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Tracking the trends 2023
The indispensable role of
mining and metals

Introduction

The indispensable role of mining and metals

The world is at a critical point in time, socially, environmentally, and economically. The latest projections by the United Nations suggest that the global population could hit 8.5 billion in 2030 and 9.7 billion in 2050.¹ With a growing population comes a growing demand for the metals and minerals that underpin societal progress. From civil infrastructure to transportation, and technology to agriculture, the products that the mining and metals sector produces, support and enable virtually every sector globally.

The paradox is that, while the need for mined products has never been greater, public opposition to mining activities has never been higher. The green energy transition is expected to be a mineral-intensive one—the International Energy Agency estimates that the demand for minerals used for electric vehicles and battery storage will grow tenfold by 2040.² Yet, at the same time, approvals for projects that could become important providers of critical minerals, such as lithium (see Rio Tinto's Jadar project in Serbia³), are being hampered due to protests. The juxtaposition between need and want is stark, and the gulf between them creates a very real threat to global climate change mitigation.

For too long, the stories told about the mining and metals industry have centered on the negatives. However, the opportunities

that mining and metals companies can offer to provide for and enhance the prospects of the population, as well as the environments they reside in, are vast. Mining underpins approximately half of the global economy⁴ and therefore, it has the greatest potential of any industry to positively influence social, environmental and economic development.

This year, Deloitte Global's Tracking the trends 2023 focuses on the indispensable value that mining and metals companies can deliver, with the emphasis on taking action now for a better tomorrow. In each of these 10 trends, our network of Mining & Metals sector professionals globally offer up expertise, insights, and examples to spark conversations about how mining and metals organizations can make a difference in the world.

Changing perceptions of the industry by putting people and natural capital front and center in strategies; designing organizations and products for circularity; creating safer, more respectful places of work; and innovating together to make the possibility of ultra-efficient mines a reality will be key to creating a healthy, regenerative ecosystem inclusive of people, planet and industry.

We're excited to discuss these trends with you and explore how they will shape your company's future. Thank you for your ongoing support.

Endnotes

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Trend 8

Layering safety for greater sustainability

Making workforce health and safety fit for the future

Nicki Ivory, partner, Mining & Metals Leader, Deloitte Australia

René Waslo, partner, Global Risk Advisory & Cyber Energy, Resources & Industrials Leader, Deloitte Global

Mining and metals companies have made significant strides in improving physical safety at their operations over the past 20 years, and this is evident in ever-decreasing rates of fatalities and serious injuries. For example, in the United States, statistics from the National Institute for Occupational Safety and Health (NIOSH) show that the number of occupational fatalities in mining fell 59% between 2010 and 2020,¹ while in Australia, between 2003 and 2015, the fatality rate in mining decreased 65%.²

This progress can be partly attributed to the proliferation of automated and digitally enabled mining technologies, which now underpin production at almost every operation. But improvements are mainly thanks to the way that physical safety has been embedded into workplace culture; today it's the number one concern when setting foot onsite.

However, safety is evolving. There are now new aspects that must be considered to keep people safe—and to continue building diverse, respectful and inclusive workplaces that help enable each employee to achieve their maximum potential.

The positive power of mining and metals

The ways in which mining and metals organizations tackle other persistent health and safety concerns may set expectations for other industries too. By taking a proactive and transparent stance in eradicating unacceptable behaviors, such as bullying and cultural discrimination, in the mining industry, there is also a chance to elevate awareness as well as visibility of potential strategies and solutions in sectors such as infrastructure, construction and oil and gas.

Extending the physical safety focus

Recently, there has been a renewed focus on people in mining and metals and the value that they provide to organizations, with the realization that technology is not a silver bullet for sustainability. The understanding that greater diversity, equity and inclusion (DEI) makes for an advantaged and, most importantly, happy workforce has pushed many companies to set ambitious targets to diversify their workforces. The wider community has welcomed these goals, however, progress toward them has been slow thus far.

During this time, there has also been a rise in reports of sexual harassment, bullying and discrimination in major jurisdictions. The 2022 "Enough is enough" report,³ following a Western Australia Parliament inquiry into sexual harassment against women in Australia's fly-in-fly-out (FIFO) mining industry, confirmed these problems.

