



Workforce Plan

2026 - 2027



Skills Insight acknowledges that First Nations peoples have been living on and caring for Country for thousands of years.

This is respected in our values and the way we work.

Skills Insight has a collaborative partnerships with MINTRAC and ForestWorks to support stakeholder engagement activities and JSC projects within the following industries:



Meat, poultry and seafood processing



Forestry, timber, paper, fibre and furnishing



Skills Insight is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations (DEWR).

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Todd Loydell

Message from the Chair

Australia's agribusiness, fibre, furnishing, food, animal and environment care industries are foundational to the nation's economic resilience. Operating largely outside our major capital cities, these sectors are the economic anchors of regional, rural and remote communities. Crucially, they underpin the complex supply chains required to deliver on our most pressing national priorities, from sovereign manufacturing capability and food security to environmental stewardship and the Net Zero transformation.

Australia finds itself operating in an increasingly volatile global environment. Rising geopolitical tensions, disrupted international supply chains and a reliance on critical imported inputs are placing immense pressure on the industries that provide our essential services. As these sectors adapt to the impacts of climate change and integrate new digital and AI technologies, the complexity of work is rapidly evolving.

In this context, workforce capability is a strategic national asset. The ability of the industries we support to respond to these shifting conditions and manage complex biosecurity risks depends entirely on a skilled, adaptable and inclusive workforce. Yet many of the sectors supported by Skills Insight face persistent, structural shortages in roles essential to these outcomes. When critical occupations remain unfilled, the impacts cascade through supply chains, constraining productivity, increasing safety risks and limiting innovation.

Addressing these systemic challenges requires a coordinated response that aligns with the ambitions of the National Skills Agreement and the Australian Government's focus on productivity, equity and long-term capability. It requires us to look beyond immediate vacancies and build robust, sustainable workforce pipelines that draw on the full diversity of the Australian community, while recognising the profound value of the foundational industries that feed the nation and manage our natural environment.

This Workforce Plan is our contribution to that national effort. By synthesising extensive industry intelligence with comprehensive data analysis, it brings into focus the complex realities shaping our sectors. It provides a clear, evidence-based roadmap for employers, unions, education providers and government to collaborate on strengthening workforce capability and ensuring our foundational industries remain resilient into the future.

Message from the CEO

This Workforce Plan sets the strategic direction for Skills Insight's work across 2026 and into 2027. It brings together extensive consultations with employers, unions, TAFE networks and training providers, alongside robust data analysis, to identify priorities that will strengthen workforce capability and secure long-term industry sustainability. The plan is designed as a practical tool to inform decision-making and drive collective action across the jobs and skills system.

Formal education and training are the bedrock of a productive economy. For individuals, nationally recognised qualifications provide a reliable bridge into secure, rewarding careers. For employers, a robust vocational education and training (VET) system delivers the technical skills and adaptability required to innovate and maintain operations. Training delivered through the national packages supported by Skills Insight yields strong returns on investment, with graduates reporting high levels of satisfaction and clear improvements in their employment outcomes.

To maximise these outcomes, government skills policies are focused on building the system with TAFE at the centre. Yet significant structural barriers remain in ensuring equitable access to training across regional, rural and remote Australia. We view access to education and training in these regions not just as a logistical challenge, but as a fundamental right and a critical economic driver for local communities. Overcoming this requires a stronger evidence base on the true costs of regional delivery to ensure funding models are sustainable, alongside the development of accessible, inclusive training pathways where workforce shortages are most acute.

These persistent regional shortages, compounded by the seasonal nature of agricultural and processing work, currently drive a heavy industry reliance on temporary migrant labour. While this workforce is essential for immediate productivity, it creates complex challenges for long-term workforce development and the continuity of skills, highlighting the need to invest in a secure, diverse domestic pipeline.

A capable workforce must also be an inclusive and protected one. Addressing system inclusivity, particularly in highly gender-segregated industries, and partnering with First Nations peoples to empower economic development are central to our approach.

By clearly articulating shared priorities and evidence-based opportunities for action, this Workforce Plan provides a practical foundation for strengthening the jobs and skills system. Continued collaboration across industry and unions, TAFE and training providers, and governments will ensure we support a workforce that is capable, resilient and ready to meet the challenges ahead.



Dugald Murray

Executive summary

This Workforce Plan brings together extensive industry consultation, project activity and system-level analysis into a consolidated view of where workforce challenges and opportunities exist or are emerging across the industries Skills Insight supports. It outlines the common drivers behind workforce shortages and skills priorities, which are cross-referenced within each of the 13 industry overviews, demonstrating both industry-specific impacts and broader systemic issues that demand attention. In response to these dynamics, the Workforce Plan 2026–2027 sets out four interconnected workforce planning priorities to guide Skills Insight’s work and provide a shared framework for action and collaboration with industry, governments, unions and training providers. For a full list, see Proposed, current and complete projects, activities and consultations.

Despite their critical importance, many of the industries Skills Insight supports face persistent workforce shortages. In many sectors, demand is obscured by data limitations, occupation and industry classification gaps, delivery constraints and policy settings that unintentionally suppress training activity. These effects are most visible

in regional, rural and remote Australia, where thin training markets, highly specialised roles and seasonal employment patterns intersect.

Stakeholder feedback consistently indicates that workforce pressures are often more widespread than reflected in national data and occupation level shortage assessments, particularly for roles and sectors that are insufficiently visible within existing classifications. When these pressures remain unaddressed, the impacts cascade through supply chains, constraining productivity, increasing safety and biosecurity risks, and limiting industry capacity to innovate and grow.

Evidence shows that VET delivers strong returns for learners and employers, with high levels of satisfaction and improved employment outcomes. However, access to training is uneven. In many regional, rural and remote areas, delivery is constrained by workforce shortages among trainers, limited infrastructure, and funding models that do not reflect the true cost of regional delivery. At the same time, small businesses struggle to facilitate formal workplace-based learning due to capacity

pressures. Stakeholders are especially concerned at changes to the Australian Apprenticeships Incentive System, with financial support reductions having negative consequences for learners, businesses and regional communities. As a result, training supply is often weakest where workforce demand is greatest.

Workforce sustainability also depends on who is able to participate and remain in work. While training participation by under-represented cohorts, like women, First Nations peoples, and people with disability, has improved in aggregate, gains are uneven across training packages and do not always translate into equitable employment or income outcomes. Stakeholder consultation highlights that attraction alone is insufficient: safe, inclusive workplaces, effective leadership and clear progression pathways are central to retention, capability development and productivity.

Safety and wellbeing emerge throughout this plan as core industry resilience issues rather than standalone workforce compliance concerns. High-risk work environments, dispersed regional

operations, reliance on seasonal and migrant labour, and increasing input cost pressures mean that physical, psychosocial and cultural workforce safety practices must be embedded across qualifications and workplaces, supported by strong supervisory and leadership capability.

Together, these insights reinforce that workforce pressures across Skills Insight-supported industries are systemic, interconnected and most acute in regional, rural and remote Australia. While VET delivers strong returns, uneven access, capacity constraints and policy settings continue to limit its impact on uplifting productivity. Addressing these challenges requires sustained investment in skills, safer and more inclusive workplaces, and workforce pathways that support attraction, retention and progression. Through ongoing workforce planning and close collaboration with industry, governments, unions and training providers, Skills Insight will focus its efforts where it can to deliver the greatest, most durable impact.

Workforce planning approach

The agribusiness, fibre, furnishing, food, animal and environmental care industries operate across diverse geographies, business models and workforce profiles.

Our consultation approach engages stakeholders within their operating contexts to capture a broad range of perspectives and reflect the lived realities of employers, workers, industry bodies and registered training organisations (RTOs).

We draw on multiple engagement and research methods, triangulating stakeholder insights with quantitative and qualitative evidence. This enables us to test industry experience against national datasets and identify where official statistics may not fully capture workforce characteristics.

Stakeholder input informs each stage of development, from refining analysis to identifying priorities and actionable responses. This supports a Workforce Plan that is evidence-based, reflects industry diversity, and designed to inform decision-making across government, industry and the training system.

Above: Front left to right: Lily Brown (DEWR), Anne-Maree Clarke (Capital Region Local Jobs Program), Sharon Locker-Lloyd (Regional Industry Education Partnerships NSW), Rachel Eslick-Angus (DEWR), Simon Booth (Australian Local Government Association), Scott Turner (Australian Forest Products Association). Back left to right: Maurice Logue (Harness Racing NSW), Louise Hegarty (National Farmers' Federation), Sharyn Downey (DEWR), Diana McNaughton (Skills Insight).



Who we engage with

Through stakeholder engagement, research and project consultation, we develop insights with:

- Stakeholder Forum
- Industry Advisory Panels (IAPs)
- Industry (employers, employees, associations)
- Unions
- First Nations enterprises and communities
- Commonwealth Government departments, including DEWR and DAFF
- State Training Authorities (STAs)
- Industry Skills and Training Advisory Bodies (including ITABs and Industry Skills Councils)
- The Federated Industry Skills Network (FISN)
- Jobs and Skills Australia (JSA)
- Jobs and Skills Councils (JSCs)
- Australian Bureau of Statistics (ABS)
- RTOs (including TAFE) and their representatives
- Non-registered training providers
- Learners
- Regulators (including ASQA)
- Research (including NCVER, CSIRO, RDCs and others)

Data we use

We build on stakeholder feedback by analysing data and evidence including:

- Labour market data and classifications:
 - Census
 - Labour Force Trending
 - Nowcast of Employment by Region and Occupation (NERO)
 - OSCA (occupation classification)
 - ANZSIC (industry classification)
- Workforce and skills supply and demand:
 - Occupation Shortage List (OSL)
 - Core Skills Occupation List (CSOL)
 - Total New Vacancies
 - Internet Vacancy Index (IVI)
 - Employment projections
- VET data
 - Total VET Activity
 - Apprenticeships & traineeships
 - Employers Use and Views of the VET System
 - VET National Data Asset (VNDA)
 - National Training Register
- Industry reports
- Academic research

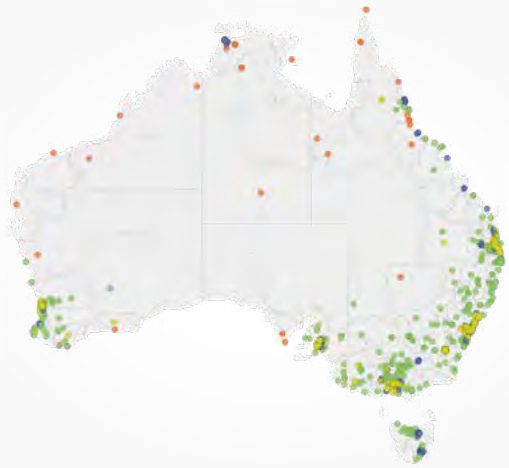
For information on how we use data, see [Appendix 1: Data and analytical framework](#). See also: [Data and evidence credibility issues](#).

What we do

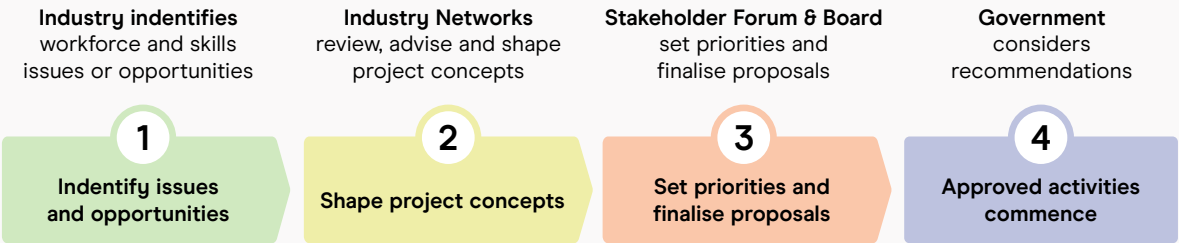
Evidence and insights are tested through a collaborative feedback loop with stakeholders, including our tripartite Stakeholder Forum, and are embedded in Workforce Plans and project submissions to support, connect and advocate on behalf of industry.

National stakeholder engagement 2025-2026

- Metropolitan
- Regional
- Remote
- Rural



Tripartite workforce planning solutions



Bringing together employer representatives, unions and governments in a tripartite arrangement to find solutions to skills and workforce challenges.

Workforce planning priorities

The *Workforce Plan 2026–2027* identifies four interconnected workforce planning priorities that shape Skills Insight’s role and provide a practical framework for coordinated action that is to be delivered in collaboration with industry, governments, unions and training providers.

*View Skills Insight’s position on [Data and evidence credibility issues](#).



Access and inclusion (RRR and priority cohorts)

Strengthening workforce participation by improving access to training and pathways in rural, regional and remote (RRR) Australia, supporting priority cohorts, reducing structural, cultural and geographic barriers to participation.

Actions include

- Applying an equity, safety and cultural capability lens to workforce planning and advice, with explicit focus on First Nations peoples, women, people with disability, RRR communities and other priority groups
- Advocating for sustainable funding models, place-based delivery and inclusive design to improve access, participation and completion

Evidence-based decision making

Enabling better workforce decisions by strengthening the industry evidence base, improving understanding of current and future skills needs, and building industry capability to use data effectively.

Actions include

- Integrating data and industry insights to define priority skills, occupations and cohorts across sectors and regions
- Addressing data gaps, improving visibility of real-world workforce conditions, and supporting industry-led data collection and use

Productivity and capability

Supporting productivity by strengthening workforce capability and improving recognition of the return on investment in VET to inform industry and policy decision-making and support safe, resilient and future-ready workforces aligned with Commonwealth priorities.

Actions include

- Promoting the contribution of workforce capability development, lifelong learning and skills recognition to productivity, leadership and industry resilience
- Monitoring whether VET is delivering the right skills, in the right places, at the right time to meet industry needs, including for safety and wellbeing, digital transformation, biosecurity, biological resource management and regulatory compliance

Quality skills system

Improving skills system quality by driving sector reform, ensuring training products and delivery settings meet industry needs, and addressing inter-jurisdictional barriers to delivery and uptake.

Actions include

- Designing and updating training packages, qualifications and units to reflect current practice, safety requirements and emerging skill needs
- Providing advice to governments and system leaders on policy, funding, qualification reform and delivery settings to improve consistency, quality and uptake

Workforce planning priorities and government policy alignment

Skills Insight’s workforce planning priorities are interconnected with Australian Government policy settings that focus on productivity, equity and long term capability.

Core policy anchors

Working Future: The Australian Government’s White Paper on Jobs and Opportunities

Sets the overarching ambition for a more productive, inclusive and secure labour market, with a focus on:

Delivering sustained and inclusive full employment

Ensuring everyone who wants to work can find a job without a prolonged job search.

Promoting job security and strong, sustainable wage growth

Supporting secure work and real wage growth that lifts living standards over time.

Reigniting productivity growth

Lifting productivity through skills, technology and better-functioning labour markets.

Filling skills needs and building our future workforce

Aligning education, training and migration systems with current and emerging skills demand.

Overcoming barriers to employment and broadening opportunities

Removing structural barriers so more people can participate fully in the labour market, especially cohorts facing persistent disadvantage and exclusion.

Regional, Rural and Remote (RRR) focus

Regional policy initiatives are driven by goals of economic resilience, productivity, equal access to education and jobs, and sustainable, inclusive workforce solutions, including:

- Regional Investment Framework
- Regional Development Australia
- Regional Recovery partnerships
- Northern Australia Action Plan.

National Skills Agreement

Establishes shared Australian and state and territory government priorities for the vocational education and training (VET) system to:

- provide high-quality, responsive and accessible education and training to boost productivity
- support Australians to build the skills and capabilities they need for well-paid, secure jobs, including through lifelong and foundation skills development
- ensure Australia has the skilled workforce it needs, now and into the future
- place TAFE at the heart of the VET sector.

The industries supported by Skills Insight align with **National Skills Agreement** priorities in two ways: through enabling roles as economic anchors in RRR Australia that underpin supply chains for housing, construction, essential care and community services; and through specific workforce and skills-related contributions across the national priority areas outlined below.

Developing Australia’s sovereign capability and food security

Supporting the *National Biosecurity Strategy* and the *National Food Security Strategy* through primary production, processing and manufacturing.

Supporting the Net Zero transformation

Workforce development through programs such as the Indigenous Rangers Program for skills in land use, water, ecosystem management, environmental services, and primary production emissions reductions.

Ensuring Australia’s digital and technology capability

Growing capabilities for Artificial Intelligence (AI) use and broader digital transformation within production, processing and supply chains.

Delivering reforms to improve the regulation of VET qualifications and quality

Through training product design, training delivery implementation, promotion and monitoring, and future-ready workforce pathways.

Gender equity

Embedding analysis of gender-segregated workforces and participation barriers into workforce planning and training design.

Closing the Gap

Through participation, co-design, pathways and regional employment.

Industries overview

In 2025, Skills Insight-supported industries contributed

\$79.5 billion

to the national economy

The workforce has declined by 3.3% since 2015 but is projected to grow by

6.2% by 2035

compared with 13% nationally

Employing

626,100

as at November 2025

There were over

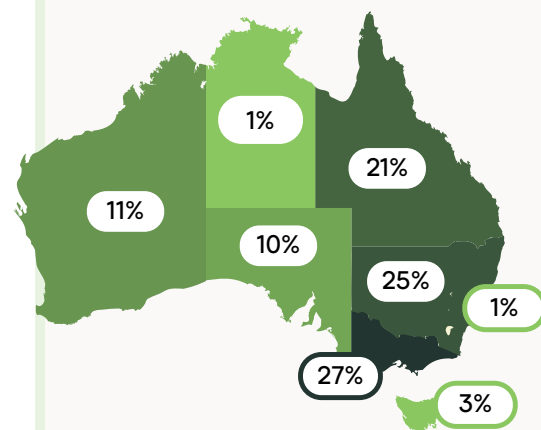
240,300

businesses operating across Skills Insight-supported industries at the end of June 2025



First Nations people account for 2.2% of the workforce, with the highest representation in Forest Management and Harvesting (6.8%)

Total national employment: 2.2%



Regional, rural and remote

59% of workers live outside capital cities

Location of businesses varies among sectors eg:

Over 90% of sugarcane farming businesses are in QLD

Cut and sewn textile manufacturing businesses are evenly distributed nationally, with Victoria having the highest share (25%)

37%

Women below the national workforce participation rate of 48%

39

Median age up one year over the past five years vs. 38 nationwide

28% of workers are owner-managers vs. 21% nationwide

31% of the workforce is nearing retirement (55+ years)

35%

work in roles formally classified as 'high-skill' (ANZSCO/OSCA Skill Level 1)

Yet only around one in five workers hold a bachelor's degree or higher

High-skill work does not always require high-level qualifications

28%

work in roles formally classified as 'lower-skill' (ANZSCO/OSCA Skill Level 5)

Yet over half hold qualifications above certificate II-level

Workers at Skill Level 5 encompass a broad range of capabilities and career progression potential

Competency and experience may substitute for formal tertiary qualifications in a substantial share of high-skill roles. A similar pattern is evident in lower-skill roles, where diverse qualification attainment points to scope for progression and upward mobility.



Formal qualification attainment alone does not fully capture workforce capability.

Stakeholders highlight the need to review OSCA occupation skill levels to ensure alignment with real-world industry requirements.

Sources: a) IBISWorld (2026) Industry Wizard; b) ABS, Labour Force, Australia, Detailed, November 2025, Jobs and Skills Australia trend; c) JSA Employment Projections (May 2025 - May 2035); d) ABS (2025) Characteristics of Employment Survey (CoE), Custom Report; e) ABS (2025) Counts of Australian Businesses, including Entries and Exits, f) ABS (2021) Census of Population and Housing, TableBuilder Pro

Data and evidence credibility issues

Skills Insight acknowledges consistent feedback from industry regarding data limitations. We understand that robust, accurate data is essential for effective workforce planning and training package development. Our team is working to strengthen the evidence base through practical solutions, including by supporting industry-led approaches to data collection and analysis to address data gaps. As we build better data capabilities, we invite stakeholders to continue sharing their experiences and insights with us. Your ongoing engagement and willingness to share local data sources are vital to ensuring our planning accurately reflects the realities of your industry.

Data gaps

National administrative datasets (primarily from the ABS and JSA) describe workforce size, trends, and characteristics, but have significant limitations, especially in agribusiness, fibre, furnishing, food, animal, and environment care industries.

Key issues include:

- statistical volatility from small samples, particularly in RRR areas
- under-estimation of seasonal and temporary workers and distortion of employment patterns
- misalignments in time-series data due to:
 - misclassified industry assignments
 - changes to geographical and industry classifications
- inadequate capture of business owners and unpaid family workers
- under-estimation of job vacancies
- trade-offs between timeliness, granularity and accuracy.

Poor-quality data can lead to workforce and skills demand being under-estimated or misclassified, particularly for regional, niche or emerging roles, resulting in their exclusion from funding, incentives or priority programs. Such exclusions can cause employers to delay workforce investment, scale back training, or abandon recruitment altogether, negatively affecting productivity, business viability and training markets. For industry bodies, unreliable data increases the cost of engagement, requiring repeated advocacy and evidence-gathering simply to correct the record, rather than progressing solutions.



When headline data obscures real workforce pressures

Data limitations are particularly evident in RRR areas with complex labour markets. Stakeholders in aquaculture and wild catch industries, for example, have consistently reported that official workforce data understates real employment levels and labour demand. Industry feedback indicates that Labour Force Survey (LFS) estimates significantly under-count employment in sectors characterised by self-employment, owner-operators and informal labour arrangements, such as in the South Australian tuna industry, where stakeholders advised actual workforce numbers were more than double those reported in the LFS.

Such data issues are starting to gain greater recognition nationally, notably with demand indicators. Jobs and Skills Australia¹ highlight that:

'In December 2025, there were around 13,000 vacancies advertised online in Northern Australia (a decrease by around 7% over the year previous). Using data from JSA's new series Total New Vacancies, which combines data from both JSA's Internet Vacancy Index and employer surveys to offer insights into hiring activity beyond online job ads, there were 89,300 estimated vacancies in Northern Australia.'

This substantial gap highlights how reliance on online vacancy data as a proxy for 'total demand' can significantly understate labour demand, particularly in regions where employers rely far more on informal, community-based or sector-specific recruitment networks. These new findings both validate and reinforce industry concerns that headline indicators do not reflect actual workforce pressures. Stakeholders, including AUSVEG, emphasise the potential of supplementing official data with industry intelligence – such as AUSVEG's six-monthly workforce sentiment survey – which captures current shortages and the roles employers are actively seeking to fill. JSA's acknowledgement of limitations in national collections strengthens the case for integrating such industry data sources to support more accurate, timely and industry-relevant workforce planning.

What we're doing

Timely, reliable and sector-relevant industry data, used alongside Commonwealth and state and territory datasets, is essential for skills analysis, workforce planning and industry response. Stronger data sharing and integration will support a more accurate understanding of current and emerging workforce needs, enabling more responsive and evidence-based decisions across industry and government.

Skills Insight is developing a strategy to support our collaboration with industry on data improvements and support better workforce planning. Objectives of the strategy are to:

- Strengthen confidence in workforce data by improving transparency, consistency and fitness-for-purpose, enabling industry stakeholders to use data with greater confidence in workforce planning and decision-making.
- Build industry data capability through strategic partnerships, supporting an uplift in the collection, sharing and analysis of industry-relevant workforce data across regions, sectors and priority cohorts.
- Influence government decision-making by advocating for the integration and effective use of industry-led data collections alongside administrative and labour market data, ensuring policy settings better reflect real-world workforce conditions.

Animal care and management

This industry underpins the health, welfare and safe handling of wildlife, livestock, exhibited, working and domestic animals. Its workforce has critical capabilities essential not only to animal welfare outcomes, but also to human health, biosecurity, environmental stewardship, and the integrity of Australia’s food, research and care systems.

Industry workforce and skilling insights

Strengthening veterinary workforce capacity

Veterinarians and veterinary nurses have been in national shortage since 2021. Vacancy fill times for veterinarians averaged 25 weeks in 2023,² affecting service delivery acutely in RRR areas. A high proportion of part-time employment (38%) further reduces effective capacity, reflecting both workforce preferences and adaptive responses to work pressures.

The Veterinary Nurses Council of Australia (VNCA) suggests enabling veterinary nurses and technologists to work to the full scope of their qualified tasks and responsibilities would improve service delivery efficiency, relieve pressure on veterinarians and build resilience across industry sectors. Skills Insight is working with industry to update veterinary nursing training products to reflect current skills needs.

