Jobs and Skills Councils

An Australian Government Initiative

Joint Submission

Getting it right: Building AI infrastructure that works for Australia

9 October 2026

Table of Contents

Participating Jobs and Skills Councils 3

Executive Summary 4

Part 1: Managing growth in large data centres and the AI training opportunity 7

- Capacity thresholds for application of the AI standards 7
- Approach to the application of the AI standards 8

Part 2: Requirements for large data centres 10

- Make a positive contribution to Australia's energy transition 10
- Impose no net costs on consumers and communities 10
- Engage meaningfully with local communities and councils 11
- Contribute to building skills and training opportunities 14

Part 3: Conditions for AI training 17

- Australia's security and safety will benefit from AI training 17
- Australia's AI standards will provide a simple and consistent regulatory approach 26

References 29

Participating Jobs and Skills Councils

Jobs and Skills Councils (JSCs) are industry-owned and industry-led organisations that bring together employers, unions and governments to identify workforce and skills needs and strengthen Australia's vocational education and training system.

This joint submission to the Australian Government's consultation *Getting it right: Building AI infrastructure that works for Australia*, has been prepared with the participation of the following JSCs:

Future Skills Organisation: Works across Australia's finance, technology and business sectors, with a focus on emerging workforce needs, digital capability and skills. www.futureskillsorganisation.com.au

HumanAbility: Represents the care and support economy, spanning aged and disability services, children's education and care, health, human services, sport and recreation. www.humanability.com.au

Industry Skills Australia: Covers Australia's transport supply chain, including aviation, maritime, rail, transport and logistics, and emerging areas of transport and distribution. www.industryskillsaustralia.org.au

Manufacturing Industry Skills Alliance: Brings together industry perspectives across Australia's manufacturing sectors to support workforce capability, skills development and industry-led training solutions. www.manufacturingalliance.org.au

Mining and Automotive Skills Alliance: Works across the mining and automotive industries to strengthen workforce capability, develop industry-relevant training and respond to changing skills needs. www.ausmasa.org.au

Public Skills Australia: Supports workforce and skills development across public safety and government, including government, defence, policing, corrections, and fire and emergency services. www.publicskillsaustralia.org.au

Powering Skills Organisation: Focuses on workforce and skills needs across energy, gas and renewables, including the capabilities required to support Australia's energy transformation. www.poweringskills.com.au

Service and Creative Skills Australia: Represents arts, personal services, retail, tourism and hospitality, supporting workforce development across Australia's diverse service and creative industries. www.sacsa.org.au

Skills Insight: Works across agribusiness, fibre, furnishing, food, animal and environment care, drawing together industry perspectives on workforce and skills needs. www.skillsinsight.com.au

To find out more about the JSCs, visit www.dewr.gov.au/skills-reform/jobs-and-skills-councils.

Executive Summary

We are pleased to provide this submission to support the Australian Government in developing the requirements to guide the future sustainable development of large data centres and AI infrastructure and inform the design of nationally consistent AI standards.

JSCs support the Government's objective of attracting investment in AI infrastructure and frontier AI training to Australia, and its intention that this investment deliver lasting economic, social and strategic benefits.

This submission focuses on the workforce and skills dimensions of the proposed AI standards, where JSCs can contribute industry-led, tripartite insights from across the economy. It responds to the consultation questions where JSCs have relevant evidence and does not address technical matters outside that remit.

The central message of this submission is that workforce capability must be built alongside technology deployment.

Australia's investment in sovereign AI infrastructure, including data centres, compute capacity and related digital assets, will significantly expand the nation's ability to develop, deploy and use AI. To realise the full economic and productivity value of this investment, infrastructure will need to be matched by the capability of businesses, workers and communities to apply these technologies effectively.

As AI becomes more widely available, the need for AI and digital skills extends across the entire economy, not just within the technology sector. Australia will need both a broad base of workers in every industry who can use AI safely, productively and responsibly, and a specialist workforce that can design, build, secure and maintain AI-enabled systems and infrastructure.

Together, these capabilities will determine how effectively the nation can both create advanced AI capability and apply it across the economy.

The consultation paper's discussion of local capability focuses largely on research and development. While pathways for workers and learners to gain digital and AI skills receive less attention in the paper, this submission considers them essential to realising the benefits of AI infrastructure.

The *Intergenerational Report 2026: Australia's future to 2066* identifies AI as one of five transitions that will shape the economy over the next 40 years. It notes that Australia's data centre pipeline could support more than $150 billion in investment by 2030. Yet while two-thirds of Australian businesses report adopting AI in some form, fewer than 10 per cent describe that adoption as significant (Treasury 2026).

That gap reflects what JSCs are seeing across their industries, namely Australia's challenge is not AI adoption alone, but the workforce and organisational capability required to translate adoption into productive use.

Workforce development is not keeping pace with technology deployment. The expectation is that AI will help lift long-term productivity growth, but only if it is adopted broadly and backed by complementary investment, not just the technology itself (Treasury 2026). Workforce capability is that investment and without it the productivity gains will not follow.

This builds on the *National AI Plan 2025*, which identifies data centres as foundational to Australia's AI ambitions and points to the Key Apprenticeship Program as supporting apprenticeships in priority sectors, including those required for AI infrastructure such as clean energy (DISR 2025). The AI standards are an opportunity to take that further.

The key points of this submission by participating JSCs are:

- **Workforce is a constraint on AI infrastructure.**
  Data centres and the energy infrastructure needed to support them will draw on electricians, engineers, technicians and other trades already in shortage across energy, mining, manufacturing, construction, the public sector and other sectors. Workforce capacity should be considered alongside energy and water in siting and approval decisions, and the aim should be to grow the workforce rather than move workers between industries. This will additionally increase demand for various resources, in mining for example the demand for minerals such as copper, adding to workforce pressure in exploration, mining and processing.

- **Sovereign AI will require sovereign security capability**.
  Sovereign AI models and infrastructure will require sovereign securitisation, together with the capability to prepare for, respond to and recover from incidents. These security and response requirements will place additional demand on the public safety and government workforce, where shortages are already acknowledged. Early and ongoing engagement with these sectors will be essential to ensure workforce planning keeps pace.

- **Skills obligations should be specific and measurable.**
  The requirement to support training should become measurable commitments, including apprentice and trainee targets during construction and workforce development commitments for ongoing operations, delivered through nationally recognised training and consistent with the Commonwealth's Expectations of data centres and AI infrastructure developers (DISR 2026).

- **Communities should share in the benefits.**
  Regional communities, small businesses and First Nations people should benefit through local training capacity, genuine partnership and pathways into work.

- **AI capability is needed across the whole economy.**
  This should be recognised explicitly in the standards, with an emphasis on applied and contextualised training rather than generic tool use. Responsibility for building this capability should be shared, led by government in partnership with industry, employers, education providers, unions and the skills system. Employers could be expected and supported to train their staff, including through traineeships and apprenticeships, and frontier AI developers and data centre operators have a contribution to make as part of that shared effort, as outlined in Part 3.

- **Safeguards should protect people and Australian knowledge.**
  From a worker’s perspective, workers and unions should have a genuine say in how AI is introduced, potentially through duties to inform staff before AI systems are deployed. Safeguards should also protect people receiving services, Australian data and intellectual property, and First Nations cultural knowledge and data.

