to be contracted in 2022/2023.

New projects were contracted during 2021/2022, including two flagship projects:

- A \$10 million, five-year project to address the risk of Acid Mine Drainage – a fundamental barrier to effective post-mine transitions due to lasting legacy impacts.
- A \$3 million project on the large-scale deployment of diverse seed mixes using customised precision technologies, aimed at improving the efficiency and effectiveness of revegetation during mine site rehabilitation. This project has cross-sector application, including for degraded agricultural land.

*“As is the role of a Cooperative Research Centre, our research program aims to challenge the status quo, question how well current systems work, and build an evidence base that can support new innovation in how mining systems, regional planning, regulatory systems, social groups and teams work together to deliver positive post mine legacies.”*

Dr Guy Boggs, CEO, CRC TiME

## EXPANDING OUR HIGHER DEGREE BY RESEARCH (HDR) PROGRAM

Six PhD students were awarded Top Up scholarships during 2021/2022, bringing the number of CRC TiME HDR Scheme students to nine.

Their research areas range from soil carbon sequestration, to pit lake and ground water systems, to stakeholder mapping.

Ongoing engagement between the students and CRC TiME is core to the HDR program. PhD students are also encouraged to participate in industry events and conferences, including our own forums.

CRC TiME aims to at least double the national benchmark as defined by Universities Australia for the percentage of HDR scholarships awarded to Indigenous Australians. We also provide dedicated funding for regional or industry placements to support graduates understand and connect with communities in key mining regions.

With longer, larger projects now contracted, additional PhD students will be engaged directly through specific projects, as well as through the HDR scholarship scheme.

Read more about our current PhD students and their areas of study:



## IN FOCUS: DELIVERING ON OUR FOUNDATIONAL PROJECT PORTFOLIO

### A LANDMARK ASSESSMENT OF MINE CLOSURE AND TRANSITION KNOWLEDGE

The collective efforts of over 400 people from across CRC TiME's unique partnership supported a landmark consolidation and examination of post-mine transition knowledge.

During the year, 16 of 22 projects commissioned as part of the \$4.9 million Foundational Project Portfolio were completed. The projects bring together diverse knowledge sources on critical issues affecting positive post-mine outcomes.

The projects cover some of the most significant mine closure and post-mine transition issues and challenges, including technical operational solutions, regional cumulative effects and environmental assessments, climate change impacts on mine closure operations, legal frameworks, evaluation and risk management.

A portfolio approach enabled us to deliver an unusually high volume of research outputs in our first two years.

By design, the portfolio projects were highly connected and recognised the challenge of mine closure and post mine transitions as a complex issue. The role of these projects were:

- Baseline and benchmarking the current state of knowledge
- Sharing data and knowledge from existing initiatives with partners
- Roadmapping gaps, priorities and future research directions
- Short-term field or modelling studies as driven by end-users
- Establishing collaborative infrastructure to underpin future use within CRC TiME

In addition to informing future research questions, these overarching themes provide a structure to drive changes in knowledge, motivation and behaviour as it relates to post-mine transitions.

Dr Guy Boggs, Dr Tom Measham, Professor Anna Littleboy and Professor Fiona Haslam-McKenzie presented an in-depth analysis of the foundational research findings, overarching themes and implications for future research at the 2022 Mine Closure Conference in October.

Read the conference paper:



## KEY CROSS-CUTTING THEMES, OPPORTUNITIES AND CHALLENGES IDENTIFIED FROM THE FOUNDATION PROJECTS

1

There is potential for policy innovation to enable net benefit post-mine transitions, with particular opportunities to improve clarity in statutory expression as well as broader principles and guidance.

3

Significant and new opportunities can arise from better transition of mining-related land and assets to post-mine land uses. Enabling more flexible tenure frameworks, support for local champions and whole-of-government responses could improve outcomes.

2

The importance of broadening the view from site to regional scale assessments and plans. Understanding regional cumulative effects will help achieve better social and economic outcomes by considering and addressing the broader positive and negative aspects of decisions.

4

There is opportunity to address gaps in existing risk and evaluation decision-making tools and techniques, especially in relation to:

- Environmental, Social and Governance (ESG) integration
- Social aspects of closure
- Use of discounting models
- Handling of intangible values.

5

Exploration is needed on the ways technology development can help in meeting changing post-mine landscape expectations, including using technology to assist repurposing and post-mine value optimisation, integration and systems-based knowledge and ecosystem accounting.

## 2021/2022 FOUNDATIONAL RESEARCH PROJECTS

PRIMARY PROGRAM	RESEARCH PRIORITIES	RESEARCH PROJECTS	
Regional Economic Development	#1 Regions in transition #2 Informing regulatory excellence for transitions #3 Delivering post-mining options	1.1	Towards a framework for cumulative regional impact assessment
		1.2	Post-mining land use
		1.3	Mapping the regulation of mine closure
Risk, Evaluation and Planning	#4 Enhancing decisions systems for positive closure	2.1	Understanding stakeholder values in post-mining economies
		2.2	Exploring the issues in mine closure planning
		2.3	Current tools, techniques, and gaps in evaluating mine closure
		2.4	Quantifying risks and opportunities from mine closure
Operational Solutions	#5 Implementing technology for positive impact #6 Innovating supply chains for sustainable business solutions	3.1	Integration of biophysical aspects of mine closure planning
		3.2	Transforming disparate approaches to remote sensing and monitoring to industry best practice
		3.3	Mine site water: options for extracting value from open pits
		3.4	Returning ecosystem resilience
		3.5	Mined landform stability for regional benefit
		3.6	Barriers to reducing acid and metalliferous drainage (AMD) risk
		3.7	Comparative Closure: assessing the biophysical closure challenges of different mining methods
Data Integration, Forecasting and Scale	#7 Assessing and predicting cumulative impact #8 Demonstration and data solutions	4.1	Dynamically transforming environmental assessment through a shared analytics framework
		4.2	Mine rehabilitation trials online (MRTO)
		4.3	Network of demonstration and testing sites
		4.4	CRC TIME knowledge hub (e-library)
		4.5	Abandoned mines in Australia
		5.1	Strategic Project – Defining our path to impact
		5.2	Strategic Project – Foundations for Indigenous Inclusion
		5.3	Strategic Project – Transitions and climate change

