



MINERALS COUNCIL OF AUSTRALIA

SUBMISSION TO THE REVIEW OF THE AUSTRALIAN QUALIFICATIONS FRAMEWORK

15 MARCH 2019

INTRODUCTION

The Australian minerals industry

The Australian resources sector employs around 245,200 people in high-value, high-wage, high-skilled jobs, mostly in remote and regional Australia. Average weekly earnings (full-time adult) in the resources sector are \$2,659 per week, more than 65 per cent higher than the national average of \$1,606 per week.¹

The MCA recognises the unique value proposition that the different arms of tertiary education provide and advocates for investment in and the use of the different offerings of both VET and higher education providers. A large proportion of the minerals workforce is highly skilled, 67 per cent hold a Certificate III level qualification or higher, above the national average.² More than four per cent of the workforce is currently apprentices and trainees.³ One in five workers also hold a bachelor degree or higher.⁴

Quality and responsive training and workforce development are a crucial mechanism to ensure a supply of skilled workers enter and remain in the industry. MCA advocates for uninterrupted skills pathways, regardless of business cycle. This means the funding and provision of quality training throughout the cycle, supported by industry and associated education and training institutions, and reinforced by a valid policy base.

Delivering a flexible, functional and fluid tertiary education system at the post-secondary VET and higher education level is critical to meeting the skills needs of the sector, especially as specialist skills associated with innovation and technology adoption increase.⁵

It is important to cultivate broad funding, policy and regulatory settings that support lifelong attainment of relevant, portable and transferable skills.

The changing nature of work and skills

The changes in how work is done will affect the type and mix of skills and knowledge that graduates need and how providers deliver education and training, which in turn should be reflected in the framework that supports funding, assurance and alignment.⁶

There is an active transformation of skill capabilities through access to technology and soft skills will be central to the skill profile of Australia's future workforce.⁷ The future minerals workforce will be more diverse, geographically distributed and digitally connected. As the nature of work changes and evolves, workers will need skills and capabilities that are adaptable, transferable, relevant to the needs of the future economy, and which are not easily replicated by technological advances.⁸

These broad ranging skills, competencies and qualifications will be obtained through both accredited and non-accredited offerings across the tertiary landscape. There is an expectation that these skills, competencies and qualifications are accessible through multiple pathways, are affordable, portable and increasingly delivered just-in-time.

¹ Australian Bureau of Statistics, [Labour Force, Australia, Detailed, Quarterly, Aug 2018](#), ABS cat. no. 6291.0.55.003, released on 20 September 2018. [Average Weekly Earnings, Australia, May 2018](#), ABS cat. no. 6302.0, released on 16 August 2018.

² Minerals Council of Australia, [Miners at Work](#), Canberra, 2018; and Australian Bureau of Statistics, 2016 Census, [Census Table Builder – Highest Level of Educational Attainment and Industry of Employment](#), viewed 30 November 2018.

³ National Centre for Vocational Education Research (NCVER) – [Apprentice and trainees 2018 – March Quarter](#) (released 3 September 2018).

⁴ Department of Education, [Industry Outlook: Mining](#), Canberra, 2014; and Australian Bureau of Statistics, 2016 Census, [Census Table Builder – Highest Level of Educational Attainment and Industry of Employment](#), viewed 30 November 2018.

⁵ The Minerals Council of Australia, [The next frontier: Australian Mining Policy Priorities](#), Canberra, 2019, p. 19.

⁶ Productivity Commission, [Shifting the Dial: 5 year Productivity Review](#), 2017, p. 87; and Department of Jobs and Small Business, [Australian Jobs 2018](#), Australian Government, 2018, p. 29; as seen in Australian Qualifications Framework Review Panel, [Review of the Australian Qualifications Framework Discussion Paper](#), December 2018, Australian Government, p. 12.

⁷ [Australia's Future Workforce, the opportunities and challenges](#), Address at the [Navigating Technology and Jobs of the Future Summit](#), 2018, Australian Information Industry Association, Canberra.

