



Stop doing, start thinking. Mining & Metals Leadership.

Voices of the industry.

Reliable
Leadership
Advice™



Contents

Introduction.....	3
Leaders of today	5
Operations and Supply Chain – Shift in the power balance	5
Talent Shortage	6
Circularity	6
Digitalisation and Technology Investment	7
Current Leadership Trend	7
Leadership Strengths	8
Cognitive Diversity	9
Leadership Competencies	10
Competency acquisition and development	13
Cognitive Diverse Leadership Attraction	13
Leadership Selection Science in Mining & Metals	14
Acknowledgements	16
References	17



The mining & metals industry has not historically been the first to come forward in terms of innovation or change, and with increasing pressure on the industry to adapt because of the introduction of more ambitious ESG agendas, greater stakeholder scrutiny, a post pandemic environment and changing employee values, the industry leaders are called to respond – and quickly. These internal and external pressures are not unique to the mining and metals industry and no geography or industry is spared; however, as an industry, now is the time to assess the current leaders in place and **set the path for our future leaders to succeed**. Now is the time for the mining and metals industry to learn from other industries such as the automotive, chemical or energy industries... **and do it better**.



The world's top miners recently committed to a **goal of net zero direct and indirect carbon emissions by 2050**¹⁻³ or sooner agreed with the International Council of Mining and Metals. This cohort represents companies that make up one third of the global mining and metals industry and the commitment made results in a significant **decarbonisation challenge** for an industry that is producing the raw material which is essential for the low-carbon industry. In light of this, Mining emerged economically strong from the recent COVID-19 pandemic and forecasts predict a stronger future as the world transitions to a low-carbon sustainable economy².

With an **ever-expanding supply chain** as the world moves towards an increase in hydrocarbon storage, battery and automotive manufacturing and an increased investment in metal recycling, this commitment at the extractive end of the market reaffirms the complete supply chain focus for the coming 30 years and more, and although edging towards it, questions arise around competent leadership in the industry to achieve it.

The industry not only involves the extraction and processing organisations but extends along the entire supply chain through mining and metal service providers, technology organisation, government and international not for profit organisations aligned to the industry and ultimately the end consumer. Mercuri Urval undertook research and conducted a number of interviews with key industry leaders, to further understand how these changes and requirements are impacting their leadership competence and organisational agendas. Mercuri Urval worked in collaboration with recent Cranfield graduate and Mining industry expert, **Sam Houston**, Founder of Strategist Solutions who undertook similar research related to cognitive diversity within mining and metals.

Mercuri Urval interviewed over 20 industry leaders, ensuring a cross section representative of the industry from mining operators, mining service companies through to industry organisations with a view to understand the challenges facing the industry and what is required of the future mining and metal leaders to meet these challenges and transform the industry.

Some interviewees wished to remain anonymous. Our acknowledgement and gratitude are given for those who participated in the process as your contribution has been invaluable. Our findings are outlined throughout the report and are not necessarily representative of each of the individual contributors' views but a collective.

Leaders of today

Mercuri Urval identified that the perception from the industry peers is that the leaders of today, within the mining and metals industry, are perceived as competent to be able to achieve the current objectives however overall lacking capability to address the future challenges for the industry.

With the recent announcement regarding the top mining companies 2050 net zero commitments there are questions raised around whether the leaders have the capacity to meet short and midterm crisis' as well as adding the complexity of what they need to do to achieve the future organisational objectives. The need for **maintaining the core operations of the industry** cannot be forgotten while in search of the new models required to achieve the objectives set. Some feel that the leaders in industry today need to remain focused on the needs of today while agreeing that although vision is essential, the change needs to come from sustained evolution as opposed to rapid revolution.



...the change needs to come from
sustained evolution as opposed to
rapid revolution.

