



**QUEENSLAND GOVERNMENT  
DEPARTMENT OF RESOURCES  
CONSULTATION ON QUEENSLAND RESOURCES INDUSTRY  
DEVELOPMENT PLAN**

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## Contents

About AusIMM .....	3
Our Voice on the Queensland Resources Industry Development Plan .....	3
Overview: Imperatives for a Strong Queensland Resources Sector.....	4
Critical Enabler: The Future Workforce .....	5
Forecasting .....	5
Education, skills and training .....	6
Attraction and retention.....	7
Equality of opportunity .....	7
Professional recognition and mobility .....	9
Critical Enabler: Professional and technical excellence.....	10
Professional codes and standards .....	10
Professional best practice.....	11
Technical standards.....	11
Domestic standards development.....	12
International standards leadership.....	12
Critical Enabler: Environmental and Social Responsibility.....	13
AusIMM Social Responsibility Framework .....	13
Professional Certificate in Social Responsibility.....	14
Social Licence to Operate Forum .....	15
Critical enabler: Investment and International Engagement .....	15
Attracting investment through international engagement .....	15
Key challenges for emerging commodities .....	16

## About AusIMM

The Australasian Institute for Mining and Metallurgy (AusIMM) is the peak body for resources professionals, with over 13,000 members across more than 110 countries. Established in 1893 and operating under a Royal Charter, we represent professionals across all levels of the mining industry, working from exploration through to delivery, and in disciplines ranging from mining engineering to geoscience, health and safety, finance, government and academia.

As the trusted voice in resources, we exercise shared leadership for our sector and global community. We advance our sector's continued technical and professional leadership, champion community understanding and support for the sector, and work with governments to develop policies and implement programs for the advancement of our industry and community.

In Queensland, we are proud to represent more than 2,700 members working across the state, from the North West Minerals Province through to key industrial hubs including Townsville, Mackay, Rockhampton and the South East region. Our Queensland membership reflects the whole of the sector, the breadth of commodities we produce (both established and emerging), and the full spectrum of professionals whose expertise sustains our industry and community.

We are pleased to partner and work in close collaboration with leading Queensland institutions active across all levels of the minerals value chain. This network of partnerships and kindred institutions includes the Queensland Government, with whom we are pleased to have collaborated in advancing the sector for the benefit of the community.

## Our Voice on the Queensland Resources Industry Development Plan

This submission comes in response to the consultation process currently being undertaken by the Queensland Government (Government) through the Department of Resources (Department), in relation to the development of a Queensland Resources Industry Development Plan (QRIDP).

The Queensland Resources Minister has explained that the QRIDP will set out a long-term vision for the state's resources sector. The QRIDP will chart key focus areas, and identify the mechanisms through which industry, professionals, communities and the Government can collaborate to pursue this shared vision.

In this submission, we canvass the key imperatives for a prosperous and sustainable Queensland resources sector, and provide an overview of how AusIMM, Government and our partners across industry can work together to take advance our sector for the benefit of the community. We frame our advice around four key themes:

- 1. Future workforce:** We share our insight regarding needs analysis, attraction, retention, skills development, equality of opportunity and professional mobility.
- 2. Professional and technical excellence:** Leading practices and technical expertise are core to our industry's global competitiveness. We share our insights on the priorities for career-long learning, professional standards, innovation and development.
- 3. Environmental and social responsibility:** Community, government and investors demand the highest standards of environmental and social performance from our industry. We outline our work to articulate environmental, social and governance standards, equip professionals to meet those standards, and drive collaboration.
- 4. Securing investment:** We provide our advice on mechanisms to further strengthen the Queensland industry's international profile and investment attractiveness, and ensure the business operating environment is primed to meet growing demand.

AusIMM are pleased to be working with the Government and Department on this substantial policy initiative. We look forward to continuing to work together as the plan is drafted in the latter half of this year, and implemented in the years to come.

## Overview: Imperatives for a Strong Queensland Resources Sector

The Queensland resources sector is a major contributor not only to the economic and social prosperity of the Queensland community, but to all Australians. Indeed, the resources provided by the Queensland sector are essential for all aspects of modern life, enabling economic growth, social development and technological advancement worldwide.

In 2020-21, Queensland's mineral commodities accounted for more than 80% of the state's royalty revenue, contributing more than \$2.1 billion to the Queensland economy. AusIMM project that this contribution will grow at more than 16% annually through to 2023-24, driven by the global economic rebound from COVID-19 and growing demand for key new economy minerals.<sup>1</sup>

The Queensland mining sector's stability throughout the pandemic – and clear growth pathway – highlight the sector's role in providing diverse and expanding **employment**, opportunities supporting **economic growth and resilience**, and generating **innovations** that will underwrite Queensland's economic and social prosperity for generations to come.

AusIMM highlight in this submission several critical enablers for a prosperous and sustainable resources sector in Queensland. We focus on the shared leadership roles to be played by government, industry and resources professionals, as summarised below.