RESEARCH ACTIVITIES INCLUDE	COMMONWEALTH MILESTONE OUTPUTS	STATUS
<ul style="list-style-type: none"> <li>Articulate regulatory reform for relinquishment</li> <li>Co-develop post-mining land use options and decision tools</li> <li>Understand the nature, value and readiness of regions to transition</li> <li>Design and implement regional planning</li> <li>Assess cumulative social, economic and environmental impact</li> </ul>	RP1.1 Roadmap for co-developed relinquishment policy	Completed
	RP1.2 Decision tool for regional planning of post-mine uses	Completed
	RP1.3 Frameworks, tools and capacity building to enable shared vision development	Completed
<ul style="list-style-type: none"> <li>Enhance decision tools to support relinquishment and accommodate next land use decision making</li> </ul>	RP2.1 Advanced evaluation framework for long life assets	Completed
	RP2.2 Real time predictive models	Completed
	RP2.3 Planning tools to identify transferrable residual risk	Completed
		Final reporting
<ul style="list-style-type: none"> <li>Create and refine remote systems to monitor progress against closure criteria</li> <li>Design, develop, test and validate viable novel technologies for rehabilitation and closure</li> <li>Analyse, develop, test and validate supply chain business solutions</li> </ul>	RP3.1 Smart architecture for closure design (incl. data storage and transfer protocols)	Completed
	RP3.2 Prototype risk management technologies for successful post-mine futures	Final reporting
	RP3.3 Business solutions for supply chain development	Completed
		Delayed
		Final reporting
		Completed
		Completed
<ul style="list-style-type: none"> <li>Develop data and knowledge sharing platforms</li> <li>Environmental analytics for ecosystem forecasting</li> <li>Link site demonstrations</li> <li>Assess cumulative social, economic and environmental impact</li> </ul>	RP1.2 Decision tool for regional planning of post-mine uses	Completed
	RP3.1 Smart architecture for closure design (incl. data storage and transfer protocols)	Completed
		Final reporting
	Completed	

## ONGOING AND NEW RESEARCH PROJECTS

PRIMARY PROGRAM	RESEARCH PROJECTS	PROJECT PARTNERS
Regional Economic Development	1.7 Collaborative planning for post-mining development in the Latrobe Valley (Stage 1)	Federation University, University of South Australia, CSIRO, Energy Australia, AGL, Mine Land Rehabilitation Authority, GHD, Central Gippsland Region Water Catchment Authority
	1.8 Identifying future economic development pathways for mining regions and increasing transition capacity	CSIRO, University of Western Australia, BHP, Central Highlands Development Corporation, Geoscience Australia, Isaac Regional Council, Pilbara Development Commission, Rio Tinto, Greater Whitsunday Alliance, MMG Australia, Our Country Workforce Solutions
Risk, Evaluation and Planning	2.7 Natural capital accounting in the mining sector (includes multiple projects)	Department of Climate Change, Energy, the Environment and Water, CSIRO, Curtin University, BHP, Alcoa, Hanson, Syrinx, University of South Australia, Murdoch
Operational Solutions	3.8 Increasing bio-available plant nutrients in mineral waste	University of Western Australia, Fortescue Metals Group, Curtin University
	3.9 Climate change, vegetation and risk for rehabilitation success	Federation University, University of Queensland, Victorian, Department of Jobs, Precincts and Regions
	3.10 Improved prediction, remediation and closure of acid and neutral metalliferous drainage (AMD/NMD) sites by examination of mine waste behaviour at the meso-scale	Flinders University, Newmont Mining Services, MMG Australia Limited, Rio Tinto Services Limited, Fortescue Metals Group Ltd, BHP Group Operations Pty Ltd, Teck Resources Limited, Genome Research Facility Limited, Okane, Minerals Research Institute of Western Australia, Department for Energy and Mining, South Australian Government, Australian Department of Agriculture, Water and the Environment, Mineral Resources Tasmania, The University of Queensland, University of Windsor, Blue Minerals Consultancy
	3.12 Long-term performance of 'store and release' cover system and slope treatment on potentially acid forming (PAF) waste rock dumps at Kidston Gold Mine, Queensland	University of Queensland
	3.13 Australian seed scaling initiative: Large-scale deployment of diverse, enhanced seed mixes using customised precision seeding technologies	University of Western Australia, Alcoa, WA Department of Biodiversity Conservation and Attractions
	3.17 Opportunities for growth in Australia's mine closure solutions industry	CSIRO, Minerals Research Institute Western Australia, Ecoscene, GHD, Landloch, Okane, K2Fly, Ecoplant Australia, Sustainable Solutions Global, Deswik, New South Wales Department of Regional Development

