



FUTUREOFMINING | SYDNEY



Accelerate your roadmap to zero harm, zero entry and zero emissions

20-21 February 2023 | Sydney Masonic Centre

Day One 20 February	
8:30	Registration
9:20	<p>Chair's opening remarks Chris Cann, Group Managing Editor, Aspermont Limited</p>
9:30	<p>Opening keynote: Australia becoming a critical minerals powerhouse Australia has most of the minerals needed to become a battery industry powerhouse. Yet, how does it position itself to become a downstream value-adding engine for the global energy transition rather than just a quarry for the raw materials?</p> <ul style="list-style-type: none"> • How serious and mature are the current plans? • Why do battery factories make sense when another downstream industry has proved too challenging. • How important is the role of strategic investment from the US and other major economies in making plans a reality? • How is Australia's METS sector backing these initiatives with technical innovation? <p>Hon Madeleine King MP, Minister for Resources, Australian Government</p>
10:00	<p>In-conversation: Responsible sourcing There is growing pressure on manufacturers to demonstrate ethical mineral provenance, posing a serious challenge for goods with a cosmopolitan mix of metals from all corners of the globe. The preference for products made with responsibly sourced materials suggests that miners who can prove they are operating sustainably can expect a premium for their metals.</p> <ul style="list-style-type: none"> • Are miners and downstream producers realistically seeing a premium for responsibly sourced metals in a world of undersupply? • What does it mean to mine responsibly in Australia? • Will battery metals such as lithium, cobalt, nickel and graphite need certification to be cleared for use in carbon-fighting electric vehicles? • What technologies can miners embrace to ensure the downstream industry is satisfied with mineral provenance? • Is blockchain the answer for responsible sourcing or a solution looking for a problem? <p>Michelle Ash, Chief Technology Officer, OZ Minerals Nicole Roocke, CEO, Minerals Research Institute of Western Australia (MRIWA)</p>
10:30	<p>Presentation: Increasing loading efficiency through technology-supported payload spread reduction</p>


	<p>Load and haul circuits are a critical component of any modern surface mining operation. Maximum efficiency of these circuits is only achievable by providing the right information to operators and automation systems through real-time data that reduces variability of payloads in the back of haul trucks.</p> <ul style="list-style-type: none"> • Payload systems on loading equipment have been demonstrated across all variety of commodity to reduce variability and increase efficiency of the circuit. • How one operation has used this technology to increase operational productivity by almost 13%. • Overview of the joint success framework used to align site and vendor and result in absolute best practice. <p>Damian Assailit, GM Growth and Innovation, CR Digital</p> 
11:00	<p>Networking break</p>
11:40	<p>Presentation: Standardising and simplified the life cycle impacts of haulage methods through industry engagement</p> <p>Comparing the full life-cycle impact of current and emerging haulage technologies to surrounding communities and options for use of additional technologies.</p> <ul style="list-style-type: none"> • Why do many mine sites continue defaulting to conventional haulage methods when new methods with proven benefits are available? • How do we create a universal way of presenting the full life cycle impacts of haulage methods? • Utilising new and emerging haulage methods is critical to achieving our net-zero emission targets. • Industry engagement is required to understand the variables of emerging haulage technologies and refine any assumptions so this model can be created. <p>Dr Chengguo Zhang, Senior Lecturer, Professor of Mining Engineering, UNSW Andrew Jolly, Chief Operating Officer, CMA</p>
12:10	<p>Presentation: Presenting a socially active and smart mining shovel</p> <p>Mining shovels are employed around the clock at open pit mines worldwide, and they play a very key role in the whole mining cycle. In this project, we will present ShovelMetrics™ Gen 3, a multi-feature smart machine vision system for mining shovels.</p> <ul style="list-style-type: none"> • Exploring Shovel Metrics™ Gen 3, a multi-feature smart machine vision system for mining shovels. • Exploring various AI-enabled modules such as missing teeth and missing lip shroud detection, rock fragmentation monitoring, boulder detection, and cycle monitoring. • How a mining shovel equipped with cloud-based visualization, reporting, and notification system can run more safely, efficiently, and sustainably while communicating with the shovel operator and mining crew. <p>Mark Mukhija, General Manager Australia, Weir Motion Metrics</p>