Operations and Supply Chain Shift in the power balance

As the industry transitions, there is an expectation that the supply chain will move and investment into operations will shift, ultimately affecting the balance of power in the industry. Shareholders have already begun challenging the leaders regarding the ESG impact of the organisation, with one interviewee commenting from an operational perspective, *'we are only ever remembered for our last fatality or cultural issue we caused'*. Across the board, it was strongly noted that the industry is entering a period of intense scrutiny with expectation that host countries through to both the markets and logistics will be scrutinised to the millimetre, impacting on the capital investment available. There is a strong sentiment that over the next 10 years, as a result of decarbonisation goals and legislation, **mine closures will increase**.





Talent Shortage

In a cyclical industry such as the Mining and Metal industry, it was felt that commodity prices and technology in the downcurve regularly result in the **reduction of training and development spend**, ultimately impacting on the industry attractiveness for those seeking a career. An area of concern; roughly 60,000 people in mining will retire by 2030 in Canada alone¹⁴, and these numbers do not include those who leave for other reasons.

Many noted that the industry was **no longer attractive for new talent**. In conjunction with the recent phenomenon dubbed the 'Great Resignation' and the lack of purpose many employees across all industries felt in their current roles, for those outside the industry making a step into Mining & Metals, the ethical perception of the industry is being questioned. With more talent choosing employers with a greater emphasis on **value-based decision making** and the continued 'war for talent' – this does not bode well for the industry in its current state.

Circularity

As the world continues to seek virgin material, there is a vision among the leaders that the mining industry will follow the well-trodden path of the oil & gas industry. The aim continues to be a reduction of their footprint, while increasing their value to the countries and people it operates for. Somewhat like the automotive industry, the fear that increased pressure on the supply chain could starve the industry of innovation and make them less attractive as a partner was raised. It was felt that with a **continued focus on recycling and circularity**, and an appetite for **investing in ageing assets to reach new standards**, the labour shortages and anti-mining sentiment will be improved, but only through **strong and adaptable leadership**.

Digitalisation and Technology Investment

Mining and metals have historically been the first to come second when it comes to adopting new technology, with digitalisation being at the forefront of the challenges identified which the industry has faced and will continue to face over the coming years. **Digitalisation**, including **autonomous vehicles** and **AI** were identified as one of the key topics, with many agreeing that the current leaders in industry overall are not equipped to talk about the solutions yet.

There is an urgent need as an industry to identify and tackle the deficiencies in the digitalisation journey and focus on the lowest hanging fruit to begin the transition. It was suggested that the entire industry would benefit from adapting a **start-up mentality** and approach to tackling the challenges with the larger firms having the funds to engage in some **trial and error**.

There is an understanding in the market that majors cannot '*put their eggs in the same basket*' and will need to diversify their approach as some of these investments fail.

Current Leadership Trend

While the trend to attract Executives with engineering and geotechnical backgrounds has transitioned to include those with more **finance and technology backgrounds**, and a recognition that technology is the future, the **generational gap** in industry leaders is still evident. The leaders who led the industry where it is today are recognised as exceptionally bold, hard edged and operationally focussed. The traditional autocratic leadership model used historically in Mining and Metals has rapidly moved out of favour and a recognised need for enhanced people oriented, inspiring change leaders are required to not only drive the industry challenges from the front; but to inspire others to follow.





With mixed views on the capabilities of the current leaders to achieve the targets set by the industry, there was a recognition of the presence of some inspiring leaders already in the industry and particularly those from outside of the industry joining. There was however a united view that there are some competencies lacking overall in the current leaders in the industry in comparison to other industries. Acknowledgment was given that the industry has previously hired risk averse leaders who have served their organisations well however it is time to take further risks.

Finding Executives with the technical, people oriented, financial and strategic ability to lead the organisation in the changing industry is still key, however the emphasis has moved further than ever to visionary and democratic leadership styles; engaging with people more and gaining valuable advice from those outside industry. There has been a shift from skills-driven leadership selection to a more behavioural driven selection of leaders.



There has been a shift from skills-driven leadership selection to a more behavioural driven selection of leaders.