Critical enabler	Recommendations to Government
<b>Future workforce</b>	Join with industry to facilitate workforce forecasting
	Work with industry to upskill and cross-skill professionals
	Invest in research to understand career decision-making
	Invest in programs to educate and raise awareness amongst young Queenslanders about the opportunities in resources
	Partner with industry to co-deliver programs that create opportunity and support career progression for diverse professionals
	Continue reforms to support professional recognition and mobility
<b>Professional and technical excellence</b>	Align regulatory frameworks to the highest standards of professional and technical practice
	Join with industry in developing and championing Australian standards on the global stage
<b>Environmental and social responsibility</b>	Join with industry and professionals in articulating standards, developing accountability frameworks and equipping resources professionals to advance environmental and social performance
<b>Securing investment</b>	Leverage international conferences, events and other for a to attract investment and increase awareness of Queensland resources
	Pursue opportunities to increase access to emerging global markets
	Deliver fit-for-purpose regulatory frameworks that balance efficiency with due economic, social and environmental protection

We expand on each of these areas in the sections that follow.

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<sup>1</sup> Queensland State Government 2020, 'Budget Strategy and Outlook 2020-21, Queensland Treasury, available at <https://budget.qld.gov.au/budget-papers>.

## Critical Enabler: The Future Workforce

A skilled and sustainable workforce is a critical enabler for the continued success of the Queensland resources sector, and one which demands collaboration and coordination across the industry and broader sector, including academia and government.

The pace and scale of change in the resources industry has never been greater. The Australian mining industry, and with it the Queensland sector, is becoming more sophisticated, automated and technologically advanced as it develops more efficient operational methods. As the sector evolves, mining professionals will require different skillsets to thrive and maintain Australia's global competitiveness.

This trend of continued development is, however, met by a corresponding suite of challenges around attracting and retaining talent, particularly as Australian mining companies find themselves in direct competition with employers across a range of other industries. Queensland's mining and METS expertise is world-class, and ensuring this continues is vital not only to supporting operational outcomes, but to attracting investment, extending the state's global competitiveness, expanding capacity in emerging markets and commodities (particularly New Economy Minerals) and providing enduring benefits to the community

AusIMM recognise several key areas in which action is required, to ensure a sustainable and agile future resources workforce:

- **Forecasting**, to ascertain the future needs of the industry, map expected growth in the resources workforce and identify potential gaps and skills shortages
- **Education, skills and training**, with an expansion of education pathways to diversify progression and entry options across all mining-relevant fields
- **Attraction and retention**, to improve the perception of the resources sector and increase awareness of the breadth of established and emerging career opportunities, as well as the role of mining in driving future economic and social prosperity
- **Equality of opportunity**, which requires the sector to adopt a broad understanding of the diversity that exists within the community, recognise the value of accessing diversity of thought and background within the workforce, and work to increase the inclusiveness of the workforce and industry; and
- **Collaboration**, with co-ordination across industry, government and the education to ensure a cohesive and responsive approach across each of these areas.
- **Professional recognition and mobility**, to ensure the sector has access to professional experts working across different jurisdictions.

These themes emerging during the inaugural Resources Education Collaboration Summit (RECS), co-hosted by AusIMM with the Victorian Government in 2019.<sup>2</sup> AusIMM have made substantial progress with our partners across each of these areas, and will be hosting a second Summit with industry, government and education partners in late 2021.

AusIMM believe that the Queensland Government has an important role to play in the future of the resources workforce, reflecting the broader responsibility of the government to drive economic growth and support job creation in one of the state's major industries.

We provide further insights and recommendations on these key areas of action below.

### Forecasting

A major initiative AusIMM has progressed since the first RECS is the establishment of a *Working Group on the Resources Industry Future Workforce*, whose focus over coming months is on gathering data from universities and industry to forecast supply and demand, map gaps and identify pathways to meet those gaps.

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<sup>2</sup> AusIMM, 2019, 'Summary Report: Resources Education Collaboration Summit', available at: [https://www.ausimm.com/globalassets/advocacy/2020-recs-summary-report\\_v2.pdf](https://www.ausimm.com/globalassets/advocacy/2020-recs-summary-report_v2.pdf).

The Working Group comprises representatives from industry, Federal Government, universities and our kindred peak bodies. The Working Group's immediate focus is on:

- **Devising and supporting a proactive approach** to industry and universities to source accurate data on the supply and demand of graduates for the minerals industry, including geotechnical, metallurgical and mining engineering.
- **Guiding engagement** with industry and university stakeholders.
- **Providing insights** and review into the desired types of data for collation from universities and industry.
- **Developing definitions** for the minerals related roles on which data will be sought.
- **Establishing a clear methodology** to guide data analysis.
- **Sharing advice and feedback on initial data analysis**, including its presentation to key stakeholders.

These findings are vital in guiding policy and action from all industry stakeholders, including government., and will be canvassed at the second RECS to be hosted by AusIMM and the Victorian Government in late 2021.

**AusIMM recommend** the Queensland Government engage in the co-ordinated work we are leading with our partners across the sector, including through support for forums such as RECS and investment to continue the vital supply and demand analysis now underway.

### ***Education, skills and training***

As the range of skills required for resources professionals expand, AusIMM are committed to supporting people in mining to pursue continuous learning and development throughout their careers. We see that a flexible whole-of-lifetime professional development framework is vital to ensure our workforce can cross-skill, upskill and reskill to meet the needs of an evolving sector.

Recognising and responding to the imperative for responsive, future-focussed skills development, AusIMM continue to deliver a market-leading program of technical conferences, leadership and featured events, along with summits and other sector-wide for a (such as the RECS referenced earlier in this submission).

