



**ANNUAL
REPORT 2021**



Australian Government
Department of Industry, Science,
Energy and Resources

AusIndustry
Cooperative Research
Centres Program

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The Cooperative Research Centre for Transformations in Mining Economies (CRC TiME) brings together over 70 leading mining and mining service companies, regional development organisations, State and Commonwealth governments, research partners, community and indigenous groups. Our unique coalition brings scale and coordinated investment into innovative research that addresses the complex challenges underpinning mine closure, relinquishment and valued post-mine transitions.

CRC TiME receives grant funding from the Australian Government through the Cooperative Research Centre Program.

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.

FROM THE CHAIR



It is my privilege to present the first Annual Report of the CRC for Transformations in Mining Economies (CRC TiME). Within just 15 short months, CRC TiME has grown from whiteboard concept to operational reality. The organisation now has a well experienced and diverse Board providing strong governance and direction, a highly capable and driven management team, well respected program and project teams and a world class research base.

The sheer complexity of the mine closure and post-mining sector has in turn led to a very large CRC TiME partner base. Partners are taking the opportunity to fully engage and drive projects that will ultimately lead to impactful outcomes and positive change. This CRC, more than most, will only succeed through an ability to see beyond 'business as usual' and extensive collaboration and engagement from Company Boardrooms to outback communities.

That so much has been achieved in just one year against a backdrop of COVID and the restrictions it continues to impose, is a testimony to the hard work of so many working in a virtual reality.

In addition to founding the business, a comprehensive set of foundational projects was established, many of which are now approaching completion. These serve to cover knowledge and process gaps, building the structural foundation on which the CRC's more substantive projects are just starting to emerge. Alignment to the organisation's strategic direction is a Board priority, ensuring outcomes bring necessary and positive change to the industry in the broadest sense.

I am very grateful to all who are giving so freely of their time, experience and expertise. I also thank them for their support, patience and trust as we transition the CRC from concept to reality. There is no doubting the complexity of the task we face. But so many are prepared to rise to the challenge and help set the CRC on the path to facilitating much needed transformation within the mining industry and the diverse stakeholder base on which it so vitally depends and impacts.

Dr Bruce Kelley
CHAIR

CEO OVERVIEW



As mines develop, they build infrastructure, create communities and radically change the landscape. Through the formation of CRC TiME, Australia is leading the world in recognising the critical importance of ensuring when mines close, they can be relinquished and transitioned back to communities with infrastructure and land available for next use.

CRC TiME is the culmination of years of hard work and support from many people across our partner base and beyond, all dedicated to making real-step change in mine closure and post-mine transitions that will deliver enduring value. Australia's unique, government funded Cooperative Research Centre Program, has allowed us to bring shared financial and human resources together to transform this multi-layered, socially, environmentally and technically complex mine closure and post-mining sector.

Even prior to our incorporation in April 2020, CRC TiME was already playing a key facilitating role in the 'mine closure and beyond' sector, by providing a collaborative space for mining companies, communities, First Nations representatives, regulators, and suppliers to work together on innovative solutions.

Over the past year, our focus was on establishing our partnership, building governance and business systems that will support future activity of the CRC, commencing our research program through foundational research and shared prioritisation and building platforms for effective engagement and

translation. Highlights include the establishment of our Board and Board Committees, execution of 75 Participant Agreements, launch of our online Project Management system and partner interface 'Connect' Portal, commissioning of 22 Foundation Projects worth \$4.9M, plus three additional projects and engagement across partners and regional hubs that saw over 1000 people contributing to advancing CRC TiME.

With \$29.5M Commonwealth Government funding and \$100M of cash and 'in-kind' investment support from our partners, we have established a fully operational research centre dedicating to delivering on key components in the National Resources Statement and transforming Australia's regions post-mining.

As we transition into the operational phase of our organisation, we are well positioned to begin the co-design and delivery of research, translation and adoption activities that will connect our unique partnership and deliver outcomes for mine closure and post-mine economies, with three new projects started and a number of concepts moving through our pipeline.

