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## Introduction

Skills Impact worked throughout 2022 with industries that are critical to Australia's communities, ecosystems and prosperity.

Skills Impact supports industries that produce raw materials required for items such as food, housing and clothing which are essential to sustaining life. We support the workforces responsible for caring for pets, wildlife and stock, and for maintaining much of our land and water bodies. These industries are at the forefront of the impacts of climate change, floods and fires, and play important roles in the recovery from such events and mitigating the changes in our environment. They have faced workforce shortages and logistical issues due to the COVID-19 pandemic and shifting global markets. In the face of these and other disruptions, they have demonstrated great resilience, adaptability and innovation. Throughout the past 12 months, industry volunteers from around the country have contributed to improving national skills standards for future learners. As we move towards a new skills system for Australia, we reflect on these contributions, as well as the contributions industry has made to the Skills Service Organisation (SSO) program over the past six plus years.

## Industries we support

### Number of businesses

252,078

### Total employment

1,018,876

### Export value

\$64.8 billion

### Revenue

\$457.6 billion

### Contribution to Gross Domestic Product

\$102.1 billion<sup>1</sup>

Work was carried out on 30 projects between July 2021 and June 2022 (12 of the projects were initiated in 2021 and the other 18 were undergoing completion from previous years). Over 350 stakeholders from 260 organisations around the country volunteered their time and expertise to these projects. This year's training package projects have added skills for working with new technologies, systems, and legislation to the national skills standards across a range of sectors. There was continued focus on streamlining qualifications, skill sets and units of competency to reduce complexity and improve training deliverability. Several of the projects for this year captured emerging skills in high demand due to consumer trends, such as skills for working with Australian native and bush foods and for work using principles of permaculture, organic production and composting. Other projects, such as those for navigating water markets or training assistance dogs, were responsive to recommendations and findings of recent government inquiries, research and initiatives. The bushfires of 2019-20 impacted many of the industries we work with and influenced the skills needs of some, leading to the development of skills standards for companion animal incident management and for forestry operators participating in recovery following bushfires. Core skills for job roles across the agriculture, horticulture and meat processing industries were reviewed and updated, as were skills required in niche professions of pig and poultry farming, pharmaceutical manufacturing, and sawmilling and timber processing.

More than 120 Aboriginal and Torres Strait Islander project partners guided the review of qualifications and skills standards for cultural sites work and on Country management, many of whom presented viewpoints from employers, peak bodies and communities. There was strong support from stakeholders to ensure protection of Indigenous culture and intellectual property in numerous units to ensure learners working with

<sup>1</sup> Source: IBISWorld Industry Wizard, 2022



Skills Impact, AFAM and MINTRAC staff and Directors attending the National Farmers' Federation Conference 2022.

Left to right: Susie Falk, Mick Crouch, Paula Fitzgerald, Duncan Fraser, Wayne Jones, Andrew Horgan, Ruth Geldard, Ben Norton-Smith.

Aboriginal and/or Torres Strait Islander communities have the skills to support cultural safety through shared respect, meaning and knowledge.

This is the last year of the SSO program, which Skills Impact has been a part of since 2016. To support transition to the new system, we have produced an Agribusiness, Food and Fibre Industries Skills Report, developed collaboratively across 12 Industry Reference Committees (IRCs) and in consultation with broader industry. The Industries Skills Report identifies common issues experienced across the industries we work with, while providing guidance for future work to support skills and training. This report was then utilised to assist in the creation of nine individual Industry Skills Reports based around the training packages for the industries we work with. These reports replace the Skills Forecasts that the IRCs produced in previous years with our support. They identify issues and priorities specific to each industry and present ideas for consideration under the new program.

Drawing on our work with industry, 2021-22 saw Skills Impact continue to play an active role in supporting the Government with its inquiries into industry workforce and skills needs and vocational education and training (VET) reform. With guidance from industry stakeholders, we have provided feedback or participated in research regarding Australian and New Zealand Standard Classification

of Occupation (ANZSCO) codes; a proposed VET digital skills framework; the implementation of the AQF update; foundation skills frameworks; and the review of the national training register.

Industry volunteers are the driving force behind all the activities and projects outlined in this report. We appreciate the time and expertise they have offered. Thanks especially to the IRC members who have made a huge contribution throughout their time as part of the SSO program. Thanks also to our staff, specialist project contractors, Directors, ForestWorks, the National Farmers Federation and MINTRAC.

Skills Impact and its predecessors have been supporting industry to develop the skills of the workforce for nearly 30 years. We have enthusiastically participated in the opportunity to secure a role to carry on this work under a new program. Skills Impact understands and supports the development of the next iteration of the Australian VET sector with industry having a greater voice in its skills and training needs.

At the end of this report, you will find a list of some of the key people who have collaborated with us over the years. Their passion and commitment to improving skills standards for their industries have been a constant source of inspiration.

**Over the duration of the SSO program, together we have:**

**managed 90 training package projects across eight training packages**

**managed three cross sector projects for skills needs across the supply chain and contributed to six other cross sector projects managed by other SSOs.**

**reviewed and developed over 3000 units**

**reviewed and developed over 400 qualifications**

**reviewed and developed close to 350 skill sets**

**presented research on industry skills needs and proposed projects via 58 industry specific reports, including Skills Forecasts, Updates to Skills Forecasts, Four-Year Work Plans and Industry Skills Reports.**

## Our Role in the Skills Standards Development Program



**Our role as an SSO involves the development and maintenance of skills standards for more than 120 industry sectors, covering:**

- eight training packages
- 200+ qualifications
- 2,900+ units of competency
- 300+ skill sets.

**From July 2021 to June 2022, we:**

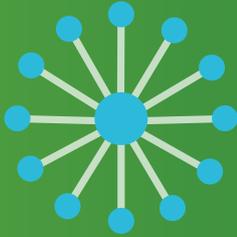
- supported 12 Industry Reference Committees to engage with over 2030 stakeholders
- developed an Agribusiness Food and Fibre Industries Skills Report addressing common themes across industries and supply chains
- developed nine individual Industry Skills Reports outlining industry-specific issues and future priorities
- managed 30 projects to improve skills standards and qualifications
- collected over 5200 feedback items and comments from over 2030 stakeholders as part of the projects
- facilitated 154 meetings, including IRC meetings and project webinars and meetings

Skills Impact is a not-for-profit, industry owned organisation that has been performing a Skill services Organisation (SSO) role since the inception of the program over six years ago. As one of six organisations contracted by the Commonwealth Government to perform the SSO role, Skills Impact has delivered services to industry committees, undertaken Skills Forecasts in collaboration with IRCs and developed skills standards and qualifications.

Our role as an SSO has involved providing services to 12 IRCs, supporting them to plan their industry engagement and to guide training package development and review activities.

## Skills Standards Development Program

### What is Our Role?



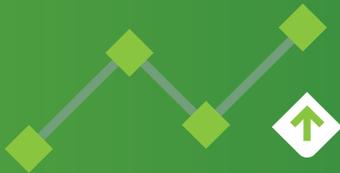
The Australian Industry and Skills Committee (AISC) appoints Industry Reference Committees (IRCs) to oversee the development and review of training packages (qualifications, skill sets and units).

*Skills Impact is contracted by the Commonwealth to support 12 IRCs.*



Gaps and emerging skill needs are identified by Industry Reference Committees and industry.

*Skills Impact captures this in Skills Forecasts.*



Skills Impact submits IRC Skills Forecasts, Cases for Change, and projects to the AISC for approval.



The AISC determines the national schedule of review and development projects.

*Skills Impact is contracted to carry out projects.*



Qualifications, skill sets and units are reviewed and developed in consultation with subject matter experts and stakeholders, to meet current and future industry needs.

*Skills Impact submits the work to the AISC.*



Revised qualifications, skill sets and units are endorsed by the AISC and made publicly available at [training.gov.au](http://training.gov.au)

## Industry Reference Committees

Our work is guided by 12 IRCs who review our work with the broader industry to update training packages (i.e. units, skill sets and qualifications) so that industry skills needs are met.

Each IRC is made up of people with experience, skills and knowledge of their industry sector, who are appointed by the Australian Industry and Skills Committee (AISC). More than 200 IRC members have volunteered their time and agreed to share their knowledge to benefit industry over the time we have worked as an SSO. Without these contributions and experience, Skills impact would not be able to carry out its work.

IRC members took on increasing workloads through the COVID period as they provided government with important updates on industry impacts and worked well beyond their original remit as they contributed to the current VET reforms, Digital Capability Frameworks at both industry and VET level, and to the many related government initiatives.

Skills impact acknowledges the expertise and knowledge that IRC members have developed over the time of the AISC-led system. It will be important to find ways to retain connection to this knowledge and expertise and the Australian skills system progresses through impending changes. A list of IRC members can be found later in this document.

### We provide support to these IRCs in four key areas:

- **Secretarial and operational support** – committee meetings, agendas, papers and travel.
- **Industry engagement** – to gather information about industry and its skills needs.
- Develop **Skills Forecasts** and Annual Updates, as well as proposals for training package projects to review units, skill sets and qualifications.
- **Undertake training package projects** with oversight by the IRCs, including drafting units, skill sets and qualifications, in preparation for endorsement by the AISC and State and Territory Ministers.

Throughout its time as an SSO, Skills Impact has employed dedicated Industry Engagement Managers to provide secretariat support services to seven of the IRCs. Secretariat support for the remaining five IRCs is provided by ForestWorks and MINTRAC, with whom Skills Impact has working and contractual partnerships. Drawing on their extensive networks and sector specific knowledge, ForestWorks and MINTRAC work on our behalf and under our direction for IRCs for the forest management, timber, pulp and paper and meat processing sectors.

### We support the following IRCs:

- Agriculture and Production Horticulture IRC
- Amenity Horticulture, Landscaping, Conservation and Land Management IRC
- Animal Care and Management IRC
- Aquaculture and Wild Catch IRC
- Food, Beverage and Pharmaceutical IRC
- Forest Management and Harvesting IRC
- Meat IRC
- Pharmaceutical Manufacturing IRC
- Pulp and Paper Manufacturing IRC
- Racing IRC
- Timber and Wood Processing IRC
- Timber Building Solutions IRC.

### We support IRCs to improve and develop the following training packages:

- ACM Animal Care and Management Training Package
- AHC Agriculture, Horticulture and Conservation and Land Management Training Package
- AMP Australian Meat Processing Training Package
- FBP Food, Beverage and Pharmaceutical Training Package
- FWP Forest and Wood Products Training Package
- PPM Pulp and Paper Manufacturing Industry Training Package
- RGR Racing and Breeding Training Package
- SFI Seafood Industry Training Package.

## IRC Meetings

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This year, the IRCs we work with continued to face the additional demands of industry recovery and skills system reform. There are extreme skills shortages being experienced across most industries in Australia, and particularly in regional, rural and remote Australia. The IRCs have been reporting the realities and potential consequences, while ensuring that if people can be found, suitable training remains available. In addition, they have been dealing with the proposals for broad change in the current skills system, which would include a different structure for industry leadership and input.

IRC members met virtually to make decisions, share industry updates, respond to specific questions and to progress the development work on their respective national training

packages. Committee members participated in exchanges of specific industry intelligence gathered through their activities to identify current and future skills needs and gaps. Committee members were also asked to consider a range of additional issues including, VET reform; mandatory work placements; Industry Skills Reports; and ongoing measures to address issues from the pandemic. This year, the Industry Skills forecasts have been replaced with industry summaries submitted to the AISC in September 2022. In addition, the IRCs guided the development of an overview Industry Skills Report for Agribusiness, Food and Fibre industries, as well as specific industry skills reports for each sector.

Guests invited to these meetings included key stakeholders interested in specific issues; state and territory-

funded industry training advisory organisations, representing the needs of their own state or territory's industries; representatives from the Department of Education, Skills and Employment; and representatives of associations or organisations that may have members affected by the decisions the IRC make.

From July 2021 to June 2022, Skills Impact and our partners supported IRC members at 27 meetings, including arranging all logistics, facilitating and managing the meetings, creating all supporting documentation and minute taking.

## NSW Industry Training Advisory Body



# AFAM ITAB

**Agriculture, Food  
& Animal Management**

The Agriculture, Food and Animal Management (AFAM) ITAB has been working with industry and registered training providers (RTOs) to provide advice to the NSW Government on NSW-specific training and skills needs.

The two-person team, supported by Skills Impact's operational team, works collaboratively with relevant state, territory and commonwealth stakeholders in the sharing of information on industry training and skills needs in NSW for the following industries:

- agriculture, horticulture and conservation and ecosystem management
- animal care and management
- meat processing (supported by MINTRAC)
- food, beverage and pharmaceutical
- racing and breeding
- seafood.

AFAM has completed its first year of operation and, after positive feedback from stakeholders, has secured a 12-month contract extension, while Training Services NSW considers the reforms currently taking place in VET and the impacts those changes may have on the ways they structure their advisory mechanisms.

Over the past year AFAM priorities have focussed on:

- continuing to build relationships so AFAM can contribute to delivering value to industry and learners
- sharing industry-led advice about VET and skills related matters with the NSW Government
- connecting industry with funded training opportunities
- providing information on grants and opportunities including disaster relief grants
- identifying training and workforce development needs of industry
- collecting NSW stakeholder feedback on training package updates to ensure any changes to the national training package reflect NSW industry perspectives, as well as suitability for delivery in schools
- supporting career showcases and building relationships between industries and schools
- sharing industry feedback on the review of Australian and New Zealand Standard Classification of Occupations (ANZSCO) classifications.

Industry Training Advisory Committee (ITAC) meetings, regional roundtables and other external meetings are among the methods AFAM has used for identifying skills and training needs. Key matters that have been raised during the year include part-time apprenticeships, suitability of qualifications for traineeships, and school-based delivery of VET programs.

The following ITACs have met to discuss skills needs, challenges and opportunities, with most meeting twice in the last year, while also providing guidance and advice between meetings:

- Agriculture and Production Horticulture ITAC
- Amenity Horticulture, Landscaping, and Conservation and Land Management ITAC
- Animal Care and Management ITAC
- Food, Beverage and Pharmaceutical Manufacturing ITAC.



A Meat Workforce Development Forum was also held in partnership with the National Meat Industry Training Advisory Council (MINTRAC). The racing and breeding, seafood and meat processing industries have been engaged through existing and established informal networks that these industries have in place in NSW.

ITAC meetings have helped identify skills needs in areas such as disaster recovery, mental health, emergency management and biosecurity, which will help with rebuilding communities that have been badly affected by recent weather events in NSW. AFAM also has ongoing contact with stakeholders to understand the impact of the recent disease outbreaks such as Foot and Mouth Disease in Indonesia and the Varroa Mite in NSW to industry.

The AFAM team has particularly enjoyed engaging with a wide variety of stakeholders in 2021-22. The first of the regional roundtables were held in Orange and Newcastle,

bringing together industry, RTOs and Regional Officers of Training NSW. Regional roundtables have provided an excellent opportunity for industry-led information exchange, and these will be a key focus of AFAM's work in 2022-23. AFAM has also participated in external meetings such as AgSkilled 2.0 Steering Committee, Primary Industries Curriculum Education and various IRCs.

The team have visited with industry to learn more about some of their innovative programs addressing industry skill shortages. They have attended regional workforce expos, several conferences and workshops including the Women in Trades workshop hosted by the NSW Behavioural Insights Unit and Trade Pathways Program team. AFAM continue to consult with industry on Apprenticeships and Traineeships (ATs) and during the past year, AFAM has reviewed and updated ATs for a number of training packages. Several queries about School Based

Apprenticeships and Traineeships have been received and addressed in consultation with the NSW Education Standards Authority (NESA) to ensure qualifications align with the school curriculum and NESA requirements. As part of relationship building, the AFAM team also presented to teachers and assessors at TAFE regarding AFAM's role as an ITAB.

AFAM distributes a monthly e-newsletter to NSW stakeholders providing information and opportunities related to skills and vocational education training matters in NSW, news about the NSW Government's Smart and Skilled program, ITAB engagement activities, funding opportunities including disaster relief grants, industry events and programs, national training package updates, NCVET findings and more.

## Operational Systems and Capabilities

Each year, Skills Impact identifies ways to enhance our services to industry, government and RTOs, and look at ways to add more value to the work we do.