- **A nationally coherent approach to uplifting AI capabilities is needed.**
  This includes an agreed definition of AI skills, the inclusion of workforce capability in the Australian Standards for AI, and integration with Qualification and System Reform.
- **The pace of AI adoption means Australia cannot rely on traditional workforce development approaches alone.**
  Building capability at the scale and speed required will demand a coordinated effort across multiple learning pathways, including schools, VET, higher education, workplace learning, vendor certifications, micro-credentials, traineeships, apprenticeships and self-directed learning. The goal must be to rapidly increase both the number of Australians with foundational AI capabilities and the specialist workforce needed to build and deploy AI systems. Without a scalable, multi-pathway approach to skills development, the nation's investment in AI infrastructure and capability will outpace the workforce's ability to use it productively, limiting economic, productivity and social benefits.

JSCs are well placed to help the Government realise the benefits of AI infrastructure. Through their four functions of workforce planning, training product development, implementation support and industry stewardship, they shape the training packages that underpin most nationally recognised training (DEWR n.d.a). When AI changes what work requires, it is largely through these training products that the change reaches apprenticeships, classrooms and workplaces.

JSCs' tripartite structure is a particular strength in this environment. AI is adopted most successfully when workers are partners in change and employers can see the value of investing in skills.

By bringing employers, unions and governments to the same table, JSCs can test what AI means for tasks and occupations with the people who do the work, validate new skills with the employers who need them, and build the trust that worker-centred adoption relies on.

This work is already underway. The Manufacturing Industry Skills Alliance, for example, is currently examining the impact of AI and digital technologies on manufacturing skills and workforce needs through its Industry 5.0 Integrated Manufacturing Workforce Development Project, with findings expected to inform future workforce planning and training product development.

Working together, JSCs also offer a whole-of-economy view that no single industry can provide.

A coordinated cross-JSC approach can provide government with industry-specific intelligence about emerging AI capability requirements, identify where industries are competing for the same skills and where common skills can be addressed consistently across industries.

This also helps avoid a fragmented approach in which industries independently attempt to understand and respond to the same technological changes.

The JSC network welcomes the opportunity to work with the Office of AI, relevant Commonwealth agencies and state and territory governments as the standards are developed and implemented, so that Australia's investment in AI infrastructure delivers lasting benefits for workers, industries and communities.

Part 1: Managing growth in large data centres and the AI training opportunity

For noting:

Parts 1 and 2 of the consultation paper focus largely on how large data centres should be regulated, including capacity thresholds, energy and water requirements and community obligations.

Consistent with the approach outlined in the Executive Summary, participating JSCs have responded to these questions only where they have workforce and skills implications, recognising that other matters are best addressed by those with the relevant technical expertise.

Where the consultation questions distinguish between the construction and operational phases of data centres, this submission has sought to do the same, as the workforce issues and the evidence available for each phase differ.

Capacity thresholds for application of the AI standards

Q: Is a single threshold such as an energy capacity (MW) sufficient to identify the data centres that should be subject to the AI standards? If not, what additional thresholds should be considered?

Q: Does a tiered approach sufficiently capture different types of facilities and ensure proportionate obligations relating to Australia's energy transition, water management and communities?

This submission does not propose different technical thresholds to those set out in the consultation paper. From a workforce perspective, however, facility size should not be the only measure of impact.

Workforce impacts will also depend on where and when a project is developed, the occupations it requires, the capacity of the local labour market and the number of other major projects drawing on the same workers.

Data centre development will draw on many occupations already in demand across mining, energy, water and other industries, including electricians, electrical engineers, metal fitters and machinists, diesel motor mechanics and other technical roles and several of these occupations are on the Jobs and Skills Australia Occupation Shortage List (JSA 2025a).

For example, the 2021 Census counted around 29,000 metal fitters and machinists and 20,000 other building and engineering technicians working in mining, representing around 23 per cent and 44 per cent of these occupations respectively (ABS 2022, cited in AUSMASA 2025). Similar pressures apply in other industries that rely on these occupations such as manufacturing, energy and agriculture. These pressures may be particularly significant in regional areas where the available workforce is smaller.

A tiered approach can provide a useful basis for scaling requirements, but it should be supported by consideration of local workforce capacity and cumulative demand across the broader project pipeline.

Data centre locations should be assessed against local workforce capacity, as well as energy and water availability. For larger developments, this could include identifying the occupations required, assessing local workforce capacity and setting out how the project will contribute to additional workforce supply through apprenticeships, traineeships and training partnerships.

Q: What can Australia learn from other jurisdictions that regulate large data centres, particularly in designing obligations that are proportionate to potential community impacts while maintaining incentives for investment?

International experience shows the value of linking major infrastructure investment with workforce planning and recognised skills pathways from the outset.

The United Kingdom provides a useful example of linking infrastructure planning with workforce planning, including greater visibility of skills demand across regions and the broader project pipeline. After designating data centres as Critical National Infrastructure in 2024 (UK Government 2024), the UK has moved to develop occupational standards and apprenticeships specific to the sector.

Singapore has also taken a coordinated approach that connects industry demand with skills pathways, training and employment, placing more than 19,000 local professionals in technology roles through pathways aligned with its national ICT skills framework (IMDA n.d.).

Workforce and skills requirements should be clear, nationally consistent and built into infrastructure planning early. This would give industry greater certainty while helping governments identify where workforce pressures are likely to emerge and where additional training and skills development will be needed. Australia should build on its existing workforce and training system rather than create a separate system for AI infrastructure.

As will be discussed in Part 2, much of the training provided through operators' internal programs is not portable between operators or eligible for public funding (Mandala Partners 2024). Where it meets an identified need, bringing this training within the national system could unlock public funding that cannot currently be applied to unaccredited courses. A nationally consistent approach should still allow for local and regional differences, particularly where projects are drawing on occupations already in shortage or competing with other major investments.

JSCs are well placed to connect infrastructure planning with workforce and skills planning. Drawing on the tripartite networks JSCs can identify emerging workforce needs, shared occupations and regional pressure points across major project pipelines, and help translate these into nationally recognised qualifications, skill sets and training pathways.

The UK's regional mapping of skills demand is similar in purpose to the workforce planning JSCs already undertake. The cross-industry role of JSCs also supports a more coordinated national response, rather than addressing skills needs project by project or industry by industry.

Approach to the application of the AI standards

Q: At what point in development processes should mandatory requirements apply for large data centres?

Q: Should there be a transition period for data centre proponents to meet their obligations, for example submitting a plan within a certain timeframe after commencing operations? If so, at what point in the development cycle should this occur?

Q: Following passage of the proposed legislation, when should compliance start? For example, immediately, or staggered for different requirements, recognising practical constraints around planning and approvals, and to ensure regulation is proportionate. How should certainty for, and impacts on, the Australian community be balanced with these considerations?

From a workforce and skills perspective, requirements should apply early in the development process in order to influence workforce planning and training, particularly for the construction phase.

Building additional workforce capacity takes time, particularly where apprenticeships, traineeships and partnerships with training providers are involved, noting for example most trade apprenticeships take four or more years.

Workforce planning should consider demand from other major projects drawing on the same occupations. Workforce and training commitments should be made at the approval stage and address the construction phase and ongoing operations separately, recognising that their workforce needs differ, consistent with Expectation 4 of the Commonwealth's Expectations of data centres and AI infrastructure developers, which already expects operators to invest in apprenticeships and structured training pathways (DISR 2026). Construction is where workforce demand is most immediate, so these commitments should not be deferred until a facility is operating.

Some phasing may be reasonable for operational roles. As discussed in Part 2 of this submission, there are currently no nationally accredited pathways designed specifically for data centre operations, and the qualifications and skill sets that may be needed are still being identified. Operational training requirements could therefore be phased in as the most appropriate training pathways are confirmed. Commitments at each stage should be measurable, based on realistic local employment outcomes and monitored over the life of the project.

Q: How should governments anticipate and respond to large data centre energy loads which may become operational faster than additional energy generation can be completed to offset their demand?