⁸ DH Autor, [Why are there still so many jobs? The history and future of workplace automation](#), *Journal of Economic Perspectives*, Vol. 29 No. 3, 2015, pp. 3-30; as seen in Department of Education and Training, [Training product reform – what is the case for change?](#), Department document, Australian Government, November 2017, p. 5.

The education and training landscape

The skills, knowledge and learning gained through quality education are building blocks for healthy and prosperous lives. This in turn supports equitable and inclusive societies. Quality education also equips people with the tools necessary for innovative solutions to the challenging and complex problems facing the world today.⁹

Australia's education and training ecosystem needs to cater to diverse range of learners and learning styles across a range of industries and shifting priority sectors. It is essential that the system is flexible and responsive to changes both across the labour market and within industries. In particular, the system needs to confirm that workers either have the existing skills, or ensure workers can quickly acquire new skills, to enable them to satisfy evolving job profiles or the change jobs.¹⁰

Providing appropriate, timely and affordable skills, training and development options and pathways for both existing and pipeline workforce whilst connecting the tertiary education landscape at the post-secondary level is crucial.¹¹

Consequently, the minerals industry advocates for the modernisation of vocational education and training (VET) and higher education-level courses, content and delivery to provide knowledge and skills needed in the redesigned workplaces of the future.¹² In order for this to be achieved, Australia requires a robust, responsive and fit-for-purpose qualifications framework.

⁹ Cardno, [Sustainability in Action: Australian Mining and the United Nations Sustainable Development Goals](#), October 2018, p. 24.

¹⁰ Department of Education and Training, [Training product reform – what is the case for change?](#), Department document, Australian Government, November 2017, p. 7.

¹¹ Minerals Council of Australia 2018 Minerals Industry Education Summit, Melbourne, 17 May 2018.

¹² The Minerals Council of Australia, [The next frontier: Australian Mining Policy Priorities](#), Canberra, 2019, p. 19.

1. WAYS THE AQF IS OR IS NOT FIT FOR PURPOSE

The Australian Qualifications Framework

The MCA supports the notion of ‘qualifications frameworks as a tool to facilitate an agile workforce suited to rapid change.’¹³ In its [submission](#) to the [Expert Review of Australia’s VET System](#), the MCA highlights that one of the nation’s most pressing challenges is creating the education, training and workplace framework that provides the skills, capability and flexibility to maintain and enhance Australia’s international competitive advantage.¹⁴

In this context, Australia needs a skills formation system that ensures people are work ready for the jobs on offer, and that the education and training system not only develops the required skills efficiently and cost-effectively, but has a system of qualifications that are meaningful to employers when people seek work.¹⁵

In determining whether the Australian Qualifications Framework (AQF) is fit for purpose, it is important to note that the framework was originally developed to promote transparency and linkages across education sectors, and aimed to promote a coherent tertiary sector.¹⁶ Given the scope and frequency of reviews associated with the tertiary sector, it is clear that Australia is yet to achieve a transparent, linked up and coherent tertiary education landscape initially intended.

In its current form, the AQF encourages artificial barriers that learners and providers must navigate. This contributes to the diluted relevance and acknowledgement of the full suite of offerings across the sector, discourages learner articulation and inhibits lifelong learning – a well-known construct prominent in policy debate since the 1970s.¹⁷

Key areas of concern across the framework include:

- A disconnect with contemporary and evolving understanding of skills needs, learning styles and the changing nature of work
- Limited capacity to be flexible, responsive and accessible to learners and employers/industry
- Lack of connection to the principles of lifelong learning, mixed-modes of teaching delivery and use of new technologies and learning platforms¹⁸
- Compelling the duplication of efforts for learners, employers and administrators.

This has resulted in the sustained promotion of an already fractured tertiary landscape that is not fit for purpose. Lack of cohesion across the sector has led to wasted resources, underdeveloped learners and skills that are lost in translation.