To focus here on our course offering, we emphasise to government the rapid pace and scale of the increasing demand. Consider, for example, that since 2018, AusIMM have brought more than 11 new online courses to market, with our current offering now including training on key technical areas such as social responsibility, tailing management and JORC code reporting, as well as cost estimation, process automation and diversity and inclusion in mining.

AusIMM see value in offering mining-specific development for people pursuing careers in our sector, to leverage the transferable skills and knowledge developed by people who come to the sector with a range of professional and educational backgrounds. This supports both entry into, and growth within, the resources workforce and allows workers to access opportunities across the project life cycle.

AusIMM support professionals with cross-sectoral skillsets and experience outside resources to enter and advance within our sector. As the home for mining-related professional development and advancement, the opportunities we provide for people in resources range from introductory and fundamental courses through to a globally recognised Chartered Professional Program covering both established and emerging resources disciplines. Our online and hybrid delivery channels maximise the reach and accessibility of these programs, as they do for our conferences, events and advocacy.

**AusIMM recommend** the Queensland Government support industry activities to provide transferable, future-focussed skills for the state's resources workforce, as part of a broader education and training system. We call for Government investment to expand the availability and accessibility of industry-specific short courses and credential being developed by industry.

## ***Attraction and retention***

AusIMM research has also yielded insights into the factors that most affect the attraction of young Australians into the future resources workforce. AusIMM has conducted and championed this research to instruct future government and industry initiatives intended to strengthen and secure the critical talent pipeline for the resources industry, and in turn support the ongoing role of the industry within the community.

Key findings of AusIMM research touch identify several critical factors influencing the interest of young Australians in pursuing careers within the resources workforce

- **Certainty:** Few high-school, university and vocational education age students are fixed on a career in a particular industry, with career certainty trending up with education.
- **Awareness:** Knowledge of the resources sector generally varies across jurisdictions, but knowledge of mining careers is extremely low, with 94% of students indicating they know either 'nothing at all' or only 'a little bit' about careers in mining.
- **Association:** Spontaneous associations with mining are generally negative to neutral, with young Australians recognising both the current and future economic contributions made by Australian mining, but having little awareness of the sector's role as a hub for innovation and technological development.
- **Interest:** Low consideration of mining is generally driven by a lack of knowledge, not conscientious objection based on ethical or environmental concerns.
- **Influence:** Key spheres of influence in the career decisions of young Australians are television and online news, school classes, friends and family (particularly parents), and are positively influenced by an increased understanding of the breadth of career opportunities in the sector, the opportunity to work overseas and across regional and metropolitan locations, and the strong wages offered in the industry.

We commend this research to the Queensland Government as an input into future programs to attract talent into the industry. We emphasise, also, that there are salient differences in the attitudes of young Australians living across regional, rural and metropolitan centres, as there are between those who live in states with different industrial mixes.

**AusIMM recommend** the Queensland Government partner with industry to undertake state-specific research into the factors most influential on the career decisions of young people living in remote, rural, regional and metropolitan areas of the state.

**AusIMM recommend** the Queensland Government join industry in pursuing direct engagement with young Queenslanders and key influencers. Such engagement is vital not only to ensure awareness and understanding of career opportunities in the sector, but also to directly address the factors that may be preventing them from pursuing careers in the sector.

**AusIMM recommend** the Queensland Government collaborate with industry partners to increase the availability of work experience and industry placement programs, and establish hubs for resources-specific tertiary education programs across the state.

AusIMM invite further engagement on how these actions can be progressed.

## ***Equality of opportunity***

AusIMM believe fundamentally in the intrinsic value of diversity and inclusion. We also recognise the clear imperative to create equality of opportunity by welcoming, attracting and advancing the careers of a diverse range of people working within the resources sector. A contemporary, future-focussed resources workforce must be inclusive and harness the full breadth of skills and experience found in the communities we serve.

In this section of the submission, we draw the Government's attention to the key levers through which the resources industry can be made more diverse and inclusive. We flag four key areas for the Queensland Government's attention:

- **Professional and role diversity** across the resources sector, particularly as the range of jobs available (and skillsets demanded) in our industry expand.
- **Aboriginal and Torres Strait Islander people** working in resources.
- **Gender and sexually diverse professionals** in resources, including women in mining.
- **Age diversity** of people working and pursuing careers in resources, reflecting a need to retain expert professionals while attracting and developing future generations.

AusIMM work to affect change across all levels of industry, including through:

- **Advocacy:** We raise awareness about diverse attributes, skills and qualities of our professional community and advocate for equality of opportunity in our sector, including through our International Women's Day Series, New Leaders Conference, social media and publication channels.
- **Education:** We equip all professionals with the tools, guidance and professional development opportunities they need to thrive and drive meaningful change for themselves and all other people working in resources. We do this by maximising the accessibility of our conferences, training and professional development offering; and delivering initiatives such as our National Mentoring Program, Women on Boards Scholarship and Diversity and Inclusion in Mining Short Course.
- **Insight:** With a global member base and networks spanning industry, government and academia, we undertake research and analysis to identify priorities for action, inform our initiatives, and expand knowledge within the sector and community. Examples include our annual Women in Mining Survey, discussed further below.
- **Standards:** We expect and promote the highest standards of professional conduct and ethical practice across all areas of practice within our industry, including by encouraging members to exercise personal leadership and uphold principles of equity and inclusion.