RESEARCH ACTIVITIES INCLUDE	COMMONWEALTH MILESTONE OUPUTS	TIMING
<ul style="list-style-type: none"> <li>Review and synthesise previously discussed post-mine development options</li> <li>Identify institutional arrangements required to implement different options</li> <li>Assess options feasibility as perceived by stakeholders</li> </ul>	<p><b>1.3.1</b> Value aggregation: Tools for aggregating community values developed</p> <p><b>1.3.2</b> Opportunity analysis: Trade-offs for different opportunities and constraints quantified</p>	To commence 2023, 12 months
<ul style="list-style-type: none"> <li>Develop an analytical framework to support the identification of transition capacity drivers and regional resilience components</li> <li>Stakeholder-based construction of potential future development scenarios</li> </ul>	<p><b>1.3.1</b> Value aggregation: Tools for aggregating community values developed</p> <p><b>1.3.2</b> Opportunity analysis: Trade-offs for different opportunities and constraints quantified</p> <p><b>1.3.3</b> Dynamic modelling: Dynamics of typologies, options and trade-offs modelled</p> <p><b>1.4.1</b> Integrated modelling: Algorithms developed to integrate qualitative and quantitative data</p>	To commence 2023, 24 months
<ul style="list-style-type: none"> <li>Development of industry guidance</li> <li>Development of a business case for creating and using an NCA framework</li> <li>Development of case studies</li> <li>Gap analysis to understand where further research is needed</li> <li>Capacity building</li> </ul>	<p>Various including,</p> <p><b>RP2.1</b> Advanced evaluation framework for long-life assets</p> <p><b>RP2.2</b> Planning tools to identify transferable residual risk</p>	Commenced 2022, 18 months
<ul style="list-style-type: none"> <li>Create and refine remote systems to monitor progress against closure criteria</li> <li>Design, develop, test and validate viable novel technologies for rehabilitation and closure</li> <li>Analyse, develop, test and validate supply chain business solutions</li> </ul>	<p><b>RP3.1</b> Smart architecture for closure design (incl. data storage and transfer protocols)</p> <p><b>RP3.2</b> Prototype risk management technologies for successful post-mine futures</p> <p><b>RP3.3</b> Business solutions for supply chain development</p>	<p>Commenced 2021, close to completion</p> <p>Near completion</p>
<ul style="list-style-type: none"> <li>Monitor untreated waste</li> <li>Microbial and mineralogical utilisation</li> <li>Lab-scale remediation strategy assessment</li> <li>Tailored AMD/NMD control options</li> <li>Improve testing strategies for better predictive capability</li> <li>Information dissemination, training, and improved awareness for utilisation</li> </ul>	<p><b>RP3.1</b> Smart architecture for closure design (incl. data storage and transfer protocols)</p> <p><b>RP3.4</b> Training content and courses for integrating post closure outcomes into the workforce</p>	Commenced 2022, 60 months
<ul style="list-style-type: none"> <li>Improve understanding of the long-term performance of store and release covers in reducing residual AMD risks at closure</li> <li>Improve design criteria</li> <li>Improve understanding of the slope treatment applied</li> </ul>	<p><b>RP2.3</b> Planning tools to identify transferrable residual risk</p> <p><b>RP3.2</b> Prototype risk management technologies for successful post-mine futures</p>	Near completion
<ul style="list-style-type: none"> <li>Demonstrate applicability of precision seeding machines in a variety of rehabilitation sites</li> <li>Further develop understanding of optimal seed treatments and methodologies for problematic species</li> </ul>	<p><b>RP3.2</b> Prototype risk management technologies for successful post-mine futures</p> <p><b>RP3.4</b> Training content and courses for integrating post closure outcomes into the workforce</p>	42 months
<ul style="list-style-type: none"> <li>Identify growth opportunities for MCS businesses that deliver economic or social value, including for First Nations businesses</li> <li>Support the case for investment in the MCS ecosystem as a mechanism to both reduce environmental risks and closure-related financial liabilities</li> </ul>	<p><b>3.3.1</b> Current post-mine land use supply chains analysed</p> <p><b>3.3.2</b> Market analysis and project for future postmine supply chains quantified</p> <p><b>3.3.3</b> Business models and technologies that present scalable solutions priorities</p>	To commence 2023, six months

## ONGOING AND NEW RESEARCH PROJECTS (CONT.)

PRIMARY PROGRAM	RESEARCH PROJECTS	PROJECT PARTNERS	
<b>SELECTED PROJECTS IN DEVELOPMENT</b>			
<b>Data Integration, Forecasting and Scale</b>	4.7	An approach to regional cumulative effects assessment (RCEA) (Stage 1 – Case Study Analysis)	Western Australian Biodiversity Science Institute, Murdoch University, Conservation Council of Western Australia, Commonwealth, Department of Climate Change, Energy, the Environment and Water, Western Australian Department of Water, Environment and Regulation, Federation University, Hanson Construction, Newmont, Pershke Consulting, Pilbara Consulting, Queensland Resources Council, Rangelands NRM WA, University of Western Australia
	4.16	Mine pit lake assessment and management: a national initiative to support mine closure and regional opportunities	ChemCentre, Aurecon, BHP, Central Highlands Development Corporation, CSIRO, Curtin University, Department for Energy and Mining (Government of South Australia), Department of Mines, Industry Regulation and Safety (WA), Department of Water and Environmental Regulation (WA), Energy Australia, Ecological Australia, Flinders University, FMG Fortescue, GHD, GW3 Greater Whitsunday Alliance, Iluka, Isaac Regional Council, Minerals Research Institute of Western Australia, Pilbara Development Commission, Premier Coal, Office of the Queensland Mine Rehabilitation Commissioner, Rio Tinto, South 32, The University of Queensland, The University of Western Australia