Workforce capacity should be considered alongside energy infrastructure planning. Where data centre energy loads come online faster than new generation can be built, the workforce pressure falls on the construction of the additional generation, transmission and supporting infrastructure needed to meet that demand. This is distinct from the workforce required to operate data centres once they are running, which is discussed in Part 2.

The additional generation, transmission and supporting infrastructure required for data centres will draw on many of the same electrical and technical occupations already needed for the energy transition. Electrical systems alone account for around 44 per cent of data centre construction costs (CBRE 2024).

The energy sector is already projected to be short around 42,000 electrical workers by 2030, and data centre construction alone is estimated to require around 12,450 additional energy trades workers between 2024 and 2030 (PSO 2025). Existing trade shortages, limited skilled migration and a four-year apprenticeship pathway mean this workforce cannot be expanded quickly. These challenges increase workforce-related delivery risks not only for data centres, but also for broader electrification and Australia's net zero ambitions (PSO 2025).

Planning for data centre growth should therefore consider the workforce required not only to build and operate the facilities themselves, but also to deliver the additional energy infrastructure needed to support them, so that new investment grows the available workforce rather than intensifying existing shortages.

Part 2: Requirements for large data centres

Make a positive contribution to Australia's energy transition

Q: How could obligations be phased in to account for the time needed to build data centres and new renewable projects?

Phasing should allow for the time it takes to build the workforce as well as the infrastructure. The renewable energy obligation should be matched by a workforce commitment at the approval stage, so that training for the trades needed to deliver new generation is under way before construction begins. That commitment should grow the supply of new workers rather than draw on existing tradespeople. Targets for first and second-year electrotechnology apprentices and mature-age apprentices would do this and would reduce the risk of major projects recruiting apprentices trained by smaller employers.

Q: What unintended consequences or implementation challenges should the government consider in designing a renewable electricity framework for data centres?

From the JSCs' perspective, the main risk is that the obligation moves pressure onto other industries rather than adding capacity.

As mentioned previously, renewable projects built to offset data centre demand will draw on the same occupations as the data centres themselves and as other energy, housing, manufacturing and mining projects. Data centre construction could support around 18,900 additional jobs by 2030 (Mandala Partners 2024). Without a parallel workforce plan, the obligation could slow other energy transition projects rather than add to them.

Data centres will also increase demand for minerals and metals, including critical minerals. They use large amounts of iron, aluminium and copper, and AI data centres are estimated to use around three times as much copper as traditional facilities, with copper demand from data centres expected to increase significantly by 2030. The proposed renewable generation requirement could increase this demand further, increasing the need for workers across exploration, mining and processing, where shortages already exist.

Impose no net costs on consumers and communities

Q: Aside from infrastructure and network augmentation costs attributable to their energy and water demand, are there other significant potential costs from data centre activity, and how might accountability be provided for managing these?

A significant cost that does not appear on energy or water bills is the effect on other employers when data centres compete for scarce skilled workers. For example, in NSW, more than 10,000 workers could be needed for data centre construction at the same time as around 3,000 are needed for mining projects (based on Mandala Partners 2024). As data centres are increasingly considered for regional sites, they may compete for local workers.

The cost also falls on employers who are less able to compete on wages. Small businesses often invest in training apprentices, only to lose them to major projects once they are qualified, while public sector agencies, including local government, already struggle to recruit technical and trade staff within tight

budgets. In the current inflationary environment, this competition is likely to place further pressure on wages and project costs.

The consultation paper identifies housing, energy, telecommunications and defence as sectors likely to face competition for high-skilled workers, and manufacturing, mining and the public sector should be added to that list.

Data centre operators should be accountable for this cost through the skills requirement in the AI standards. Rather than recruiting workers already trained by small businesses, public agencies and other employers, operators should add to the overall supply of skilled workers, particularly by training new entrants.

This could include extending apprentice and trainee requirements similar to the Australian Skills Guarantee to large data centre projects, as discussed further below, together with commitments to ongoing local employment so that communities genuinely share in the benefits.

Engage meaningfully with local communities and councils

Q: What does best practice community engagement look like for data centres, including with nearby businesses?

Best practice engagement treats workforce and skills as a core part of a project's local impact, not a side issue.

Across a tripartite range of stakeholders, data centre development is generally seen as an opportunity. Realising that opportunity will depend on realistic, locally grounded workforce outcomes, and on communities not bearing costs that investors have not accounted for.

There are also concerns that the pace of investment in AI and data centres may lead to demands for excessively rapid expansion and return on investment, without consideration of the impact on critical Australian industries and communities.

Good engagement should include:

- **Workers and unions:**
    - Workers are among those most directly affected by a project of this scale, whether through new job opportunities, competition for their skills, or changes to local training and working conditions.
    - Engaging workers and unions early, as partners rather than simply as a labour supply, builds the trust that successful projects depend on.
    - It also helps ensure that the jobs created lead to long-term careers, supported by nationally recognised training and portable skills that workers can carry between employers, projects and industries.
- **First Nations communities:**
    - Engagement should be a genuine partnership rather than consultation alone, guided by free, prior and informed consent, transparency about intended uses, culturally appropriate governance, shared decision-making and fair benefit-sharing.
    - First Nations peoples hold deep knowledge of land, water and environmental management that is directly relevant to where and how large facilities are built.
    - Projects should create real pathways for First Nations people into education, training and employment, with benefits flowing to the communities in which they operate rather than being extracted from them.

- **Local employers:**
    - Mining, agriculture, energy and other businesses that rely on the same occupations may lose workers to the project, while others, particularly small businesses, may be well placed to supply it or to benefit from new skills in the region.
    - Understanding their workforce needs before construction begins will help ensure the project adds to local capability rather than drawing it away.
- **Local training providers and schools:**
    - Regional, rural and remote communities face persistent barriers to accessing vocational education and training, and many local employers are small businesses that struggle to release staff for training or meet its cost.
    - Bringing TAFEs, registered training organisations and schools into engagement early allows training to be planned ahead of demand rather than in response to it and builds local delivery capacity that remains after construction is complete.
    - Partnerships of this kind can also open pathways for young people and career changers into construction, technical and operational roles, using nationally recognised qualifications and skill sets.
- **Emergency services and local government:**
    - Fire, emergency services and police need the capacity and capability to respond safely at critical infrastructure sites, and this should be confirmed rather than assumed, particularly in regional areas.
    - As noted above, local government and other public agencies already struggle to compete with private employers for technical and trade staff. Early engagement helps ensure a new facility does not stretch the local services it relies on.

Effective workforce development depends on more than point-in-time labour figures, and commitments made to communities should reflect what the local labour market and training system can genuinely deliver, rather than assumed or overstated benefits.

JSCs can support this by sharing intelligence on local labour markets and shared occupations, and by helping proponents and communities design training responses that are practical, locally grounded and nationally recognised.

Q: What role should the Commonwealth's mandatory requirements play in relation to location and community engagement?

The Commonwealth's mandatory requirements should set a consistent national baseline for how workforce and community impacts are considered, while leaving detailed planning decisions with states, territories and local government.

As outlined in Part 1, location decisions should take account of local workforce capacity alongside energy and water availability. Commonwealth requirements could support this by asking proponents to show, as part of their planning, how local workforce capacity has been assessed and how they will add to it through apprenticeships, traineeships and regional training partnerships.

Greater transparency about where large data centres are planned would also help. Visibility of the national project pipeline would allow governments, training providers and JSCs to anticipate where workforce pressures are likely to emerge and to plan training ahead of demand, rather than responding once shortages appear.