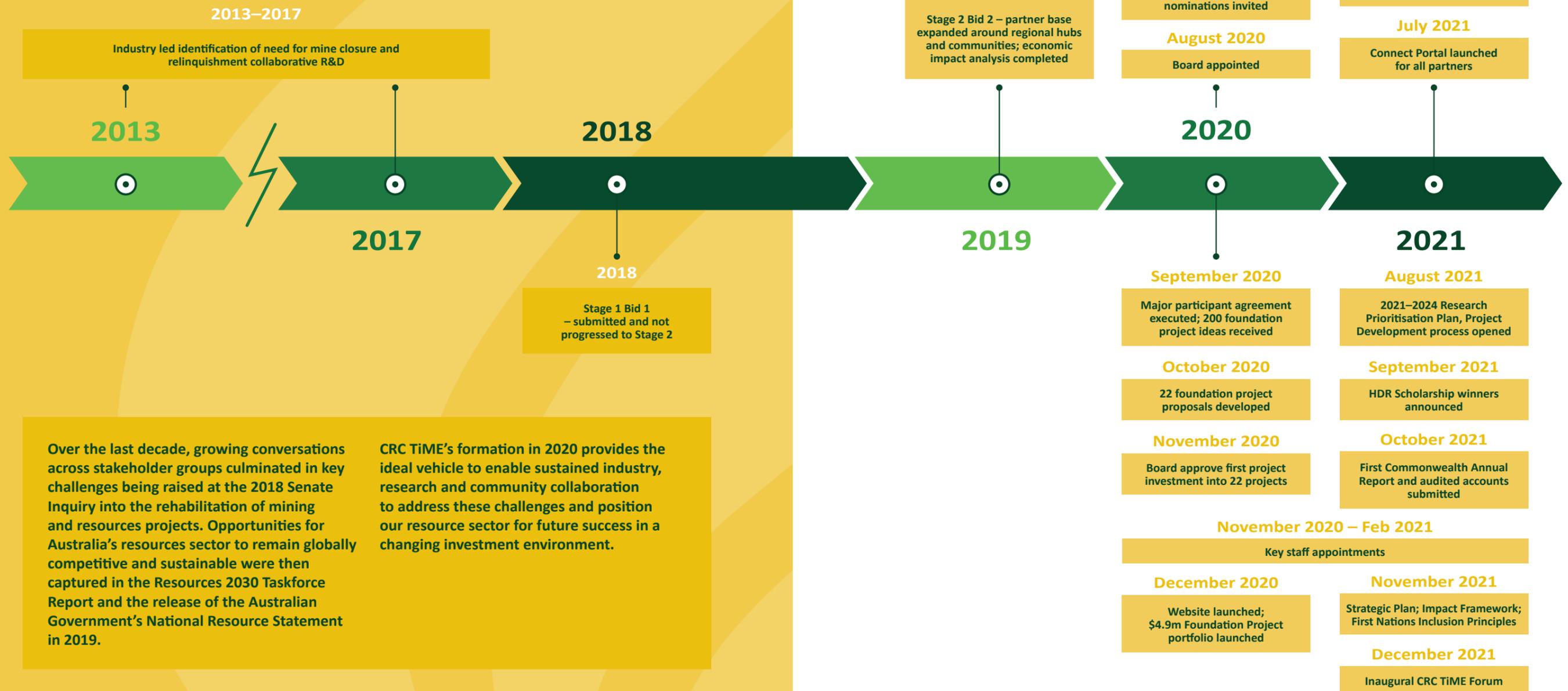
Central to creating transformative change is the education and development of our future leaders for driving post-mine economies. We were proud to announce our PhD top-up scholarship recipients and are looking forward to welcoming many more students to complete their industry-defined PhDs whilst being embedded within a CRC partner organisation during their studies. Their research will contribute to our strategic research initiatives outlined in the [Research Prioritisation Plan](#), providing a clear context to enable student-based research to contribute to real change in the industry, whilst creating opportunities to connect with thought leaders from across CRC TiME's unique partner base.

Finally, I would like to thank the considerable efforts of our small team as well as the many hours our partners have spent on building our truly unique partnership model. We look forward to the coming year of delivering research backed solutions to dramatically transform mine closure outcomes, confident we have laid the groundwork in our first year with systems and governance structures, partners and communications, regional hubs and the backing of the Commonwealth Government.

Dr Guy Boggs
CHIEF EXECUTIVE OFFICER



OUR JOURNEY



Over the last decade, growing conversations across stakeholder groups culminated in key challenges being raised at the 2018 Senate Inquiry into the rehabilitation of mining and resources projects. Opportunities for Australia's resources sector to remain globally competitive and sustainable were then captured in the Resources 2030 Taskforce Report and the release of the Australian Government's National Resource Statement in 2019.

CRC TiME's formation in 2020 provides the ideal vehicle to enable sustained industry, research and community collaboration to address these challenges and position our resource sector for future success in a changing investment environment.

STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT

2020/2021 SNAPSHOT

 **25**
Projects approved

 **\$6.4M+**
Research

 **74**
Participants

 **8**
Hub workshops

 **1,000+**
Workshop participants

“As a regional development organisation within a resource region it’s imperative that we take a broad view of our economy. Focusing on maximising the opportunities now and positioning for the future. With CRC TiME we have a vehicle that has the potential to offer in-region outcomes for both today and tomorrow.”

Peter Dowling,
Central Highlands Development Corporation

“Since it began, CRC TiME has developed significant momentum in engagement with industry.”

Rob Brown, Iluka

 **200+**
Research ideas submitted

 **90+**
Full time equivalent researchers

 **3**
Higher Degree by Research students

 **250**
Personnel in projects

“It has been exciting to be involved with the CRC TiME, as it establishes its early projects and priorities. The strong focus on ensuring impact and evaluating projects, combined with a dynamic CEO and team, and a strongly engaged Board, will ensure excellent outcomes from the CRC and its partners.”

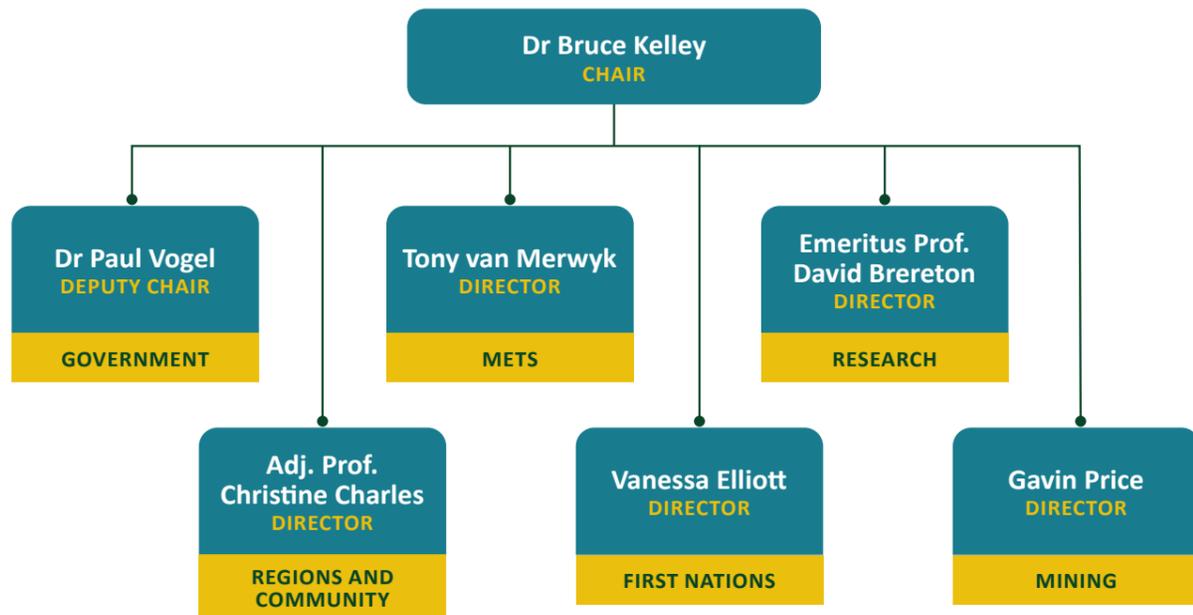
Terry Hill,
Pilbara Development Commission

“CRC TiME has come together incredibly well through the inventiveness of management, the uniqueness of their research and funding models and dealing with regions across the nation. The speed the team has moved forward is very impressive.”

Rae Mackay,
Mine Land Rehabilitation Authority

OUR GOVERNANCE

CRC TiME has established a robust governance system, led by our Board of Directors. Made up of six non-executive directors and an independent Chair, each director has broad depth of experience in at least one of the six stakeholder groups or 'colleges'.



The four Board committees, each chaired by a Board Director, are:

- Audit Risk and Finance Committee
- Remunerations and Nominations Committee
- Impact Committee
- Research Committee.

