

Appendix A: Current Projects/ Contracts Executed



Current Projects/ Contracts Executed

Program 1 – Find More Viable Resources							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10525	Data driven decisions	ChatGeo: Forging Trust in Spatial Semantic Document and Knowledge Retrieval	University of Western Australia Eun-Jung Holden	Department for Energy and Mining (SA), Department of Mines, Petroleum and Exploration (GSWA)	2	300,401	100,401
M10587	Data driven decisions	Machine-Assisted Granite Mapping in the Archaean Yilgarn Craton	RSC Global Pty Ltd Yongjun Lu	Department of Mines, Petroleum and Exploration (GSWA), SQM Australia Pty Ltd, Terrain Minerals	1	255,000	85,000
M10665	Data driven decisions	Empowering Future Mineral Exploration Research – WA Capability Review	University of Western Australia Guangyi Shao		1	18,000	18,000
M10678	Data driven decisions	Unveiling the Critical Resource Potential of Western Australia's (WA) Proterozoic Carbonatites	University of Western Australia Jonathan Michael Stokes		3.5	64,830	64,830
M0509	Detection technology	MinEx CRC	MinEx CRC Andrew Bailey		10	1,000,000	1,000,000 ¹
M10444	Detection technology	Coiled Tubing Drilling for definition of Mineral Deposits - Phase 2: MinEx CRC Project 2	University of South Australia Soren Soe	Anglo American Services (UK) Ltd, Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Department of Regional New South Wales, Epiroc, LKAB Wassara, MinEx CRC, South32 Group Operations Pty Ltd	3	2,833,505	86,561 ²

¹ MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10445	Detection technology	Petrophysics for Mineral Discovery during Drilling - Phase 2: MinEx CRC Project 4	Curtin University Brett Harris	Imdex Limited, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, South32 Group Operations Pty Ltd	3	816,000	123,000 ³
M10446	Detection technology	Seismic in the Drilling Workflow - Phase 2: MinEx CRC Project 5	Curtin University Konstantin Tertyshnikov	Anglo American Exploration (Australia) Pty Ltd, BHP Pty Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, Sercel	3	940,000	123,000 ⁴
M10532	Detection technology	Drone-Deployed Transient Electromagnetic (TEM) System for Exploration and Mining Applications	Loupe Geophysics Pty Ltd Andrew Duncan	Loupe Geophysics Pty Ltd	2	600,232	250,000
M10536	Detection technology	Raptor Grav™ – a next generation airborne gravimeter	CMG Operations Pty Ltd Andy Gabell	CMG Operations Pty Ltd	1.8	500,000	250,000
M10540	Detection technology	Data Processing and Inversion for Seismic While Drilling and Mining Using Distributed Acoustic Sensing and Machine Learning	Curtin University Emad Al-Hemyari		2.5	34,942	34,942
M10545	Detection technology	Collar Keeper® System (CKS) Automation Phase	Aquirian Limited - Jon Wright	Aquirian Limited	1	906,000	250,000
M10552	Detection technology	Coiled Tubing Drilling for definition of Mineral Deposits - Phase 3: MinEx CRC Project 2	University of South Australia Soren Soe	Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Epiroc, LKAB Wassara, MinEx CRC, Vale	3	1,843,000	84,000 ⁵
M10553	Detection technology	Petrophysics for Mineral Discovery during Drilling - Phase 3: MinEx CRC Project 4	Curtin University Brett Harris	BHP Iron Ore Pty Ltd, Imdex Limited, MinEx CRC, Rio Tinto Technological Resources Pty Ltd	3	782,000	101,000 ⁶

³ MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10554	Detection technology	Seismic in the Drilling Workflow - Phase 3: MinEx CRC Project 5	Curtin University Konstantin Tertyshnikov	Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd	3	702,600	99,600 ⁷
M10582	Detection technology	Drilling Optimisation - Phase 3: MinEx CRC Project 1	Curtin University Masood Mostofi	BHP Iron Ore Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, Geotech Boyles Bros, Imdex Limited, McKay Drilling Pty Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, Sandvik Mining and Construction Oy, Vale	3	2,342,000	100,000 ⁸
M10614	Detection technology	Advanced Integration of Electromagnetic Data in the Tomofast-x Inversion Code for Enhanced Mineral Exploration	University of Western Australia Farid Ullah		4	167,519	167,519
M0470a	Mineral systems	(WAS M555) A multi-scale approach to controls on mineralization in the Fraser Zone, Western Australia	Curtin University Katy Evans	Curtin University, Department of Mines, Petroleum and Exploration (GSWA), IGO Limited, Legend Mining Limited, Mark Gareth Creasy	3.7	1,023,300	341,300
M0551	Mineral systems	Integrated 3G - Geochronology-geochemistry-grain shape: a new toolkit for mineral sands understanding	Curtin University Milo Barham	Curtin University, Iluka Resources Limited	4	979,000	345,000