Shortages

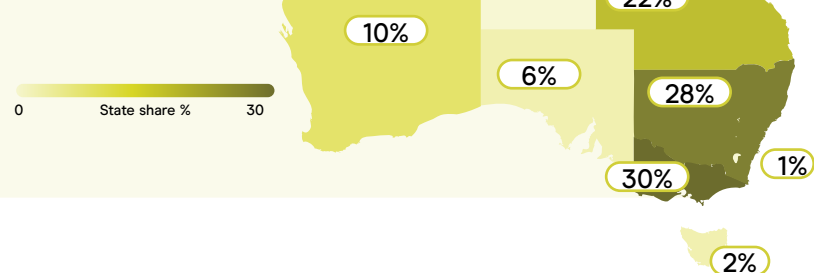
RRR

Living systems

GEOGRAPHIC DISTRIBUTION

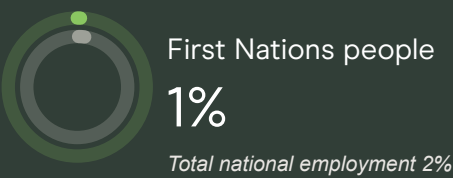
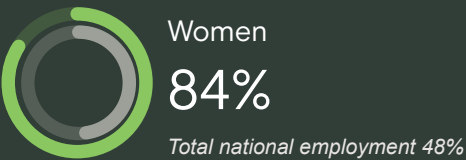
61%

live in capital cities, where workforce demand clusters.³



WORKFORCE DEMOGRAPHICS

Industry total | Total national employment



37% are aged 15 to 29, reflecting a young workforce

BUSINESS SIZE

88%

of businesses are non-employing or have fewer than five employees.⁴



40,900
total employed

\$3B
industry value add

▲ 5.8%
employment projection
to 2030

▲ 6.3%
employment projection
to 2035

Aligning training standards for workforce mobility

The animal care sector operates under a fragmented, multi-jurisdictional regulatory environment. Ongoing animal welfare reforms across states and territories are adding compliance complexity for employers, workers and training providers. These regulatory requirements create training delivery inconsistencies which can limit workforce mobility. Skills Insight is undertaking a pilot initiative to map licensing and regulatory requirements across selected ACM Training Package qualifications and units, with the aim of improving clarity and consistency for RTOs and learners, reducing compliance burden and building standards for the transferability of skills across the industry.

Regulation

Data gaps limiting visibility of workforce demand

Occupation (OSCA) and industry (ANZSIC) classifications do not adequately reflect current work practices, while shortages are not sufficiently captured. Veterinary Services is the only relevant ANZSIC industry, while OSCA gaps entail limited visibility of roles such as equine dental technicians and massage therapists. Despite pet groomers not being classed as ‘in national shortage’, the PIAA Pet Grooming Survey 2025 found that nearly four in five respondents experience extreme difficulties recruiting. Stakeholders are concerned that these issues distort the evidence base for training investment decisions, perpetuating a cycle in which workforce demand goes unaddressed.

Shortages

Regulation

Living systems

Priority actions

Complete

- Attraction and retention tools for employers
- From Training Package to Training Delivery

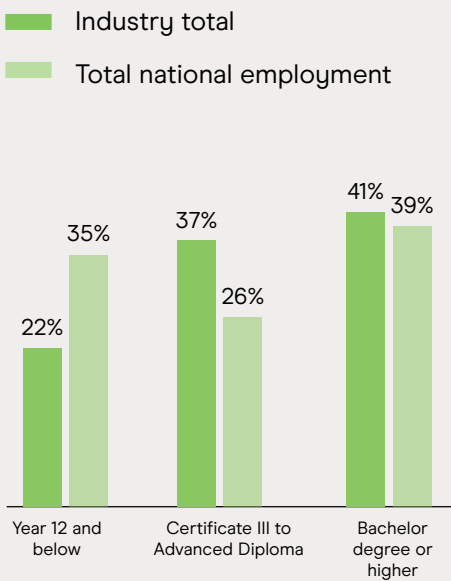
Current

- Veterinary Nursing Review
- Mapping Licensing and Regulatory Considerations Project
- VET Workforce Project
- Biosecurity Skills Review
- Regional, Rural and Remote VET Policy Decision Making

Consultations

- Occupation Shortage List
- OSCA Maintenance Strategy
- A revised methodology for the Australian Apprenticeship Priority List
- Consultation paper: Leading a safer, inclusive and resilient workforce

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

41%

hold a Bachelor degree or higher,⁵ yet only 32% work in the industry’s highest-skilled occupations (OSCA Skill Level 1).⁶

Aquaculture and wild catch

This industry cultivates, harvests and supplies seafood from Australia’s marine and freshwater systems. Its workforce applies critical skills in animal health, biosecurity, environmental management and regulatory compliance that underpin food security, regional economies, sustainable resource use and Australia’s sovereign capability.

Industry workforce and skilling insights

Shortage occupations and declining training enrolments

Training activity is highly sensitive to funding and incentive settings. Following the reclassification of Aquaculture and Fisheries Technicians as no longer being in national shortage, the *Certificate III, IV and Diploma in Aquaculture* were removed from the Australian Apprenticeship Priority List (AAPL). Stakeholders identify the removal of apprenticeship incentives as a risk to the skills pipeline, especially given industry’s demonstrated commitment to apprenticeships and traineeships: the 66.4% completion rate for learners who commenced in 2019 indicates that, where training remains viable, outcomes are strong. Stakeholders therefore emphasise consultations on OSCA maintenance and the Occupation Shortage List as critical mechanisms for ensuring occupations are accurately described and assessed for shortages so that training incentives remain aligned with workforce needs. See here for stakeholder views on the misclassification of Aquaculture Worker.

Shortages

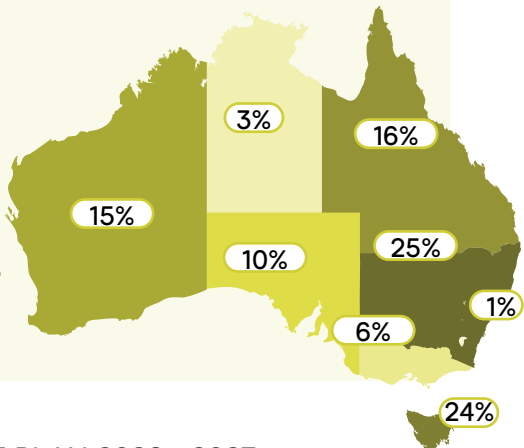
Apprenticeships

GEOGRAPHIC DISTRIBUTION

66%

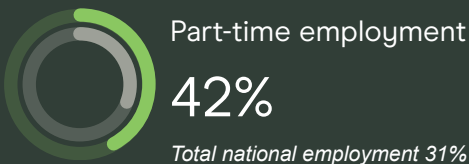
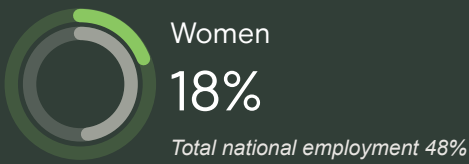
live outside capital cities, compared to 31% of total national employment.³

0 State share % 25



WORKFORCE DEMOGRAPHICS

Industry total Total national employment



27% of the workforce are nearing retirement (55+ years)

BUSINESS SIZE

93%

of businesses are non-employing or have fewer than five employees.⁴



8,800
total employed

\$1.5B
industry value add

▲ 6.2%
employment projection
to 2030

▲ 14.4%
employment projection
to 2035

Data improvements required for effective workforce planning

Industry employment spans owner-operators, vessel crews, seasonal labour and remote community workers, with many roles captured inconsistently – or misclassified under maritime industries – in national datasets, creating an invisible workforce demand problem. For example, work in the abalone sector is largely casual, intermittent, weather-dependent, and quota-limited, and is therefore poorly reflected in data collections. While the Futures of Seafood study estimates the seafood industry supports more than 79,000 full-time equivalent jobs, ABS’s Labour Force Survey records employment at only 8,800. Poor data coverage risks systematically underestimating workforce demand, weakening workforce planning, occupation recognition and training supply viability.

Data issues

Supporting skills development in First Nations aquaculture enterprises

As aquaculture continues to grow across remote and northern Australia, the need for culturally grounded, place-based training models is also rising. The Aboriginal Sea Company is working directly with Aboriginal and Torres Strait Islander communities to develop Community-Based Aquaculture Training Tools.

These culturally embedded resources are designed to be used flexibly in both formal Registered Training Organisation (RTO) programs and community-led, on-Country delivery. By linking traditional knowledge with practical industry skills, they help communities shape their own learning journeys while supporting RTOs to deliver accredited units with greater cultural integrity and regional relevance.

RRR

Diversity

Priority actions

Complete

- Attraction and retention tools for employers
- From Training Package to Training Delivery
- Exploring Training Demand & Supply Challenges

Current

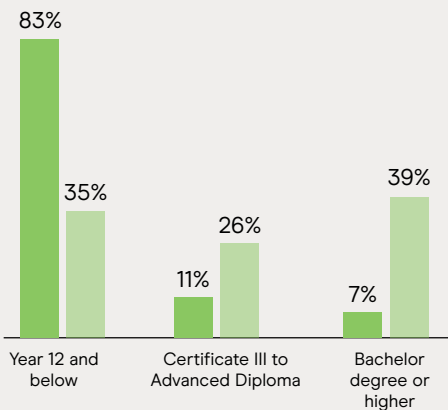
- Community-based Aquaculture Training Tools
- VET Workforce Project
- Biosecurity Skills Review
- Regional, Rural and Remote VET Policy Decision Making

Consultations

- Occupation Shortage List
- OSCA Maintenance Strategy
- A revised methodology for the Australian Apprenticeship Priority List

EDUCATIONAL ATTAINMENT

Industry total Total national employment



SKILLS UTILISATION

83%

of workers hold no post-secondary qualification,⁵ yet 26% work in the industry’s highest-skilled occupations (OSCA Skill Level 1).⁶

Broadacre cropping

Broadacre cropping encompasses the production of grains, oilseeds, pastures, cotton and sugar cane for national food and fibre supply chains. Many operations are highly seasonal and are increasingly rely on skills in precision agriculture and digital systems to maintain productivity and support food security amid environmental and workforce challenges.

Industry workforce and skilling insights

Safety, wellbeing and climate risks in diverse workforces

Diverse workforces – including seasonal workers, working holiday makers, PALM scheme participants and family operators – bring valuable capability, but require tailored safety and wellbeing supports for high-risk work involving large machinery, long hours, heat stressors and long distances from emergency services.^{8,9,10} These conditions highlight the importance of effective leadership to embed strong safety culture and induction, alongside targeted support to build employer HR and supervisory capability. This is particularly important as employers manage training, compliance and supervision demands while responding to extreme weather and drought cycles and their impacts on labour demand, retention, and wellbeing.

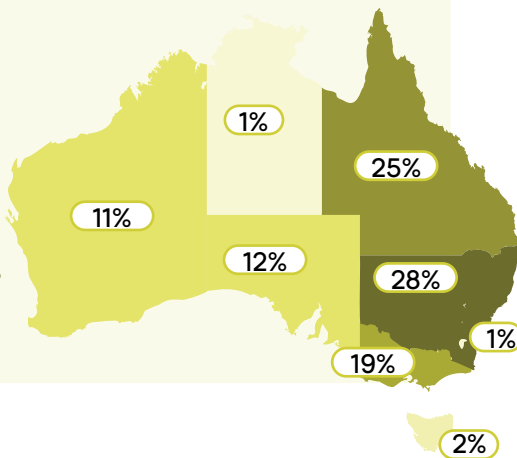
Safety

GEOGRAPHIC DISTRIBUTION

94%

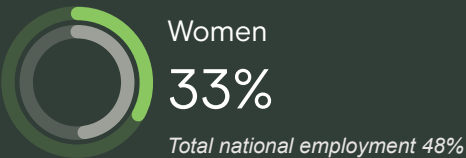
live outside capital cities, compared to 31% of total national employment.³

0 State share % 30



WORKFORCE DEMOGRAPHICS

Industry total Total national employment



44% of the workforce are nearing retirement (55+ years)

BUSINESS SIZE

93%

of businesses are non-employing or have fewer than five employees.⁴



32,000
total employed

\$12.6B
industry value add

▼ -1.3%
employment projection
to 2030

▲ 3.8%
employment projection
to 2035

Accessible skilling options required

This regionally concentrated workforce (94% live outside capital cities) are poorly serviced by RTOs, while employers face practical constraints in absorbing off-farm training time and costs.³ As a result, VET qualifications are often inaccessible without structural intervention, increasing the risk that persistently unmet need is misinterpreted as low demand. Sustained workforce development requires place-based solutions, including mobile and on-farm training delivery, incentives for remote trainers, and improved digital connectivity to support blended learning.

RRR

An Ag Trade Apprenticeship offers pathways potential

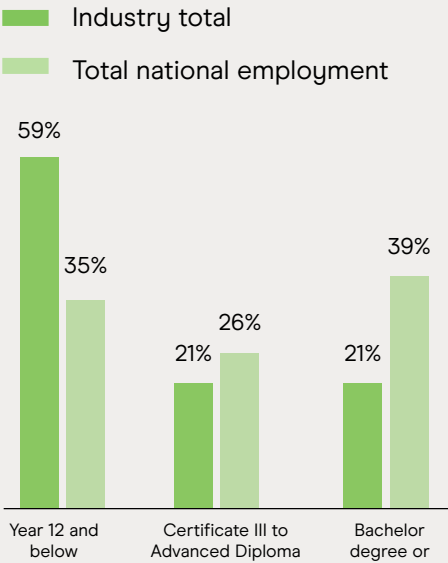
Stakeholders see an Ag Trade Apprenticeship as an opportunity to establish a visible and robust career entry pathway into sectors including broadacre cropping, and support renewal in an ageing workforce with persistent shortages in skilled roles such as Agronomist. This would help address expanding skill requirements, including stronger biosecurity capability to manage pest and disease risk, and the growing importance of digital literacy, precision agriculture and automation. The sector also relies on highly skilled machinery operators, an essential role that lacks OSCA recognition and structured pathways. In this context, an Ag Trade job brand could support clearer skilling pathways for the next generation of workers.

Apprenticeships

Biosecurity

Technology

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

21%

of workers hold a Bachelor degree or higher,⁵ despite 72% working in the industry's highest-skilled occupations (OSCA Skill Level 1).⁶

Industry priority actions

Complete

- Attraction and retention tools for employers
- Career Pathways for Agricultural Trades
- Worker Safety Induction Pilot
- From Training Package to Training Delivery
- AHC Improvements Project

Current

- Rural Operations Project
- Ag Trade Apprenticeship
- VET Workforce Project
- Biosecurity Skills Review
- Regional, Rural and Remote VET Policy Decision Making

Consultations

- Occupation Shortage List
- OSCA Maintenance Strategy
- A revised methodology for the Australian Apprenticeship Priority List
- Consultation paper: Leading a safer, inclusive and resilient workforce

Ecosystem management, conservation, landscaping and gardening

This industry manages, restores and enhances natural and built environments, including Indigenous Protected Areas, national and state parks, coastal zones, and recreational spaces. Demand for skills in ecological restoration, conservation and environmental resilience is growing as climate pressures intensify and environmental standards, regulatory frameworks and stewardship expectations evolve.

Industry workforce and skilling insights

Unlocking regional training opportunities

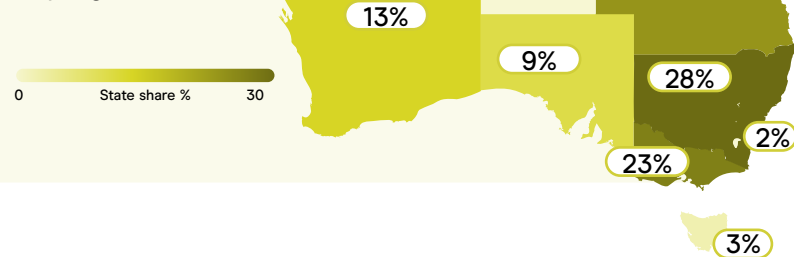
Skills Insight’s [Exploring Training Demands And Supply Challenges](#) research shows how low enrolments in some arboriculture, landscaping and pest management qualifications are not a reliable indicator of low industry demand. Instead, limited training often reflects supply constraints, including in RTO capacity, trainer availability and delivery viability, particularly in RRR areas. Given the sector’s predominantly outdoor and practical work, skills delivery is well suited to flexible and workplace-based models. Investment in regional training supply presents an opportunity to better align skills delivery with local demand and address persistent shortages in occupations such as Arborists and Landscape Gardeners.

- RRR
- Shortages

GEOGRAPHIC DISTRIBUTION

42%

live outside capital cities, compared to 31% of total national employment.³



WORKFORCE DEMOGRAPHICS



28% of the workforce are nearing retirement (55+ years)

BUSINESS SIZE

93%

of businesses are non-employing or have fewer than five employees.⁴



79,000
total employed

\$4.3B
industry value add

▲ 3.2%
employment projection to 2030

▲ 8.1%
employment projection to 2035

Supporting industry meet environmental targets

Australia’s Strategy for Nature 2024-2030 commits to ‘protect and conserve at least 30% of Australia’s terrestrial and inland water areas, and marine and coastal areas by 2030’. Achieving this target requires a skilled workforce to support conservation, biosecurity and land-use change, and formal recognition of emerging roles not yet captured in the OSCA, such as biodiversity assessors, and hybrid regenerative and ecological land management roles. This recognition would support industry data collection, training product review and targeted workforce development, including school-based training and career pathways promotion. In parallel, Skills Insight is supporting national objectives by [partnering with Public Skills Australia](#), with contributions from [ForestWorks](#) and [MINTRAC](#), to undertake a cross-industry analysis of biosecurity skills needs.

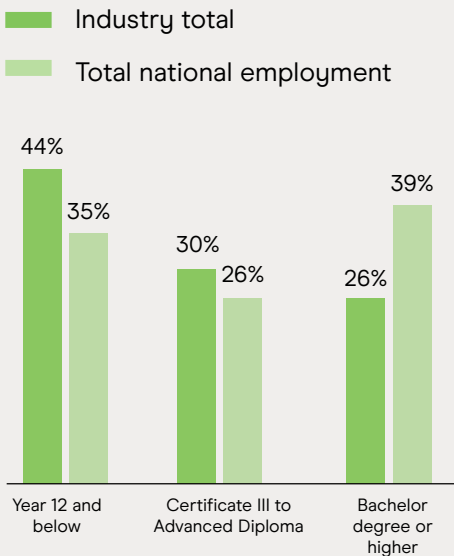
- Sustainability
- Biosecurity

Building a skilled First Nations Ranger workforce

The [Indigenous Rangers Program](#) is expanding, with over 1,900 new Indigenous ranger jobs being created in the period 2024-2028, and up to 1,200 of these positions going to First Nations women to progress gender equality.^{11,12} Skills Insight is supporting First Nations stakeholders in scoping initiatives to build a skilled and diverse Ranger workforce to implement biodiversity conservation, biosecurity monitoring, fire management, and capability development initiatives.

- Sustainability
- Diversity

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

26%

hold a Bachelor degree or higher,⁵ yet only 6% work in the industry’s highest-skilled occupations (OSCA Skill Level 1).⁶

Priority actions

Complete	Current	Consultations
Exploring Training Demand & Supply Challenges Attraction and retention tools for employers Career Pathways for Agricultural Trades Worker Safety Induction Pilot From Training Package to Training Delivery AHC Improvements Project	Landscaping Skills Review Rural Operations Project Ag Trade Apprenticeship VET Workforce Project Biosecurity Skills Review Regional, Rural and Remote VET Policy Decision Making	Occupation Shortage List OSCA Maintenance Strategy A revised methodology for the Australian Apprenticeship Priority List Consultation paper: Leading a safer, inclusive and resilient workforce

Forest management and harvesting

This industry encompasses activities that support timber and fibre production across native and plantation forests. Workers are responsible for managing forest resources to balance commercial productivity with conservation, sustainability and regulatory compliance. Skills in land management, environmental monitoring and risk management are critical to maintaining resilient supply chains and ensuring safe forest operations.

Industry workforce and skilling insights

Forest Operations excluded from the Australian Apprenticeships Priority List

All Forest Operations qualifications (Certificate III, IV and Diploma) were removed from the Australian Apprenticeships Priority List in early 2026 – despite sustained national shortages of foresters, tree workers and arborists, and a decline in both enrolments (-33%) and completions (-68%) in FWP Training Package forestry qualifications from 2020 to 2024. Removing training incentives risks further undermining the skills pipeline of an industry central to the housing construction supply chain. Industry, supported by ForestWorks, are identifying measures to mitigate workforce development risks.

- Apprenticeships
- Supply chains
- Shortages

GEOGRAPHIC DISTRIBUTION

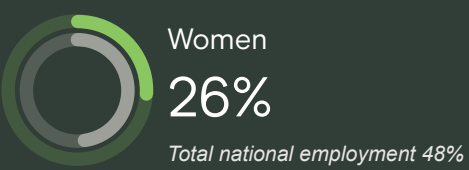
74%

live outside capital cities, compared to 31% of total national employment.³



WORKFORCE DEMOGRAPHICS

Industry total | Total national employment

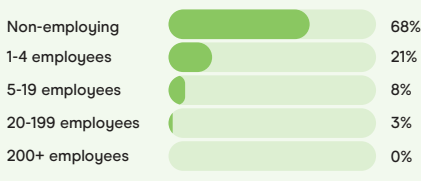


24%
of the workforce are nearing retirement (55+ years), however employment is evenly distributed across most age groups

BUSINESS SIZE

89%

of businesses are non-employing or have fewer than five employees.⁴



10,700
total employed

\$2.9B
industry value add

▲ 3.5%
employment projection to 2030

▲ 11.9%
employment projection to 2035

Tree felling requiring a national professional development program

Manual tree felling is a high-risk activity requiring quality training, yet RTOs have consistently struggled to source trees for learners to practice. The [Tree Allocation Partnerships Project](#) aimed to address this by facilitating partnerships between RTOs, landowners and employers. Similarly, stakeholder consultation through the [Pathway to Tree Felling Skills Project](#) led to recommendations for a national professional development program for trainers, assessors, compliance staff and careers advisers to support consistent application of tree felling operations.

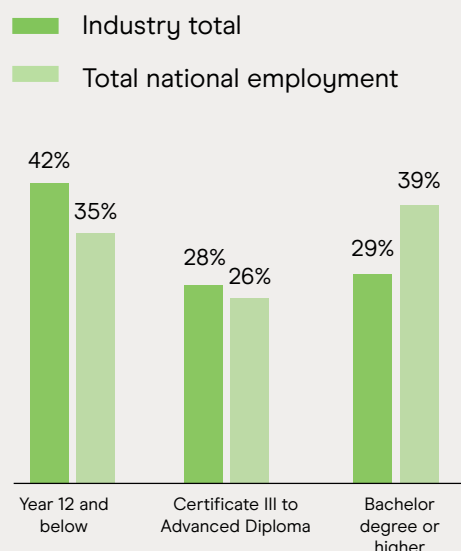
- Safety
- RRR

Accessible skills recognition and training delivery

In the context of increasing mechanisation and native forestry being restructured, Jobs and Skills Australia forecast a 4.7% reduction in industry employment by 2030. Recognition of Prior Learning (RPL) is a core – yet under-utilised – mechanism for recognising and redeploying current workers’ portable capabilities across related roles and sectors. At the same time, with First Nations people accounting for 6.8% of a predominantly regional workforce, culturally appropriate and locally accessible training and skills recognition are critical to supporting workers and maintaining industry resilience during periods of transition.

- Diversity
- RRR

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

63%

work in the industry’s lowest skilled occupations (OSCA Skill Levels 4-5),⁶ despite 58% holding post-secondary qualifications, suggesting potential skills underutilisation.⁵

Industry priority actions

Complete	Current	Consultations
Pathway to Tree Felling Skills Tree Felling Project Attraction and retention tools for employers	Tree Allocation Partnerships Rural Operations Project VET Workforce Project Biosecurity Skills Review Regional, Rural and Remote VET Policy Decision Making	Occupation Shortage List OSCA Maintenance Strategy A revised methodology for the Australian Apprenticeship Priority List Consultation paper: Leading a safer, inclusive and resilient workforce

Furnishing and other manufacturing

This industry includes furniture and fittings for residential and commercial buildings, spanning furniture and cabinet making, flooring, glazing, upholstery, window coverings and specialised trades. It underpins the housing construction supply chain and contributes to Australia’s sovereign manufacturing capability.

Industry workforce and skilling insights

Interior designer licensing elevating training delivery demand

The *Diploma of Interior Design* recorded 6,100 enrolments in 2024, yet the *Advanced Diploma of Interior Design* – now required for registered practice in Victoria and recommended in New South Wales – recorded only 140. This disparity reflects cost barriers, RTO withdrawals and limited awareness of regulatory shifts. With licensing requirements expected to expand nationally, many of the 18,800 interior design practitioners will be affected. Skills Insight is proposing an *Interior Design: Develop Integrated Career Pathways* project to improve Advanced Diploma access, support regional training delivery, and retain knowledge within the industry.