As a result, organizations are now investing significant time and resources to understand these inherent concerns and how best to combat them. Some have even chosen to conduct internal inquiries and openly share their findings, encouraging greater transparency and accountability in other organizations too. Rio Tinto's workplace culture report,⁴ which was published in February 2022 was something of a watershed moment for the mining and metals sector in this regard.

Taking responsibility for poor past performance and detailing corrective and tangible actions sends a powerful message to the industry's workforce, to its stakeholders and to the general public that change is truly underway.

Incorporating psychological and cyber safety

Both physical and psychological safety are prerequisites for sustainable mining activities—people need to feel safe as well as be safe to perform their roles to the fullest, to feel valued and to achieve job satisfaction.

However, workplace health and safety is evolving, and in today's digitally connected world, safety is also a virtual matter. In 2021, the average number of cyberattacks and data breaches increased by 15.1% from 2020.⁵

Data security doesn't just impact companies through the psychological safety of their workforces who need to know that their personal data is secure. The physical safety of workers onsite can also be compromised through operational technology (OT) security breaches. The 2012 Shamoon cyberattack on oil producer Saudi Aramco demonstrated how the cyber environment can be manipulated to pinpoint and launch physical attacks on key operational assets.⁶ The asymmetric attack took down more than 30,000 computers and put 10% of the world's oil supply at risk.⁷

Data security can also impact organizations' relationships with customers and other third parties. Safety is essential to trust, and trust determines who companies collaborate with and to what extent. Implementing a comprehensive cybersecurity plan will open new business opportunities for mining and metals companies.

The criticality of cultural safety

Cultural safety is another relatively new but important concept. Respecting traditional custodians and their environments, as well as the cultures and communities in which miners and metal providers operate is non-negotiable in winning trust and maintaining a license to operate. It's also key in boosting Indigenous employment in mining, which again, is important to operational and environmental sustainability.

A culturally safe workplace helps people call out safety concerns and can lead to decreased injury. It also attracts, engages, and retains diverse talent when people feel valued, allowing them to bring their whole selves to work. Increasing the number of Indigenous people in leadership positions is key in fostering cultural safety, and mining and metals companies should actively look for opportunities to recruit or upskill and support candidates into these roles. Government funding and initiatives, such as the Australian government's US\$14.2 million (AU\$21.9 million) Indigenous Leadership and Governance package, which was announced in February 2022,⁸ can also help to accelerate this.

Nicki Ivory, Partner, Mining & Metals Leader, Deloitte Australia, explains: "A culturally safe workplace creates an environment where people are respected, supported, heard, and celebrated whatever their cultural identity. To be culturally safe, people need to know that their whole health and well-being is understood and supported."

Company culture is also defined by the stories that organizations tell about themselves, and mining and metals companies should provide opportunities for minority groups within their workforces to be an integral part of the industry's narrative, both internally and externally. They can do this through helping to ensure that contributions from underrepresented groups, organizations, and businesses are recognized and honored through organizational celebrations and communications.

Organizations already know what to do

To maintain the high standards that they have set for themselves, mining and metals companies must continue to evolve their approach to workplace health, safety and culture. Most already know how to instigate positive change; the key to success lies in extending the laser-like focus from physical safety to include these newer types of safety.

In the 2022 report, [Safety 4.0: A new horizon for mining safety](#), Deloitte Australia outlined some of the opportunities linked to improvements in four types of safety.⁹

- 1. Physical safety:** Attracts workers from many walks of life whose skills (both emerging and traditional) are critical to mine production.
- 2. Psychological safety:** Attracts innovation and diversity of thinking, encouraging workers and partner organizations to explore new ways of working.
- 3. Cultural safety:** Encourages communities to welcome mining organizations onto their land and into their regions. This provides the foundation for strong working relationships across cultures and fosters opportunities for collaboration and streamlined approval processes.
- 4. Cyber safety:** Enables workers, customers, suppliers and shareholders to place their trust in an organization, both with their confidential information and the responsibility for taking care of their careers, businesses, and investments.