Site assessment should also confirm that emergency services can support the facility. Fire, emergency services and police need the capacity and capability to respond safely to incidents at critical infrastructure sites, including fire, flood, infrastructure failure or deliberate attack, and the safety of workers attending these sites must be considered. This should not be assumed, particularly in regional areas, where competition for technical and trade skills is already stretching the capacity of public safety agencies.

Q: How can communities and industry work together to ensure data centres deliver lasting community benefits? How can upfront commitments be reflected in state and territory planning processes or community engagement?

One of the most lasting benefits a data centre can leave is a skilled local workforce. If data centre development is to support regional communities, communities and industry will need to work together on local capability building, training access and sustained workforce participation, beginning well before construction and continuing into operation.

Remote, rural and regional Australia should be seen as a source of economic value in its own right, not simply a location for infrastructure. Its strengths in agriculture and food production, biosecurity, resource management, environmental stewardship and local business growth all stand to benefit from new skills and technology.

Benefits should reach the people and businesses already working there, through:

- specialist trade and technical pathways into construction and operational roles
- broader capability for local workers and businesses to use AI safely and productively in their own work
- access to applied AI expertise and demonstration projects and industry innovation programs
- partnerships with local training providers supported by incentives and subsidies that allow small businesses to take part.

Upfront commitments can be reflected in state and territory processes by attaching training participation conditions to planning approval or investment facilitation for major projects, consistent with the Commonwealth's Expectations (DISR 2026).

As noted in Part 1, these commitments should be measurable and monitored over the life of the project. They should also include partnerships with regional communities and First Nations organisations. A consistent national approach would give investors certainty and keep requirements aligned across jurisdictions.

Q: How important is proximity to population centres for data centre operators given improvements in connectivity and advances in fibre optics?

Q: Should states and territories work with energy, water and telecommunications companies to proactively identify sites for data centres that could support future builds away from populated areas?

This submission comments only on the workforce implications of these questions. Locating away from population centres means drawing on smaller labour markets, where data centres may compete directly with regional industries for workers in occupations already in shortage.

Because data centres also act as anchor infrastructure, attracting related businesses and jobs over time, site decisions will shape regional skills demand for many years, not just during construction.

Proactive identification of suitable sites by states and territories is therefore supported, provided workforce availability is assessed alongside energy, water and connectivity.

Where projects do locate regionally, workforce plans should show how local people will be trained for the roles, rather than relying mainly on recruiting workers from elsewhere. To support this, JSCs can provide intelligence on regional workforce pressures and shared occupations, and work with training providers to build the training capacity those regions will need before demand arrives.

Contribute to building skills and training opportunities

Q: How should data centre operators be required to provide skills and training opportunities, including for under-represented cohorts in skilled workforces, during construction and into ongoing operation?

Q: What broader workforce development obligations should apply to data centre operators during ongoing operations?

The workforce issues in each phase differ, and distinguishing between them is important to ensure that responses are matched to the right need.

Construction draws largely on established licensed trades such as electricians, which are generally supported by existing qualifications and are being considered through existing workforce planning activities. In the construction phase, when data centres and their supporting energy infrastructure are being built, the main challenges are workforce supply, training capacity and post-trade upskilling and specialisation rather than the absence of suitable training products.

The operational phase, once a facility is running and must be maintained over its life, is where new and emerging roles such as data centre and critical environment technicians are appearing and where the evidence on training needs is still developing. Conclusions about the workforce needed to run and maintain data centres should therefore be based on evidence specific to the operational phase.

Further work is needed to establish whether the needs of these roles reflect gaps in qualifications and training products or broader challenges in workforce supply, capability and capacity that can be addressed through existing pathways. Obligations on data centre operators should reflect these differences, with a focus on growing the supply of skilled workers during construction and building the capability of the operational workforce over the life of the facility, as set out below.

The current requirement to demonstrate support for training should be strengthened into specific commitments that can be measured and reported across both construction and ongoing operation.

Existing apprentice requirements, such as the Australian Skills Guarantee, largely apply to government-funded projects (DEWR 2025). Because most data centre projects are privately funded, they sit outside these arrangements, and the AI standards are an opportunity to close that gap.

The scale of the need is significant: data centres are projected to require around 8,300 additional operational workers by 2030, with four in ten operational roles already in shortage (Mandala Partners 2024). That need spans licensed electrical and mechanical trades and non-trade operational roles such as data centre technicians and is in addition to the workforce required during the construction phase.

Industry research also reports that no single existing qualification prepares a worker to operate across all aspects of a critical data centre environment, and that there are currently no nationally accredited pathways designed specifically for data centre operations (Mandala Partners 2024).

As specialised work environments are not always addressed through a single qualification pathway, further examination is needed to identify whether these roles are best served by existing qualifications, targeted skill sets or the development of new training products.

Because these roles sit across different industries with different regulatory requirements, addressing the gaps that are confirmed would require coordinated development across training packages, within each regulatory boundary. For licensed trades, the priority is post-trade upskilling and specialisation rather than entry-level pathway design.

Operators have responded in different ways, with some already working within the national training system. AirTrunk, for example, runs electrical and mechanical apprenticeships through Certificate III qualifications (AirTrunk 2024), and NEXTDC uses telecommunications traineeships for entry-level technician roles.

Others rely on internal programs, such as CDC's internal academy and Equinix's career transition program, which draws workers from manufacturing, maritime, oil and gas and the military (CDC Data Centres n.d.; Equinix n.d.). These internal programs meet real needs, but the credentials they produce are generally not portable between operators and attract no public funding.

Other operators have partnered with public providers, with Microsoft developing short courses delivered through data centre academies with TAFE NSW and Victoria University (Microsoft n.d.; Victoria University 2026).

The use of existing qualifications by some operators suggests that the national training system already meets a number of data centre workforce needs. The extent to which these qualifications suit the full range of data centre roles, and where internal training could be better recognised within the national system, warrants closer examination. Building on what is already working, operators should be required from the construction phase onwards to:

- meet apprentice, trainee and learning worker targets for construction and operational roles consistent with Expectation 4 (DISR 2026), with targets that could be scaled to facility capacity (MW) in line with the tiered approach discussed in Part 1
- use nationally recognised training wherever possible, so the skills workers gain are portable and publicly recognised
- in consultation with workers and unions prepare a workforce development plan with measurable commitments, including partnerships with training providers, regional communities and First Nations organisations
- work with local training providers to build delivery capacity and upskill the VET workforce
- provide pathways for under-represented groups, including women, regional residents, First Nations people, mature-age apprentices and career changers
- contribute evidence to help identify whether existing qualifications, targeted skill sets or new training products best meet the needs of data centre roles, so that training is fit for purpose and can be delivered at scale
- regularly publish workforce outcomes and equity data.

Once facilities are operating, workforce obligations should continue, with a focus on building the capability of the operational workforce through:

- **Upskilling existing tradespeople**
  For electricians already in the workforce, a nationally consistent continuing professional development framework linked to licence renewal would support specialisation in data centre technologies far faster than relying on four-year apprenticeships alone. Other pathways that build specialist capability for new entrants to data centre environments could also be explored as the evidence base develops.

- **Earn while you learn pathways for ICT roles**
  Fewer than 1 per cent of apprenticeship commencements are in IT qualifications. Barriers include low employer awareness, weaker funding incentives, qualifications that do not match entry-level roles, system complexity, and a lack of models suited to career changers (FSO 2025). Shorter, skill set-based traineeships could give graduates and career changers a recognised route into the sector, and governments, employers and unions should work with JSCs to pilot these models for non-trade data centre roles.

- **Ongoing operational training**
  Around 39 per cent of data centre incidents have operational causes, often linked to fatigue or gaps in knowledge (Uptime Institute 2024). This suggests that capability and capacity are significant challenges, and makes continued training a matter of resilience as well as workforce development.