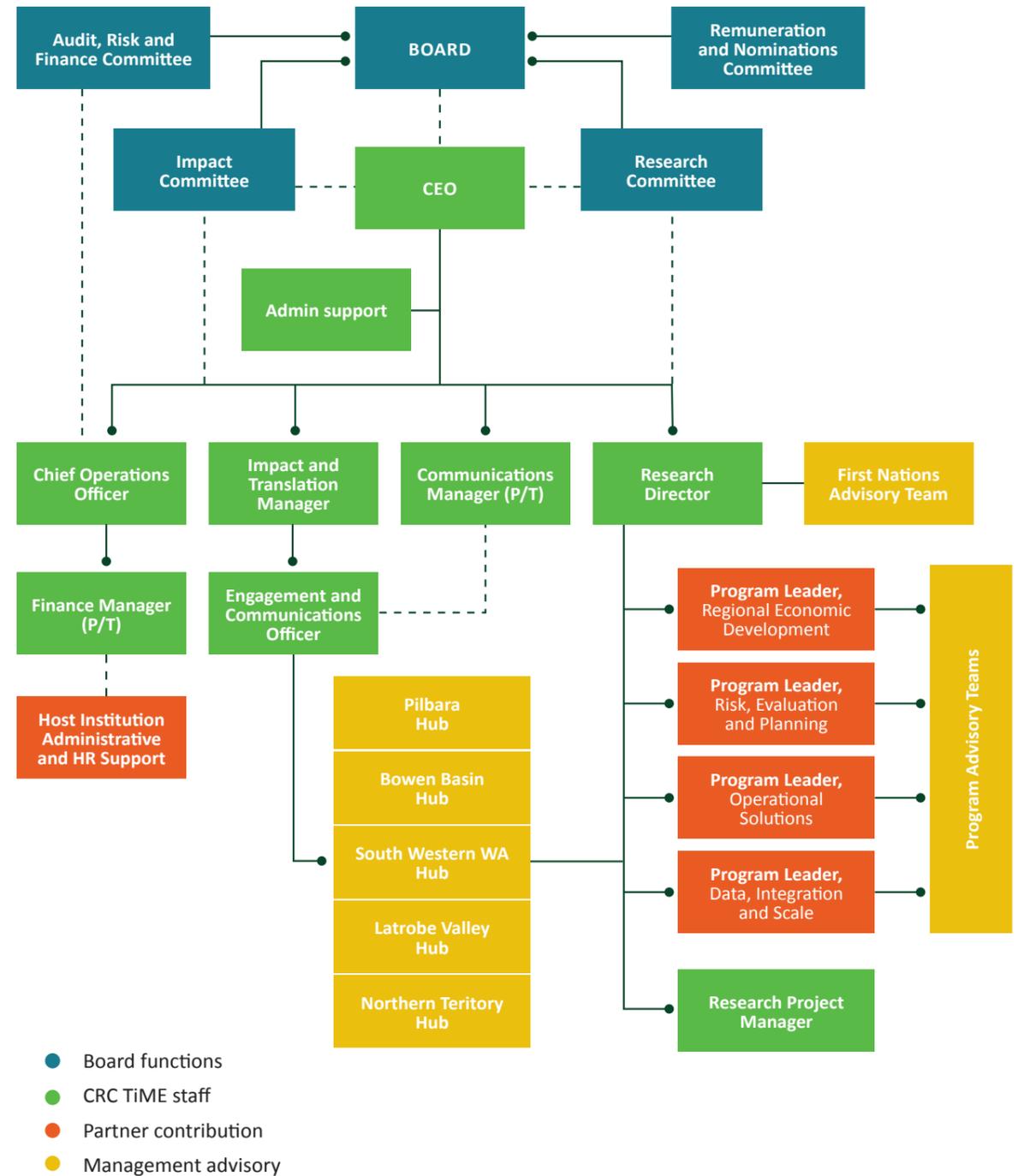
CRC TiME's establishment of a research and impact committee is unique and demonstrates our commitment to delivering high quality and collaborative research, outputs that are positioned for use by our end users and delivering translation and adoption activities that achieve impact.

Both the Impact and Research Committees have representatives from each of our colleges and all projects are reviewed through these two committees prior to making their feedback to management and recommendations to the Board.

Each of CRC TiME's four Research Program areas is guided by a Program Advisory Team. Made up of key stakeholders, the Program Advisory teams help management in the design and assessment of projects and ensure the CRC is responding to the needs of its partners. They also provide a vehicle for management to share its strategic planning with key stakeholder groups.

CRC TiME is currently establishing a First Nations Advisory Team to ensure the voice of First Nations peoples are reflected in projects and that co-development is at the heart of all project proposals.

CRC TiME Organisation Chart



- Board functions
- CRC TiME staff
- Partner contribution
- Management advisory

OUR FUNDING

CRC TiME is on track to deliver the cash and staff in-kind support as promised by its partners.

In the first year of operations, over \$450k of new funds was secured, on top of the \$129.5m initial funding commitments (cash and in-kind), with a further \$1.1m of new funding for projects not yet approved. CRC TiME is well placed to attract new funding as it establishes itself both nationally and internationally as the leading research organisation on mine closure. The audited financial statements for 2020–21 can be found at www.crctime.com.au.