Regulation

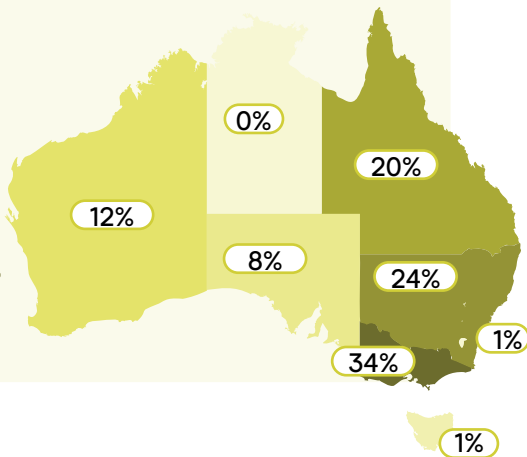
RRR

GEOGRAPHIC DISTRIBUTION

77%

live in capital cities, compared to 69% of total national employment.³

0 State share % 35



WORKFORCE DEMOGRAPHICS

Industry total Total national employment



34% are aged 25-34, pointing to a relatively young workforce

BUSINESS SIZE

80%

of businesses are non-employing or have fewer than five employees.⁴



53,100
total employed

\$2.9B
industry value add

▲ 2.4%
employment projection
to 2030

▲ 8.8%
employment projection
to 2035

Supporting apprenticeships for a sustainable workforce

Jobs and Skills Australia project 8.8% employment growth by 2035, yet the industry is facing severe skills pipeline constraints. Core occupations including Cabinet Maker, Glazier, Upholsterer and Wood Machinist are in national shortage, driven by long training gaps, retention issues and low female participation (19.4%). While 2024 enrolments in the *MSF Training Package* were 20% higher than in 2020, apprenticeship and traineeship commencements dropped by 29%. To promote a skilled and diverse workforce, improving apprenticeship outcomes is a priority for industry, who are consulted with Skills Insight on the *Furnishing Apprenticeship Guidance Project* to address these pressures.

Apprenticeships

Digitally enabled furnishing manufacturing

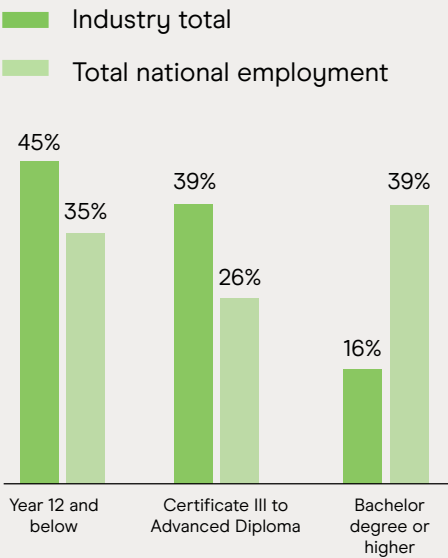
The industry is a leader in sustainable, circular and digitally traceable production, with domestic manufacturers increasingly supplying clients requiring environmentally compliant, locally made products. Growing use of digital product data, traceability systems and sustainable procurement is creating clear skills needs across cabinetry, furniture, upholstery and window manufacturing. Skills Insight is addressing these needs through new training products, including through the *Window Furnishings and Shade Sails Project*.

Supply chains

Sustainability

Technology

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

39%

hold qualifications ranging from Certificate III to Advanced Diploma, 13 percentage points above the total workforce average.⁵

Priority actions

Complete

- [Window Furnishings and Shade Sails](#)
- [Attraction and retention tools for employers](#)
- [Wood Machining Research](#)

Current

- [Furnishing Apprenticeship Guidance Project](#)
- [VET Workforce Project](#)

Proposed

- [Interior Design: Develop Integrated Career Pathways](#)
- [Specialisations in Glass and Glazing: Qualifications and Skill Sets](#)
- [Improving Apprenticeship and Traineeship Completion Rates in Furnishing](#)
- [Skilled Foundations: Strengthening Australia's Furnishing Workforce](#)

Consultations

- Consultation paper: Leading a safer, inclusive and resilient workforce

Horticulture

Horticulture involves the large-scale production of fruit, vegetables, nuts and nursery products across outdoor and protected-cropping systems. As a major primary industry, it underpins national food security and regional economies. The workforce reflects the sector’s seasonal and regionally dispersed operating model, combining permanent, seasonal and visiting workers, while also adapting to changing skills needs as production systems increasingly incorporate advanced and digital technologies.

Industry workforce and skilling insights

Technological adoption key to sustainable growth

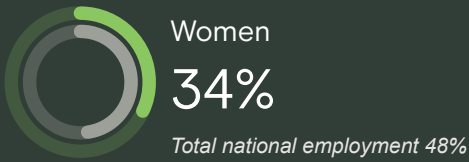
The [Centre for International Economics](#) reports that horticultural productivity growth is driven by increased uptake of new technologies, such as automated data collection, AI-enabled insights and increased mechanisation and automation. Modelling suggests that, under a high-adoption scenario, annual value added could increase from \$8 billion to \$22 billion by 2040, delivering \$37 billion in cumulative gains relative to a low-adoption pathway. Realising this opportunity depends on leadership capability and a skilled, adaptable workforce to implement, maintain and effectively use advanced technologies.

Technology

RRR

WORKFORCE DEMOGRAPHICS

Industry total Total national employment

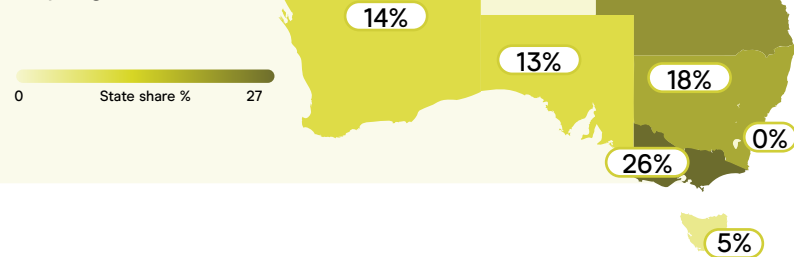


28% of the workforce are nearing retirement (55+ years)

GEOGRAPHIC DISTRIBUTION

63%

live outside capital cities, compared to 31% of total national employment.³



BUSINESS SIZE

89%

of businesses are non-employing or have fewer than five employees.⁴



85,700
total employed

\$5B
industry value add

▲ 1.1%
employment projection
to 2030

▲ 7.2%
employment projection
to 2035

Pathways to a more stable workforce

Horticulture has a long standing structural reliance on seasonal migrant labour including the PALM scheme and Working Holiday Makers, reflecting persistent difficulties in attracting local workers to meet peak demand. Maintaining stable and responsive visa settings, alongside targeted workforce development initiatives, is therefore critical to managing labour risk and supporting sector sustainability. At the same time, workforce attraction efforts focus on building a more stable pipeline into higher skilled occupations, including through AUSVEG’s [Growing a Career in Horticulture](#) program, which supports career awareness and skills development. Many stakeholders also support the introduction of national labour hire regulation to address cases of worker exploitation and strengthen workforce attraction and retention.⁹

Shortages

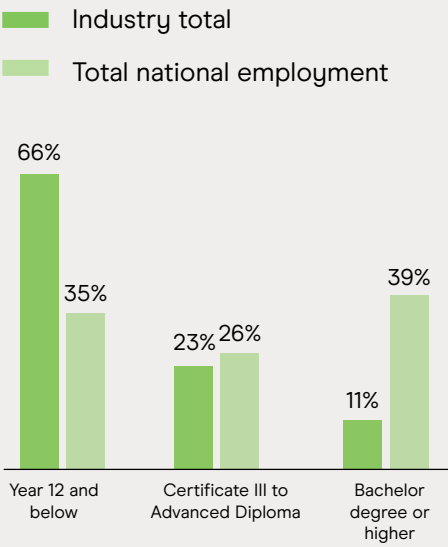
RRR

Addressing heat exposure to sustain productivity

Open-field production systems can expose workers to extreme temperatures and increase the risk of heat-related illnesses. Research suggests heat exposure causes a 9% increase in seasonal labour demand in some regions, with associated productivity losses.¹³ Without explicit national legislation to manage heat risk (e.g. mandatory work cessation thresholds), the development of cost-effective, evidence-based guidance for heat stress mitigation would better equip businesses to address this issue.

Safety

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

11%

hold a Bachelor degree or higher,⁵ despite 38% working in the industry’s highest skilled occupations (OSCA Skill Level 1).⁶

Priority actions

Complete

- [Attraction and retention tools for employers](#)
- [Career Pathways for Agricultural Trades](#)
- [Worker Safety Induction Pilot](#)
- [From Training Package to Training Delivery](#)
- [AHC Improvements Project](#)
- [Exploring Training Demand & Supply Challenges](#)

Current

- [Rural Operations Project](#)
- [Ag Trade Apprenticeship](#)
- [VET Workforce Project](#)
- [Biosecurity Skills Review](#)
- [Regional, Rural and Remote VET Policy Decision Making](#)

Consultations

- [Occupation Shortage List](#)
- [OSCA Maintenance Strategy](#)
- [A revised methodology for the Australian Apprenticeship Priority List](#)
- [Consultation paper: Leading a safer, inclusive and resilient workforce](#)

Livestock farming

This industry manages farming operations to breed and raise animals for meat, milk, eggs, wool and other products across specialised and mixed farming systems. Its workforce skills in animal welfare, biosecurity, land management and climate adaptation are critical to food security, exports and regional livelihoods.

Industry workforce and skilling insights

Technology driving productivity and skills needs

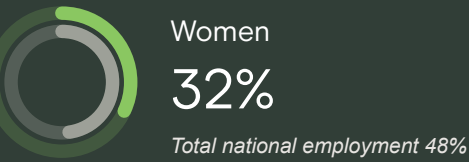
Advanced technologies in livestock farming are driving productivity gains and reshaping skill requirements. As digital tools become embedded in operations, workers increasingly need capabilities in technology adoption, data collection, analysis and interpretation. Rather than displacing jobs, sectors such as chicken meat, egg and dairy production are integrating digital skills into existing roles; for example, robotic milking systems reduce manual labour while shifting work toward higher skilled tasks in animal health, data management and system maintenance. Growing reliance on digital platforms also elevates the importance of cybersecurity skills to protect data and maintain operational resilience.

Technology

RRR

WORKFORCE DEMOGRAPHICS

Industry total Total national employment

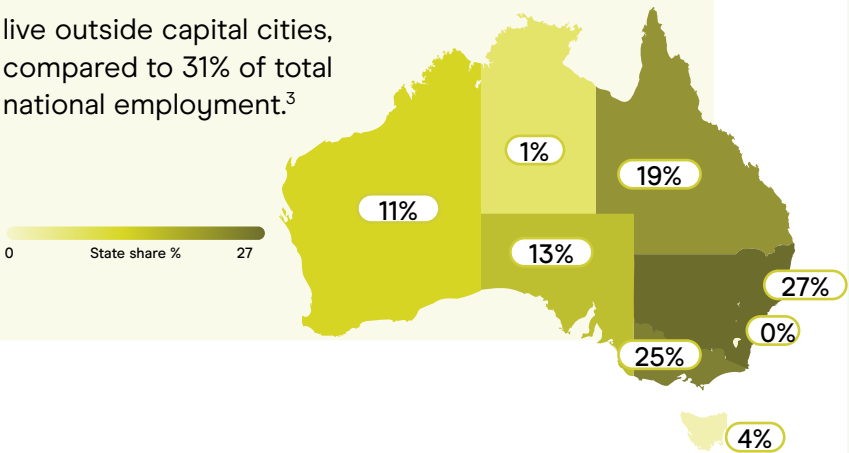


47% of the workforce are nearing retirement (55+ years)

GEOGRAPHIC DISTRIBUTION

90%

live outside capital cities, compared to 31% of total national employment.³



BUSINESS SIZE

95%

of businesses are non-employing or have fewer than five employees.⁴



142,000
total employed

\$22.2B
industry value add

▼ -1.9%
employment projection
to 2030

▲ 2.8%
employment projection
to 2035

Supporting industry to implement the National Biosecurity Strategy

The ongoing risk of diseases such as foot-and-mouth and avian influenza highlights the need for biosecurity capability across the livestock workforce, encompassing detection, prevention and response. Delivering the National Biosecurity Strategy depends on a workforce with the right skills, capacity and readiness across all stages of production. To support this, industry is collaborating with Skills Insight through Australia's Biosecurity Skills Review to identify priority biosecurity competencies and ensure training products equip workers with practical, job-relevant skills aligned to current and emerging risks.

Biosecurity

Living systems

Regulation

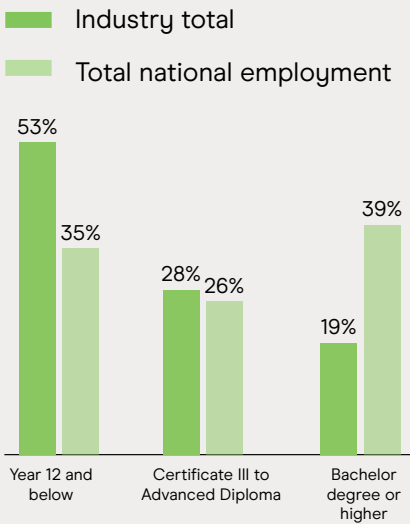
An Ag Trade Apprenticeship offers pathways potential

JSA projects 1.9% employment decline by 2030, with stakeholders identifying an [Ag Trade Apprenticeship](#) as an opportunity to establish a clear and credible career entry pathway. This is particularly important in a sector characterised by ageing owner operators and facing persistent shortages in skilled roles, including at entry and senior levels. Skills Insight is exploring the development of an 'agriculturalist' occupation as an Apprenticeship outcome, noting this role is not currently recognised within the OSCA but could create a job brand supporting workforce renewal.

Apprenticeships

Shortages

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

19%

hold a Bachelor degree or higher,⁵ despite 71% working in the industry's highest skilled occupations (OSCA Skill Level 1).⁶

Priority actions

Complete

- [Attraction and retention tools for employers](#)
- [Career Pathways for Agricultural Trades](#)
- [Worker Safety Induction Pilot](#)
- [From Training Package to Training Delivery](#)
- [AHC Improvements Project](#)
- [Livestock Operations](#)
- [Shearing and Wool Classing](#)

Current

- [Rural Operations Project](#)
- [Ag Trade Apprenticeship](#)
- [VET Workforce Project](#)
- [Biosecurity Skills Review](#)
- [Regional, Rural and Remote VET Policy Decision Making](#)

Consultations

- [Occupation Shortage List](#)
- [OSCA Maintenance Strategy](#)
- [A revised methodology for the Australian Apprenticeship Priority List](#)
- [Consultation paper: Leading a safer, inclusive and resilient workforce](#)

Meat, poultry and seafood processing

These industries transform livestock and aquatic products into safe, market-ready food for domestic and export markets. Workforce skills in processing, food safety, biosecurity and automation are critical to food security, sovereign capability and continued access to global supply chains.

Industry workforce and skilling insights

Consistent safety inductions for new entrants

Meat and poultry processing plants employ large numbers of new entrants, casual workers and PALM scheme participants in physically demanding roles. Industry-led collaboration is progressing more consistent approaches to workforce safety induction. The Worker Safety Induction Pilot, delivered by Skills Insight in partnership with MINTRAC, was established to address the absence of a nationally consistent, pre-employment baseline for safety capability. Early findings highlight the potential for scalable induction models to support safer onboarding, strengthen regulatory compliance, and contribute to workforce stability.

Safety

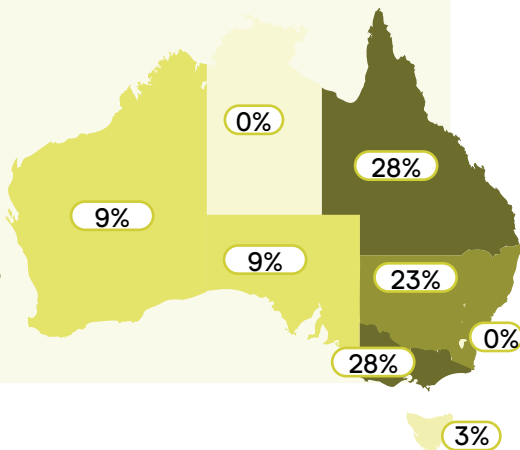
Regulation

GEOGRAPHIC DISTRIBUTION

49%

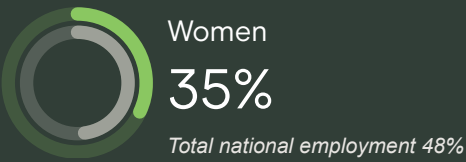
live outside capital cities, compared to 31% of total national employment.³

0 State share % 30



WORKFORCE DEMOGRAPHICS

Industry total Total national employment



48% are aged 20-34, reflecting a young workforce

BUSINESS SIZE

65%

of businesses are non-employing or have fewer than five employees.⁴



55,600
total employed

\$11.2B
industry value add

▼ -4.1%
employment projection
to 2030

▼ -1.3%
employment projection
to 2035

Automation reshaping industry skills needs

Jobs and Skills Australia's projected -4.1% employment decline by 2030 reflects how automation and technological integration is shifting skill requirements towards machine operation, monitoring and maintenance. The *AMP Training Package* is undergoing staged review to ensure training products remain aligned with processing technologies, recognising the importance of up-to-date skills for long-term workforce resilience, productivity and regional business viability.

Technology

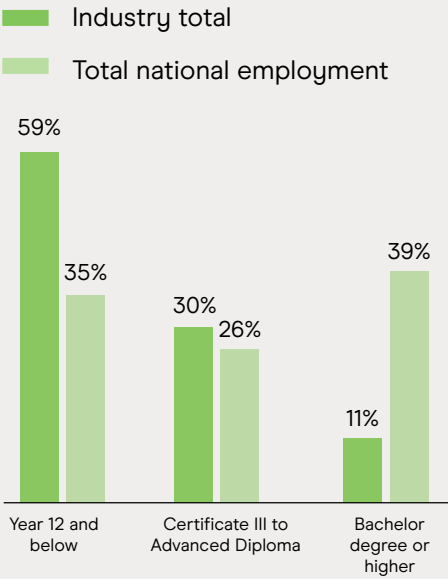
Strengthening retail butchery apprenticeship pathways

The occupation Butcher or Smallgoods Maker has been in national shortage since 2021, yet recent policy changes have significantly reduced support for apprenticeship pathways. Financial incentives for the industry's Certificate III apprenticeships have halved, while Certificate IV, Diploma and Advanced Diploma qualifications have been removed from the Australian Apprenticeships Priority List, leaving no incentives for progression to higher skill levels. In response, the Retail Butchery and Smallgoods Project will strengthen trade pathways by improving training product alignment and supporting employers to overcome capacity constraints, enabling the delivery of high-quality workplace learning.

Apprenticeships

Shortages

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

59%

hold no post-secondary qualifications,⁵ 24 percentage points above the total workforce average.⁶

Priority actions

Complete

- Attraction and retention tools for employers
- Worker Safety Induction Pilot
- Training Support Materials for Meat Safety
- Essential Meat Processing Skills

Current

- Flock Safe Project
- Retail Butchery and Smallgoods
- Meat Processing Training Resources
- Biosecurity Skills Review
- Regional, Rural and Remote VET Policy Decision Making
- VET Workforce Project

Consultations

- Occupation Shortage List
- A revised methodology for the Australian Apprenticeship Priority List
- AFAM – Identifying the true costs of RTO delivery in regional NSW
- Consultation paper: Leading a safer, inclusive and resilient workforce

Pulp, paper, packaging and hygiene products

This industry produces paper, packaging and related products through pulping, papermaking, converting and printing operations. Workforce skills in advanced manufacturing, process control and sustainability are critical as the sector modernises production and supports Australia’s circular economy and sovereign manufacturing priorities.

Industry workforce and skilling insights

Supporting workforce transition

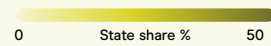
While most industry employment is metropolitan, large-scale pulp and paper mills remain concentrated in regional centres, particularly in Victoria and New South Wales. These sites are characterised by highly specialised, long-tenured workforces aligned to capital-intensive production systems, contributing to the sector’s predominantly full-time employment profile (around 90%). Although JSA projects modest employment growth of 2.1% by 2030, ongoing technological change and automation are altering skill requirements within existing roles. This increases the importance of industry-recognised skills, recognition of prior learning (RPL) and targeted retraining to support safe workforce mobility, adaptability and regional labour market resilience.

- RRR
- Safety
- Diversity

GEOGRAPHIC DISTRIBUTION

78%

live in capital cities, compared to 69% of total national employment.³



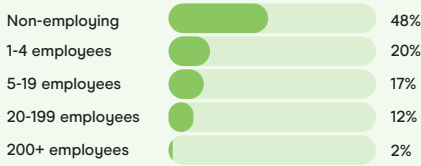
WORKFORCE DEMOGRAPHICS



BUSINESS SIZE

68%

of businesses are non-employing or have fewer than five employees.⁴



17,700 total employed

\$2.5B industry value add

2.1% employment projection to 2030

8.6% employment projection to 2035

Sustainability and sovereign manufacturing priorities

Manufacturers are responding to packaging and plastics policy changes, including the *APCO National Packaging Targets and the National Plastics Plan*, accelerating shifts toward fibre-based materials, recyclability and compliance capability. At the same time, the \$15 billion National Reconstruction Fund is supporting value-adding and advanced manufacturing in sectors such as agriculture and forestry, reinforcing the strategic importance of domestic fibre and packaging production. Industry feedback points to emerging skills gaps in sustainable packaging design, process optimisation and quality assurance.

- Supply chains
- Sustainability
- Regulation

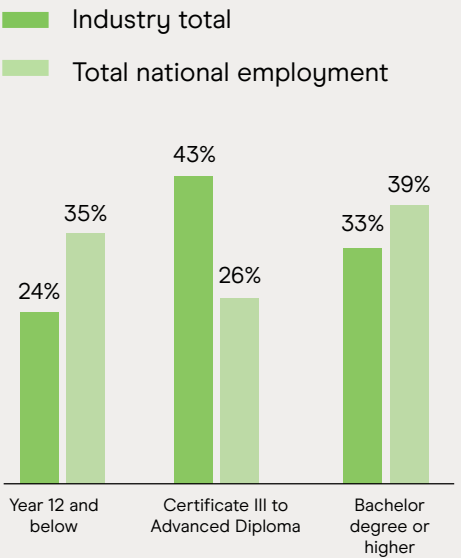
Strengthening delivery opportunities and skills recognition

Structural change and an ageing, male-dominated workforce are increasing the urgency of attracting, skilling and retaining new entrants to support long-term succession. Despite this, *PPM Training Package* qualifications have recorded no enrolments since 2017, except in 2023 when around 65 *Certificate III in Pulp and Paper Operations* qualifications were awarded using recognition of prior learning (RPL). The lack of accessible formal pathways limits workforce renewal and career progression. In response, Skills Insight is engaging industry through the *Mapping Workplace Training to PPM Qualifications* project to capture evolving skills and better align in-house training with nationally recognised qualifications to enhance their portability and value.

- RRR
- Diversity

Priority actions		
Complete	Current	Consultations
- Attraction and retention tools for employers - Connecting RTOs & Employers	- Improved Training Pathways and Safety in Racing - Regional, Rural and Remote VET Policy Decision Making - VET Workforce Project	- Occupation Shortage List - OSCA Maintenance Strategy - A revised methodology for the Australian Apprenticeship Priority List - Consultation paper: Leading a safer, inclusive and resilient workforce

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

33%

hold a Bachelor degree or higher,⁵ yet 59% work in the industry’s lowest skilled occupations (OSCA Skill Levels 4-5).⁶

Racing and breeding

This industry encompasses animal breeding, training, racing operations and racecourse management. Workforce skills in high-performance animal care, safety management, regulatory compliance and welfare are critical in a highly scrutinised, integrity- and safety-critical operating environment.