RESEARCH ACTIVITIES INCLUDE	COMMONWEALTH MILESTONE OUPUTS	TIMING
<ul style="list-style-type: none"> <li>Develop shared understanding of diversity in RCEA practice and potential application</li> <li>Develop a decision-tree to guide use of RCEA in different forms</li> <li>Generate preliminary insights, including regional definitions, governance, stakeholder engagement, Indigenous involvement</li> </ul>	<b>RP1.2</b> Decision tool for regional planning of post mine uses	If approved, to commence in 2023 and continue for 12 months
<ul style="list-style-type: none"> <li>Explore Traditional Owner, community and industry aspirations for post-mining use of pit lake water</li> <li>Produce common language tools</li> <li>Develop guidance to assess risk categories</li> <li>Model opportunity and risk scenarios</li> <li>Make recommendations on technical data and approaches required for fit-for-purpose modeling</li> <li>Evaluate uncertainty of model prediction</li> </ul>	Various, including: <b>RP2.1</b> Advanced evaluation framework for long life assets <b>RP3.2</b> Prototype risk management technologies for successful post-mine futures	If approved, to commence in 2023 and continue over 48 months

Other projects in development relate to mine closure and post-mine transition training and education, First Nations' aspirations, challenges and opportunities for post-mine outcomes, and incorporating intangibles for sustainable mine closure. Visit our website for more information.

**FLAGSHIP PROJECT:**  
**Australian seed scaling initiative (ASSI)**

**TIMEFRAME:** 3.5 years  
**FUNDING:** \$3 million



ASSI aims to address the challenge of using wild-collected native seeds at a scale and efficiency level suitable for large scale ecological restoration and rehabilitation. The more efficient precision technology sows diverse mixes of wild-collected seeds in sloped and rock landforms. ASSI's evidence-based program will be critically important to help ensure every seed counts for restoration.

The project builds upon new seeding mechanisms designed by the University of Western Australia and Kings Park Science research group for use in the Pilbara and will apply and optimise this technology in Alcoa's bauxite mine rehabilitation in the Peel and South West regions of Western Australia.

The project will also scope a broader national program and assess the transferability of the technology to other landscapes to help Australia meet a rapidly growing demand for seed based restoration.

Working with Advisory Project Participants from Rio Tinto, BHP, Peel Harvey Catchment Council, Peel Development Commission and Rangelands NRM, the ASSI project team plans to develop the technology and process to deploy over similar mined landscapes and severely degraded agricultural environments requiring restoration across Australia.

**FLAGSHIP PROJECT:**  
**Improved prediction, remediation and closure of acid and neutral metalliferous drainage (AMD/NMD) sites**

**TIMEFRAME:** 60 months  
**FUNDING:** \$10 million

AMD management and remediation involves significant cost and can inhibit mine closure. Forecasting and appropriate control of AMD is a common issue for mine sites with climate, geochemistry and microbiology all involved. Incorrect forecasting may result in:

- Inadequate controls and strategies leading to downstream contamination of water ways, ecosystem and/or human health impacts and constraints on future site repurposing
- Inaccurate geochemical risk assessments (non-acid forming, NAF, waste rock and tailings being wrongly classified as potentially acid forming, PAF) resulting in inefficient use of resources through unwarranted expenditure
- On-site remediation resources not being recognised
- Opportunities to understand and control beneficial microbial action not being recognised

This project aims to link prediction, scale up and residual risk. There are potential improvements, using both mineralogy and microbiology, for assessment and remediation of the undersaturated mine waste zone through examination of the behaviour of mine wastes at a range of scales. The project also aims to bridge the gap between lab-scale methodologies and site implementation through emphasis on meso-scale testing of AMD/NMD behaviours of mine waste at >1 t.

By developing understanding and use of microbial activity for AMD control, improved acid-base testing procedures for AMD/NMD waste disposal planning, and accurate identification and quantification of sources of neutralisation, it may be possible to achieve fit-for-purpose end-user environments.

# PROGRESS TOWARDS FIRST NATIONS INCLUSION

**CRC TiME is committed to First Nations Inclusion. We aim to facilitate a legacy that is designed with and by First Nations people, not for them. To us, Inclusion means ‘making room’ for collaboration and partnership rather than engagement and consultation.**

Our unique structure – which emphasises co-definition, co-design and collaboration – means that CRC TiME can be a vehicle for decisions that incorporate the interests and concerns of First Nations regarding mine closure outcomes and opportunities.

This also supports improved post-mine and mine closure outcomes for all.

Changing from an engagement and consultation approach to an Inclusion approach requires us to work differently. And, while lessons from other sectors and organisations making this change are useful, CRC TiME needs its own fit-for-purpose systems, processes and capability.

We made progress during 2021/2022, including:

- Reviewing and acting on findings and recommendations from [A snap-shot review and recommendations to support the development of the CRC TiME Indigenous Inclusion Strategy](#).
- Commissioning an organisation-wide strategy to help shift from consultation to Inclusion. The full report is expected to be released in 2022.
- Releasing the CRC TiME First Nations Inclusion Principles. The principles are an explicit and public commitment about how we will work with First Nations (see page 25).
- Establishing a First Nations Advisory Team (FNAT) to inform research development, delivery and evaluation (see page 26).
- Developing the first tranche of guidance to support implementation of the Inclusion Principles.