Whilst the AQF is widely used by people who develop, issue and accredit qualifications, as well as professional bodies, industry, unions, licensing authorities and governments, in its current composition, the framework is outdated and misaligned.¹⁹

The profile that the AQF has achieved could position the updated framework to be the catalyst in facilitating and securing the broader policy and practice shifts necessary for the Australian education and training landscape to be fit-for-purpose and sustain its relevance into the future – particularly at the post-secondary level.

The MCA broadly supports the objectives of the review and commends the scope of work undertaken to progress options for a more coherent, coordinated and contemporary qualifications framework.

¹³ PhillipsKPA, [Contextual Research for the Australian Qualifications Framework Review](#), Victoria, 2018, p. 9.

¹⁴ Minerals Council of Australia, [Submission to the expert review of Australia’s vocational education and training system](#), 25 January 2019, p. 1.

¹⁵ Productivity Commission, [Shifting the Dial: 5 Year Productivity Review](#), Report No. 84, Canberra, 3 August 2017, p. 89.

¹⁶ Department of Education and Training, [Review of the Australian Qualifications Framework: Discussion Paper](#), Australian Government, December 2018, p. 9.

¹⁷ Parliament of Australia, [Beyond Cinderella: towards a learning society](#), report from the 1996 Senate Select Committee [Inquiry](#) into the Developments in Adult and Community Education in Australia since 1991, p1; and National Centre for Vocational Education Research (NCVER), [Australia’s approach to lifelong learning](#), Australia, 2004, p. 3.

¹⁸ For principles of lifelong learning see Parliament of Australia, [Beyond Cinderella: towards a learning society](#), report from the 1996 Senate Select Committee [Inquiry](#) into the Developments in Adult and Community Education in Australia since 1991.

¹⁹ Department of Education and Training, op. cit. p. 10.

2. REFORMS AND PRIORITIES

The MCA acknowledges there is a significant body of work – research, reports, discussion papers and reviews – that explores the challenges of delivering a cohesive, fit-for-purpose and sustainable tertiary sector, with a spectrum of associated recommendations and proposed interventions.²⁰

Critically, the approaches applied need to:

- Reflect contemporary and evolving understanding of skills needs, learning styles and the changing nature of work
- Be flexible, responsive and accessible to learners and employers/ industry
- Promote and facilitate lifelong learning, mixed-modes of teaching delivery and use of new technologies and learning platforms
- Reduce duplication or efforts for learners, employers and administrators

Inclusion of a wider range of credentials

MCA recently engaged EY to examine the skills needed to reflect and respond to changes in minerals operating practices, particularly increased remote operations. This work rebuts a number of myths about what the future workforce will look like and provides an evidence-based foundation to:

- Determine how we invest in and collaborate across the education and training ecosystem
- Keep up and be responsive to the pace of change
- Thrive in the opportunities that change presents.

This research confirms technology will enable 77 per cent of jobs to be enhanced or redesigned and where automation is possible, some core roles will remain. Retraining will provide opportunities for other workers.²¹

Pathways spanning TAFE and training providers, university and include intensive micro-credentialing (mini-qualifications that demonstrate skills, knowledge, or experience in a given capability) will likely become commonplace for the industry, making it easier to both connect with and learn the skills key for our industry.²²

The recognition and inclusion of a wider range of credentials aligns with industry's focus on and need for competencies and skills.

Skill sets

The minerals sector believes that skills sets 'can be a better option for both individuals and employers' because they are 'more efficient, quicker to undertake and less costly... [and] can also more readily support individuals to develop further specialisation, progression or occupational mobility'.²³

Skills sets are highly popular in the minerals sector, because of productivity drivers leading to multiskilling requirements, rapid technological change and safety requirements. For example, they are the largest form of nationally recognised training provided to minerals sector employees – about 50 per cent of total minerals sector employees undertake skills sets.²⁴

Noting that VET Skills Sets, along with VET short courses and incomplete qualifications are accredited and assured, the MCA advocates for their inclusion in the AQF.