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⁸ MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0554	Mineral systems	Evolution of Proterozoic multistage rift basins – key to mineral systems - ARC Linkage proposal linked to M521	University of Western Australia Mark Jessell	Anglo American Exploration (Australia) Pty Ltd, Anglo-American PLC, Australian Research Council, BHP Group Operations Pty Ltd, IGO Limited, Monash University, Teck Australia Pty Ltd	4	2,041,040	540,837
M0561	Mineral systems	Giant rare-metal pegmatites of the East Pilbara Terrane, Western Australia: Mineral systems analysis and terrane-scale exploration	University of Western Australia John Grigson		3.5	52,500	52,500
M10412	Mineral systems	Primary and secondary high-grade gold mineralisation processes in orogenic systems: key to a sustainable mining?	University of Western Australia (CET - Centre for Exploration Targeting) Nicolas Thébaud	Australian Research Council, Fosterville Gold Mine Pty Ltd, Karora Resources Pty Ltd, Monash University, Newmont Australia Pty Ltd, Northern Star Resources Limited, University of Western Australia (CET - Centre for Exploration Targeting)	3	1,942,114	450,417
M10422	Mineral systems	Understanding the Mt Weld Carbonatite mineral system - a Critical Minerals super-resource in Western Australia	Murdoch University Artur Deditius	Curtin University, Murdoch University, Lynas Rare Earths Limited	5	581,083	146,116
M10433	Mineral systems	Distal footprints in the South West Terrane	Commonwealth Scientific Industrial Research Organisation (CSIRO) Ignacio Gonzalez-Alvarez	Anglo American Exploration (Australia) Pty Ltd, Department of Mines, Petroleum and Exploration (GSWA), Ramelius Resources Limited	3.8	1,233,000	308,000
M10484	Mineral systems	Petrogenesis and metallogenic significance of the Speewah Ti-V Deposit	University of Western Australia Alex Eves		3	48,361	48,361

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10500	Mineral systems	Characterisation of clay-hosted rare-earth element deposits in Australia	RSC Global Pty Ltd Yongjun Lu	Auric Mining, Dreadnought Resources, Golden Mile Resources, Heavy Rare Earths Ltd, Mt Ridley Mines, MTM Critical Metals Ltd, Terrain Minerals, Voltaic Strategic Resources	1	202,500	67,500
M10502	Mineral systems	CuBAS - Structural and sedimentological reconstruction and fluid flow simulations for copper exploration in the Yeneena Basin – Paterson Orogen, WA	Commonwealth Scientific Industrial Research Organisation (CSIRO) Thomas Poulet	BHP Metals Exploration Pty Ltd, Department of Mines, Petroleum and Exploration (GSWA)	2	600,000	150,000
M10539	Mineral systems	Realising the carbonatite-hosted Nb-REE Potential of the West Arunta, Western Australia	University of Western Australia Marco Fiorentini	Australian Research Council, Department of Mines, Petroleum and Exploration (GSWA), Dreadnought Resources, Encounter Resources Ltd	3	1,669,948	366,739
M10602	Mineral systems	Mobility of nominally immobile elements in hydrothermal and weathering environments: implications for exploration and mineral processing	Curtin University Alexander Walker	Critica Limited, Curtin University	2	650,000	150,000
M10610	Mineral systems	Yilgarn 2030	University of Western Australia Quentin Masurel	Iceni Gold, Lefroy Exploration Ltd, Northern Star Resources Limited, Norton Gold Fields Pty Ltd, Ramelius Resources Limited, Regis Resources	3	1,760,000	440,000
M10675	Mineral systems	Controls on the orderly distribution of giant deposits in self-organised mineral systems: new predictive criteria and analytical tools	University of Western Australia (CET - Centre for Exploration Targeting) Lisa Jane Vella		3.5	64,830	64,830

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10479	Workforce of the future	ARC Training Centre in Critical Resources for the Future	University of Western Australia Marco Fiorentini	Ardea Resources Limited, Australian Research Council, Bellavista Resources, BHP Group Ltd, Chalice Mining Ltd, Department for Energy and Mining (SA), Department of Industry, Tourism and Trade (Northern Territory Geological Survey), Department of Mines, Petroleum and Exploration (GSA), Evolution Mining Limited, Geological Survey of Queensland, IGO Limited, Imdex Limited, Newexco Services Pty Ltd, Rio Tinto Exploration Pty Limited, The Australian National University, University of Adelaide, University of Western Australia	5	10,500,334	695,711