\$70 million in in-kind support

\$60 million in cash



- Community and Regions
- Government
- Mining companies
- Research
- METS sector
- CRC grant

OUR RESEARCH

Within our first six months, we fully contracted a \$4.9M portfolio of 22 Foundation Projects with the majority of projects due for completion in the 2021 calendar year.

An iterative consultation process was undertaken to identify projects that would:

- build networks within and between researcher and end user partners
- capture the state of the art in different areas – from multiple perspectives
- identify research gaps where innovation is required to deliver solutions that enable relinquishment and deliver positive post-mine legacies

With our ‘end user driven’ process for CRC TiME projects, we saw a commitment made to contribute 50% of year one industry contributions to fund the Foundation Project portfolio. Over 1000 people participated in workshops with 200 ideas submitted to inform the development of the Foundation Projects. Our projects have involved more than 250 staff (including over 90 researchers) from 59 partners through our integrated project delivery model. Collaboration through project meetings, sector, and theme-based focus groups and through our emerging regional hubs extends this reach to key stakeholders.

Each research project sits under one of four Research Programs, providing further opportunity at the program level, for cross-pollination of ideas and resources.

In addition to the Foundation Projects, three new projects were approved during the year. These projects were considered time critical by our partners and differ from Foundation Projects as they represent on-ground studies at single sites.

The Foundation Projects are informing and contributing to the planning of longer term CRC TiME research investment which is detailed in our [Research Prioritisation Plan](#), developed through the foundational period of the CRC and released in August 2021. The [Research Prioritisation Plan](#) sets out our research priorities for the next three years of activity and identifies a set of eight priorities, developed consultatively with CRC TiME partners, which are key to sustainably transforming regions post-mining. Each of these priorities has a problem statement, goals, objectives and priority research questions linking through to Commonwealth milestones and desired outputs. They will be explored through research projects that sit within the four program areas.

To support the development of new project ideas, a robust project idea submission process has been developed based on the research framework and priorities set out in the Research Prioritisation Plan. Project ideas are submitted through a purpose built, integrated, online system accessible to all partners through a portal on the CRC TiME website. The Turnkey Project Reporting software is tailored to manage projects from the ideas hurdling process, right through to execution, progress reporting and milestone tracking. The system supports a project development pipeline that will enhance collaboration, co-design and effective business case development in all CRC TiME projects.

CASE STUDIES

Mapping the regulation of mine closure

RESEARCH PROGRAM 1: Regional Economic Development

- **PROJECT LEADER:** Professor Alex Gardner
- **TIMEFRAME:** September 2020 to March 2022
- **TOTAL PROJECT VALUE:** \$344,373
Cash: \$150,000 In-kind: \$194,373

I really appreciate the collaborative lens CRC TIME is applying to its work and the focus on the bigger picture. Mine closure for communities like those in the Latrobe Valley is about so much more than technical rehabilitation of land. My engagement with the CRC has been very positive so far and I can see benefits for our own policy work coming out of the program areas."

Linda Bibby, Director Policy & Legislation, Resources, Rural and Regional Victoria

The multiplicity of policy frameworks and regulations at national, state, and local scales is complex, inconsistent, and sometimes incommensurable and can work against the delivery of positive post-mining outcomes for mining regions. Working towards long-term regulatory reform is one of the goals of CRC TIME and the foundational project on *Mapping the Regulation of Mine Closure* is playing an important role in taking stock of the current regulatory environment in different states. The project team has worked closely with its project steering committee comprising representatives from industry, government, regional development organisations, and an Aboriginal corporation who are contributing to the selection of case studies and issues addressed in project reports. The project team has presented to regional hubs and law makers, as well as posting their findings on social media.

One of the findings of the project is that the balance between legally enforceable 'hard law' and more flexible guidelines or 'soft law' varies between contexts. Some states have significantly more detailed closure and relinquishment processes established in legislation. By contrast, others place greater emphasis on guidelines and convention. The certainty that is generated from a detailed and legally enforceable

process can provide greater certainty for industry. At the same time, a more flexible set of standards and guidelines facilitates faster evolution of best practice to keep pace with social expectations and developments in scientific understanding. Working closely with all CRC partners towards the most effective combination of enforceable and flexible governance is a key focus over the life of the CRC and beyond.

PROJECT PARTNERS

BHP; Rio Tinto Services Limited; Murdoch University; University of Western Australia; Central Highlands Development Commission, Queensland; Department of Jobs, Precincts and Regions, Victorian Government; Department of Resources, Queensland Government; Department of Environment and Science, Queensland Government; Department of Water and Environmental Regulation, Western Australian Government; Department of Mines, Industry Regulation and Safety, West Australian Government; Department of Environment, Land, Water and Planning, Victorian Government; Highlands Environmental; Mine Land Rehabilitation Authority, Victoria; Pilbara Development Commission; Planning 4 Sustainable Development Pty Ltd; Yinhawangka Aboriginal Corporation; Ngadju Conservation Aboriginal Corporation; Roy Hill Iron Ore.