Leadership Strengths

Comparative to other industries, mining leaders are well known for being exceptional in addressing international *Health, Safety and Environment* (HSE). Like the Oil & Gas and Chemical industry, the focus has been on attracting and developing leaders with a safety mindset as a key priority, particularly in the operating mining companies as well as a strong understanding and ability to optimise supply chains.

The mining and metal industry leaders show great strength in having a truly international mindset who, in most cases, they recognise that they are a guest in the country they operate in, and take this responsibility seriously. The industry leaders have an international literacy unlike many others and are considered **competitive and agile**.

Cognitive Diversity

A study conducted by BCG found that businesses with **more diverse management** teams earned 19% more **revenue**¹⁰. Additionally, McKinsey found that teams with **gender and ethnic diversity** were 35% more likely than those without such diversity to **outperform** the median company in their industry¹¹.

Of particular note was the increasing need for **cognitive diversity in leadership within industry**. Cognitive diversity being a variety of people with different thought patterns, ideas, problem-solving methods, and mental perspectives. Research indicates that cognitively diverse teams solve problems faster and get results¹²⁻¹³.

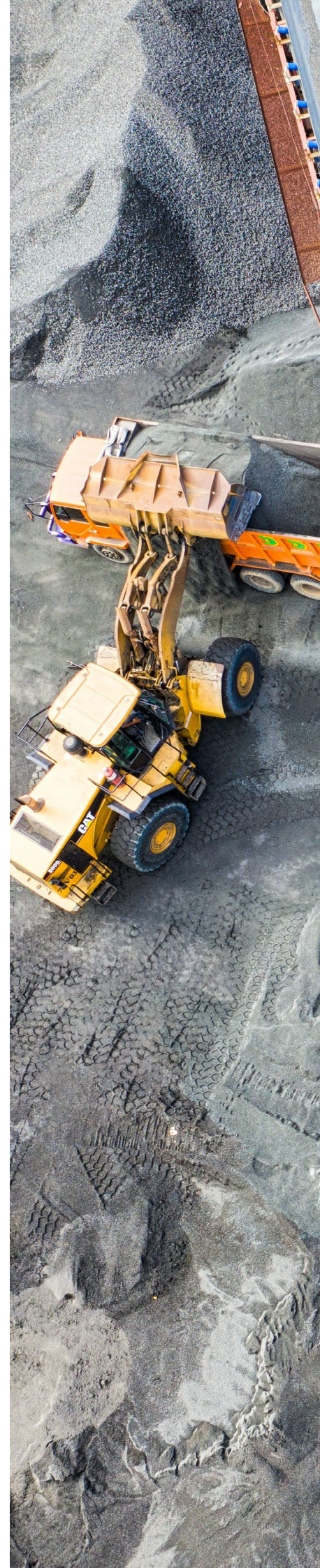
It was noted that the industry has a potential to continue to pursue leaders from industry which could lead to inward looking management and shareholders. The need to attract from outside the industry and focus on training and development to **diversify the talent pool** should be on the agenda of every organisation in the industry. It is noted however that these risks to diversify should be approached with caution to not destabilise the organisation but enhance the growth and impact on the communities it serves. Some noted that the true test of leadership can meet immediate needs and keep long term requirements at the forefront beyond just focussing on carbon.

The current industry business operating systems to motivate others, are still predominately built around the carrot and the stick, or the transactional leadership style⁴. This method however relies on the sole task as a leader to be compliance rather than motivation. It is well known that rewards often narrow our focus on the achievement of an objective rather than broaden our perspective⁵⁻⁶. The desire to make or support those making impactful change are regularly quoted as being the reason people go to work. **Inspirational and impactful leaders** are required now, more than ever, to lead the current and future workforce to achieve socially and environmentally desirable, as well as operational and stakeholder return, objectives. Never more have these two key factors been so intrinsically linked. With increasing investment criteria being aligned to ESG factors, it will be difficult to see how those who don't adjust will survive.