During the past twelve months, further streamlining of processes and customisation of systems has been undertaken to improve stakeholder engagement processes and experiences, as well as enabling accurate and comprehensive reporting. Our systems have been developed to be dynamic, allowing us to adapt to shifting needs. Improving these areas of our work allows us to enact the organisation's values of transparency, trust, collaboration, and accountability more effectively, and improve internal and external stakeholder experiences. Achievements over the past year include:

- **Customer Relationship Management (CRM) database automation and improvements:** Skills Impacts' CRM is the central tool to store and manage all information and data related to stakeholder engagement. With the expertise to customise the CRM in-house, further developments in the system have given staff the ability to perform their roles more efficiently and productively, ensuring stakeholder and contractual requirements are provided to a high professional standard. The improvements have also enabled staff to work from home more effectively during the pandemic.
- **CRM Dashboards:** Dashboards for each area of the business have been created in the CRM to provide staff with instant visibility of core information required to maintain the high level of internal and external stakeholder engagement expected by Skills Impact. The reports within these dashboards provide near real-time data that allows the identification of points that need to be addressed and provides guidance for work priorities.
- **Online feedback hub:** The feedback hub continues to be a key tool in collecting feedback on draft documents, such as qualifications, skill sets and units that are being developed/updated as part of training package projects, and key reports such as the Industry Skill Reports. The feedback hub allows users to easily make comments on documents and to see and respond to comments made by other users, providing the opportunity for discussion. This has been especially important as COVID-19 has continued to make travel and face-to-face consultation challenging. Comments made on the hub about the training package projects are collated into a summary of feedback report using the feedback database after each round of consultation on the draft documents. This allows for greater transparency of how industry feedback has been used to inform updates to qualifications, skill sets and units. Users remain anonymous throughout the process, with only Skills Impact staff and contractors working directly on the project able to identify users against their unique IDs.
- **Feedback database:** The internally developed feedback database is constantly reviewed to improve usability for internal staff and contractors and to allow the output of professional reporting, a crucial part of the training package development process. The synchronisation of CRM and the feedback database reduces the need for double entry of information within the two systems and therefore increases the reliability and accuracy of the information reported.
- **SharePoint Intranet:** The company's SharePoint site has been revamped for a better user experience, including the integration of systems and reporting within the one space. Staff can now navigate to almost all applications and tools required to perform their roles within this platform.
- **Power BI data visualisation software:** Reporting from Power BI is continually in development to provide business intelligence insights from the data collected with the system. These reports are now viewable within the CRM dashboards and SharePoint intranet, giving staff instant access to visualisations of the information needed to provide professional stakeholder support and deliver the company's reporting responsibilities.



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## Streamlining Training Packages

Over the last year, Skills Impact’s training package project work has continued to offer solutions to streamline qualifications, skill sets and units, to reduce complexity and improve their training deliverability. This has been done in support of the Skills Ministers’ objectives to reduce the complexity of the training system and improve accessibility of training for employers and learners.

We have continued to work with the Australian Industry and Skills Committee (AISC) framework to prioritise training package development, which outlines a process for categorising proposed projects (Cases for Change), based on the types of changes expected. It also asks IRCs to focus on ways to streamline and rationalise existing qualifications, skill sets and units to offer a smaller number of concise options for industry, trainers and learners.

### Assigning categories to proposed projects (Cases for Change)

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Skills Impact supported the IRCs to categorise project proposals (Cases for Change), based on the following AISC created framework.

Category of Change	Expected Maximum Timeframes
<b>Fast-track update</b> – products that are urgent and straightforward would be updated in an expedited timeframe	6-8 months
<b>Routine update</b> – products that are not urgent or complex, and simply need to be updated efficiently without diverting effort from more urgent or complex cases, would be updated but not prioritised	12 months
<b>Complex update</b> – products that are important but complex to update would be updated but allocated a longer timeframe and potentially more resources and support to expedite development	18 months

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## Rationalisation of qualifications and units as part of 2021-22 project work

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As part of supporting the Ministers' efforts to reduce complexity in the system, Skills Impact has sought ways to rationalise qualifications and units while they are under review as part of approved project work. Qualifications sharing the same core skills and knowledge have been merged, with specialisations added where needed for flexible learning pathways. Learners are given the opportunity to select one or two specialisations or choose a generalist option and can gain further specialisations in future by completing additional units, rather than completing a whole additional qualification. Units with similar learning outcomes were also merged. The result has been a reduction in the number of qualifications and units, while still supporting the same essential skills and job outcomes.

For example, the Certificates II and III in Sawmilling and Processing and Timber Manufactured Products were consolidated into one qualification at each level, resulting in a reduction of qualifications from four to two. The new Certificate II in Timber and Wood Products Operations describes the job roles of people who support production processes in a timber or wood product production facility and can be used for school-based VET traineeships and other VET in schools programs. The new Certificate III in Timber and Wood Products Operations includes specialisations, offering more training options, clear career pathways into a range of forestry roles and flexibility to choose from a range of career pathways.

Similarly, the level III and IV qualifications in meat processing leadership, general and quality assurance have been merged to create a single Certificate in Meat Processing at each level, resulting in a reduction from five to two qualifications, with specialisations included in the Certificate IV to

promote flexible career pathways and ease of delivery.

The review of other qualifications has supported moving the skills they describe into different qualifications or skill sets leading to a reduction in qualification numbers. The Certificate IV and Diploma of Organic Farming are proposed to be deleted and replaced with specialisations within the Certificate IV and Diploma of Agriculture. The Certificate III in Commercial Composting is proposed for deletion to be replaced with four new skill sets targeted at micro-sectors of the composting industry.

Units across sawmilling and timber processing, meat processing and permaculture have also been merged where applicable to remove duplication and reflect the current work task requirements. Some units were also proposed for deletion where suitable units could be found in other training packages.

## Reviewing Qualifications and Units with Low Enrolments

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Skills Impact also continued to support the IRCs to investigate qualifications and units with low enrolments (fewer than 42 enrolments per annum over the last three years). The AISC requested information from industry about whether low enrolment numbers are an indication of lack of industry need for a particular qualification or unit, or whether there are reasons to maintain the unit or qualification in the formal VET system. There may be numerous explanations for low enrolment numbers.

The Diploma of Community Coordination and Facilitation and Advanced Diploma of Horticulture were identified as having low enrolments and industry was consulted about the reasons for this and whether they should be deleted or retained. Feedback indicated that the Diploma of Community Coordination described in demand skills and could be updated to better

reflect job roles. The Advanced Diploma was identified as no longer relevant and is proposed for deletion along with 17 agriculture, horticulture, conservation and land management industry (AHC) units.

Consultation also took place to consider the qualifications, a skill set and units for sugar milling and how these could be reconfigured to reflect industry requirements and be more accessible for training providers to deliver. As the project progressed, industry indicated the national skills standards were unlikely to be used for delivery of formal training in the future. As a result, these were archived from the national training register.

Community coordination and facilitation units, common and generic work units, and a unit in monitoring and maintaining pig production were also identified for deletion. Consultation also took place on some Aboriginal Site Works and Indigenous Land Management units with low enrolments. However, support was not given for their deletion and these have been retained and updated.

Skills Impact is committed to the Ministers priorities to reduce the complexity of the training system and improve accessibility of training. In consulting with industry about low enrolments, we have removed unnecessary qualifications and units from the system where appropriate and retained components and sought training package solutions to low enrolments, where possible.

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## Support for Government Initiatives

# Skills Impact continues to draw on its experience working and consulting with industry to assist Government with its inquiries into industry workforce and skills needs and vocational education and training (VET) reform.

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### Review of ANZSCO codes

Skills Impact participated in the Australian Bureau of Statistics' review of the Australian and New Zealand Standard Classification of Occupations (ANZSCO), which was limited to a review of selected agricultural occupations. As well as assisting directly, Skills Impact supported some industry peak bodies to provide responses in the limited timeframe available.

This work assisted the first major update of ANZSCO codes since 2013 for agricultural industries, including the recognition of occupations not previously identified.

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### Proposed VET Digital Skills Framework

Skills Impact assisted Industry Reference Committees (IRCs) to pilot and provide feedback on a draft, proposed VET digital skills framework. The framework is being developed to support the future inclusion of digital skills that are beneficial for industries, as well as identifying transferable skills. This work is being undertaken by Australian Industry Standards and is nearing completion.

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### Contributions to consultations on implementation of AQF update

Skills Impact has participated in several follow-up consultations that came from the 2019 review of the Australian Qualifications Framework (AQF). In particular, Skills impact has contributed to work on the architecture and taxonomy of the AQF and the Qualifications Pathways Policy. This work is ongoing.

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### Foundation Skills Frameworks Review Project Report

The Department of Education, Skills and Employment (DESE) commissioned the Australian Council for Educational Research (ACER) to review the Australian Core Skills Framework (ACSF) and the Digital Literacy Skills Framework (DLSF). These frameworks provide common language and a set of reference points for discussing digital literacy, learning, numeracy, oral communication, reading and writing skills. They are used in diverse programs and in a range of product and policy development and workforce capability contexts.

Skills Impact team members explained how we use these frameworks to inform the foundation skills in units. There was also discussion on Skills Impact's work with KPMG to develop the Agricultural Workforce Digital Capability Framework, and suggestions for how users of the ACSF and DLSF may be supported more effectively.

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### Indigenous Ranger Sector Strategy Consultation

The National Indigenous Australians Agency is overseeing a consultation process on the strategy for the Indigenous Ranger sector. The Strategy guides the future growth and empowerment of community-based Indigenous ranger organisations across Australia. The development and delivery of the Strategy will be a collaborative effort by Indigenous Australians, governments, and the private sector.

The Vision and Purpose of the Strategy is described on the website: <https://www.niaa.gov.au/indigenous-affairs/environment/indigenous-ranger-sector-strategy>

The Strategy is intended to support an integrated, national approach between Indigenous, government and private sector stakeholders to address the challenges and aspirations of rangers over the next six years and into the future. The vision is to develop an Indigenous ranger sector empowered to manage Country sustainably, strengthen culture, provide economic and career opportunities for Indigenous people and communities, and have a recognised role and voice in land and water management. The Strategy aims to support the wider aspirations of rangers and ranger organisations that go beyond funded programs.

Skills Impact provided a submission to the consultation, given the work we do with the rangers in relation to skills and training. The consultation discussion paper included a proposal for the creation of an Indigenous ranger industry body. It is proposed that this body may '*oversee the development of any accredited Indigenous land and water skills curriculum and training packages*'. Skills Impact submitted that Indigenous rangers and broader Aboriginal and Torres Strait Islander organisations and businesses need the capacity to participate in and influence

outcomes in the new system. Skills and job development works best when there is a direct connection between training and employment. It is important that the training provided for Indigenous rangers and other Aboriginal and Torres Strait Islander people leads to better job outcomes. Skills impact acknowledges the importance of Aboriginal and Torres Strait Islander people guiding and directing their economic and social development.

### Review of the National Training Register

Skills Impact has been asked to participate in a review and design process to update the National Training Register ([training.gov.au](http://training.gov.au)). Staff members are currently working with the Department of Employment and Workplace Relations (DEWR) staff and representatives from other SSOs to help guide this project from the perspective of back-end users required to upload information to the Register.

Elvie Arugay uploading information onto the back end of the National Training Register ([training.gov.au](http://training.gov.au))



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## Agribusiness, Food and Fibre Industries Skills Report

In 2022, Skills Impact has produced an *Agribusiness, Food and Fibre Industries Skills Report* – the first of its kind in this program. Designed to support collaboration across industries and the streamlining and reform of the Australian Skills and VET system, it was developed in cooperation across 12 Industry Reference Committees. The report endeavours to identify common issues experienced across the Agribusiness, Food and Fibre industries.

The Industry Skills Report identifies key characteristics of the Agribusiness, Food and Fibre industries, including:

### Environmental analysis

- whole of value chain approach
- biosecurity, invasive species and pest control
- sustaining plants and animals
- ecosystem management
- digital and automation practices
- food safety, quality assurance and regulatory compliance
- workplace and value chain risk management and safety culture.

### Market analysis

- workforce, business and market summary
- training summary
- regional, rural and remote summary
- Aboriginal and Torres Strait Islander Peoples summary.

Skills Impact invited industry stakeholders to review and provide feedback on the report. Key contributions included identifying commonalities across occupations and the inclusion of risk management as a defining characteristic of a skill. Industry stakeholders are beginning to consider methods of attracting new entrants using workplace-based experience and training opportunities for transferable skills that may be applied across multiple industries, including industries outside of Agribusiness, Food and Fibre. This will help to address constraints being experienced due to widespread skill and labour shortages.

The Agribusiness, Food and Fibre Industries account for around 8% of total employment nationally, which includes a significant proportion of regional and remote workforces. There are around 244,000 individual businesses, which operate and

trade in all states and territories, and comprise a variety of small, medium and large enterprises. The sectors across these industries are extremely varied, with large agribusinesses, as well as niche, specialist and regional operators. The industries form a sophisticated and complex web across the value chain. Looking at the whole value chain helps to identify priority work on cross-sector projects, including collaboration with the manufacturing, transport and logistics, textiles, furniture, tourism and hospitality industries.

Recognition of the need to manage employment and skills development in the context of the Agribusiness, Food and Fibre Industries, and of the unique challenges faced in regional, rural and remote areas, are critical success factors in the implementation of solutions. Education opportunities as a way of improving social and industry outcomes in regional, rural and remote areas are emphasised by various studies. Social and economic progress in these areas can be improved with increased education provision and providing tailored resources particularly in remote and very remote areas.



This also contributes to developing opportunities for Aboriginal and Torres Strait Islander peoples.

The Agribusiness, Food and Fibre Industries contribute to Australia's food security, our homes, health and wellbeing. They produce essential food, drink, medicine, fibre and textile products. They also work with and protect Australia's environmental assets, now valued at more than \$6.5 trillion according to the Australian Bureau of Statistics<sup>2</sup> and CSIRO<sup>3</sup>. In recognising and responding appropriately to the challenges experienced by employers and workers in Agribusiness, Food and Fibre Industries, especially in regional, rural and remote areas, *all* Australians end up benefitting from reduced productivity losses, lower costs, improved quality and increased liveability associated with optimal skills for these essential industries.

The observations, data and intelligence reported in the *Agribusiness, Food and Fibre Industries Skills Report* will be used to develop proposals for:

- workforce planning
- training product development
- implementation, promotion and monitoring of skills development
- industry stewardship and leadership.

The work identified two immediate priorities touching all industries, being:

- Working with other agribusiness, food and fibre industries on research and planning projects to identify and address skills gaps relating to traceability, provenance and blockchain.
- Identifying digital skills needs using the Agricultural Digital Workforce Framework, and the Digital Workforce Capability and VET framework currently in development (along with other digital capability frameworks).

The Industries Skills Report may also aid the implementation of the Skills Minister's priorities by supporting:

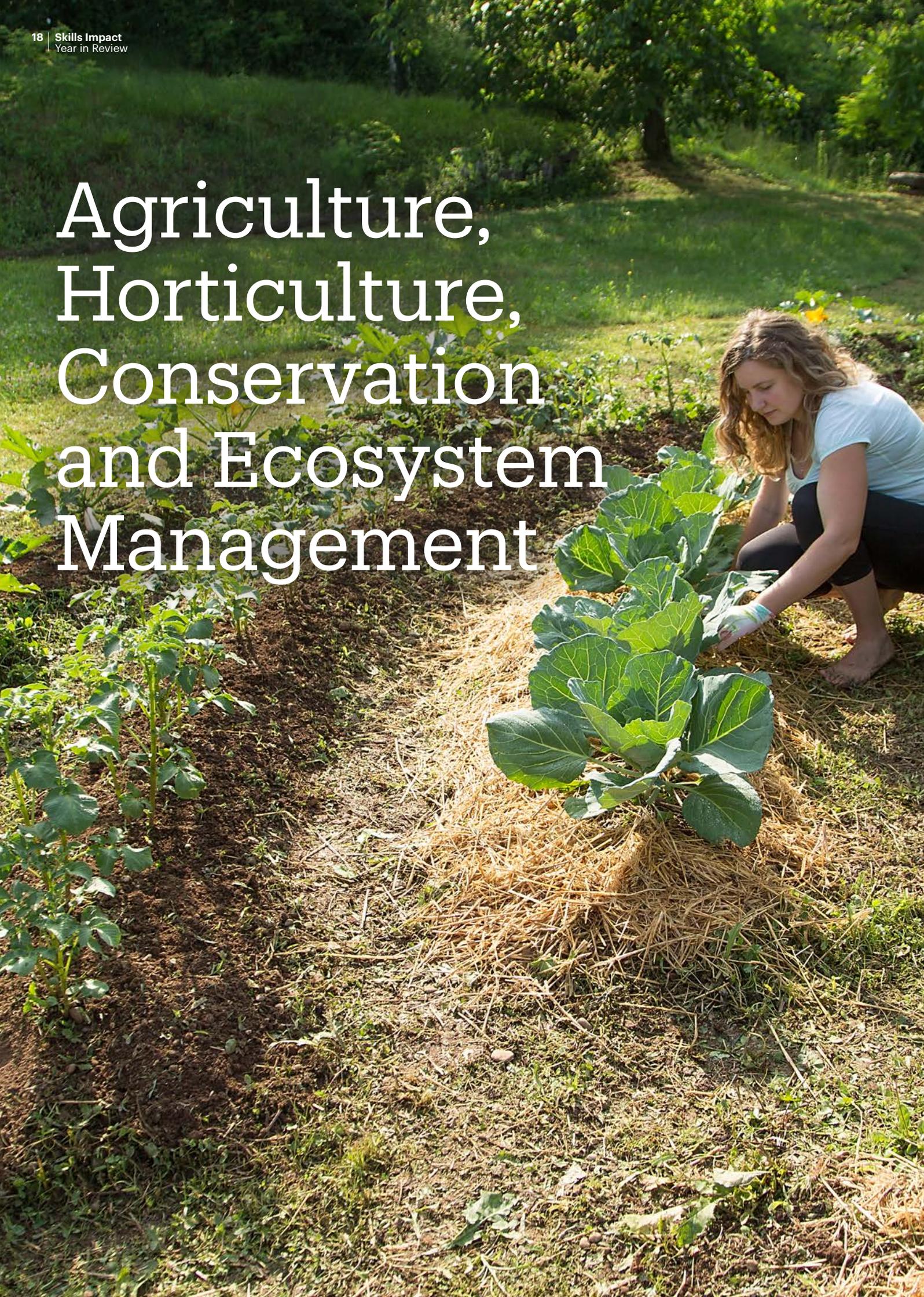
- greater labour mobility through stronger recognition of cross-sector and transferable skills
- better use of industry and educator expertise to ensure better quality outcomes
- improved pathways advice to support lifelong learning and build peoples' labour market resilience
- Australia's capacity to grow, compete and thrive in the global economy, especially in the context of the concurrent impacts of COVID-19, automation and digital transformation on the skills required for jobs now and into the future.