Program 2 – Expand the Mining Envelope

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10430	Data driven decisions	Sustainable Optimisation of Mining Complexes through Innovative Algorithms	Curtin University Waqar Asad	Norton Gold Fields Pty Ltd,	4.5	165,000	M10430
M10486	Data driven decisions	Ore Body Characterisation using Machine Learning and Measure-While-Drilling Data	Curtin University Daniel Goldstein		2.8	45,597	M10486
M0529	Deep and complex extraction systems	Lixiviant access creation in impermeable hard rock mass for the in-situ underground leaching of metals from ore	Murdoch University Aleksandar Naum Nikoloski	Murdoch University, CMTE Development Ltd T/As Mining3	5.6	120,000	M0529
M0544	Deep and complex extraction systems	Towards a Mechanistic Understanding of Electrokinetic In Situ Leaching	University of Western Australia James Jamieson	BHP Pty Ltd, Evolution Mining Limited, Newcrest Mining Limited, Newmont Mining Services Pty Ltd	6	842,605	M0544
M0545	Deep and complex extraction systems	Evaluation of in-situ barrier technology for risk mitigation and extraction optimisation for in-situ-recovery operations	Curtin University Navdeep Dhami	BHP Pty Ltd, CMTE Development Ltd T/As Mining3, Newcrest Mining Limited, Orano Mining	5.1	225,000	M0545
M0510	Mining technology	Safe, sustainable management of filtered tailings	University of Western Australia Andy Fourie	Alcoa of Australia Ltd, Alumina Quality Workshop Inc, International Aluminium Institute, Rio Tinto Technological Resources Pty Ltd, BHP Group Operations Pty Ltd	3	482,500	M0510
M0548	Mining technology	Investigating the utilisation of mine waste in shotcrete for underground support	University of Western Australia Xingjie Chen		4	120,000	M0548

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10559	Mining technology	Automation System for Processing Tank Descale Rig with Advanced A.I. driven 4D radar and 3D camera technologies	Total Marine Technology (TMT) Malte Duering	Cleanaway Operation Pty Ltd	2.9	500,000	M10559
M10599	Mining technology	Precision and Low Impact Mining Technologies Inventory	University of Western Australia Keely Gausten		1	18,000	M10599
M10633	Mining technology	Field-Scale Validation of Electrokinetic In Situ Recovery of Metals from Tailings Waste	Ekion Pty Ltd Henning Prommer	Ekion Pty Ltd	1.5	502,205	M10633
M10660	Mining technology	OptiClino Precision Drill Alignment System - MVP Optimisation, Prototype 2 Development and Underground Field Validation at Fimiston Underground Mine	IBT Robotic System Group Jollan Kingsley	Innovative Blasting Technologies Pty Ltd, Robotic Systems Pty Ltd	0.5	500,000	M10660
M10562	Safety, social and environmental sustainability	Impact of COVID-19 on the leadership of operational leaders in the oil, gas, and mining sector of Australia	Edith Cowan University Michael Ajith		4.5	104,757	M10562
M10594	Safety, social and environmental sustainability	Psychological Capital – The Last Line of Defence in Psychosocial Safety in the Mining Industry	Edith Cowan University Ronald Neil James		6.7	155,196	M10594
M10596	Safety, social and environmental sustainability	Occupational Hygiene Dust Sampler Comparison Study in Western Australian Mining Operations	Edith Cowan University Ben Walsh		4.5	116,397	M10596

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10597	Safety, social and environmental sustainability	Examining the Role of Psychosocial Safety Climate in the Mining Industry	Edith Cowan University Nousheen Fatima		3.5	162,956	M10597

Program 3 – Increase Recovered Value Through Processing

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0508a	Data driven decisions	Unlocking Knowledge from Technical Texts using Deep Active Learning and Entity Typing	University of Western Australia Tyler Bikaun		3.5	120,000	120,000 ⁹
M0508b	Data driven decisions	Risk-based Inspection Intervals: A Practical Approach	Curtin University Gabriel Gonzalez		3.5	120,000	120,000 ¹⁰
M10673	Data driven decisions	Mineralogical Classification of Tailings and Development of Advanced Separation Strategies for Resource Recovery	Curtin University Maria Joriza Bondoc		0.5	20,000	20,000
M10425	Energy utilisation	Heavy Industry Low-Carbon Transmission CRC (HILT CRC)	HILT CRC Limited Jenny Selway	Department of Energy and Economic Diversification (DEED)	10	1,630,000	0
M10527	Energy utilisation	Online Green Process Model Phase2 and Phase3	GHD Pty Ltd Bhupesh Sharma		0.7	210,000	210,000
M10544	Energy utilisation	Towards decarbonisation in steelmaking: Grey-box modelling for optimisation of green and sustainable metallurgical coke production from biomass	Murdoch University Muzammil Khan		3.5	61,148	61,148
M0508	Processing technology	ARC Industrial Transformation Training Centre (ITTC) in Transforming Maintenance through Data Science	Curtin University Andrew Rohl	Alcoa of Australia Ltd, Australian Research Council, BHP Pty Ltd, Curtin University, Roy Hill Holdings Pty Ltd, University of Western Australia	6	9,099,302	240,000

⁹ MRIWA contributions are drawn down from MRIWA's commitment to the CTMTDS.

