



Supporting skills for a changing world

Year in Review 2021

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Introduction

Skills Impact supports a broad range of industries that contribute to Australia's food security, our homes, health and wellbeing. They produce essential food, drink, medicine, fibre and textile products.

These industries are also responsible for caring for the health and wellbeing of our land and water bodies, wildlife, stock and pets.

The significance of these industries has been highlighted by the COVID-19 pandemic. The increased demand for products like paper, packaging, meat, timber, pharmaceuticals, and services in the animal care sector, meant most of the sectors we work with were classified as 'essential industries' and remained in operation throughout the pandemic.

Industries we support

Number of businesses

221,276

Total employment

1 million

(\$39bn worth of wages in Australia)

Contribution to Gross Domestic Product

\$83 billion

Export value

\$57 billion

17% of all Australian industry exports

Revenue

\$351 billion

World leader

Australia is a world leader in the production of clean, green premium food, agricultural produce, and ecosystem management. Our reputation for high quality food and fibre is underpinned by the availability of a trained and skilled workforce with specialist skills in producing and adding value to grown products. It is thanks to this skilled workforce that Australia is virtually self-sufficient in producing a huge range of food, timber, fibre and textile products.

Major agri-exporter

Australia is also a major agri-exporter. For the financial year ending 2020, the value of our food and fibre exports rose to about \$48 billion dollars¹. Much of this was produced by workers based in regional, rural and remote Australia. These workers live in communities that are a major contributor to Australia's economy, with agri-business providing an important foundation for local economies while also supporting hospitality, tourism, mining and other operations. Supporting the skills standards and the development of this workforce is critical for sustaining the availability of jobs in these areas and the efficiency of the food supply value chain.

Remarkably resilient

The COVID-19 pandemic brought many challenges to the industries we support, such as COVID-19 outbreaks in some businesses, labour shortages, and a wide range of services needing to adapt to new restrictions. These industries have been remarkably resilient, illustrating how existing biosecurity measures prevented COVID-19 outbreaks in the majority of workplaces, while maintaining full operations during lockdowns, often when there has been increased demand for certain products and services. The full breakdown of industry developments, challenges and skills

requirements were outlined in the 2021 Annual Updates to the Skills Forecasts and Proposed Schedules of Work (Skills Forecasts).

Daily engagement with industry

The Annual Updates to the Skills Forecasts were developed in consultation with the Industry Reference Committees (IRCs) and the broader industry. Information is gathered throughout the year, from our daily engagement with industry, training providers and other stakeholders from the vocational education and training (VET) sector. The 2021 Annual Updates include information about employers' use of training packages and qualifications and proposes projects in areas that the training packages can be improved. This year, the Australian Industry and Skills Committee (AISC) approved ten projects for 2021-22.

Improving industry skills standards

Project work for 2020-21 focused on solutions to streamline qualifications, skill sets and units of competency, to reduce complexity and improve their training deliverability. Qualifications and units covering similar learning outcomes were merged. Specialisations were also added to qualifications to offer learners more flexible training pathways. Numerous skills standards that were no longer in use or required by industry were deleted from the system. Skills for working with new technologies, systems, legislation and consumer trends were added to the national skills standards across a range of sectors, including dairy, animal reproduction, landscaping, parks and gardens, cropping and seeds, land rehabilitation, horse care, greyhounds, thoroughbred racing, food and beverage processing, flour milling, baking, forestry, pulp and paper and meat processing. Work was carried out on 32 projects between July 2020 and June 2021 (17 of the projects were initiated in 2020

and the other 15 were undergoing completion from last year).

Improvement of VET

This year, the government conducted continuing consultations around their commitment to improve VET. Skills Impact's work with industry to support current and future skills needs placed us in an ideal position to respond to government VET reform inquiries and consultation. Industry stakeholders continued to share issues and challenges with us and to discuss possible solutions. Skills Impact collected this information and undertook further research to provide input to the governments' VET reform processes and respond to relevant inquiries. Our research included both qualitative and quantitative approaches, including literature reviews, interviews and discussions with industry and VET stakeholders, data analysis, and surveys.

Thank you to thousands of industry volunteers

The projects and activities outlined in this report have all been initiated and driven by industry volunteers, passionate about improving the skills standards of their workforce. We appreciate the input from every stakeholder we work with, particularly IRC members. Thank you also to our staff, specialist project contractors, Directors, ForestWorks, MINTRAC and the National Farmers Federation for your contributions.

¹ Australian Trade and Investment Commission, 2021, 'The 3 industries behind Australia's Covid resilience', viewed August 2021 <<https://www.austrade.gov.au/news/economic-analysis/the-3-industries-behind-australias-covid-resilience>>

Our Role in the Skills Standards Development Program

Development and maintenance of skills standards for more than 120 industry sectors:

8 Training packages

200+ qualifications

2,900+ units of competency

300+ skill sets

Supported 12 Industry Reference Committees to engage with over 2,300 stakeholders

Developed 8 Annual Updates to the Skills Forecasts, identifying changes to industry environments and project proposals

Managed 32 projects to improve skills standards and qualifications

2,500+ feedback items and comments

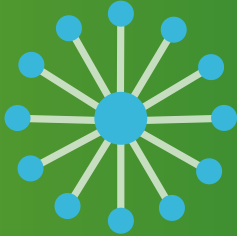
173 workshops/webinars/meetings

2021 marks five years of Skills Impact performing a role as a Skills Service Organisation (SSO). Skills Impact is a not-for-profit, industry owned organisation, specialising in delivering services to industry committees, undertaking Skills Forecasts and developing skills standards and qualifications. We are one of six organisations that is contracted by the Commonwealth Government to perform a role as an SSO.

Our role as an SSO involves providing services to 12 Industry Reference Committees, supporting them to plan their industry engagement and to guide training package development and review activities.



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.

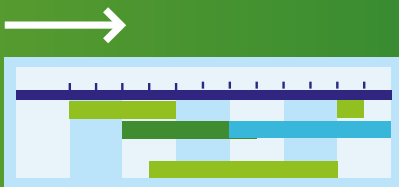


Gaps and emerging skill needs are identified by Industry Reference Committees and industry.

Skills Impact captures this in Skills Forecasts.

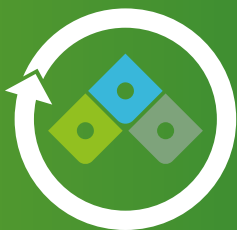


Skills Impact submits IRC Skills Forecasts, Cases for Change, and projects to the AISC for approval.



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

Support to Industry Reference Committees

Twelve Industry Reference Committees (IRCs) guide and review our work with industry to ensure training packages (i.e. units of competency, skill sets and qualifications) reflect industry's existing and emerging workforce development needs.

All IRCs and their members are appointed by the Australian Industry and Skills Committee (AISC). Each IRC is made up of people with experience, skills and knowledge of their industry sector.

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.

Skills Impact employs dedicated Industry Engagement Managers who provide secretariat support services to seven of the IRCs. Skills Impact has contractual partnerships with ForestWorks and MINTRAC; these two organisations utilise their extensive networks and sector specific knowledge to, on our behalf and under our direction, manage the secretariat services for the forest management, timber, pulp and paper and the 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

This year, the IRCs we work with faced additional demands on their time due to the COVID-19 pandemic. They were also asked to contribute more to the VET system, resulting in a higher number of meetings and new work areas for them to consider.

IRCs met virtually to make decisions, discuss concerns, respond to specific questions and to progress the development work on their industry's national training package. Committee members participated in exchanges of specific industry intelligence gathered through their activities to identify current and future skills needs and gaps. In addition, committee members were also asked to consider a range of additional issues including: VET reform; mandatory work placements; streamlining and prioritisation frameworks; and emergency measures to address issues from the pandemic.

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.

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.

What is a training package?

Why are they important?



Training packages contain national skills standards, aligned to job roles

Training Packages help deliver



Development, training, assessment



Productivity



Safety for workers and the public

A training package is comprised of



Units of Competency

which are building blocks for

A work function

Example:
Install and repair fences and gates unit of competency



Skill Sets

(3-7 Units) Providing potential pathway towards

A specialist industry need or regulatory/licence requirement

Example:
Recognise Aboriginal Cultural Sites Skill Set



Qualifications

(15-30 Units)

A job role

Example:
Certificate III in Agriculture (Dairy Production)

Training Packages are used in



Registered Training Organisations
Formal training and assessment



Workplaces
Informal on-the-job learning and assessment

The units of competency, skill sets and qualifications for a particular industry (or related industry sectors) are grouped together into 'training packages'. Training packages are the skills standards developed by industry and used by registered training organisations, like TAFEs, to help design training programs. Training packages describe industry expectations of the work outcomes that are expected to perform particular job roles and to what standard.

NSW Industry Training Advisory Body

As an expert skills and industry service organisation, Skills Impact has been contracted by the NSW Government to perform the role of a NSW Industry Training Advisory Body (ITAB) for the following industries.

- Agriculture, Horticulture and Conservation and Land Management
- Animal Care and Management
- Meat Processing (supported by MINTRAC)
- Food, Beverage and Pharmaceutical
- Racing and Breeding
- Seafood

In February 2021 the Agriculture, Food and Animal Management (AFAM) ITAB was established in NSW to service this contract. We specifically recruited a team based in NSW to carry out engagement and secretariat activities. The two-person team, with administration and other support, has been working with industry and registered training providers (RTOs) to provide advice to the NSW Government on NSW specific training and skill needs.

NSW ITABs are a key source of industry advice for the NSW Government. ITABs provide streamlined, unique and timely advice on the training and skill needs of their NSW industry sectors to facilitate workforce development. ITABs work collaboratively with other relevant state, territory and commonwealth stakeholders in the sharing of information on industry training and skills needs in NSW.



AFAM ITAB

**Agriculture, Food
& Animal Management**

Industry Training Advisory Committees (ITACs)

The following ITACs have been arranged in NSW to discuss skills needs, challenges and opportunities. The inaugural meetings were held in May and June 2021.

- 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
- Meat ITAC (supported by MINTRAC)

The racing and breeding, seafood and meat processing industries will be engaged through the existing and established informal networks that these industries already have in place in NSW.

Other Engagement Activities

- A monthly newsletter is distributed to NSW stakeholders, sharing information and opportunities related to skills and vocational education, training (VET) matters in NSW, including news about the NSW Government's Smart and Skilled program.
- Regional Roundtables will take place in the second half of 2021, pandemic permitting. The roundtables aim to bring together stakeholders who are based in rural, regional and remote NSW, to discuss the unique skills challenges and needs, and potentially identify shared and industry-specific opportunities, challenges and actions.

The work of the NSW ITAB via its two dedicated managers is independent of work with these same industries at a national level (as part of our Skills Service Organisation contract).

Operational Systems and Capabilities

Skills Impact has continued to focus on ways to enhance our services to industry, government and RTOs, looking at ways to add more value to the work we do. This year, operational systems have been developed and expanded to improve stakeholder engagement processes and experiences, record and report project feedback, and to collect data and unique insights into training packages. Continuing our commitment to the organisation's values, these systems and processes have been designed to support our values of transparency, trust, collaboration, and accountability, and to improve internal and external stakeholder experiences. The 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 number of stakeholders who engage with training package consultation processes increasing, improvements have been made to track and record all relevant information. This has enabled us to send information about skills and training package challenges and requirements to government in a timely and accurate manner, which has been particularly important during the COVID-19 era. The internal expertise available within the operations support team has enabled in-house improvements to user experience and visibility, streamlining of data entry and automated workflows.

- **Online feedback hub:** The capability of the feedback hub was extended to include validation feedback. The feedback hub was originally created to collect feedback on Skills Forecasts and for the first main public consultation phase of projects, titled 'Drafts Available' on our website. Since the establishment of the feedback hub, we have seen increased engagement with draft

documents online. For stakeholders, the ability to easily make comments on documents and to see other peoples' feedback in an online environment has become even more important when face-to-face consultation has been limited due to COVID-19. A summary of all feedback and comments is published at various stages of the project, with users' anonymity protected. Only Skills Impact staff and training package contractors working directly on the project can identify users against their unique IDs.

- **Feedback database:** A feedback database has been developed internally to streamline the entry of all project feedback and produce automated summary reports. The database draws on feedback entered through the feedback hub and other consultation channels, which is filtered through to the CRM.
- **Training package insights:** A comprehensive record of data around the training packages Skills Impact works with is being maintained and provides additional insights to what can currently be drawn from the National Training Register (training.gov.au). This data provides insight into qualification streams/

specialisations, taxonomy of the industry sectors and occupations, entry requirements and number of elective units. This information is valuable to IRCs, industry and government, particularly in regard to decisions related to assigning ANZSCO codes to qualifications, for information related to Visas for overseas workers, and guidance around training pathways. Work is underway to integrate this data into a more comprehensive database that will support future planning around changes made to units and qualifications and to reveal how the changes will impact on other training packages, including those that are not directly managed by Skills Impact.

- **Events service:** The events module is integrated with the CRM and aims to make the process of booking and attending meetings as smooth as possible for attendees. Improvements were made this year to allow for remote workshops, more efficient events management of face-to-face meetings and future hybrid events. The use of workflows within the system have streamlined event management and increased the visibility of the tasks and responsibilities required to provide a professional experience for internal and external stakeholders.

Validation: In your view does this final draft meet the needs of industry?

- Yes.
- Yes - with minor modifications.
- No - do not support.

Browse Project Documents Your user ID is: 1315

essential outcomes.	achievement of the element.
3. Safely catch, lead, secure and release horse	3.1 Select and fit personal protective equipment (PPE) according to workplace procedures 3.2 Locate horse and observe horse body language and behaviour before approaching 3.3 Select appropriate horse gear for handling horses safely 3.4 Catch horse using head collar, lead, tie up and release horse using safe and low stress handling techniques 3.5 Lead horse through gateways and doorways, and amongst other horses and people 3.6 Catch, lead and release a horse within a group of horses 3.7 Fit horse restraints to secure and control horse 3.8 Lift fore and hind limbs and check horse's hooves
4. Respond to immediate safety risks	4.1 Monitor horse behaviour during all handling activities and respond to situations and hazards that arise to avoid injury to self, others and horse 4.2 Use safe and low stress handling techniques to minimise risks to horse and handler 4.3 Report and seek assistance from supervisor on incidents and/or risks beyond level of own responsibility

Skill	Description
Numeracy	Estimate and measure distance, area, weight, temperature, length, volume and capacity
Oral communication	Use active listening and questioning techniques to clarify supervisor instructions Use industry terminology to describe horses, gear and equipment

- **CRM operations support requests:** A new operations support requests entity within the CRM has been developed internally to enable management of staff requests for IT and administrative support. This system not only provides improved visibility of workload and priorities, it also provides the tools and resources staff need to engage effectively with stakeholders. The system also assists in the identification of improvements or solutions required, such as the need for staff training or network/system changes.
- **Project management:** The Microsoft (MS) Project templates used by the Industry Skills Standards Specialists to manage

their projects have been enhanced to assist the team keep track of projects and key milestones more effectively. The new templates provide greater visibility, accountability and control over the completion of tasks required to meet key milestones.