It may also be used by businesses, employer and employee bodies, industry peak bodies, and research and development bodies for the development of policies and proposals.

2 ABS (2019); 4655.0 - *Australian Environmental-Economic Accounts, 2019*; <https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4655.0Main%20Features22019?opendocument&tabname=Summary&prodno=4655.0&issue=2019&num=&view=>; viewed 22/02/2022.

3 CSIRO (2020); *Australia's Biosecurity Future*

# Agriculture, Horticulture, Conservation and Ecosystem Management



Employ over 499,054  
people<sup>4</sup>

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Are made up of more than  
184,186 businesses<sup>5</sup>

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Contribute over  
\$42.78 billion to Gross  
Domestic Product  
More than 178,000 businesses<sup>6</sup>

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Create revenue of over  
\$171 billion<sup>7</sup>

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The agriculture, horticulture, conservation and ecosystem management industry is critical in caring for and managing Australia's environmental assets. One key element of this is the production of food for local and international consumption. Another is maintaining land and water, including farmed land, national and state parks, public gardens, sporting grounds and open spaces.

The national skills standards and qualifications for the agriculture, horticulture, conservation and ecosystem management industry are overseen by the Agriculture and Production Horticulture Industry Reference Committee (IRC) and the Amenity Horticulture, Landscaping, Conservation and Land Management IRC.

4 IBISWorld Industry Wizard (2022)

5 IBISWorld Industry Wizard (2022)

6 IBISWorld Industry Wizard (2022)

7 IBISWorld Industry Wizard (2022)

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## Agriculture and Production Horticulture

The agriculture and production horticulture industry is responsible for producing livestock and crops, including food production for local and international consumers. This highly skilled workforce produces more food than the Australian population consumes, making Australia one of the most food-secure places on earth while being able to export high quality food globally. Enterprises across these industries are extremely varied, with large agribusinesses, as well as niche, specialist, and regional operators.

The challenges of recent years, including natural disasters, global markets, and the COVID-19 pandemic have highlighted the necessity of agricultural skills and knowledge to maintain Australia's food security and support the economy. Industry is developing further skills in new and emerging food sources, sustainability, farm management, digital literacy and compliance to tackle these challenges and pursue new opportunities.

The Agriculture and Production Horticulture Industry Reference Committee (IRC) is one of two IRCs that oversee the national skills standards for the broader agriculture, horticulture, conservation and ecosystem management industry. The other IRC is the Amenity Horticulture, Landscaping and Conservation and Land Management IRC.



**The gross value of agricultural production is forecast to be \$80.4 billion in 2022-23<sup>8</sup>**

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**The value of agricultural exports is forecast to reach a record \$64.9 billion in 2022-23, driven by a crop export record of \$39.8 billion<sup>9</sup>**

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<sup>8</sup> ABARES (2022); Agricultural Commodities: June quarter 2022; Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.

<sup>9</sup> ABARES (2022); Agricultural Commodities: June quarter 2022; Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.

## Agriculture and Production Horticulture Industry Skills Report

This year, Skills Impact prepared an Agriculture and Production Horticulture Industry Skills Report, at the request of the IRC, to provide in-depth information about industry-specific issues impacting skills and training. This is one of nine industry-specific Skills Reports with matching structures produced to assist with collaboration across industries and the strengthening of the Australian VET system.

The robust adaptations, innovations, and evolution of the agriculture and production horticulture industry mean that, notwithstanding on-going challenges due to disrupted supply chains, labour shortages and the COVID-19 pandemic, they are thriving<sup>10</sup>. Over 90% of daily food consumed in Australia is provided by Australian farmers and associated food producers and processors within the value chain<sup>11</sup>, seeing the gross value of production reach an all-time high<sup>12</sup>. Around 71% of Australia's 'agriculture, forestry and fisheries' products are exported because there is substantially more food produced than consumed across the nation<sup>13</sup>.

Such trends ensure the products, services and economic contributions of agriculture and production horticulture businesses continue to grow. However, while this industry is playing a critical role in rebuilding Australia's economy, following the most severe impacts of the pandemic, its contributions are constrained by skilled worker shortages, especially in regional, rural and remote areas. The *National Agricultural Workforce Strategy* notes that the best way of future-proofing industry is by preparing all levels of

the workforce through 'learning in all its forms, at all levels, in all the relevant parts of the nation'<sup>14</sup>. Such capabilities development will unlock opportunities, including through the improved use of knowledge, practices, and technologies.

In December 2020, the National Agricultural Labour Advisory Committee delivered its National Agricultural Workforce Strategy. It confirmed that the industry is a complex and sophisticated system that relies heavily on the skills of its people. However, there are widespread skills shortages across all sectors of the agriculture and production horticulture industry, presenting a challenge for many businesses. Such issues are both reflective of the impacts of COVID-19 on international workers' entry to Australia and longstanding concerns associated with an ageing workforce. Industry stakeholders are beginning to formulate attraction methods based on workplace-based experience and training opportunities for transferable skills that may be applied across multiple industries. Showcasing industry careers during public events and developing resources that speak to young people are strategies to attract new entrants into specific occupations.

The Agriculture and Production Horticulture IRC has identified priorities which they recommend for future consideration, including:

- The finalisation of the Unit Sector Approach for reviewing the *AHC Training Package*, and further consideration of the rural operations qualifications, including the potential for broader skills requirements as a key part of rural activities.
- Working with other industries to determine which qualifications need to incorporate new and updated units from the current *AHC Training Package*, to identify:
  - an efficient consultation process to update qualifications so that the most recent training standards are accessible, and RTOs can be assisted in the delivery of units
  - any assistance that can be provided across all industries utilising AHC training products to enhance appropriate implementation, enrolments and viability of training delivery.
- The evaluation of the Unit Sector Approach for the review of the *AHC Training Package*.

10 R. Heath (2021); Editorial: Ag thriving in disruption; Farm Policy Journal Vol.18, No.2, Winter Quarter 2021

11 Department of Agriculture, Water and the Environment (2021); Delivering Ag2030; Canberra, May. CC BY 4.0.

12 ABARES (2021); Agricultural Commodities: December quarter 2021; Canberra. CC BY 4.0

13 ABARES (2020); Australian food security and the Covid-19 pandemic; Canberra. CC BY 4.0.

14 J. Azarias, R. Nettle & J. Williams (2020); National Agricultural Workforce Strategy: Learning to excel; National Agricultural Labour Advisory Committee; Canberra, December. CC BY 4.0; p.xiii.

## Case study

# A cross-sectoral partnership for strengthening agricultural pathways

In September 2021, the Brotherhood of St Laurence convened a system design workshop with Skills Impact, employers, industry, government, community and training stakeholders from agriculture (including Brophy Family and Youth Services, South West TAFE, Dairy Australia, and Food and Fibre Great South Coast). The aim of the workshop was to identify ways to encourage young people to seek employment in the industry, especially in the context of increasing rates of youth

unemployment and longstanding agricultural labour shortages being exacerbated by COVID-19. In the workshop and follow-up consultations, an opportunity was identified to trial a new training approach for encouraging young people into agriculture occupations in the Barwon South West region. Alongside youth under-employment, this AgFutures project aims to address issues around declining uptake and completion of entry-level agricultural programs among new workforce entrants.

In March 2022, Skills Impact and the Brotherhood of St Laurence co-facilitated a workshop with employers and key stakeholders in Warrnambool, Victoria, to understand employers' skills needs, especially for entry level positions on farms. Following these consultations, the AgFutures project has designed a short-form qualification that teaches young people the skills needed to enter the dairy industry while meeting the skills needs of employers.



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## Agriculture and Production Horticulture Industry Skills Report

Australia's numerous public and private green spaces can be enjoyed thanks to the hard work of the amenity horticulture, landscaping, conservation and ecosystem management industry.



The Amenity Horticulture, Landscaping, Conservation and Ecosystem Management industry works with and protects Australia's environmental assets, now valued at more than \$6.5 trillion according to the ABS<sup>15</sup> and CSIRO<sup>16</sup>.

The nursery industry has reported a sustained rise in plant sales since the start of COVID-19-related restrictions, with an overall 26% increase in sales and over 2.2 billion plants produced and sold in Australia in 2019–2020<sup>17</sup>.

Drawing on a vast array of skills, this workforce cares for and maintains national and state parks, public gardens, sporting grounds, and green spaces, and supports private gardening and growing activities. As cultural attitudes, government policies, and the natural environment itself shift, new skills and job roles are emerging in the industry. With the importance of biodiversity and biosecurity becoming better recognised and climate change becoming a global priority, skills and labour across the industry will be in high demand.

The Amenity Horticulture, Landscaping, Conservation and Land Management Industry Reference Committee (IRC) works alongside the Agriculture and Production Horticulture IRC, which together oversee the national skills standards for the broader agriculture, horticulture, conservation and ecosystem management industry.

15 ABS (2019); 4655.0 - Australian Environmental-Economic Accounts, 2019; <https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/4655.0Main%20Features2019?opendocument&tabname=Summary&prodno=4655.0&issue=2019&num=&view=>; viewed 22/02/2022.

16 CSIRO (2020); *Australia's Biosecurity Future*

17 Greenlife Industry Australia (2022); *Nursery papers: Learn more about your business with industry data*; <https://www.greenlifeindustry.com.au/static/uploads/files/nursery-paper-march-2022-fostering-innovation-within-production-nurseries-wfdvvcfvmond.pdf>; viewed 13/05/2022

## Amenity Horticulture, Landscaping, Conservation and Ecosystem Management Industry Skills Report

This year, Skills Impact prepared an Amenity Horticulture, Landscaping and Conservation and Land Management Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

Industry has navigated many challenges over the past two years, with COVID-19, drought, bushfires, floods and trade issues causing disruptions. However, these events have also demonstrated the high demand for a skilled amenity horticulture, landscaping, conservation and ecosystem management workforce. With people spending more time at home, nursery and landscaping services and products have been in high demand. There is also a need for skills to mitigate and deal with the impacts of climate change.

The demands for skills, labour and work in this area are likely to grow beyond the current predictions and expectations of the National Skills Commission and other analysis bodies. Improved analytic data is important in managing these needs, including data on new and emerging industry sectors and skills. This is particularly pertinent as industry continues to be elevated as a national priority, in relation to addressing climate change and in recognition of the critical importance of biodiversity and biosecurity to all Australian land and water activities.

Workers in amenity horticulture, landscaping, conservation and ecosystem management are critical for sustaining Australian biodiversity, which helps to regulate climate, water quality, pollination, animal health and habitats, flooding,

droughts, bushfires and storm surges. In Australia, managing biodiversity is especially important and complex because of the sheer number of native and unique plants and animals. *The Strategy for the Australian Native Seed Sector*, published in late 2021, provides a ten-year plan to better manage the restoration and rehabilitation of landscapes and support biodiversity conservation. To build the capacity of the sector, as well as improve employee retention and attraction, the strategy focusses on making education and training more accessible. Specifically, there are objectives to 'work with providers and potential providers of native seed education and training to strengthen the range and quality of education and training provided'; and to engage with the sector 'to identify existing education and training programs that can be expanded and any gaps where new programs should be developed'<sup>18</sup>.

More of Australia's land and water is being returned into the custodianship of Aboriginal and Torres Strait Islander people. With this has come a change in the way that work is being undertaken to protect and conserve the ecosystem. Aboriginal and Torres Strait Islander communities, business enterprises and individuals are also now major employers of workers or service providers in ecosystem management. Various industry stakeholders have recognised the importance

of developing closer working relationships with Aboriginal and Torres Strait Islander communities and business enterprises. This is likely to be an ongoing priority for the skills and VET system because many potential opportunities, including for ecosystem management, can be unlocked with traditional cultural knowledge and practices.

The Amenity Horticulture, Landscaping and Conservation and Land Management IRC have identified priorities which they recommend for future consideration, including:

- the finalisation of the Unit Sector Approach for reviewing the *AHC Training Package*, and further consideration of the Rural Operations qualifications, including the potential for greater recognition of ecosystem management as a key part of rural activities
- evaluation of the Unit Sector Approach for the review of the *AHC Training Package*
- working with the Arts and Personal Services Cluster (specifically relating to Tourism and Hospitality) to ensure that food handling, biosecurity, provenance, traceability and other relevant skills are incorporated into their qualifications with the guidance of experts from the Agribusiness, Food and Fibre Industry Cluster.



## Projects

### Project work between 2021-22

Outlined over the following pages is a summary of the projects Skills Impact managed between July 2021 and June 2022.

The Amenity Horticulture, Landscaping, Conservation and Land Management Industry Reference Committee (IRC) and Agriculture and Production Horticulture IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following projects are expected to be endorsed by the AISC and State and Territory Ministers in late 2022.

### Ag and Horticulture Core Skills Project

Australia's agriculture and horticulture industry is made up of a workforce of more than 452,000 people who play an integral role in producing food and fibre and caring for our land and water bodies. While the expertise across professions is varied, the industry is underpinned by core skills in workplace health and safety, environmental practices, quality assurance procedures and workplace recording.

These skills help to build and maintain infrastructure, support community related projects and programs, research initiatives and staff performance and are crucial across these settings.

Community consultation took place throughout this project to update and develop national qualifications, skill sets and units that describe these important core skills so that they reflect real job functions that are undertaken by graduates.

Qualifications, skills sets and units were updated to include work functions that reflect current job roles in the industry and incorporate the latest technologies, equipment and advances in agriculture, horticulture and community coordination and facilitation.

### Key Outcomes

- Thirteen qualifications have been revised, including the Certificates I, II, III, IV and Diploma of Agriculture; Certificates I, II, III, and IV of Horticulture; the Diploma of Horticulture Management; the Diploma of Community Group Coordination and Facilitation; the Certificate III in Production Horticulture; and the Certificate III in Rural Operations. They have been updated to reflect current job roles, including the skills and knowledge to:
  - utilise new and emerging technology and systems
  - address new and updated regulatory and legislative requirements
  - work safely and communicate work safety procedures respectfully both up and down the chain of command
  - address issues around biosecurity, environmental sustainability and quality assurance.
- The Advanced Diploma of Horticulture is proposed for deletion due to low enrolments and industry feedback that indicated it was no longer required.

- A skill set was developed to address safety management and the investigation of workplace health and safety incidents in the agriculture and horticulture industry.
- Sixty-three units were revised, including changes such as:
  - updates to indicative AQF levels to reflect job functions
  - adjustments to reflect regulatory and legislative requirements
  - changes to reflect current Standards for Training Packages (2012)
  - merging of two units to avoid duplication.
- Two units were developed:
  - AHPCPC308 Identify and select plants
  - AHCMOM303 Operate a telehandler.
- Four units are proposed for deletion as they are no longer required by industry. Five more have been identified for deletion pending future review of the qualifications in which they currently sit.

## Permaculture, Organic Production and Composting Projects

Producers are increasingly incorporating techniques based around principles of permaculture, organic production and composting to keep up with demand for sustainably grown produce and support future food security. These production methods can improve the resilience of our food production systems, reduce waste and help optimise available resources.

### Key Outcomes

#### Permaculture

- Five qualifications were revised and updated to incorporate unit changes including merging of content and adjustments to Australian Qualification Framework alignment for some units.
- Twelve new skills sets were developed to meet industry needs related to permaculture fundamentals. One existing skill set for a Permaculture Demonstrator was revised.
- Fifty-five permaculture units of competency were reviewed, resulting in four being merged into two and five proposed for deletion. One unit was also developed based on a previously deleted permaculture unit. Selected units are to be included in Certificate I to Diploma level Agriculture qualifications.

#### Organic production

- The Certificate IV and Diploma of Organic Farming were proposed to be deleted and replaced with specialisations within existing agriculture qualifications.
- Three organic production skill sets were revised, and one new skill set was developed to incorporate skills and knowledge required to plan,

consultation has taken place throughout this project to review and update the national qualifications and skills standards for work using the principles of permaculture, organic production and composting. Thanks to the contributions of all involved, qualifications, skill sets and units were revised and updated to reflect the evolution of industry job roles and skills needs. Attention has been paid to how to incorporate the skills for these important practices throughout agriculture qualifications, as they are useful and necessary across a range of job roles and environments.

manage, and oversee certification of organic or biodynamic farms and farm produce.

- Fourteen organic production related units were updated to incorporate skills and knowledge relating to certification schemes, compliance and the implications of non-compliance when undertaking work tasks. Organic units are proposed for inclusion in other agriculture, horticulture, conservation and land management (AHC) qualifications at the appropriate level.

#### Composting

- Five skill sets were developed to describe expertise in micro-sectors of the composting industry.
- Six composting units were updated, where necessary, to include reference to relevant legislation, standards and codes of practice, including workplace health and safety and environmental requirements. The units will be included in agriculture and horticulture qualifications as electives for on-farm composting activity, as well as in waste management qualifications.
- The Certificate III in Commercial Composting was proposed for deletion.



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## Pig and Poultry Farming Project

Skills in biosecurity, animal welfare, safety and sustainability are crucial for pig and poultry farmers to raise and care for animals used to produce some of the staple foods in Australia. It is important that qualification and skills standards for this work are kept up to date.

Consultation has taken place throughout this project to revise pork and poultry units, skill sets and qualifications, so that they incorporate current industry practices and job functions and support pathways for graduates into employment.