Work is now underway to build on these foundations. In 2022/2023, CRC TiME will focus on:

- Implementation of the First Nations Inclusion Strategy, implementing actions to shift from consultation to Inclusion
- Supporting our team and researchers to implement the principles to ensure tailored Inclusion across all future projects. An important step was True Tracks training on Indigenous Intellectual and Cultural Property (ICIP).
- Working with First Nations communities and organisations that express interest in collaborating on shared priorities.
- Sharing findings from the CRC TiME Foundational Project Portfolio in a way that is useful for First Nations communities and organisations.
- Working to encourage and support Indigenous Australians to be part of CRC TiME’s Higher Degree by Research Program.

“*... it is pertinent to all researchers, industry partners, program managers and other partners of CRC TiME to remain mindful of the histories and legacies of research that Indigenous peoples globally, and locally, have endured.”*

A snap-shot review and recommendations to support development of the CRC TiME Indigenous Inclusion Strategy, 2021

“*Ultimately, we want to set up a system that guides First Nations driven research and land use for the transition of mining economies past simple closure and that will outlive CRC TiME itself.”*

**Vanessa Elliott**, CRC TiME Board member

## FIRST NATIONS INCLUSION PRINCIPLES

**In December 2021, the CRC TiME Board endorsed, and included in their Strategic Plan, ten principles that will guide how CRC TiME works with First Nations people, communities and organisations. During 2022/2023, CRC TiME will continue to work with researchers and partners to support implementation of the principles.**

1. First Nations People are the first custodians of land and sea country and Traditional Owners have inherent rights and responsibilities.
2. First Nations People have their own research priorities and interests and are looking to engage with partners that can facilitate social, cultural and economic benefit to their people and communities.
3. First Nations communities and groups have their own protocols and these must be observed, understood, respected and engaged with as an essential, ongoing part of the research process. Engagement should happen via appropriate Indigenous governance structures (and protocols).
4. Opportunities for First Nations led and directed research are created and research enables, facilitates and supports First Nations Inclusion.
5. ‘Truth-telling’ about the (colonial) past including misappropriation and exploitation of Indigenous knowledge and intellectual property.
6. Recognition of Indigenous Ecological Knowledge and Indigenous Cultural and Intellectual Property and First Nations rights to benefit sharing as a result of that knowledge.
7. Research is underpinned by free, prior and informed consent processes and respects the rights of First Nations.
8. First Nations people have the right to control and maintain their culture and heritage.
9. Traditional Owner interests endure in data/samples collected on First Nations Country by researchers.
10. Centrality of equitable partnerships and appreciation for First Nations Peoples concept of time.

*CRC TiME recognises the UN Declaration on the Rights of Indigenous Peoples and Nagoya Protocol.*

“*The importance of having a First Nations Advisory Team involved at the very start of CRC TiME projects will ensure genuine decision making engagement of First Nations peoples and communities in this most important area of mine closure and transitioning into future uses.”*

**Jim Walker**, of the Yiman and Goreng Goreng First Nations peoples of Australia, CRC TiME FNAT Chair

## IN FOCUS: MEET OUR FIRST NATIONS ADVISORY TEAM

In August 2022, CRC TiME held its inaugural First Nations Advisory Team (FNAT) meeting – a significant milestone on its First Nations Inclusion journey.

The FNAT has a critical role, providing advice and support on First Nations engagement, participation and outcomes across all CRC TiME research projects and processes.

Their advice, challenge and input will help ensure our work respects, empowers and supports First Nations.

**Jim Walker**  
CHAIR,  
FIRST NATIONS ADVISORY TEAM



Jim Walker is an Aboriginal man of the Yiman and Goreng Goreng First Nations peoples of Australia. He is a lecturer at the UQ School of Earth and Environmental Sciences, a member of the Science Advisory Committee of Earthwatch Australia and Bush Blitz, Chair of the Murri Mura Aboriginal Corporation and Board of Advice member of the Queensland Aboriginal and Torres Strait Islander Foundation.

**Liz Santo**  
COMMITTEE MEMBER,  
FIRST NATIONS ADVISORY TEAM



Liz Santo is a proud Gudjala/Waanyi woman from northwest Queensland and to the banks of the Lawn Hill George where her grandmothers were born. Liz has a background in native title, Commonwealth Government-Indigenous business procurement, and has represented Indigenous businesses in resource, private and government sectors on a global platform.

**Dr Bep Uink**  
COMMITTEE MEMBER,  
FIRST NATIONS ADVISORY TEAM



Dr Bep Uink (Master of Applied Psychology (Clinical), PhD) is a Noongar woman from Perth, WA. She is a Senior Research Fellow at Kulbardi Aboriginal Centre, Murdoch University, where she co-leads the Aboriginal Culture, Education and Equity (ACEE) Lab.

**Gerry Turpin**  
COMMITTEE MEMBER,  
FIRST NATIONS ADVISORY TEAM



Gerry Turpin is an Mbabaram Traditional Owner from north Queensland with familial links to Wadjanbarra Yidinji, Nadjon and Kuku Thaypan. He is an Indigenous Ethnobotanist with the Australian Tropical Herbarium, Department of Science (DES), an Adjunct Senior Research Fellow at James Cook University and has worked for state government for 30 years.

**John Briggs**  
COMMITTEE MEMBER,  
FIRST NATIONS ADVISORY TEAM



John is a proud Yorta Yorta man from Cummrugunja, part of the Barmah Forest on the Murray River border region between Victoria and New South Wales. He is one of three original founders of Intract Australia Pty Ltd, a successful standalone Indigenous construction company.

We are delighted these strong, experienced First Nations leaders have chosen to work with CRC TiME.

Read more about the members of our First Nations Advisory Team:



# A SHARED PATH TO IMPACT

## Achieving our collective goal of transforming mine closure and post-mine outcomes requires a clear path connecting research to impact.