- **Support for the training system**
  This includes trainer and assessor upskilling, transition support for workers moving from affected industries, and operator input to any updates of the ICT and Electrotechnology Training Packages.

The above listed responses are directed at different types of workforce challenges. Apprentice and trainee targets, earn-while-you-learn pathways and pathways for under-represented groups respond to workforce supply. Continuing professional development for licensed trades and ongoing operational training respond to capability. Trainer and assessor upskilling and partnerships with training providers respond to capacity within the training system itself.

Changes to qualifications and training products should be pursued wherever the evidence confirms that existing products do not meet the needs of these roles.

Government also has an important role in supporting the Australian Bureau of Statistics to establish dedicated occupation codes for data centre technician and critical environment technician roles, so that this emerging workforce can be accurately measured and planned for. Without them, workforce data collection, skills shortage analysis and migration pathway planning cannot be undertaken effectively.

A more detailed data centre workforce assessment, building on existing research and undertaken collaboratively by the JSCs whose industries contribute to this workforce, would strengthen the evidence base needed to understand workforce requirements across the construction and operational phases and across different parts of the sector.

This would help distinguish gaps in qualifications and training products from broader workforce supply, capability and capacity challenges, and inform training product development already under way so that it remains responsive to industry needs.

This in turn could inform a national data centre workforce action plan to align Commonwealth, state and territory skills and investment settings and support a consistent national approach across jurisdictions.

Through their tripartite structure, JSCs bring together employers, unions and governments and are well placed to support the co-design of the plan with data centre operators and registered training organisations. Much of this work could also be progressed through existing intergovernmental arrangements such as the National Skills Agreement, without the need for a new structure.

Part 3: Conditions for AI training

Australia's security and safety will benefit from AI training

Q: How should safety and security conditions for AI training be designed to keep pace with rapid technological change, while providing sufficient legal certainty for investors and operators?

Q: What safeguards should apply?

Effective safeguards depend not only on technical controls and regulation, but also on the capability of the people who use, oversee and make decisions about AI.

At present, adoption is outpacing governance, and governance is in turn outpacing the capability needed to give it effect. Only around 23 per cent of Australian organisations have implemented specific AI oversight and control measures (Fifth Quadrant 2025), even though the National AI Centre's guidance on responsible adoption expects organisations to maintain accountability, capability and human oversight across the life of an AI system (National AI Centre 2025). Workforce capability does not currently appear in the published scope of the Australian Standards for AI, and it should (FSO 2026).

Sovereign AI infrastructure is becoming a strategic capability that underpins national resilience. Established frameworks, such as the Tech Policy Design Institute’s layers of AI sovereignty (TPDi n.d.), provide a useful basis for this. A future-ready approach should balance the following considerations, each of which carries workforce and skills implications:

- ethical use of data and AI
- sovereign control of critical information
- prudent use of outsourced services
- development of Australian cyber and digital skills
- secure and resilient domestic data centre design and capacity
- the management of critical environmental resources such as water and power
- diversification of technology and service providers.

Developing sovereign AI capability and infrastructure also poses challenges for workforce and skills development, and a strategic workforce agenda should focus on three objectives:

- **Building sovereign capability**: Australia must develop and retain a pipeline of cyber security, AI, engineering and digital talent capable of securing critical infrastructure and responding to emerging threats, because reliance on external capability for critical security functions creates strategic vulnerabilities and limits national resilience.
- **Embedding security by design**: the future workforce will need multidisciplinary skills that combine technology, risk management, governance and operational delivery, so that security and responsible AI practices are integrated from the outset of system design rather than applied retrospectively.
- **Developing leadership capability**: cyber and AI risks are now board-level and government-level concerns, so the workforce challenge extends beyond technical specialists to executives, policymakers and operational leaders, who need sufficient digital literacy to make informed decisions about investment, risk appetite, regulation and strategic priorities

For public safety and government agencies, the workforce implications are two-fold: integrating AI into their own work with due regard to the sensitivity of the information they handle; and being equipped to secure and respond to incidents at AI facilities.

These agencies, including police, fire and emergency services, corrections, defence and government departments, are already adopting AI on the back of robust ethical-use policies and frameworks that extend to the physical and cyber security of data and AI systems.

However, they operate within fiscally constrained environments and already compete with private employers for technical and trade-based roles. As further critical and AI infrastructure is built, that competition is likely to intensify, so maintaining their capability to support the safe deployment of AI will need deliberate attention.

Throughout, human oversight should remain central. Workers need to understand what AI can and cannot do, interrogate and verify its outputs, recognise errors and know when human judgement should prevail. This matters most where decisions directly affect people, particularly in the care and support sectors, where AI is reshaping workforce requirements at different speeds and with distinct implications for each sector:

- In health and aged care, AI is increasingly embedded in clinical decision support, diagnostic tools, care coordination platforms and monitoring systems, creating demand for workers who can interpret AI-generated insights, maintain human oversight of automated recommendations and navigate the ethical dimensions of AI-assisted care.
- In community services and disability support, AI applications in case management, risk assessment and service matching raise critical questions about algorithmic bias, client privacy and the irreplaceable role of human judgement in complex, trauma-informed and person-centred practice.
- In early childhood education and care, there are emerging questions about the appropriate use of AI in developmental assessment and learning documentation, balanced against the sector's foundation in relational pedagogy and play-based learning.

In each of these settings, AI should augment professional judgement rather than displace it. Beyond foundational AI literacy, workers across these sectors will need the ethical capability to recognise and respond to issues of bias, consent, privacy and transparency, and adaptive skills to work effectively

alongside AI tools while preserving the relational, creative and critical-thinking capabilities that define person-centred practice.

Training products will need to anticipate these shifts and embed appropriate digital and AI literacy within competency frameworks, supporting these sectors to adopt AI in ways that enhance rather than diminish the quality, safety and humanity of care, education and service delivery.

Workers and unions should be involved in how AI is introduced, particularly where it affects tasks, job security, surveillance or automated decision-making. This means genuine consultation with workers before AI is adopted, clear guardrails, transparency about how systems are used, clear lines of responsibility and meaningful human involvement in decisions.

Frontline and mid-career workers often encounter AI with little context, explanation or say in how it is introduced, and without that involvement the technology is experienced as something done to workers rather than with them.

Where AI training involves First Nations cultural knowledge or data, it should not be treated as just another training dataset. First Nations knowledge is a nationally significant asset.

First Nations peoples hold extensive knowledge of land and water management, fire management, biodiversity, agricultural production systems, environmental monitoring and climate adaptation, much of which is increasingly documented through research partnerships, ranger programs, cultural mapping and environmental monitoring activities.

As AI developers seek high-quality datasets and domain expertise, this knowledge may become an increasingly valuable input to AI development, and First Nations peoples have legitimate interests in how their cultural knowledge, data and intellectual property are collected, accessed, used and incorporated into AI systems.

Safeguards should include:

- free, prior and informed consent
- transparency regarding intended uses
- Indigenous data sovereignty
- culturally appropriate governance and shared decision-making
- fair benefit-sharing
- recognition and protection of cultural intellectual property.

The AI framework should also support First Nations-led research and innovation and enable First Nations participation in AI development and create pathways into AI-related education and employment, with the objective of genuine partnership rather than extraction.

Building workforce capability into these settings allows safeguards to evolve as technology changes, while preserving the enduring principles of security, human oversight, transparency, privacy and responsible use.

Q: What contributions would add the greatest value to Australia's future industries and research and innovation system?

The consultation paper's discussion of local capability focuses largely on research and development, with comparatively little attention to pathways for workers and learners to gain digital and AI skills.