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## Key Outcomes

### Pork

- The Certificate III in Pork Production has undergone structural revisions, with some core and elective units moved and changes to the number of units required to be completed from the core or elective lists or permitted to be completed from outside the qualification.
- Two skill sets were updated to reflect changes to the units and unit codes. Descriptions were added to reflect the purpose of the skill sets.
- Seven units have been revised to incorporate skills standards around biosecurity, current work health and safety practices, and animal welfare requirements.
- Pork Industry Euthanasia Skill Set is proposed for deletion as it is no longer reflects industry skills needs.
- The unit AHCPRK306 Monitor and maintain outdoor pig production is proposed for deletion as it is no longer reflects industry skills needs.

### Poultry

- The Certificate III in Poultry Production has undergone structural revisions, with changes to the lists of core units and elective units and to the number of core and elective units required. Specialisations were developed, including poultry farm technician, poultry breeding technician, egg grader, poultry services provider, and poultry hatchery technician.
- Five new skill sets were created to reflect the five specialisations in the Certificate III in Poultry Production.
- Seven existing skill sets were proposed for deletion as they are no longer required by industry.
- Ten units have been revised to improve clarity and better match industry practice.



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## Respect for Country Job Skills Project

Aboriginal and Torres Strait Islander cultures have a long history of caring for Country, using skills for land and water management activities developed over thousands of years. Some of these skills are described in nationally endorsed qualifications, skill sets and units that are used by registered training organisations (RTOs) to equip learners for jobs as rangers, natural resource management field officers, cultural and heritage officers, land council site officers, tourism operators, conservationists, and guides. These job roles are highly valued by communities, as they reflect work of inherent cultural importance to Traditional Owners, as well as providing economic and cultural benefit to communities.

Led by Aboriginal and Torres Strait Islander project partners, the qualifications, skill sets and units for this work have been updated, so that culture, skills and knowledge are better reflected; unit integrity is retained; and the unique nature of caring for Country for each community is recognised.

The titles of the qualifications and coding of the units have been updated to reflect terminology that is more accurate, culturally sensitive and preferred by industry and those using the skills standards. The sector previously known as Aboriginal Sites Work (ASW) is now Cultural Sites Work (CSW) and the sector of Indigenous Land Management (ILM) is now On Country Management (OCM).

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## Key Outcomes

- Industry sector codes have been updated to reflect appropriate language and consistent terminology, including:
  - industry sector code AHCASW Aboriginal Sites Work has been updated to AHCCSW Cultural Sites Work
  - industry sector code AHCILM Indigenous Land Management has been updated to AHCCOM On Country Management.
- Two qualifications – the Certificate III in Aboriginal and/or Torres Strait Islander Cultural Sites Work and the Certificate III in On Country Management – have been revised to clarify job roles, reflect the latest technology and equipment and improve flexibility of delivery and career pathways. They have been retitled to be in line with the



updated terminology used in the new sector codes.

- The Advanced Diploma of Conservation and Land Management has been renamed the Advanced Diploma of Conservation and Ecosystem Management in line with changes made as part of the Conservation and Land Management Project in 2020.
- Seven skill sets have been updated to reflect changes in the units and their codes have been revised.
- A new unit AHCCSW401 Contribute to the development of cultural safety processes has been developed.
- Thirty five units have been reviewed and updated including:
  - updates to support awareness and understanding of different legislation, regulations, local laws and community Lores
  - updates to support protection of Indigenous Culture and Intellectual Property (ICIP) and cultural safety through shared respect, meaning and knowledge
  - revisions to improve relevance and clarity, support foundation skills, and remove barriers to assessment.

Skills Impact recognises the traditional custodians and owners of this land and all who have a connection to Country, as well as their role in caring for and maintaining Country over thousands of years. We respect Elders and Leaders past and present, and all Aboriginal and Torres Strait Islander Peoples who have helped to create the culture and knowledge that project participants have been and are willing to share with us. We acknowledge and thank the many project partners including Traditional Owners, Land Councils and organisations, registered training organisations, Government and non-government organisation representatives who have collaborated with us in this project.

## Water Allocation and Entitlement Skills Project

Water catchments and systems are a vital resource that need to be preserved and managed for the long-term to support the interests of all Australians. Farmers and irrigators rely on water resources to produce food and fibre. With the right skills and knowledge, access to water markets can help improve farm productivity, provide greater choice and flexibility in business decision-making, and help inform risk management. Expertise is required to participate in Australia's water markets, including navigating changing prices, managing buying and selling processes, calculating the carryover of water, and managing risk strategies around climate for long-term water allocation.

From its informal beginnings around 20 years ago, water trading in Australia has evolved into a multifaceted market, with different jurisdictions, states and territories in operation. One of the recommendations of the Keelty Report into management of Murray-Darling Basin water resources was to incorporate water literacy into education, including via VET.

Industry has provided their expertise throughout this project to develop national skills standards that will support the next generation of farmers and those with water entitlements to effectively navigate Australian water markets. They were published on the national training register ([training.gov.au](http://training.gov.au)) on 31 July 2022.

### Key Outcomes

- Two skill sets have been developed to support the skills required by agricultural managers, workers and farmers in participating effectively in Australia's multifaceted water markets.
- Three units have been developed to describe the skills farmers and those with water entitlements require to correctly engage with water trading practices, including the purchase and selling of water, navigating carry over water or continuous accounting options and how to procure, receive and monitor water.
- The developed units are included in the *Certificate III in Irrigation and the Diploma of Agribusiness*.



## Completed Projects (started in the previous year)

The following projects were endorsed by the Australian Industry and Skills Committee (AISC) and State and Territory Skills Ministers. The revised qualifications, skill sets and units, that were developed as part of these projects, are published on the national training register ([training.gov.au](http://training.gov.au)) and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### **Animal Reproduction Project**

Technical and digital skills are required to take advantage of technologies used for managing livestock reproduction. Qualifications, a skill set and units were revised to reflect terminology relating to different livestock species; key skills for maintaining health and safety in the workplace, including use of personal protective equipment and hygiene procedures; and the current biosecurity, environmental and animal welfare legislation and regulations.

### **Crops, Pastures and Seeds Project**

Farmers and seed producers are drawing on the latest technology and science in response to increasing global demand for food and fibre and changing environmental conditions. As a result of this project and consultation with industry throughout Australia, units across the seeds, crops and pastures sectors were updated so that they accurately capture current industry practices and technologies. New units were developed to reflect up-to-date industry practice and include an array of the latest technology implemented in the field, from satellite positioning guidance of farming equipment to laser technology designed to detect pests and disease.

### **Dairy and Milk Harvesting Project**

As a result of consultation as part of this project, skills standards for dairy and milk harvesting were revised and updated to reflect modern terminology, equipment used and job roles, as well as traditional methods. The Certificate III in Agriculture (Dairy Production) was changed to Certificate III in Dairy Production, existing units were revised, and some were deleted to reflect current skills needs. One skill set and one unit were developed to capture the skills and knowledge required to maintain automated mass milking machines.

### **Landscaping Project**

Thanks to the input of all involved in this project, qualifications and units for landscaping construction and design were revised to include the latest technologies, equipment, regulations, and consumer trends, and more accurately describe job functions and the range of tasks involved.

### **Parks and Gardens Project**

As part of this project, the Certificates II and III in Parks and Gardens and units within them were updated to support strong pathways into the industry and reflect the common skills required by the sector. The updated skill standards now describe current terminology, equipment, work practices (including sustainable use of materials), environment, and workplace health and safety requirements.

### **Skills for Land Rehabilitation (Mined Land) Project**

This project addressed the need for national skills standards for the rehabilitation of land that has been used for mining, resulting in the development of four skill sets and a 'rehabilitation of mined land' specialisation in the Certificate III in Conservation and Ecosystem Management. The updated skills standards also reflect that Indigenous rangers and other Aboriginal and Torres Strait Islander community members can often undertake this work and that it may require multiple inputs from a range of services, including environmental advisors and field workers.

# Animal Care and Management



Makes a revenue of \$3.82<sup>20</sup>

Value added \$2.33<sup>21</sup>

Made up of more than 3,400 businesses<sup>22</sup>

Employs a workforce of more than 25,700 people<sup>23</sup>

Dog owners in Australia spent a total of \$20.5 billion in 2020-2021, while cat owners spent \$10.2 billion.<sup>24</sup>

69% of Australian households now have one or more companion animals (compared with 61% only two years ago).<sup>25</sup>

There are now 30.4 million pets (compared with 28.5 million in 2019) that require training, grooming, shelter and health-related services.<sup>26</sup>

The skills and knowledge of the animal care and management industry contribute hugely to the health and harmony of our communities and ecosystems. Job roles across the industry are diverse, including veterinary nursing, companion and assistance animal management, pet care and training, equine care and animal regulation. With pet ownership growing 8%<sup>19</sup> in the past two years, industry has experienced accelerated growth, meaning continued growth in productivity and profitability. This dedicated workforce continues to adapt its skills, caring for and nurturing wild and domestic animals while supporting the mental and physical health of employees and the public.

The national skills standards and qualifications for this industry are overseen by the Animal Care and Management Industry Reference Committee (IRC), and the Amenity Horticulture, Landscaping, Conservation and Land Management IRC.

19 Animal Medicines Australia (2021); Pets and the Pandemic

20 IBISWorld Industry Wizard (2022)

21 IBISWorld Industry Wizard (2022)

22 IBISWorld Industry Wizard (2022)

23 AISC (2022); Industries / Animal Care and Management; <https://nationalindustryinsights.aisc.net.au/industries/animal-care-and-management>; viewed 31/08/2022

24 Labour Market Insights (2022); Animal Attendants and Trainers ANZSCO ID 3611; <https://labourmarketinsights.gov.au/occupation-profile/animal-attendants-and-trainers?occupationCode=3611>; viewed 31/08/2022

25 Labour Market Insights (2022); Animal Attendants and Trainers ANZSCO ID 3611; <https://labourmarketinsights.gov.au/occupation-profile/animal-attendants-and-trainers?occupationCode=3611>; viewed 31/08/2022

26 Labour Market Insights (2022); Animal Attendants and Trainers ANZSCO ID 3611; <https://labourmarketinsights.gov.au/occupation-profile/animal-attendants-and-trainers?occupationCode=3611>; viewed 31/08/2022

## Industry Skills Report

# This year, Skills Impact prepared an Animal Care and Management Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

The animal care and management industry is experiencing rapid expansion, as people in Australia take on more pets and seek out more products and services for them. Pet ownership has experienced 8%<sup>27</sup> growth over the last two years, and there is high demand for more information, food, accessories, medicines, therapies and veterinary care. This has created pressure on value chains to respond to elevated and changing demands and to take advantage of opportunities for new and expanding businesses. There is strong growth projected across occupations, with 14.9% more animal attendants and trainers expected to be employed in Australia by 2026<sup>28</sup>. Future job opportunities such as this will need to be supported by education policy, career planning services for job seekers and students, course offerings by education providers and broader policy and program design.

Attracting labour to keep up with the strong demand for animal care services remains a challenge. A 2021 workforce survey by the Australian Veterinary Association found almost 31% of veterinary job vacancies took more than 12 months to fill or were still not filled. Various strategies are being implemented by industry to promote industry careers,

especially to young people who are interested in working with animals. The Veterinary Nurses Council of Australia (VNCA) has also explored whether veterinary nurses could take on expanded roles, to help mitigate staff shortages. However, appropriate training and support is needed for this to happen safely and effectively.

Access to trained animal care and management professionals is important to protecting animal welfare, biosecurity and public health, especially in regional, rural and remote Australia. To help address the many challenges for providing adequate skills and training opportunities in regional Australia, the Hon Fiona Nash was appointed as Australia's first Regional Education Commissioner in December 2021 and will oversee implementation of recommendations from the *National Regional, Rural and Remote Tertiary Education Strategy* ('the Napthine Review')<sup>29</sup>. According to the review, provision of tertiary education is the key to increasing productivity and strengthening industries, economies and communities. In remote communities, work with Indigenous ranger groups is helping to meet some animal care and management related needs, but further training and extension of the program may promote better outcomes.

Appropriate ANZSCO and ANZSIC classification of the whole of the animal care and management value chain would help support future industry growth and collection of relevant data. Acknowledging interconnections and interdependencies is becoming increasingly important so that industry can anticipate and respond holistically to challenges, changes or trends.

The IRC has identified priorities for consideration in future:

- review of qualifications in veterinary nursing, including addressing mandatory workplace requirements consistent with new standards introduced in 2022
- review of qualifications in animal technology to include replacement of superseded units to updated units.

27 Animal Medicines Australia (2021); *Pets and the Pandemic*

28 National Skills Commission (2022); *Animal Attendants and Trainers*;

<https://labourmarketinsights.gov.au/occupation-profile/animal-attendants-and-trainers?occupationCode=3611>; viewed 05/07/2022.

29 Commonwealth of Australia (2019); *National Regional, Rural and Remote Tertiary Education Strategy*.



## Projects

### Project work between 2021-22

Skills Impact managed the following projects between July 2021 and June 2022.

The Animal Care and Management Industry Reference Committee (IRC) oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the project met stakeholder needs.

The skills standards and qualifications updated as part of this project are expected to be endorsed by the AISC and State and Territory Ministers in early 2023.

### Small Companion Animal Incident Management Project

The benefits of companion animals are well understood in Australia, with an estimated 30.4 million pets across the country. When incidents occur that put these animals in danger, a coordinated effort is required. Animal facility, emergency services, animal welfare and evacuation centre workers must all work together to manage the safety of companion animals and the people they live with. Following the 2019-20 Australian Bushfires, the Royal Commission into National Natural Disaster Arrangements recommended 'national consistency in training and competency standards' to help support people to work effectively across different states. Specific skills are also required for working in rural and regional Australia where incidents such as fires, floods and natural events occur at a higher rate.

As a result of consultation throughout this project, national skills standards have been developed to support the skills needed to evacuate and accommodate companion animals and their owners during an incident.

### Key Outcomes

- Seven units of competency were developed to describe the skills involved in rescuing companion animals, including planning, raising awareness, communicating to owners, participating in and performing rescue, setting up a rescue facility, and determining database information requirements.
- One unit, ACMAIM313 Carry out casualty and post-rescue management of animals, was revised to broaden its coverage so that it can be used for animals of all sizes.
- Four skill sets were developed to address the skills required for management and planning in the case of an incident involving companion animals and campaign planning to raise awareness about companion animal rescue, as well as for participating in companion animal incident management as a worker or leader.
- The revised and developed units are packaged in the existing qualifications ACM30122 Certificate III in Animal Care Services, ACM40122 Certificate IV in Animal Regulation and Management and ACM40222 Certificate IV in Animal Facility Management.
- The Companion Volume: Animal Incident Management User Guide was updated to provide additional information specific to companion animal rescue to assist RTOs with delivery.



## Trainers of Assistance Dogs Project

As evidence and awareness of the benefits of assistance dogs grows, there is increasing demand for skilled trainers to prepare dogs and their handlers for life together. There is a projected growth rate of 14.9% to November 2026, meaning an extra 3,083 workers will be needed.<sup>30</sup> With long wait lists at organisations such as Assistance Dogs Australia and Guide Dogs Australia, many people are turning to independent dog trainers. This, combined with the expansion of assistance dogs into fields covered by the National Disability Insurance Scheme (NDIS) and other health streams has inspired calls for greater regulation and skilled delivery of assistance animal training.

Thanks to the contributions of everyone involved in this project, five units and two skill sets have been developed to capture the skills required to train assistance dogs for a broad range of purposes and to work with and instruct prospective handlers.

### Key Outcomes

- Five units were developed to reflect the skills to train assistance dogs, select appropriate equipment for a handler and dog, assess the suitability of a prospective handler for a dog and instruct handlers to train dogs. The units reflect the importance of the monitoring and maintenance of dogs' work/life balance, condition, and physical, emotional and mental health

needs. References to relevant legislation have been incorporated into the units as applicable.

- Two skill sets were developed to capture the skills required to introduce an assistance dog to a handler and to provide potential dog handlers with the skills and knowledge to train an assistance dog.
- The Certificate IV in Animal Behaviour and Training was updated to include the new units and a specialisation for assistance dog training was added.
- The Trainers of Assistance Dogs User Guide was created to provide additional information to assist RTOs with delivery.

## Completed Project (started in the previous year)

The following project was endorsed by the Australian Industry and Skills Committee (AISC) and State and Territory Skills Ministers. The revised qualifications, skill sets and units, that were developed as part of the project, are published on the national training register ([training.gov.au](http://training.gov.au)) and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### Horse Care Project

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It takes input from a whole range of professionals to care for horses. Different kinds of expertise are required to keep a horse's body functioning well, to make sure equipment used is appropriate and safe, and to make sure basic needs are being met. Industry from around the country contributed to this project to define the skills standards for a range of horse care professions. Qualifications, skill sets and units have been updated and developed so that they support consistency in how services are provided, provide clear career pathways, and promote the foundational safety skills required across all environments.





# Aquaculture and Wild Catch

Australia's aquaculture and wild catch industry has a strong reputation for producing high quality and safe products. This is underpinned by a dedicated workforce equipped with an array of skills for operating collaboratively across the value chain – including up- and down-stream suppliers, fisheries, aquaculture farms, traders,

seafood processors and retailers. Across these environments there is a commitment to skills to support biosecurity, sustainability, aquatic animal health, and food safety standards. In continuing to improve these skills, Australia's aquaculture and wild catch industry draws on the latest in science and technology, including automation and robotics.