Industry workforce and skilling insights

Racing integrity reforms shaping workforce expectations

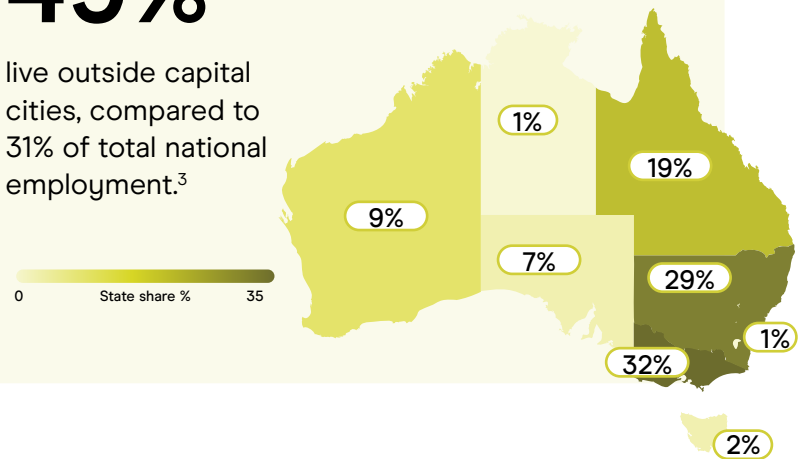
Industry safety protocols are supported by strengthened state-based racing legislation. Independent and parliamentary reviews in Queensland, New South Wales, South Australia and Tasmania are elevating integrity, welfare, governance and workforce-related obligations across the sector. Government responses to the *Queensland Racing Review (The Next Lap)*, the *NSW Drake Inquiry*, the *South Australian Ashton Inquiry*, and Tasmania’s *Racing Regulation and Integrity Act 2024* raise expectations for HR practices, conduct standards, procurement and compliance systems. In parallel, the evolving regulatory environment underscores the need for RTOs to work with industry to contextualise training products that support compliance, integrity and social licence outcomes.

Regulation

GEOGRAPHIC DISTRIBUTION

49%

live outside capital cities, compared to 31% of total national employment.³



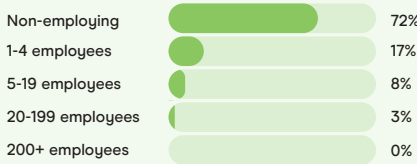
WORKFORCE DEMOGRAPHICS



BUSINESS SIZE

89%

of businesses are non-employing or have fewer than five employees.⁴



15,800
total employed

\$1B
industry value add

▲ 1.5%
employment projection
to 2030

▲ 7.1%
employment projection
to 2035

Training currency in safety-critical roles

Racing occupations, including jockeys, trackwork riders and breeding staff, operate in high-risk environments. Industry is working with Skills Insight to support operations through the [Improved Training Pathways and Safety in Racing project](#). Updates to the Training Package Organising Framework (TPOF) also reinforce expectations that training products remain current and aligned with safety and welfare requirements. The Australian Jockey Association stresses the importance of matching trainees to roles and operations suited to their capability and aptitude, and highlight workplace-based training as essential for developing the practical riding, handling and judgement skills needed to safely manage highly athletic and responsive racehorses.

Safety

Apprenticeships

Breeding workforce resilience

Stakeholders report that the thoroughbred breeding sector faces sustained workforce pressure. Horse Breeders are not classed as a national shortage occupation – despite industry feedback – limiting access to workforce development incentives. Skills Insight’s [Connecting RTOs & Employers Research](#) highlights that limited training availability drives employer led responses, such as [Thoroughbred Breeders Australia’s Fast Track Program](#). In parallel, AgriFutures Australia is developing a [Thoroughbred Breeding Industry Workforce Strategy](#) to strengthen attraction and retention, and establish clearer education and career pathways to support long term resilience and growth.

Shortages

RRR

Priority actions

Complete

- [Attraction and retention tools for employers](#)
- [Connecting RTOs & Employers](#)

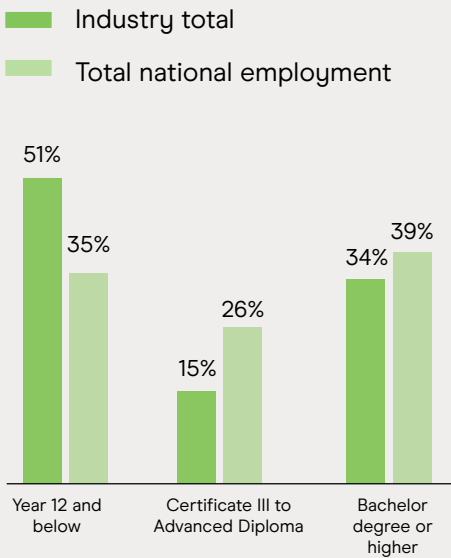
Current

- [Improved Training Pathways and Safety in Racing](#)
- [Regional, Rural and Remote VET Policy Decision Making](#)
- [VET Workforce Project](#)

Consultations

- [Occupation Shortage List](#)
- [OSCA Maintenance Strategy](#)
- [A revised methodology for the Australian Apprenticeship Priority List](#)
- [Consultation paper: Leading a safer, inclusive and resilient workforce](#)

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

34%

of workers hold a Bachelor degree or higher,⁵ yet only 13% work in the industry’s highest skilled occupations (OSCA Skill Level 1).⁶

Textiles, clothing and footwear

This industry processes and manufactures natural and synthetic materials into textiles, leather, clothing and footwear, supported by design and specialist services. Workforce skills in advanced materials, production and quality control are increasingly critical to Australia’s sovereign manufacturing capability, including technical, defence and medical textiles.

Industry workforce and skilling insights

Strengthening the sewing machinist pipeline

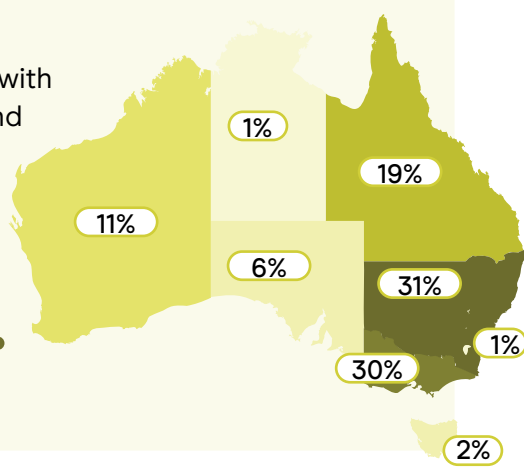
The Australian Fashion Council reports that shortages in core technical occupations threaten the sustainability of local manufacturing. Sewing machinists, for example, have a median age of 53 – 14 years older than the overall workforce – highlighting a significant replacement risk. Despite this, the 100 enrolments in the *Certificate IV in Apparel and Fashion* in 2024 were only 37% of 2017 levels and 73% of 2020 levels. Stakeholder consultation through Skills Insight’s Textiles, Clothing and Footwear Workforce Insights study identified opportunities to better recognise existing skills, expand apprenticeships and traineeships, and strengthen entry pathways. The New Entrants as Sewing Machinists project, commencing in 2026, is designed to respond to these challenges.

- Shortages
- Diversity
- Apprenticeships

GEOGRAPHIC DISTRIBUTION

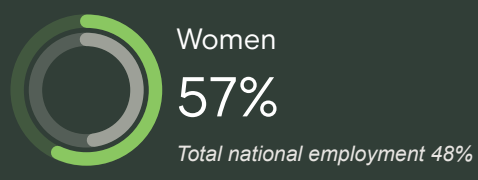
70%

live in capital cities, with New South Wales and Victoria together accounting for 61% of total industry employment.³



WORKFORCE DEMOGRAPHICS

Industry total | Total national employment

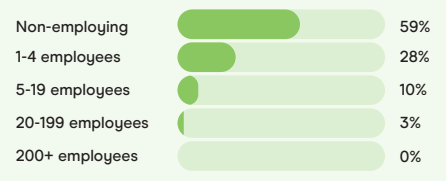


34% of the workforce are nearing retirement (55+ years)

BUSINESS SIZE

87%

of businesses are non-employing or have fewer than five employees.⁴



56,700
total employed

\$3.9B
industry value add

▲ 5.0%
employment projection to 2030

▲ 12.4%
employment projection to 2035

Improving MST Training Package outcomes for the workforce

The MST Training Package spans diverse sectors, including medical textile production, textile flooring, and commercial laundry, that combine traditional craftsmanship with technological innovation and compliance with environmental regulation. Feedback during Skills Insight’s current MST Skills and Occupation Mapping project indicates current and emerging skill needs, career pathways, and gaps in training provision warrant review. The project will produce clear occupational maps and identify where targeted training investment is required to help support training and career progression.^{14,15}

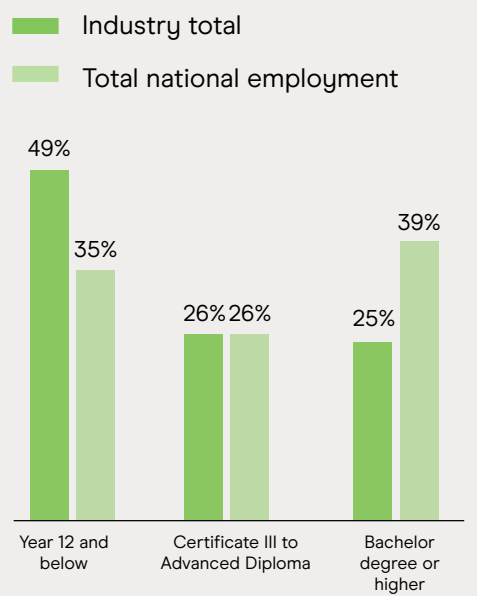
- Regulation
- Shortages

Growing demand for sovereign textile capability

Despite being recognised in defence policy as a sovereign industrial capability, advanced textile manufacturing continues to rely on offshore supply for critical combat, technical and medical textiles.¹⁸ While defence and manufacturing strategies emphasise workforce capability as central to sovereign production, consultation for Skills Insight’s Textiles, Clothing and Footwear Workforce Insights highlighted opportunities for training product review, qualification reform and greater economies of scale to build workforce resilience and innovation.

- Supply chains
- Technology

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

51%

hold post-secondary qualifications,⁵ yet only 38% work in high-skill occupations (OSCA Skill Levels 1-3).⁶

Priority actions

Complete	Current	Consultations
- Attraction and retention tools for employers - Textiles, Clothing and Footwear Workforce Insights	- Textiles, Clothing and Footwear Skills Mapping - Textile Flooring Manufacturing Pathway - New Entrants as Sewing Machinists - VET Workforce Project	- Occupation Shortage List - OSCA Maintenance Strategy - A revised methodology for the Australian Apprenticeship Priority List - Consultation paper: Leading a safer, inclusive and resilient workforce

Timber, wood processing and building solutions

This industry is central to the timber value chain, converting harvested wood into materials for housing, furniture and other products. Australian-grown timber-framed systems dominate detached housing construction, tightly linking housing delivery to forestry, wood processing and regional logistics. A skilled workforce underpins national housing priorities and sovereign capability.

Industry workforce and skilling insights

Building training capacity for timber systems design

The National Housing Accord’s 1.2 million home target by 2029 is intensifying pressure to adopt prefabricated and modular construction to overcome labour shortages and accelerate delivery. However, nationally recognised training in timber framing and truss design is limited, with few RTOs offering the two entry level skill sets as a pathway to full timber systems design qualifications. Training is further constrained by proprietary, manufacturing-linked software commonly used by industry. Expanding training provision and strengthening industry partnerships are therefore critical to building a scalable pipeline of timber systems designers.

Apprenticeships

Supply chains

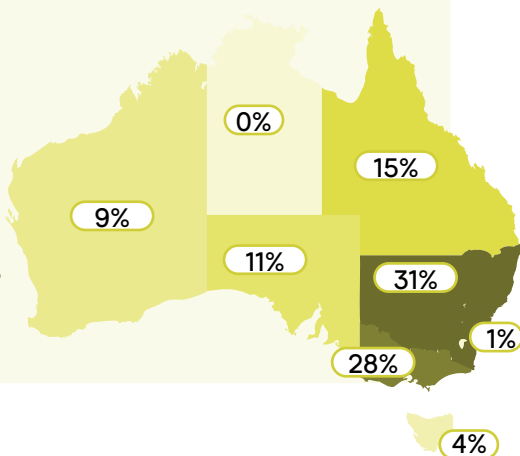
Regulation

GEOGRAPHIC DISTRIBUTION

46%

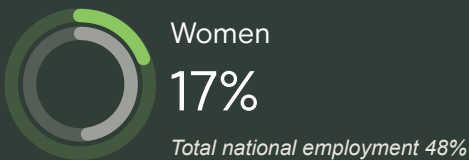
live outside capital cities, compared to 31% of total national employment.³

0 State share % 31



WORKFORCE DEMOGRAPHICS

Industry total Total national employment



24% of the workforce are nearing retirement (55+ years)

BUSINESS SIZE

75%

of businesses are non-employing or have fewer than five employees.⁴



32,300
total employed

\$5.3B
industry value add

▼ -0.1%
employment projection
to 2030

▲ 3.1%
employment projection
to 2035

Aligning workforce skills with wood processing innovation

The sector faces mounting pressure to build a workforce pipeline and modernise operations. The DAFF funded [Accelerate Adoption of Wood Processing Innovation Program](#) has invested \$88 million to support new and upgraded processing facilities, and lift productivity and environmental performance.¹⁷ This requires an appropriately skilled workforce; however, enrolments in FWP Training Package timber qualifications declined by 9% between their peak in 2022 and 2024. This underscores the need for increasing participation and expanding training delivery to support industry transformation and address shortages in critical roles such as Sawmilling Operators and Wood Machinists.

Supply chains

Technology

Strengthening tech-literate entry pathways

Timber and wood processing is undergoing rapid technological change, with automation, digital manufacturing and AI now standard across sawmilling and engineered wood operations. ForestWorks’ [Tech-Literate Traineeships for School Students in Forestry and Wood Processing project](#) is piloting school to work traineeship models that build digital capability and job readiness. With women accounting for just 13% of the workforce, and [Australia’s Timber Fibre Strategy](#) prioritising workforce diversity, these pathways are critical to positioning timber processing as an accessible, future focused career.

Diversity

Technology

Priority actions

Complete

- [Attraction and retention tools for employers](#)
- [Wood Machining Research](#)

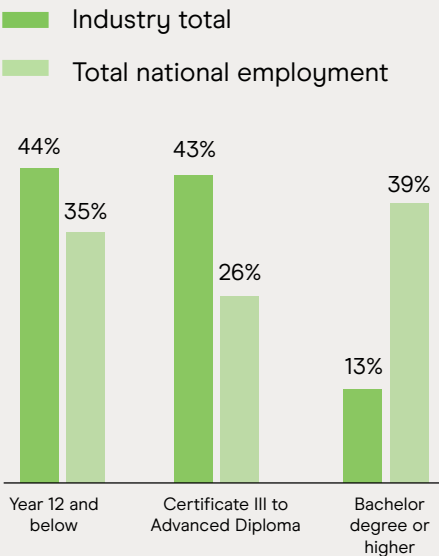
Current

- [VET Workforce Project](#)

Consultations

- [Occupation Shortage List](#)
- [OSCA Maintenance Strategy](#)
- [A revised methodology for the Australian Apprenticeship Priority List](#)
- [Consultation paper: Leading a safer, inclusive and resilient workforce](#)

EDUCATIONAL ATTAINMENT



SKILLS UTILISATION

43%

hold Certificate III to Advanced Diploma qualifications, 18 percentage points above the total workforce average.⁵

Education and training update

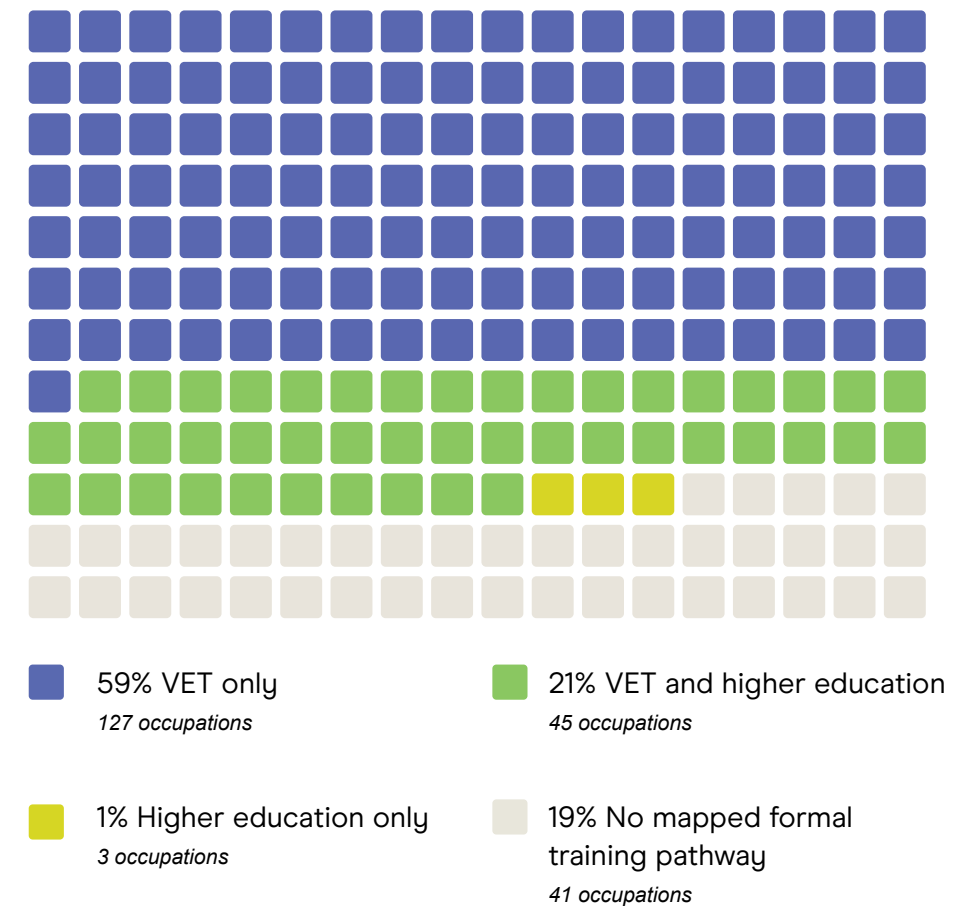
Formal education and training, delivered through schools, VET (including apprenticeships and traineeships) and higher education (HE), are the **main pathways for building workforce capability across the industries Skills Insight supports.**



Figure 1: Education and training pathways

VET is the primary formal training pathway across Skills Insight-supported occupations

Each square represents one occupation (n=216), coloured by the dominant training pathway



Source: Skills Insight analysis of JSA's VET & HE training pathways data and National Training Register

For further details on this analysis, see: [Education and training pathways analysis](#)

The Education and training pathways data presented above reinforces the importance of nationally recognised VET training packages as the main mechanism for workforce entry and upskilling. It also points to the need for better alignment and credit recognition where dual pathways exist, with implications for tertiary harmonisation, the National Skills Taxonomy, and RPL processes.

The absence of an explicit or clear formal training pathway for some occupations may also make it harder to expand training supply in response to workforce shortages, particularly in RRR areas.

Numerous qualifications, including agriculture and rural operations, include flexible design features intended to support local contextualisation for different occupational outcomes. There is, however, a lack of data and evidence clarifying the occupational outcomes these flexible qualifications are designed to achieve, and how contextualisation is implemented with industry input. Skills Insight will continue to explore these issues through projects such as Career Pathways for Agricultural Trades.

Participation insights

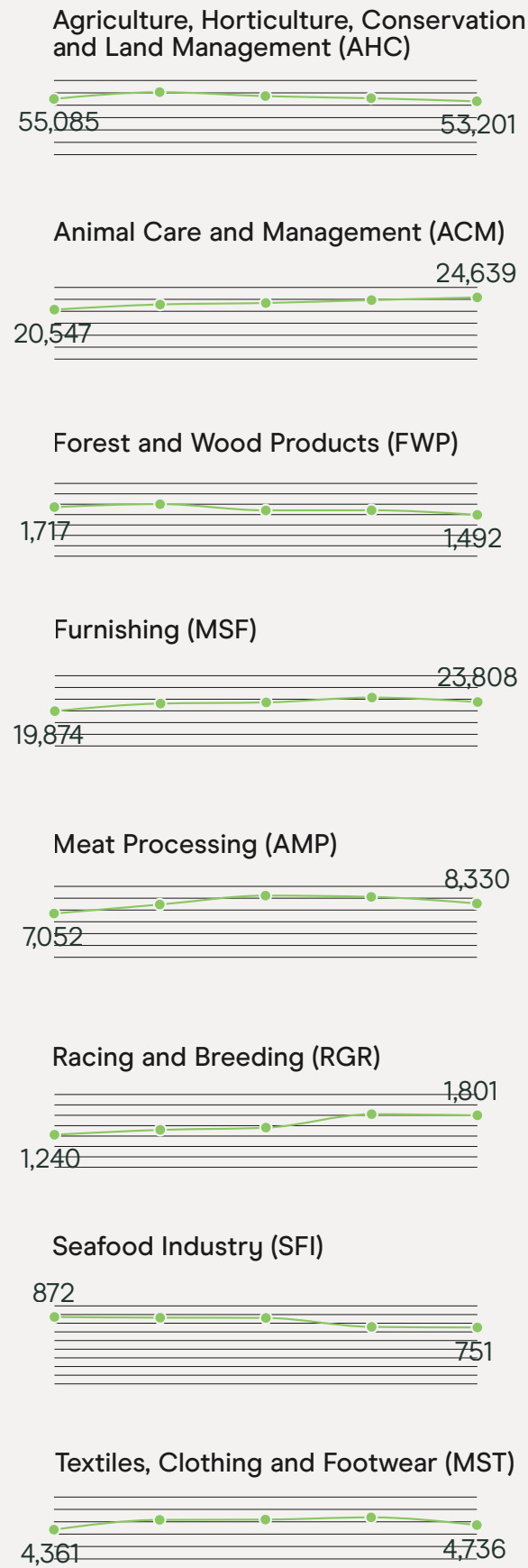
NCVER enrolments data for 2024 shows:

- A positive trend in most of the training packages supported by Skills Insight over the four years since 2020. This includes **ACM** (+20%), **AMP** (+18%), **RGR** (+45%), **MST** (+9%) and **MSF** (+20%).
- The **AHC** and **FWP** Training Packages displayed growth around 2021 but, overall, show five-year change of -3% and -13% respectively. There has been a consistent decline in **SFI** enrolments since 2020, with a -14% four-year change. For more information on training delivery barriers contributing to these trends, see:

Apprenticeships

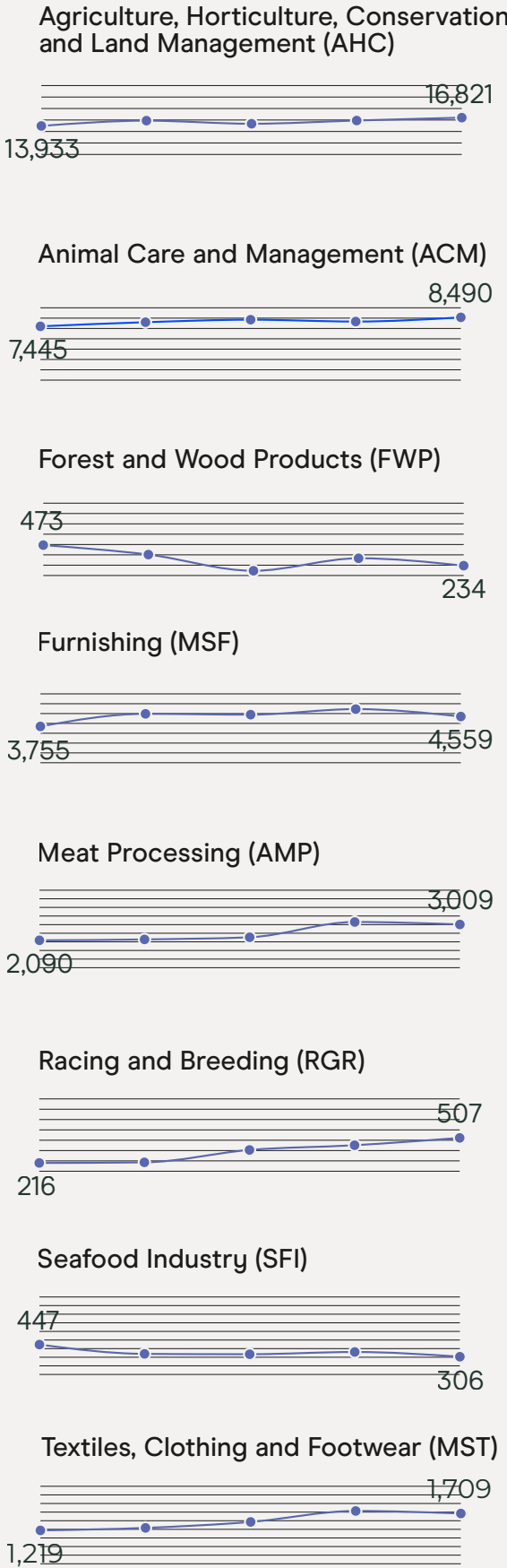
RRR
- There have been zero enrolments in the **PPM Paper and Pulp Manufacturing Training Package** every year since 2017; however, in 2023 there were around 65 *Certificate III in Pulp and Paper Operations* qualifications awarded through recognition of prior learning (RPL). This was arranged through ForestWorks' Worker Support Program, which supports workers who have been made redundant, with a view to boosting their employability for future roles. For more information see: [Pulp, paper, packaging and hygiene products](#).