Understanding stakeholder values in post-mining economies

RESEARCH PROGRAM 2: Risk, Evaluation & Planning

- **PROJECT LEADER:** Dr. Marcus Barber
- **TIMEFRAME:** November 2020 to April 2022
- **TOTAL PROJECT VALUE:** \$255,017
Cash: \$150,000 In-kind: \$105,017



The *Understanding stakeholder values in post-mining economies* project is developing a customised approach to discuss what value means to diverse stakeholders and how values change over time. In its first year of operation, the project worked closely with a project steering group comprising a diverse set of CRC TIME partners to identify the challenges and opportunities when it comes to values. Based on these interactions, the project team developed a comprehensive literature review on the topic of values and their role in post-mining transitions. The literature review has considered a range of factors including financial, tangible and intangible, measurable and non-measurable as well as ways to think about possible complementarity and trade-offs between values and systems of values held by stakeholders. Due to the importance of value to multiple dimensions of transitions to post-mining economies, the project provides crucial input into projects across the CRC portfolio and in particular, those relating to managing closure and post-mining land use options. With the literature review complete, the team are now conducting interviews and workshops with stakeholders in case studies.

"If the Values Project helps Iluka Resources to make better decisions earlier, we will achieve better outcomes."

Rob Brown, Closure Planning Manager, Iluka Resources

PROJECT PARTNERS

BHP; CSIRO; Curtin University; Rio Tinto Services Limited; University of Queensland; University of Western Australia; Department of Water and Environmental Regulation, Western Australian Government; Developing East Arnhem Ltd; Iluka Resources Limited; Okane; Pilbara Development Commission; Golder Associates Pty. Ltd.; The Chamber of Minerals and Energy of Western Australia Inc; Pilbara Development Commission; Newmont Mining Services.

CASE STUDIES (cont.)

Barriers to reducing AMD risk

**RESEARCH PROGRAM 3:
Operational Solutions**

- **PROJECT LEADER:** Professor Carolyn Oldham
- **TIMEFRAME:** February 2021 to October 2021
- **TOTAL PROJECT VALUE:** \$205,765
Cash: \$100,000 In-kind: \$105,765



Acid and metalliferous drainage (AMD) is a major issue for mine closure and land relinquishment and creates significant risks and consequences for industry and for post-mine land uses. This project builds on many years of past research and sets out how CRC TiME differentiates itself from previous AMD initiatives to enable transformational change for the sector. A key collaborative component of this project was a set of global online workshops which brought together 90 participants from 18 countries. The proceedings from the workshops were distributed to a network of 220 professionals from around the world.

The project team worked closely with CRC partners to deliver a concise overview and expert analysis of the past and current global activities on AMD and identifies the potential future CRC TiME multi-disciplinary research agenda for the next first 5 years to drive transformational change around AMD.

The collaboration across the foundational projects between industry, academia and government has been fantastic, providing a vehicle for knowledge sharing, professional learning and research that could not have been achieved otherwise. The outcomes have informed the definition of priorities of the ongoing research program, with some promising innovations already being progressed. I am excited about MMG's ongoing participation in the CRC."

Jon Crosbie, Group Manager – Closure and Remediation MMG Limited

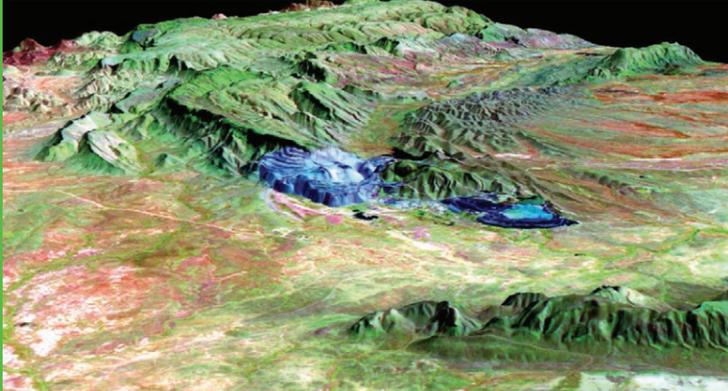
PROJECT PARTNERS

BHP; CSIRO; Curtin University; Flinders University; Fortescue Metals Group Ltd; MMG Australia Limited; Rio Tinto Services Limited; South32 Limited; University of Queensland; University of Western Australia; Department of Natural Resources, Mines and Energy, Queensland Government; Department of Water and Environmental Regulation, Western Australian Government; Sustainable Solutions Global; Golder Associates Pty. Ltd.