Since 2017, AusIMM have conducted an annual Women in Mining Survey, which gathers vital data to guide AusIMM, our partners in industry and policymakers with the data needed to create an inclusive working environment, increase women's workforce participation and support women's economic empowerment through the resources sector.

AusIMM emphasise to the Government that women's workforce participation is vital not only to support the economic and social prosperity of individual professionals, but the wellbeing of the communities in which they live and work. With this, we draw Government's attention several key findings from our annual Women in Mining Survey, which shows that:

- **Perception challenges persist:** Women continue to report that their own workplaces are significantly more inclusive than their perception of the broader resources sector.
- **Amenities are improving:** In the latest survey, 67.0% of female respondents rating amenities as good or very good, an increase of 7.5% on previous years.
- **Travel support is improving:** Reflecting the sector's agility in response to the COVID-19 pandemic, 73.0% of female respondents rated employer support for travel as good or very good, an increase of 10.0% on previous years.
- **Educational pathways must be broadened:** Survey results show, for example, that Aboriginal and Torres Strait Islander women in resources are five times more likely to have high school as their highest form of qualification, compared to the survey average.
- **Diverse leadership is needed:** Leadership is rated by 79.0% of women in resources as being a top priority for diversity and inclusion in the sector, and is identified as a key professional development priority by 55.0% of respondents.
- **Workforce flexibility is a priority:** The on-site experience is improving for many women in resources, but workforce flexibility and support to manage inter-role conflict continue to be key challenges.

AusIMM take the view that addressing these challenges will not only advance the careers of women in resources, but will help to maximise and create equality of opportunity for all members of the community who are now, or might one day, pursue careers in the sector.

There is an important role for Governments to play here, including by supporting research and partnering with industry on career advancement initiatives. Programs such as the AusIMM



Women on Boards Scholarship, sponsored by the Victorian Government, and scholarships AusIMM have delivered with our partners for First Nations resources professionals to participate in our National Mentoring Program, serve as two prime examples.

**AusIMM recommend** the Queensland Government join with AusIMM and our industry partners to develop tailored programs to support the career advancement of diverse professionals pursuing careers in the Queensland resources industry.

### ***Professional recognition and mobility***

AusIMM protect and promote the recognition and mobility of professionals working across the resources industry, and our members are recognised for their expertise and global leadership in upholding professional standards and best practice for the sector. We believe the professional and technical excellence of the resources workforce is key to future of the Queensland sector.

Indeed, the Queensland resources sector has transformed dramatically over recent decades and this trend of innovation will only accelerate as we move into the future. The nature of work is changing, as are the skills demanded across all parts of the resources industry.

Measures to increase the mobility of suitably qualified professional across jurisdictional borders will, as such, help to ensure industry have access to suitably qualified professionals. This is particularly critical given the varying operational needs of individual projects over their lifecycle, as well as the macro-level shifts in key skillsets demanded by the sector.

AusIMM commend the joint efforts of the State and Federal Government to establish mutual recognition frameworks to maximise the cross-border mobility of Australian. We support passage of various Mutual Recognition Amendments Bills at the State and Commonwealth levels, which reflect a significant body of co-ordinated reform across the Federation. We support these reforms, which establish an appropriate legislative architecture for mutual recognition.

The challenge is in the implementation of this framework. AusIMM emphasise that the alignment of underlying registration frameworks across jurisdictions is particularly important to support an effective mutual registration scheme. This is true for professional areas of practice that are already subject to registration requirements, such as engineering and mine management, as well as areas such as environmental assessment, social performance, and geology.

To articulate the complexity inherent in aligning professional registration requirements, consider the following examples:

- **Mining engineers:** Engineers account for close to half of our membership, with a larger cohort based in Queensland where formal registration is required, many others in Victoria and NSW where registration frameworks are proposed, and the remainder in jurisdictions that do not currently require professional registration. Registration requirements differ across each of these jurisdictions, as do the local laws with which registered professionals must comply.
- **Resources safety and health professionals:** Similarly, many of our members work in mine safety and health, where practicing certificate requirements for key statutory positions such as 'quarry manager' and 'mine manager' vary substantially between jurisdictions and are subject to ongoing reform.
- **Environmental professionals:** Several state regulators are also considering professional registration requirements for environmental practitioners – who likewise account for a substantial proportion of our membership – as part of reforms to state planning frameworks.

AusIMM do not express any opinion here on the relative merits of individual registration frameworks. While we are glad to engage further with the Queensland Government on these matters, we emphasise here that a co-ordinated approach is necessary to avoid the proliferation of unduly burdensome professional registration frameworks. Statutory registration frameworks have an important, often vital role, to play in ensuring public safety and securing industries operate in an economically, social and environmentally sustainable fashion. Co-ordination between Governments, and collaboration with peak professional bodies, is vital to ensure this objective is achieved.

**AusIMM recommend** the Queensland Government join with State and Federal counterparts and peak professional bodies to align professional regulatory frameworks, and pursue reforms in a coordinated manner.