Figure 2: VET training package qualification enrolment trends, 2020 to 2024



Source: NCVER Total VET Activity, DataBuilder (2026)

Figure 3: VET training package qualification completion trends, 2020 to 2024



Source: NCVER Total VET Activity, DataBuilder (2026)

Combining enrolments insights with completions data:

- All training packages showing positive enrolment trends also show growth in completions over the last four years, including **ACM** (+14%), **AMP** (+44%), **RGR** (+135%), **MST** (+40%) and **MSF** (+21%).
- **AHC** saw a 21% increase in completions despite enrolments falling over the four years.
- **FWP** completions fell by 51%, outpacing the decline in enrolments over the same four-year period. A similar pattern was observed in **SFI**, where completions declined by 32%, also exceeding the fall in enrolments.

For more detailed data breakdowns, please see our [Data Dashboard](#).

35% of all enrolments in 2024 were by commencing apprentices and trainees

Apprenticeships and traineeships are a primary mechanism for formalising on-the-job learning across several of Skills Insight's training packages, particularly for entry-level roles. By combining paid workplace experience with structured off-the-job training delivered by RTOs, they provide employers and learners with a consistent pathway for building skills in sectors where learning has often been informal. For more participation data, see:

Apprenticeships

Strengthening priority cohort participation

For under-represented genders, people with disability and First Nations people, participating in education and training can improve employment outcomes, while helping to address skills shortages.¹⁸ Across the training packages under the custodianship of Skills Insight, enrolments for these priority cohorts increased in both number and share (see Table 1), suggesting modest structural change in the pipeline of skilled workers and the potential for increased workforce representation.

Comparing 2020 and 2024, overall completions in these qualifications improved across priority cohorts, with the strongest growth among women (+3.1 percentage points), followed by First Nations learners (+1.9 percentage points) and learners with disability (+0.7 percentage points). While this suggests progress towards structural parity in aggregate, the pattern is not uniform across training packages, with most gains concentrated in a small number of products rather than broadly distributed across the system. One such example is the MSF Furnishing Training Package, where completions by women increased by around 10.9 percentage points.

While JSA data indicates that post-training employment rates increase for priority cohorts, persistent disparities in income and employment outcomes remain, underscoring the need for government policy and industry responses.¹⁹ Employer-led inclusion initiatives, such as workplace adjustments and supportive employment practices, play a critical role in enabling successful transitions into work. Stakeholder feedback from the [Safety and wellbeing](#) consultation reinforced that skills reform must embed psychosocial and cultural safety, alongside clear accountability, across qualifications, pathways and workplaces to support inclusive and equitable learning and working environments.²⁰ Participation strategies should therefore prioritise retention and progression in safe, supportive settings, rather than focusing solely on enrolments and recruitment. Ultimately, improving outcomes will depend on training organisations and employers fostering workplace conditions and cultures – underpinned by strong leadership and supervisory capability – that serve as key levers for both inclusion and productivity.

See also: [Diversity](#)

Table 1: Priority cohort participation

Cohort	2024 enrolments	2024 share of enrolments	Percentage points change in share of enrolments, 2020 vs 2024	Change in enrolment count, 2020 vs 2024	% Change in enrolment count, 2020 vs 2024
Women	55,362	46.8%	+4.1 pp	+8,435	+18.0%
People with disability	11,325	9.6%	+0.6 pp	+1,449	+14.7%
First Nations people	9,603	8.1%	+0.7 pp	+1,453	+17.8%

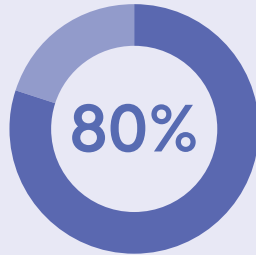
Source: NCVER (2025), VOCSTATS TVA program enrolments

Learner outcomes

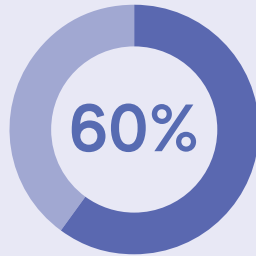
Learner outcomes across Skills Insight-supported training packages point to a strong overall return from training. The evidence shows a high rate of satisfaction with training, with training supporting graduates to move into work, improve their employment status (e.g. through promotion), and continue into further study.

The following case study tells the story of Imogen Coe. It illustrates how individuals build capability and progress through vocational learning over time, while also revealing the practical barriers they can face in accessing training and career information. Imogen’s learning journey highlights how motivation, on-the-job experience and VET pathways can combine to support progression and promotion, even for those without prior industry exposure. Her experience also reflects broader, system-level issues explored throughout this workforce plan, including career awareness, access to hands-on training, regional delivery constraints and the importance of sustained learning pathways.

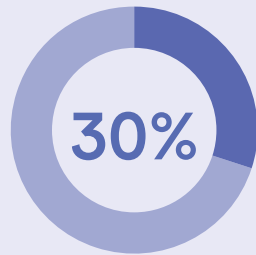
Learner outcomes from training packages supported by Skills Insight



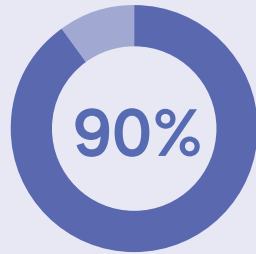
of all graduates are employed or in further study



have improved employment status after training



of graduates have commenced further study



are satisfied with their training

Source: NCVER (2025) Student Outcomes Survey



CASE STUDY

Low exposure to industry and career awareness

Imogen Coe currently works on a dairy farm in NSW where they milk 260-280 cows a year. She had no family background in farming and minimal exposure at school yet has been active in pursuing a career in agriculture.

Navigating VET access at school

Imogen had to advocate to study for a *Certificate II in Agriculture* during Year 11, requiring her mum to engage with the school career councillor, who then pursued options for Imogen. Ultimately, Imogen was allowed to study by distance. Her passion for the subject matter meant she excelled.

Transition from school to workplace-based training

After finishing year 11 and her Certificate II, Dairy Australia helped Imogen source different farms to do trials with. This experience improved Imogen's confidence and capability and motivated her to sign up for a traineeship.

Ongoing learning, capability building and progression

Imogen is currently employed as an Assistant Farm Manager while studying for her *Diploma of Agriculture* online. Her training has supported progression into a more senior role, broadening potential future pathways.

Imogen Coe's learning journey

"I'm a bit of an animal lover, but I didn't grow up on a farm, so to get into it was a bit random. I wanted to [study agriculture] at school, because we used to go camping and stuff growing up. I'm such an outdoorsy person. I'm not a write down pen and paper kind of learner. I'm definitely a learn on the job kind of person."

"It was my favourite class. I was second in my year just because I was so interested in it. It was just limiting there wasn't the hands-on experience I wanted. So, it was like 'go out to a paddock and figure out how much clover is in the paddock', but I didn't have a paddock to go to, so I'd be walking around the park at the back of my house. That's why TAFE's really good because you get the hands-on experience. Working in it, you learn more than anything else."

"I was so excited to be doing what I wanted to do. Going to TAFE, I was learning the same kind of stuff I learnt as part of the distance course, but this time I was actually understanding it because I was doing it at work. It also made it feel like what I was learning was important."

"My boss is bringing me into a manager role which is pretty cool. I'm not there yet, but I'm training to be. He gives me a go at everything, even the big boss kind of jobs. I don't know if I'll get to own my own farm, but that would be the goal. I'm doing the Diploma to give me the skills so if there is the opportunity to be a farm manager on my own, I can do it."

"It'd be harder now because there's no TAFE running, so if you want to do it, you're on your own a little bit. That would scare me off if I was going to leave school and had to do it all online."

"You think of a farm: you're thinking of someone sitting on a tractor ploughing a field and it's not what it's like at all. There are good jobs, especially if you're an animal lover and that's what you want to do. Just knowing it's an option makes a big difference – knowing that you don't have to be born on a farm to work on a farm and that there are jobs nearby. I didn't really know I could get work on a farm like 20 minutes from home if I wanted."

Imogen's story emphasises

- There are structural gaps in early exposure to industry careers, with a reliance on individual motivation rather than system design.
- Formal work-integrated learning is a key enabler of skill development, safe work practices, workforce retention and career progression.
- Regional training ecosystems are highly vulnerable, including due to VET workforce attrition, with significant flow-on effects for industry capability.
- There is a need for locally sourced trainers and blended delivery models that support regional career progression, safety and productivity.
- There remain visibility, cultural norm, and informational barriers to participation in industry careers and training.

These issues are elaborated in the following section on key jobs and skills system challenges and drivers.

Training supply and regional availability

The educator who delivered Imogen's traineeship recently retired, with no replacement hired, meaning the region lost access to face-to-face delivery of agriculture qualifications. While online training offered an important pathway for Imogen, she says access to hands-on experience was crucial for her to take the leap and pursue a career in the dairy industry.

System gaps and what needs to change

Imogen says the dairy industry is doing a good job of building community and connections to support new entrants, but more could be done to raise young people's awareness about career opportunities in agriculture.



Challenges and drivers



Addressing persistent occupation shortages

Skills Insight-supported industries continue to face significant workforce shortages in roles that underpin food security, animal welfare, biosecurity, sustainability, manufacturing operations, regulatory compliance, environmental stewardship, sovereign capability and housing construction.

Source: JSA (2025) *Occupation Shortage List*
AUS: National shortage; (R): Regional shortage
See JSA's *2025 Occupation Shortage Drivers Report* for definitions of shortage drivers

Table 2: Core occupation shortages by industry group

Core industry occupations classed by JSA as being in shortage in 2025 include:

- Retention gap

Suitability gap

Long training gap
- Uncertain

Short training gap

Regional/ state based

Year, shortage location and driver (if published)

Industry	Occupation title	2023	2024	2025
Horticulture; Broadacre Cropping; Livestock Farming	Agricultural Consultant	AUS	AUS	AUS
Broadacre Cropping; Horticulture; Livestock Farming	Agricultural Research Scientist	AUS	AUS	AUS
Ecosystem Management, Conservation, Landscaping, and Gardening; Forest Management and Harvesting	Arborist	AUS	AUS	AUS
Meat, Poultry, and Seafood Processing/ Manufacturing	Butcher or Smallgoods Maker	AUS	AUS	AUS
Furnishing and Other Manufacturing; Timber, Wood Processing, and Building Solutions	Cabinet Maker	AUS	AUS	AUS
Aquaculture and Wild Catch	Deck Hand	NSW, QLD, NT	QLD, SA, NT	AUS
Racing and Breeding	Farrier	AUS	AUS	AUS
Forest Management and Harvesting	Forester		NSW, QLD (R)	AUS
Ecosystem Management, Conservation, Landscaping, and Gardening	Landscape Gardener	AUS	AUS	AUS
Furnishing and Other Manufacturing	Glazier	AUS	AUS	AUS
Racing and Breeding	Horse Trainer	AUS	AUS	AUS
Aquaculture and Wild Catch	Master Fisher			AUS
Meat, Poultry, and Seafood Processing/ Manufacturing	Meat Inspector	AUS	AUS	AUS
Timber, Wood Processing, and Building Solutions	Saw Technician	VIC		AUS
Timber, Wood Processing, and Building Solutions	Sawmilling Operator			AUS
Furnishing and Other Manufacturing	Upholsterer	AUS	AUS	AUS
Animal Care and Management	Veterinary Nurse	AUS	AUS	AUS
Furnishing and Other Manufacturing; Timber, Wood Processing, and Building Solutions	Wood Machinist	AUS	AUS	AUS

Employers continue to report persistent shortages in occupations that underpin safe operations, productivity and regulatory compliance – with many reporting shortages far beyond what JSA findings suggest. Many of these roles are highly specialised, and located in RRR areas, making them difficult to fill even during periods of broader labour market easing. From an industry perspective, shortages are not episodic but structural, reflecting long training lead times, an ageing workforce, limited training delivery, and competition from other sectors for transferable skills. Employers consistently emphasise that vacancies in these roles cannot be easily substituted or deferred without consequence, as they are integral to business continuity and value-chain performance.

The impacts of ongoing shortages are felt directly at the enterprise level. Businesses report increased workload pressures on existing staff, heightened safety and compliance risks, reduced capacity to expand or adopt new technologies, and growing reliance on short-term or less-experienced labour to maintain operations. For smaller and RRR employers in particular, sustained vacancies can constrain productivity, increase operating costs, and undermine confidence to invest in training, innovation or succession planning. Over time, these pressures compound across supply chains, affecting service delivery, regional economies and compromising Australia’s broader sovereign capability and food security.

Actions and consultation
Complete
Attraction and retention tools for employers
Career Pathways for Agricultural Trades
Essential Meat Processing Skills
Current
Ag Trade Apprenticeship
Veterinary Nursing Review
Landscaping Skills Review
Textiles, Clothing and Footwear Skills Mapping
Rural Operations Project
Consultation
Occupation Shortage List
OSCA Maintenance Strategy
A revised methodology for the Australian Apprenticeship Priority List
Proposed
Growth Skills Review

The invisibility or misclassification of critical roles exacerbates shortages

Across Skills Insight-supported industries, workforce shortages are most pronounced in occupations aligned to OSCA Skill Levels 2 and 3. Stakeholder feedback, including through the [OSCA Update](#) consultation, indicates that gaps in the classification at these levels mean some existing roles, particularly at supervisor and senior practitioner levels, are not separately recognised or clearly distinguished. This reduces their visibility in workforce planning, training analysis and policy settings, concentrating demand pressure on a smaller set of recognised occupations.

Stakeholders have also raised concerns about recognised occupations where OSCA Skill Levels do not adequately reflect the complexity, responsibility and regulatory requirements of the role. A clear example highlighted by the seafood industry is the classification of Aquaculture Worker at Skill Level 5, which industry considers misaligned with the technical demands and risk profile of the occupation. Under-skilling in this role increases the risk of biosecurity breaches, environmental

harm, animal welfare failures and serious work health and safety incidents, with consequences that can escalate rapidly into stock losses, regulatory non-compliance, market disruption and long-term damage to industry productivity and reputation.

Industry has indicated that this misclassification reduces the visibility of aquaculture workforce pressures in formal workforce planning processes, including by placing the occupation outside the scope of the Occupation Shortage List. As a result, persistent shortages may be overlooked in policy settings linked to training, incentives and migration. The seafood industry is therefore advocating for framework changes to ensure that aquaculture roles are appropriately recognised and that workforce responses are better aligned to the sector’s operational, regulatory and biosecurity realities. Skills Insight will continue to work with impacted stakeholders to support their representations to the JSA.





Strengthening workforce inclusion and diversity

Increasing diversity and inclusion is critical to addressing workforce shortages, ensuring the agribusiness, fibre, furnishing, food, animal and environment care industries draw from the widest possible pool of potential entrants and untapped talent.

Greater diversity brings a broader range of perspectives, skills and lived experience into the workforce, strengthening innovation, adaptability and problem-solving. This is particularly important in industries where safety, biosecurity, animal welfare, environmental stewardship and regulatory compliance are central, and where diverse workforces can improve decision-making and sustainable operational outcomes, especially in regional, rural and remote contexts.

Evidence from Jobs and Skills Australia (JSA) and the Workplace Gender Equality Agency indicates that exclusion of under-represented groups can constrain industry growth, workforce resilience and safety outcomes. Diverse workforces bring different experiences and knowledge systems that shape how risks are understood, how work is organised, and how innovations are identified and adopted. When workplaces include people with varied technical backgrounds, cultural perspectives and career stages, they tend to operate in more adaptive and informed ways. In this context, diversity is best understood as a workforce capability rather than simply a demographic characteristic, with clear implications for strategic efforts to broaden and sustain participation across the workforce.

Diversity across the workforce

ABS Labour Force Survey and Census data shows that the industry workforces under Skills Insight's coverage are often older, male-dominated and have low representation of First Nations peoples and people with disability.^{6,21} These patterns reflect accumulated structural barriers that have been documented across multiple national inquiries and strategy documents, including *Working for Women: A Strategy for Gender Equality*, *Australia's Disability Strategy 2021–2031* and the Closing the Gap employment targets. This Workforce Plan examines diversity across five areas: gender, First Nations peoples, Culturally and Linguistically Diverse (CALD) and migrant workers, people with disabilities and age. Each area reflects both persistent barriers to workforce participation and opportunities to strengthen workforce capability, access and industry growth.

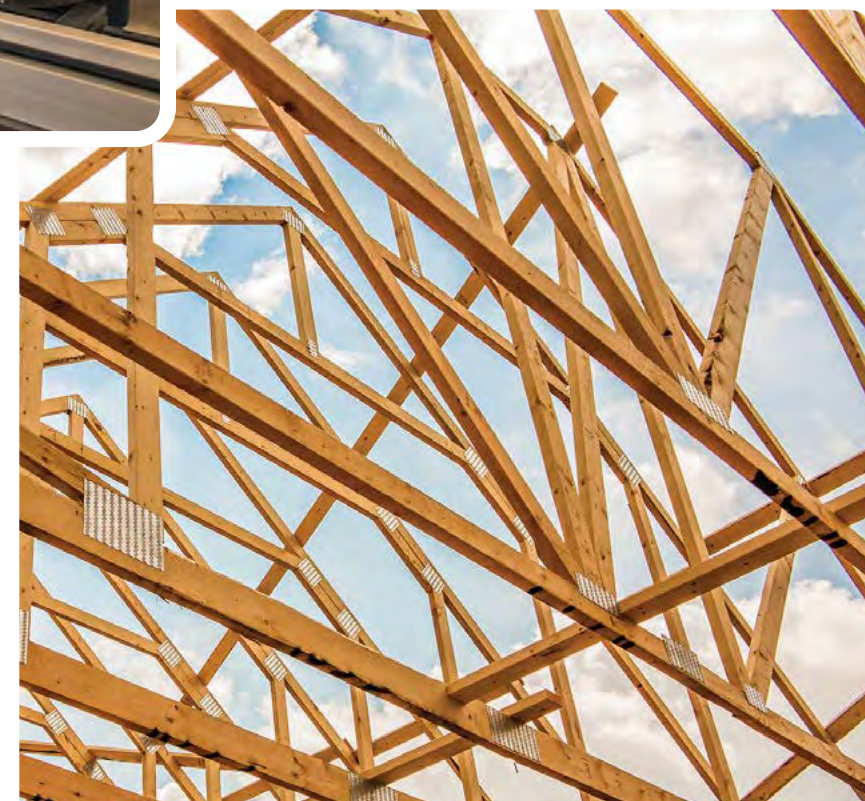


Above: Apprentice cabinet maker Karen Suze at TAFE NSW Lidcombe Campus

Gender

JSA evidence suggests occupations with strong gender imbalances are more susceptible to skills shortages.²² Women represent an average of 37% of workers across Skills Insight's 13 industry groups, ranging from 17% of the workforce in aquaculture and wild catch to 83% in animal care and management.²³ However, these figures can understate the gender imbalance within occupations: men hold the large majority of management, technician, trade and machinery operator positions across agriculture and related industries, while women are concentrated in clerical, administrative and part-time roles.²⁴

JSA's *Gender Economic Equality Study*²⁵ attributes the gap between women's educational attainment and their workforce representation primarily to workplace conditions such as inflexible working arrangements and inadequate responses to harassment and discrimination, rather than to skills or aspiration. The JSA Gender Segregation Intensity Scale²⁶ further shows that occupational gender gaps have remained largely unchanged for around 15 years, indicating that structural change has been slow. Where industry has committed to structured change, outcomes have shifted: *Forest and Wood Products Australia's Gender and Diversity Survey*²⁷ recorded women executive roles rising from 20% to 29% between 2021 and 2023, demonstrating that targeted initiatives can reshape leadership profiles over relatively short timeframes.



First Nations peoples

First Nations peoples are custodians of Australia’s land and waterways. They hold knowledge systems developed over millennia that are directly relevant to environmental stewardship, biosecurity and climate resilience in agribusiness, fibre, furnishing, food, animal and environment care industries. Yet First Nations workers average only around 2.2% of the workforce across the industries under Skills Insight’s coverage.⁶ According to the Indigenous Land and Sea Corporation and JSA analysis, less than 1% of growers, farm managers and exporters in the food supply chain are First Nations people, and First Nations-owned enterprises are concentrated in specific segments such as harvesting and cultural land management. The exclusion of First Nations peoples from formal roles in land and environment management is therefore not only an equity issue, but a missed opportunity to harness existing capability, innovation and productivity essential to sustainable workforce development.⁹

The National Agreement on Closing the Gap includes specific employment and education targets for First Nations peoples yet three out of four of these targets remain off track despite improvement.²⁸ Research suggests that experiences of racism, cultural disconnection and limited career pathways continue to drive high turnover, while programs like Indigenous Rangers demonstrate that culturally safe, place-based roles can achieve strong retention.²⁹



Culturally and linguistically diverse workers and migrants

Culturally and linguistically diverse (CALD) workers and migrants are essential to the capacity and capability of several industries under Skills Insight’s coverage. In meat, poultry and seafood processing, an estimated 32% of the workforce are migrant workers; while in horticulture around 24% are migrant workers.⁶ These industries rely heavily on working holiday makers, PALM scheme participants and other temporary visa holders, with employment often mediated through labour hire arrangements that can limit access to training, progression and workplace safety networks.

Research on CALD agricultural workers finds that many bring technical qualifications and transferable skills well beyond the roles to which they are assigned, but limited recognition of prior learning, language barriers and insecure visa status often prevent those capabilities from being formally recognised. This means that industries may experience shortages in technical and supervisory roles even where capability already exists within their workforce. This indicates that the constraint is not solely labour supply, but the structural conditions that limit skill recognition, progression and effective workforce utilisation.⁹



Disability

In the 2021 Census, around 1.3% of the agribusiness, fibre, furnishing, food, animal and environment care workforce identified as having disability-related support needs (‘need for assistance with core activities’)⁶; however, true prevalence is likely higher due to under-reporting. Whether a person chooses to disclose a disability is often shaped by perceptions of workplace culture. While some roles require disclosure for safety reasons, many workers choose not to disclose due to fear of discrimination or career disadvantage. Nearly half of people with disability report experiencing discrimination or harassment at work, compared with 23% of people without disability.³⁰ Australia is a party to the United Nations Convention on the Rights of Persons with Disabilities, which underpins domestic disability rights and antidiscrimination obligations, and *Australia’s Disability Strategy 2021–2031* and programs such as JobAccess provide a framework and funding mechanisms for workplace adjustment. However, uptake of these mechanisms appears limited, constrained by low employer awareness, fragmented advisory services and difficulties accessing specialist support. Accessible design, flexible task allocation, assistive technology and peer support mechanisms have demonstrated effectiveness in improving employment outcomes and represent underexplored opportunities for industries seeking to broaden their talent pool while maintaining high safety standards.



Age

An ageing workforce and a lack of young entrants create simultaneous pressures for industry growth. Across the agribusiness, fibre, furnishing, food, animal and environment care industries, the proportion of workers aged over 55 years increased from around 26% in 2006 to 31% in 2021,⁶ indicating growing exposure to retirement-related turnover. As many businesses under Skills Insight’s coverage are small or non-employing, limited succession planning risks widespread closures when owner-managers retire, threatening overall productivity, inter-generational knowledge transfer and the long-term sustainability of many industries.

The challenge of attracting young workers to industry is multifaceted. Recent ABS labour force data show that youth unemployment remained elevated at around 10% through 2025, more than double the overall unemployment rate, confirming that young people continue to face disproportionately high barriers to secure work compared with the broader labour force. JSA’s *Food Supply Chain Workforce*⁹ study identifies apprenticeships and traineeships for critical roles, alongside other structured work-based learning models, as primary mechanisms for addressing attraction and progression challenges, particularly in regional areas.

Actions and consultation	
Current	
Community-based Aquaculture Training Tools	
Attraction and retention tools for employers	
VET Workforce Project	
Rural Operations Project	
Consultation	
Gender Economic Equity study	



Enabling apprenticeship and traineeship pathways

Apprenticeship and traineeship pathways are essential for Skills Insight-supported industries as they provide a structured approach to developing practical, job-ready skills that align with industry needs.

These pathways support workforce renewal and address skill shortages, especially in regional, rural and remote communities, by offering accessible training options and clear career progression pathways. They also contribute to the long-term sustainability of supply chains and enable businesses to respond flexibly to changing economic demands. The effectiveness of these pathways is critical to supporting workforce capability and the growth and competitiveness of Australia's industries.