- **Power BI data visualisation software:** The requirements for additional Power BI reporting capabilities is continually being assessed. These reports provide the visualisation of business intelligence to all staff at Skills Impact and can be easily interpreted to provide information to aid decision making. The development of reports generated in the past twelve months include MS Project summary dashboards,

stakeholder engagement statistics by IRC and by project, event coordination status and operations support request resolution performance.

The development and improvement of the operational systems and processes over the last year are providing Skills Impact staff with the tools to perform their roles with greater efficiency and professionalism, and as a result, provide our stakeholders with a higher standard of service.

COVID-19 Critical Response Project

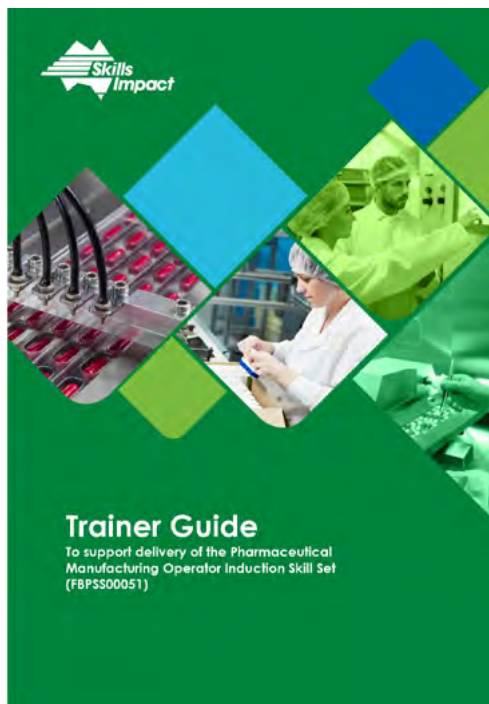
New Skill Set, Training & Assessment Guides for Pharmaceutical Manufacturing

Pharmaceutical manufacturing companies are playing a key role in the COVID-19 pandemic by making tests, treatments and vaccines. It is important manufacturers are equipped with all the expertise they may require, including the unique skills to produce and distribute life-saving and enhancing medical treatments.

Skills Impact worked with the Industry Reference Committees (IRCs) to identify areas within national training packages where rapid development of skills standards could help industry respond to COVID-19. Generally, the training packages were able to meet the needs of industry during the pandemic.

To support the pharmaceutical processing industry in their urgent response to the COVID-19 health crisis, a Pharmaceutical Manufacturing Operator Induction Skill Set was developed.

Skills Impact and the Pharmaceutical Manufacturing Industry Reference Committee engaged with key industry stakeholders to draft the skill set. The skill set describes the foundation skills and knowledge required by workers entering the pharmaceutical manufacturing industry, especially those employed to work with bioprocessed products, such as vaccines and antibody testing devices.



A range of resources and tools were also developed to support training delivery of this skill set:

- **Trainer Guide:** Contains training materials to address all four units of competency in the skill set.
- **Assessment Tasks and Tools:** Contains suggested assessment tasks.
- **Marking Guide:** A guide to marking the suggested assessment tasks.
- **Mapping Matrix:** Maps the assessment tasks with the requirements of the skill set and units of competency.
- **Enterprise Information Guide:** For enterprises thinking about employing a trainee or embarking on a skills development program for staff to meet the requirements of the skill set.

The skill set and training resources were developed in response to the Critical Skills for Recovery initiative, driven by the Australian Industry and Skills Committee (AISC) and the AISC Emergency Response Sub-Committee. They were funded by the Commonwealth Government and are available for free access and download on the Skills Impact website.

A range of other projects were submitted by the IRCs Skills Impact supports, to address certain industry skills needs and opportunities increased as a result of the pandemic, however these were not deemed critical to the emergency response criteria. A number of projects were referred to the National Careers Institute, while others were identified as being appropriate for consideration through the regular approval processes and will be submitted as part of future Skills Forecasts as the relevant IRCs deem necessary.

Streamlining Training Packages

Skills Impact supports the Skills Ministers' objectives to reduce the complexity of the training system and improve accessibility of training for employers and students. Training package project work this year focused on solutions to streamline qualifications, skill sets and units of competency, to reduce complexity and improve their training deliverability.

A new framework to prioritise training package development was developed by the Australian Industry and Skills Committee (AISC). It outlined a new process for categorising proposed projects (cases for change), based on the types of changes expected. It also asked 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)

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

Fast-track update – products that are urgent and straightforward would be updated in an expedited timeframe

6-8 months

Routine update – 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

Complex update – 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

Rationalisation of qualifications and units as part of 2020-21 project work

To support the Ministers' efforts to reduce complexity in the system, Skills Impact focused on ways to rationalise qualifications and units that were currently under review as part of approved project work for 2020-21. Units covering similar learning outcomes were merged, so too were qualifications that shared the same core skills and knowledge. Both of these solutions resulted in a reduced number of qualifications and units, without removing the coverage of any essential skills from the national training system or reducing the scope of job outcomes.

Merging qualifications that share similar skills to produce one qualification with specialisations offers learners more flexible training pathways. They can select one or two specialisations or choose the generalist option. They also have the option of gaining further specialisations in the future, by completing additional units, rather than having to undertake a whole additional qualification. For example, the Certificate III in Food Processing (Sales) was merged into the revised Certificate III in Food Processing. Twelve specialisations were added to the revised qualification, including one for 'milling' which is more suitable to that sector's skill needs than the Certificate IV in Flour Milling, which was deleted.

The Certificate III in Food Processing now has the following specialisations:

- Bottling and Packaging
- Brewing
- Confectionery
- Dairy Processing
- Distilling
- Edible Oils
- Milling (will replace the need for a Certificate IV in Flour Milling, which is proposed for deletion)
- Non-alcoholic Beverages
- Pet Food
- Quality
- Sales
- Stock Feed.

This year, several qualifications were merged to create a simplified qualification with skills streams or specialisations. Another example is where four forestry qualifications at AQF levels 2 and 3 were consolidated into one qualification at each level. This has resulted in a Certificate II in Forest Operations and a Certificate III in Forest Operations, with specialisations in both qualifications for 'Forest Nursery Production', 'Silviculture' and 'Timber Harvesting'.

Across various projects, units were also merged where they shared similar learning outcomes. For example, fourteen seed units were merged to become three units:

1. A unit for processing planting seed, which merges the skills captured by five previous units.
2. A unit for performing advanced tests on seeds, which merges the skills captured by seven existing units.
3. A unit for performing quality tests on seeds, which merged AHCSDT303 Perform a fluorescence test on seeds and AHCSDT304 Perform a seed purity analysis.

Reviewing Qualifications and Units with Low Enrolments

Skills Impact also supported the IRCs to investigate whether there was a need to keep qualifications and units with low enrolments (classified as fewer than 42 enrolments in each of the last three years).

There may be a number of explanations for low enrolment numbers, and the AISC asked industry to confirm whether low enrolment numbers are an indication of lack of industry need, or whether there may be reasons to maintain the relevant unit or qualifications in the formal VET system.

Examples of qualifications with low enrolments included the Certificate III in Commercial Seed Processing; AHC33416 Certificate III in Seed Production; Certificate III in Seed Testing; Certificate IV in Seed Production; and Certificate IV in Seed Testing. Industry has supported the deletion of these qualifications and requested that a seeds specialisation be added to the Certificate III and IV in Agriculture, which will better support their industry skills requirements. The Certificate III and

IV in Agriculture are approved for review in 2021-22.

The Certificate IV in Parks and Gardens and Diploma of Parks and Gardens are proposed for deletion. The associated higher-level units in these qualifications have been reviewed and retained as they still hold great relevance to the tasks industry undertake. They have been added to the Diploma of Horticulture as electives, with the intention of reviewing how they are incorporated into the qualification when it is reviewed as part of another project in 2021-22. The unit AHCPGD205 Prepare a grave site has also been proposed for deletion as it is not applicable to the parks and gardens industry and there are more suitable units within the SIF Funeral Services Training Package.

Sometimes however, there is the example of a qualification or unit that is supported by an industry need, but has very few enrolments and the delivery challenges cannot be addressed by simply removing or replacing the qualification or unit. Skills Impact undertook additional research to look at the challenges and solutions around this. Further information is available under the sections titled 'Support for Government Initiatives' and 'VET Insights'.

Support for Government Initiatives

Skills Impact's work with industry to support current and future skills needs puts us in a unique position to respond to government inquiries regarding industry workforce and skill needs and vocational education and training (VET) reform.

As part of our daily work with industry and RTOs, we hear many viewpoints about workforce skill challenges and opportunities, what is working in regard to training, what needs changing and possible avenues for improvement. In turn, we pass on these views through public submissions to the relevant inquiries.

Between July 2020 and June 2021, there were three key government enquiries related to the industries we work with and the VET sector. Skills Impact drew on the information and intelligence shared with us from our stakeholders to respond to each.

These submissions can be downloaded from skillsimpact.com.au/vetreform/submissions

Discussion Paper on Improving Industry Engagement and Reforming Qualifications in VET *February 2021*

The Australian Government is looking at expanding and strengthening industry involvement in the VET system. They are collecting feedback through a dedicated website for VET Reform, using surveys and discussion papers.

Skills Impact has responded to the surveys about Industry Engagement and Qualifications Reform. The questions touched on many of the challenges that stakeholders have raised with us over the years. Our submission is a compilation of these broadly held industry views, as they have been reported to us. We outlined the skills and training challenges and ideas for how these could be improved.

National Agricultural Workforce Strategy and Roadmap *December 2020*

In December 2020 the National Agricultural Labour Advisory Committee delivered its National Agricultural Workforce Strategy. Skills Impact submitted that the focus of the strategy should include "developing a skilled, future workforce the industry requires". Skills Impact provided a broad submission about VET for agriculture to the Senate Inquiry, with a focus on upskilling existing industry personnel, to help grow Australian Agriculture to \$100 Billion by 2030. Skills Impact then worked with key stakeholders and the Australian Government Department of Agriculture to assist with the development of the strategy.

Review of Agvet Chemicals Regulatory Framework *August 2020*

An independent panel has been appointed to review the current agvet chemicals regulatory system.

Skills Impact's submission outlines the process and functions of national, industry and government endorsed skills standards to support our recommendation that they are fit for purpose as the key instruments to inform and regulate the behaviour of a wide range of users of agvet chemicals, including suppliers, wholesalers, retailers, and end users.

Environmental Sustainability Skills Project

Australia's transition toward a more environmentally sustainable society is being driven by political, economic, social and environmental imperatives. The transition brings challenges for the vocational education and training (VET) system to ensure that the Australian workforce is equipped with the skills required for new, and more sustainable, ways of working.

An Environmental Sustainability Expert Panel was convened by the Australian Industry and Skills Committee (AISC) to provide advice to the AISC on:

- The extent of industry demand for environmental sustainability skills and appropriate whole-of-system approaches to the development of these skills in the Australian workforce.
- Strategies for ensuring that stakeholders from existing and emerging industries have input into training product development and reform, including options for ongoing advisory arrangements to inform training system responses to environmental sustainability.
- Rationalising training products through the development of a plan and processes to enable the progression of recommendations from the 2017 Environmental Sustainability Case for Change in accordance with industry need.

The AISC appointed Skills Impact to support the work of the panel. The panel consulted with all IRCs and compiled a report of their investigation, including a series of recommendations, and submitted this to the AISC.


An AISC communique from the Chair Emeritus Professor Tracey Horton AO commended the Panel on their work. Initially, one of the recommendations was to expand the Panel to coordinate future work on environmental sustainability, including considering the findings of the report and progressing priority areas for new training product development. In relation to progressing recommendations 1-10, the AISC said:

"It has been difficult to progress the initial response, which included the continuation of an expanded Expert Panel. This has been due to the shifting priorities of Skills Service Organisations and Industry Reference Committees in responding to the pandemic and to the announcement of, and subsequent activity involved in, the national VET reform agenda ...Given the significant VET reform agenda that is underway for 2021, the Panel's report will be most valuable in informing reform priorities and training package development. In particular, the highlighted constructive approaches to addressing environmental sustainability skills needs and whole of system approaches to developing these skills across the workforce which include evidence of opportunities to improve cross-sector collaboration and broader processes and practices."

Recommendations 11-16 have been referred to the Commonwealth's VET Reform Taskforce for consideration. In addition, the AISC has directed the AISC Secretariat to share the Panel's report with Industry Reference Committees and Skills Service Organisations to inform the review and development of training products.



Agriculture, Horticulture, Conservation and Land Management



The skills of the agriculture, horticulture, conservation and land management industry are key to preserving and managing Australia's national and state parks, public gardens, sporting grounds, farms and water bodies.

Due to agricultural production, Australia is one of the most food secure countries in the world. The skills of the landscaping and land management sectors have also increased in popularity with people spending more time at home and outdoors.

The skills across all sectors of the industry are constantly evolving with the introduction of new technologies and science. Robotics, satellites, sensors and other digital technologies are driving innovations, to increase productivity, safety and quality of products and services.

Employs over
470,000 people

More than 178,000
businesses

Contributes over
\$37 billion to Gross
Domestic Product

Revenue of over \$150
billion

Source: IBISWorld Industry Wizard, 2021

The gross value of Australia's agricultural production is forecast to reach a record \$73.0 billion in 2021-22. If accomplished, this will be the first time that agricultural gross value has surpassed \$70 billion.

The value of agricultural exports is forecast to hit record highs in 2021-22, increasing by 12% to \$54.7 billion.

Source: ABARES, 2021, *Agricultural Commodities: September quarter 2021*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

The industry experienced significant disruption over the last year as they continued to deal with the impacts of COVID-19, drought, bushfires, and trade issues on workforce development. Due to international and state borders being closed, many businesses experienced labour and skills shortages, at a time when domestic food supplies, nursery products and landscaping services encountered unprecedented levels of demand.

Australian farmers and horticulturalists showed their resilience with many businesses seeking alternative markets for their products. For example, barley growers reported increased market activity in the Middle East and Asia, and cotton growers moved into markets such as Indonesia, Thailand, Vietnam and Bangladesh. This diversification has enabled some sectors' relative recovery and reduced the risk of being over-reliant on any one market.

In December 2020 the National Agricultural Labour Advisory Committee delivered its National Agricultural Workforce Strategy. The strategy confirms that the industry is a complex and sophisticated system. Its performance relies heavily on the skills of its people. The Committee highlighted five key principles to meet future workforce needs:

- Education and training strategies should be industry-led, demand-driven and collaborative in vision with education providers.
- The AgriFood sector should strengthen the linkages between education and training and occupations across their sector.

- The education and training sectors should modernise the span of educational offerings and delivery modes in response to clear industry signals.
- Education and training should be underpinned by sufficient investment, reflective of a progressive and growing sector of the Australian economy.
- Stakeholders should share a commitment to demonstrate impact from investment and accountability for industry-defined outcomes in education and training.