**AusIMM recommend** the Queensland Government align professional registration frameworks with key professional schemes including the AusIMM Chartered Professional Program discussed later in this submission.

## **Critical Enabler: Professional and technical excellence**

### ***Professional codes and standards***

Queensland resources professionals are amongst the most highly skilled in the world. Their reputation and ethical leadership support the industry's global profile and competitive strength. The resources industry is also vital in supporting Queensland's strategic interests through second-track dialogue with key trade, economic and diplomatic partners.

These contributions are reflected not only in the significant export revenue generated by the Queensland sector, but in the continued global demand for Queensland mining professionals and Australian mining codes, standards and professional development and training. Consider, for example, that more than 20% of AusIMM members routinely work overseas, including across the USA, UK Canada, Indonesia, China, India, Ghana, Brazil, Chile, Peru and South Africa. Of further note is the fact that 23% of AusIMM Fellows (our highest membership grade) are based internationally.

Upholding these standards and promoting professional best practice is an abiding focus area for AusIMM, pursuant to our Royal Charter. The global recognition of the Australian sector's expertise, much of which is concentrated in Queensland, is core to the industry's global position and competitive strength.

AusIMM exercise a leadership role in developing and actively promoting the highest ethical and professional standards on the global stage through a range of codes, standards and professional frameworks including:

- **AusIMM Code of Ethics**, which ensures mining professionals uphold and enhance the global standing of mining professionals, has been translated into Mandarin, and is supported by an established governance framework including By-Laws and Professional Conduct Regulations.
- **AusIMM Social Responsibility Framework**, which outlines professional standards to support the sector's environmental, social, and financial sustainability, and is a world first amongst mining professional associations (discussed in a subsequent section of this submission)
- **JORC Code**, the full denomination of which is the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, which AusIMM co-parent with our partners at the Australian Institute of Geoscientists (AIG) and Minerals Council of Australia and has been translated into Mandarin.
- **VALMIN Code**, the full denomination of which is the Australasian Code for the Public Reporting of Technical Assessments and Valuations of Mineral Assets, also co-parented with the AIG.

With members from across more than 110 countries, AusIMM recognise that the global mining community is keen to align itself with the professionalism and technical excellence of the Queensland resources sector.

For Government, AusIMM emphasise that the regulatory frameworks within which the resources sector operates must be reflect emerging best practice and technical knowledge. We note, for example, that the Government rely on the JORC and VALMIN Codes as bases upon which to estimate and describe resources reserves in mining tenure applications.

**AusIMM recommend** the Government continue to work with the sector to ensure regulatory frameworks align and keep pace with technical and professional developments. This is particularly vital in relation to health and safety, environmental regulation, and social performance. Likewise, it is critical that the highest standards of industry and professional practice continue to be assured as the Queensland Government progress efforts to streamline regulatory processes, including in relation to mining approvals.

### ***Professional best practice***

As with the demand for Australian mining professionals, codes and standards, the global community also seek out opportunities to discover and be up skilled in Australian mining practices. AusIMM play a key role in increasing the global recognition and uptake of mining best practice, offering a wide range of globally recognised courses and training services to meet this demand.

This is reflected, for example, in the fact that more than 40% of enrolments in our flagship Professional Certificate in JORC Code Reporting are from locations outside Australia and New Zealand. A further example lies in our work with the Global Mining Association of China in 2020 to deliver a five-day training program on the JORC Code in China. AusIMM also established a partnership with the Indian School of Mines in 2020, as part of the Austrade-facilitated Australia-India Business Exchange.

While we cite these examples in relation to the JORC Code, specifically, we also flag sustained growth in international attendance and engagement at AusIMM-hosted mining events. We note a strong emerging interest in Australian practices and innovations across several key themes shaping the future of the global mining industry, such as:

- **Mining technology and innovation**, particularly as they relate to particularly including operational efficiency, waste reduction and environmental performance
- **Mining health and safety**, with Australia occupying a position at the vanguard of continued progress towards a zero-harm industry
- **Sustainability**, including the social responsibility and performance of the sector,
- **The future of the mining workforce.**

We highlight in this submission that mechanisms to support the continued technical and professional leadership of Queensland resources professionals will strengthen the contributions made by the sector into the future.

**AusIMM recommend** the Queensland Government support the continued professional development and leadership of Queensland resources professionals, through investment and participation in research, professional development and training, and international forums to showcase the sector's leadership globally.

### ***Technical standards***

Clear norms must be in place to secure the economic and social benefits available through the Queensland resources sector. In addition to the codes and standards we articulate as the peak professional body, AusIMM work with our partners through Standards Australia and the International Standards Organisation to develop technical standards for the industry.

We see this function as particularly vital in relation to emerging commodities and technologies, with a prime example being the expansion of the lithium, battery and energy metals supply chain in Queensland and the broader Australasian region. We emphasise, here, the relevance for the Queensland resources sector, given the state's significant endowments of lithium, nickel, cobalt and a host of other new economy minerals.

The global market and supply chain for these minerals is fast developing, geo-strategically complex and, in many cases, opaque. Many major global producers operate with a significant carbon footprint, and adopt practices that fall afoul of best social, environmental, health and safety practices. For the Queensland sector, a significant competitive advantage exists where we can

articulate and champion the highest standards within the domestic market, and pursue alignment of international practices against the Australian benchmark.