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533f	Processing technology	Hydrometallurgical Processing for Nickel and Cobalt Ores, Concentrates, Tailings, Wastes - Stage 2 (FBI CRC Project No. 029)	Curtin University Elsayed Oraby	Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Blackstone Minerals Limited, Future Battery Industries, CRC Ltd, IGO Limited, JordProxa Pty Ltd, Lycopodium Pty Ltd, Mineral Carbonation International Pty Ltd, Mining and Process Solutions Pty Ltd, Pure Battery Technologies Pty Ltd	3.5	3,607,080	0. ¹¹
M0533v	Processing technology	Beneficiation and Chemical Processing of Lithium Minerals - Phase 2 (FBI CRC No. 030)	Murdoch University Aleksandar Nikoloski	Allkem Ltd, BASF Australia Ltd, Calix Limited, Department of the Chief Minister and Cabinet (Northern Territory), EV Metals Group PLC, Future Battery Industries, CRC Ltd, IGO Limited, JordProxa Pty Ltd, Lycopodium Pty Ltd, Rio Tinto Services Limited	3.5	3,195,000	0. ¹²
M0537	Processing technology	The effect of water quality on rare earth minerals flotation	Curtin University Bogale Tadesse	Curtin University, Lynas Rare Earths Limited	4.3	210,500	70,000
M0541	Processing technology	Organic Acid Leach System for Rare Earth Extraction Technology Development	Curtin University Laurence Dyer	Future Battery Industries CRC Ltd, Department of Industry, Innovation and Science, Lynas Rare Earths Limited, Curtin University	5.1	435,160	115,000
M10452	Processing technology	Feasibility of effective metal recovery from tailings material via electrokinetic in-situ leaching	University of Western Australia Bishenka Mahaulpatha		3.5	144,228	144,228

¹¹ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and include Department of Energy and Economic Diversification (DEED) funds.

¹² MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and include DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10473	Processing technology	Microwave Reactor for Critical Minerals	Northern Minerals Louis DeKlerk	Northern Minerals	0.7	625,000	125,000
M10481	Processing technology	New Opportunities for the PGM Industry in WA	ACIL Allen Pty Limited Ryan Buckland		0.7	204,874	204,874
M10485	Processing technology	Development of cementation-magnetic separation method for sulfide mineral processing and AMD prevention	Curtin University Hyunjin Na		3.3	143,734	143,734
M10497	Processing technology	Green pyromet/hydromet beneficiation pathways	University of Adelaide Alfonso Chinnici	Calix Limited Curtin University, FMG Procurement Services Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Roy Hill Holdings Pty Ltd, South32 Group Operations Pty Ltd, The Australian National University, University of Adelaide	1	504,350	20,000. ¹³
M10504	Processing technology	The upgrading of iron ore for DRI production using products from seawater	Curtin University Jacques Eksteen	Curtin University, FMG Procurement Services Pty Ltd, HILT CRC Limited, Roy Hill Holdings Pty Ltd, University of Adelaide	1	455,000	20,000. ¹⁴
M10522	Processing technology	Upgrading Iron Ore for DRI Production using Seawater Reverse Osmosis Brines	Curtin University Jacques Eksteen	Australian Renewable Energy Agency (ARENA), Curtin University, HILT CRC Limited, FMG Procurement Services Pty Ltd, Roy Hill Holding Pty Ltd, BG&E Resources Pty Ltd, Proxa Australia Pty Ltd, University of Adelaide	3	2,806,238	500,000

¹³ MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10528	Processing technology	Extraction of Clay-Hosted Rare-Earth Element Deposits in Australia	RSC Global Pty Ltd Yongjun Lu	Curtin University, Cygnus Metals Limited, Dreadnought Resources, Narryer Metals Limited, Pluto Resources, Terrain Minerals	1	532,500	175,000
M10541	Processing technology	Extraction of Rare Earth Elements (REE) from Sub-economic Ores and Process Tailings	Curtin University Yamini Kannappan		1.5	26,206	26,206
M10563	Processing technology	De-risking of Electric Smelting Furnaces for Australian Ores	Swinburne University of Technology	HILT CRC Limited, CSIRO, Calix Limited, Swinburne University of Technology, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, MHI Australia Pty Ltd, Roy Hill Holding Pty Ltd, Onesteel Manufacturing Pty Ltd	3	860,179	60,000 ¹⁵
M10569	Processing technology	Cathode Precursor Production Pilot Plant (C4P) - Stage 3	Commonwealth Scientific Industrial Research Organisation (CSIRO) Keith Barnard		1	1,494,000	1,494,000
M10583	Processing technology	Critical Minerals Recovery with Simultaneous Generation of Cleaned Groundwater in the Goldfields.	EcoTechnol Pty Ltd Robert Vagnoni	EcoTechnol Pty Ltd	1	96,200	48,100