²⁰ Such work has been undertaken by governments, industry groups, councils, VET and higher education providers, and professional service companies. See C Fowler, [Making friends with the new ideas – tertiary system reforms of AQF levels 5-6](#), article in [Campus Review](#), viewed 14 March 2019.

²¹ Ernst and Young, [The Future of Work: the Changing Skills Landscape for Miners](#). A report for the Minerals Council of Australia, Sydney, 2019.

²² Deakin University, [What are micro-credentials and how can they benefit business and employees](#), Deakin Co. online media centre, 24 October 2017.

²³ Department of Industry, Review of Training Packages and Accredited Courses, 2014; as cited in the Minerals Council of Australia, *Victorian Government VET Funding Review Submission*, 2015, p. 10.

²⁴ National Centre for Vocational Education Research, [Training and education activity in the minerals sector](#), 20 March 2013.

The MCA supports the proposed criteria for inclusion, noting that such a criteria would facilitate inclusion of future skills set and competencies as they are developed in response to industry, professional and community need:

Quality assured, accredited, AQF learning outcomes, assigned to an AQF level, with a clear AQF pathway, that are not duplicative, and meet industry, professional and community need.²⁵

The MCA would also welcome the creation of credential types defined by a link to a qualification type, where learners wish to collate shorter form credentials into full qualifications.²⁶ The MCA recommends that this aggregation is optional and would not diminish the value of credential types completed as a stand-alone.

Enterprise and social skills

In a time where the linear world of work is disappearing and it is anticipated that young people will hold more than ten jobs across five industries throughout their career. At the same time, the skills and capabilities employers are seeking continue to evolve; for example, there is pronounced shift to employers seeking 'soft skills' and weighting them equally with 'test scores'.²⁷

With the increased profile of what the AQF refers to as enterprise and social skills, the MCA supports and advocates for the recognition of these skills within the framework. Noting that there are contextual limitations on establishing an enterprise and social skills taxonomy that applies to all qualifications, the MCA supports the proposal to expand the list of the skills included in the AQF and provide advice about delivering them through various qualifications.²⁸ The MCA recommends that this approach includes the development of tools for industry to use in providing the contextual frame complimentary to the AQF advice, to assist tertiary providers in incorporating them into various qualifications.

Taxonomies

VET offers an alternative pathway for industry to gain workers with the right skills, by encouraging students and current employees to upskill, re-skill and develop expertise in a particular area by completing just a few units of competency, rather than a full qualification.²⁹ Yet broad public perceptions often misrepresent VET as a pathway of 'last-resort' or the 'failed pathway' – perpetuating misinformed views diminishing its perceived value and importance. Composition of the AQF taxonomies and issues identified in the discussion paper contribute to and exacerbates this perception.³⁰

Re-positioning VET as an equally valid pathway to securing the right skills for the future of work is a critical aspect of any action in response to this review. Recalibration of AQF taxonomies and levels to better reflect contemporary and evolving understanding of skills needs, learning styles and the changing nature of work would:

- Provide clarity around pathways
- Promote improved cohesion, coordination and cooperation across the landscape
- Present clear distinction across levels and recognition of the individual value and profile of VET and higher education

The MCA recommends this approach also considers how to incorporate flexibility to introduce additional taxonomies to capture future modes of delivery.

²⁵ Department of Education and Training, [Review of the Australian Qualifications Framework Discussion Paper](#), Australian Government, December 2018, p. 16.

²⁶ Department of Education and Training, op. cit. p. 18.

²⁷ J Owens, *Artificial Intelligence, machines and the GIG economy*, targeted stream at the [Navigating Technology and Jobs of the Future Summit](#), 2018, Australian Information Industry Association, Canberra.

²⁸ Department of Education and Training, op. cit. p. 18.

²⁹ Minerals Council of Australia 2018 Minerals Industry Education Summit, Melbourne, 17 May 2018.