It is also informed by traditional knowledge and skills, including from the world's oldest civilisation, Aboriginal and Torres Strait Islanders, who have a long history of connection to seas and waterways.

The national skills standards and qualifications for this industry are overseen by the Aquaculture and Wild Catch Industry Reference Committee (IRC).

Employs over 18,069 people<sup>31</sup>

Over 6,304 businesses<sup>32</sup>

Over \$8.57 billion in revenue<sup>33</sup>

Contributes \$1.63 billion to Gross Domestic Product<sup>34</sup>

Aquaculture 'is the fastest-growing food industry in the world'<sup>35</sup>

<sup>31</sup> IBISWorld Industry Wizard (2022)

<sup>32</sup> IBISWorld Industry Wizard (2022)

<sup>33</sup> IBISWorld Industry Wizard (2022)

<sup>34</sup> IBISWorld Industry Wizard (2022)

<sup>35</sup> Parliament of the Commonwealth of Australia (2022); Supporting a strong future for Australian aquaculture; House of Representatives Standing Committee on Agriculture and Water Resources; p.3 & v.

## Industry Skills Report

This year, Skills Impact prepared an Aquaculture and Wild Catch Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

It has been a time of rapid change and complex challenges for the aquaculture and wild catch industry, with the value chain adapting to continue meeting consumer needs. Industry has navigated disruptions caused by COVID-19, trade disputes with China, and rising input, fuel and freight costs. Industry continues to depend upon its skills in biosecurity, which have helped navigate major outbreaks of white spot disease in prawns and pacific oyster mortality syndrome in recent years. Skills in traceability, provenance and country of origin labelling are also crucial to cater to consumers who are keen to know where their seafood is coming from and what conditions it has been produced in.

There is increasing recognition of Aboriginal and Torres Strait Islander peoples' participation in the seafood industry and of their longstanding and profound cultural connections with seas and waterways. This is seeing greater business development opportunities, inter-community partnerships and self-determination. Activities by Aboriginal and Torres Strait Islander peoples are often at the forefront of emerging sectors, coinciding with national demand for greater transparency around provenance and sustainable practices.

The skills needs of the industry are being successfully met by the training package, with recent updates

to incorporate skills for working with new digital technologies are delivering results. However, there are still challenges in training access and attracting and retaining workers. It is important that accurate data around skills and jobs is available for future planning and strategies to attract and retain workers, particularly data at a regional level to reflect where the industry is located.

Aquaculture is the 'fastest growing food industry in the world'<sup>36</sup>, so the opportunities within the industry are significant. A situational analysis conducted by the Cooperative Research Centre for Northern Australia (CRCNA)<sup>37</sup> established that, by 2030, the aquaculture industry has potential to grow its current production value by five times, which would bring around 1,400 to 2,300 new jobs. The CRCNA assert that this can only occur with ongoing support and planning, infrastructure, research, development and extension, and investment. Skills impact has been contributing to the support and planning work during 2021-2022 through the CRNCA funded Building the Northern Australia Aquaculture Industry project (see below).

Realising the potential of these planned investments in the regions is likely to help attract and retain workers. However, such investments can be a risk, particularly where there are not already-established populations and industries, with

associated education opportunities that lift the skill levels of local populations and associated lifestyle quality issues. Various studies of regional, rural and remote challenges emphasise educational opportunities as central to a regionalisation agenda. This is because good schools and other educational services are attractive to families considering moving to regions. They also enable social mobility and develop the skilled workers that industries require.

The Aquaculture and Wild Catch Industry Reference Committee has identified key priorities in skills and training for the consideration of industry, including:

- support for engaging with employers and RTOs to address training delivery barriers to seafood industry qualifications, potentially including the development of nationally consistent assessment and training materials, and participation in industry attraction and retention programs working with the National Careers Institute and relevant federal, state, territory and industry bodies
- working with the National Skills Commission on accuracy of skills and jobs data in these sectors, including at a regional level, which provides a more accurate representation of skills and training needs than the equivalent at a national or state/territory level.

36 Parliament of the Commonwealth Of Australia (2022); *Supporting a strong future for Australian aquaculture*; House of Representatives Standing Committee on Agriculture and Water Resources; p.3 & v.

37 CRCNA (2020); *Northern Australia aquaculture situational analysis 2020*



## Case study

# Increasing recognition for Aboriginal and Torres Strait Islander Peoples' participation in the fishing industry

At the 2021 World Fisheries Congress, Matthew Osborne (Program Leader, Aquaculture and Regional Development in Northern Territory Fisheries) promoted recognition of the importance of the fishing industry for Aboriginal and Torres Strait Islander people, and the contributions that they continue to make. Indigenous fishing adds value and diversity to the Australian fishing community in its blending of cultural, recreational, commercial, and environmental practices. It has the ability to connect sectors and support a collective representation of Australia's fisheries.

Various programs have been established in northern Australia, including through funded research dedicated to progressing Indigenous participation in fisheries

decision-making, capacity building and economic development. Projects have also been developed and funded across Australia to empower communities and support change, which requires strategies both to impact attitudinal change and regulator policies.

There are recent examples of greater collaboration between Aboriginal and Torres Strait Islander people, government, industry and other fishing stakeholders. These include the development of culturally aligned, community-based fishing operations in the Northern Territory, where Aboriginal people are building coastal fishing businesses and supplying their communities with fresh, affordable seafood. This is resulting in economic development and self-

determination opportunities and enabling the continuation of cultural practices.

It must be noted that there are persisting challenges in unlocking opportunities for Aboriginal and Torres Strait Islander peoples due to limited funding and investment for Indigenous aquaculture projects, education provision shortcomings, a lack of tailored resources, and inadequate support for traditional owner organisations to generate substantive outcomes.



## Projects

Substantial work was undertaken in 2018-2019 to update skills standards and qualifications for the aquaculture and wild catch industry. This included work to incorporate the essential skills for biosecurity, regulation and compliance. In 2019-2020 projects were undertaken to address some key skills gaps in underwater technologies and working with crocodiles. Research and consultation showed no further gaps in the skills standards and therefore no projects were identified for 2021-22.

Visit [skillsimpact.com.au/completed-projects](https://skillsimpact.com.au/completed-projects) for further details.



## Case study

# Building the Northern Australia Aquaculture Industry

Skills Impact participated in a project funded by the Cooperative Research Centre for Northern Australia (CRCNA) and led by James Cook University to follow-up on the analysis of workforce requirements undertaken during 2020 (Skills Impact also provided input into this work).

Aquaculture employers have highlighted the need to build skills to meet industry growth, including aligned training for industry needs and professional development opportunities. They are also seeking ways to promote career opportunities and sustainably deliver needed training in northern Australian, particularly to regional communities.

The project aimed to define the industry's need for specific skills and education levels, map existing training and education providers, and propose improved models for education and training delivery. The work has been completed and should be published in the near future. Keep an eye out for the report on the CRCNA website.

# Food, Beverage and Pharmaceutical



Employs more than  
285,000 people<sup>38</sup>

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Contributes \$31.80  
billion to Gross Domestic  
Product<sup>39</sup>

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Revenue of \$157.89 billion<sup>40</sup>

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There are 27,000  
businesses<sup>41</sup>

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Society is reliant on the skills in the food, beverage and pharmaceutical manufacturing industries to produce products needed by humans and animals alike, whether that be in the form of packaged foods, processed ingredients, bottled beverages, or life-saving and enhancing medicines. This skilled workforce is highly responsive to consumer trends, taking advantage of opportunities for innovation in processing methods and products to satisfy customers' desires. It is through diligence and skills in traceability, automation and contaminant control that the public have access to food, beverage and pharmaceutical products that are high quality and safe.

The national skills standards and qualifications for Australia's food, beverage and pharmaceutical industry are overseen by the Food, Beverage and Pharmaceutical Industry Reference Committee (IRC) and the Pharmaceutical Manufacturing IRC.

38 IBISWorld Industry Wizard (2022)

39 IBISWorld Industry Wizard (2022)

40 IBISWorld Industry Wizard (2022)

41 IBISWorld Industry Wizard (2022)

## Industry Skills Report

This year, Skills Impact has prepared a Food, Beverage and Pharmaceutical Industry Skills Report, at the request of the Industry Reference Committees (IRCs), to provide in-depth information about industry-specific issues impacting skills and training.

The food, beverage and pharmaceutical industries are going through significant transformations, as they adapt to consumer demands and adopt new technologies, while managing challenges from multiple sources, including global market instability, and the COVID-19 pandemic. There are major growth opportunities, with the Federal Government identifying food, beverage and pharmaceutical as strategic industries for Australia, through priority manufacturing strategic plans. The food, beverage and pharmaceutical industries continue to be shaped by longer-term trends that have emerged over the past decade, which impact on work practices, product development and the skills needed by industry employers. Specific concerns that are shaping the Australian food and beverage processing value chain include:

- nutrition and health
- circular economy
- climate change
- food security
- retail competition and concentration.<sup>42</sup>

There is demand from the public for food and beverage products to meet specific medical dietary requirements or health goals. This provides industry with opportunities to develop innovative products, upgrade operational systems and adopt technological solutions.

For example, the confectionery industry faces demands to reduce sugar but maintain sweetness, and is responding by seeking opportunities to enhance the nutritional value of products while not compromising on texture and taste.

Shifting consumer demand is creating opportunities for value chain operators involved in sustainable production and processing healthy foods. According to Lux Research (and many others in the industry) consumption habits are trending towards fresh foods and plant-based proteins, as well as allergen friendly or allergen free products. The soft drink industry, for example, has experienced a 27% decline in the demand for sugar-sweetened beverages over the past few decades and bottled water and non-sweetened drinks have increased by 85%<sup>43</sup>. Non-alcoholic spirits and beer are in greater demand than ever before as are low-calorie, low sugar and low carbohydrate beers and other drinks.

The potential growth of the sector relies upon businesses' ability to process locally and export more high-value goods to overseas markets. The *Food and Beverage National Manufacturing Priority Road Map*<sup>44</sup> states that there are opportunities for food and beverage processors, including small to medium enterprises, to collaborate and invest in research translating innovations into commercial applications and developing new products for existing and emerging markets. While these activities may be out of reach of a single business, through collaboration they may collectively achieve the critical mass to pursue opportunities and share the benefits. This includes collaboration with the agriculture sector.

Recent updates to the *FBP Food Beverage and Pharmaceutical Training Package* have provided improved skilling opportunities and have assisted to identify and meet skills demands throughout the challenges of the last two years. This will continue to be important into the future.

42 Australian Food and Grocery Council (2021); *Sustaining Australia: Food and Grocery Manufacturing 2030 A Refreshing Recovery: A Post-Coronavirus Recovery Blueprint for the Australian Drinks Industry*

43 Australian Government (2021); *Food and Beverage National Manufacturing Priority road map*; p.6

44 Australian Government (2021); *Food and Beverage National Manufacturing Priority road map*; p.ii

The IRC has identified key priorities in skills and training for the consideration of industry, including:

- leading an agribusiness, food and fibre industries skills analysis, workforce planning and development project to identify and address occupational skills gaps related to traceability, provenance and blockchain
- review of qualifications related to baking, and consideration of the need to develop nationally consistent assessment and training materials linked to the relevant occupations, and promotion of career attraction and opportunities for the baking industry
- review of wine operations training products to better meet industry needs.

A review of the *FBP Training Package* has identified relevant products relating to food waste. Developments in this area should be monitored for future consideration.

With the articulation of shared objectives and greater collaboration, the Australian Government envisions that:

**‘By 2030 we will double the value of Australia’s food and beverage manufacturing through a focus on smart food and beverage manufacturing; innovative foods and beverages; and food safety, origin and traceability systems.’<sup>44</sup>**





## Projects

### Project work between 2021-22

Outlined over the following pages is a summary of projects Skills Impact managed between July 2021 and June 2022.

The Food, Beverage and Pharmaceutical IRC and the Pharmaceutical Manufacturing IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications were updated as part of the following projects and were endorsed by AISC and the State and Territory Ministers in 2022. They are published on the national training register ([training.gov.au](http://training.gov.au)) and available for delivery by registered training organisations (RTOs).

Visit [skillsimpact.com.au/completed-projects](http://skillsimpact.com.au/completed-projects) for further details.

### Australian Native and Bush Food Project

The Australian native and bush foods industry is increasing in size, with local and international consumers interested in the unique nutrition and cultural value of these products. Most business in the sector (87%) are expecting to expand in the next five years and new businesses are opening all the time. Only a small number of the 6,400 recognised varieties of Australian native foods have received safety certification for commercial production so far, so there is plenty of room for expansion.

Consultation took place throughout this project to describe the unique skills required to work with Australian native and bush foods across the supply chain, from sourcing and harvesting to preparing products and setting up a business. As a result, national skills standards are now available that describe the unique skills required to set up and participate in Australian native and bush food businesses. Aboriginal

and Torres Strait Islander people have an ongoing and crucial role in this sector and were consulted in the development of these skill sets and units. The developed skill sets and unit also include skills for working respectfully alongside Aboriginal and Torres Strait Islander people and organisations according to appropriate cultural protocols.

### Key Outcomes

- Three skill sets were developed to capture the skills required to:
  - prepare Australian bush and native food products for sale
  - prepare to set up a food production business in the sector
  - and to source and harvest bush and native food.
- A unit of competency was developed to capture the skills required to participate in wild harvesting of plants and/or seed for food processing. The new unit is included in the Certificate II in Food Processing as an elective.



## Sugar Milling Project

Sugar milling is one of Australia's largest rural industries, employing 23,000 people and contributing \$4 billion to the Australian economy each year, according to the Australian Sugar Milling Council. The sugar milling industry regularly undertakes training of their staff in-house, negating the need for registered training organisations (RTOs) to be utilised for delivery or assessment.

Consultation took place at the commencement of this project to consider how the current skills standards for sugar milling could be reconfigured to reflect industry requirements and be more accessible for training providers to deliver. As the project progressed, feedback from industry indicated that delivery of formal training using the national qualifications, skill set and units was not likely in the future. Industry determined that the review should not continue.

The Food, Beverage and Pharmaceutical IRC responsible for this project informed the Department of Education Skills and Employment (DESE) about the feedback received and the DESE confirmed the early cessation of the project and deletion (archiving) of the qualifications, skill set and units.

The qualifications, skill set and units were archived from the national training register on 20 April 2022. They will remain available in their current form for reference but will not be subject to future reviews or updates or be available for the delivery of training by RTOs. There are four units that have not been deleted as they sit within both current food and beverage processing (FBP) and meat processing (AMP) qualifications and need to be retained.

## Completed Projects (started in the previous year)

The following projects were endorsed by the Australian Industry and Skills Committee (AISC). The revised qualifications, skill sets and units, that were developed as part of these projects, are published on [training.gov.au](http://training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### Flour Milling Project

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Consultation took place to review and update the skills standards for flour milling to reflect the technical expertise required to work in the sector, and to support flexible career pathways. As a result, a milling specialisation was developed within the Certificate III in Food Processing, to support the highly technical and sought-after skills involved in flour milling.

### Food and Beverage Processing Project

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Some of the most used food and beverage qualifications were reviewed as part of this project to address an increasingly automated work environment, advances in traceability, shifts in consumer trends and changing regulations. The updated and developed qualifications, skill sets and units incorporate skills to utilise new and emerging food processing technology and systems, address issues around allergens and traceability, work using good manufacturing practice and uphold the Food Standards Code. They have been redesigned so that they are flexible enough to be used across the food and beverage industry for a range of purposes.

### High Volume Production Baking Project

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This project involved a review of the Certificate III in Plant Baking to determine how to best capture the skills standards for this sector. The qualification was revised and renamed the Certificate III in High Volume Baking and incorporates units covering skills and knowledge across all four sub sectors (pastry, cakes, biscuits and bread) to allow flexibility and movement within the industry.

### Pharmaceutical Good Manufacturing Practice

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Consultation took place throughout this project to update national skills standards for pharmaceutical GMP, so that they better reflect industry needs, reflect actual job tasks undertaken by graduates and present fewer barriers in deliverability. This will allow current and future learners to gain the skills they require to produce safe and effective pharmaceuticals for the Australian public.







# Forestry and Timber



Employs around  
63,000 people<sup>47</sup>

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Industry value added:  
\$6.36 billion<sup>48</sup>

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Revenue of 23.112 billion<sup>49</sup>

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Australia's forest, timber and wood related industries are responsible for producing the raw materials for a range of paper and timber products that are essential to daily life, including office supplies, health products and construction materials for buildings, furniture and other structures. Australian forests are a valuable renewable resource, managed by a skilled workforce. While the forest management and harvesting industry is at the forefront of maintaining forests sustainability, this work is supported across the supply chain by the innovations of those who process, design, manufacture and sell wood and timber products.

The national skills standards and qualifications for Australia's forestry and timber industry are overseen by the Forest Management and Harvesting Industry Reference Committee (IRC), Timber and Wood Processing IRC and Timber Building Solutions IRC.

<sup>47</sup> IBISWorld Industry Wizard (2022)

<sup>48</sup> IBISWorld Industry Wizard (2022)

<sup>49</sup> IBISWorld Industry Wizard (2022)

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## Industry Skills Report

This year, Skills Impact prepared a Forest and Timber Products Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

Australia's forest and wood products industries play a major role in mitigating climate change, growing regional communities and stimulating economic activity. The importance of maintaining the skills of the forest and timber products industries has been reinforced in recent years, as industry has navigated challenges including COVID-19, bushfires, climate change and policy changes. Across the supply chain the forest and timber products workforce has contributed to tackling these issues, which have had broad impacts across many industries.