Apprenticeships and traineeships benefit learners and industry

Apprenticeships are a highly effective pathway to employment. In 2024, 95.4% of trade completers and 89.4% of non-trade completers were employed after training, underscoring the enduring labour market value of vocational pathways. For trade apprentices, outcomes are particularly strong, with 74.4% employed in the same occupation as their training and a further 14.6% working in other roles where their skills remained relevant. While non-trade completers were less likely to be employed in their trained occupation (32.7%), a substantial share (41.5%) reported that their training was still relevant in different roles, highlighting the portability of vocational skills. Employment rates for non-completers also remain relatively high (83.3% for trade and 76.1% for non-trade); however, dissatisfaction with pay, working conditions or workplace fit points to persistent challenges in retention and completion.³¹

Raising awareness of apprenticeships and their value to prospective apprentices and employers must be complemented by support that prepares both parties for productive, positive working relationships. This includes ensuring work-based learning is delivered in inclusive and safe environments, supported by capable mentors and supervisors, to strengthen retention, job quality and long-term workforce outcomes.

See also: [Safety](#)



Apprenticeship and traineeship commencement and completion rates

Skills Insight-supported industries are highly supportive of apprenticeships and traineeships; however, participation is sensitive to policy changes that impact on learner and employer support, and recent years have seen a decline in commencements.

Recent research by [Manufacturing Industry Skills Alliance](#) highlights persistent drivers of low completion rates in manufacturing, including supervisor-apprentice relationships, the quality of on-the-job training, workplace culture, and financial pressures faced by apprentices.³² These factors are inter-related and point to system-level challenges rather than isolated causes.

In 2019, 12,855 learners commenced apprenticeships and traineeships in Skills Insight training packages. The overall completion rate was 51.8%, below the national average of 56.1% across all training packages.³³ This gap reinforces the need for coordinated action across employers, training providers and the broader jobs and skills system. Completion outcomes vary by employer size and learner cohort:

Employer size

Medium-sized employers recorded the highest completion rate (53.7%), while large employers recorded the lowest (49.6%).

Gender

Women achieved higher completion rates (55.8%) than men (50.9%), although commencements were predominantly male (10,445 men; 2,410 women).

First Nations learners

A pronounced completion gap persists. Across all training packages nationally, the completion rate for First Nations learners was 49.1%. Within Skills Insight training packages, 1,110 First Nations learners commenced, with a completion rate of 43.0%, compared with 52.6% for non-First Nations learners (11,010 commencements).

Skills Insight will continue to examine barriers to participation and identify practical opportunities to lift completion rates for learners and industry.

Figure 4: Skills Insight apprenticeship and traineeship commencements



Source: NCVER (2025) VOCSTATS, Apprentices and trainees - June 2025

Inadequate support limiting apprentice and trainee viability

The Australian Government has progressively adjusted apprenticeship incentive settings over recent years, increasing financial support for housing construction and clean energy occupations under the [Key Apprenticeship Program](#) (KAP), while reducing payments for non-KAP occupations included on the Australian Apprenticeship Priority List (AAPL). These changes reflect a shift away from COVID-era measures, such as the Boosting Apprenticeship Commencements (BAC) incentives, towards more targeted support aligned with stated economic priorities.

The government also reviewed how the [methodology behind the AAPL](#) can prioritise occupations considered to represent ‘value for money or a demonstrable public benefit’. Under the proposed approach, numerous occupations across the agribusiness, fibre, furnishing, food, animal and environment care industries would have become ineligible for incentives, despite their critical role in priority industry supply chains and their economic significance for many regional communities.

Insights from a Skills Insight industry survey revealed significant concerns regarding the reduction or removal of apprenticeship incentives. Respondents indicated that such changes would impact their ability to maintain business operations, influence hiring decisions, and challenge workforce development in regional areas. Many businesses rely on these supports to manage the costs associated with recruiting and training apprentices, especially in sectors vital to regional economies.

The survey findings underscored the risks associated with reducing financial support and excluding critical occupations from the incentives system, particularly when apprenticeship commencements and completion rates are already facing pressure. Respondents highlighted that these changes could undermine the ability to develop a skilled workforce, with potential negative consequences for both businesses and regional communities.



Above: Clothing manufacturing on display at Wilderness Wear



Left: Footwear manufacturing on display during a site visit to R.M. Williams'

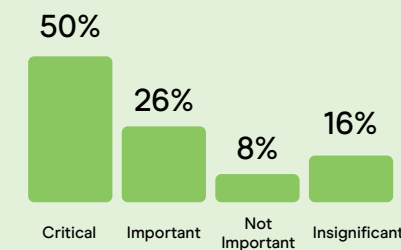
Survey findings

- Changes to the apprenticeship incentive system are perceived to work against national skills priorities such as food security and sovereign capability, reducing the system's capacity to deliver on stated workforce and industry objectives.
- Employers are dependent on incentives to offset the financial, time, and productivity costs of apprenticeships - without them, many businesses will seek alternative labour market solutions.
- Small businesses are particularly vulnerable to incentive changes, with reductions threatening future viability of apprenticeships and even some businesses.
- Removing incentives will lead to lowered demand for VET delivery, further exacerbating supply pressures (especially in regional, rural and remote areas).
- A reduced pipeline of apprentices would compromise workplace safety and productivity.
- Greater reliance on migrant labour to address skills needs would curtail regional opportunities for young people to work and learn.
- Reducing incentives would lead to lower apprenticeship completion rates and greater regional out-migration as people pursue opportunities in better-supported industries.

Key survey findings

76%

of current employers say **financial incentives** are critical in maintaining apprenticeship pathways



1 in 5

employers would not have hired their apprentice if **government support** had been unavailable at the time of hiring

Over 50% of apprenticeships rely solely on the incentives systems to supplement training costs. A further:

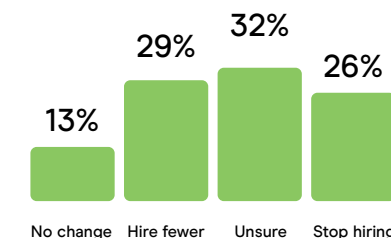
14% rely on Fee-Free TAFE

13% rely on other subsidies

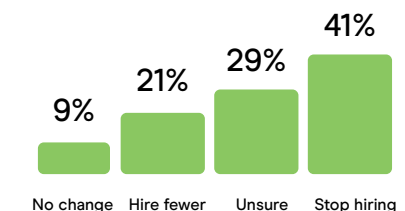
What happens to apprenticeship hiring patterns when incentives change?

Shifting from a reduction scenario to a removal scenario increases the share of employers who would stop hiring apprentices by nearly 60%

If incentives were reduced:



If incentives were removed:



What do employers think?

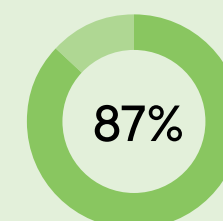
Among employers already committed to training:

75%

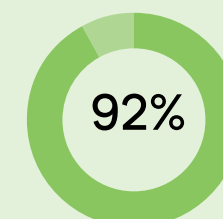
would stop hiring or hire fewer apprentices if incentives were removed

Four in five employers think food security and sovereign capability apprenticeships should be incentivised equally with housing construction and clean energy

How will changes to incentive affect the workforce?



of respondents believe reduced incentives will lead to **fewer opportunities** for young people



of respondents agree that reduced incentives will **drive young people away** from their sector or region

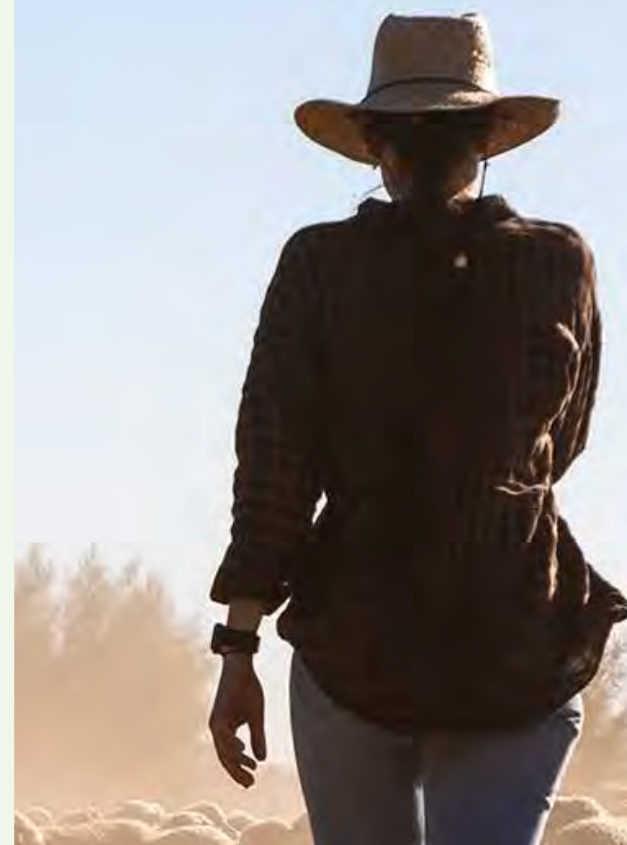
Industry feedback informs upcoming changes to the AAPL

Following feedback from stakeholders, including Skills Insight, the government has revised its proposed changes to the AAPL. From 1 January 2027, the AAPL will:

- take both national and regional skills shortages into account
- consider shortage ratings over two years to improve stability and support business planning
- still include priority jobs that support women and First Nations communities.

Skills Insight supports these changes in principle. However, there remains limited transparency in how the AAPL methodology will be applied in practice, including how the national food security priority is weighted relative to construction, net zero, manufacturing, and care and support.

Skills Insight will continue to monitor the implementation and impacts of these changes, working with stakeholders and drawing on industry evidence, including the survey findings that follow, to inform ongoing engagement with government.



Actions and consultation

Complete

[Connecting RTOs & Employers](#)

Current

[Ag Trade Apprenticeship](#)

[Furnishing Apprenticeship
Guidance Project](#)

[Retail Butchery and
Smallgoods Project](#)

Consultation

[Skills Insight response to Revised
Apprenticeship Priority List
Methodology Discussion Paper](#)

Recommendations to strengthen apprenticeship and traineeship support, pathways and industry uptake

1 Ensure incentive settings support growth in the overall apprenticeship pipeline without disadvantaging industries and regions that rely on apprenticeships for workforce supply

As incentive changes are implemented, their impact on apprenticeship commencements and completions should be monitored, particularly in regional, rural and remote communities where apprenticeship pathways support local employment and employers report greater sensitivity to incentive settings.

2 Broaden the evidence base used to determine apprenticeship priorities and incentive settings

While the AAPL draws on JSA data, including the Occupation Shortage List and Training to Occupation Pathways, these datasets do not address the full spectrum of structural and financial barriers currently impeding apprenticeship success. The AAPL methodology should incorporate a broader range of evidence inputs and weightings to better account for regional challenges, workforce characteristics, the role of structured training in managing workplace safety risks, and barriers to apprenticeship participation and completion.

3 Assess workforce need and apprenticeship growth potential, not only existing apprenticeship participation

Priority-setting should not rely solely on whether apprenticeships are currently the primary training pathway within an industry. It should also consider sectors experiencing workforce shortages where apprenticeship uptake may be constrained by structural, financial or regional barriers, and where there is potential to expand apprenticeship pathways to meet workforce needs.

4 Strengthen data monitoring and transparency to support evidence-based decision-making

Regular, disaggregated reporting on incentive uptake, completion and attrition, combined with structured industry, occupational and regional outcomes data, should inform continuous refinement of apprenticeship policy settings and reduce reliance on lagged or incomplete data.

5 Support essential industries equitably and consistently

Align incentives with all national priorities identified in the National Skills Agreement, explicitly including food security and related workforce needs, to enhance collaboration and long-term commitment to addressing critical skills and workforce shortages.

6 Recognise critical supply chain operations

Where a 'priority industries' approach is applied, the incentives system should recognise and incorporate their broader supply chains to ensure incentives support the workforce ecosystems that enable these industries to function (e.g. forestry occupations without which housing construction would stall).

7 Improve the visibility and utilisation of existing apprenticeship supports

Stakeholder feedback indicates that awareness of available financial and non-financial support remains uneven across industries and regions. Greater coordination, promotion and guidance would help apprentices and employers access the full suite of supports available through apprenticeship, training and workforce development programs.



Expanding training delivery in rural, regional and remote areas

Delivering training in RRR Australia presents persistent structural challenges that differ markedly from metropolitan contexts.

Challenges reaching a critical volume of students, long travel distances, limited infrastructure and connectivity, and difficulties attracting and retaining qualified trainers all affect the viability, consistency, continuity and quality of local training provision. At the same time, workforce demand data is often unreliable or incomplete at the local and regional level, meaning that understanding skills needs in RRR areas relies heavily on local intelligence, trusted relationships and sustained consultation. These challenges are compounded by higher delivery costs and smaller, more geographically dispersed cohorts, which can constrain the range of training options available and reduce completion rates where delivery models are not sufficiently flexible, place-based, culturally appropriate or supported by wrap-around services.³⁴

While demand for training in RRR areas is not well captured in existing data, evidence shows that the true costs of delivery are not adequately covered, limiting the ability of RTOs to consistently offer industry-relevant courses.³ Training that can be delivered at scale in metropolitan classrooms or online often costs only a fraction of what is required to deliver equivalent outcomes in regional settings – for example, in agricultural insititues – where lower learner volumes are combined with higher capital, operating and compliance costs associated with maintaining crops, livestock, land, equipment and safety during and between teaching terms. Although many of these cost differentials are unavoidable, current funding arrangements do not sufficiently account for them, undermining the sustainability of regional delivery.

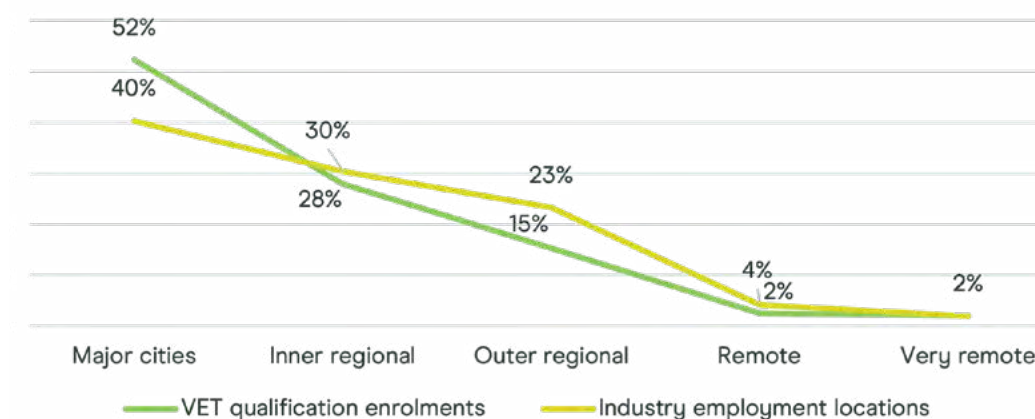
At the heart of the Australian Government's Employment White Paper is a commitment to sustained and inclusive full employment, underpinned by ensuring people have access to appropriate education and training, where and when it is needed, to participate in the labour market. However, this opportunity is not experienced equally across Australia.

This has direct implications for food security and sovereign capability, reinforcing the need for a more comprehensive and evidence-based understanding of the true costs of training delivery in RRR Australia to inform more equitable funding models.

Data also shows a geographic mismatch between where training is delivered and where jobs are located, with major cities over-represented in VET enrolments relative to industry employment in RRR areas (see Figure 5).

Outer regional areas show the largest gap, signalling a likely under-supply of locally trained VET graduates relative to workforce demand. While remote areas have a smaller overall base, they exhibit a much higher employment-to-enrolment ratio, which can translate into persistent vacancies, higher turnover and reduced workforce resilience. Although graduate mobility from metropolitan areas may help address some shortages, liveability constraints – particularly housing availability and affordability – continue to limit the effectiveness of this approach, reinforcing the need for locally accessible and sustainable training delivery in RRR communities.

Figure 5: Distribution of VET and industry employment (Skills Insight coverage)



Sources: a) NCVER VOCSTATS (2024 enrolments; Student remoteness region: ARIA+, 2023); b) ABS, 2021 Census of Population and Housing

Actions and consultation

Complete

[Exploring Training Demand & Supply Challenges](#)

[From Training Package to Training Delivery](#)

[Connecting RTOs & Employers](#)

Current

[VET Workforce Project](#)

[Regional, Rural and Remote VET Policy Decision Making](#)

[AFAM – Identifying the true costs of RTO delivery in regional NSW](#)

Consultation

[JSA - Jobs and Skills Roadmap for Regional Australia](#)



Sustaining supply chains supporting national priorities

While strengthening apprenticeship and traineeship pathways is essential to building workforce pipelines, those pathways will only succeed if national skills priorities recognise and support the full range of foundational industries that underpin priority outcomes.

The [National Skills Agreement](#) and its supporting National Skills Plan define national priorities that governments have agreed require focused effort to address critical skills and workforce shortages. The *Strategic Review of the Australian Apprenticeship Incentive System*³⁵ elevates construction and clean energy as dominant national priorities, embedding them at the centre of incentive reform, procurement policy, GTO pilots and workforce planning to deliver housing, infrastructure and net zero objectives. In doing so, the Review narrows the definition of public benefit to only include some sectors while largely excluding those related to food production and other national priorities.

[Skills Insight's response to the Consultation on the Australian Apprenticeships Priority List](#) highlights this as a structural and strategic flaw: agribusiness, fibre, furnishing, food, animal and environment care industries – many of which underpin construction, care, net zero and regional economies through complex supply chains – are systematically marginalised by a methodology that privileges administrative simplicity, headline shortages and metropolitan delivery over regional resilience, safety-critical roles, biosecurity, climate

adaptation and sovereign capability. The net effect is a policy shift that concentrates skills investment on construction and clean energy as outcome sectors, while under-recognising and under-incentivising the foundational industries that feed the nation, sustain rural and regional communities, manage land and water systems, and provide the sovereign, environmental and food-system capacity on which construction and other priority sectors ultimately depend. The following case study illustrates this point.

Actions and consultation	
Complete	
Tree Allocation Partnerships	
Current	
Pathway to Tree Felling Skills	
Tree Felling Project	
Wood Machining Research	
Consultation	
Skills Insight response to Revised Apprenticeship Priority List Methodology Discussion Paper	
Stakeholder survey on Changes to Australian Apprenticeship Incentive System	
Proposed	
Growth Skills Review	

CASE STUDY

Domestic forestry and wood processing foundational to housing delivery, affordability and sovereign capability

Australian-grown timber-framed structural systems are the dominant construction material for detached housing structures, with domestic demand for structural softwood sawnwood projected to grow as much as 50% by 2050.³⁶ The supply chain opposite shows that housing construction outcomes are inseparable from forestry, wood processing, manufacturing and regional logistics capacity, meaning sustaining skilled workforces across these industries is foundational to Australia's housing system. However, without government incentives, including to enable apprenticeship incentives for [forest operations](#), supply chain and future workforce vulnerabilities persist.

Figure 6: Dependencies from forestry to final build



Priority skills

The following skills priorities apply across much of Skills Insight's industry coverage, signalling where skills development and policy is expected to drive significant change. They should be read in the context of overarching drivers of the JSC program.



Above: Pacific Reef Fisheries Guthalungra facility



Above: Humpty Doo Barramundi

Sustainability

Sustainability is increasingly shaping how industries operate, how work is organised, and the skills needed across the economy. Australia's shift to a more sustainable, low-emissions and resource-efficient future is being driven by national commitments to net zero, climate risk disclosure, biodiversity protection and responsible resource use. These settings are influencing decision-making across agribusiness, fibre, furnishing, food and animal care operations and value chains, not only environment care sectors.

As a result, sustainability is becoming a core workforce capability. It is increasingly part of everyday roles through environmental, social and governance compliance and reporting, supply chain transparency and risk management, greenhouse gas emissions reduction, landscape and biodiversity preservation, carbon farming, agroforestry, permaculture, regenerative agriculture, soil health management, circular economy principles, and efficient water and energy use.

From a workforce perspective, this transition is increasing demand for both technical and transferable skills that can be applied across industries and occupations. These include systems thinking, data and reporting literacy, sustainable resource management, and the ability to adapt practices in response to regulatory, environmental and market change. Although many sustainability-related practices draw on capabilities already present in the workforce, meeting future environmental, regulatory and productivity demands will require a more deliberate uplift in skills. This will involve targeted upskilling and reskilling of existing workers, alongside the creation of new, clearly defined roles supported by formal training pathways, apprenticeships and career structures that support workforce attraction and retention, and drive productivity improvement.

Workforce planning in this area should support flexible training pathways and workplace-based learning that help workers build sustainability capability over time. It should also recognise the value of recognition of prior learning in making existing skills more visible and portable, alongside the importance of First Nations knowledge, stewardship, and land and sea management practices in delivering long-term economic, environmental and social outcomes, including through the Indigenous Rangers Program.

Skills Insight's work in this area is framed by a range of policies and frameworks that help industry navigate a more complex operating environment while balancing productivity and market development with sustainability and compliance priorities. These include:

- [The United Nations' 2030 Sustainable Development Goals](#)
- [Climate-Smart Agriculture Program](#)
- [Environmentally Sustainable Procurement Policy](#)
- [National Roadmap for protecting and conserving 30% of Australia's land by 2030](#)
- [The Australian Government's National Forest Industries Plan: Growing a Better Australia – A Billion Trees for Jobs and Growth](#)
- [Australian Agricultural Sustainability Framework](#)
- [Feeding Australia: A National Food Security Strategy](#) (in development)

Actions and consultation

Proposed

Growth Skills Review

Technology and innovation

Rapid technological change is reshaping how work is performed across the agribusiness, fibre, furnishing, food, animal and environment care industries. Digital technologies, automation and data-enabled systems are increasingly embedded in production, processing, logistics, compliance and decision-making, supporting improvements in productivity, traceability and risk management. In many cases, innovation is incremental rather than disruptive, with technologies augmenting existing roles rather than replacing them.

From a workforce perspective, this shift is driving demand for both technical and transferable skills, including digital literacy, data interpretation, systems thinking, and the ability to integrate new technologies into established work practices while maintaining safety, quality and regulatory compliance. As a result, workforce capability to adopt, operate and adapt new tools in workplace settings is becoming increasingly important. This reinforces the need for accessible upskilling and reskilling opportunities for existing workers, alongside effective workforce planning to anticipate and attract new workers with evolving skill profiles.

Forecasting and supporting changes to workforce skills composition is challenging because businesses are operating at different stages of technological maturity. While many of the industries covered by Skills Insight benefit from the research, development and extension activities of organisations such as the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Rural Research and Development Corporations (RDCs), the uptake of new technologies and innovations is uneven. Diffusion varies significantly across operating environments, regions and business sizes, creating divergent skills needs and limiting the ability to implement uniform workforce or training responses.

In practice, demand for training often follows rather than leads technology adoption. Rapid technological development across critical technologies identified by the Australian

Government – including advanced manufacturing and materials, Artificial Intelligence (AI), and autonomous systems, robotics, positioning, timing and sensing – makes it difficult to anticipate how industry practices, markets and employment structures may evolve. In many cases, new technologies must first be tested and applied in operational contexts before training systems can respond, slowing the translation of emerging capabilities into effective training products and delivery.

In response, Skills Insight is working closely with industry to support the development of robust, future-ready training products and projects. The work draws on established digital skills frameworks, including the Australian Digital Capability Framework, DigComp 2.2, Digital Foundations for Agriculture Strategy, and the *Agricultural Workforce Digital Capability framework*.³⁷

Against this backdrop, Skills Insight is collaborating closely with the Future Skills Organisation (FSO) and other JSCs to contribute industry-specific insights to work under the Australian Government’s National AI Plan. This collaboration is focused on understanding how AI is currently being used across industries, the priority AI-related skills required now and into the future, and current training initiatives and gaps. We are also exploring barriers to regional AI skills development, impacts on priority cohorts, data for tracking national progress, opportunities for cross-industry partnerships and actions to accelerate workplace adoption across all business sizes.

Actions and consultation

Consultation

Cross-JSC contributions coordinated by Future Skills Organisation for the National AI Skills Report

Biosecurity

Biosecurity underpins Australia’s economic resilience, environmental protection and market access, particularly across agriculture, fisheries, forestry and related supply chains. Australia’s biosecurity system operates in an increasingly complex risk environment shaped by global trade and travel, climate variability, emerging pests, weeds and diseases, and evolving technologies. National policy settings, including the National Biosecurity Strategy and the DAFF Biosecurity 2030 Roadmap, emphasise the need for a highly skilled, responsive and risk-based biosecurity workforce spanning government, industry and the community. Recent assessments have identified workforce capability and capacity as a strategic risk, highlighting the importance of sustained investment in workforce planning, training and deployment to maintain Australia’s high level of biosecurity protection for animal, plant and environmental health.