³⁰ Department of Education and Training, op. cit. p. 18

Volume of learning and credit points

The MCA acknowledges the challenges associated with and reported reluctance to maintain descriptors on the volume of learning – that provide a guide to the depth and breadth of learning– in the AQF.³¹ However, this needs to be considered in the context of:

- Broader challenges faced across the tertiary sector, for example: consistency and quality of learner outcomes and the reputation of providers)
- The proposed expansion of the framework to recognise a wider range of credentials.

When considered in this context, the inclusion of volume of learning parameters – as a guide – may contribute to increased trust in the qualifications, competencies and skills that are supported by the framework.

In line with the changing nature of work, evolving skills needs and the increased need for a spectrum of VET and higher education offerings, the MCA agrees the introduction of a voluntary credit point system may facilitate greater recognition of shorter form qualifications and improve the balance of importance across VET and higher education.³²

The MCA supports a combined approach that includes:

- Volume of learning
 - As a guide on the breadth and depth of a qualification
 - Updated to reflect hours required not year
 - Based on the needs of a new learner
- Credit point system
 - As a voluntary guide that helps facilitate pathways between levels and qualifications
 - Providing volume of learning in hours
 - Based on the needs of a new learner.³³

Offering a two-pronged approach would promote greater uptake of volume of learning/ credit-point methodology across the broader education and training landscape as providers learn to apply and administer the systems. In the longer term, this may accommodate the shift a single system of recognition for the purposes of articulation across the Australian system as well as comparison in the international context.

³¹ Department of Education and Training, op. cit. p. 27.

³² Department of Education and Training, op. cit. p. 29.

³³ Department of Education and Training, op. cit. p. 30.

3. IN RELATION TO APPROACHES SUGGESTED BY THE PANEL OR PROPOSED IN SUBMISSIONS OR THROUGH CONSULTATIONS, WHAT ARE THE MAJOR IMPLEMENTATION ISSUES THE REVIEW SHOULD CONSIDER? PLEASE CONSIDER REGULATORY AND OTHER IMPACTS.

While this review does not extend to broader governance structures, it should recognise/ acknowledge the impact of funding, regulations and the state/federal interplay on learners, providers and industry.

Cohesion across broader policy reform and activity

A significant number of reviews, strategies and reports are underway or complete across the policy landscape. This unique shift affords the opportunity to examine complementarity and interplay across broader policy issues/ decisions to support greater policy cohesion founded on a cumulative evidence base. This would facilitate development and implementation of a robust, future-focused and sustainable qualifications framework.

Active and recent reviews and strategies that have or will soon deliver recommendations that may be relevant to this work include:

- [National Regional, Rural and Remote Education Strategy](#)

This strategy is considering a national focus for regional, rural and remote education, training and research to enhance access, outcomes and opportunities in regional Australia. Successful implementation of interventions will be influenced by the strength of the overarching qualifications framework – in particular where there is a need for collaboration between and articulation through the VET and higher education levels.
- [The Expert Review of Australia's VET System](#)

The focus of this review is on how the Australian Government's investment in VET could better provide Australians with the skills for success across their working life. The report is expected by end of March 2019 and may include recommendations that impact and-or may enhance the recommendations from this review.
- [Australian Government discussion paper: driving innovation, fairness and excellence in Australian higher education](#)

Released for public comment at the 2016-17 Budget, this paper received more than 1200 [submissions](#). The policy options paper and subsequent submissions inform the [Higher Education Reform Package](#).³⁴ It also includes various reforms that rely on the qualifications framework; therefore progress of these should be taken into consideration.
- [The House of Representatives Standing Committee on Education and Employment inquiry into innovation and creativity: a workforce for the new economy](#)
- This 2016 inquiry proposed various constructive recommendations that are yet to be actioned. Key recommendations include, but are not limited to:
 - Recommendation 19 – streamlining integration between universities and the VET sector
 - Recommendation 18 – ensuring that the competencies taught in certificate IV, diploma and other VET qualifications are linked to corresponding bachelor degrees.