The forest and timber products industry is particularly susceptible to the impacts of climate change compared to other industries. However, it also has a key role to play in addressing it. Forestry is one of the most efficient and effective methods of carbon sequestration. Plantation expansion would help Australia meet its future wood needs, increase carbon stores in the built environment, and contribute to the circular economy through the sustainable, renewable and recyclable potential of timber products.

Attracting people to the industry has been identified by all 11 Regional Forestry Hubs as an industry priority. Many industry stakeholders have undertaken promotional activities in schools and each forestry region either plans to or has undertaken tours and taster programs for young people. Industry is undergoing an image change to highlight evolving

job roles, with a focus on the many technical roles available and a reframing of perceptions of an environment dominated by manual labour.

Employers report that they are happy with the quality of the FWP Training Package, but still need access to RTOs who can deliver the training in a flexible manner while meeting specific workplace needs. Partnerships between RTOs and businesses utilising a workplace-based trainer and assessor model is seen as a solution to improving the disconnect between businesses and the VET system.

The three Industry Reference Committees (IRCs) have identified priorities which they recommend for future consideration, including:

- development of action plans to implement industry identified solutions to address low enrolments and thin markets

- development of industry shared resources to support delivery of accredited training
- identifying digital skills needs using the Digital Workforce Capability and VET framework currently in development (along with other digital capability frameworks). This will need to include development of specific digital skills related to:
  - development of digital forest operational maps
  - development of cutting instructions files for forestry harvesters
  - management and analysis of harvesting optimisation data and
  - collection of forestry data using uncrewed aerial vehicle (UAV).

The Food and Agriculture Organisation (FAO) of the United Nations released a State of the World's Forests Report in May 2022 which reinforces that sustainable forestry is essential to help curb the global climate crisis and help avert major biodiversity loss.<sup>50</sup>

**The Australian Forest Products Association (AFPA) note that:**

- 'Trees capture the most carbon when they are in their early to mid-growth phase, which is why the continuous harvest-and-replant cycle of Australia's forestry operations deliver such good carbon sequestration.'
- 'The average timber framed house stores as much carbon as is emitted by a car driving two-thirds the way around the world.'
- 'Wood products in use in Australia store enough carbon to offset the emissions generated by all the cars on our roads for one year.'



<sup>50</sup> Australian Forest Products Association (2021), Storing Carbon For a Cleaner Future: a Snapshot, <https://ausfpa.com.au/sustainably-managed-working-forests-vital-for-halting-deforestation-and-delivering-climate-goals/>  
<https://ausfpa.com.au/sustainably-managed-working-forests-vital-for-halting-deforestation-and-delivering-climate-goals/>



## Projects

### Project work between 2021-22

Outlined over the following pages is a summary of projects managed by Skills Impact, with support from ForestWorks, between July 2021 and June 2022.

The Forest Management and Harvesting IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following projects are expected to be endorsed by the AISC and State and Territory Ministers later in 2022.

### Responding and Assisting in Bushfires Project

The bushfires of 2019-2020 brought to light the important contributions forestry operators, arborists and other service providers make in clearing and clean-up following bushfires. This is a high-risk activity, requiring strong communication skills and the ability to make assessments about potential hazards.

Consultation has taken place throughout this project to develop units that will support safer and more efficient post-bushfire vegetation clearing and clean-up operations. They describe how to use communication protocols and structures while conducting tasks in a bushfire zone and how to perform tree hazard assessment according to national standards.

Industry was also consulted on the revision of four units for chainsaw operations so that they are accessible for use by non-forestry industries, including agriculture, conservation and ecosystem management, local government and emergency services.

### Key Outcomes

- One unit was developed to address the skills required to use communication protocols and structures in a bushfire zone while conducting tasks such as vegetation clearing and clean-up operations on private and public land, including main roads.
- Two units were developed to address the skills required to perform tree hazard assessment in a bushfire zone. One is designed for personnel authorised to perform tree hazard assessments during the early stages of bushfire recovery to take timely actions to prevent injuries. This unit will be hosted within the Certificate IV in Forest Operations. The other unit is intended for professional arborists who conduct complex assessments of fire-affected or fire-damaged trees as part of the later stages of bushfire recovery. This unit will be consulted on for potential inclusion in the Diploma and Advanced Diploma of Arboriculture as part of a future project.
- Four units on felling and cutting trees with a chainsaw were updated so that they can be delivered and assessed by non-forestry sectors without changing the learning outcomes.

## Sawmilling and Timber Processing Project

Rapid digital transformation and technical progress are shaping the skills needs of the sawmilling and timber processing sectors. Workplaces are integrating state-of-the-art equipment to increase productivity and produce innovative products, including cross laminated timber (CLT) and glue laminated timber (GLT). This has required operators, line technicians, and production supervisors to develop updated expertise.

Thanks to the contributions of everyone involved in this project, qualifications, skill sets and units for timber and wood production have been redeveloped into a more flexible structure and updated to reflect the practical skills required. These updated qualifications and units will provide learners with the opportunity to select subjects that best suit their needs and provide skills that are transferable to a wide range of jobs or occupations. They also reflect the unique requirements for skills development and professional growth at different occupational levels.

### Key Outcomes

- The Certificates at level II and III were consolidated so that there is one qualification available at each level.
- The Certificates II, III and IV were re-named to be certificates in 'Timber and Wood Products Operations' and broadened in their application to support jobs and skills across all operational areas.
- Four specialisations were created for the Certificate III in timber production, glue laminated timber or cross laminated timber production, plywood or laminated veneer lumber production, and reconstituted wood panel production.
- Fifty existing units were updated, with 21 being consolidated into 8, to remove duplication and reflect the current work tasks requirements.
- Eight new units were developed to address skills gaps, including in chain of custody certification principles, mechanical equipment maintenance, engineered wood products and communicating effectively with members of the public or external stakeholders concerned about forest practices.
- Eight skill sets were developed to further enhance flexibility and serve as entry pathways into critical jobs, such as saw technicians and wood machinists, and programs to train future leaders.



## Completed Projects (started in the previous year)

The following projects were endorsed by the Australian Industry and Skills Committee (AISC). The revised qualifications, skill sets and units of competency that were developed as part of these projects, are published on [training.gov.au](http://training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### Entry Level Forestry Skills Project

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The forestry industry requires access to skilled workers in regional and rural locations to deliver on planting commitments and address the future skills needs of industry. Industry representatives volunteered their time throughout this project to update the national entry level qualifications to better meet current skills needs and attract new young entrants. They were updated as part of this project so that they are easier to deliver, better support the career journey of learners and reflect the hands-on skills required.

### High-Level Forestry Skills Project

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With new digital and spatial technologies being adopted by industry, the high-level planning, supervision and management skills required to grow and maintain sustainable forests have been changing. Thanks to the contributions of everyone involved in this project, the qualifications and skills standards that support these skills have been updated to better support career pathways and reflect the current expertise required to grow and harvest forests safely and sustainably. The qualification structure was revised as part of this project, so that they are more flexible, enabling participants to select subjects which best suit their needs.

### Remote Forestry Operations Project

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Specific skills are required to support the physical and mental wellbeing of forest workers who operate in remote locations. Driven by industry, this project was undertaken to capture the safety skills required to promote individual and team safety in remote and isolated conditions. One unit was developed for operational forestry roles to support skills in situational awareness and a safety mindset, and another was designed for those leading small work teams in remote forestry operations to support skills to influence safety culture.





# Meat Processing

Employs over  
98,000 people<sup>51</sup>

Contributes  
\$7.94 billion in value<sup>52</sup>

Revenue of \$52.22 billion<sup>53</sup>

Made up of more than  
6,400 businesses<sup>54</sup>

Australian meat processors  
export over 65% of  
production by value<sup>55</sup>

In 2021, 97.5% of cattle were processed through an establishment accredited under the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS), an independently audited program to demonstrate compliance with animal welfare standards from receipt of livestock to the point of humane processing.<sup>56</sup>

Strong skills in food safety, quality assurance control, animal welfare, and compliance requirements have built up Australia's reputation for producing high quality meat products. This workforce plays an important role in supporting the Australian economy and in providing food that meets a range of cultural and lifestyle needs around the globe.

While COVID-19 has presented challenges, the industry is forecast to continue growing over the next five years<sup>7</sup>. Continued adoption of new technology, including big data and automation, will help industry meet the strong demand for its products while becoming more efficient and sustainable.

The national skills standards and qualifications for Australia's meat processing industry are overseen by the Meat Industry Reference Committee (IRC).

<sup>51</sup> IBISWorld Industry Wizard (2022)

<sup>52</sup> IBISWorld Industry Wizard (2022)

<sup>53</sup> IBISWorld Industry Wizard (2022)

<sup>54</sup> IBISWorld Industry Wizard (2022)

<sup>55</sup> IBISWorld (2022); *Meat Processing in Australia*

<sup>56</sup> Australian Beef Sustainability Framework (2022), *Annual Update 2022*,

[https://www.sustainableaustralianbeef.com.au/globalassets/beef-sustainability/documents/absf\\_update\\_2022\\_web.pdf](https://www.sustainableaustralianbeef.com.au/globalassets/beef-sustainability/documents/absf_update_2022_web.pdf)

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## Industry Skills Report

This year, Skills Impact prepared a Meat Processing Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

The importance of Australia's meat processing industry has been accentuated by the COVID-19 pandemic. Industry has shown the adaptability of its skills throughout this time, meeting strong demand for meat products throughout pandemic-related restrictions while managing the various challenges associated with disrupted supply chains, shipping and workforce availability (which have impacted all industries). Revenue from meat exports has remained high over the past few years, despite volatility associated with the international markets and COVID-19. While food prices are rising around the world, demand for meat products is projected to remain high.

Like many industries, the Australian meat industry is experiencing a labour shortage, with meat processors looking for an average of 26 additional workers per business, and retail butchers looking for an average of four additional workers per business. Two-thirds of meat/smallgoods processors are operating below 80% capacity, while almost half of retail butchers are operating below 80% capacity. Findings from Australian Meat Industry Council research indicate a complexity of reasons for this.

There is also a need for higher-level skills, including increased safety skills relating to biosecurity issues and infection control. The importance of these skills has been reiterated by the recent outbreaks of lumpy skin

disease and foot and mouth disease in countries to the north of Australia. The Australian meat processing industry has built a strong reputation for producing 'clean and green' products through the demonstration of biosecurity skills, providing a point of difference in local and international markets. Industry continues to work hard in this area to prevent incursions and prepare for containment of disease should it reach the country. Addressing labour shortages will assist in maintaining the Australian meat processing industry's strong image.

The IRC has identified priorities for consideration in future:

- the next stage (Stage 2 of 3) of the AMP Training Package Whole of Training Package/Core and Foundation Qualifications project
- evaluation of Stage 1 of the Whole of Training Package/Core and Foundation Qualifications approach for the AMP Training Package
- training and assessment materials to support the delivery of recently updated and new training products for the meat processing sector.

# Projects

## Project work between 2021-22

Outlined over the following pages is a summary of the projects managed by Skills Impact, with support from MINTRAC, between July 2021 and June 2022.

The Meat IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following projects are expected to be endorsed by the AISC and State and Territory Ministers later in 2022.

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## Meat Processing, General, Quality and Safety Skills Project

The Australian meat processing workforce possesses core skills in safety, quality assurance, and leadership that underpin its ability to produce high quality meat products. It is important that the qualifications and skills standards that describe these skills are kept up to date, as they are essential for roles throughout the entire meat processing industry – from entry level positions through to management and across all kinds of processing.

Consultation took place throughout this project to review and update qualifications and skill standards that describe some of the core skills used throughout Australia's meat processing industry. As a result, the qualifications have been streamlined to promote flexible career pathways and transferability throughout different sectors.

This project is the first of a three-part process to update the entire Meat Training Package to address duplication, adjust units to better reflect the level of task described, and remove skills standards that are no longer working for industry. This will support career pathways and make the training package easier to deliver.

### Key Outcomes

- Seven qualifications have been reviewed and some merged to become four updated qualifications. Changes have been made to improve flexibility and promote career pathways and better match with current and future occupations. Nested qualification content and the point system have been removed to better reflect job outcomes, support flexibility and ensure compliance with Standards for Training Packages. Merged qualifications have been structured to provide either a general meat processing qualification or a specialisation. Mandatory work requirements have been retained where needed to ensure users can easily identify requirements and so that the qualifications are comparable to international qualifications in countries to which Australian meat is exported.
- Three additional qualifications have been updated to reflect the revised units, with one receiving a code change as a result.
- Two skill sets have been developed: one for meat processing mentors and one to act as a pathway into the Certificate IV meat qualifications.
- One skill set in animal welfare has been updated.
- One hundred and seventeen units have been reviewed and updated to clarify assessment conditions and better match job roles, including 15 merged to become two.
- Seven units have been developed to support skills in communication, meat safety, quality, and workplace health and safety. Two of these units are to cover the job roles of meat inspectors in micro meat processing enterprises that are located in some regional and remote areas.
- Three units are proposed for deletion and seven are identified for potential deletion as part of future projects.
- A Training Package Companion Volume Implementation Guide (CVIG) has also been produced to support delivery of the qualifications, skill sets and units.

## Completed Projects (started in the previous year)

The following projects were endorsed by the Australian Industry and Skills Committee (AISC). The revised qualifications, skill sets and units, that were developed as part of these projects, are published on [training.gov.au](http://training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit [www.skillsimpact.com.au/completed-projects](http://www.skillsimpact.com.au/completed-projects) for further details.

### Meat Rendering Project

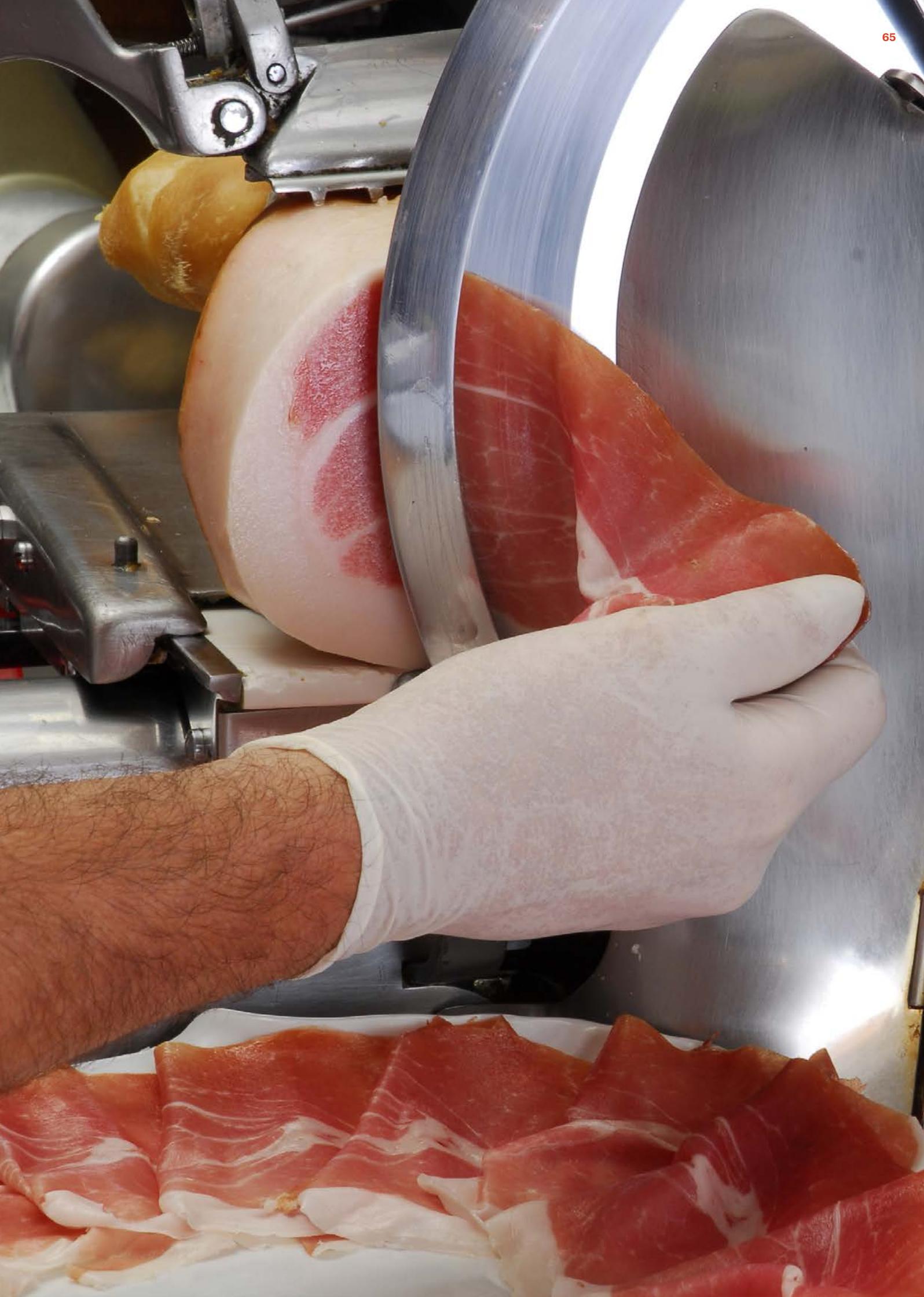
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Meat rendering and pre-rendering processes play a key role in the sustainability of the meat processing industry by transforming animal by-products into stable and useable material. Feedback was collected throughout this project to review the qualification and skills standards for rendering and pre-rendering processes so that they reflect changes in industry operations, equipment and terminology. The Certificate III in Meat Processing (Rendering) was redesigned to better align with the level of skills required and the diversity of rendering operations. Rendering and pre-rendering units were updated, and three skill sets were also developed to capture the unique skills required for this work.