Our co-design approach and unique partnership provides a strong basis for ensuring research has practical and clear application. However, further clarity was needed to understand the specific actions, stakeholders and systems to facilitate change – and how to influence these.

Starting in November 2021, CRC TiME engaged across its partnership to define a pathway to impact. It included working to define objectives, clarify what CRC TiME can reasonably influence and identify activities and outputs to support.

This led to the *Impact Framework: Outcomes and Path to Achieving Impact*, released in March 2022. Guided by five Impact Objectives, the framework clarifies success in the short and longer-term, as well as the research translation and adoption activities that will contribute to knowledge, skills, motivation and behavioural change.

### DEEPENING ENGAGEMENT TO SUPPORT CO-DESIGN AND COLLABORATION

More than ten Regional Hub and College meetings were held, with input directly influencing project identification, design and delivery.

Informed by stakeholder engagement planning, numerous initiative and project based meetings were also held between researchers and interested end user partners to facilitate co-design in the project development process.

Through our innovative Regional Hub model, outreach in key focus mining regions continued, including visits to Karratha, Emerald, Northern Territory, Latrobe Valley and south west Western Australia. A Regional Hub Roundtable enabled Regional Hub Secretariats to share their experiences, build connections and engage across regions in transition.

### EXTENDING OUR IMPACT

We are gradually expanding our international networks to support the global community of mine closure practitioners. Highlights in 2021/2022 included our participation in the online Australian Centre for Geomechanics 2021 Mine Closure Conference, hosted by Mongolia, and joining the program committee for the 2022 Mine Closure Conference. This led to a strong presence and platform to share foundational project findings at the October 2022 event in Brisbane.

Our relationship with the International Council on Mining and Metals (ICMM) continues and led to Foundational Project 1.3 directly contributing to an Intergovernmental Forum (IGF) on Mining, Minerals, Metals and Sustainable Development briefing note on land relinquishments.

### Work is underway to implement the Impact Framework, with 2022/2023 priorities including:

- Delivering the Monitoring and Evaluation Framework
- Working to support project-specific adoption and translation activities, particularly on our flagship projects
- Working with our partners to promote, share and embed relevant foundational portfolio findings to improve guidance, policy, methodology and vision

## IMPACT OBJECTIVES

1

Mines are closed in ways that deliver social, economic and environmental value.

3

Mine closure business solutions drive new commercial and/or regional closure opportunities.

2

Closed sites are repurposed to enable a faster transition to diverse and resilient local economies.

4

Continued investment in Australian resources.

5

Policy, decision and management systems reduce risks.

## IN FOCUS: DIGGING DEEPER TO DRIVE CHANGE

### TAILORING INFORMATION TO DRIVE KNOWLEDGE SHARING, SKILLS AND MOTIVATION

We aim to foster dialogue and collaboration between stakeholder groups.

However, geographic distance, competing priorities and the need to build momentum among diverse cohorts to drive impact, all provide challenges to sharing information and collaboration. During the year, we turned these challenges into opportunities through a tailored series of online events to foster connections and knowledge.

### ONLINE WEBINAR SERIES: DIG DEEPER

Over the year, CRC TiME held five Dig Deeper webinars, providing informative, inspiring and concise presentations delivered by project teams on their foundational project research. Eight webinars have now been held in total.

More than 500 people registered for the series.

The webinars were recorded for future reference by attendees, partners and for others with an interest in mine closure and post-mine transitions.

## 2021 PARTNER FORUM: CREATING CONNECTIONS

More than 180 people participated in CRC TiME's first Partner Forum '#CreatingConnections', held as an online event over three days in November 2021. The #CreatingConnections theme reflected the potential for new connections to be made across CRC TiME's diverse partnership.

Representatives heard from thought leaders, leading researchers, global and national experts, senior government leaders as well as community and First Nations organisations about new directions in mine closure, innovation, diversification of mining economies and regional closure planning. These included Andy Lloyd, Chair, Jabiru Kabolmakmen and Kaylene Gulich, Chief Executive Officer, Western Australian Treasury Corporation.

Workshops throughout facilitated direct participant input into research projects.



## IN FOCUS: REGIONAL ENGAGEMENT

**Maintaining strong connections to the people and communities in focus mining regions is – and must always be – central to our work. Respect and understanding of the local context, particularly the priorities and aspirations of each region, is essential to this.**

During 2021/2022, our team worked to build these connections through Regional Hubs. Generously hosted by local regional and community development organisations, the Hubs provide a central point of engagement between CRC TiME and local organisations and groups in focus regions.

We were grateful to have Regional Hubs in the Pilbara, Western Australia, the Latrobe Valley, Victoria, Bowen Basin, Queensland, south west Western Australia and Gove, the Northern Territory during 2021/2022.<sup>1</sup>

While the COVID-19 pandemic affected travel during our first year, our leaders, staff and researchers were able to visit some host regions in 2021/2022, including Emerald in Queensland, Collie and Karratha in Western Australia, and the Northern Territory. Regional visits provide rich insights into local challenges and opportunities, and reinforce the need for our research to have real impact.

Online engagement continued, with virtual meetings held with representatives in the Latrobe Valley, Bowen Basin and the Northern Territory.

Our 2021 Partner Forum included a ‘Regional Hub Story Sharing’, providing a platform for five Hub Chairs to discuss local barriers and opportunities.

A Regional Hub Roundtable, attended by Hub Secretariats, was also convened to discuss challenges related to the establishment of Regional Hubs and ideas for mutual support in the future. The opportunity for CRC TiME to facilitate regular sharing between regions is being explored.