¹⁵ MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10591	Processing technology	Alumina Refineries' Next Generation Transition (ALUMINEXT) Project - HILT CRC	HILT CRC Limited Woei Saw	CSIRO, 1414 Degrees Limited, Emirates Global Aluminium PJSC, Energy Exemplar Pty Ltd, WA Kenwalt Australia Pty Ltd, Norsk Hydro Brazil LTDA, Calix Limited, Rio Tinto Aluminium Limited, HILT CRC Limited	3	2,250,404	60,000. ¹⁶
M10605	Processing technology	Optimal fast-start pathways to green steel via magnetite	The Australian National University Alireza Rahbari	HILT CRC Limited, The Australian National University, University of Adelaide, Department for Energy and Mining (SA), Grange Resources (Tasmania) Pty Ltd, Magnetite Mines Limited, Onesteel Manufacturing Pty Ltd	2	480,874	40,000. ¹⁷
M10613	Processing technology	Development of a Gas-Assisted Ion-Selective Membrane for Lithium-Ion Extraction from Tailings	Edith Cowan University Yasamin Hamidian		3	139,599	139,599
M10625	Processing technology	Advancing Low-Carbon High-Grade Silicon Production from Iron Ore Waste (Phase 1)	Element Zero Bart Kolodziejczyk	Element Zero	2.8	500,000	250,000
M10626	Processing technology	Critical Minerals Advanced Processing Common User Facility - Project Definition Plan	MRIWA Johan Paul Beukes	Department of Industry, Science, Energy and Resources	1.1	3,000,000	1,500,000

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10636	Processing technology	Upscaling of novel green thermally assisted beneficiation pathways and impact of beneficiation on DRI and pellet production	University of Adelaide Alfonso Chinnici	HILT CRC Limited, Magaldi Power SpA, CSIRO, Calix Limited, Curtin University, Swinburne University of Technology, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, Roy Hill Holding Pty Ltd	3	1,298,320	60,000. ¹⁸
M10640	Processing technology	Metallurgical Process Development for Gallium – Nimy Resources	NIMY Pty Ltd Luke Hampson	Curtin University, NIMY Resources Pty Ltd	2	1,456,000	550,000
M10641	Processing technology	Production of High-Performance Vanadium Redox Flow Batteries Electrolytes-Extraction of Impurities and optimisation	Murdoch University Aleksandar Naum Nikoloski	Murdoch University	1.5	120,000	60,000
M10477	Safety, social and environmental sustainability	Advanced electrometallurgy for improved recovery of green metals	University of Sydney Alejandro Montoya	ECOX Australia Pty Ltd	3	1,515,139	378,785

¹⁸ MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Program 4 – Infrastructure and Logistics

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533u	Data driven decisions	Assessment, design and operation of battery-supported electric mining vehicles and machinery (FBI CRC No. 028)	University of Adelaide Ali Pourmousavi Kani	BHP Nickel West Pty Ltd, Department for Energy and Mining (SA), Department of Energy and Public Works (Qld), Energetics Pty Ltd, Future Battery Industries CRC Ltd, IGO Limited, Multicom Resources Limited, Galaxy Resources Limited - now Allkem Limited	3.5	1,160,000	300,000. ¹⁹
M10644	Data driven decisions	Data Visualisation and Machine Learning for Truck Performance Prediction and Analysis	Electric Power Conversions Australia Clayton Franklin	Electric Power Conversions Australia	0.6	500,000	250,000
M10443	Energy utilisation	Stationary Mine Electrification (FBI CRC No. 039)	University of Western Australia Tyrone Fernando	Energetics Pty Ltd, Future Battery Industries CRC Ltd, Lycopodium Pty Ltd, Magellan Powertronics Pty Ltd, Ultra Power Systems Pty Ltd	2.5	1,112,000	300,000. ²⁰

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10451	Energy utilisation	Development of Vanadium Electrolytes (FBI CRC Project Number 038)	Murdoch University Aleksandar Naum Nikoloski	Department of Energy and Public Works (Qld), Department of the Chief Minister and Cabinet (Northern Territory), Future Battery Industries CRC Ltd, King River Resources Limited, Lycopodium Pty Ltd, Lynas Corporation, Technology Metals Australia Limited, Ultra Power Systems Pty Ltd	3	1,073,000	0 ²¹
M10550	Energy utilisation	Cooling System for Retrofitted Electric Mining Truck (EPCA-E100 project)	Electric Power Conversions Australia Clayton Franklin	Electric Power Conversions Australia	1	500,000	250,000
M10600	Energy utilisation	Net Zero Research, Development & Deployment Roadmap Inventory	University of Western Australia Phoebe Tran		1	18,000	18,000
M10611	Energy utilisation	Responsible management of retired mining vehicle batteries to address environmental and economic challenges	Edith Cowan University Kenneth Tetteh Akiti		2	28,436	28,436
M10645	Regulatory tools and processes	Phase 1 Accreditation for Surficial Mineral Carbonation - Carbon Credit Markets and Australian Carbon Credit Units (ACCUs)	Full Circle Carbon Rosie Johnstone		0.3	25,000	25,000