In Sam Houston's Thesis,

“

half of the interviewees mentioned that there was a perception that senior leaders in the mining industry were “pale, male and stale” and although there was some progress to change the demographic balance within the industry, the industry needs more cognitive diversity being brought in from outside of mining.”





Leadership Competencies

For the industry to meet the challenges of the future, our leaders need to **diversify**, and our organisations need to **shift focus**. Firstly, mining executives will need to align existing talent in the organisation to ascertain capability to achieve future objectives while being able to meet the challenges of today.

Secondly, talent will need to be developed to meet the needs of the future in areas where it does not already exist. Lastly, we need to focus on ‘*competence over confidence*’ as critical criteria when making leadership hiring decisions, as well as hiring for potential success using outcome based assessments, as what has got a leader to where they are today, will not necessarily serve them to where they need to be tomorrow.



we need to focus on ‘*competence over confidence*’ when making leadership hiring decisions

Capability to achieve success as an individual comes down to two clear assessment criteria, one being **skills / experience** and the other being **behavioural competence**. Some of the key competencies for executives in mining and metals suggested during the research included the need to be:

- 1. Innovative**
- 2. Responsive**
- 3. Engaging**
- 4. Communicative**
- 5. Influential**
- 6. Trusted**
- 7. Encouraging (Diversity of Thought)**
- 8. Courageous (to act)**
- 9. Resilient**
- 10. Humble**
- 11. Honest**
- 12. Competitive**
- 13. Accountable**
- 14. Curious**
- 15. Cognitively Respectful**



As with all leaders, it was suggested that the mining and metal leaders need to focus on being concerned with getting it right as an industry; rather than the need to be personally right.

In Sam Houston's research, he concluded:



The objective of this research was to understand the mining industry's appreciation of whether cognitive diversity in senior management teams can add value through innovation and improved performance in the mining industry...

...Awareness in the industry of cognitive diversity is low and it is crucial to raise the awareness of the benefits that cognitive diversity could bring to teams and organisations. Interviewees confirmed literature review findings that senior leaders in mining lack support mechanisms to be able to measure, manage and leverage cognitive diversity during recruitment and retention. Interviewees overwhelmingly supported the development and management of cognitive diversity and inclusion, and corroborated that this is seen by leaders in mining as pivotal for the industry to be successful in the future."¹⁵



There is no 'off the shelf' solution to accurately predict leadership competence as every situation is different.

There is no 'off the shelf' solution to accurately predict leadership competence as every situation is different. Communication style, organisational structure, employee engagement are just a few examples in an endless list of factors in an organisation that can impact on a leader's success. In contrast, there is no 'one size fits all' to determine capable leadership either; however, there are definite traits across all industries globally, which can support the prediction of a good leader.

Organisations need to focus now, more than ever, on educating decision makers internally, and **implementing a science backed assessment method** to contextually analyse behavioural competencies as well as skill/experience, one that has proven, measurable results.

Competency Acquisition and Development

Among many established models for talent acquisition and development, reference to the industry transformation as an opportunity to acquire and develop new and diverse talent was recognised. During IBM's transformation from a hardware manufacturer⁷ to a service-based organisation, as part of this transition, the organisation **mapped internal talent** where they saw a radical different mindset to develop and promote internally.

Also noted was the opportunity that **generational differences** provide to an organisation with reference to the traditional model of **apprentice and mentor**. As technologically advanced junior employees enter the organisation, this creates an opportunity for adopting a more **modern apprenticeship model**⁹.

As more experienced leaders become the apprentices to the technologically advanced young adults entering an organisation, a success factor in a transformation could come down to harnessing this new model as a replacement, thereby capturing the value from this skilled talent pool.

Cognitive Diverse Leadership Attraction

Diversity, Equity, and Inclusion (DEI) overall is a critical strategic focus for all organisations, and never more important in mining and metals today. McKinsey released an article in 2021⁸ highlighting that women, for example, represent an estimated 8% to 17% of the global mining workforce and with female representation within mining company C-Suites sitting at only 13%.