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

Skills Forecast

Both IRCs have been overseeing a major review of the AHC Agriculture, Horticulture and Conservation and Land Management Training Package through a 'Unit Sector Approach', which commenced in 2019. Work this year focused on the sectors of landscaping, animal reproduction, dairy and milk harvesting, parks and gardens, land rehabilitation (mined land), crops, pastures and seed. The project work has focused on updating the national skills standards to meet current skills requirements, especially where technologies are quickly evolving. It has also focused on streamlining the skills standards, to remove duplication across the training package, enhance opportunities for identifying cross-sector units, and better support graduates' capabilities in moving between occupations and industries. The final phase of this project work will commence in 2021-22 and will look at the skills standards related to composting, organic production, permaculture, livestock, Indigenous, community and common work-related skills. An additional project for 2021-22 will look at the skills standards for the acquisition, management and trading of water.

Over the past year there has been an upsurge in demand for nursery and landscaping products and services. COVID-19 has impacted peoples' use of domestic space, notably gardens. Google searches for 'how to grow vegetables' hit an all-time high in April 2020. Nurseries and garden centres have been inundated with new and experienced customers seeking to develop and upgrade their gardens and veggie patches. With growing evidence that new customers plan to maintain and extend their home and community gardening endeavours, the demand for complementary skilled landscaping and nursery workers is likely to increase.

A challenge for the industry this year has been around skill shortages, due to the closure of state, territory and international borders. There has been an urgent need to replace backpacker, seasonal and visa workforces in entry-level roles, while protecting the Australian agricultural industries from the risks associated with the rapid deployment of new workers. It has been very difficult to retain or replace workers with experience in mentoring and leadership, especially as COVID-19 has accelerated the rate of people exiting industries (those with ageing workforces have been particularly affected), leaving fewer workers who would normally be relied upon to assist in the development of the next generation.

The agricultural workforce was already facing a labour and skills shortfall due to the challenges associated with attracting workers to the industry. These challenges are related to work being based in regional, rural and remote areas, barriers to labour mobility, and the availability of effective workforce training. There are also challenges in attracting new entrants based on the misunderstanding about what a career in the agriculture and horticulture industry offers.

“The technological innovation that is taking place within the sector and the new careers that are possible are not being communicated to students. In particular, urban students are unlikely to realise that the majority of roles in the agriculture sector occur after the farm gate.”

YouthInsight (2017); Developing student interest in the agriculture sector; Western Australia

Projects for 2020-21

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2020-21:

Review of Unit Sectors

Given the size and complexity of the AHC Agriculture, Horticulture and Conservation and Land Management Training Package, this work involves a continuation of the unit sector approach for Year 3 of the strategy, as outlined in the current 2019 – 2022 Skills Forecast. It will consist of four sub-projects across the following areas and sectors:

- Community and common work-related skills
- Composting, organic production and permaculture
- Livestock
- Indigenous

“The organic farming industry is projected to grow at an annual rate of 15% over the next five years.”

IBISWorld, 2020

Water Allocation & Entitlement Skills

Access to water resources is vital to Australian farmers and it is equally vital that farming communities understand the water market. Water literacy in education, including VET, is one recommendation of the 'Keelty Report' inquiry into Murray-Darling Basin water resource management? The proposal for this project is to develop up to five units and one skill set to capture the skills needed for the acquisition, management and trading of water within the agricultural, pastoral and production horticultural sectors.

Project Work Between 2020-21

Outlined over the following pages is a summary of the projects Skills Impact managed between July 2020 and June 2021.

The Agriculture and Production Horticulture Industry Reference Committee (IRC) and the Amenity Horticulture, Landscaping, Conservation and Land Management 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 early 2022.

Animal Reproduction Project

For generations farmers have been managing the reproduction of livestock and poultry to support the welfare of animals and optimise return on effort, support the welfare of animals and increase sustainability. Identifying breeding objectives, genetic influences, animal soundness and breeding health can help improve production of products like meat, dairy, eggs and wool. Increasing access to technologies such as ultrasound equipment, sensors and trackers is making it possible to better monitor animals and build on these practices.

Thanks to the input of everyone involved in this project, the technical and digital skills required to take advantage of the many benefits of these technologies have been captured in updated skills standards.

Qualifications, a skill set and units of competency have been revised to reflect terminology relating to different livestock species; to incorporate the key skills for maintaining health and safety in the workplace, such as the use of

personal protective equipment and hygiene procedures; and to include current biosecurity, environmental and animal welfare legislation and regulations. The frequency and volume of evidence that needs to be collected by an assessor to determine competence has been added to units, including accuracy percentages in some units. The Diploma of Pork Production and four units are proposed for deletion as they have had low enrolments and the skills they describe are in low demand.

Key Outcomes

- The Certificates III in Pork Production and Poultry Production were revised, with updates made to the description, packaging rules, and titles of core and elective units. The Certificate III in Agriculture (Dairy Production) was also reviewed as part of the Dairy and Milk Harvesting Project and contains some units that were reviewed as part of this project.
- The Diploma of Pork Production and four units are proposed for deletion as they have had low enrolments and the skills they describe are not required by industry.
- The Pork Industry Stockperson Skill Set was updated to include a biosecurity unit of competency, as requested by representatives of the pork production industry sector.
- The Poultry Industry Beak Tipping Skill Set was discussed as having low enrolments and will be considered in a future project, as the IRC indicated further investigation may be required.
- Twenty units were revised to clarify terminology, performance criteria, performance evidence

and assessment conditions.

Animal welfare practices and the importance of consulting with a veterinarian have also been outlined for tasks within specific units.

Crops, Pastures & Seeds Project

The success of Australia's broadacre cropping and animal production industry is underpinned by skills to produce crops and pastures from high quality seed. With increasing global demand for food and fibre, and challenges brought about by changing environmental conditions, the broadacre farming and seed production sectors are turning to the latest technology and science, hoping to create crops that are drought resistant, higher yielding, and more nutritious. As a result, the skills for working in the sector are changing, with mapping technology, RADAR and stereoscopic sensors, LIDAR, satellite positioning and satellite imagery being used to record the volume, mass and moisture of crops, and to assess crop performance and soil characteristics. These skills are essential for supporting biosecurity and supplying farmers with seed that is free from disease, organisms and pests.

As a result of this project and consultation with industry throughout Australia, units across the seeds, crops and pastures sectors were updated and developed so that they accurately capture current industry practices and technologies. Concepts surrounding precision agriculture were also embedded in units relating to broadacre cropping. Feedback from industry, during the consultation phases of the project, indicated that the current units on the National Training Register did not accurately reflect current job roles. It is understood this has been a factor

limiting delivery demand for these units. To further enhance the delivery of these units, it is also proposed that a seeds specialisation or stream is added to the Certificates III and IV in Agriculture, which are approved for review in 2021-22. Therefore, for the short term and to avoid any units being orphaned, the indicative seven AQF level 3 and three level 4 seed units (AHCSTD and AHCSP0) will be added as elective units into the respective qualifications (Certificate III in Agriculture and Certificate IV in Agriculture). New units have been developed where necessary to reflect up-to-date industry practice and include an array of the new technology being implemented in the field, from satellite positioning guidance of farming equipment to laser tech designed to detect pests and disease.

Key Outcomes

- Thirty-three units revised or developed to reflect current industry practices, terminology and equipment.
- The five qualifications detailed below have been proposed for deletion as they are no longer required by industry. The request to add a seeds specialisation or stream to the Certificate III in Agriculture will be proposed as part of a future project to address the need for these skills to be retained and available within a qualification.
 - AHC32116 Certificate III in Commercial Seed Processing
 - AHC33416 Certificate III in Seed Production
 - AHC33516 Certificate III in Seed Testing
 - AHC41416 Certificate IV in Seed Production
 - AHC41516 Certificate IV in Seed Testing.

- Fourteen units are proposed for deletion because they include skills that are no longer required by industry or they are duplicated by another unit.
- Fourteen units that have similar learning outcomes have been merged. Examples of merged units include:
 - creation of a unit for processing planting seed, which merges the skills captured by five previous units
 - creation of a unit for performing advanced tests on seeds, which merges the skills captured by seven existing units
 - creation of a unit for performing quality tests on seeds, which merged AHCSDT303 Perform a fluorescence test on seeds and AHCSDT304 Perform a seed purity analysis.

Dairy & Milk Harvesting Project

Australia's dairy and milk industry directly employed around 46,200 people and generated \$4.4 billion in farm gate value in 2018-19³. Farms range in size from small niche herds of goats, camel, buffalo and sheep, through to large dairy businesses with more than 3,000 cattle. Technology in this industry is developing rapidly. Innovations in the industry have seen milking methods evolve from manual,

to herringbone and rotary sheds, to the more recent introduction of robotic technology and automatic milking systems. As a result, the range of skills used across the industry is expanding. At the same time, traditional work practices remain valuable in various farm settings. Foundational skills, such as those to support biosecurity and animal welfare, are integral to all methods. This project looked at the skills and knowledge required to operate the vast array of technologies, across dairy harvesting operations of various sizes and contexts

Consultation has taken place throughout this project to revise the current qualification and skills standards for dairy and milk harvesting, so that they better reflect modern terminology, equipment and job roles within the sector. The Certificate III in Agriculture (Dairy Production) has been renamed to the Certificate III in Dairy Production. Existing units were revised and some proposed for deletion, to reflect current skills needs. One skill set and one unit were developed to capture the skills and knowledge required to maintain complicated automated mass milking machines.



³ Department of Agriculture, Water and the Environment, 2021, 'Dairy in Australia', viewed August 2021 <<https://www.agriculture.gov.au/ag-farm-food/meat-wool-dairy/dairy>>

Key Outcomes

- The Certificate III in Agriculture (Dairy Production) was revised to better reflect current industry needs, including the proposal to rename the qualification to Certificate III in Dairy Production.
- A skill set was developed to support the skills for maintaining on-site equipment.
- Six existing units were updated to include modern industry practices, including troubleshooting automated milking machines to reduce dairy's reliance on external technical support to keep the equipment running. The language within the units has also been updated so that it is inclusive of a wider range of milking animals, including goats, camels, buffalo and other animals.
- A unit that describes the skills for carrying out a routine service of milking equipment was developed.
- Seven units are proposed for deletion due to no/low enrolments and no longer required by industry.

The Australian dairy industry is dedicated to the skills development of its future workforce. A new Dairy Passport has been launched by Dairy Australia and supported by the Victorian Government, under the Agriculture Workforce Plan.

Landscaping Project

Landscapers draw on a range of expertise in horticulture, plant care and construction materials to design, construct and maintain the green spaces in private and community spaces. With urban city blocks getting smaller and many backyards acting as an extension of the living room, landscapers are working to deliver the most out of every space. Special considerations need to be made for environment and site conditions to design, construct and maintain gardens, so they are safe, comfortable and sustainable. Well designed and

constructed gardens offer both social and economic value, improving the liveability of our communities.

Thanks to the input of those involved in this project, the skills standards for work in landscaping have been updated to reflect current safe work practices and standards, industry regulations, the latest in technology, and up-to-date knowledge of horticulture and ecology.

Qualifications and units have been revised to more accurately describe job functions and the range of tasks that landscapers are required to perform, as well as to incorporate the latest technologies, equipment, regulations and consumer trends. Industry considered the issue of low enrolments in qualifications, recognising that they had not been reviewed recently and had been designed with a focus on horticulture. Feedback indicated that the qualifications are required by industry to meet their training needs, but that they could be made more relevant to industry and support clearer career pathways by broadening their focus to encompass the full scope of skills required. The updated qualifications and units reflect the increased consumer demand for a wider range of services and products and recognise the distinct skills required for tasks involved in the construction and design of gardens.

Key Outcomes

- Five national qualifications and two state accredited qualifications were considered, resulting in six draft qualifications. They have been reviewed to clarify their focus and indicate clear career pathways. The updated qualifications include units relevant to addressing building codes and standards, building principles, design, project management, health and safety in the workplace and licensing arrangements.
- Four skill sets are proposed for deletion due to low enrolments and no longer being required by industry.
- One skill set has been developed to support landscape design within

Australia's burgeoning therapeutic horticulture sector. Allied health professionals who develop therapeutic horticulture programs are covered under the HLT Health Industry Training Package. This skill set captures the skills in design required to plan garden spaces in schools and aged care facilities to carry out these programs.

- Twenty-four units have been reviewed to incorporate changes in technology and workplace practices and techniques, and to reflect current terminology. Where practicable, units were revised for use across multiple industry sectors (landscape, parks and gardens, horticulture, etc.) enabling individuals to move more easily between related occupations within the industry.
- Ten units have been developed to meet industry skill needs. They include: six design units that were developed to meet national industry skill requirements relevant to landscape design, producing landscape drawing and using CAD software; two units for landscaping construction that were developed to meet licensing requirements in certain states, so that graduates across the country can perform landscaping construction work; one unit for implementing an outdoor tiling project that was developed to meet increased customer demand in this area; and one unit to address the need for landscaping design skills standards for therapeutic horticulture.

Parks & Gardens Project

A skilled workforce of grounds keepers and gardeners are responsible for managing and maintaining Australia's many parks and gardens. It is important that these spaces are cared for, so that the public can continue to access safe and pleasant green spaces for recreation and leisure activities, as this can support mental health and wellbeing. Many parks and gardens are also home to native and unique plant species, animals and historic structures, which hold cultural and social importance. The



skills for this work are changing, as industry builds on its practices to promote biodiversity, adapt to climate change, and acknowledge the cultural significance of parks and gardens. Expertise in horticulture and an ability to work alongside other industry professionals are a necessity, with increased focus on skills for reusing resources, planting native species, and reducing herbicide and chemical use.

Industry have driven this project to review and update the national skills standards for caring for parks and gardens. Units of competency for working in parks and gardens have been revised to reflect current terminology, equipment, work practices (including sustainable use of materials), and workplace health and safety requirements. The Certificates II and III in Parks and Gardens have been updated to support strong pathways into the industry.

Key Outcomes

- The Certificates II and III in Parks and Gardens have been revised to support strong pathways into the industry, and to reflect the current job roles of the industry more accurately.
- The Certificate IV in Parks and Gardens and Diploma of Parks and Gardens are proposed for deletion. The associated high-level units within these qualifications have been reviewed and retained as they still hold great relevance to the tasks industry undertake. They

have been added to Diploma of Horticulture as electives, with the intention of reviewing how they are incorporated into the qualification when it is reviewed as part of another project in 2021-22.

- Nineteen units were revised to reflect current work practices and job roles and include references to waste disposal options such as recycling where applicable. The units for skills to address climate change and urban heat mitigation will be retained. These units are AHCPGD503 Manage parks and reserves and AHCPGD504 Develop and implement a streetscape management plan. Although both have low enrolment numbers compared to the national average, they are required to meet industry needs and there is expectation for renewed interest and an increase in enrolment numbers.
- The unit AHCPGD205 Prepare a grave site is proposed for deletion as it is not applicable to the parks and gardens industry and there are more suitable units within the SIF Funeral Services Training Package.