### *Domestic standards development*

In the domestic context, AusIMM are guiding the development of mining, concentration extraction, separation and conversion standards in partnership with Standards Australia. In this work, we pursue shared leadership with:

- **Research and academic organisations** including CSIRO<sup>3</sup>, ANSTO,<sup>4</sup> the University of Queensland and Curtin University.
- **Federal, state and territory governments**, including Geosciences Australia, the Commonwealth Department of Industry, Science, Energy and Resources and the Queensland Department of Resources.
- **Our kindred peak bodies** including AMEC,<sup>5</sup> AiG<sup>6</sup> and the MCA.<sup>7</sup>

We are similarly engaged in standards development for mine electrification, carbon capture and storage, safety equipment and a range of other emerging fields. AusIMM commit to continuing this shared continuing to work with industry partners to guide these important initiatives.

### *International standards leadership*

At the international level, AusIMM believe standards alignment will promote production, fair trade and sustainable development globally and advance Queensland and other key mining regions in emerging markets, including in relation to:

- **Health and safety:** Allowing the Australasian sector to share its own leading practices, with one of the lowest global incident rates, and address health and safety risks unique to battery metals production and processing.
- **Community and society:** Australasian representation in international standards development will drive global consensus-building, ensuring production standards amongst major lithium producers including Australia, Chile, Argentina and China are aligned and calibrated to maximise community benefit.
- **Environment:** Reflecting the battery metals in driving sustainable technology development and production, Australasian leadership in global standards development ensures will drive uptake of the uptake of Australasian products, technologies and practices.
- **Competition and economic benefit:** As a major world producer, the Australasian sector can realise significant commercial benefits in guiding international standardisation from its inception, as this allows to develop suitable processes to maximise domestic production viability and export competitiveness.

AusIMM will continue to work with industry partners to establish clear norms to guide the maintenance and expansion of the Australian resources industry, including in relation to those commodities of relevance to the Queensland sector. We will also AusIMM will also continue to pursue Australasian participation in international standardisation processes.

**AusIMM recommend** the Queensland Government continue its engagement in domestic standardisation processes, and support efforts to pursue Australasian representation in key international standardisation fora.

**AusIMM recommend** that the Queensland Government ensure regulatory frameworks align with domestic and international standards, particularly as they relate to health and safety, environmental regulation and community engagement throughout the mining lifecycle.

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<sup>3</sup> Commonwealth Scientific and Industrial Research Organisation.

<sup>4</sup> Australian Nuclear Science and Technology Organisation.

<sup>5</sup> Association of Mining and Exploration Companies.

<sup>6</sup> Australian Industry Group.

<sup>7</sup> Minerals Council of Australia.

## Critical Enabler: Environmental and Social Responsibility

Environmental, social and governance (ESG) factors are recognised as being of fundamental importance to the sustainability and financial viability of mining globally, including in Queensland.<sup>8</sup> The salience of ESG performance to community sentiment and trust in the credibility of mining operations is reflected in the spread of investment geographically and has a profound impact on sources, availability, time frames and costs for project financing.<sup>9</sup>

Mineral resource development opportunities in Queensland are likely to be severely constrained unless projects and ESG factors are appropriately managed, and industry works with communities to maximise social and economic outcomes.

AusIMM is taking the lead in ensuring resources professionals are equipped to meet the highest standards of ESG performance through a range of mechanisms, including our Social Responsibility Framework and Professional Certificate in ESG and Social Responsibility.

### ***AusIMM Social Responsibility Framework***

The AusIMM Social Responsibility Framework comprises the:

- [AusIMM Royal Charter and By-Laws](#)
- [AusIMM Code of Ethics](#)
- [AusIMM Social Responsibility Statement](#)
- Area of Practice descriptors for AusIMM's [Chartered Professional Program](#).

AusIMM's Royal Charter references community considerations and the Code of Ethics states 'The purpose of the Institute is to advance the sciences applying to the minerals industry for the benefit of the community'. This means members must be aware of and consider ESG factors in their work, include legal requirements and well-established global sustainability principles, standards and guidance applicable to minerals sector enterprise activity.

AusIMM recognise that one of the most important factors in driving ESG performance within the resources sector is equipping decision-makers with the knowledge, skills and tools required to pursue their work in a manner that maximises community benefit and reflects ESG imperatives. The AusIMM Social Responsibility Statement is a key piece of this puzzle, and outlines three key levels of professional due diligence, in relation to ESG factors:

- **Level 1 – Awareness:** Awareness of all members of AusIMM's Code of Ethics and the existence of global ESG-related principles, standards and guidance, and the likely consequences of work activities on communities and broader society.
- **Level 2 – Understanding:** Understanding by members in leadership roles of how they can contribute to minimising harm and maximising value to affected communities and broader society by reference to global ESG-related principles, standards and guidance, managed effectively through workplace systems, procedures, and behaviours.
- **Level 3 – Competence:** Competence by members who have accountability in Environmental and Social Performance Areas of Practice, demonstrated through professional qualification, experience and a working knowledge of jurisdictional requirements, workplace systems and procedures, relevant global principles, standards and guidance, and potential JORC modifying factors.

**AusIMM call** on all professionals working in resources to understand their role in ensuring the resources industry develops in a socially and environmentally sustainable fashion, as outlined in the Social Responsibility Framework.