### Meat Slicing Project

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Meat slicing techniques are used in a range of environments to safely and hygienically prepare products to customer specifications. Expertise for this work was previously supported by the unit AMPS207 Slice product using simple machinery, which was specific to the smallgoods sector and not accessible to workers in other environments. Consultation took place throughout this project to update the unit so that it is relevant to the various sectors that use these skills and to reflect personal and food safety skills. Skill sets and qualifications that contain the unit were also updated to include these changes.



# Pulp and Paper Manufacturing



Employs over  
15,000 people<sup>57</sup>

Over 600 businesses<sup>58</sup>

Industry value added  
\$2.51 billion<sup>59</sup>

Revenue of \$10.75 billion<sup>60</sup>

'Australia's Pulp and Paper Manufacturing industry generates products that can be found in virtually every business and household across Australia, ranging from the paper used in books and magazines to cartons, paper stationery, tissues, nappies, paper towels and sanitary goods.

A world leader in sustainability and innovation, the Pulp and Paper Manufacturing industry uses independently certified renewable resources, internationally recognised best practices for recycling, and continuously improves its energy/water efficiency and emissions.<sup>61</sup>

Australia is reliant on the skills of the pulp and paper workforce to produce a range of essential everyday products, from printing and packaging materials to sanitary and medical supplies. Over the past few years, industry has continued to use its skills to meet a range of challenges, from supply chain issues and market disruptions to natural disasters and harvesting bans.

There continues to be strong demand for pulp and paper products, especially as industry adapts to meet consumer demand for more eco-friendly and sustainable options. Industry is exploring further expansion in this area, with a push for even more re-use and recycling in the production process through methods including bio-manufacturing and recovered paper. Through such innovations, the pulp and paper industry has an important role to play in mitigating climate change, growing regional communities and stimulating economic activity.

The national skills standards and qualifications for Australia's pulp and paper manufacturing industry are overseen by the Pulp and Paper Industry Reference Committee (IRC).

57 IBISWorld Industry Wizard (2022)

58 IBISWorld Industry Wizard (2022)

59 IBISWorld Industry Wizard (2022)

60 IBISWorld Industry Wizard (2022)

61 AISC (2022); *Industries / Pulp and Paper Manufacturing*;

<https://nationalindustryinsights.aisc.net.au/industries/pulp-and-paper-manufacturing>; visited: 31/08/2022

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## Industry Skills Report

This year, Skills Impact prepared a Pulp and Paper Manufacturing Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

Australia's pulp and paper manufacturing industry is committed to sustainability and innovation, with key growth areas in food, retail and e-commerce packaging, and converted paper product manufacturing. While digitisation and remote working have contributed to the steady decline of newsprint and general paper consumption, there are opportunities for industry to expand into other areas such as bioenergy and biomass.

Industry continues to be at the forefront of the push for a circular economy where the cycle of 'make, use, dispose' is replaced by the philosophy of reusing and recycling, so that maximum value can be extracted from resources while minimising waste. Updated skills will be needed as industry moves towards these kinds of practices.

The pulp and paper manufacturing industry supports thousands of jobs in regional areas, including transport, logistics and supply chain operations in addition to those directly employed in mills. The industry is characterised by a very stable workforce with low attrition rates. However, new entrants will be needed in the next decade to replace the aging workforce.

The industry remains committed to and works hard to stimulate engagement and connection with the VET system. At the time of writing, there is no Registered Training Organisation (RTO) with any pulp and paper manufacturing (PPM) qualifications on scope. The Industry Reference Committee (IRC) continues to maintain that the VET system needs to support a more flexible and innovative delivery model that allows for workplace-based and workforce-based training and assessment under the supervision of an RTO. Long-term investment in the capabilities and skills of the pulp and paper workforce is crucial.

The 2021 complete review of the *Pulp and Paper Manufacturing Industry (PPM) Training Package* was an important milestone in the IRC's goal to have the qualifications accurately reflect the current innovative technology and operations of the businesses operating in the industry.

The IRC considers the training package to sufficiently reflect the functions of the industry and that priority work to support the industry will be in other parts of the skills system. There is a critical need to secure training pathways leading to VET enrolments in the new qualifications, skill sets and units.

With respect to future work to support engagement with the VET sector, the IRC has identified priorities that they recommend for future consideration, including:

- development of action plans to implement industry identified solutions to identify and address low enrolments and thin markets
- development of industry-shared resources to support the implementation and delivery of the PPM Training Package
- furthering the industry strategy to develop and maintain a sustainable RTO delivery model.

## Projects

### Project work between 2021-22

The following project was completed by Skills Impact, with support from ForestWorks, between July 2020 and June 2021.

The Pulp and Paper Manufacturing IRC oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs.

The skills standards and qualifications updated as part of the following project were endorsed by the AISC and State and Territory Ministers in late 2021 and published on the national training register ([training.gov.au](http://training.gov.au)) within the PPM Pulp and Paper Manufacturing Industry Training Package on 11 February 2022.

Research and consultation showed no further gaps in the skills standards and therefore no more projects were identified for the 2021-22 period.

Visit [skillsimpact.com.au/completed-projects](http://skillsimpact.com.au/completed-projects) for further details.

## Completed Project (started in the previous year)

### Pulp and Paper Manufacturing Review Project

Thanks to the input of everyone involved in this project, the entire PPM Pulp and Paper Manufacturing Industry Training Package was updated and restructured to reflect current technology, terminology and processes. Qualifications, skill sets and units were merged where possible, to streamline learning and

better reflect job roles. Qualifications were reviewed so that skills in problem solving, workplace health and safety, and quality assurance skills were included as core skills. Units were updated to include skills for operating emerging technologies where applicable. Consultation with registered training organisations (RTOs) also took place, to improve the viability of training delivery.



# Racing and Breeding

Employs more than  
26,600 people<sup>62</sup>

Made up of more than  
5,000 businesses<sup>63</sup>

Contributes almost  
\$1 billion to Gross  
Domestic Product<sup>64</sup>

Revenue of \$4.45 billion<sup>65</sup>

63% of employees reside  
in regional Australia,  
where 51% of the industry's  
economic activity is  
generated<sup>66</sup>

There are 371 Australian  
Racing Clubs<sup>67</sup>

There are around 4.5  
million attendances at race  
meetings every year<sup>68</sup>

More than 700 million  
people watch the  
Melbourne Cup worldwide<sup>69</sup>

100,000 racehorse owners  
invest in Australian racing<sup>70</sup>

Australia's racing and breeding industry is dependent on a workforce with a high-level of skills in safety and animal welfare to produce successful events and care for animals throughout their careers and lives. For those preparing animals to race, expertise in training, nutrition and biomechanics is required to keep animals physically healthy. There is also a need for skills in retraining, to support animals transitioning to breeding or other environments. Knowledge of pedigrees, business management, biosecurity and regulations are also important to support these hands-on skills and maintain the integrity of the industry.

The national skills standards and qualifications for Australia's racing and breeding industry are overseen by the Racing and Breeding Industry Reference Committee (IRC).

62 IBISWorld Industry Wizard (2022)

63 IBISWorld Industry Wizard (2022)

64 IBISWorld Industry Wizard (2022)

65 IBISWorld Industry Wizard (2022)

66 Racing Australia (2021); Fact Book 2021

67 TB Industry Careers (2022); The Industry; <https://tbindustry careers.com.au/the-industry/>; visited: 31/08/2022

68 TB Industry Careers (2022); The Industry; <https://tbindustry careers.com.au/the-industry/>; visited: 31/08/2022

69 TB Industry Careers (2022); The Industry; <https://tbindustry careers.com.au/the-industry/>; visited: 31/08/2022

70 TB Industry Careers (2022); The Industry; <https://tbindustry careers.com.au/the-industry/>; visited: 31/08/2022

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## Industry Skills Report

This year, Skills Impact prepared a Racing and Breeding Industry Skills Report, at the request of the Industry Reference Committee (IRC), to provide in-depth information about industry-specific issues impacting skills and training.

Thanks to a high-level biosecurity and health protocols, the racing and breeding industries have experienced less disruption than many other industries over the last two years, allowing continuation of the industry in most jurisdictions. However, some activities were curtailed, especially in regional, rural and remote areas, with disruptions to breeding sales around the country and the cessation of all three racing codes in Tasmania for some of 2020.

While career opportunities are available in racing and breeding, attracting labour remains one of the biggest challenges for the industry. Industry is making considerable efforts to address this, focusing on attracting the next generation of workers to fill this gap. The addition of the occupation of track rider to the ANZSCO Codes has been welcomed by the industry, opening avenues to address a major skills shortage.

Recent updates to the training package have been working well. However, COVID-19 has been disruptive to training and proved a barrier to some RTOs placing qualifications on scope. Even in this environment, industry participants are actively seeking to promote skills and training opportunities, through a myriad of industry-led education initiatives.

A number of integrity (Stewards) bodies have also been looking at ways to facilitate training and skills gaps. Skills impact has been communicating with bodies to ensure the national training package remains relevant and that consideration is being given to relevant training across jurisdiction and sectors.

The IRC suggests that the priorities of for industry skills and training in future should include any support that can be given to attracting new entrants to the industry, including:

- creating nationally consistent assessment and training resources across all qualifications, with immediate priorities for track riders and stewards/integrity qualifications
- activities to support engagement with employers that have identified RTO barriers to delivery
- mapping of career pathways to assist the National Careers Institute to address critical workforce shortages through the promotion of careers
- review of RGR40221 Certificate IV in Racing (Jockey) to remove prerequisites and duplications, included in the core concerning riding, to free up training hours to include updated skills required to fill training gaps.





## Projects

### Project work between 2021-22

The qualifications updated as part of the following project were endorsed by the AISC and State and Territory Ministers between July 2021 and June 2022. The qualifications are published on the national training register ([training.gov.au](https://training.gov.au)) and available for delivery by registered training organisations (RTOs).

The Racing and Breeding Industry Reference Committee (IRC) oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the project met stakeholder needs.

## Completed Project (started in the previous year)

### Greyhound Racing Careers and Jockeys Project

Thanks to the contributions of everyone involved in this project, the skills required for those starting a career in the racing industry and the expertise required to be a jockey are accurately described in national qualifications. The Certificate II in Racing Industry has been updated to better reflect the skills requirements of entry level careers in the racing industry across all codes, including thoroughbred, harness and greyhound. The Certificate IV in Racing (Jockey) was revised to reflect the expertise required to race thoroughbred horses. As a result, industry can be confident these qualifications capture skills to promote the health and safety of riders and horses across the industry.

# Reform of the Australian Skills System: Future Priorities and Potential Work

Skills Impact has been an active participant in much of the work being undertaken to reform the Australian Skills System.

The Federal Government, State and Territory Ministers, the Australian Industry and Skills Committee (AISC), State and Territory Training Authorities and the Federal Department have been engaged in a VET reform process throughout 2021 and 2022. Details can be found on the VET Reform website.

## Skills Impact Participation

Over the last few years, the Industry Reference Committees (IRCs) Skills Impact works with have identified common elements they would like to see improved in the skills system. We have reported these through direct contact with the Department, submissions to inquiries and consultations, and presentations to VET bodies and conferences.

Some themes have been clearly heard and reforms are underway to incorporate feedback. In particular, it seems as though eventual reforms will:

- seek to expand the involvement of industry in the skills system beyond the current area of skills standards development

- consider separating Industry Skills Standards from development of detailed curriculum or training standards
- have a greater focus on support outside of metropolitan areas.

Skills Impact has been asked to obtain industry input and participate in many elements of the skills system reform, such as improving industry leadership of the system, reviews of the Australian Qualifications Framework, review of ANZSCO Codes and the proposed VET Digital Framework, and to a lesser degree limited participation in qualifications reform and RTO quality approaches.

## New Industry Engagement Arrangements Progress

It has been announced that the current system, overseen by the AISC and IRCs with support from Skills Service Organisations like Skills Impact, will end in 2022.

Industries with an interest in the VET system have been asked to get together to create 'Industry Cluster' organisations to support industry leadership across additional

elements of the Australian Skills System, beyond the current coverage of training package product development.

Industry bodies approached Skills Impact to work on a proposal to create such an organisation, and a detailed submission was made in March 2022. Skills Impact worked with industry representatives and current partners, MINTRAC and ForestWorks, to develop the proposal which received more than 200 letters of support from employers, unions, peak and representative bodies, and training organisations.

The purpose of the Industry Clusters is to embed industry engagement in VET at both strategic and operational levels. Working closely with training providers, these organisations will ensure on-the-ground delivery issues are considered early in the design of training products, training delivery meets learner and employer needs, and the impacts of delivery are monitored to drive continuous quality improvement. Industry Clusters will have primary responsibility for managing and resolving disputes prior to submission of training



products for approval. The new organisations are being asked to consider undertaking a broad range of functions across the skills system, including:

- Workforce planning – addressing workforce challenges through use of high-quality data and evidence to identify current and emerging skills needs, including through collaboration with Jobs and Skills Australia. Strategies will be developed to address skills needs across a range of educational pathways, including VET and higher education.
- Training product development – developing training products aligned with the standards set by Skills Ministers to improve the quality, speed to market and responsiveness of nationally-recognised training products. This includes piloting emerging products and testing new approaches to meet workforce, skills, and industry needs. It also includes removing product duplication and proliferation, ensuring products can be

used across industries where appropriate, and being responsible for resolving stakeholder disputes prior to submitting training products for approval.

- Implementation, promotion and monitoring – working with training providers to build an end-to-end approach to training product development and implementation and working with the National Careers Institute to develop and promote career pathways into, within and across industries.
- Industry stewardship – acting as a source of intelligence on issues affecting their industries and providing advice on national training system policies.

### Qualifications Reform Progress

Work continues on qualifications reform including ideas on streamlining qualifications by using an ‘industry family’ approach has been considered. This will require changes to the current VET Standards relating to training package development.

The qualifications reform feedback report highlights three major outcomes:

- Qualifications based on appropriately grouped occupation and skills clusters to deliver broader vocational outcomes for students. This includes supporting stronger recognition of cross-sectoral and transferable skills.
- Simplifying products and removing complexity through the separation of occupational and training standards, to reduce the level of prescriptive conditions in current qualifications and make better use of industry and educationalist expertise.
- Stand-alone and/or stackable short form training products, with improved pathways advice to support students to rapidly upskill or reskill to pursue career opportunities. This includes facilitating stronger articulation pathways between school, VET, and higher education to support lifelong learning.

# Award Winning Skills

## Congratulations to the National Training Award Finalists for 2021

We were delighted to see finalists from the industries we work with in this year's National Training Awards. The awards showcase best practice in VET and are a wonderful way to celebrate the achievements of learners, teachers and employers. Read about the winners and finalists from the industries we work with below.



**Maryke Gray**

**Teacher/Trainer of the Year  
Runner-up**

*Employer: Central Regional TAFE*

Maryke has a passion for ensuring that all students have the same opportunity to receive a quality education, no matter where they live. Maryke's innovative programs are delivered using various methods, with the Aboriginal Ranger training programs delivered entirely on Country. Managing several key conservation projects with industry partners, Maryke incorporates these into her training and her students gain current best practice knowledge and valuable insights by working alongside specialists in the workplace.



**David Lowery**

**Aboriginal and Torres Strait Islander  
Student of the Year Finalist**

*Certificate IV in Forest Operations*

David was working in the forest industry as a supervisor when he chose to study Certificate IV in Forest Operations. Training helped him understand more about his position and the way he could improve the way he worked in all aspects of the industry, from safety to the management of workers. Further study has also helped David gain more skills to move to a new position as a land management coordinator for the Tasmanian Aboriginal Centre, where working in the community has allowed David to connect more with his people, culture and Country.



**Zoe Tucker**

**Vocational Student of the Year  
Runner-up**

*Certificate IV in Landscape Design*

Zoe has always been a creative person and after pursuing several job roles, it became clear that landscape design was the career path that would best utilise her creative talents. As a parent, studying part-time allowed her the flexibility to manage her training and family commitments. On completing the Certificate IV in Landscape Design and winning the Western Australia Landscape Designer Award (student category), Zoe now plans to expand her practical industry experience for a few years before continuing her training.



## Batchelor Institute of Indigenous Tertiary Education

### Large Training Provider of the Year Award Finalist

The Batchelor Institute is well on the way to realising its vision to be the First Nations' institution of choice, where truth, knowledge and wisdom meet. The Institutes' work is framed and guided by providing training, research and lifelong education in line with what their students, families, partners and communities seek, strengthening culture, capability and capacity. The Institute delivers a range of nationally accredited and recognised VET and secondary education courses spanning many industries including Certificate II and III in Conservation and Ecosystem Management.



## Taminmin College

### Small Training Provider of the Year Award Winner

Taminmin College is the largest school provider of VET programs and the only agricultural secondary school in the Northern Territory. As a rural school-based RTO, it caters for 1,250 students from Years 7 to 12. The College offers a range of nationally accredited and recognised VET and secondary education courses spanning many industries, including animal care and management, agriculture, horticulture, conservation and ecosystem management, seafood, and racing and breeding.