²¹ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Program 5 – New Products and Markets

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533d	Data driven decisions	Process Legacy - Stage 2 (FBI CRC Project No. 033)	Curtin University Arie van Riessen	Anax Metals Limited, Australasian Pozzolan Association, Cadoux Limited (formerly FYI Resources Limited), ChemCentre, Department of the Chief Minister and Cabinet (Northern Territory), EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited	3.5	3,044,589	0. ²²
M0533j	Data driven decisions	Establishment of the National Battery Testing Centre	Queensland University of Technology Joshua Watts	Australian Vanadium Ltd, BASF Corporation USA, BHP Nickel West Pty Ltd, Calix Limited, Defence Science and Technology, Department of the Chief Minister and Cabinet (Northern Territory), ESS Asia Pacific Pty Ltd, Future Battery Industries CRC Ltd, Lava Blue Ltd, Magellan Powertronics Pty Ltd, Multicom Resources Limited, Sunrise Energy Metals Limited, Syrah Resources Ltd, Ultra Power Systems Pty Ltd	4	7,145,342	200,000. ²³

²² MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

²³ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533m	Data driven decisions	Electrochemical Testing of Li-ion Battery Materials in Standard Cell Formats (FBI CRC Project No. 022)	Queensland University of Technology Michael Horn	Alpha HPA Limited, Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Cadoux Limited (formerly FYI Resources Limited), Calix Limited, ChemX Materials Ltd, Cobalt Blue Holdings Limited, EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited, Koppers Carbon Minerals and Chemicals Pty Ltd, Lava Blue Ltd, MRIWA, Pure Battery Technologies Pty Ltd, Sicona Battery Technologies Pty Ltd, Sunrise Energy Metals Limited, Talga Group Ltd	4	4,210,396	500,000 ²⁴
M0533q	Data driven decisions	Development of a trusted supply chain for Australian battery minerals and products (FBI CRC Project No. 027)	Curtin University Prokopi Vasilyev	Ardea Resources Limited, Australasian Pozzolan Association, BASF Australia Ltd, EV Metals Group PLC, Everledger Australia Pty Ltd, Future Battery Industries CRC Ltd, Source Certain International Pty Ltd	3	1,795,000	0 ²⁵

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²⁵ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533r	Data driven decisions	Battery Materials for a Circular Economy (FBI CRC Project 023)	University of Technology Sydney Damien Giurco	Ardea Resources Limited, Australasian Pozzolan Association, BASF Australia Ltd, BHP Nickel West Pty Ltd, Energetics Pty Ltd, Future Battery Industries CRC Ltd, IGO Limited, Multicom Resources Limited, Galaxy Resources Limited - now Allkem Limited	4.5	1,688,550	400,000 ²⁶
M10530	Data driven decisions	Retrieval Augmented Generation (RAG) on large Technical Reports - (CEED)	University of Western Australia Henri Scaffidi		1	24,354	24,354
M10585	Data driven decisions	Development and Implementation of CMAP: A Corrosion Monitoring and Protection System for Gold Cyanidation Tanks	TECHT Giles Harrison	TECHT	1.3	471,721	230,610
M10672	Data driven decisions	Accelerated Mineral Carbonation: Research Capability and Opportunity Mapping	Curtin University Thi Hong Tran		0.5	20,000	20,000

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Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M0533h	Downstream processing technology	Cathode Precursor Production Pilot Plant - Stage 2 (FBI CRC No. 031)	Curtin University Alireza Rabieh	Alpha HPA Limited, Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Blackstone Minerals Limited, Calix Limited, ChemX Materials Ltd, Cobalt Blue Holdings Limited, EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited, JordProxa Pty Ltd, King River Resources Limited, Lycopodium Pty Ltd, Mn Energy Limited (formerly Pilbara Metals Group Ltd), Pure Battery Technologies Pty Ltd	3	5,916,300	0 ²⁷
M0533k	Downstream processing technology	Super Anode (FBI CRC Project No.019)	University of Melbourne Amanda Ellis	AnteoTech LTD, Calix Limited, EcoGraf Limited, Future Battery Industries CRC Ltd, Koppers Carbon Minerals and Chemicals Pty Ltd, Syrah Resources Ltd, Talga Group Ltd	4	4,200,000	200,000 ²⁸
M10453	Downstream processing technology	Beneficiation of Gold Telluride Ores	Curtin University Kylie Blackwell		2.7	41,208	41,208
M10521	Downstream processing technology	Pre-feasibility study into the development of a pilot plant for the adaption of Direct Lithium Extraction	Edith Cowan University Amir Razmjou		0.7	450,000	450,000
M10598	Downstream processing technology	WA Critical Mineral Commodity Overviews	Curtin University George Barakos		0.3	50,000	50,000
M10622	Downstream processing technology	Scandium Oxide Recovery	Victory Metals Limited Brendan Clark	Victory Metals Limited	0.7	750,000	250,000