		
12:40	<p>Panel discussion: Hitting climate targets with the electric mine</p> <p>Climate targets have matured from broad, long-dated statements of intent from a few large miners five years ago, to specific year-on-year deliverables against which sitting executives will be measured. This has brought the need for workable emission-reduction technologies into sharp focus and, with that, the viability of the electric mine.</p> <ul style="list-style-type: none"> • Is the industry progressing quickly enough on electrification? • Are equipment providers close to solving the electric heavy-haulage challenge? • Where is the diesel blind spots in the electric mine? • How important is the role of remote renewables for the electric industry? • Which technologies could move the electric mine from novelty to ubiquity? <p>Fergus Kiley, General Manager Operations, NiCo Resources Dev Gil-Sanchez, Operations Manager, Anglo American Matt Sprague, Principal Consultant, Climate Strategies, South Pole Jason Dickfos, Head of Growth, EDL Energy</p>	
13:10	<p>Networking Lunch</p>	
14:10	<p>Organisational ambidexterity and strategic agility - key enablers for a successful energetic transition.</p> <p>Significant ground has been made by different stakeholders, as policy makers, investors, NGOs and private organisations develop organisational strategies aiming towards a decarbonized energetic transition. But a volatile, uncertain, complex, ambiguous and constantly evolving macro-economic context brings unprecedented challenges for leaders to ensure the successful delivery of carbon neutral strategies. This presentation will discuss what are the traps and options leaders face:</p> <ul style="list-style-type: none"> • Organisational ambidexterity: structural or contextual? What are the pros and cons? • The role of human capital alignment for carbon neutral strategy implementation. • Organisational elements to foster strategic agility in a VUCA environment. <p>Dev Gil-Sanchez, Operations Manager, Anglo American</p>	
14:40	<p>Fireside chat: Managing costs in an inflationary environment</p> <p>Investors familiar with the mining sector from the previous Super Cycle painfully recall the waste and then margin squeeze caused by demand-driven cost inflation. With industry-agnostic inflationary pressures already biting, and another Super Cycle underpinned by the energy transition arguably on the way, investors will be keeping a keen eye on miners and their ability to keep costs in check.</p> <ul style="list-style-type: none"> • The outlook for inflation? • The operational areas most affected and so in need of most attention? • What strategies and technologies are available to fight back against rising costs? • What are the top lessons we can learn from the end of the last supercycle. <p>Robyn Dittrich, Vice President, Procurement – Global Functions & China, BHP</p>	

15:10	
15:40	Networking break
16:20	<p>Start-up battle: Pitching toward zero</p> <ul style="list-style-type: none"> • Andrew Pedley, CEO, Carbonaught • Dave Sammut, Managing Director, Loop Hydrometallurgy Pty Ltd • Stefano Utili, CEO, Optimal Slope • Amanda Hall, CEO and Founder, Summit Nanotech <p>Judges: Last year winner Michelle Ash, CTO, OZ Minerals Dev Gil-Sanchez, Operations Manager, Anglo American</p> <p>In partnership with </p>
17:00	End of day one

Day Two 21 February	
8:30	Registration
9:20	<p>Chair's opening remarks Chris Cann, Group Managing Editor, Aspermont Limited</p>
9:30	<p>Opening panel discussion: Australia's Got Talent: but why isn't it interested in mining? The mining sector has been rocked by reputational scandals from gender inequality to cultural abominations and continues to battle a legacy built on environmental atrocities. This not only creates a challenge for miners in recruiting the key skills for their businesses, but for governments in ensuring the operability of the sector responsible for supplying the raw materials central to energy-transition policies.</p> <ul style="list-style-type: none"> • What should the near-term recruitment strategy look like for mining? • How should this fit within government policy and what government support is necessary? • What does the workplace of the future need to look like to attract talent in the long term? <p>Fiona Robertson, Non-Executive Director, 29Metals/Bellevue Gold/Whitehaven Coal Peter Betts, President, Geological Society of Australia Dr. Gavin Lind, Chief Executive Officer, Australian Minerals and Energy Skills Alliance Ltd (AUSMESA)</p>