## Pups4fun

### Medium Employer of the Year Award Finalist

Pups4fun is the largest dog day-care provider in Canberra, caring for over 620 dogs a week. Pups4fun focuses on training their employees and apprentices to deliver outstanding services and programs, with extensive in-house and online training. This year they have been able to enrol employees into the Certificate II in Animal Studies, including two Australian School-based Apprentices.



## St Raphael's Catholic School

### School Pathways to VET Award Finalist

Saint Raphael's has been part of many successful vocational education partnerships between its students and local businesses to facilitate training and workplace experience. The school actively encourages school-based apprenticeships and traineeships by providing a flexible timetable that supports the needs of both students and their employers, delivering several nationally accredited training options including the Certificate II in Agriculture.



## TAFE Queensland

### Large Training Provider of the Year Award Finalist

TAFE Queensland operates across a network of more than 50 campuses, in the workplace and online, providing a state-wide delivery model. This supports its commitment to working with students from various socio-economic backgrounds, remote locations and students with diverse needs. TAFE Queensland's current training curriculum spans more than 520 programs from entry-level qualifications to higher education degrees, including agriculture and horticulture.

# Thank you for your contributions

Since 2016, Skills Impact has worked with 12 Industry Reference Committees (IRCs) to benchmark learning and skills standards as part of its Skills Service Organisation (SSO) role. Through the IRCs and broader consultation with industry, we have been able to track industry trends and document skills opportunities and challenges.

Approximately 6,250 people from across industry and the vocational education system have provided time and expertise to review and develop vocational units of competency, skill sets and qualifications over our time in the SSO program. Given the sheer scale of participation, the lists below do not include the names of everyone who attended a meeting or commented on the draft document or every organisation who volunteered their own resources to the work. However, every contribution has been useful and appreciated. Important input has been made to the projects by industry experts, employers, trainers, and managers, as well as representatives from registered training organisations, State and Territory Training Authorities, peak bodies, associations, community organisations, unions, and local, state and federal government.

Our staff – many of whom come from the industries we work with or the tertiary education system – have shown a passion for workforce development and a dedication to industry having a voice in the skills standards of their workforce. The teams from ForestWorks and MINTRAC have demonstrated a similarly high level of commitment to supporting their industries' skills and training needs.

**We would like to take the opportunity to thank everyone who has been part of the projects and activities undertaken in our SSO role.**

If your name is missing from any of these lists, please get in touch with us at [inquiry@skillsimpact.com.au](mailto:inquiry@skillsimpact.com.au) and we would be happy to update the document.

## To all Industry Reference Committee (IRC) Members past and present

### **Agriculture and Production Horticulture IRC**

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Dianne Fullelove  
*Fresh Growth*

Geoff Harvey  
*Irrigation Australia*

Gordon Verrall  
*Department of Primary Industries and Regional Development WA*

Grady Powell  
*Western Australian Farmers*

Greg Owens  
*Northern Territory Farmers Association (NT Farmers)*

Jacqueline Heap  
*TAFE NSW*

Jane Wightman  
*Horticulture Innovation Australia Limited*

Jay Cummins  
*Horticulture Innovation Australia Limited*

John Kargotich  
*Western Australian Farmers*

Judi Forsyth  
*Central Regional TAFE (WA)*

Mark Fagan  
*Australian Workers Union - National*

Meg Parkinson  
*Meg Parkinson Associates*

Rebecca Fing  
*Cotton Australia*

Reginald Kidd  
*National Farmers Federation (NFF)*

Rick Whistler  
*Department of Agriculture and Fisheries QLD*

Rob Fenton  
*TAFE NSW*

Ron Paynter  
*Paynter Farms Ellinbank*

Shane Hellwege  
*Dairy Australia*

Shane Roulstone  
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#### Pest Management Project 2018-19

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### Pig and Poultry Farming Project 2021-22

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### Work Safely Around Animals (Infection Control) 2018-19

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#### Fisheries Compliance Project 2018-19

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### Fishtech and Aquabotics Project 2019-20

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### Work with Crocodiles Project 2019-20

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### Food and Beverage Industry

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#### Advanced Wine Operations Skills Project 2019-20

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#### Artisanal Food and Beverage Processing Project 2018-20

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### **Australian Native and Bush Food Project 2021-22**

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### **Flour Milling Project 2020-21**

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### **Food and Beverage Manufacturing – Cross Sector Project 2017-18**

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### **Food and Beverage Processing Project 2019-21**

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### **Food Science and Technology Project 2017-18**

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### **High Volume Production Baking Project 2020-21**

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### **Retail Baking Review Project 2016-17**

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### **Rice Processing Project 2017**

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### **Sugar Milling Project 2021-22**

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### **Wine Operations Project 2017-18**

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### **Forest and Timber Industry**

#### **Advances in Woodmachining and Sawdoctoring Project 2018-19**

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**Cross Laminated Timber Building Systems Project 2017-18**

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**Forest Harvesting Optimisation Project 2017**

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**New Timber Harvesting Technologies Project 2019-20**

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**Prefabricated Building Systems Project 2017-18**

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**Entry Level Forestry Skills Project, High-Level Forestry Skills Project, and Remote Forestry Operations Project 2020-22**

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Anthony Wise  
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 Nathan Baratta  
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 Peter Fagg  
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### **Responding and Assisting in Bushfires Project 2021-22**

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### **Sawmill Timber and Process Optimisation Project 2018-19**

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### **Sawmilling and Timber Processing Project 2021-22**

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### **Timber Merchandising Project 2019-10**

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 Rani Thulsay  
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 Tim Johnston

### **Timber Truss and Frame Estimating and Design Project 2019-20**

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## Meat Industry Project Contributors

### Animal Welfare (Meat) Project 2017-18

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### Diploma and Advanced Diploma in Meat Processing Project 2019-20

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### Game Harvesting Auditing Project 2019-20

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### Halal Meat Processing Project 2019-20

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### Meat Processing, General, Quality and Safety Skills Project 2021-22

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### Meat Processing Project 2018-19

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### Meat Rendering and Meat Slicing Projects 2020-21

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### **Poultry Processing Project 2019-20**

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### **Pharmaceutical Manufacturing Industry**

#### **COVID-19 Critical Response Project 2020**

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This project was undertaken in response to a request by the Australian Industry and Skills Committee Emergency Response Sub-Committee, as there was a need for a skill set for pharmaceutical manufacturing operators. Given the urgency of the project, it was informed directly by members of the Pharmaceutical Manufacturing Industry Reference Committee. Thank you to everyone involved.

#### **Pharmaceutical Bioprocessing 2019-21**

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### **Pharmaceutical GMP Project 2021-22**

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#### **Pharmaceutical Manufacturing Standards Project 2017-18**

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### **Pulp and Paper Manufacturing Industry**

#### **Pulp and Paper Manufacturing Review Project 2020-22**

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### **Pulp and Paper Manufacturing Safety Compliance Project 2017-18**

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### **Racing and Breeding Industry**

#### **Greyhound Health Assistance Services Project, Horse Breeding Skills Project and Retraining Horses and Greyhounds to New Environments Project 2018-19**

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### **Greyhounds Project (animal welfare and racing integrity) 2017**

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Karen Dawson  
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### **Greyhound Racing Careers and Jockeys Project 2020-21**

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### **Racing Project 2017-18**

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### **Cross Sector Projects**

#### **Environmental Sustainability Skills Project 2019**

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#### **Environmental Sustainability Skills Case for Change Project 2017**

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### **Automation Skills Case for Change 2017**

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## To the key organisations that have been part of our work

AgForce Queensland	Australian Federation Greyhound Owners, Breeders & Trainers Association	Australian Oilseeds Federation	Eastern Zone Abalone Industry Association
AgriFutures	Australian Fisheries Management Authority	Australian Pork Limited	Engineered Wood Products Association of Australasia Ltd
Allied Pinnacle	Australian Food and Grocery Council	Australian Prawn Farmers Association	Equestrian Australia
Animal Care Australia	Australian Forest Contractors Association	Australian Southern Bluefin Tuna Industry Association (ASBTIA)	Equine Dental Association of Australia
Animal Emergency Incident Management Network ANZ (AEIMN)	Australian Forest Products Association	Australian Specialist Cheesemakers' Association	Fonterra Australia Ltd
Animal Health Australia	Australian Golf Course Superintendents Association AGCSA	Australian Sugar Milling Council	Food Fibre and Timber Industries Training Council
Animal Management in Rural and Remote Indigenous Communities (AMRRIC)	Australian Grape and Wine Incorporation	Australian Technical Millers Association	Food Innovation Australia
Animal Medicines Australia	Australian Horse Industry Council (AHIC)	Australian Trainers Association	Forest Industry Council
Animal Therapies Ltd	Australian Industry Group	Australian Veterinary Association (AVA)	Forest Products Commission WA
Animal Welfare League	Australian Institute of Animal Management (AIAM)	Australian Wool Innovation (AWI)	Forestry Australia
Aquaculture Council WA	Australian Institute of Food Science and Technology	Australian Workers' Union	Frame and Truss Manufacturers Association (FTMA)
Arboriculture Australia	Australian Institute of Horticulture (AIH)	Baking Association of Australia	Freedom Foods
Asahi Holdings Australia Pty Ltd	Australian Institute of Packaging	Bega Cheese Limited	George Weston Foods
Ashton Valley Fresh	Australian Institute of Jockeys Association	Canegrowers	GrainCorp
Assistance Dogs Australia	Australian Lot Feeders Association (ALFA)	Carlton and United Breweries	GrainGrowers
Australasian Meat Industry Employees Union AMIEU	Australian Manufacturing Workers Union	Casella Family Brands	Grains Research & Development Corporation
Australian and New Zealand Laboratory Animal Association (ANZLAA)	Australian Maritime Safety Authority (AMSA)	Cattle Council of Australia	Greening Australia
Australian Association of Bush Regenerators Inc AABR	Australian Meat Industry Council	CFMEU Manufacturing	Greenlife Industry Australia
Australian Barramundi Farmers Association (ABFA)	Australian Meat Processor Corporation	Clean Seas	Greyhounds Australasia
Australian Beverages Council	Australian Native Food and Botanicals	Conservation Volunteers Australia	Guide Dogs Australia
Australian Chicken Growers Council	Australian Network for Plant Conservation	CopRice	Harness Racing Australia
Australian Conservation Foundation		Cotton Australia	Horse Safety Australia
Australian Dairy Products Federation		Cotton Research and Development Corporation	Horticulture Innovation Australia Limited
Australian Distillers Association		Council of Rural Research and Development Corporations	Huon Aquaculture
Australian Eggs		Dairy Australia	Independent Brewers Association
		Department of Agriculture, Fisheries and Forestry	Indigenous Land and Sea Corporation
			Industry Skills Advisory Council NT
			Institute of Brewing and Distilling

Irrigation Australia	Nursery and Gardens Industry QLD	RSPCA Australia Inc	Association
Kailis Bros	Nursery and Gardens Industry SA	Saputo - Warrnambool Cheese and Butter	Timber NSW
Kialla Pure Foods	Nursery and Gardens Industry TAS	Seafarms Group	Timber Queensland
Landcare Australia	Nursery and Gardens Industry VIC	Seafood Industry Australia	Tip Top Bakeries
Landscape Asscoiation NSW / ACT	Nursery and Gardens Industry WA	Seafood Industry Victoria	Turf Australia
Landscape Industry of Western Australia	Parks and Leisure Australia (PLA)	Sheep Meat Council of Australia	Uncle Bob's Bakery
Landscape Queensland	Pastoralists and Graziers Association of Western Australia (PGA)	Sheep Producers Australia	United Workers Union
Landscape Victoria	Pearl Producers Association	Simplot Australia Pty Ltd	Veterinary Nurses Council of Australia (VNCA)
Lion Dairy & Drinks	Pearl Producers Association (Australian South Sea Pearls)	Soils For Life	Vic Forests
Maize Association of Australia	Pet Food Industry Association of Australia	South Australian Wine Industry Association	Victorian Association of Forest Industries
Manildra Group	Pet Industry Association of Australia (PIAA)	Southern Rock Lobster Council	Victorian Farmers Federation
Maritime Union of Australia	Pets Australia	SPC Ardmona	Western Australian Farmers
Master Landscapers South Australia	Petuna Aquaculture	Sports Turf Association of Australia STA	Western Australian Fishing Industry Council
Maxima Opportunity	Petuna Seafood	Starward Whisky	Wilmar Sugar Mills
McCain Foods Australia	PF Olsen	Stock Feed Manufacturers' Council of Australia	Women in Seafood Australasia
Meat & Livestock Australia	Plant Health Australia	Stone and Wood	Wool Producers Australia
Medicinal Cannabis Industry Australia	Primary Industries Skills Council SA	Sugar Research Australia	Woolworths Group Limited
Melbourne Seafood Centre	Primary Producers SA	SunRice	Yalumba Wine Company
National Baking Industry Association	Protected Cropping Association	Sunshine Sugar	Young Henry's Brewing Company
National Cutting Horse Association (NCHA)	Professional Fisherman's Association	Sustainable Timber Tasmania	Zoo and Aquarium Association
National Farmers Federation (NFF)	Queensland Farmers' Federation	Sydney Fish Market	
National Irrigators Council of Australia	Queensland Seafood Industry Association	Tasmanian Farmers and Graziers Association	
National Landcare Network	Queensland Seafood Marketers Association	Tasmanian Seafood Industry Council	
Nestlé Australia Ltd	Racing Australia	Tassal	
Northern Australia Land and Sea Management Alliance	Real Pet Food Company	The Allergen Bureau	
Northern Territory Cattleman's Association	Ricegrowers' Association of Australia	The Master Fish Merchants Association of Australia	
Northern Territory Farmers Association (NT Farmers)	Ridley	Therapeutic Goods Administration	
Northern Territory Seafood Council		Thoroughbred Breeders Australia	
NSW Farmers Association		Thoroughbred Industry Careers	
Nursery and Gardens Industry NSW / ACT		Timber and Building Materials Association (TABMA)	
		Timber Merchants	

## Other people that make the training package projects possible, including all our contractors

### Training package developers

Anna Henderson  
Jenni Oldfield  
Lina Robinson  
Maree Thorne  
Peter Miller  
Ron Barrow  
Sue Hamilton

### TPCMS Contractors

Josephine Grenouille  
Mark Lancaster

## Department staff who've worked with us

Adam Luckhurst	Deborah Verco	Karen McCormack	Richard Bolto
Aleshia Thornton	Dianna Cleland	Kathryn Shugg	Scott Neil
Alasdair Salvage	Eleanor Morphett	Lucy Vangelatos	Simon Stratton
Andrew Byers	Emma Fox	Lynn Connell	Stephanie Pauliukevicius
Angela Hewson	Fiona Morris	Madhumita Iyengar	Therese Postma
Anne Flynn	Greg Mason	Martin Fuller	Tiffany Blight
Ben Vering	Holly Hasenkam	Martin Paul	Tom Vangelovski
Brooke Hartigan	Jennifer Hayes	Melbourne Charles	William Symons
Damien Farncomb	Jodie Kafer	Michael Wyndham	
Daniel Langer	John Paul Berenger	Nathan Ballard	
David Klassen	Julianne Best	Rachel Livingston	

## The State/Territory Industry Training Advisory Bodies (ITABs) and employees

### Active Queenslanders Industry Alliance

Jo Chiu

### Agriculture Food and Animal Management ITAB (NSW)

Ben Norton-Smith  
Jess Cleary

### Australian Industry Group Queensland

Lisa Gilbert  
Wayne Lee

### Industry Skills Advisory Council, NT (NT)

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### Food and Primary Skills Victoria

Nick Juniper

### Food, Fibre and Timber Industries Training Council WA

Janine Blake  
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### ForestWorks NSW and VIC ITAB

Tim Cleary  
Sarah Fitzpatrick

### FutureNow - Creative and Leisure Industries Training Council

Julie Hobbs  
Kelly Perry

### Queensland Farmers' Federation and RURAL JOBS & SKILLS ALLIANCE (RJSA)

Diana Saunders  
Rod Morris

## The State and Territory Training Authorities

Department for Innovation and Skills SA	Department of Education and Training VIC	Department of Industry, Tourism and Trade NT	Skills Canberra Skills Tasmania
Department of Education NSW	Department of Employment, Small Business and Training QLD	Department of Training and Workforce Development WA	

## MINTRAC staff, throughout the SSO contract

Clive Richardson	John Hughes	Mark Wadsworth
Don Jones	Lynne Crawford	Mick Crouch
Irene Parker	Marc Livingston	Sharon Fitzgerald
Jenny Kroonstuiver	Mark Beecham	Tania Minehan

## ForestWorks staff, throughout the SSO contract

Antoinette Hewitt	Diana Lloyd	Michael Borowick	Tim Woods
Cameron Carnes	Emily Hemi-Gardam	Michael Walker	Travis Wacey
Chris Carmody	Eva James	Michelle Clayton	Yvette Nash
Clara Beattie	Georgiana Daian	Sandy Hodge	
David Forbes	Jodi Clark	Sarah Fitzpatrick	
Denise Wong	Mariana Hein	Tim Cleary	

## Skills Impact Staff, past and present

Alison Carmichael	Diana McNaughton	Keren Lavery	Rebecca Ford
Andrea Hayman	Dion Daniell	Kerryn Ingham	Rosalie Staggard
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## Skills Impact Directors, past and present

Duncan Fraser	Paula Fitzgerald
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Nicki Anderson	

To everyone who has been a  
part of our work over the  
past six and half years

Thank  
you



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