Skills for Land Rehabilitation (Mined Land) Project

Conserving and managing Australia's many unique ecosystems requires specialist skill and knowledge. While these skills are generally applicable to a range of geographically diverse natural locations, additional expertise is required to rehabilitate land after it has been used for mining. Working with topsoil that has been depleted of nutrients, managing the presence of chemicals and heavy metals, and considering structural hazards both above and below ground are all essential skills. Mine sites are now expected to have a land rehabilitation plan built into their plans for closure and with over 350 operating mines and mineral deposits across Australia, it is vital that the skills to restore mined land to a safe, stable environment are accessible.

Thanks to everyone involved in this project, the hands-on skills required to restore mined land have been captured in four skill sets and a 'rehabilitation of mined land' specialisation in the Certificate III in Conservation and Ecosystem Management. The subject matter experts who have helped support the development of draft skill standards for this work have considered how this work is increasingly undertaken by Indigenous rangers and other community members on Aboriginal lands, as well as the fact that it can require multiple inputs, including from environmental advisors, field workers carrying out conservation work, through to seed producers.

“The contents of each skill set and the specialisation added to the Certificate III in Conservation and Ecosystem Management are comprehensive of the skills required for somebody undertaking this work.

The specialisation will support a person developing a very rounded and multiskilled approach to their work. My role sits between an employee of a registered training provider and a contractor for rehabilitating contaminated sites. Working with Skills Impact from the inception of the project to the finished product, I feel confident in recommending the skill sets and qualification to those in my field of work.”

Matthew Pearson,
Central Queensland University.

Key Outcomes

- The option to specialise in the skills for the ‘Rehabilitation of Mined Land’ has been added to the Certificate III in Conservation and Ecosystem Management. Additional units have been added to the general elective bank of units in the qualification to support this specialisation, including work health and safety units.
- Four skill sets have been developed to address the following skills areas:
 - Providing administrative support on mined land rehabilitation projects
 - Carrying out work on-site on mined land rehabilitation projects
 - Operating machinery to assist with rehabilitation projects
 - Undertaking project coordination tasks in the rehabilitation of mined land.
- A unit describing the skills to develop work practices to accommodate cultural identity has been added to the Mined Land Rehabilitation Project Coordinator Skill Set, to reflect the skills in cultural sensitivity needed at a management level. A unit for managing enterprise staff requirements has also been added to the skill set.



Completed Projects

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 of competency, that were developed as part of these projects, are published on the national training register (training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

Ag Biosecurity and Emergency Response Project

Skills standards for preventing and managing biosecurity issues and outbreaks have been identified and benchmarked to job roles and activities, to support industry address the biosecurity issues within Australia today and prevent those issues of tomorrow.

Agronomy Project

A Diploma of Applied Agronomy has been developed to address the technical expertise required to apply agronomy practices. A skill set in digital agronomy and two units in agricultural data and nutrition have also been developed, and six existing units were revised.

Conservation and Land Management Project

Conservation and Ecosystem Management is a large and complex sector responsible for caring for Australia's unique flora and fauna. This project reviewed and updated qualifications and units related to this work, across the sub-sectors of lands, parks and wildlife; natural area restoration; conservation earthworks and pest management.

Green Walls & Rooftop Gardens Project

Green infrastructure offers many benefits for city residents, helping to cool our cities, manage storm water and improve air quality. The unique skills required to design, construct and maintain green infrastructure have been captured in five units and three skill sets.

Horticulture & Nursery Project

The skills required to grow plants for human use are evolving as industry adopts new technologies, processes and operations. Qualifications have been reviewed, merged and updated to provide greater clarity and simplicity for industry regarding the qualifications available for their workforce and units have been updated to incorporate the digital and technical skills required across the supply chain, including in the sectors of production horticulture, nursery production and retail nursery.

Medicinal Crops Project

Unique skills are required to operate within the strict regulatory framework and security requirements of the medicinal crops sector. Two qualifications have been created and thirteen units developed to capture the skills required to grow medical cannabis, including skills and knowledge in regulatory requirements, security measures, propagation, plant care, maintenance, harvest and pre-processing. Four skill sets have been developed to support the skills for working in the medicinal cannabis industry, covering induction activities, cultivation, production and management roles.

Rural Merchandising & Sales Project

Rural merchandising workers provide vital support to Australian farmers and horticulturalists, facilitating the sale of products and services to keep agricultural and horticultural businesses efficient and economically viable. The national qualification and skills standards for rural merchandising were reviewed so they are up to date with evolving products and markets.



Animal Care and Management



Supporting animal welfare and the wellbeing of those who work with animals is the key focus of the animal care and management industry.

Job roles across the industry are diverse, with unique expertise required to care for different animals according to their species and environment.

From dog trainers to zoo keepers, vet nurses to saddle fitters, every individual within this workforce has a role to play in supporting the welfare of wildlife, exhibited, working and domestic animals, as well as our broader community and ecosystems.

Veterinary services contribute \$2.6 billion to Gross Domestic Product, with a revenue of \$3.8 billion.

(Source: IBISWorld Industry Wizard, 2021)

Over 30 million pets in Australia today – more pets than humans! This includes an estimated 6.3 million dogs, 4.9 million cats, 11.2 million fish, 5.4 million birds, 1.5 million small mammals, 663,000 reptiles and 401,000 'other' pets.

Almost two-thirds of Australian households currently have one or more pets.

Australia is spending over \$30.7 billion per year to keep our dogs and cats fed, healthy and well-accessorised, with food and veterinary services continuing to account for half of all ongoing expenditure.

Source: Animal Medicines Australia, 2021, *Pets and the Pandemic: A social research snapshot of pets and people in the COVID-19 era*

Australia is home to some of the rarest animals in the world. In recent times, there has also been a substantial increase in pet ownership. The animal care and management industry is committed to keeping all these animals well cared for and safe. It is important that national skills standards for animal welfare are up-to-date and accessible.

During COVID-19, “There has been a substantial boom in pet ownership, with an estimated 30.4 million pets across the country. Nationally, 69% of households now own a pet, up from 61% only two years ago.”

Animal Medicines Australia, ‘Pets and the Pandemic: A social research snapshot of pets and people in the COVID-19 era’

The national skills standards and qualifications for this industry are overseen by the Animal Care and Management Industry Reference Committee (IRC).



Skills Forecast

The importance of a skilled animal care and management industry was emphasised by the 2019-2020 bushfires and COVID-19. Receiving recognition as an essential service early in the pandemic allowed industry to continue work to maintain the health, welfare and feeding of animals, but different challenges continued to face different parts of the sector. Animal exhibitors such as zoos, wildlife parks and aquariums relied on government supports to continue to care for animals without their usual revenue. Meanwhile, adoption agencies were inundated with requests to adopt or foster pets. Preparing for and responding to future emergencies, such as bushfires has also been a focus for industry moving forward.

Work to update skills standards related to pet care and animal training, exhibited animal care and marine wildlife continued throughout 2020. As a result of feedback collected throughout this process, a need for skills in assistance dog training and companion animal incident management emerged. As this was outside of the scope of the 2020 projects, two key projects were proposed to address these skills needs in the 2021 Annual Update to the IRC Skills Forecast and Proposed Schedule of Work (Skills Forecast).

Projects for 2020-21

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2021-22.

Trainers of Assistance Dogs

Growing evidence for how assistance animals can improve the quality of life for people with impairments and disabilities is driving demand for more skilled trainers of assistance dogs. This proposal is for the development of national units of competency to support the range of skills required of dog trainers in this important area of expertise. The units would be packaged as a specialisation in existing qualifications. Assistance dogs are now supporting an expanding range of disabilities and impairments (e.g. epilepsy, dementia, mental health, mobility and hearing impairment), all requiring distinct training methods to prepare the dog for interpreting and reacting to various symptoms and situations. Trainers not only require knowledge of the impacts of health-related conditions and how to train dogs for specific tasks, but they must also understand applicable legislation, risk management strategies, and public and workplace health and safety guidelines. Assistance dogs are covered under numerous laws for public access rights when assisting a person living with a disability. Accredited training, that utilises national units and qualifications, will support existing regulation and consistency among accredited trainers.

Small Companion Animal Incident Management

The 2019-2020 bushfires highlighted the important role of animal facility workers, emergency service workers and evacuation centres in supporting injured and displaced animals. With many evacuation centres overwhelmed, the need for revised evacuation protocols, procedures for accommodating companion animals and staff training were recommended by several reports, including the Royal Commission into National Natural Disaster Arrangements. The Royal Commission recommended 'national consistency in training and competency standards' to encourage resource and information sharing, and to enable 'someone trained in one state or territory to work effectively in another'. This proposal is for the development of companion animal incident management units of competency. The proposed project will provide a national approach to the skills standards for responding to incidents involving companion animals, which could also be used by local boarding kennels, shelters, and evacuation centres to upskill staff.

Project Work Between 2020-21

Skills Impact managed the following project between July 2020 and June 2021.

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 2022.

Horse Care Project

Caring for horses takes input from a whole range of professionals, each with unique expertise. Different skills are needed 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. Across all roles that work with or near horses, foundational skills in safety are vital. It is important that the skills required for all roles and tasks involved in the care of horses are captured in nationally endorsed skills standards, to support the safety of all involved and promote consistency in how services are provided.

Industry from around the country have contributed to this project to define the skills standards for a range of horse care professions. Qualifications have been updated to make them more flexible to deliver and to support career pathways. Skill sets have been updated and developed to support skills for emergency shoe replacement, coordination of horse care tasks and workers, and safety skills across a range of environments. Units have been revised and developed to strengthen safety skills and ensure flexibility of use across different job

roles involving horses. Some units have been merged to better reflect work tasks and some are proposed for deletion as they are no longer required by industry.

“...skills in safe horse handling are an integral part of our institution here. Volunteers, riders, carers and parents are provided with training in varying levels depending upon their interactions with horses at our establishment.

I believe that the standards developed have reinforced safety and created clear job pathways for people within the horse industry. I look forward to teaching and working with individuals with the updated standards for horse care.”

Jacqui Moon, CEO, Claremont Therapeutic Riding Centre

“The focus on safety for handler, bystanders and horse has been tailored to ensure everyone moving through any qualification has these skills prior to more intensive job roles. This ensures the safety of all people involved in and around horses and gives confidence to other professionals, such as vets and farriers, when engaged by a qualified equine person. The qualifications also allow clear progression in knowledge and skills through the different certificate levels, and again are tailored to the job roles within the equine industry.”

Lisa Wallace, Lecturer, Central Regional TAFE WA



Key Outcomes

- The Certificate II and III Horse Care qualifications have been revised to create distinct and clear pathways from the entry level horse care workers to broadly skilled and autonomous horse care practitioners, such as stable hands, grooms and riders.
- The Certificate IV in Equine Care has been created to provide a pathway in equine care, with occupational elective groups covering technical skills for a range of niche occupations.
- The Diploma of Equine Management has been updated so that it can provide a general qualification or options to focus on a specific technical area by selecting electives in horse, farm, stud or business management.
- The Diploma of Equine Allied Health has been restructured with a common core and elective groupings, potentially enabling other allied health job roles to be covered in the future without the need for an additional qualification to be developed.
- Three skill sets have been revised to incorporate changes to the units they contain.
- Three skill sets have been developed to support skills for working safely around horses, for performing horse groom functions and for transporting horses by road.
- Forty-one units have been reviewed and updated to improve flexibility of delivery, better reflect current terminology and Australian Qualification Framework (AQF) alignment. Best use has been made of cross-industry and cross-sector units to prevent duplication, and 20 units have been merged to become 13 to remove duplication. Specific safety and welfare knowledge and skills have been updated or added in each of the revised units where required. Specific assessor requirements for units instructing riding skills have been revised to strengthen the responsibility of RTOs and/or assessors to undertake appropriate risk assessment and control to ensure the safety of all involved in assessing the unit, including matching horses to the riders being assessed.
- Nine units were developed to address skills needs for specific expertise needed across the horse care sector.
- Six units are proposed for deletion, as feedback indicated they were no longer needed by industry.



Aquaculture and Wild Catch



Australia's aquaculture and wild catch industry draws on traditional knowledge and skills, including from the world's oldest civilization, Aboriginal and Torres Strait Islanders, while also adopting the latest technologies to maintain high standards of sustainability, biosecurity and efficiency.

Employs over
18,000 people

Over 6,320 businesses

Over \$8.5 billion in
revenue

Contributes \$1.6 billion to
Gross Domestic Product

(Source: IBISWorld Industry Wizard, 2021)

Between 2021–25 Australian fisheries and aquaculture production value is projected to rise by 1.6% to \$3.21 billion

Source: Mobsby, D, Steven, AH and Curtotti, R & Dylewski, M, 2021, Australian fisheries and aquaculture: Outlook to 2025-26, ABARES, Canberra

With one of the largest coastlines in the world, it is no wonder that Australia has a strong reputation for seafood – with salmonids, rock lobster and prawns the most popular catch. The industry’s positive reputation is underpinned by a dedicated workforce, equipped with a diverse array of skills, that operate across a wide range of environments and job roles, from small scale fishers to big trawlers, from salmon, crocodile, and oyster farms to prawn fisheries.

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



Skills Forecast

This year's Annual Update to the IRC Skills Forecast identified specific changes to the industry environment over the past year. It highlighted the impact of COVID-19, industry response and developments, including challenges around trade tensions. It also included information about employers' use of the national SFI Seafood Industry Training Package and qualifications, barriers to training, hiring apprentices and trainees, and reasons behind non-completion rates.

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, and more recently (2019-2020) addressing the skills gaps in underwater technologies and working with crocodiles. Research to date has shown no skills gaps in the skills standards and therefore no projects were identified for 2021-2022.

COVID-19 has caused many disruptions to the aquaculture and wild catch industry. Restrictions in response to local outbreaks have reduced demand for high quality seafood products, lowering the market price and in turn making it difficult for businesses to retain workers. At the same time, reduction in international flights has caused a logistical issue for exports. With government supports to ease these challenges, the industry is expected to rebound. Trade tensions with China have also caused disruption to the sector, which worked hard to bolster domestic consumption backed by a Seafood Industry Australia (SIA) campaign over

Christmas, with sales of Australian seafood rising by 30%.⁴ Country of Origin labelling is one mechanism that is helping industry promote its products to Australian consumers, who are increasingly keen to support local products.

One of the ongoing challenges for the industry is attracting a workforce, with strong competition from the mining industry in Western Australia and a shortage of migrant and visa workers. The Cooperative Research Centre for Developing Northern Australia (CRCNA) estimate that there will be 1,400 to 2,300 new direct jobs in aquaculture over the next 10 years, while there is potential for a 50-fold expansion in area available for freshwater pond aquaculture.⁵ They recognise the role of training and skills development in promoting aquaculture career pathways to fill these jobs and offer opportunities to potential workers.