This submission considers that this balance should be addressed, because the benefits of AI infrastructure will depend not only on investment in technology, but on whether Australian workers, businesses and industries have the skills to adopt, use and adapt to AI effectively.

As noted earlier, a central concern raised through the JSC network is that workforce development is not keeping pace with technology deployment. This imbalance risks limiting Australia's ability to translate investment in AI infrastructure into sustained productivity improvements and broadly shared economic benefits. Workforce capability should therefore be treated as an essential part of AI infrastructure rather than a downstream consequence of it.

One of Australia's long-standing challenges has been the translation and adoption of innovation rather than its creation, and AI investment will only generate national benefit if it reaches workplaces, enterprises and communities. Support for capability transfer should be considered equally important as support for research generation.

Frontier AI investment should build Australia's productive capacity and resilience, not weaken the industries, communities and rights it depends on.

The greatest value will come from building capability across the economy, recognising that Australia's AI workforce challenge is one of industry transformation, not merely AI specialisation. Generic AI skills will rapidly evolve into industry-specific AI capabilities.

Already many existing occupations are evolving into AI-enabled occupations. The critical capability challenge is enabling workers with deep industry expertise to deploy, interpret and govern AI systems within complex operational environments, combining that expertise with AI and data literacy, cyber awareness and professional judgement.

Manufacturing is already experiencing significant AI-enabled workforce transformation through automation, robotics, predictive maintenance, machine vision and advanced production systems. As a result, AI capability development will be increasingly important for engineers, technicians, tradespeople and production staff working across Australia's manufacturing sectors.

AI training obligations should therefore explicitly recognise the importance of developing industry-specific AI capability and workforce transition pathways across existing industries.

As AI capability becomes more widely available, the need for AI and digital skills extends across the entire economy, not just within the technology sector.

Australia needs two distinct but connected forms of AI capability. First, a broad base of workers across every industry who can use AI safely, productively and responsibly to improve productivity, support decision-making, enhance customer outcomes and adapt to changing ways of working. Second, a specialist workforce capable of designing, building, deploying, securing and maintaining AI-enabled products, services and infrastructure.

Together, these generalist and specialist capabilities will be essential to ensuring that the nation can both create advanced AI capability and apply it effectively across the economy.

AI capability is fast becoming a general workforce requirement. Between 2022 and 2026, the share of job advertisements seeking AI skills rose in every major occupation group except machinery operators and drivers, and in the finance, technology and business sectors individual use is already running ahead of organisational capability, with 64 per cent of workers using AI at work compared with organisational adoption of 57 per cent (FSO 2026).

Hiring data can also understate the need. Health care and social assistance had the lowest share of job advertisements seeking AI skills, at 0.8 per cent (FSO 2026), yet some of its largest occupations, such as registered nurses, are highly exposed to AI (JSA 2025b). Because training tends to follow hiring signals, sectors such as these risk being overlooked.

There is unlikely to be a single set of AI skills that applies across the economy, as requirements will differ by occupation, industry and level of responsibility:

- **Frontline workers** may need practical AI literacy, safe and responsible use, and the ability to critically assess AI-generated information.
- **Managers** may need capability in workflow redesign, workforce planning, data governance and managing human and AI-supported work.
- **Technical specialists** will need deeper technical capability.
- **Leaders** will need to make informed decisions about technology investment, workforce implications, governance and risk.

These needs are already emerging across a wide range of occupations, including but not limited to:

- clinicians, aged care and disability workers, and early childhood educators, who need to maintain human oversight of AI in care settings, as outlined above
- creative practitioners, as AI, online platforms and virtual performance reshape how creative work is made and distributed, as discussed further below
- producers and farm managers using AI-supported production and business management tools
- biosecurity officers using AI-enabled surveillance, detection and risk assessment systems
- environmental practitioners integrating AI-assisted ecosystem monitoring and modelling
- animal care and veterinary professionals working alongside AI-supported diagnostics, treatment and monitoring systems
- fisheries, aquaculture and forestry professionals using AI-enabled monitoring and decision-support technologies, including in planning and regulation
- food, furniture and textile manufacturing workers operating in increasingly automated production environments
- sport and recreation workers, where AI-driven performance analysis, injury prevention and personalised programming require workers to combine data literacy with coaching expertise and inclusive practice
- public safety and government staff integrating AI into their work with due regard to the sensitivity of the information they handle
- engineers, technicians, tradespeople and production staff using AI-enabled automation, robotics, digital twins, predictive maintenance and quality assurance systems to improve productivity, safety and operational performance.

Technological capability should not be considered in isolation from human capability. As AI takes on more routine and analytical tasks, communication, judgement, problem solving, creativity, collaboration and interpersonal skills are becoming more important in many occupations.

AI adoption and workforce transformation are not occurring evenly across the economy, with businesses moving at different speeds and requiring different combinations of digital, technical and human skills depending on how technology is adopted and integrated into their operations.

Small and medium businesses across industries may also face particular barriers to AI adoption and workforce development, including limited time, investment capacity and access to specialist digital expertise. Support for AI capability should therefore recognise business size and capability, as well as geography.

Finally, the benefits of AI capability should not be concentrated in large metropolitan employers. AI implementation will create opportunities to address historical inequities and advance the economies of regional, rural and remote communities, and an AI training framework should include incentives for, and promotion of, regional training and AI investment opportunities.

Many regional, rural and remote operators are small businesses that struggle to access VET, release staff for block training and afford the costs of training. These businesses consistently seek short, applied training linked to real use cases, and without a more active approach that includes incentives and subsidies they risk being left behind.

Investment should therefore expand access to applied AI expertise, demonstration projects, VET partnerships and practical training in regional, rural and remote areas. Without this, differences in autonomy, confidence, digital literacy, time and organisational support mean AI capability may accumulate among the workers and firms already best placed, widening the gaps between large and small employers and between metropolitan and regional businesses.

Q: What mechanisms should the government consider for securing these contributions?

Q: Are frontier AI developers best placed to make contributions in these areas? Should other actors be considered?

Q: What indicators could best demonstrate contribution to Australian research, innovation and public interest purposes?

Investment in AI infrastructure should be accompanied by meaningful investment in Australian workforce capability, through measurable contributions from frontier AI developers and complementary investment by government.

These contributions could be secured as conditions of investment and set out in workforce development plans, with clear commitments to apprenticeships and traineeships, partnerships with training providers, and trainer upskilling that can be monitored over time.

They should be delivered through Australia's existing skills and training structures rather than a separate AI training system and based on realistic local employment outcomes rather than assumed or overstated benefits.

Frontier AI developers have an important role, but responsibility for workforce capability cannot sit with developers alone.

In practice, frontier AI developers could contribute through partnerships with training providers and JSCs, co-investment in applied and industry-specific training, and access to tools and expertise that support trainers and assessors. Some technology providers are already supporting workforce AI capability through agreements with unions and other partners, and these arrangements offer a foundation to build on.

The economy-wide need for AI and digital skills should be recognised explicitly in the standards. Consideration should be given to placing a positive obligation on employers to invest in workforce capability, including through structured training, traineeships, apprenticeships and other recognised learning pathways, so that Australians can fully realise the benefits of the nation's investment in sovereign AI capability.

Agreement on the need to act is currently well ahead of agreement on who leads, who pays and how responsibility is shared (FSO 2026). Building capability will require coordinated effort across government, industry, employers, unions, universities, the VET sector and JSCs, with targeted support needed for small and medium businesses and for industries with less capacity to fund workforce development themselves.

A nationally coherent approach should connect activity already under way, reduce the risk of fragmented and duplicative training, and provide clearer pathways from foundational AI literacy through to industry-specific and specialist capability.