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²⁸ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10623	Downstream processing technology	Establishing an Australian rubidium industry: Extraction and purification from pegmatite ore	Everest Metals Corporation Ltd Bahman Rashidi	Everest Metals Corporation Ltd	1	300,000	150,000
M10549	Energy utilisation	Big Roller™, energy efficient overland conveying with negative marginal cost of abatement energy efficient overland conveyor development	Big Roller™ Overland Conveyor Company Shawn Ryan	Big Roller™ Overland Conveyor Company	0.6	500,000	250,000
M10571	Regulatory tools and processes	Developing a Perth Critical Minerals Exchange (PCMX)	Digital Finance CRC Limited Eric Lilford	Curtin University, Digital Finance CRC Limited, University of Western Australia	1	2,000,000	500,000
M10469	Safety, social and environmental sustainability	Use of Industrial Tailings as Alternative to Virgin Sands	ChemCentre Richard Burgdorf	Sustainability Waste Alliance (SWA), Albemarle Lithium Pty Ltd, Covalent Lithium, Mineral Resources Limited	1.5	319,165	79,788
M10529	Safety, social and environmental sustainability	Automated Flange Bolting Robot with Camera Vision for Mining and Minerals Processing Infrastructure	Total Marine Technology (TMT) Malte Duering	Alcoa of Australia Ltd	3.1	397,333	99,333
M10542	Safety, social and environmental sustainability	The Unintended Effects of Carbon Emission Policy: International Evidence from the Paris Agreement and its Impact on the WA Mining Sector	University of Western Australia Sistine Sun		2.5	116,397	116,397
M10595	Safety, social and environmental sustainability	Effective Leader Safety Storytelling: its attributes and outcomes	University of Western Australia Patrick Benetti		1	17,471	17,471
M10607	Safety, social and environmental sustainability	Use of DBS manufactured sands in roads - Human Health and Ecological Risk Assessment	ChemCentre Richard Burgdorf	Albemarle Lithium Pty Ltd, Covalent Lithium, Department of Water and Environmental Regulation	1.4	521,334	64,360

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10617	Safety, social and environmental sustainability	Evaluating the Potential of Mine Waste for Construction Solutions	University of Western Australia Sarah Scott		0.8	13,500	13,500
M10645	Safety, social and environmental sustainability	Phase 1 Accreditation for Surficial Mineral Carbonation - Carbon Credit Markets and Australian Carbon Credit Units (ACCUs)	Full Circle Carbon Rosie Johnstone		0.2	25,000	25,000
M10646	Safety, social and environmental sustainability	A.I. enhanced Machine Vision System for Automated Flange Bolting Robot "Boltron" for Mining and Minerals Processing Infrastructure	Total Marine Technology (TMT) Dan Barac	Total Marine Technology (TMT)	0.6	187,720	93,860
M10679	Safety, social and environmental sustainability	Sustainable Enhancement of Asphalt Performance Using Biochar, Waste Plastic Aggregate, and Mining Waste	Edith Cowan University Adeel Iqbal		1.8	83,759	83,759
M0533	Strategic foresight	Future Battery Industries CRC	Future Battery Industries CRC Ltd Derek Hall	Department of Energy and Economic Diversification	5	6,000,000	5,500,000. ²⁹
M10505	Strategic foresight	Intermediate product exports for Australia-China green steel	The Australian National University Jorrit Gosens	Curtin University, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Roy Hill Holdings Pty Ltd, The Australian National University	1.2	254,461	0. ³⁰

²⁹ MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

³⁰ MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10506	Strategic foresight	Analysis of market, cost and locational factors for green iron and steel in Australia	The Australian National University Frank Jotzo	FMG Procurement Services Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Queensland University of Technology, Roy Hill Holdings Pty Ltd, Swinburne University of Technology, The Australian National University, University of Adelaide	1.2	26,1517	0. ³¹
M10515	Strategic foresight	Western Australia Critical Minerals priority scheme	University of Western Australia Sineth Kannangara		0.6	20,000	20,000
M10535	Strategic foresight	Net Zero Research Development and Demonstration Roadmap	Low Carbon Australia Pty Ltd Tristy Fairfield	Department of Energy and Economic Diversification	0.5	450,000	150,000
M10629	Strategic foresight	Australian intermediate product exports in a decarbonised global steelmaking industry: scenarios and pathways	The Australian National University Jorrit Gosens	Swinbourne University, FMG Procurement Services Pty Ltd, Roy Hill Holding Pty Ltd, Grange Resources (Tasmania) Pty Ltd, CSIRO, Onesteel Manufacturing Pty Ltd, The Super Power Institute, University of Adelaide, HILT CRC Limited	1	335,507	200,000. ³²
M10647	Workforce of the future	Case Study Audit & Development (25 MRIWA-2)	Curtin University Annalise Peacock		0.3	10,886	10,886

³¹ MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds.

³² MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds.

Program 6 – Remediation and Mine Closure

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10442	Acid mine drainage and treatment of tailings	Improved Prediction, Remediation and Closure of Acid and Neutral Metalliferous Drainage (AMD/NMD) Sites	Flinders University Sarah Harmer	Australian Genome Research Facility Limited, Australian Research Council, BHP Group Operations Pty Ltd, CRC for Transformations in Mining Economies (CRC TiME), Fortescue Ltd T/As Fortescue Metals Group Ltd, MMG Australia Ltd, Newmont Mining Services Pty Ltd, Rio Tinto Services Limited, Teck Resources Limited	5	4,558,586	125,000 ³³
M10447	Acid mine drainage and treatment of tailings	Wetland in a Box (EnphytoBox®) - a smart water treatment system to support the decarbonisation of water in mining	Syrinx Environmental PL Kathy Meney	Syrinx Environmental PL	0.8	86,600	43,300
M10619	Acid mine drainage and treatment of tailings	Carbon negative mines: mineral carbonation of mine waste	University of Queensland Eric Ansah		0.5	25,000	25,000
M10624	Acid mine drainage and treatment of tailings	Hybrid tailings treatment with integrated mineral carbonation for CO ₂ sequestration	Edith Cowan University Masoumeh Zargar	Edith Cowan University	0.5	50,000	25,000
M10676	Acid mine drainage and treatment of tailings	Green and Eco-friendly Membrane Technology for Sustainable Wastewater Treatment in Australia	Edith Cowan University Davood Hassanian Moghaddam		3.5	64,830	64,830

³³ MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10615	Data driven decisions	Investigating the Valorisation Potential of Mine Waste for Mineral Carbonation	University of Western Australia Nikhil Kumar		0.8	18,000	18,000
M0513	Regulatory tools and processes	Validation and Standardisation of Sequential Leaching Tools to Better Predict Impacts of Iron Ore Mining – Phase 2	ChemCentre John Moursoundis	BHP Iron Ore Pty Ltd, CRC CARE, Fortescue Ltd T/As Fortescue Metals Group Ltd, Rio Tinto Limited (Iron Ore)	3	525,000	216,000
M10406	Safety, social and environmental sustainability	Evaluating the mining industry's view of their success in delivering a positive legacy for host communities at the time of mine closure	University of Western Australia Elizabeth Wall		5	52,972	52,972
M10476	Safety, social and environmental sustainability	Opportunities for Growth in Australia's Mine Closure Solutions Industry (CRC TiME Project Number 3.17)	Commonwealth Scientific Industrial Research Organisation (CSIRO) Dominic Banfield	CRC for Transformations in Mining Economies (CRC TiME), Deswick Mining Consultants (Australia) Pty Ltd, Ecocene (Emapper), Ecoplant Australia Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, GHD Pty Ltd, K2Fly Ltd T/as Decipher, Landloch Pty Ltd, O'Kane Consultants Pty Ltd, Sustainable Solutions Global Pty Ltd	0.5	410,350	50,000 ³⁴
M10487	Safety, social and environmental sustainability	Accelerating Consolidation of Mine Tailings using Electro-osmosis Dewatering Technology	University of Western Australia Nilan Jayasiri Mudiyanse		3.5	58,033	58,033.50

³⁴ MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value \$	MRIWA Contribution \$
M10501	Safety, social and environmental sustainability	Algae-based technologies for improved environmental outcomes and sustainable post-mining futures	Commonwealth Scientific Industrial Research Organisation (CSIRO) Anna Kaksonen	CRC for Transformations in Mining Economies (CRC TiME), Fortescue Ltd T/As Fortescue Metals Group Ltd, Heidelberg Materials Australia Pty Ltd T/As Hanson Construction Materials, Rio Tinto Services Limited, South32 Group Operations Pty Ltd	1	270,000	30,000 ³⁵
M0558	Sustainable land use post- mining	CRC for Transformations in Mining Economies (CRC-TiME) (Extension to M536 - CRC for Achieving Sustainable Mine Closure)	CRC for Transformations in Mining Economies (CRC TiME) Guy Boggs		10	300,000	300,000 ³⁶
M10458	Sustainable land use post- mining	Mine Pit Lake Assessment and Management: A National Initiative to Support Mine Closure and Regional Opportunities	ChemCentre Kathryn Linge	BHP Group Operations Pty Ltd, ChemCentre, CRC for Transformations in Mining Economies (CRC TiME), EnergyAustralia Yallourn Pty Ltd, GHD Pty Ltd, Iluka Resources Limited, Mine Land Rehabilitation Authority, Rio Tinto Services Limited, South32 Group Operations Pty Ltd	4	3,216,000	400,000 ³⁷

³⁵ MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME

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