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<sup>8</sup> AusIMM Social Responsibility Statement, available at: <https://www.ausimm.com/about-us/governance/social-responsibility-framework-and-statement/>.

<sup>9</sup> AusIMM, 2019, 'Social Licence Policy Development Forum Summary Report', available at: [https://www.ausimm.com/globalassets/advocacy/slto\\_forum\\_report\\_final.pdf](https://www.ausimm.com/globalassets/advocacy/slto_forum_report_final.pdf);

PwC, 2020, 'Aussie Mine 2020: Resources the Recovery'; Mackenzie, S, Everingham, J and Bourke, P, 2020, "The Social Dimension of Mineral Exploration", SEG Discovery No 121. April 2020, pp. 16-28;

The AusIMM Social Responsibility Framework deliberately incorporates existing international ESG frameworks, including those set out by the Organisation for Economic Co-operation and Development OECD, United Nations, International Finance Corporation, International Council of Mining and Metals and our kindred bodies including the Minerals Council of Australia.

Notwithstanding the significant value realised through these various frameworks, AusIMM caution against the uncoordinated proliferation of initiatives that increase the duplication, risk inconsistency, and complicate the task of incorporating standards into regulatory frameworks.

**AusIMM call** for coordination across the sector to ensure alignment of industry, professional, legal and regulatory framework for ESG across the resources sector.

**AusIMM recommend** the Queensland Government maintain close engagement with industry and professional bodies to ensure regulatory frameworks are aligned with best professional practice, as articulated by AusIMM.

### ***Professional Certificate in Social Responsibility***

Another key element of AusIMM's strategy to uphold ESG performance in the sector is through the delivery of targeted professional development and training for professionals working at all levels of the sector, and in all professional disciplines. AusIMM provide this leadership through our conferences and events, include the Life of Mine Conference, as well as a Professional Certificate in ESG and Social Responsibility, which will be launching in August 2021.

The Professional Certificate will examine environment, social and governance performance and social responsibility (ESG/SR) through critical thinking and authentic resource sector experience. Prominence will be given to evaluating ESG/SR risk, threats and opportunities, and to developing workplace responses, execution, assurance and performance reporting.

**AusIMM call** for resources sector professionals, particularly those in management and executive leadership positions to ensure they have an appropriate understanding of existing social, financial and regulatory imperatives regarding ESG performance in the sector.

### ***Chartered Professionals***

As referenced earlier in this submission, AusIMM's Chartered Professional program is a key mechanism through which we uphold standards and provide the sector with a cohort of professionals possessed of the various skills required to ensure beneficial outcomes for both industry and the community.

The Chartered Professional Program assures the qualifications, standards and competency of professionals for professionals working across seven categories, including Social Performance and Environment.<sup>10</sup>

To attain Chartered Professional status, professionals must:

- Hold a current financial membership with AusIMM;
- Hold a relevant tertiary environmental degree or equivalent;
- Have at least five years of relevant work experience;
- Demonstrate key competencies within the relevant discipline's Area of Practice;  
Nominate three sponsors who can verify the applicant's qualifications and experience;  
and
- Demonstrate on-going professional development during the three years prior to their application.

The Areas of Practice relevant to Social Performance, and the other disciplines, are set out in the AusIMM Chartered Professional Program Regulations. The Regulations also outline the role of the Chartered Professional Program Committee in overseeing the program, and articulates

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<sup>10</sup> The Program also accredits professionals working in Geology, Mining Engineering, Metallurgy, Geotechnical Engineering and Management.

the continuous professional development and other requirements for professionals to maintain their Chartered status.

**AusIMM recommend** the Queensland Government engage AusIMM Social Performance and Environment Chartered Professionals to discuss mechanisms through which ESG factors can be appropriately regulated across the mining lifecycle. AusIMM invite engagement on matters including project approval, abandoned mine rehabilitation, community engagement and independent assurance review processes.

### ***Social Licence to Operate Forum***

The AusIMM Social Responsibility Framework is a direct outcome of the Social Licence to Operate (SLTO) Forum held in May 2019, which brought together leaders and professionals from across the sector to discuss:

- Perceptions of the resources sector in Australia
- Performance standards for the sector, at both the operator and individual professional levels
- The role of professional performance in maximising ESG outcomes
- Policy options to drive social performance and strengthen community support for resources operations

Further information on the SLTO Forum is available is included in the *Social Licence Policy Development Forum Report*. AusIMM will be hosting a second Forum in the latter half of 2021, and look forward to hosting further fora with industry, government and other partners in the future.

## **Critical enabler: Investment and International Engagement**

Queensland benefits from a well-established position as one of the most attractive jurisdictions for mining investment worldwide. This global position is based on the region's significant minerals endowment, world leading technical and professional practices, broadly supportive policy settings, political stability and low corruption.<sup>11</sup>

In this section, we highlight the role of engagement through international forums, conferences and events in driving the Queensland resources sector's continued status as an attractive destination for global investment. We also provide insights and recommendations on a range of challenges peculiar to emerging commodities markets, particularly lithium and new economy minerals.