³⁴ The review of the AQF is part of this package, see: Australian Government, [The Higher Education Reform Package](#), May 2017, p. 29.

4. OTHER

The education experience needs to mirror real life working modes and complement the technical side of learning. Today people work within and across networks and systems, and are expected to function through agile, borderless, teams or communities of practice. These are outcomes focused and may be formed in response to a specific problem, execute their response and disband.³⁵

As the framework is reimagined, due consideration must be given to the changing nature of work. There is a real danger the broader narrative shaping the tertiary sector continues to consider the future ways of working in the context of an outdated construct of work.

The minerals industry supports use of pilot programs to test interventions and models to determine best-practice, identify the interventions and pathways that are responsive and relevant, and establish a flexible, stable and sustainable VET system.

This includes the testing of how interventions fit in and interact with the qualifications framework.

While such activity may be outside the scope of this review, the framework must be sufficiently robust to respond to accelerating innovation across the education and training ecosystem.

Pilot programs that may seek-to or need-to be captured under the framework include:

- Adapting the funding system to facilitate more flexibility and relevance around skills acquisition, including funding units of competence and skill sets³⁶
- Shorter modules linked to qualifications and connected to real work content and experience, with flexible and technology enabled delivery modes across the higher education and VET sectors
- Alternative assessment and credentialing options³⁷
- Combined, online curriculum that offers academic and skills development; with materials, courses and offerings from multiple locations and providers, enabling students to pick up different parcels of skills and knowledge relevant to their needs, wants and desires, at the right time
- New models of teaching and engaging students, such as threaded degrees, flipped classrooms, interactive and immersive technologies and on-the-job learning
- Programs that offer just-in-time education and training, link training needs to labour market demands and are suitable for upskilling workers based on changing market needs³⁸
- Cadet style programs for individuals transitioning mid-career or for those long term unemployed
- Threaded pathways that span TAFE, university and short burst, micro credentialing to form learning bridges³⁹
- Adapting existing models to develop a skills mapping systems that can track an individual's abilities and knowledge, and map these against current a future skills.⁴⁰

³⁵ Minerals Council of Australia 2018 Minerals Industry Education Summit, Melbourne, 17 May 2018.

³⁶ Minerals Council of Australia 2018 Minerals Industry Education Summit, Melbourne, 17 May 2018; Australian Information Industry Association [Navigating Technology and Jobs of the Future Summit](#), 2018, Canberra; and, Australian Government, [Review of the Australian Qualifications Framework Discussion Paper](#), December 2018, viewed 19 January 2019.

³⁷ University of Melbourne [micro-credentialing](#), web page, viewed 21 January 2019.

³⁸ Government of Canada, [Aboriginal Skills and Employment Training Strategy](#), program web page, December 2018; and Obvious Choice, [Micro-learning](#) viewed 23 January 2019; and Productivity Commission, [Shifting the Dial: 5 Year Productivity Review](#), 2017, p. 97 as seen in Department of Education and Training, [Changing work requires new skills and learning methods](#), Department document, Australian Government, December 2018, p. 3.

³⁹ Minerals Council of Australia 2018 Minerals Industry Education Summit, Melbourne, 17 May 2018.

⁴⁰ J Clarke, *Technology, Government and the Customer Experience – Telstra*, Address at the [Navigating Technology and Jobs of the Future Summit](#), Australian Information Industry Association, 2018, Canberra.

The Minerals Council of Australia (MCA) welcomes the opportunity to contribute to the review of Australian Qualifications Framework: discussion paper.

Delivering a flexible, functional and fluid tertiary education system at the post-secondary VET and higher education level is critical to meeting the skills needed of the sector and industries more broadly; especially as specialist skills associated with innovation and technology adoption increase. Ensuring that the qualifications framework that supports this system is robust, responsive and relevant is critical to the longer-term success and sustainability of the system.