Project researchers are keen to engage with our communities and the Regional Hubs have provided a valuable vehicle for knowledge sharing and data collection. Several project leaders have provided updates on their foundational projects at Regional Hub meetings.

In 2022/2023, CRC TiME will work with regional representatives to understand how it can best support ongoing, respectful and tailored connections with focus mining regions.



**IN FOCUS:** In June 2022, the CRC TiME Board visited the Western Australian town of Collie as the region progresses its transition away from coal mining. Visits to Lake Kepwari, the Motorplex complex and Cannaponics highlighted value in re-purposing of mining assets and economic diversification, while briefings and conversations with the Shire of Collie, WA Government and Yancoal representatives demonstrated the commitment to collaboration and implementation of a just transition.

## IN FOCUS: ‘REGIONS IN TRANSITION’ INITIATIVE WORKSHOPS IN BRISBANE AND MORWELL

**To develop our next phase of projects, CRC TiME held workshops with focus regions via our Hub network, our partner Colleges and with specialists on thematic areas.**

Workshops in Brisbane and Morwell brought together representatives from regional development organisations, industry, state and local governments and researchers.

In Brisbane, closure preparedness, collaborative drivers underpinning successful post-mine transitions, and tools to enable a structured approach to incorporating stakeholder perspectives were participant priorities. Tools to measure socio-economic readiness for closure and economic resilience were also sought.

To help meet these needs, the *Identifying future economic development pathways for mining regions and increasing transition capacity* project was developed.

In Morwell, participants said CRC TiME could help guide further economic transition and develop new dialogue tools. While many industry-specific economic studies had been undertaken, these were not always integrated. As a result, there is a need to synthesise past work to clarify the current state and the lessons learned to date.

With this advice as a key input, CRC TiME has worked with Federation University and other partners to develop the *Collaborative planning for post-mining development in the Latrobe Valley* project, which will include an options feasibility assessment from a stakeholder perspective.

**“It’s great to see the co-design process in action through these workshops: bringing partners together, listening to their needs and engaging in an interactive, co-design process to develop the next generation of projects for CRC TiME.”**

**Dr Tom Measham**, Research Director, CRC TiME

**“The Bowen Basin Regional Hub has been a part of the journey since the inception of CRC TiME. Importantly, we are pleased to be given a voice at the table in order to bring regional context and perspective to CRC TiME itself, and the work it and its partners do. Effective applied research that leads to economic solutions beyond compliance is fundamentally critical in delivering sustainable communities for those regions that have mining as a key economic driver.”**

**Peter Dowling**, CEO, Central Highlands Development Corporation  
Bowen Basin Regional Hub

**“We’re listening and acting on what we hear. This project provides a genuine opportunity for collaborative planning between industry, government, Traditional Owners and the broader community for future land uses for the mined lands of the Latrobe Valley. Whilst not being prescriptive, it will assess feasible options across a range of future development opportunities, for the greatest benefit to the Valley, considering social, cultural, economic and environmental perspectives. The project invites key stakeholders to consider novel private-public partnerships and planning implications of the preferred options. This directly addresses a current and pressing need in the region.”**

**Dr Jessica Reeves**, Federation University Australia

<sup>1</sup> The Gove Hub is no longer operating due to other local priorities.

# ABOUT US

## GOVERNANCE

The Board includes six non-executive directors and an independent Chair. As well as being a skills based Board, each Director has a broad depth of experience and is nominated by one of six stakeholder groups our participants belong to (known as Colleges in the CRC TiME constitution).

## MEET OUR BOARD MEMBERS

**Dr Bruce Kelley**  
CHAIR



As the former Global Head of Environment for Rio Tinto, Bruce is a respected global authority in his field and is involved with numerous industry and university working groups, panels and advisory boards.

**Dr Paul Vogel**  
DEPUTY CHAIR  
(GOVERNMENT COLLEGE)



Paul is the former Chairperson of Western Australia's EPA and was also the inaugural Chief Executive and Chairman of the South Australian Environmental Protection Authority (EPA). Prior to that Paul held senior executive positions in the WA Departments of the Premier and Cabinet and Environmental Protection Authority (EPA).

**Professor Christine Charles**  
DIRECTOR  
(REGIONS AND COMMUNITY COLLEGE)



Christine is an independent chair and director in mining and energy and has held a variety of senior positions with NGOs, the community sector, academia and in both the private and public sectors.

**Tony van Merwyk**  
DIRECTOR  
(METS COLLEGE)



As a former partner of Herbert Smith Freehills, Tony was involved with all aspects of environment, planning and hospitality law.

**Vanessa Elliott**  
DIRECTOR  
(FIRST NATIONS COLLEGE)



Vanessa is a Jaru woman from the Kimberley region of Western Australia with more than 20 years' experience working in strategic leadership roles in economic development, community services, regional and remote project management, town planning, energy, mining and service commissioning.

**Gavin Price**  
DIRECTOR  
(MINING COLLEGE)



Gavin is currently the Head of Environment for BHP's Minerals Australia Regions. He has worked across the minerals and processing sectors for over 30 years and has strong operational experience in research science application in industry.

**Emeritus Professor David Brereton**  
DIRECTOR  
(RESEARCH COLLEGE)



As Deputy Director of the Sustainable Minerals Institute, David had responsibility for driving cross-disciplinary research addressing technical, environmental and social dimensions of mining and sustainability.

Find out more about our Board members:



## OUR BOARD COMMITTEES

The four Board committees, each chaired by a Board Director, are Audit, Risk and Finance Committee, Remunerations and Nominations Committee, Impact Committee and Research Committee.