Developers will also have greater impact by working through Australia's existing innovation system rather than alongside it. Decades of public and industry investment have built institutions, knowledge and data that are globally valuable and that give Australian industries their competitive advantage. The agricultural, food, fibre and environmental sectors provide a strong example of this.

> ***Example: Australia's agricultural, food, fibre and environmental innovation system***
>
> *In these industries, Australia's innovation system extends well beyond universities.*
>
> *It includes CSIRO, the Rural Research and Development Corporations, industry extension networks, producer-led innovation programs, VET providers and industry peak bodies.*
>
> *CSIRO and the Rural Research and Development Corporations are Australia's primary mechanisms for translating technology into on-farm, on-water and land-management productivity improvements.*
>
> *The intellectual property developed through this system includes:*
> - *genetics and breeding knowledge*
> - *crop and livestock management systems*
> - *biosecurity methodologies*
> - *environmental monitoring frameworks*
> - *natural resource management expertise*
> - *food production and processing systems*
> - *industry-specific datasets and research outputs.*
>
> *These assets have contributed significantly to Australia's global agricultural competitiveness and productivity performance.*
>
> *Partnerships between AI innovators and this system would significantly increase the likelihood that AI capability translates into measurable productivity, sustainability and workforce outcomes across Australia's productive economy.*

Australia should not simply provide infrastructure, data and expertise for global AI development.

Arrangements should recognise the value of publicly and industry-funded Australian assets, support transparent use and informed consent, ensure Australian industries participate in the value generated, and favour partnership, licensing and co-development models that keep capability and economic benefit in Australia.

The public value of Australian data and knowledge should not be extracted without fair return, particularly for regional communities and First Nations people. Growth in AI infrastructure should also not lock away data that Australian industries need for decision-making and planning, or limit access to repair and maintenance services.

Contributions should be measured by outcomes rather than activity, and relevant indicators could include:

- workforce development outcomes, including the quality and security of the jobs created
- apprenticeships, traineeships and other training participation and completion
- partnerships with training providers, research organisations, regional communities and First Nations organisations
- regional and small business capability
- trainer and educator upskilling
- workforce transition support
- evidence that Australian research, data and expertise are generating ongoing Australian value.

As industry-led, tripartite bodies, JSCs are well placed to provide national industry leadership on the workforce, skills and training implications of AI, ensuring the AI training framework is industry-relevant, workforce-informed, nationally coherent and responsive to changing skills needs.

JSCs are already updating training products to incorporate AI capability and have also previously built in flexibility into many current Training Package products that allow the training of capabilities with the use of changing technologies. Work under way across the network also includes developing general digital capability units for use across the economy, mapping entry-level pathways into technology careers, and a community of practice connecting employers, unions, government and training organisations to co-design and share AI upskilling approaches.

Building on this work, they can help identify how AI is changing tasks, occupations and skills within their industries and translate emerging requirements into training products and skills system responses, including advice on microcredentials, skill sets, trainer and assessor capability, credit recognition and integration across VET and higher education. This may require greater focus on providing implementation guidance for VET providers.

JSCs can also identify the barriers facing regional communities and small businesses and help design accessible training pathways in response, and work as partners with First Nations organisations and leaders to embed First Nations perspectives in AI-related training.

Q: How should frontier AI developers measurably support skills, training and education opportunities beyond what is required of data centre operators to create a sustainable workforce and contribute to the required workforce adaptations?

This submission supports the consultation paper's recognition that AI infrastructure investment should generate broader benefits for Australia's skills, research and innovation ecosystem, and welcomes its focus on creating pathways for workers to upskill in digital and AI-related roles.

The consultation paper proposes requirements for data centre operators to support training for workers involved in construction and operation. This is important, but the workforce opportunity extends considerably further, and the national standards should consider how to divide responsibilities for uplifting AI-relevant capabilities across the economy. This responsibility should be shared between

government and industry, with frontier AI developers contributing as part of that broader effort. Frontier AI development and deployment will affect occupations and industries across the economy. That includes workers who will use AI, work alongside AI-enabled systems, manage AI-supported workplaces and redesign business processes around new technologies.

Frontier AI developers' contributions should complement those of government, industry and the skills system as part of a shared effort. Measurable contributions could include:

- workforce development plans with clear outcomes
- investment in the VET system, including trainer and assessor capability
- partnerships with JSCs, VET providers, universities, employers and unions to identify and respond to changing skills needs
- support for building AI capability into existing occupations and qualifications immediately and continuously, through timely updates to qualifications, skill sets and other training products
- apprenticeships, traineeships, earn-while-you-learn and other entry-level pathways
- practical AI and digital capability development for workers, managers and leaders, not only specialist AI professionals
- support for workers and businesses to train as technologies and job requirements change
- targeted access for regional, rural and remote communities, small businesses, creative practitioners and First Nations people
- accessible pathways and transition support for workers whose occupations are being significantly redesigned or disrupted by AI
- worker consultation as AI changes tasks, roles and workplace practices.

For these contributions to have lasting effect, the skills system itself must be able to respond to the pace of change. Skills requirements can now shift significantly within the life of a single qualification, and workers will increasingly need to build new capability throughout their careers rather than relying mainly on qualifications gained before entering an occupation.

While full qualifications remain important, they should be complemented by shorter, targeted training, skill sets and other recognised learning that can be updated as technology and work practices change, with clear pathways into broader qualifications and career progression.

This in turn depends on the capability of trainers and assessors, noted above, to teach AI skills that are themselves changing rapidly. Within this, two groups warrant particular attention:

- **Early-career workers** need opportunities to develop evaluative judgement, the ability to question, verify or reject AI outputs that underpins the human oversight discussed earlier in this Part.

  That judgement is usually built through the routine early-career tasks AI is now automating, and with entry-level and graduate hiring already contracting in some sectors, entry pathways into work need to be protected.

- **Middle managers**, meanwhile, are expected to translate leadership intent into everyday decisions about when AI should be trusted and are often where AI transition succeeds or fails.

The objective should be a workforce that can use AI safely, productively and with sound judgement across different industry contexts, rather than one that has simply adopted the tools.

Support Australian writers, musicians, artists and journalists, and others working in the creative and media sectors, to thrive

This submission also welcomes the consultation paper's recognition of Australian writers, musicians, artists, journalists and other creative workers.

The paper notes that frontier AI models are currently trained internationally under overseas legal frameworks, with limited visibility or payment for Australian creators, and states the Government's intention to ensure Australian creators can exercise control and receive payment (PM&C 2026).

These issues are significant for the arts workforce, and the workforce response should sit alongside strong copyright and rights-holder protections.

Arts workforce planning identifies AI, online platforms and virtual performance as fundamentally reshaping how art is created, distributed and experienced (SaCSA 2025).

Industry consultation has highlighted both the opportunities AI presents and concerns about the impact of generative AI on creative roles, intellectual property, and the recognition and compensation of creators.

At the same time, as noted earlier in this Part, creativity and the ability to integrate creative and technological skills are likely to become more valuable across the economy, not less. Australian creators should therefore be supported not only to manage the risks associated with AI, but to participate in and benefit from the economic opportunities it creates.

This requires practical capability development, including:

- AI literacy and use
- understanding intellectual property and digital rights
- ethical and responsible use
- digital business capability
- the integration of creative and technological skills.

Training models must also reflect the structure of the creative workforce. In sectors characterised by freelancers, sole traders, project-based employment and small organisations, traditional employer-led training will not reach all workers. Shorter, targeted and recognised forms of learning, such as skill sets that can be updated as technology evolves, are likely to suit creative practitioners better than full qualifications alone. The design of workforce support associated with AI investment should therefore explicitly consider how creative practitioners and small creative businesses can access skills development.