Aboriginal and Torres Strait Islander communities continue to express a desire to have more economic opportunities around fishing, particularly in their own sea country. It is critical to the future of the industry that issues related to Aboriginal and Torres Strait Islander involvement in aquaculture and wild catch, as identified by the Productivity Commission in 2017, are addressed. Some work to address this is already happening across Australia, with the Queensland Government developing policy to support economic development opportunities for Aboriginal people and communities, and a Pilbara Indigenous community tropical rock oyster project underway in Western Australia which employs and trains Indigenous rangers.



4 ABC News, 2021, 'China's lobster ban helped lift Australian Christmas seafood purchases by 30 per cent', viewed April 2021 < <https://www.abc.net.au/news/rural/2021-01-06/christmas-seafood-sales-up-30-pc-after-chinas-ban-on-lobsters/13035636>

5 Cooperative Research Centre for Developing Northern Australia (2020); State of the North 2020; p.26

Completed Projects

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 the national training register (training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

Fishtech & Aquabotics Project

Australia's aquaculture industry is adapting its skills to work with a new range of underwater technologies, such as remotely operated vehicles (ROVs), underwater drones and biosensors. Tasks that have previously been performed manually, such as monitoring fish health and environmental conditions and inspecting and repairing nets, can now be done from a control room. These technologies are creating significant improvements across the industry, with increased productivity and sustainability, and better biosecurity and environment controls. As remote technologies become more prevalent most job roles will be impacted, requiring updated skills in digital literacy, data, automation and environmental sustainability.

“Innovation and technological advances are changing approaches to how work tasks are being performed. This in turn is driving the industry to introduce new technology, requiring employees to be adept in utilising the tools and computer programs to drive hardware. The industry therefore needs to prepare for the future and a focus now needs to be on the development of a workforce who is strong in digital literacy.”

Natalie Cheequee, Group Manager
People and Culture, Huon
Aquaculture.

As a result of this project and the input from all involved, national skills standards are now available for working with new remote technologies in the aquaculture and wild catch industries. Industry experts from around the country commented on the draft documents and invited the project team into their workplaces to demonstrate real job tasks and emerging skills needs.

“At Tassal, we use real-time technology and ROVs as a part of our everyday processes. The training documents developed as a part of this project will assist our workers to improve their skill level and work with greater awareness and knowledge.”

Peter Cheesman, WHS Induction
and Training Coordinator Farming





Key Outcomes

- Three skill sets have been developed for aquatic technology induction, aquabotics, and aquatic environmental audit.
- Nine units of competency have been developed, with a focus on the use and future use of technology in the seafood industry. These units will be incorporated as electives into existing aquaculture qualifications, in addition to being available for import to other qualifications. Some units have been developed to meet immediate needs and others are intentionally generic to future proof them and allow for new and emerging technologies to be incorporated into training. These units will be placed as electives in:
 - SFI20119 Certificate II in Aquaculture
 - SFI30119 Certificate III in Aquaculture
 - SFI40119 Certificate IV in Aquaculture
 - SFI50119 Diploma of Aquaculture
 - SFI50219 Diploma of Fisheries Compliance.
- Twenty-three units of competency have been revised so that they are applicable for use in the context of remote technologies.

Work with Crocodiles Project

Working with crocodiles is a complex field, overlapping a number of sectors including conservation and land management, animal care and management, and aquaculture. However, the same foundational skills support safe and sustainable practices for working with crocodiles and their eggs across all job roles, from crocodile farm workers to park rangers, zoo employees, and licensed individuals. Knowledge of diseases, biosecurity management, and the humane treatment of crocodiles are all crucial, as is the ability to perform risk assessment. Building on this, unique expertise is required depending on whether animals are in the wild or in a controlled environment.

It is crucial to understand that crocodile farming and conservation relies on the knowledge of Aboriginal communities who have respected crocodiles as entities and as a source of food for thousands of years. These industries also provide economic benefits for Traditional Owners through employment and royalty payments for egg collection on their land.

Thanks to all those involved in this project, new and revised skills standards are now available to support this developing industry, supporting safe and sustainable practices and the continued participation of Aboriginal communities in the industry across Northern Australia.

“There’s a strong desire for training by community rangers who want additional skills to deal with crocodile management and safety issues. We’ll be putting the new Certificate III in Working with Crocodiles to use as soon as our RTO gets it on scope.”

Dr. Adam Britton, Big Gecko Crocodilian Research, Charles Darwin University, NT

Key Outcomes

- Certificate III in Working with Crocodiles developed.
- Eight skill sets developed, including: Introduction to Working with Crocodiles, Care for Crocodiles in a Controlled Environment, Hatchling and Juvenile Crocodile Care, Crocodile Egg Harvesting, Crocodile Relocation, Crocodile Incident, Crocodile Survey, and Crocodile Public Relations.
- Eleven units of competency were developed with a focus on working with crocodiles and working in crocodile habitats. All of these are featured as core and elective units in the Certificate III in Working with Crocodiles. Some will also be included in elective lists for qualifications in the conservation and land management and animal care and management industries
- Two existing units were deleted – SFI AQU216 Work with crocodiles and SFIPRO303 Slaughter and process crocodiles – as they do not adequately address industry needs.



Food, Beverage and Pharmaceutical



Society is reliant on the skills of the food, beverage and pharmaceutical manufacturing industry to produce the products needed by humans and animals every day, whether that be in the form of packaged foods, processed ingredients, bottled beverages, or life-saving and enhancing medicines.

This industry is highly attuned to the needs and wants of its consumers and has been adapting to keep up with the latest developments around automation and traceability for its large-scale operations. At the same time, the industry is expanding its skills into new areas, such as native foods and pharmaceutical bioprocessing.

Employs more than
195,000 people

Contributes \$23.6 billion to
Gross Domestic Product

Revenue of \$98.4 billion

Source: IBISWorld Industry Wizard, 2021

As the largest single manufacturing sector, food and beverage accounts for 27.9% of total manufacturing turnover in Australia

Australian Government, 2021, Food and Beverage National Manufacturing Priority road map

Pharmaceutical manufacturing sector employs over 30,800 people and has a projected employment growth rate of 7.2% up to 2024.

Sources: a) ABS, 2021, 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, May 2021; EQ06 - Employed persons by Industry group of main job (ANZSIC), Sex, State and Territory, November 1984 onwards; b) Labour Market Information Portal, 2020, 2020 Employment Projections

The COVID-19 pandemic has highlighted the importance of a well-supported and highly skilled food, beverage, and pharmaceutical processing industry, with spikes in demand for certain products such as flour and pasta throughout lockdowns, increasing interest in locally sourced goods, and pressure to build up sovereign pharmaceutical manufacturing capacity as global demand for vaccines continues. While the skills of this industry are critical for day-to-day survival, they also play a big part in recreation, supplying restaurants, bars, and home kitchens, and supporting people's health so these things can be enjoyed.

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.



Skills Forecast

The last year has seen the food, beverage and pharmaceutical manufacturing industry face both disruption and unprecedented growth due to the ongoing impacts of COVID-19, drought, bushfires, flood and trade issues, as well as changes in consumer preferences. To stimulate job growth and strengthen the industry, the Australian Government is implementing a series of initiatives which will offer funding to businesses that are scaling up, build resilience into the supply chain, and plan for the future of the industry.

Investments in pharmaceutical manufacturing has seen significant increases to support the development of sovereign capability, particularly in the production of vaccines. More broadly, industry has responded to the challenges of the pandemic by boosting domestic production and building new facilities to compensate for Australia's usual reliance on imported products. With such a strong growth rate it is anticipated that industry will place a greater emphasis on formal training, as new entrants enter the workforce.

The pandemic has also strengthened consumer trends towards products that match their values. People are increasingly interested in supporting small local businesses and in purchasing products that are ethical, sustainable and health-focused. Skills in traceability and labelling are key to giving customers the information they need to make informed decisions.

The wine industry has been faced with particular challenges this past year, with COVID-19 closing bars, restaurants and cellar doors, extreme weather affecting crops, and trade interruptions decreasing the value of Australian bottled wine.

The National Skills Commission (NSC) has shifted its focus to identifying training options for workers that have become unemployed due to COVID-19. As well as upskilling and reskilling opportunities, the NSC are championing 'skills transferability' as a pathway to better employment prospects. This is something the food, beverage and pharmaceutical industry may be able to capitalise on as it continues to grow and evolve in response to consumer tastes and global forces.

Projects for 2021-22

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2021-22.

Australian Native and Bush Food

Indigenous food is a rapidly expanding sector in both local and global markets. Given that only a small proportion of native foods have received food safety certification so far, there is plenty of room for further growth. New job roles are emerging requiring specific skills for working in Indigenous communities and remote locations, harvesting and processing wild food, and exporting products according to strict regulations.

Pharmaceutical GMP

Good manufacturing practice (GMP) systems are used by the pharmaceutical manufacturing industry to ensure that products are consistently produced and controlled according to quality standards. Three Pharmaceutical Manufacturing qualifications currently contain GMP units that industry recommends are reviewed and updated so that appropriate training in these critical practices can be accessed, as well as ensuring that each unit aligns with its designated Australian

Qualifications Framework (AQF) level. In addition, business units within the Certificates III and IV in Pharmaceutical Manufacturing have been superseded and should be replaced with the current versions so that training delivery reflects current practices.

Sugar Milling

Sugar milling qualifications are widely used in sugar mills to develop training and define skills requirements for various roles, but are not formally delivered or assessed by any RTO. With the nature of the sugar industry changing, adopting increased automation and branching out into producing biofuel, the skills required for work in sugar milling are also shifting. This proposed project is to review current sugar milling qualifications and redesign training options to reflect the skills shared across industry job roles, and to encourage use of sugar milling units within the VET system.



Project Work Between 2020-21

Outlined over the following pages is a summary of projects Skills Impact managed between July 2020 and June 2021.

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 updated as part of the following projects were endorsed by the AISC and State and Territory Ministers in 2021. They are published on the national training register (training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit skillsimpact.com.au/completed-projects for further details.

Flour Milling Project

The skills to produce flour, oats, maize and other milled products are highly technical and sought after. Strong continued demand for these products has seen the flour milling industry adopt increasingly sophisticated automated systems and processes. As a result, the workforce has become more concentrated and milling operatives require diverse skills to be across a larger part of the process. Consumer interest in an expanding variety of flour and grains and an increased focus on traceability has also driven industry to develop and adapt its skills.

Consultation took place throughout this project to review the national skills standards for flour milling, which had not been updated in some time. Industry experts indicated early in the project that there were industry-supported options available outside of the VET system that appropriately

met upskilling requirements at the level of the Certificate IV in Flour Milling. However, a skills gap was identified at the Certificate III level, for a mill operative or miller's assistant role, which shares many foundation skills used across the food and beverage processing industry at that level. As a result, a specialisation in the Certificate III in Food Processing has been developed to reflect the technical expertise required and support flexible career pathways. Following industry advice, the Certificate IV in Flour Milling is proposed for deletion. The proposed new milling specialisation includes core units that cover food safety and quality, traceability, good manufacturing practice (GMP), work health and safety, and process operator skills and knowledge.

"For me it is difficult to imagine a day where I do not eat a flour-based product. From bread to meat pies, crackers to cakes, biscuits to pasta, donuts to gyoza, noodles to pancakes, pizzas to beer battered chips and everything in between. Having skilled milling operatives and assistants is now more important than ever." James Bunn, National Head Miller at Allied Pinnacle Pty Ltd

Key Outcomes

- Milling specialisation developed within the Certificate III in Food Processing.
- Two skill sets developed to cover skills for food processing operators, including mill operatives and miller's assistants.
- Current units updated so they match the work currently carried out in grain processing.
- A unit developed for operating and monitoring a reduction system.

- Certificate IV in Flour Milling proposed for deletion.
- Five units proposed for removal as they either describe skills required at a management or supervisor level, which are being met by alternative industry-supported training options, or describe skills that have been embedded across other units.

Food and Beverage Processing Project

Over the past ten years, consumer demand has inspired a range of innovations and shifted the way job roles are performed in the food and beverage processing sector. Today's customers want to know where their food and beverages came from and what is in them. They also care how they are packaged. This has inspired improvements in traceability and allergen control, and the development of new products.

Thanks to all involved in this project, industry has access to updated qualifications and skills standards that reflect current job roles to produce food and beverage products. 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. Qualifications and units have been merged where appropriate to remove duplication and streamline delivery. Specialisations have been added to the Certificate III in Food Processing to support more flexible career pathways and help acknowledge specialist expertise.

Modernisation of the Food, Beverage and Pharmaceutical Training Package

The work that took place between 2019 and 2021 as part of the Food and Beverage Processing, Flour Milling and High-Volume Production Baking projects resulted in substantial changes being made to over 85% of the qualifications within the Food Beverage and Pharmaceutical Training Package. This included streamlining, removing duplication, deleting unused qualifications and developing skill sets and specialisations within qualifications. This work is in keeping with the aims of the Australian Government's Modern Manufacturing Strategy⁶ to double the value of the food and beverage manufacturing industries through a focus on smart manufacturing, innovation, food safety and origin and traceability systems.

⁶ Australian Government (2021); Make It Happen: The Australian Government's Modern Manufacturing Strategy; <https://www.industry.gov.au/sites/default/files/October%202020/document/make-it-happen-modern-manufacturing-strategy.pdf>



“The Food, Beverage and Pharmaceutical Training package is a key cornerstone to the provision of skills and underpinning knowledge of process technology and supporting processes within our industry. In our case, its role is reinforced within our Industrial Agreement instrument to provide employees with skills, recognised qualifications, career progression and learning paths, whilst providing our business with a workforce with necessary skills and knowledge.”

Carolyn Gray,
Nestlé Confectionery & Snacks

Key Outcomes

- Five qualifications reviewed and redesigned to become three qualifications, including updates to reflect necessary skills in allergens and traceability and checking and adjusting alignment to the Australian Qualifications Framework (AQF):
 - Certificate I in Food Processing
 - Certificate II in Food Processing (merged with Certificate II in Food Processing [Sales])
 - Certificate III in Food Processing (merged with Certificate III in Food Processing [Sales]), includes 12 specialisations.
- Seventeen units developed to capture current industry skills needs related to allergens, traceability, edible oils, food specific good manufacturing practice (GMP), fruit/vegetable juices and equipment maintenance.

- Four skill sets developed for skills in allergens and traceability and for introductory skills for new workers in the sector.
- 114 units revised to better reflect current industry practices, terminology and standards.
- Ten units deleted, as feedback indicated they were no longer needed by industry.

High Volume Production Baking Project

Australians are spending more on quality baked goods and are increasingly interested in a broader range of products – from gluten free options to nutrient enriched breads. The high-volume production baking industry is uniquely equipped to meet this demand, producing the baked goods that line supermarket shelves around the country. As more digital and automated technology is adopted to feed this hunger for baked goods, industry is leading change by identifying augmented job roles and emerging skills needs.

Thanks to everyone who contributed to this project, the high-volume production baking sector will soon have access to an updated qualification and skills standards to reflect these industry changes.