Our Research and Impact Committees support our aim to deliver high quality and collaborative research that is applicable, practical and impactful. By including representatives from each partner College, the committees are well-positioned to provide advice on proposals prior to Board consideration.

### RESEARCH COMMITTEE

**Emeritus Professor David Brereton**  
(CHAIR)

**Dr Paul Vogel**  
(CRC TIME DIRECTOR)

**Terry Rae Mackay**  
(VICTORIA GOVERNMENT/  
FEDERATION UNIVERSITY)

**Andrew Beer**  
(UNISA)

**Mel Stutsel**  
(RIO TINTO)

**Professor Stephen Van Leeuwen**  
(CURTIN)

**Ben Forsyth**  
(3RZ CONTRACTING)

### IMPACT COMMITTEE

**Professor Christine Charles**  
(CHAIR)

**Vanessa Elliott**  
(CRC TIME DIRECTOR)

**Emeritus Professor David Brereton**  
(CRC TIME DIRECTOR)

**Terry Hill**  
(PILBARA DEVELOPMENT COMMISSION)

**Piers Gillespie**  
(SOUTH AUSTRALIAN GOVERNMENT)

**Jordy Bowman**  
(BOWMAN CONSULTING,  
FORMERLY DEAL)

## OUR ORGANISATIONAL STRUCTURE

In June 2022, the Board endorsed a new organisational structure to position CRC TiME for our next phase of operations. The new structure, which came into effect in July 2022, balances the focus on research and impact with a new External Relations and Impact Director role now sitting alongside the Research Director.<sup>2</sup>

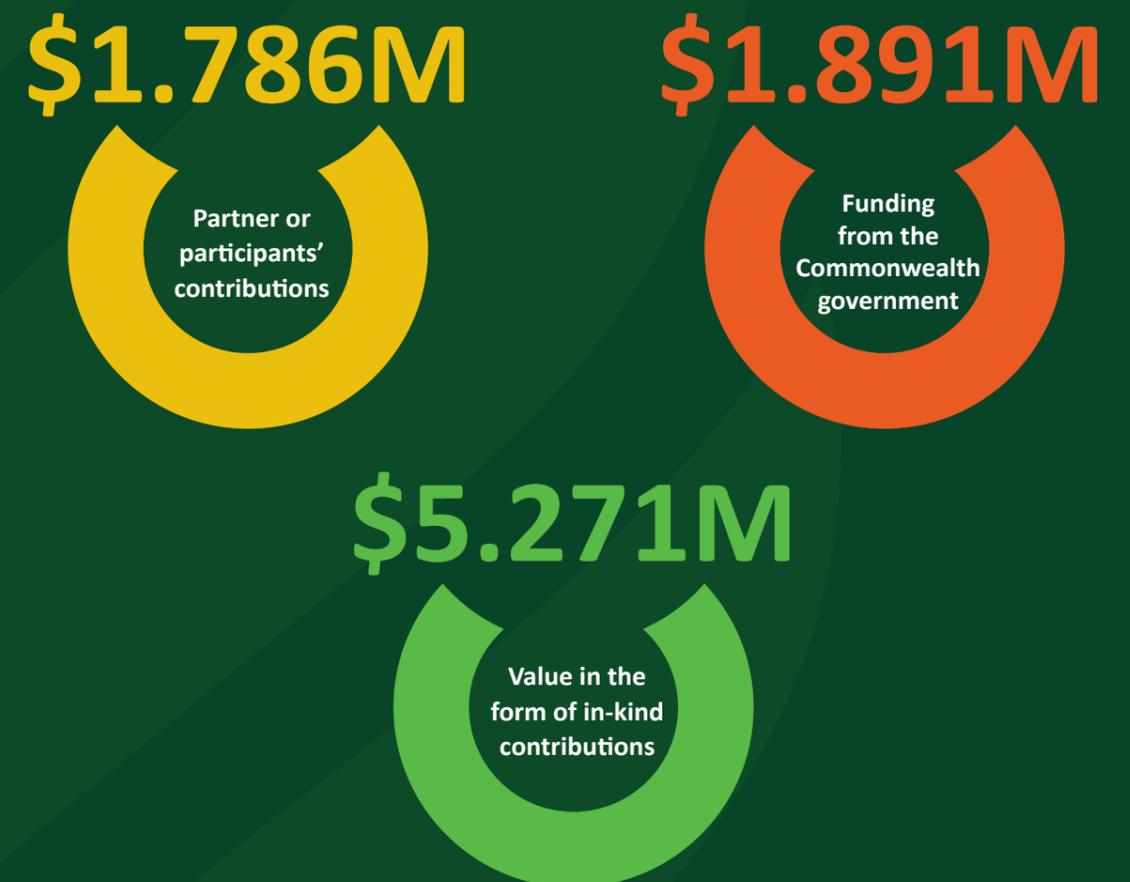


<sup>2</sup> Current as at 17 November 2022.

## FUNDING

CRC TiME continues to receive financial and in-kind support as committed by our partners.

In the 2021/2022 financial year, the following funding was received:



At the end of the 2021/2022 financial year, CRC TiME is well positioned to fund upcoming programs and commitments, with cash on hand of \$10.1 million.

During the year, CRC TiME further developed its position as a valued project delivery agent, attracting additional contributions totalling more than \$2.5 million from new or existing partners to CRC TiME projects.

The audited financial statements for 2021/2022 are available at [www.crctime.com.au](http://www.crctime.com.au).





[crctime.com.au](http://crctime.com.au)