René Waslo, Partner, Global Risk Advisory & Cyber Energy Resources & Industrials Leader, Deloitte Global says: “These four layers of safety link and build upon each other to create foundations for a secure organization. Mining and metals leaders who can seamlessly integrate and have genuine engagement, action, and advocacy for all aspects of safety will lead their organization toward a more sustainable, secure, resilient, and prosperous future.”

How to widen the mining and metals safety lens

- **Double down on physical safety:** Mining and metals companies should continue to put physical safety at the forefront of operational environments, inclusive of accommodation and living facilities, transportation and offices. Regularly review and revise policies, systems, processes, structures, worksites, symbols, norms and accepted daily behaviors to help ensure people are always safe.
- **Budget for inclusivity:** Physical, psychological and cultural safety require workplaces that accommodate different types of diversity and ways of working. Some changes will be more costly than others. However, these should be seen as an investment rather than an expense and budgeted for accordingly.
- **Introduce screening for contractors:** Many contractor agencies do not carry out basic background checks on new hires. Mining and metals organizations should push for these to be introduced and, where necessary, carry out checks internally to avoid rehiring contractors who have previously violated safety rules.
- **Embrace collaborative learning:** If matters do arise, it's important for businesses to own them and share their learnings and actions openly to reduce the potential for recurring concerns. Also, be willing to learn from the experiences of other organizations in the broader industrial landscape and adjacent sectors.
- **Test procedures and governance:** Any reports of inappropriate behaviors, regardless of whether they are from an employee or third party, must be treated with gravity, investigated swiftly, and ensure appropriate action is taken. This requires watertight governance that can be tested through an internal audit once policies, procedures and responsibilities are determined.
- **Communicate the importance of cyber in workplace health and safety:** Cyber safety underpins the entire organization, and each employee must share in its responsibility. Make cybersecurity an integral part of health and safety training and briefings, and explain the impact a data breach could have on individuals' mental and physical health. Identifying any potential threats and implementing controls as soon as possible will help to prevent incidents.

Endnotes

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Global contacts

Stanley Porter

Global Leader—Energy, Resources & Industrials

Deloitte Global

+1 301 793 4170

sporter@deloitte.com

Ian Sanders

Global Sector Leader—Mining & Metals

Deloitte Global

+61 3 9671 7479

iasanders@deloitte.com.au

Regional/Country Mining & Metals Leaders

Africa

Andrew Lane

+27 11 517 4221

alane@deloitte.co.za

Australia

Nicki Ivory

+61 422 024 597

nivory@deloitte.com.au

Brazil

Patricia Muricy

+55 21 3981 0490

pmuricy@deloitte.com

Canada

Van Ramsay

+1 416 998 4905

vramsay@deloitte.ca

Chile

Pedro Bravo

+ 56 227 297 361

pbravo@deloitte.com

China

Kevin Bin Xu

+86 10 8520 7147

kxu@deloitte.com.cn

Francophone Africa

Damien Jacquart

+33 1 55 61 64 89

djacquart@deloitte.fr

India

Rakesh Surana

+91 22 6122 8160

rvsurana@deloitte.com

Indonesia

Cindy Sukiman

+62 21 5081 8000

csukiman@deloitte.com

Japan

Dai Yamamoto

+815030859802

dai.yamamoto@tohmatsu.co.jp

Mexico

Valeria Vazquez

+52 55 5080 7548

vavazquez@deloittemx.com

Peru

Antonio Mella

+51 1 211 8532

amella@deloitte.com

Poland

Zbig Majtyka

+48 32 508 0333

zmajtyka@deloittece.com

Southeast Asia

Jarrold Baker

+6598961225

jarbaker@deloitte.com

Switzerland

Peter Vickers

+41767803059

pgvickers@deloitte.ch

Turkey

Elif Dusmez Tek

+90 312 295 47 00

etek@deloitte.com

United Arab Emirates

Bart Cornelissen

+971 4 376 8888

bpcornelissen@deloitte.com

United Kingdom

Roman Webber

+44 20 7007 1806

rwebber@deloitte.co.uk

United States

Amy Chronis

+1 713 982 4315

achronis@deloitte.com

Authors & Acknowledgement

Trend 1: Valuing nature

Ian Sanders | Global Mining & Metals leader, Deloitte Global | iasanders@deloitte.com.au