Defining our path to impact

**RESEARCH PROGRAM 4:
Data Integration, Forecasting and Scale**

- **PROJECT LEADER:** Dr Tira Foran
- **TIMEFRAME:** November 2020 to June 2021
- **TOTAL PROJECT VALUE:** \$58,273
Cash: \$46,692 In-kind: \$11,581



This project developed a participatory approach to formulating a working model for CRC TiME to achieve impact through multi-stakeholder collaboration. Realising impact through research over a sustained period is underpinned by a shared path to impact that is clearly articulated.

A series of three workshops were conducted with 34 partners from CRC TiME's six stakeholder groups. The first workshop focused on factors in the system context inhibiting the integration of mine closure planning with post-mining regional development as well as the intermediate and long-term outcomes which they considered important for CRC TiME. This was followed up by a second workshop to explore strategic actions in greater detail, focusing on what a regional planning tool should look like and what changes to mine closure and regional planning processes are required. A final workshop with the CRC Research Committee, the Impact Committee and Program Leaders reflected on the outputs of the previous workshops and considered the practical elements of a monitoring, evaluation and learning framework. Drawing on the insights from these

The workshops were really insightful with a wide range of people coming together with broad perspectives, providing a good starting point for designing the impact approach."

Rae Mackay, Chair – Mine Land Rehabilitation Authority, Victoria

workshops, the project formulated an impact pathway with a focus on the Regional Economic Development Program. The impact pathway emphasised the importance of pursuing interdisciplinary and transdisciplinary approaches and the potential for projects in the program to realise compelling synergies with transformative outcomes.

PROJECT PARTNERS

CSIRO, with workshop participation from 34 representatives across partners.

CRC TiME 2020/2021 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
		1.4	Understanding local readiness for closure – initiating a multi-stakeholder participatory approach
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
		3.8	Increasing bio-available plant nutrients in mineral waste
		3.9	Climate change, vegetation and risk for rehabilitation success
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	COMMONWEALTH MILESTONE OUTPUTS	OUTCOMES SHORT TERM	OUTCOMES MEDIUM TERM	OUTCOMES LONG TERM
<ul style="list-style-type: none"> Articulating regulatory reform for relinquishment Co-developing post-mining land use options and decision tools Understanding the nature, value and readiness of regions to transition Design and implement regional planning Assessing cumulative social, economic and environmental impact 	<p>RP1.1 Roadmap for co-developed relinquishment policy</p> <p>RP1.2 Decision tool for regional planning of post-mine uses</p> <p>RP1.3 Frameworks, tools and capacity building to enable shared vision development</p>	Communities are invested in the development of post-mining prosperity	Regional scale evaluation of viable future land uses encourages post-mining investment Policy frameworks link mining transitions to long range regional planning	Increased number of alternative land uses post-mining Faster transitions to diverse mining economies
<ul style="list-style-type: none"> Enhancing decision tools to support relinquishment and accommodate next land use decision making 	<p>RP2.1 Advanced evaluation framework for long life assets</p> <p>RP2.2 Real time predictive models</p> <p>RP2.3 Planning tools to identify transferrable residual risk</p>	Risk-return models identify the levels of risk and liability that are acceptable to the subsequent use proprietor	Assessment of liability, total risk and residual risk considers environmental and social opportunities	Efficiency gains and lower costs of capital Reduced number of unfunded or abandoned liabilities
<ul style="list-style-type: none"> Create and refine remote systems to monitor progress against closure criteria Design, develop, test and validate viable novel technologies for rehabilitation and closure Analyse, develop, test and validate supply chain business solutions 	<p>RP3.1 Smart architecture for closure design (incl. data storage and transfer protocols)</p> <p>RP3.2 Prototype risk management technologies for successful post-mine futures</p> <p>RP3.3 Business solutions for supply chain development</p>	Cost-effective technological solutions at selected intervention positions will reduce the long-term residual risk and/or maximise net benefit	Emerging supply chain post-mine land use businesses make informed decisions Better design of operational and closure process by mining companies, regulators and communities	Increase in value of mine closure market
<ul style="list-style-type: none"> Develop data and knowledge sharing platforms Environmental analytics for ecosystem forecasting Link site demonstrations Assessing cumulative social, economic and environmental impact 	<p>RP1.2 Decision tool for regional planning of post-mine uses</p> <p>RP3.1 Smart architecture for closure design (incl. data storage and transfer protocols)</p>	One stop shop for access to reports, knowledge and information on mine closure transitions Access to large complex mine environmental data sets for analytics to enable new insights for proactive decision making, risk reduction and planning	Closure criteria are fit for purpose in a climate affected world Researchers and METS companies to develop, test and demonstrate technologies	Reduced environmental risks through cumulative approaches and increased forecasting certainty Technology moves faster to market

REGIONAL HUBS

Regional Hubs bring together a range of stakeholders within a geographic area to provide an interface between CRC TiME research and engagement activities and local mining communities facing closure and regional transition.