	
10:00	<p>Opening keynote Christiaan Heyning, Head of Decarbonization, Fortescue</p>
10:30	<p>Networking break</p>
11:10	<p>Presentation: Analytical maturity assessment - an innovative intelligent tool for mining 4.0</p> <ul style="list-style-type: none"> • Mining 4.0; From initial definition to the practical operation. • The role of analytics in advanced future mining. • The levels of analytical maturity assessment. • Dimensions of analytical maturity assessment. • Analytical maturity assessment – a practical use case in Vale. <p>Ali Soofastaei, Artificial Intelligence Program Leader, Vale</p>
11:40	<p>Panel discussion: The power of data: transforming the mining sector</p> <p>The collection and use of data have evolved rapidly in the past 10 years and the pandemic has only accelerated the development and opportunities. The past 12 months have seen another wave of innovation in data use for gains in efficiency, productivity, and health and safety – largely by companies that have invested in onboarding a robust data strategy.</p> <ul style="list-style-type: none"> • What has changed in data use since we last blinked? • Where are the biggest gains being made? • What does a contemporary data strategy look like? • How can we quantify the cost of data initiatives against the cost of standing still, ahead of major investment decisions? <p>Ned Howard, Manager Geoscience, Evolution Mining George Spink, Executive General Manager, Decoda Holly Bridgwater, Industry Lead, Unearthed</p> <p>Moderator: Ali Soofastaei, Artificial Intelligence Program Leader, Vale</p>
12:10	<p>Digital technology, tyre damage and production performance</p> <p>Deploying digital technology to reduce tyre damage and the flow-on impact to production performance</p> <ul style="list-style-type: none"> • Tyre supply for large mining trucks is in short supply • Waiting for tyres or replacing tyres early, adds to operating costs, reduced production capacity and increases the risk of a safety incident • Deploying a digital technology solution that can identify and alert ‘clean-up crews’ to hazards that could potentially damage large mining truck tyres <p>George Spink – Executive General Manager – Decoda</p>



12:40	Lunch break
13:40	<p>Panel discussion: Extracting values from the circular economy</p> <p>The world is under increasing pressure to meet metal and mineral demands of the global economy and do so in a more responsible way. Can the Circular Economy be a part of the solution and help the mining industry meet these demands in a more responsible way?</p> <ul style="list-style-type: none">• How the circular economy can provide opportunities to create triple-bottom line value (financial, environmental, social)• Rethinking and redesigning the process along the value chain and between supply networks.• Rethinking business strategy with a circular economy perspective. <p>Malcolm Shang, Global Head of Mine Closure Planning and Circular Economy (Mining), ArcelorMittal Tony Knight, Chief Government Geologist, Department of Resources Ashleigh Morris, CEO and Co-Founder, COREO</p>
14:10	<p>Plenary panel discussion: Improving culture and diversity in the minerals industry</p> <p>At a time when mining needs to attract more skilled workers and improve its diversification record, the recent public release of the Respect@Work, Rio Tinto reports and publicised issues into workplace culture is a call to action for the minerals industry.</p> <ul style="list-style-type: none">• What is being done to support diversity and inclusion in the minerals industry - are miners taking steps toward meaningful change or just upping the rhetoric?• What steps need to be taken to affect cultural change?• Is the industry making genuine progress toward gender diversity? <p>Lucy McClean, Chair, Women in Mining NSW Gemma White, Head of Digital, BHP Meg Brodie, Partner-in-Charge, KPMG Banarra, Human Rights & Social Impact Services Renata Roberts, Chief Corporate Services Officer, The Bloomfield Group</p>
14:40	<p>Closing keynote: The use of powerful initiatives to break the stigma of mental health in the workplace</p> <p>Over the years, there has been a growing recognition from leaders around workforce safety and mental well-being and its positive impact on organizational success. Excellent work has been done to steer efforts in the right direction and to create a workplace environment that fully fosters inclusion and psychological safety.</p> <ul style="list-style-type: none">• Detailing the various initiatives presented at Bloomfield, including MY Mindset recipient of the NSW Mining Health Award in 2022.• Understanding why these new initiatives matter and are paramount to build a better workplace for the future generation.• Leading by example: exploring the key role of leaders in fostering a culture that champion psychological safety at work.

	Renata Roberts , Chief Corporate Services Officer, The Bloomfield Group
15:10	Chair's closing remarks Noel Dyson , Deputy Managing Editor and Editor, Australia's Mining Monthly
15:20	End of the conference