The updated Certificate III in High Volume Baking incorporates the unique skills required to work in the four industry sub-sectors of pastry, cakes, biscuits and bread. It also captures skills related to food safety, good manufacturing practice, work health and safety, traceability, setting up processing lines for production or packaging, and using numerical applications.

Key Outcomes

- The Certificate III in Plant Baking was revised and renamed the Certificate III in High Volume Baking. It incorporates units of competency covering skills and knowledge across all four sub-sectors to allow flexibility and movement within the industry.
- Nine units of competency developed to fill skills gaps identified in current training programs and to meet the new and emerging needs of all four subsectors of the high-volume plant baking industry, including two technical units.
- Fifteen existing units have been revised so that they reflect current work functions.



Completed Projects

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 and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

Pharmaceutical Bioprocessing Project

The expanding field of pharmaceutical bioprocessing harnesses organic material to produce treatments, tests and vaccines. Pharmaceutical manufacturing plays a vital role in putting science into action to produce products for treatment and diagnosis and making them available for use. Specific skills are needed to work with sensitive bacteria, yeast or mammalian cells to mitigate product degradation, process variability and contamination. Workers in this area also require high level analytical skills to work with new technologies and interpret data.

As a result of this project, nine units of competency were updated so that they are relevant to the methods, materials and regulations used when manufacturing products produced using pharmaceutical bioprocessing techniques. It is important the pharmaceutical industry is equipped with all the skills it may need, so it can respond to demand quickly, particularly in light of the COVID-19 pandemic.

“Bioprocessing skills are an essential and growing part of the pharmaceutical industry, with seven out of the top ten drugs by sales value globally requiring such skills for the manufacture. I know from personal experience that these skills are needed, now and in the future, in order for our pharmaceutical manufacturing sector to grow and flourish. The recent pandemic crisis has underlined this need, not just globally but within Australia, for increased pharmaceutical manufacturing capacity in order for the country to meet current and future needs more self-sufficiently. I therefore wholeheartedly support the endorsement of the Bioprocessing Technologies training units.”

Dr Paul MacLeman, foundational Chair of the Pharmaceutical Industry Reference Committee and Chairman of AdAlta Ltd

Key Outcomes

- Nine units of competency were updated to accurately describe the skills required to work in pharmaceutical bioprocessing manufacture.
- Updates have been made to terminology so that the units are current and accurate to the context of pharmaceutical bioprocessing. This includes:
 - The term ‘plant based’ materials has been replaced with ‘organic’ materials to be inclusive of the use of mammalian blood in some processes.
 - The application of the unit of competency FBPPHM3018 Operate a sterilisation process using an autoclave has been updated to include other accreditation or certification requirements, enabling it to be used across many other training packages and settings.
 - FBPPHM3007 Operate a separation process using chromatography has been renamed FBPPHM3019 Operate a chromatography manufacturing process.



COVID-19 Critical Response Project

A skill set to support the pharmaceutical industry in its urgent response to the COVID-19 pandemic was developed and published in the later part of 2020. The Pharmaceutical Manufacturing Operator Induction Skill Set is designed to support displaced workers to gain new skills and build on existing skills, equipping them to enter the pharmaceutical processing industry. It describes foundation skills required within the industry, particularly for those employed to work with bioprocessed products, such as vaccines and antibody testing devices.

The skill set was developed by industry experts, in a process supported by the Pharmaceutical Manufacturing Industry Reference Committee and managed by Skills Impact. It is included on the JobTrainer Fund list and the fee for registered training providers putting it on scope will be waived.

A range of resources and tools have been developed to support training delivery of the skill set, funded by the Commonwealth Government. They are available to download and use for free at skillsimpact.com.au/publications-and-resources

The Pharmaceutical Manufacturing Operator Induction Skill Set was developed in response to the Critical Skills for Recovery initiative, driven by the Australian Industry and Skills Committee (AISC) and the AISC Emergency Response Sub-Committee. Work to develop the skill set was approved by the AISC Emergency Response Sub-Committee on 28 July 2020. The completed skill set was approved by the Sub-Committee on 16 September 2020.

This work is part of the AISC's efforts to ensure Australia's national training system is well positioned to address the workforce challenges presented by the COVID-19 pandemic and the subsequent economic downturn.



Forestry and Timber



Australia relies on a skilled forest management and harvesting workforce to produce the wood, timber and fibre products used everyday to construct buildings and produce essential sanitary items like toilet paper.

The industry is made up of many sectors, each responsible for a crucial step in the supply chain, planting, managing, and harvesting forests, as well as processing and distributing timber and wood.

Employs over 62,000
people

Contributes \$6.2 billion to
Gross Domestic Product

Revenue of \$22.6 billion

Export revenue of over
\$2 billion

Source: IBISWorld Industry Wizard, 2021

In the face of bushfires, climate change and COVID-19, the importance of maintaining these skills at a local level has been reinforced. Building on current skills and attracting new entrants are an important focus for industry, so that it can have access to the skilled workforce it needs. Safe and sustainable work practices are also a key focus, so industry can continue to grow and manage Australian forests, recognising them as a valuable renewable resource.

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.



Skills Forecast

Over the past year, industry has been continuing to produce forest and wood products in one of the most complex and challenging environments experienced in memory. The COVID-19 pandemic came on the heels of a devastating bushfire season, with export and policy conditions also proving difficult.

Industry has demonstrated a commitment to vocational education and training (VET) during this time, contributing to a substantial review of the FWP Forest and Wood Products Training Package overseen by the IRCs for Forest Management and Harvesting, Timber Building Solutions and Timber and Wood Products. Employers have continued to encourage participation in the projects by workers, who have volunteered their time as subject matter experts, reviewers and validators.

As part of the 2020–2021 projects, consideration has been given to some qualifications and units with low enrolments, in the interest of streamlining training packages, as requested by the Skills Ministers and the AISC. The IRCs are continuing their work to streamline the FWP Training Package as part of the 2021–2022 project to review and consolidate the sawmilling and timber processing qualifications and units.

The governments of Victoria and New South Wales have both implemented initiatives to support industry as it recovers from the 2019–2020 bushfire season, with funding for research, planting, nurseries, salvaged timber, replacing and upgrading infrastructure, and new innovations. The IRCs are overseeing a project in 2021–2022 to improve available training for assisting during future bushfires and similar emergencies.

Even with the challenges of the past few years, industry continues to look towards opportunities to expand and improve its operations. Innovations in the way timber is produced and new timber products have attracted investments in new and upgraded facilities, machinery and equipment across the timber and wood products manufacturing sector. Work to identify the growth potential for the forestry industry in northern Australia is also underway, with opportunities for skill development and sustainable local employment identified.

Projects for 2021-22

The following projects have been approved by the Australian Industry and Skills Committee (AISC) for 2021-22.

Sawmilling and Timber Processing

The sawmilling, timber processing and timber products sectors are undergoing rapid digital transformation and technological advancement, and as a result the skills required of operators is changing. They need the skills to work with new technologies and produce innovative products such as cross laminated timber (CLT) and glue laminated timber (GLT). The demand for skills to monitor, maintain, optimise and troubleshoot highly specialised automated equipment that moves, grades, assesses, scans, cuts and assembles timber pieces and products is surpassing the need for operators to pass, move, lift, grade, assess, stack, and sort timber and wood products. This project proposes a review of current qualifications and skills standards to incorporate current skills requirements and to consolidate the number of qualifications and units, to reduce complexity in the training system.

Responding and Assisting in Bushfires

Forestry operators hold a key role in assisting with fire mitigation, firefighting, clean up, and clearing operations. They have expertise in the heavy machinery used in both harvesting operations and firefighting and support the prevention of bushfire through mechanical thinning. With the frequency and intensity of bushfires in Australia expected to increase, forestry operators and emergency services supervisors need to be effectively trained and ready to respond and assist. Seventeen current units of competency within the FWP Forest and Wood Products Training Package are proposed for review, to incorporate the skills required for bushfire prevention, assistance and recovery. Two units may also need to be developed to fill a skills gap in fire incident control and leadership. The revised and new units could be exported into other training packages to support job roles outside the forestry industry, which have also expanded to undertake activities assisting with bushfires.

Project Work Between 2020-21

Outlined over the following pages is a summary of projects managed by Skills Impact, with support from ForestWorks, between July 2020 and June 2021.

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 2021.

Entry Level Forestry Skills Project

Skilled workers are highly sought after in the forestry industry. With continued strong demand for a range of products, from new wood-fibre based plastic alternatives to the softwood used to build new homes, industry and governments are looking for ways to produce these materials in a sustainable way. The Federal Government has committed to planting a billion trees over the next decade, in addition to the 70 million trees already planted each year. Australian plantation forests, which provide the majority of Australia's timber, are located in regional and sometimes remote locations. New entrants are needed in these regions to deliver on planting commitments and address the future skills needs of industry.

Industry representatives have volunteered their time throughout this project to update the national entry level qualifications to better meet current skills needs and attract new young entrants. These updates have focused on improving the deliverability of the qualifications, so that they better support the career journey of learners and reflect the hands-on skills required. The updated qualifications, skill sets and units are designed to support entry-level and

existing operators to meet current job requirements, as well as providing school students in regional forestry areas with access to school-based VET training that provides a career path into a variety of forestry roles.

“These updated qualifications, skill sets and units of competency allow myself and my colleagues to be aware of any updated skills needs that apply to our industry, and then allows us to pass on this information to learners, so they have knowledge of any new requirements they may need to meet future industry demands.”

Keith Eastley, TasTAFE

Key Outcomes

- Four qualifications at the AQF level two and three were consolidated into one qualification at each level, resulting in a Certificate II in Forest Operations and a Certificate III in Forest Operations, with specialisations in forest nursery production, silviculture and timber harvesting and haulage.
- The Certificate I in Forest and Forest Products is proposed for deletion as it is no longer needed by industry.
- Five skill sets were developed, including four to support targeted skills in plantation establishment, silviculture, and excavator and skid steer loader operations, as well as one for learners who are new to forestry operations.
- Fifteen existing skill sets were

revised to incorporate updated units of competency.

- New units of competency were developed to address gaps in entry level qualifications and meet skills requirements, including two for learners who are new to forestry operations, such as those in school-based VET traineeships and other VET in-school programs and nine to support workers and operators in forest nursery production operations.
- Units of competency from the Foundation Skills Training Package have been imported to allow for soft skills development, so that young learners are prepared to navigate workplaces and to build on the VET foundation skills programs widely delivered in schools across regions.
- Existing units were reviewed to reflect job roles and works tasks and to improve learning outcomes.
- Five units are proposed for deletion as feedback indicated they are no applicable or relevant to forestry operations.

High-Level Forestry Skills Project

Growing and maintaining sustainable forests for timber, wood and fibre requires high level skills in planning, supervision and management. With new digital and spatial technologies being adopted by industry, these skills have been changing, meaning updated skills are needed. Expertise is required to develop digital forest maps and harvest instructions files and for the management and analysis of harvesting optimisation data. Skills are also needed for the collection of forestry data using unmanned aerial vehicles (UAV) and interpretation and use of image data in forestry planning

and management. These skills help support a safer and more sustainable forestry industry.

While high-level forestry skills are in high demand in Australia, there is a shortage of people qualified and available to perform the work. 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 skills required to grow and harvest forests safely and sustainably. The updated qualification structure is more flexible, enabling participants to select subjects which best suit their needs.

“Both qualifications are now reflective of industry developments and relevant to our industry as a stepping stone to a fulfilling forestry career.”

Linda Cotterill, Forestry Corporation of NSW

Key Outcomes

- Two qualifications, the Diploma of Forest and Forest Products and Certificate IV in Forest Operations, were revised to support the current skills requirements of the forest industry and provide a flexible structure for learners.
- The Advanced Diploma of Forest Industry Sustainability is proposed for deletion as feedback indicated it is no longer needed by industry.
- Ten skill sets are proposed for deletion as they are no longer needed by industry.
- Forty-six units of competency underwent minor adjustments and updates. These units focus on people practices management, safety and environment, and forest operations.

- Seventeen units have been consolidated and merged into eight units, as they had similar learning outcomes.
- Seven units are proposed for deletion as they are no longer needed by industry.
- Sixteen units were developed to address skills gaps related to management systems, forest resource management and forest operations management.

Remote Forestry Operations Project

Forestry work in remote locations requires specific safety skills to support the wellbeing of individuals and small teams. Forest workers must possess specialised skills to maintain safe work practices while operating heavy machinery for long periods of time, in conditions that can be unpredictable. Skills are also needed to respond to emergency situations if they occur. Mental health awareness and first aid is also a key skills requirement. At a leadership level, the team's abilities are reinforced by skills to actively shape and promote a safety mindset.

The forestry industry has driven this project to capture the skill required to foster a safety culture with safe practices and a safety mindset while working in team situations or alone, in isolation or out of line of sight. One unit applies to operational forestry roles and the other unit is designed for those leading small work teams in remote forestry operations.

Key Outcomes

- A unit has been developed to describe the skills and knowledge required for applying situational awareness and a safety mindset while performing operational forestry-related tasks in team situations or when working alone, in isolation or out of line of sight. This unit has been added to the redeveloped Certificate III in Forest Operations, which was reviewed as part of the Entry Level Forestry Skills Project.
- A unit for applying a safety mindset in forestry operations has been developed to capture the skills required for those leading small work teams to influence safety culture. This unit has been added to the Certificate IV in Forest Operations, which was reviewed as part of the High-Level Forestry Skills Project.

Completed Projects

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 and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

New Timber Harvesting Technologies Project

New technologies such as digital maps, forest operation plans, and new harvesting systems are providing the forestry industry with safer, more environmentally sustainable ways to work. For this reason, many job roles have adapted to incorporate the technical and digital skills required to use these and other new technologies. As a result of consultation throughout this project, the skills needed to perform harvesting activities using new technologies were captured in five new units of competency. Twenty-five units across the forest harvesting sector were also updated to reflect current work practices, safety standards, and equipment. One unit, FWPFGM2210 Implement animal pest control procedures, was deleted and replaced by AHCPMG309 Apply pest animal control techniques, a unit of similar content and outcomes from the AHC Agriculture, Horticulture and Conservation and Land Management Training Package that has allowed for the reduction of duplication across these two training packages.