They are an essential mechanism through which CRC TiME creates an enduring legacy beyond 2030, ensuring research is industry and regionally relevant as well as culturally appropriate. Hubs also support social and economic transformations in regions through brokering knowledge, providing access to national scale programs, and building social capital and local champions through collaborative governance.

CRC TiME Regional Hubs stakeholders include:

- **INDUSTRY** – Mining companies coming up for closure in the near future or experiencing particular challenges or opportunities. METS companies involved in the planning, design and implementation of closure plans.
- **LOCAL REGIONAL DEVELOPMENT** – regional development organisations, Indigenous land management, local governments or catchment/natural resources management authorities who are directly impacted by, or benefit from, mine closure.
- **GOVERNMENT AND REGULATORS** – both regional office staff and central policy officers.
- **RESEARCHERS** – both local, non-CRC TiME researchers and formal CRC TiME Program and Project leaders.
- **CRC TIME STAFF** and stakeholders including impact and translation management, CEO, and on occasion Board and other committee members.

Regional Hubs have varying local priorities and differing capacities to engage. Five Regional Hubs were targeted for establishment in our foundational year:

Pilbara Hub	First meeting in 2020 Second meeting held at Pilbara University College Karratha, 25 March 2021
Gove Hub	First meeting within the Gove Peninsular Futures Reference Group, 25 May 2021 Note Gove Peninsular Futures Reference Group hub partnership formalised September 2021
Bowen Basin Hub	First meeting in Emerald, 17 June 2021 Second Hub meeting in Emerald workshop on the research priorities, 7 October 2021
Latrobe Valley Hub	First meeting in 2020 Second meeting and research prioritisation workshop, 3 November 2021
South West WA Hub	First meeting in 2020 Second Hub meeting in Bunbury on research prioritisation, 14 September 2021

South Australia and Hunter Valley will be established as regional hubs in future years. CRC TiME has commenced project activity in Tasmania.

OUR IMPACT

CRC TiME will deliver impact through a wide range of activities and outputs. In order to deliver on our vision and bring the promised benefits to the Australian community, we have developed an Impact and Translation Framework, targeting the following objectives:

- Mines are closed in a way that delivers social, economic and environmental value
- Closed sites are repurposed to enable a faster transition to diverse and resilient local economies
- Mine closure business solutions drive new commercial and/or regional closure opportunities
- Policy, decision and management systems reduce risks across colleges
- Continued investment in Australian resources.

These objectives will be achieved by delivering project outputs that drive changes in knowledge, skills and motivations; changes in behaviour and practice; ultimately leading to a change in conditions on the ground.

The framework identifies pathways for achieving impact through the design and delivery of research, translation and adoption activities. It ensures integration of trans-disciplinary knowledge within projects as well as connecting research to end users.

We will deliver end-user focussed tools and outputs that can be readily adopted by partners to help achieve both organisational and broader community goals. This is achieved by co design of our translation and adoption activities with our partners delivering innovative outcomes, while at the same time creating platforms for connection between our stakeholder groups.

CRC TiME is focussed on understanding stakeholder needs and shaping our communication and adoption activities to ensure our research is accessible and positioned for use.

Generic Program Logic derived from the Theory of Change

INPUTS

- Shared ideas and expertise from across the partnership
- Access to national infrastructure and capability

ACTIVITIES

- Research activities
- Adoption activities delivered with shared expertise from relevant partners

OUTPUTS

- Relevant knowledge
- Products, tools and methods
- Proof of Concept
- Valuable IP
- Connected stakeholders
- Training and dissemination

Changes in knowledge, skills and motivations (short term)

- Shared post-mining visions
- Intention and capacity to apply new approaches
- Motivation of influential stakeholders

Changes in behaviour and practice (medium term)

- Collective action
- Improved decision making
- Changed practice and institutions

Change in conditions (long term)

- Economic benefit
- Social benefit
- Environmental benefit
- Integrated systems and benefits