John O'Brien | partner, Climate & Sustainability, Deloitte Australia | johnobrien@deloitte.com.au

Michael Wood | partner, Climate & Sustainability, Deloitte Australia | michwood@deloitte.com.au

Trend 2: Conscious circularity

Georgine Roodenrys | partner, Sustainability & Climate Change National Circular Lead, Deloitte Australia | groodenrys@deloitte.com.au

Andrew Lane | partner, Energy, Resources & Industrials Leader, Deloitte Africa | alane@deloitte.co.za

Patricia Muricy | partner, Energy, Resources & Industrials Leader, Deloitte Brazil | pmuricy@deloitte.com

Thank you for the contribution of Celia Hayes, director, Risk Advisory, Deloitte Australia to this trend.

Trend 3: Driving down embodied carbon in metals

Dr. Adriaan Davidse | director, Consulting, Deloitte Canada | adavidse@deloitte.ca

John O'Brien | partner, Climate & Sustainability, Deloitte Australia | johnobrien@deloitte.com.au

Dr. Andrew Zoryk | director, Consulting, Deloitte Germany | azoryk@deloitte.de

Thank you for the contribution of Michael Wood, director, Risk and Financial Advisory, Deloitte Australia to this trend.

Trend 4: Collaborate, incubate, accelerate

Andrew Swart | partner, Energy, Resources & Industrials Leader, Deloitte Canada | aswart@deloitte.ca

Van Ramsay | partner, Mining & Metals Leader, Deloitte Canada | vramsay@deloitte.ca

Christopher Lyon | partner, Energy, Resources & Industrials Leader, Deloitte Chile | clyon@deloitte.com

Trend 5: Building resilient supply chains

René Waslo | partner, Global Risk Advisory & Cyber Leader Energy, Resources & Industrials, Deloitte Global | graeri@deloitte.com

John Diasselliss | principal, US Mining Leader, Deloitte & Touche LLP | jdiasselliss@deloitte.com

Thank you for the contribution of Matthew Barbera, senior manager, Risk and Financial Advisory, Deloitte US to this trend.

Trend 6: Making change more holistic

Roland Labuhn | partner, Consulting, Deloitte Canada | rlabuhn@deloitte.ca

Herman Lombard | partner, Consulting, Deloitte Canada | hlombard@deloitte.ca

Dr. Adriaan Davidse | director, Consulting, Deloitte Canada | adavidse@deloitte.ca

Trend 7: Rethinking external talent pathways

Janine Nel | partner, Consulting, Deloitte Canada | jnel@deloitte.ca

Pedro Bravo | partner, Mining & Metals Leader, Deloitte Chile | pbravo@deloitte.com

Thank you for the contribution of Vanessa Do Couto, manager, Consulting, Deloitte Canada to this trend.

Trend 8: Layering safety for greater sustainability

Nicki Ivory | partner, Mining & Metals Leader, Deloitte Australia | nivory@deloitte.com.au

René Waslo | partner, Global Risk Advisory & Cyber Energy, Resources & Industrials Leader, Deloitte Global | graeri@deloitte.com

Trend 9: Transparency equals trust

Roman Webber | partner, Mining & Metals Leader, Deloitte UK | rwebber@deloitte.co.uk

Valeria Vazquez | partner, Energy & Resources Leader, Deloitte Mexico | vavazquez@deloittemx.com

Andrew Stevenson | director, Tax, Deloitte UK | astevenson@deloitte.co.uk

Trend 10: The power of cloud

Dan Newman | partner, Cloud Transformation Leader, Deloitte Australia | danneyman@deloitte.com.au

Rakesh Surana | partner, Mining & Metals Leader, Deloitte India | rvsurana@deloitte.com

Thank you for the contribution of James Allan, partner, Consulting, Deloitte Australia to this trend.



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