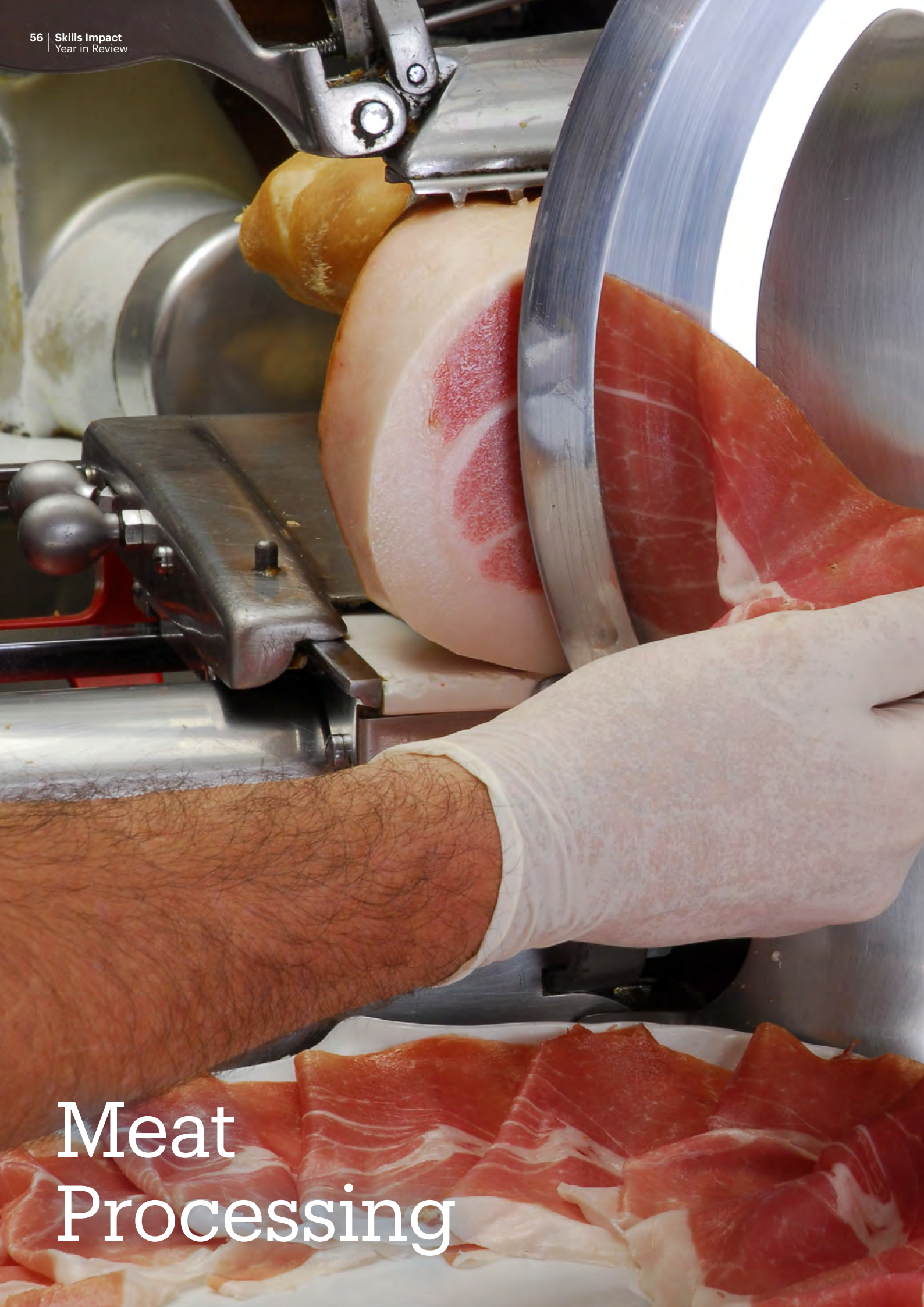
Timber Merchandising Project

Timber merchandising workers make up an essential step in the timber and wood supply chain, helping construction businesses and individual consumers with advice and sales services to meet their specific needs. Consultation has taken place throughout this project to review and redevelop the Certificate III in Timber Merchandising (now the FWP30620 Certificate III in Timber Building Products Supply) with different learning pathways and relevant job outcomes for timber building supply job roles, including specialisations in timber warehousing, logistics, or customer advice and sales. A Certificate IV was considered for development, but industry feedback indicated that leadership and management skills for this sector can be met by existing leadership and management qualifications. The Certificate II in Timber Merchandising was deleted because of availability of alternative qualifications in timber or sale operations. Four units were revised to update workplace health and safety and foundation skills requirements, and to more clearly define the nature and scope of work tasks described in these units. One unit, FWPCOT3251 Promote the carbon benefits of wood products, was deleted as industry did not indicate a need for it.


Timber Truss & Frame Estimating & Design

Many homes and other buildings in Australia are built using timber trusses and frames. While there is rising demand for timber roof trusses and frames, there is a shortage of locally based timber systems designers in Australia to provide plans for how to construct timber truss structures. Industry has contributed throughout this project to review skills standards for timber truss and frame estimators (designers) and fabricators, so that they reflect the distinct skills requirements for each role. As a result, three qualifications and 25 units of competency were updated, and five skill sets and one unit of competency were developed. They have been updated to broaden entry requirements and improve consistency. Four qualifications have been deleted, the Certificate II in Timber Truss and Frame Design and Manufacture; Certificate IV in Timber Truss and Frame Manufacture; Diploma of Timber Truss and Frame Manufacture; and Diploma of Timber Truss and Frame Design. All qualifications have been deleted either due to the low demand for training or the availability of alternative qualifications.





Meat Processing



Australia's reputation for producing high quality, wholesome and safe meat is built upon the skills and training of the 69,000 people that make up the meat processing workforce.

Bringing in more than \$45 billion each year, the sector makes a significant contribution to the Australian economy through its success in both global and local markets.

While COVID-19 has presented challenges throughout 2020-21, the industry is forecast to continue growing over the next five years.⁷

⁷ IbisWorld, 2021, 'Dead meat: Heavy declines in exports due to COVID-19 are causing revenue to fall', viewed August 2021, <<https://www.ibisworld.com/au/industry/meat-processing/90>>

Employs over 69,000
people

Contributes \$7.1 billion to
Gross Domestic Product

Revenue of \$45.2 billion

Source: IBISWorld Industry Wizard, 2021

Export over 70% of production, amounting to over \$15.9 billion annually, which is expected to grow by 2% each year up to 2026.

Source: IBISWorld, 2020, Australia Industry (ANZSIC) Report C1111: Meat Processing in Australia

The preferences of different markets are a key driver of industry skills needs across the sector, with increased interest in Australian game meat, growing demand for poultry products, and a strong market for halal products. Big data and increased automation are helping to make industry more efficient and sustainable. The skills of this workforce are integral to making sure Australians and the world have access to meat products that are nutritious and meet the needs of people from a range of cultures and lifestyles.

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



Skills Forecast

The current iteration of the AMP Australian Meat Processing Training Package is meeting industry needs well, even with the challenges of the pandemic. However, the potential of the training package is not being fully realised. As such, the Meat IRC is taking the opportunity to undertake a full review of the training package. This will mean a substantial transformation, with the aim of providing simpler training and broader job outcomes with greater transferability of skills. The review is proposed to be undertaken in three stages.

While COVID-19 has significantly disrupted the Australian meat processing industry, it has also emphasised the value of its supply chains and the robustness of food security in the sector. COVID-19 clusters associated with meatworks impacted the health of workers and their families and caused workforce interruptions. Specific precautions were taken by industry and at times were required by government to safeguard against potential outbreaks, including reductions to production during the stage 4 lockdown of greater Melbourne. Some employers are now reporting difficulty attracting and retaining workers due to these outbreaks and a lack of access to JobKeeper. Despite the impacts of COVID-19 on industry revenue, the value of agricultural exports is forecast to reach record figures in 2021–22, with beef export volumes forecast to grow by 8%.⁸

Global markets have been impacted by disrupted cargo transport and upgraded biosecurity restrictions imposed in some countries. While training was able to continue where it was taking place on-site at work, registered training organisations (RTOs) have had to shut classrooms during lockdowns across most states and travel by trainers and assessors has been limited. This has hampered completion of training and

apprenticeships. However, the Meat IRC are pleased with the flexibility and content of the training package which has supported industry throughout these challenging circumstances.

Project for 2021-22

The following project has been approved by the Australian Industry and Skills Committee (AISC) for 2021–22:

Meat Processing Skills Review Project (Stage 1)

This project proposes a full review of the AMP Australian Meat Processing Training Package, to take place over three stages (approximately three years). Updates over the past five years have focused on specific industry needs in primarily niche areas. However, the broader training package requires updates to align with best practice in the VET system. The aim of this project is to review all 24 qualifications, 446 units of competency and 75 skill sets so they not only meet Training Package

Standards, but so they are more user friendly for employers, learners and registered training providers (RTOs). This work will reduce duplication across the training package, improve the ability for employers and learners to choose the appropriate program of learning, and will simplify RTO delivery. The first stage of this project is proposed to take place in 2021–22 and will include the review of all general meat processing qualifications and core units to create qualifications that can have specialist skills or job role streams added as they are developed. This will also allow for groupings of job roles at relevant AQF levels within single qualifications.

Stages two and three of this project will be considered after the completion of stage one. Stage two is proposed for 2022–23 and will focus on reviewing components based on identified industry sectors. Stage three is proposed for 2023–24 and will focus on reviewing the qualifications and skills standards relating to retail operations and specialist areas.



⁸ Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), 'In this section Agricultural overview: September quarter 2021', viewed September 2021, < <https://www.agriculture.gov.au/abares/research-topics/agricultural-outlook/agriculture-overview> >

Project Work Between 2020-21

Outlined over the following pages is a summary of projects managed by Skills Impact, with support from MINTRAC, between July 2020 and June 2021.

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 2021.

Meat Rendering Project

Meat rendering and pre-rendering processes play a key role in the sustainability of the meat processing industry. Using unique skills, this workforce transforms animal by-products that would otherwise be waste into stable and useable material, such as food for animal and human consumption, fertiliser and other consumer products. As industry evolves, adopting new technology, equipment, terminology and practices, the skills required for this work are changing.

As part of this project, feedback was collected to review the qualification and skills standards for rendering and pre-rendering processes. They have been updated to reflect changes in industry operations, equipment and terminology, supporting the sustainability and safety of this vital sector within the meat processing industry.

Key Outcomes

- The Certificate III in Meat Processing (Rendering) has been redesigned to better align with the level of skills required for this work and amended to provide a more flexible choice of units for learners from a range of diverse rendering operations.
- Ten units in meat rendering have been revised and some of them merged, resulting in six final units.
- The meat rendering units have been

updated to reflect changes in the operations of a rendering process, such as batch rendering, continuous dry rendering and low temperature wet rendering; boiler operations; blood coagulation and drying; and tallow refining. The Performance Evidence in the Assessment Requirements were revised to remove unnecessary duplication and to provide users with greater clarity on the nature, volume and frequency of skills that an individual must demonstrate. Minor changes were also made to the Performance Criteria to differentiate food safety hazards and worker health and safety hazards.

- Two pre-rendering units have been updated to replace redundant terminology no longer used by industry and to reflect current training package standards.
- Three skill sets have been developed to capture the skills required for different types of rendering processes. This will support workplaces that have a need for skills in a particular type of rendering, such as small plants that only perform one kind of rendering process.

Meat Slicing Project

Operating meat slicing equipment safely and hygienically requires specific skills, which are used across a range of environments in the meat and food processing industries. Prior to this project the expertise for this work was supported by the unit AMPS207 Slice product using simple machinery, which was specific to the smallgoods sector and not accessible to workers using slicing equipment in other environments.

As part of this project, the unit has been reviewed and updated so that it is relevant to the various sectors that use these skills, including butchery,

small goods, retail, poultry and food processing. Updates have also been made to capture safety skills and use of manufacturer's settings, as well as personal protective equipment, cleaning and sanitisation processes and knowledge of contamination and other faults that can create product quality risks. The performance evidence has been revised to remove unnecessary duplication and to provide greater specificity on the nature, volume and frequency of skills required.

The six skill sets which contain the unit were also reviewed to include the changes to the unit. Updates were also made to reflect changes to the unit in the qualifications. However, they were not reviewed beyond this, as they are due to undergo a full review as part of future projects.

Key Outcomes

- A unit for slicing product using simple machinery has been updated to reflect diverse work environments, safety and hygiene skills.
- Six skill sets updated to reflect changes to the unit.
- Minor changes to qualifications containing the unit to incorporate the updated unit.

Completed Projects

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 and available for delivery by registered training organisations (RTOs).

Visit www.skillsimpact.com.au/completed-projects for further details.

Diploma and Advanced Diploma of Meat Processing Project

Strong management and leadership skills support the success of the Australian meat processing industry in domestic and global markets. Recent innovations in traceability and automation are changing the skills required by industry, as it strives to meet customer specifications and export requirements. It is important that people in high level roles are equipped to guide industry through these changes and take advantage of opportunities that arise.

Consultation took place throughout this project to review and update the Diploma of Meat Processing and Advanced Diploma of Meat Processing, which define the skills standards needed to effectively manage meat processing organisations and the sector more broadly. As a result, industry has access to the technical skills it needs to guide it into the future.

Halal Meat Processing Project

Demand for Australian halal meat is strong, with export trade currently valued at \$1.6 billion annually⁹ and expected to increase. Export to many international halal export markets requires certification, so that consumers know where meat is coming from, how it has been handled and whether it matches their religious beliefs. Previously, employees have needed to obtain halal certification from one of a

number of Islamic organisations in addition to possessing a meat processing qualification. This has caused challenges with consistency in Australian halal certification.

Thanks to the contributions of those involved in this project, national skills standards in halal meat processing have been developed. They describe the many specialist skills required for this work and will support the Australian meat processing industry as it moves towards a single Australian halal certification system and a unified training approach to halal meat processing.

Game Harvesting Auditing Project

Game meat undergoes a unique journey, making its way from individual harvesters or property owners to processing plants via mobile chillers or depots. This presents a different set of challenges to farmed meat products, requiring different quality control processes. Compliance is required throughout the supply chain, including skills to support humane harvesting and food safety standards. Regulations are in place for where and when certain game can be harvested, as well as harvesting quotas to keep the industry sustainable.

Previous to this project, skills for wild game harvesting were described in skill sets, components of which are requirements in most state licensing systems. However, skills standards were not available to ensure compliance in the transport of game meat via depots. Thanks to

the input of industry throughout this project, national skills standards were developed to support compliance with biosecurity and food safety regulations during this vital step of the journey. These skills are critical to ensuring meat is wholesome and safe for human consumption, supporting the reputation of Australian game meat to local and international markets.

Poultry Processing Project

Consumption of chicken is higher than any other meat in Australia, and its popularity is only on the rise, with consumption increasing by 33% per capita between 2008/09 – 2018/1910. Industry has become increasingly automated throughout the entire processing line as it works to meet this high demand, increasing the yield and efficiency of production, while also reducing the risk of cross-contamination and injury to workers carrying out repetitive tasks.

Thanks to the contributions of everyone involved in this project, current job roles and skills needs for poultry processing have been captured in ten new skill sets and four new units.

9 Commonwealth of Australia, 2015, 'Report, Third party certification of food', viewed August 2021, <https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Food_Cert_Schemes/Report/c02>

10 Australian Chicken Meat Federation, 2021, 'Facts and Figures', viewed August 2021 <<https://www.chicken.org.au/facts-and-figures>>



Pulp and Paper Manufacturing



From printing and packaging to sanitary products and medical supplies – Australians are reliant on the skills of the pulp and paper workforce to produce a range of essential everyday products. The necessity of a skilled pulp and paper workforce has been reinforced by the COVID-19 pandemic, which has seen high demand for items such as toilet paper, takeaway packaging and medical supplies.