As a result of research conducted by McKinsey, it was found that women report leaving or wanting to leave the industry because the qualities that originally attracted them to the field, are no longer attractive. It was identified that the top reasons for leaving involved **no longer finding their work intellectually challenging** and having the perception that there are **fewer advancement opportunities than there are for their male counterparts**.

So, despite actively attracting diverse talent, there still lacks the cognitive diversity needed in the organisation to support inclusion. Actively **pursuing cognitive diversity at a leadership level** is key in addressing inclusion within the organisation.





Leadership Selection Science in Mining & Metals

Future Leadership capability within the mining and metals industry is at an all-time low. This is a bold statement and although not true for every organisation, is true for most.

Traditionally, we have seen a lack of cognitive diversity in leadership within industry. The industry has found favour in circulating the same talent from company to company, each one benefitting from the others industry information and people development investment, however, rarely has the industry sought talent from outside their known networks.

Leadership is not an island, and **the misconception that a leader needs to have direct knowledge of the product, the market or the competitors is outdated**. Although beneficial, it should not be considered the sole predictor of success in another leadership position. Leadership potential needs to be addressed. Leaders of today have the world at their fingertips and the ability to gain information, expertise and network rapidly. The ability to acquire knowledge, engage and build rapport with others and build high performing teams with the right capabilities to achieve the set objectives are key.



The ability to acquire knowledge, engage and build rapport with others and build high performing teams with the right capabilities to achieve the set objectives are key.

With change, comes threat and opportunity. It is a fact. With the complex nature of business today and the need to make the right people changes in the organisation for the biggest impact, the Mining & Metals industry needs to engage the right tools to **de-risk and to predict leadership success**. The industry needs to move away from the little 'black book' of contacts to focus on attracting global non-industry talent with the right competencies to lead and inspire from the front. There is no plug and play solution as a leadership hire and they all come with risk; the overall cost of a failed leadership hire can be astronomical although the right Executive can be truly transformational. Not only are the costs attributed to the direct hire of an individual but have wider reaching repercussions that affect the whole organisation.



Luke Robbins is an Executive Search and Leadership Advisor, leading the Natural Resources Sector within Mercuri Urval and has experience in the broader industrial sectors. With close to 20 years' experience in industry, Luke has worked with leading global firms supporting multinational and local organisations in generating value through both search, selection and leadership advice. From a mining family, originally from Perth, Luke has lived and worked across APAC, Europe and Asia and is a certified Assessor.

Mercuri Urval is one of the leading Executive Search and Leadership Advisory firms globally with over 50 years in leadership search and selection. With an ISO accredited process and 94% of our leadership recommendations succeeding, our global Natural Resources Group supports organisations in de-risking leadership hires and supporting them to informed decisions on leaders that outperform.