For the workforce, this is driving demand for biosecurity capability across frontline operations, surveillance, diagnostics, data and risk analysis, and emergency preparedness and response. Workforce challenges include recruitment and retention pressures, uneven capability across regions, and the need to continuously update skills as biosecurity threats and tools evolve. National initiatives such as the Biosecurity Training Centre and the National Biosecurity Training Hub support capability development by improving access to consistent, high-quality training across jurisdictions and industries. For workforce planning, strengthening biosecurity outcomes will require a coordinated approach that builds clear career pathways, supports regional and surge capacity, integrates digital and scientific skills, and enables collaboration across government, industry, research organisations and communities.

To support this agenda, Skills Insight is leading a cross-industry skills review project in partnership with Public Skills Australia JSC, with the guidance of the National Biosecurity Strategy Implementation Committee. This work is identifying the skills required across all aspects of the biosecurity system, including policy development, research, scientific interventions, prevention, detection, monitoring and crisis response. It also seeks to identify workforces with existing, transferable skills that could be mobilised to support implementation of the National Biosecurity Strategy and related projects. Skills Insight is also monitoring work by CSIRO on the future of biological management in Australia to support the Ag2050 and Biosecurity agendas.³⁸

Actions and consultation

Current

Biosecurity Skills Review
Flock Safe Project

Biological resource management

Biological resource management underpins the health, welfare and safe management of soils, plants, trees and animals across Skills Insight’s industries. The growing importance of biological resource management is reflected in the expanding range of legislative, regulatory and standards-based approaches across Australia aimed at safeguarding soil, plant, tree and animal health. Unlike the management of machinery, infrastructure or built assets, biological resource management requires skills that respond to the inherent complexity, variability and unpredictability of living entities. The knowledge required to work with individual plant and animal species is highly specialised, encompassing behavioural, nutritional and physiological requirements, alongside species-specific health, welfare and environmental needs.

Given this variability and the safety risks that can arise when workers lack sufficient experience, workforce competency in biological resource management is best developed through workplace-based training. Practical exposure is critical when working with animals and natural systems that may behave unpredictably, particularly in high-risk or regulated environments. Industry stakeholders consistently emphasise that training package content must therefore be sufficiently flexible to allow contextualisation across different settings. This includes, for example, the safe and compliant handling and care of companion animals, livestock or wildlife, adherence to animal welfare legislation and standards, and the capacity to prevent, mitigate and respond to safety incidents or emergency and evacuation situations.

Key government policies shaping the future direction of industries and the jobs and skills system include [Animalplan 2022–2027](#), the renewed [Australian Animal Welfare Strategy](#), [Australia’s Strategy for Nature 2024–2030](#) and [Regional Forest Agreements](#). Together, these frameworks have significant implications for land use, animal production systems, regulatory compliance and workforce capability across the agribusiness, fibre, furnishing, food, animal and environment care industries.

As these policy settings have been implemented, challenges have emerged for workers and businesses, including the discontinuation or restructuring of native forestry, live animal exports and fishery operations in some jurisdictions following federal, state and territory decisions. These transitions have highlighted the consequences of workers not holding formally recognised qualifications, with many required to undertake skills assessments to identify and redeploy their portable capabilities. Upskilling and RPL are therefore critical to supporting workforce mobility and transition.

Actions and consultation
Current
Veterinary Nursing Review
Biosecurity Skills Review
Community-based Aquaculture Training Tools
Rural Operations Project
Improved Training Pathways and Safety in Racing
Flock Safe Project
Tree Allocation Partnerships
Complete
Livestock Operations
Shearing and Wool Classing
AHC Improvements Project
Career Pathways for Agricultural Trades
Connecting RTOs & Employers
Worker Safety Induction Pilot
Essential Meat Processing Skills
Pathway to Tree Felling Skills
Tree Felling Project

Regulatory compliance and quality assurance

Regulatory compliance and quality assurance are core workforce capabilities across the agribusiness, fibre, furnishing, food, animal and environment care industries, underpinning safety, productivity and access to domestic and international markets. Recent Productivity Commission analyses of the [Five pillars of productivity](#) and [National Competition Policy](#) have identified workforce licensing and occupational entry requirements as potential productivity constraints; however, industry stakeholders consistently emphasise that well designed regulatory and licensing pathways are essential in high risk and trade exposed sectors. In these industries, compliance is not an administrative overlay but a defining feature of occupational competence, supporting public and animal health, biosecurity, traceability and consumer confidence.

Regulatory compliance and quality assurance skills are embedded across value chains, rather than being confined to specialist roles. For example, in meat, poultry and seafood processing, workers must operate within complex food safety, animal welfare, biosecurity, hygiene and importing country regulatory frameworks. Workforce capability in documentation, audit readiness, traceability systems and the consistent application of standards is critical to maintaining export accreditation and access to international markets, where regulatory failures can result in plant suspensions or loss of market access with significant flow on impacts for regional workforces and businesses.

Stakeholders have identified that the complexity and risk profile of occupations in the industries supported by Skills Insight are often poorly reflected in the Occupation Standard Classification for Australia (OSCA, formerly ANZSCO), particularly where roles are designated as ‘entry-level’ despite requiring high level compliance, safety and quality assurance

skills. Low skill-level designation limits access to funding, incentives and skilled migration pathways, and reduces motivation for workers to undertake formal qualifications or continue lifelong learning, increasing the likelihood of procedural failures arising from insufficient workforce capability and exposing businesses to significant financial and operational losses.

An additional challenge is that, to support training delivery and compliance, relevant regulatory and licensing requirements are typically identified only during training product development or review processes. There is currently no central, consistent source of this information to support RTOs in designing, delivering and maintaining training that reflects current regulatory settings. In response, Skills Insight is undertaking a pilot initiative to map licensing and regulatory requirements, beginning with animal care and management occupations, to improve transparency, support recognition of existing capability, and strengthen alignment between training products, regulatory settings and workforce mobility.

Actions and consultation
Current
Mapping Licensing and Regulatory Considerations Project

Safety and wellbeing

Workforce safety and wellbeing have been identified by stakeholders as a major skills priority, requiring deeper analysis and more coordinated action across the system.

In response, Skills Insight published a [consultation paper](#) seeking stakeholder views on how the jobs and skills system can better support safe, healthy and equitable work across the agribusiness, fibre, furnishing, food, animal and environment care industries. Reflecting the system-wide nature of these issues, action is underway across multiple JSCs, including Future Skills Organisation's leadership of a cross-JSC update to the BSB Training Package [Safe and Respectful Workplaces Unit of Competency](#).

From 2026, Skills Insight will identify priority skills issues and time-sensitive policy questions and publish targeted, policy-relevant research and discussion papers for consultation and feedback. These papers form part of our broader workforce planning approach, providing a structured way to engage stakeholders, test evidence against lived experience, and connect industry and regional priorities to the identification, design and delivery of future projects.

The following section presents findings informed by input from local governments, industry associations and peak bodies, industry employers, sole traders, unions community organisations, RTOs, and researchers. Contributions were received through over 20 survey, email, and feedback hub responses, as well as a forum convened by MINTRAC and attended by over 30 representatives from across Australia. We thank all stakeholders for their valuable contributions.

Safety and wellbeing: a workforce planning issue

Safe and supportive workplaces are fundamental to workforce resilience and long-term industry sustainability. Work is not risk-free, and while injury rates have improved over time, further gains require continued effort from employers, workers, unions and governments.³⁹ Safety is strengthened through practical action – regulation, training, leadership and technology – and must address physical, psychosocial and cultural risks holistically.

Agribusiness, fibre, furnishing, food, animal and environment care remain among Australia's highest risk industries, with 'vehicle incidents' and 'contact with moving objects' accounting for the majority of workplace incidents. In 2024, agriculture, forestry, and fishing recorded 44 deaths – almost one quarter of the national total – and a fatality rate of 14 per 100,000 workers, more than ten times the national average.⁴⁰ While fatality rates have declined since the early 2000s, progress has slowed in recent years.⁴¹

Safety and wellbeing are not only compliance issues but also directly linked to workforce supply.^{42,43,44} Poor safety outcomes contribute to turnover, skills loss and reduced attraction to high-hazard roles. This creates a downward spiral, whereby pressure and risk for the remaining workforce is exacerbated. Conversely, safe and healthy workplaces support retention, training participation, and productivity. Strengthening industry safety capabilities is therefore central to building a sustainable, effective workforce.





Key challenges and drivers of safety and wellbeing

Safety and wellbeing outcomes emerge from the interaction of physical hazards, psychosocial pressures, and workplace cultures that can either support or suppress safe behaviour.

These outcomes are not the product of isolated incidents or individual action; they often reflect deeper structural, demographic, and economic drivers that shape how work is organised, resourced, and experienced. Understanding these influences is essential to designing policies and interventions that deliver lasting improvements, rather than addressing symptoms while underlying conditions remain unchanged.



Access and inclusion (RRR and priority cohorts)

Access barriers in RRR areas

The majority of workers in industries supported by Skills Insight reside in RRR areas, where health services, emergency response, and training infrastructure are limited compared with metropolitan areas.⁴⁵ Greater distances and longer emergency response times mean that injuries which might be effectively treated with rapid intervention can become life-threatening given help is hours away. Social isolation and limited mental health services heighten psychosocial risk. Persistent attraction and retention challenges in RRR areas also drive reliance on seasonal and migrant labour, disrupting continuity of safety culture as businesses must continually induct new workers who are less familiar with the specific workplace context, hazards and expectations. Stakeholders emphasise these gaps, with Cotton Australia noting that ‘training access is limited in regional, rural and remote areas, leaving many cotton and broadacre workforces without consistent pathways to essential safety competencies.’ [Broadacre farming stakeholder, national].

Cultural and demographic barriers to safe work and training opportunities

Workplace conditions, training models and safety resources are not consistently designed with workforce diversity in mind. Feedback indicates that First Nations people, CALD workers, women in male-dominated industries, mature workers and workers with disability can encounter safety and training approaches that do not always align with their lived experience. Where workers feel culturally or socially excluded, confidence to report hazards, near misses or inappropriate behaviour is diminished. The consequence is not only inequitable access to safe work, but weaker early hazard identification overall.⁴⁶ Inclusive design, therefore, is not simply an equity issue – it is a core component of workforce safety and performance. Stakeholders including the National Farmers Federation emphasised the need for translated safety training materials, multi-format delivery and culturally adapted content, including ‘advice on how other cultures view safety so we can meet people where they are at’ [Livestock farming stakeholder, VIC].

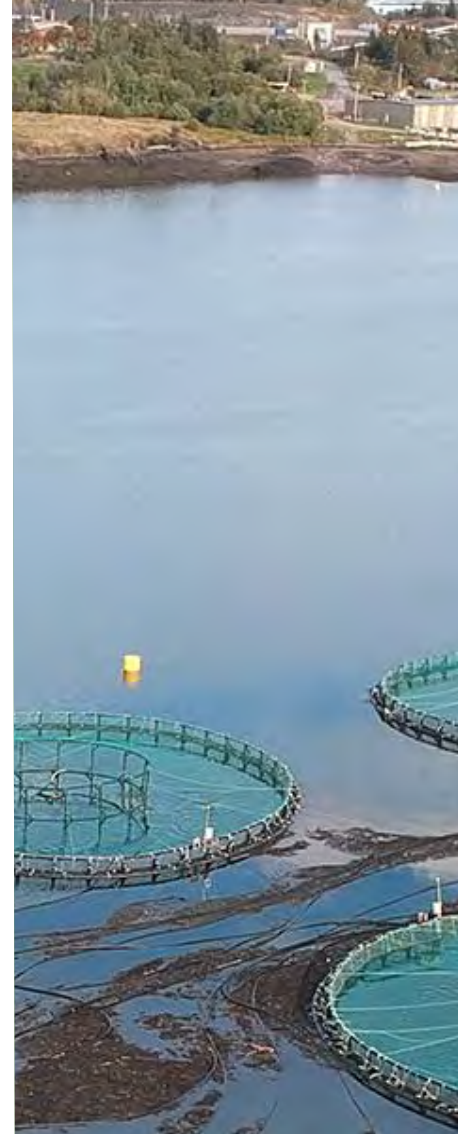
Productivity and capability

Leadership as a determinant of safety culture in the workplace

Workplace incidents result in worker compensation claims, lost output, damage to equipment and reputation, higher turnover, and further recruitment costs. In industries already facing acute skills shortages and ageing workforces, the loss of even one experienced worker can cause disproportionate operational strain. When businesses operating under tight margins respond to financial and time pressures by deferring safety investment or reducing training, they risk entrenching a weakened safety culture that is detrimental to longer-term productivity and resilience.⁴⁷ As stakeholders note, leadership capability is a critical determinant of workplace safety outcomes, both because 'managers set the tone for workplace culture, safety, and overall performance' [Meat, poultry and seafood processing stakeholder, NSW], and also make decisions on adopting new practices that can reduce the risk and incidence of injury and illness. This responsibility extends to ensuring all workers, particularly First Nations and CALD people, experience cultural safety in the workplace. Employers have an important role in shaping this environment and supporting wellbeing, while creating pathways for under-represented groups to influence change, in line with the Closing the Gap commitment to shared decision-making and improved outcomes for First Nations people.

Climate change as a safety and productivity risk

Shifting weather patterns and extreme conditions threaten worker safety through exposure to heat stress, dehydration, vector-borne diseases, and injury from extreme weather events.⁴⁸ The industries supported by Skills Insight face increasing climate-related safety risks. Disruption to seasonal production cycles, volatile supply chains and the financial stress of yield losses compound existing psychosocial and physical safety hazards. Cumulative wealth loss in Australia from reduced agricultural and labour productivity from climate change could exceed \$4.2 trillion by 2100.⁴⁹ Consequently, integrating climate adaptation into workforce safety planning is no longer a peripheral concern but a prerequisite for sustaining the labour supply and operational continuity that many food and fibre industries depend on.



Below: Michelle Ingley-Smith visiting Groote Aqua Aboriginal Corporation Aquaculture Farm with the CEO of Aboriginal Sea Company (ASC) Bo Carne, Valentin Thepot of Groote Aqua Aboriginal Corporation and Klaus Jeffrey of ASC



Above: Gazander Oysters

Quality skills system

Misalignment between training design, delivery and workplace realities

Stakeholder feedback suggests that VET may not consistently align with contemporary workplace safety needs. Some respondents identified what they view as gaps in psychosocial risk management, wellbeing and inclusive practice within current qualifications, while others pointed to limitations in how safety content is delivered in practice. Safety training is described as concentrated in discrete units rather than reinforced across the broader qualification, with delivery 'focused on the what to do rather than the why' [Meat, poultry and seafood processing stakeholder, NSW], preventing a deeper understanding of risk and decision-making in high-pressure environments.

Emerging technologies, such as automation, precision tools and AI systems, are also felt to be outpacing training package updates and delivery models, creating emerging capability gaps in areas increasingly central to safe and efficient operations.

Workplace-based training delivery barriers

Practical, workplace-based training models such as apprenticeships and traineeships, mentoring and peer learning and on-the-job training are identified by stakeholders as the most effective approach in building and maintaining safe work practices. A stakeholder from the racing and breeding industry noted how peer support can be the first step in facilitating psychological safety as 'people are often more likely to initially reach out to a trusted peer or colleague for support' [Harness Racing NSW, NSW]. Yet both formal and informal workplace-based training can be inconsistent in quality and accessibility. Many small businesses, which comprise around 98% of enterprises across Skills Insight's industry coverage,⁶ lack the structured supervision capacity to deliver workplace-based training consistently. Additionally, changes to the Australian apprenticeship incentive system threaten the supply of training required to ensure a safe, productive workforce.

Evidence-based decision making

Fragmented and inconsistent data affects planning and prevention

Stakeholders report that data is difficult to access and regularly presented in formats that prevent national aggregation. Where data does exist, it is often deemed ‘ad hoc’ and ‘inaccurate’ as many workplaces still rely on paper-based reporting systems rather than a digitised, centralised database. Indeed, existing safety data systems are fragmented across jurisdictions and do not consistently disaggregate findings by gender, sector, or cultural background, producing generic interventions that fail to address actual disparities across workforce groups. This limits opportunities to identify where risk is concentrated, how trends emerge over time and where targeted intervention is most needed.

Limited early-warning systems and under-reporting of emerging risks

Current safety reporting systems rely heavily on worker self-disclosure. However, stakeholder feedback, supported by broader evidence, suggests that early-warning mechanisms – particularly for capturing near-misses and minor incidents – are not consistently embedded or utilised across workplaces. Respondents observed that hazards and incidents may go unreported where ‘workers do not feel safe to speak up’ [Cotton Australia, NSW], while near-miss reporting remains limited ‘for fear of being ridiculed or disciplined by management’ [Cotton Australia, NSW]. Psychosocial hazards, including fatigue, stress, bullying, and workplace gender-based violence, are frequently cited as areas where visibility and reporting remain limited.^{50,51} Reporting patterns may also be shaped by structural or demographic factors. For example, mature workers may attribute injuries to the effects of ageing rather than appropriate adjustments not being made, while migrant and PALM scheme workers face vulnerabilities that inhibit the reporting of unsafe conditions.⁵² With these issues not being systematically captured, the jobs and skills system has a weaker evidence base for identifying which worker cohorts, regions or occupations are most at risk, limiting equity, accountability and effective allocation of safety resources and prevention efforts.



Above: Silverdale Farm Yearlings



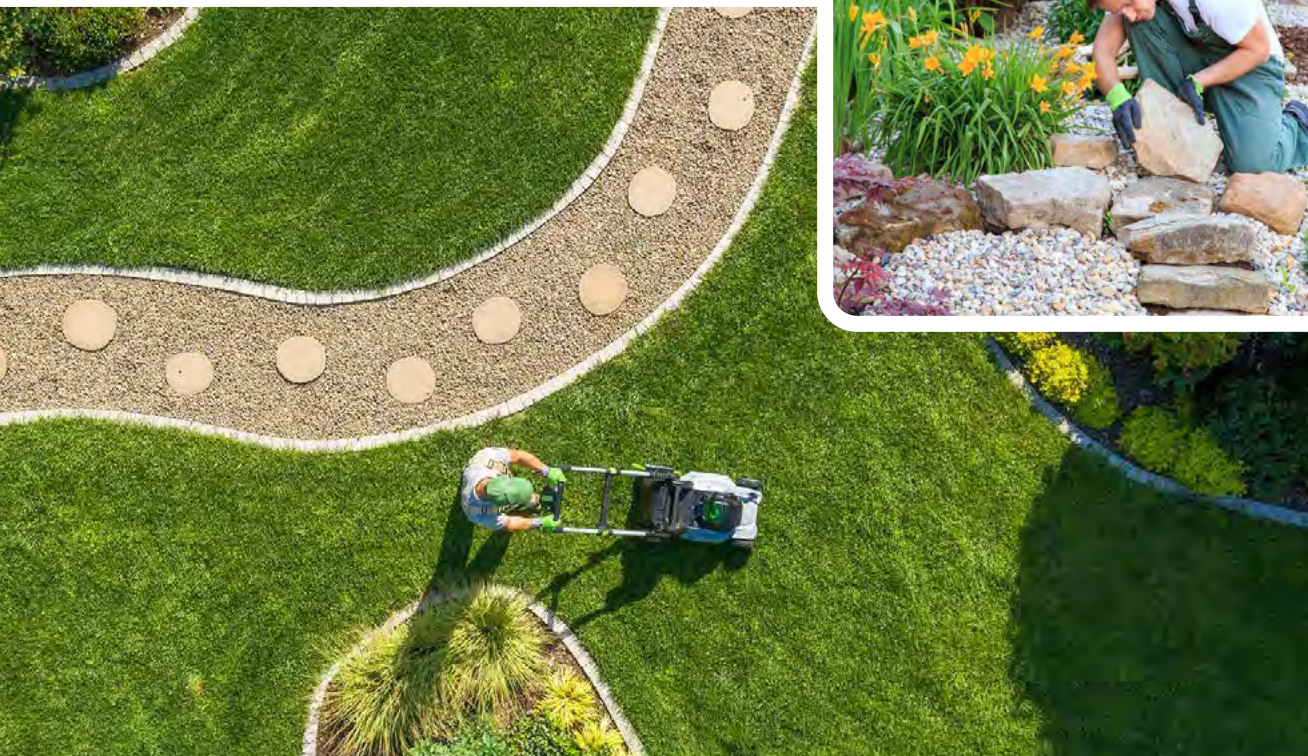
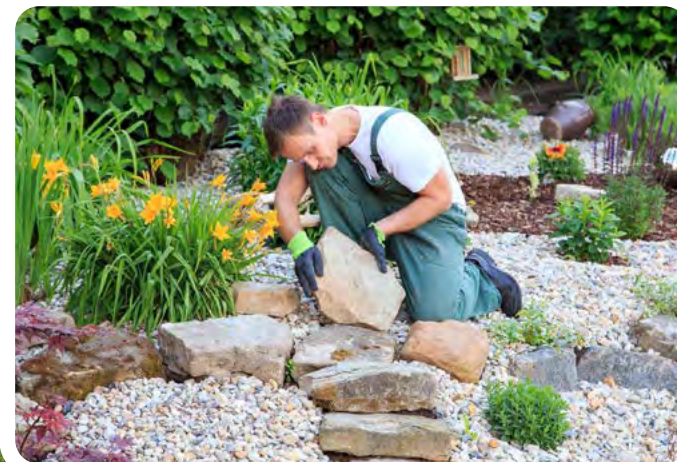
Michell Wool

Workforce planning priorities

Skills Insight's four workforce planning priorities set out a shared agenda for strengthening workforce safety and wellbeing across the jobs and skills system.

They articulate where coordinated action is required – across access and inclusion, skills and training, productivity, and data and evidence - to help stakeholders achieve practical outcomes, target resources and advocate for reform where it can deliver the greatest workforce and productivity impact.

Consultation insights highlight that progress in any one area is constrained without corresponding action in the others, underscoring the need for integrated, prevention-focused approaches to workforce development and safety uplift across the jobs and skills system.



Workforce planning priorities for leading a safer, inclusive, more resilient workforce

Figure 7: Interdependent workforce planning priorities for safety and wellbeing



INDUSTRY INITIATIVES

Safety and wellbeing in the Australian Cotton Industry

The Australian cotton industry faces safety and wellbeing challenges that reflect the broader structural complexities of regional agricultural workforces. The sector relies on large-scale machinery, seasonal production cycles and a workforce that includes temporary workers, working holiday makers, PALM scheme participants and family operators. Resourcing constraints, climate-related stressors, extended working hours during planting and harvest, and considerable distances to health services, emergency response infrastructure, and training providers all contribute to elevated physical and psychosocial risks. These characteristics underscore the need for safety approaches tailored to industry contexts.

Industry-led programs to increase safety and inclusion

The cotton sector has progressed safety outcomes through various industry-led programs. [My BMP](#) support growers to manage safety risks alongside productivity through accessible online tools and guidance. State-based programs like [AgSkilled](#) in New South Wales and [SmartAg](#) in Queensland have expanded access to subsidised, workplace-based training, improving the reach of safety-critical skills in RRR settings.

The industry has also adapted how safety training is delivered, with increased use of plain-language materials, translated resources and flexible formats to support CALD workers and transient labour. Alongside physical safety, psychosocial wellbeing has gained greater prominence, reflected in stronger engagement with rural mental health services and programs such as the [Rural Financial Counselling Service](#), helping reduce stigma and support early intervention.

Workforce planning insights

Experience in the cotton industry demonstrates that safety and wellbeing outcomes improve when industry bodies, training providers and governments coordinate action around workplace realities. Targeted training delivery, inclusive design and sustained investment have strengthened safety capability in a high-risk, regionally dispersed workforce. This case study highlights the value of workforce planning approaches that recognise safety as integral to productivity, labour supply and workforce resilience, rather than as a standalone compliance issue.





Action areas

Meaningful and sustainable change requires coordinated action across industry, government, training providers, regulators and JSCs; not through one-off interventions, but sustained investment in the conditions that enable safe work.

When that investment is made, the evidence is clear: skills and training drive safer workplaces and safer workplaces drive productivity, supporting more resilient workforces.

The following action areas outline key changes within the jobs and skills system to lead safer, more inclusive and resilient workforces.

1. **Adopt and scale place-based training in RRR areas.** Prioritise delivery models that reach dispersed and resource constrained workforces e.g. blended delivery, workplace-based training, local partnerships.
2. **Increase funding and incentives to expand total apprenticeship participation.** Focus on growing the overall apprenticeship and traineeship pathways, recognising stakeholder preferences for on-the-job structured supervision and mentoring models to build safety and wellbeing.
3. **Make inclusive delivery and assessment a key expectation of safety training.** Adopt plain-language and multi-format materials (including translated resources where needed) and strengthen guidance to support culturally safe training environments and assessments that address diverse worker needs.