Australia's AI standards will provide a simple and consistent regulatory approach

Q: The Commonwealth proposes reporting and transparency requirements at a federal level for large data centres. Where might this proposed approach interact with existing legislation?

From a workforce perspective, federal reporting should align with existing apprentice and training requirements, including the Australian Skills Guarantee and state equivalents (DEWR 2025).

As noted in Part 2, these requirements largely apply to government-funded projects, so aligning them with the AI standards would extend similar expectations to privately funded data centres without operators having to report the same information in several ways.

Workforce and training outcomes should form part of the proposed transparency reporting. Aligned reporting would keep the administrative burden on operators low and give the Commonwealth, states and territories a consistent national picture of workforce outcomes.

Facilities handling sensitive data must also comply with national security and privacy legislation. Public safety and government sectors will maintain a keen interest in the security of data as further critical infrastructure is developed, to ensure continued compliance with this legislation.

This also has implications for the workforce needed to secure these facilities and respond to incidents.

Q: What additional regulatory reforms or incentives would encourage frontier AI training in Australia?

Strengthening Australia's workforce capability will also strengthen the environment for frontier AI investment, and the main gap to address is one of coordination.

Although AI use is widespread, training activity is substantial and the capabilities required are increasingly well understood, Australia lacks a common framework to define, develop and measure them.

Comparable jurisdictions, including the United Kingdom, Singapore, the European Union and Canada, treat AI skills as integral to national AI policy rather than as standalone training programs, whereas Australia has activity across the same elements but lacks equivalent connecting architecture.

Reforms that would help close this gap include:

- an agreed national definition of AI skills and a proficiency framework, so capability can be assessed, targeted and measured consistently, including a national AI capability architecture that identifies foundation, occupational, industry and enterprise capability requirements
- consistent use of existing measures of AI adoption, so progress can be tracked over time and compared internationally
- improved monitoring of AI's effects on entry-level and early-career employment, so emerging impacts can be identified and addressed early
- including workforce capability within the scope of the Australian Standards for AI
- incorporating AI capability into the broader Qualification and System Reform agenda, building on the Statement of Australian Government Priorities for Jobs and Skills Councils (DEWR n.d.), which already asks JSCs to consider AI and digital transformation in workforce planning and to include data, digital and AI learning outcomes in qualifications and training products
- a clear role for JSCs in defining industry AI capability requirements and translating them into training

Taken together, these reforms reflect the central recommendation of this submission: that workforce capability be recognised as a core component of Australia's AI infrastructure strategy.

The national AI standards should set clear expectations for meaningful and measurable investment in workforce capability by organisations benefiting from large-scale AI development in Australia, supported by complementary Australian Government investment and delivered through Australia's existing skills and training system.

Australia's AI opportunity will not be realised by investing in technology and waiting for workforce capability to catch up. It will be realised by building that capability alongside the technology, with comparable ambition and scale.

References

AirTrunk 2024, Developing the next generation of Australian technical talent, AirTrunk, viewed 4 March 2026, https://airtrunk.com/developing-next-gen-of-australian-technical-talent/

Australian Bureau of Statistics (ABS) 2022, Census of Population and Housing 2021, ABS, Canberra.

CBRE 2024, Australia's Data Centres 2024, CBRE, Sydney.

CDC Data Centres n.d., CDC Academy, viewed 20 March 2026, https://cdc.com/careers/cdc-academy/

Department of Employment and Workplace Relations (DEWR) 2025, Australian Skills Guarantee: Skills Guarantee Procurement Connected Policy, Version 1.2, Australian Government, Canberra, 1 October 2025, https://www.dewr.gov.au/australian-skills-guarantee/resources/skills-guarantee-procurement-connected-policy

Department of Employment and Workplace Relations (DEWR) n.d.a, Jobs and Skills Councils, Australian Government, Canberra, https://www.dewr.gov.au/skills-reform/jobs-and-skills-councils

Department of Employment and Workplace Relations (DEWR) n.d.b, Statement of Australian Government Priorities for Jobs and Skills Councils, Australian Government, Canberra.

Department of Industry, Science and Resources (DISR) 2025, National AI Plan, Australian Government, Canberra, December 2025, https://www.industry.gov.au/publications/national-ai-plan

Department of Industry, Science and Resources (DISR) 2026, Expectations of data centres and AI infrastructure developers, Australian Government, Canberra, 23 March 2026, https://www.industry.gov.au/publications/expectations-data-centres-and-ai-infrastructure-developers

Department of the Prime Minister and Cabinet (PM&C) 2026, Getting it right: Building AI infrastructure that works for Australia, consultation paper, Australian Government, Canberra, September 2026, https://www.pmc.gov.au/resources/getting-it-right-building-ai-infrastructure-works-australia

Equinix n.d., Career Transition Program, Equinix, viewed 20 March 2026, https://www.equinix.com.au/careers

Fifth Quadrant 2025, Australian Responsible AI Index 2025, Fifth Quadrant, Sydney.

Future Skills Organisation (FSO) 2025, Developing the Tech Workforce: Unlocking the Potential of Earn While You Learn, FSO, Melbourne, July 2025.

Future Skills Organisation (FSO) 2026, Submission 149 to the Joint Select Committee on Artificial Intelligence, FSO, Melbourne.

Infocomm Media Development Authority (IMDA) n.d., TechSkills Accelerator (TeSA), Singapore Government, https://www.imda.gov.sg/how-we-can-help/techskills-accelerator-tesa

Jobs and Skills Australia (JSA) 2025a, Occupation Shortage List 2025, JSA, Canberra.

Jobs and Skills Australia (JSA) 2025b, Our Gen AI Transition: Implications for Work and Skills, JSA, Canberra.

Mandala Partners 2024, Empowering Australia's Digital Future: Data Centres: Essential Digital Infrastructure Underpinning Everyday Life, commissioned by AirTrunk, AWS, CDC, Microsoft and NEXTDC, October 2024.

Microsoft n.d., Microsoft and TAFE NSW's Datacentre Academy: Preparing Australian workers for the cloud computing and AI boom, Microsoft, viewed 9 October 2026, https://news.microsoft.com/source/asia/features/microsoft-and-tafe-nsws-datacentre-academy-preparing-australian-workers-for-the-cloud-computing-and-ai-boom/

Mining and Automotive Skills Alliance (AUSMASA) 2025, Research Bulletin – March 2025, AUSMASA, https://ausmasa.org.au/news-and-events/research-bulletin-march-2025/

National AI Centre 2025, Guidance for AI Adoption, Department of Industry, Science and Resources, Canberra.

Powering Skills Organisation (PSO) 2025, High Load, Short Supply: Bridging the gap to 2030, PSO, 28 August 2025, https://poweringskills.com.au

Service and Creative Skills Australia (SaCSA) 2025, Arts Workforce Plan 2025, SaCSA, Sydney.

Tech Policy Design Institute (TPDi) n.d., AI Sovereignty & AI Agency Assessment, TPDi, https://ai.techpolicy.au/

The Treasury 2026, Intergenerational Report 2026: Australia's future to 2066, Australian Government, Canberra, September 2026, https://treasury.gov.au/publication/2026-intergenerational-report

UK Government 2024, Data centres to be given massive boost and protections from cyber criminals and IT blackouts, media release, 12 September 2024, https://www.gov.uk/government/news/data-centres-to-be-given-massive-boost-and-protections-from-cyber-criminals-and-it-blackouts

Uptime Institute 2024, Annual Outage Analysis 2024, Uptime Institute, New York.

Victoria University 2026, Victoria University & Microsoft launch state's first Datacentre Academy, media release, March 2026, https://www.vu.edu.au/about-vu/news-events/news/victoria-university-and-microsoft-launch-states-first-datacentre-academy