www.mercuriurval.com

For further information please contact luke.robbs@mercuriurval.com

Acknowledgements

Christian Spano

Director Innovation, ICMM

Dylan Webb

CEO, Datamine

Gervais Jacques

Chairman, Nemaska Lithium & CEO, 5N Plus

Jan Lueder

CEO, Thyssenkrupp Mining Technologies

Janine Herzig

Former President & Chair of the Board, AusIMM

Jennifer Koury

Vice Chair Women in Mining Canada

Jody Kuzenko

President & CEO, Torex Gold Resources

Karen Trenton

Former Senior Vice President HR, Sherritt International

Michael Rowe

HR Business Director, Resource Capital Funds

Sam Houston

Principal and founder, Strategist Solutions

Samir Cairae

Managing Director Atlantic, Rio Tinto Aluminium

Sanjeev Gandhi

CEO, Orica

Steven Din

CEO Nimba Development Company

Tim Daffern

Vice President Mining, ICL Group

References

1. www.icmm.com (n.d.). ICMM • Our commitment to a goal of net zero by 2050 or sooner. [online] Available at: <https://www.icmm.com/en-gb/environmental-stewardship/climate-change/net-zero-commitment> [Accessed 4 Feb. 2022].
2. PricewaterhouseCoopers (n.d.). Mine 2020. [online] PwC. Available at: <https://www.pwc.com/gx/en/industries/energy-utilities-resources/publications/mine.html>
3. Reuters (2021). *World's largest miners pledge net zero carbon emissions by 2050*. Reuters. [online] 6 Oct. Available at: <https://www.reuters.com/business/sustainable-business/worlds-largest-miners-pledge-net-zero-carbon-emissions-by-2050-2021-10-05/>
4. Kaleem, Y. (2016). (PDF) *Leadership Styles & Using Appropriate Styles in Different Circumstances*. [online] ResearchGate. Available at: https://www.researchgate.net/publication/323797001_Leadership_Styles_Using_Appropriate_Styles_in_Different_Circumstances
5. Lai, L. (2017). *Motivating Employees Is Not About Carrots or Sticks*. [online] Harvard Business Review. Available at: <https://hbr.org/2017/06/motivating-employees-is-not-about-carrots-or-sticks>
6. Frangieh, M. and Rusu, D. (2021). *The Effect of the Carrot and Stick Transactional Leadership style in Motivating Employees in SMEs*. *Review of International Comparative Management*, [online] 22(2). Available at: <http://www.rmci.ase.ro/no22vol2/10.pdf>
7. Huge Payoff for I.B.M. After a Shift. (2010). *The New York Times*. [online] 20 Jan. Available at: <https://www.nytimes.com/2010/01/20/technology/companies/20bluweb.html>
8. Jackson, J. (2020). *Adopting a modern apprenticeship model*. [online] Chief Learning Officer - CLO Media. Available at: <https://www.chieflearningofficer.com/2020/03/31/adopting-a-modern-apprenticeship-model/> [Accessed 22 Feb. 2022].
9. www.mckinsey.com (n.d.). *Why women are leaving the mining industry and what mining companies can do about it* | McKinsey. [online] Available at: <https://www.mckinsey.com/industries/metals-and-mining/our-insights/why-women-are-leaving-the-mining-industry-and-what-mining-companies-can-do-about-it>
10. Lorenzo, R., Voigt, N., Tsusaka, M., Krentz, M. and Abouzahr, K. (2020). *How Diverse Leadership Teams Boost Innovation*. [online] United States - EN. Available at: <https://www.bcg.com/en-us/publications/2018/how-diverse-leadership-teams-boost-innovation>
11. Hunt, V., Layton, D. and Prince, S. (2015). *Why diversity matters* | McKinsey. [online] www.mckinsey.com. Available at: <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/why-diversity-matters>
12. Fortune. (n.d.). *Commentary: Why the best leaders build teams that disagree*. [online] Available at: <https://fortune.com/2021/08/11/cognitive-diversity-leadership-styles-decision-making/> [Accessed 22 Feb. 2022].
13. Bourke, J. (2019). *The diversity and inclusion revolution: Eight powerful truths*. [online] Deloitte Insights. Available at: <https://www2.deloitte.com/us/en/insights/deloitte-review/issue-22/diversity-and-inclusion-at-work-eight-powerful-truths.html>
14. Canada, N.R. (n.d.). *Help Wanted: 100,000 Workers Needed to Sustain Canada's Modern Mining Industry* | Mines Canada. [online] www.minescanada.ca. Available at: <https://www.minescanada.ca/en/content/help-wanted-100000-workers-needed-sustain-canadas-modern-mining-industry>
15. Houston, S. (2021). *How cognitive diversity in senior management teams can add value through innovation and improved performance in the mining industry*. [online] dspace.lib.cranfield.ac.uk. Available at <https://dspace.lib.cranfield.ac.uk/handle/1826/17902> [Accessed 26 May 2022].



May 2022