4. **Prioritise management and leadership capabilities.** Support industry and workplace leaders to drive both technical and cultural safety improvements, while equipping workers with leadership capabilities to embed safety and wellbeing practices across all levels of an organisation.
5. **Advocate for improved workplace safety data collection, with better integration** across national statistical, regulatory and administrative frameworks, to provide more granular insights into workforce safety risks, patterns and trends.
6. **Embed psychosocial safety, wellbeing and respectful workplace capability across relevant qualifications and pathways.** Strengthen training package outcomes so psychosocial hazard management, wellbeing and inclusive practice are integrated where risk is greatest, aligning skills reform with contemporary safety obligations and workplace realities.
7. **Integrate safety indicators into the OSCA** so the ABS can ensure high-risk occupations are flagged for priority updates as part of its maintenance strategy. This approach would strengthen alignment between the OSCA and other classifications and frameworks, enabling more responsive policy and program design to mitigate risks and support workforce wellbeing and development.
8. **Embed safety and wellbeing indicators into national taxonomies** so more effective research, data collection and monitoring can occur, with complementary decision-making and strategies to educate, support and enable workers, including those transitioning between occupations or industries.

Actions and consultations

Current

[Improved Training Pathways and Safety in Racing](#)

[Tree Allocation Partnerships](#)

Complete

[Worker Safety Induction Pilot](#)

[Training Support Materials for Meat Safety](#)

[Pathway to Tree Felling Skills](#)

Consultation

[Consultation paper: Leading a safer, inclusive and resilient workforce](#)

[Response to the JSA National Skills Taxonomy Discussion Paper](#)

[Skills Insight response to Revised Apprenticeship Priority List Methodology Discussion Paper](#)

Conclusion

Skilling the path to sustainable and productive workforces

This *Workforce Plan 2026-2027* reinforces the central proposition that accessible, high-quality education and training are foundational to safe, sustainable and productive workforces. By investing in skills at all levels, industry can lift productivity and profitability, strengthen professional capability, and support the adoption of best practice. These outcomes, in turn, enable safer, more resilient workplaces and improve the attraction and retention of a diverse workforce across metropolitan, regional, rural and remote Australia. Progress across these dimensions is mutually reinforcing: improvements in skills, systems and workforce capability compound over time, delivering benefits for individuals, businesses and the broader economy.

The Workforce Plan also reflects Skills Insight's commitment to translating evidence and industry intelligence into action. Workforce planning is not a static product, but a cycle of listening, analysis, prioritisation and delivery. In 2026, Skills Insight will launch cross-sectoral and industry-specific workforce planning webpages that showcase the latest data, analysis and industry priorities.

Ongoing guidance from the JSC Stakeholder Forum and tripartite stakeholder networks, supported by sector-based stakeholder networks and future Industry Advisory Panels, plays a critical role, helping to test evidence against lived experience, identify emerging risks and opportunities, and shape a focused pipeline of projects and reform priorities. Through these mechanisms, Skills Insight will continue to refine our strategic plan, co-design solutions with industry, and ensure that projects are targeted, credible and capable of delivering measurable impact across the skills system.

Proposed, current and complete projects, activities and consultations

Proposed projects, activities and consultations

- Growth Skills Review

Current activities and projects

- [AFAM – Identifying the true costs of RTO delivery in regional NSW](#)
- [Ag Trade Apprenticeship](#)
- [Biosecurity Skills Review](#)
- [Community-based Aquaculture Training Tools](#)
- [Flock Safe Project](#)
- [Furnishing Apprenticeship Guidance Project](#)
- [Improved Training Pathways and Safety in Racing](#)
- [Landscaping Skills Review](#)
- [Mapping Licensing and Regulatory Considerations Project](#)
- [Mapping Workplace Training to PPM Qualifications](#)
- [Meat Processing Training Resources](#)
- [New Entrants as Sewing Machinists](#)
- [Regional, Rural and Remote VET Policy Decision Making](#)
- [Retail Butchery and Smallgoods](#)
- [Rural Operations Project](#)
- [Textile Flooring Manufacturing Pathway](#)
- [Textiles, Clothing and Footwear Skills Mapping](#)
- [Tree Allocation Partnerships](#)
- [VET Workforce Project](#)
- [Veterinary Nursing Review](#)

Active and complete consultations

- [A revised methodology for the Australian Apprenticeship Priority List](#)
- [Cross JSC contributions coordinated by Future Skills Organisation for the National AI Skills Report](#)
- [Gender Economic Equity study](#)
- [JSA – Jobs and Skills Roadmap for Regional Australia](#)
- [Occupation Shortage List](#)
- [OSCA Maintenance Strategy](#)
- [Skills Insight response to Revised Apprenticeship Priority List Methodology Discussion Paper](#)
- [Stakeholder survey on Changes to Australian Apprenticeship Incentive System](#)

Complete activities and projects

- [AHC Improvements Project](#)
- [Attraction and retention tools for employers](#)
- [Career Pathways for Agricultural Trades](#)
- [Connecting RTOs & Employers](#)
- [Essential Meat Processing Skills](#)
- [Exploring Training Demand & Supply Challenges](#)
- [From Training Package to Training Delivery](#)
- [Livestock Operations](#)
- [Pathway to Tree Felling Skills](#)
- [Shearing and Wool Classing](#)
- [Textiles, Clothing and Footwear Workforce Insights](#)
- [Training Support Materials for Meat Safety](#)
- [Tree Felling Project](#)
- [Window Furnishings and Shade Sails](#)
- [Wood Machining Research](#)
- [Worker Safety Induction Pilot](#)

Appendix 1: Data and analytical framework

Defining industries and occupations

Industries and occupations are classified using hierarchical systems developed by the Australian Bureau of Statistics (ABS), previously also in collaboration with Statistics New Zealand.

Industries are classified in the Australian and New Zealand Standard Industrial Classification (ANZSIC), which comprises four levels of aggregation. In the Census of Population and Housing and other data collections, the ABS assigns individual businesses with an ANZSIC industry categorisation based on its primary activity (ABS, 2006a). For more information on the design and structure of ANZSIC, see the ABS website.

Occupations are classified in the Occupation Standard Classification for Australia (OSCA), which comprises six levels of aggregation. OSCA classifies occupations and jobs within the labour market based on skill levels and specialisations. OSCA replaced the Australian and New Zealand Standard Classification of Occupations (ANZSCO) in December 2024; however, at the time of writing, it has not been fully integrated into key data collections by the ABS and Jobs and Skills Australia (JSA). For more information on the design and structure of OSCA, see the ABS website.

Data in this report uses ANZSIC Revision 1.0 (2006) and ANZSCO Version 1.3 (2013) to classify industries and occupations respectively. This is because the most reliable national data published by the ABS and JSA uses these versions. Where appropriate, the report quotes OSCA occupation titles (for example, when addressing occupations in national shortage) to reflect contemporary labour market classifications, in some cases when underlying data uses ANZSCO.

Defining the workforce Skills Insight supports

Skills Insight support industries across 93 ANZSIC Classes, which span seven unique Divisions, 18 Subdivisions, 35 Groups.

We have mapped 253 occupations to these industries based on information self-reported by individuals and coded by the ABS in the 2021 Census of Population and Housing.

Some sectors and occupations overlap multiple industries and are covered both by Skills Insight and other JSCs.

This Workforce Plan draws on the most recent, relevant and reliable national administrative data available. Where Census data is used, industry analysis is undertaken at the four-digit ANZSIC Class level, while most JSA and ABS data are reported at the three-digit industry Group level. Occupational analysis uses six-digit ANZSCO occupations, allowing detailed examination of Census data alongside linked administrative datasets, including those available through the PLIDA ecosystem, such as the VET National Data Asset (VNDA).

Core and indicative occupations

To strengthen the identification of key occupations within each industry, we now apply an enhanced occupation-ranking approach. This builds on Census-based employment mapping by incorporating additional analytical steps to better identify occupations that are concentrated in a specific industry ('core') rather than simply being high employment while operating across multiple industries. These core roles are critical to industry functioning and serve as focal points for skills analysis. We also use 'indicative' occupations to represent the broader range of occupations that operate within an industry (inclusive of all occupations mapped in the Census).

Using 6-digit ANZSCO 2013, three indicators are used to identify core occupations within each industry:

1. Employment size, ranked from most to least common within the industry, based on Census occupation mapping;
2. The share of workers employed in the industry compared with the occupation's national employment share, based on Census data; and
3. An 'industry quotient' (IQ), adapted from the location quotient, which measures whether an occupation is more or less concentrated in a given industry than would be expected across all industries.

The formula for calculating the IQ is:

$$IQ = \frac{E_{oi}/E_i}{E_o/E_{total}}$$

Where:

E_{oi} = Employment in occupation o in the Skills Insight-supported industry i

E_i = Total employment in the Skills Insight supported industry i

E_o = Total employment in occupation o across all industries

E_{total} = Total employment across all industries

An IQ greater than 1 indicates that an occupation is more concentrated in a given industry than in the economy overall, while a value below 1 indicates under-representation. For example, an occupation accounting for 10% of employment in a Skills Insight-supported industry, but only 2% of total employment nationally, would have an IQ of 5, indicating that the industry's reliance on this occupation is five times the national average.

Core occupations within each sector were identified where three criteria were met: an employment count greater than five, an IQ of at least 10, and at least 5% of the occupation's total workforce employed within the sector.

As Census-based industry coding may misclassify some roles, a final qualitative review by Skills Insight researchers and stakeholder engagement managers was applied to exclude occupations assessed as less relevant to the sector.

Defining skills challenges and solutions

As a cornerstone of workforce planning, the conceptualisation and measurement of labour and skills shortages varies depending on context and purpose. While there is no universally agreed definition, shortages are generally characterised by a sustained imbalance between labour or skills demand and supply, within a particular time period and/or location, at prevailing wage levels.⁵³

In this Workforce Plan, a labour shortage refers to situations where there are insufficient job seekers available to fill vacancies for work typically classified as lower skilled. A skills shortage refers to circumstances where job seekers are available, but lack the skills, qualifications or experience required to perform the work.⁵⁴

While all jobs require skills, the JSA's Occupational Shortages List (OSL) focuses on occupations at skill levels equivalent to post-secondary qualification levels. Inclusion on the OSL therefore indicates a shortage of skills commensurate with Australian Qualifications Framework level 2 and above (within a defined geographic area), rather than providing a comprehensive measure of skills shortages across the labour market.

By contrast, there are few direct national indicators of labour shortages at the occupational level. Migration data is often used as a proxy for labour supply, but seasonal and cyclical demand, family labour, and unregulated wages can distort signals of shortage. Shortages may also be masked by skills mismatch, where workers with higher educational attainment compete for roles formally classified as lower skilled.⁵⁵

In response, Skills Insight undertakes broad sector- and occupation-based analysis, combining quantitative labour market data with qualitative insights from research and stakeholder engagement. Data analysis is undertaken across all sectors and occupations within scope and then tested with stakeholders to assess its appropriateness and reliability.

For example, Jobs and Skills Australia's Internet Vacancy Index provides a useful indicator of labour demand for some industries and occupations; however, evidence from JSA's Recruitment Experience and Outlook Survey indicates that internet job boards represent only one of several recruitment channels used by employers across the industries we support. As such, vacancy data is interpreted alongside other datasets and stakeholder evidence to ensure a balanced and contextualised understanding of workforce challenges.

Education and training pathways analysis

Analysis of education and training pathways follows a structured, step-by-step approach. Initial analysis draws on linked administrative data from the Skill Tracker Person Level Integrated Data Asset (PLIDA), accessed through the ABS DataLab. This dataset links individuals' VET and higher education completions with their reported occupation on Census night and provides information on employment outcomes following study completion between 2018 and 2020.

These outcomes are mapped to the core occupations identified for each sector. Subsequent analysis examines the number and nature of education and training pathways associated with each occupation, informing interpretation and further analysis within the industry overviews and Education and training update.

Where data was not available at the level of individual training packages within Skills Insight's scope, as defined in the National Training Register, findings from the Student Outcomes Survey were aggregated and analysed at the JSC-level.

Bibliography

1. Jobs and Skills Australia. Submission to the Joint Standing Committee on Northern Australia. Australian Government; 2026.
2. Jobs and Skills Australia. Labour Market Update – September 2024. Australian Government; 2024. Available at: <https://www.jobsandskills.gov.au/publications/labour-market-update-september-2024> [Accessed 24 March 2026].
3. Australian Bureau of Statistics. Labour Force, Australia, Detailed, November 2025, Jobs and Skills Australia trend. Australian Government; 2026. Available at: <https://www.jobsandskills.gov.au/data/labour-force-trending#downloads>
4. Australian Bureau of Statistics. *Counts of Australian Businesses, including Entries and Exits*. ABS; 2025. Available at: <https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/latest-release>
5. Australian Bureau of Statistics. *Characteristics of Employment Survey*. 2025. Available at: <https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/characteristics-employment-australia/latest-release>
6. Australian Bureau of Statistics. *Census of Population and Housing*, TableBuilder Pro. Australian Government; 2021.
7. Skills Insight. Exploring Training Demand & Supply Challenges Report. Skills Insight; 2025. Available at: https://skillsinsight.com.au/wordpress/wp-content/uploads/2025/03/REP.Exploring-Training-Demand-and-Supply-Challenges_FINAL.pdf
8. Jenke T, Oosthuizen J, Cattani M. An investigation of the influence of economic cycles on safety performance in Western Australia. *Safety Science*. 2021;138: 105230. <https://doi.org/10.1016/j.ssci.2021.105230>.
9. Gladanac D, Stasiuk T, Pedrotti A, et al. *An Essential Ingredient: The Food Supply Chain Workforce* – Full report. Jobs and Skills Australia; 2025. Available at: <https://www.jobsandskills.gov.au/sites/default/files/2025-01/An%20Essential%20Ingredient%20-%20The%20Food%20Supply%20Chain%20Workforce%20report.pdf>
10. Jones T, James A, Volgger M, Adams S, Niner S. Dangerous, overpriced, crammed full: poor housing for seasonal workers revealed. *The Conversation*; 2025. <https://doi.org/10.64628/AA.mdefu3cae>. [Accessed 8th January 2026].
11. National Indigenous Australians Agency. *Indigenous Rangers Program Expansion Round Two outcomes announced*. Australian Government; 2026. Available at: <https://www.niaa.gov.au/news-and-media/indigenous-rangers-program-expansion-round-two-outcomes-announced> [Accessed 16th March 2026].
12. National Indigenous Australians Agency. Indigenous Rangers Program Expansion Round 2 Consultation Summary. Australian Government; 2025.
13. Ricketts K, Whitenall S. From Heat Stress to Economic Stress: Exploring the Future of Australian Agricultural Labour and Productivity. *Farm Policy Journal*. 2025; 22(1):80-95.
14. Skills Insight, ForestWorks. *Textiles, Clothing, and-Footwear Workforce Insights Preliminary Desktop Research Findings*. Skills Insight; 2024. Available at: https://skillsinsight.com.au/wordpress/wp-content/uploads/2024/09/Textiles-Clothing-and-Footwear-Workforce-Insights-Preliminary-Desktop-Research-Findings_Final_.pdf [Accessed 12th March 2026].
15. Skills Insight. *TCF Occupation and Skills Mapping Framework*. Skills Insight; 2025. Available at: <https://skillsinsight.com.au/wordpress/wp-content/uploads/2025/12/TCF-Occupation-and-Skills-Mapping-Framework.pdf> [Accessed 12th March 2026].

16. Hamilton-Smith M. *The performance of the Department of Defence in supporting the capability and capacity of Australia's defence industry*. Hon Martin Hamilton-Smith; 2023. Available at: <https://www.martinhamilton-smith.com.au/academic-reports/the-performance-of-the-department-of-defence-in-supporting-the-capability-and-capacity-of-australias-defence-industry/> [Accessed 12th March 2026].
17. Department of Agriculture, Fisheries and Forestry. *Accelerate Adoption of Wood Processing Innovation Program*. Australian Government; 2026. Available at: <https://www.agriculture.gov.au/agriculture-land/forestry/industries/accelerate-adoption-of-wood-processing-innovation-program> [Accessed 12th March 2026].
18. Jobs and Skills Australia. *Connecting for Impact: Aligning Productivity, Participation and Skills*. Australian Government; 2025 p. 136. Available at: <https://www.jobsandskills.gov.au/publications/jobs-and-skills-report-2025> [Accessed 31st December 2025].
19. Jobs and Skills Australia. *Pathways to economic mobility and improved equity: Unlocking enhanced VET analysis through the VET National Data Asset* (VNDA) Australian Government; 2025. Available at: <https://www.jobsandskills.gov.au/data/vet-national-data-asset>
20. Women's Health in the South East. *Submission to Skills Insight: Leading a Safer, Inclusive and Resilient Workforce*. WHISE; 2026. Available at: <https://whise.org.au/womens-health/whise-submission-to-skills-insight-leading-a-safer-inclusive-and-resilient-workforce/>
21. Australian Bureau of Statistics. Labour Force Survey December 2024. ABS; 2025. Available at: <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release#data-downloads>
22. Jobs and Skills Australia. *New perspectives on old problems*. Australian Government; 2025. Available at: <https://www.jobsandskills.gov.au/publications/new-perspectives-old-problems-gendered-jobs-work-and-pay> [Accessed 17 March 2026].
23. Skills Insight. *Skills Insight Workforce Plan 2025-2026*. Skills Insight; 2025. Available at: <https://skillsinsight.com.au/workforce-planning/>.
24. Workplace Gender Equality Agency. *Industry Data Explorer*. Australian Government; 2026. Available at: <https://www.wgea.gov.au/Data-Explorer/Industry>
25. Jobs and Skills Australia. *Gender Economic Equality Study*. Australian Government; 2025. Available at: <https://www.jobsandskills.gov.au/research/studies/gender-economic-equality-study> [Accessed 11th March 2026].
26. Department of the Prime Minister and Cabinet. Working for Women: a strategy for gender equality. Australian Government; 2024. Available at: <https://www.pmc.gov.au/office-women/working-women-strategy-gender-equality>
27. Forest and Wood Products Australia. *New Industry Survey Data Highlights Significant Increase in Female Executives*. Forest and Wood Products Australia; 2023. Available at: <https://fwpa.com.au/news/new-industry-survey-data-highlights-significant-increase-in-female-executives/> [Accessed 11th March 2026].
28. Joint Council on Closing the Gap. *Webinar on Closing the Gap Dashboard and Annual Data Compilation Report 2025*. Australian Government; 2025. Available at: <https://www.youtube.com/watch?v=Oyb5lASh2F0> [Accessed 11th March 2026].
29. Gilbert J, Pratley J, Prenzler P, McCormick J. Indigenous employment in Australian agriculture. *International Journal of Regional, Rural and Remote Law and Policy*. 2024;11(1). <https://doi.org/10.3316/informit.T2024123000006800161838496>.
30. Diversity Council Australia. *Inclusion@Work Index 2023-2024*. DCA; 2024. Available at: <https://www.dca.org.au/research/inclusion-at-work-index-2023-2024> [Accessed 12th November 2025].
31. National Centre for Vocational Education Research. *Apprentice and trainee outcomes 2024*. NCVER; 2025 <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/apprentice-and-trainee-outcomes-2024>
32. Manufacturing Industry Skills Alliance. *Better Manufacturing Apprenticeship Outcomes*. MISA; 2026. Available at: https://manufacturingalliance.org.au/wp-content/uploads/2026/02/Better_Manufacturing_Apprenticeship_Outcomes_Final_Report.pdf
33. National Centre for Vocational Education Research. *JSC Apprenticeship Completion Rates DataBuilder 2024*. NCVER; 2025.
34. Griffin T, Andrahannadi U. VET Delivery in Regional, Rural and Remote Australia: Barriers and Facilitators. Research Report. *NCVER; 2023*. Available at: <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/vet-delivery-in-regional-rural-and-remote-australia-barriers-and-facilitators>
35. Department of Employment and Workplace Relations. *Strategic Review of the Australian Apprenticeship Incentive System*. Australian Government; 2024.
36. ABARES. Australian wood volumes analysis. Australian Government; 2025. Available at: https://daffent.sirsidynix.net.au/client/en_AU/search/asset/1036861/0/AusWoodVolumesAnalysis_v1.0.0.pdf
37. KPMG, Skills Impact. Agricultural workforce digital capability framework. Cotton Research and Development Corporation; 2019. Available at: https://www.crdc.com.au/sites/default/files/Agricultural%20workforce%20digital%20capability%20framework_Report_Final%20deliverable.pdf
38. CSIRO. *The future of biological management in Australia - Discussion paper*. CSIRO; 2025. Available at: <https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/csiro-futures/health-and-biosecurity/future-of-biological-management-in-australia>
39. Jobs and Skills Australia. *Jobs and Skills Roadmap for Regional Australia - Phase 1*. Australian Government; 2025. Available at: <https://www.jobsandskills.gov.au/publications/jobs-and-skills-roadmap-regional-australia-phase-1>
40. Safe Work Australia. *Key Work Health and Safety Statistics Australia 2025*. Safe Work Australia; 2025 Available at: <https://data.safeworkaustralia.gov.au/insights/key-whs-statistics-australia/latest-release> [Accessed 17th October 2025].
41. Safe Work Australia. *Work-related fatalities*. Safe Work Australia; 2025. Available at: <https://data.safeworkaustralia.gov.au/interactive-data/topic/work-related-fatalities>.
42. Cunningham TR, Guerin RJ, Ferguson J, Cavallari J. Work-related fatigue: A hazard for workers experiencing disproportionate occupational risks. *American journal of industrial medicine*. 2022;65(11): 913–925. <https://doi.org/10.1002/ajim.23325>.
43. WorkSafe Victoria. *Compliance code: Psychological health - Part 2 - Understanding psychosocial hazards*. Victoria State Government; 2025. Available at: <https://www.worksafe.vic.gov.au/compliance-code-psychological-health-part-2-understanding-psychosocial-hazards> [Accessed 20th January 2026].
44. SafeWork NSW. *Code of Practice: Managing psychosocial hazards at work*. NSW Government; 2021. Available at: <https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice/codes-of-practice/managing-psychosocial-hazards-at-work> [Accessed 17th November 2025].

45.Safe Work Australia. *Working alone or in remote areas. Safe Work Australia*;2026. Available at: <https://www.safeworkaustralia.gov.au/duties-tool/agriculture/additional-info/working-alone-or-remote-areas> [Accessed 12th January 2026].

46.Safe Work Australia. *Racism - Managing risks*. Safe Work Australia; 2026. Available at: <https://www.safeworkaustralia.gov.au/safety-topic/hazards/racism/managing-risks> [Accessed 20th January 2026].

47. Deloitte Access Economics, Safe Work Australia. *Safer, healthier, wealthier: The economic value of reducing work-related injuries and illnesses – summary report*. Deloitte; 2022.

48.Habibi P, Razmjouei J, Moradi A, Mahdavi F, Fallah-Aliabadi S, Heydari A. Climate change and heat stress resilient outdoor workers: findings from systematic literature review. *BMC Public Health*. 2024;24: 1711. <https://doi.org/10.1186/s12889-024-19212-3>.

49.Steffen W, Mallon K, Kompas T, Dean A, Rice M. *Compound costs: how climate change is damaging Australia’s economy*. Climate Council of Australia; 2019. Available at: <https://www.climatecouncil.org.au/wp-content/uploads/2019/05/Costs-of-climate-change-report.pdf> [Accessed 17th November 2025].

50.Biswas A, Harbin S, Irvin E, Johnston H, Begum M, Tiong M, Apedaile D, Koehoorn M, Smith P. Differences between men and women in their risk of work injury and disability: A systematic review. *American Journal of Industrial Medicine*. 2022;65(7): 576–588. <https://doi.org/10.1002/ajim.23364>.

51. Jobs and Skills Australia. *Speeding up progress towards gender economic equality*. Australian Government; 2025. Available at: <https://www.jobsandskills.gov.au/publications/speeding-progress-towards-gender-economic-equality> [Accessed 12th December 2025].

52.Cockayne J, Kagan S, Ng F. *Be Our Guests: Addressing urgent modern slavery risks for temporary migrant workers in rural and regional New South Wales*. NSW Anti-slavery Commissioner; 2024. Available at: <https://apo.org.au/node/328448>

53.Richardson S. *What is a skill shortage?* 2007. Available at: <https://www.ncver.edu.au/research-and-statistics/publications/all-publications/what-is-a-skill-shortage>

54.Jobs and Skills Australia. *‘Skill shortage’ myth-busting*. Available at: <https://www.jobsandskills.gov.au/news/skill-shortage-myth-busting> [Accessed 29th April 2026].

55.Mackey W. *Labour market matching across skills and regions in Australia*. 2024. Available at: <https://treasury.gov.au/sites/default/files/2024-03/p2024-495252-01-labour-market.pdf>