### ***Attracting investment through international engagement***

AusIMM is committed to championing Australasian mining excellence, standards and best practice on the global stage. Our international engagement activities are guided by an International Advisory Forum, composed of mining and international experts including representatives from peak Australian trade councils and overseas mining associations.

Reflecting our global reach, AusIMM focus on three priorities to promote the global standing of the Australasian sector and its professionals:

- **Knowledge:** We promote Australian codes and standards globally, as explored in this submission.
- **Networking:** We grow and retain AusIMM's international membership, which extends across more than 110 countries. As of May 2021, the top ten countries for our members, excluding Australia and New Zealand, are: Canada, the United States, Indonesia, Ghana, the United Kingdom, China, Brazil, Chile, Peru and India.
- **Global affiliations:** We connect with key stakeholders across the global mining industry, with an International Representative Program and partnerships with kindred

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<sup>11</sup> Yunis, J and Aliakbari, E, 2021, 'Fraser Institute Annual Survey of Mining Companies, 2020', available at: <https://www.fraserinstitute.org/sites/default/files/annual-survey-of-mining-companies-2020.pdf>.

bodies including the Global Mining Association of China; the US-based Society for Mining, Metallurgy and Exploration, UK-based Institute of Materials, Metals and Mining and Canadian Institute of Mining, Metallurgy and Petroleum. We are also Secretariat of the Global Minerals Professionals Alliance.

This broad engagement places AusIMM in an unmatched position to provide opportunities for industry, government and researchers to engage with the global mining community. A key channel through which we provide this engagement are our technical conferences and features events, which cover all major mining disciplines and emerging areas of focus for the global sector.

AusIMM are proud to attract delegations from around the world to these conferences and events. As the leading provider of mining conferences and events in the region, we are instrumental in connecting industry, government, academia and investors from across the global mining community.

**AusIMM recommend** the Queensland Government leverage the international conferences and events taking place in the state to strengthen Queensland's position as a global resources hub, and increase awareness of the state's resources prospectivity and diversity.

### ***Key challenges for emerging commodities***

AusIMM here take the opportunity to focus on a series of investment challenges that have a particular bearing on lithium, battery and energy minerals, as well as the various other new economy minerals of which Queensland has a substantial endowment.

The sector's high degree of investment attractiveness is, of course, a significant benefit for operators seeking to secure finance for new economy mineral projects in the region. AusIMM emphasise that there are, however, several investment challenges peculiar to these emerging markets that impact the ability to attract capital, including:<sup>12</sup>

- **Low supply and price volatility:** Key battery commodities such as lithium, nickel and cobalt have historically been in relatively low supply worldwide. While this points to the clear opportunity to expand Queensland lithium and batteries industry, the emergence of new supply often leads to significant price spikes. This volatility complicates the operating environment for industry and investors, creating a hurdle for project financing.
- **Price opacity:** Supply, demand and pricing of key new economy commodities across the global marketplace is not transparent, making it difficult for prospective investors to assess the viability and value of prospective Australasian projects.
- **High tech is high risk:** As a somewhat nascent sector, technologies to enhance extraction, beneficiation and processing of many new economy minerals (are still emerging and being commercialised. This is both a benefit and challenge for Queensland projects. While the Queensland sector possesses and is developing relevant expertise, technical novelty increases projects' investment risk profiles.
- **Investment across the supply chain:** The limited diversity of project financing vehicles available to Queensland proponents is another limiting factor, with many relying on internationally financed offtake agreements that restrict the availability of key materials further down the value chain.

With new economy minerals recognised as a strategic priority and substantial economic opportunity in Queensland, AusIMM take the view that these investment-restrictive factors warrant a targeted response from government.

AusIMM commend the Queensland Government for pursuing a range of initiatives to support emerging parts of the Queensland resources sector, including through substantial infrastructure

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<sup>12</sup> Best, A. and Vernon, C., 2020, 'State of Play: Australia's Battery Industries as at March 2020', CSIRO, Australia; Azevedo, M., Campagnol, N., Hagenbruch, T., Hoffman, K., Lala, A., Ramsbottom, O., 2018, 'McKinsey & Company: Lithium and cobalt – a tale of two commodities' available at: <https://www.mckinsey.com/-/media/mckinsey/industries/metals%20and%20mining/our%20insights/lithium%20and%20cobalt%20a%20tale%20of%20two%20commodities/lithium-and-cobalt-a-tale-of-two-commodities.ashx>.



investments, world-leading geological and collaborative explorative programs, and Mining Equipment, Technology and Services (METS) accelerator programs.

**AusIMM recommend** the Government pursue the following measures, to further strengthen the business and investment conditions for emerging Queensland commodities:

- **Market access:** The Queensland Government should join with partners in the Commonwealth to continue to pursue trade agreements with key emerging markets for new economy minerals, including in India, Taiwan, South Korea, Japan and China.
- **Modernisation:** Government should engage with industry and professional peak bodies to understand and address areas of undue regulatory duplication, uncertainty or complexity, ensuring all the while that key environmental, community and economic outcomes are assured. AusIMM note, for example, that complexity regarding certain statutory safety and health liabilities can complicate

**AusIMM invite** further engagement with the Government on how best to action the various recommendations we have raised in this submission. We repeat our thanks to the Government and Department of resources for the opportunities to engage throughout development of the QRIDP, and look forward to continuing this engagement over the course of the year.