Employs over
30,000 people

Over 1,630 businesses

Contributes \$3.6 billion to
Gross Domestic Product

Revenue of \$17.1 billion

Source: IBISWorld Industry Wizard, 2021

Sustainability is a key focus for industry as it moves into the future, with a push for increased re-use and recycling in production processes. Support for skills in areas such as bio-manufacturing and recovered paper are vital, so that industry can keep up with consumer demand and preferences and make the most of the materials and resources available.

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).

Skills Forecast

This year's Annual Update to the IRC Skills Forecast highlighted important information about employers' use of the national PPM Pulp and Paper Manufacturing Industry Training Package, including use outside of the vocational education and training (VET) system and barriers to using the system. This information will be critical as the full training package review is completed and attention turns to encouraging uptake for formal training in the VET system. The Annual Update also reported the impact of COVID-19, industry response and developments, including shifting demand for different products.

Work to review the full training package took place during 2020-21 as part of the Pulp and Paper Manufacturing Review Project. This work is due for endorsement late in 2021, after which there will be a continuing focus on ensuring the updated training is utilised.

While COVID-19 has dramatically changed what consumers need

and want in the form of paper-based products, Australia's pulp and paper industry has responded reasonably well. There has been huge demand for products like toilet paper, takeaway packaging and medical supplies, while sales of copy paper and lightweight coated paper for catalogues and advertising have plummeted. With the surge of online shopping throughout lockdowns, there is an increase in delivery boxes and packaging in the recycling stream, which is a valuable commodity for export, particularly as the value of unsorted recovered paper rises. Industry has also had to deal with the impacts of bushfires and market supply issues on the upstream supply chain throughout 2020-21.

As demand for newsprint and other printed products continues to fall in Australia, industry is looking to diversify its products. A range of opportunities are being pursued, which will both improve the sustainability of operations and

present economic benefits. While Australia has previously exported recovered paper, government is now investing in building local capacity to produce high-value recycled products and phasing out exports. Recycled fibre-based packaging is on the rise with major supermarkets and food retailers seeking more sustainable options.

The PPM Training Package is valued by industry, although its use is informal and on-the-job, due to a lack of registered training organisations offering training. The Pulp and Paper Manufacturing Review Project aims to find a pathway to formal use of the nationally accredited training system, in consultation with industry and RTOs. It also aims to address current skills needs, including expertise for working with new and emerging technology for bioprocessing, de-inking and recovered paper processes, supporting industry's development and diversification.

Project Work Between 2020-21

The following project was managed 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 projects are expected to be endorsed by the AISC and State and Territory Ministers later in 2021.

Pulp and Paper Manufacturing Review Project

It takes a skilled pulp and paper manufacturing workforce to produce many essential products used across households, businesses and medical environments. The importance of this industry and its expertise has been highlighted by the COVID-19 pandemic with high demands for medical and protective products, as well as packaging, tissues and toilet paper. With new technologies becoming available to support sustainability and a need to adapt to consumer preferences, innovations are occurring in bioenergy, biomass and biodegradable packaging. As a result, updated skills are required.

Thanks to the input of everyone involved in this project all qualifications, skill sets and units of competency within the PPM Pulp & Paper Manufacturing Industry Training Package have been updated and restructured to reflect current technology, terminology and processes. Consultation with registered training organisations (RTOs) has also taken place, to improve the viability of training delivery.

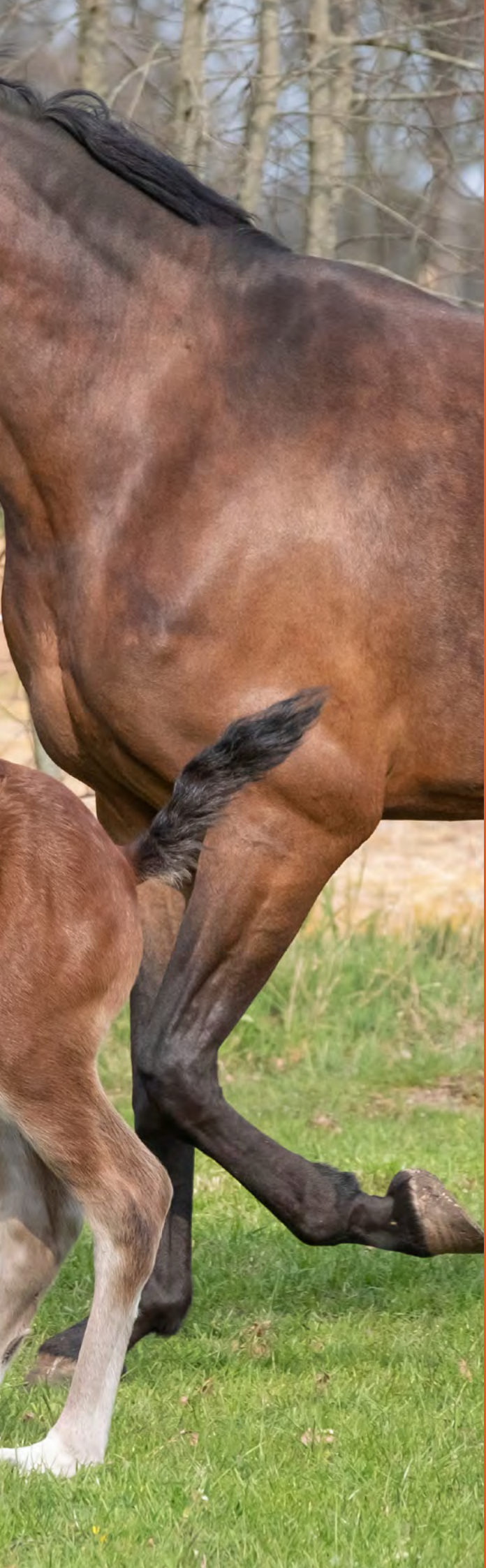
Key Outcomes

- Six qualifications at Australia Qualification Framework (AQF) levels II, III and IV have been merged into three qualifications, so that there is one at each level, reflecting the common skills across papermaking and pulping, at the same time addressing the full breadth of skills required for different job roles in a pulp or paper manufacturing facility.
- The Diploma of Pulp and Paper Process Management has been reviewed and renamed the Diploma of Pulp and Paper Operations Management, with revisions made to the core units and updated elective selections.
- Seven new units have been developed to cover entry level skills for working in the industry; skills in management or oversight of operations, including the research and evaluation of emerging technologies; and skills for working with advanced de-inking operations.
- Fifty units have been reviewed to better reflect current work tasks, technology and processes.
- Twenty-three units have been merged to become 11 units that better reflect current job tasks.
- Seven units are proposed for deletion, as the skills are now covered in other units.
- Three skill sets have been developed to address emerging technologies used in production processes, including de-inking and support skills for entry into the workforce and high-level roles.
- Eight skill sets have been revised to include updated units of competency.
- Two skill sets are proposed for deletion, as these skills could be better addressed in the proposed new skill sets.





Racing and Breeding



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.

Employs around 27,000 people

Contributes \$968.5 million to Gross Domestic Product

Revenue of \$4.6 billion

Source: IBISWorld Industry Wizard, 2021

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).

Skills Forecast

This year's Annual Update to the IRC Skills Forecast noted the success of the redevelopment of the national RGR Racing and Breeding Training Package as well as the importance of supporting training delivery.

Thanks to already strong biosecurity protocols, Australia's racing and breeding industry faced less disruption than other industries by COVID-19. The pandemic, however, highlighted the importance of training and development for industry participants and the ability of RTOs to adapt to COVID-19 protocols. High standards of safety and animal welfare are integral across all areas of work in the industry, combined with expertise to support the success of each animal in sport or breeding. Formally recognised,

quality-assured and independently assessed training is necessary to support skills development and recognition, but attracting Registered Training Organisations (RTOs) to deliver training is a challenge. This is in part due to the cost in offering new training products, or gaining approval to have them on scope, as well as the cost of providing access to live animals, stables/kennels, tracks and equipment. The need for high safety standards within the training itself, while critical to delivery, is also a barrier for RTOs. The Principal Racing Authorities (PRAs) have been encouraging RTOs to deliver formal training and are also working with the Racing and Breeding IRC to find solutions for assisting RTOs to place relevant training on scope and begin delivery. Industry is also striving to

build upon its already high safety and welfare standards, to make entry into racing and breeding more appealing.

The Racing and Breeding IRC has brought to the attention of the AISC the importance of nationally consistent assessment and training resources. This is a gap in the current system as the development of these materials does not fall within the current national system. Skills Ministers are working to address this gap in the system and it is an important element in current VET reform proposals. The Racing and Breeding IRC strongly support this change and are trying to work with reform leaders to develop approaches that will address this gap.



Project Work Between 2020-21

Skills Impact managed the following project between July 2020 and June 2021.

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.

The qualifications updated as part of the following project were endorsed by the AISC and State and Territory Ministers in 2021. The qualifications are published on the national training register (training.gov.au) and available for delivery by registered training organisations (RTOs).

Visit skillsimpact.com.au/completed-projects for further details.

Greyhound Racing Careers & Jockeys Project

A career in Australia's racing industry presents a range of opportunities and pathways to choose from, all requiring foundation skills in animal welfare and sporting integrity. For those in higher level roles, like jockeys, these skills need to be further developed to keep themselves and their mounts safe and healthy. Thanks to the contributions of everyone involved

in this project, the skills required for both of these distinct groups of learners (those starting a career and jockeys) have been included in national qualifications. As a result, industry can be confident these qualifications capture skills to promote the health and safety of riders and horses across the industry.

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 core unit ACMEQU205 Apply knowledge of horse behaviour was removed and included as a mandatory unit in the Stable Hand and Stud Hand specialisations, so as not to present a barrier to those wishing to pursue a career in greyhound racing. Two greyhound units are also included as electives. These changes are considered to be minor and the qualification is equivalent.

The Certificate IV in Racing (Jockey) has been revised to reflect the expertise required to race thoroughbred horses. Two advanced level business units have

been removed from the core of the qualification, as they were creating a barrier to training delivery and industry feedback indicated that they do not reflect the job role. This was also discussed with registered training organisations (RTOs), learners and relevant Principle Racing Authorities. The two units have now been superseded and the updated units included as electives. All prerequisite units relevant to the existing core units have also been included as core units. As a result of this, the number of required core units has been increased to 14 while the elective units have been decreased to three. All other units have been checked for currency and updated or removed where necessary. A statement has been included in the Companion Volume User Guide with a strong recommendation to RTOs to consider the personal health and fitness of learners as it applies to riding racehorses, at the weight specified according to the Australian Rules of Racing, and to ensure a person has a relevant medical clearance to become a jockey. These changes are considered to be minor and the qualification is equivalent.



VET Insights

The Government is committed to improving Australia's skills systems and the vocational education and training (VET) sector. Over the past couple of years, they have been inviting feedback from industry and other stakeholders on the ways VET can be improved. They have drafted a VET Reform Roadmap, launched the Delivering Skills for Today and Tomorrow package and more recently established the skillsreform.gov.au website to collect and report on feedback on a range of VET topics.

These initiatives recognise that we can all contribute to change and be part of a better solution for the VET sector.

Over the past five years, Skills Impact has collected a lot of feedback about the VET sector from our extensive interaction with industry, training providers and other stakeholders. They have shared their concerns and challenges and discussed possible solutions. To provide support to

the governments' VET reform processes, we have been collecting this information and undertaking further research. Our research has included both qualitative and quantitative approaches, including literature reviews, interviews and discussions with industry and VET stakeholders, data analysis, and surveys. Much of this information is included in Annual Updates to Skills Forecasts published for each industry.

A focus on learning

*Balancing outcomes and development in
Australian Vocational Education and Training*

Steven Hodge

Deniese Cox

Jason Skues



Griffith University Research

Skills Impact engaged Griffith University to collect data and views on the VET sector's current competency paradigm, and to outline concepts that may support the current VET reform process.

Griffith University conducted research, looking into the challenges experienced under current system settings. The research was supported by a review of IRC Skills Forecasts and a national survey to gather feedback on issues from VET sector participants.

A national online survey was distributed to employers, industry representatives and training providers in industries as diverse as agriculture, animal care and paper manufacturing. The questions centred on the concept of competency, and common understandings of it, to evaluate the potential efficacy of reimagining competency through a developmental framework.

It also sought to find out the extent to which stakeholders consider that workplaces should be involved in training that prepares learners for careers in their industry.

Over 550 stakeholders responded.

Griffith University have analysed the data and produced a report titled 'A focus on learning: Balancing outcomes and development in Australian Vocational Education and Training'. This report can be downloaded at skillsimpact.com.au/vetinsights

Five Key Areas

We have assembled the feedback and ideas from stakeholders under five categories. Research has focused on these areas, which outline the common challenges that our stakeholders have shared with us, as well as some possible solutions.

Industry Leadership in VET

Industry has a leadership role at the beginning of the skills pipeline, to describe their skills requirements. However, they have very little input over what, how and when training is delivered. Increasing industry leadership would have industry involved, in a structured way, at all stages of the system.

In our engagements with industry, we have seen first-hand issues that 'get in the way' of industry engagement and have collected ideas for potential solutions:

- The first is renaming 'Training Packages' to 'Industry Work Skill Standards'. This would clearly demonstrate to industry that they have a direct connection to the VET sector. We know that industry are far more interested in commenting on work and skill standards than commenting on something that appears to be an RTO training issue.
- The second is to ensure that industry, through enterprise practice, have an active and recognised role in the VET sector, by allowing for more direct enterprise contributions towards learning and training, mainly through supervised work practice.

Competency is a Journey

Competency is more than completion of a training course and it is best achieved through a combination of workplace and institutionalised practice. Our research shows that many VET sector stakeholders believe a staged approach to competency development would be a realistic improvement to the current competent or not yet competent dichotomy. Our research also showed a lot of support to reconfigure the system to identify the parts of skill proficiency RTOs can deliver and the parts enterprises need to deliver.

One possible solution to embrace the strengths of both RTOs and industry in their roles of developing a competent person could be to re-interpret units of competency and produce supporting materials for both training delivery and workplace practice. Information can be collected during both of these processes to better support assessment.

Industry Work Skill Standards

(i.e., occupational skill standards) could provide information about the skills and knowledge required for competency, as well as enterprise guidance on delivering relevant workplace practice.

National Skills and Training Materials

(i.e., training standards or curriculum, based on units of competency) could be created to help define what an RTO is responsible for delivering, including a wider range of options to meet local requirements.

Under this model, RTOs deliver, in collaboration with enterprises, a minimum acceptable standard of vocational training.

The Government's current qualification reform review is proposing some much-needed solutions, such as basing qualifications on appropriately grouped occupation and skills clusters, simplifying training products and removing complexity, separating occupational and training standards, and developing stand-alone and/or stackable short form training products. These solutions would help deliver broader vocational outcomes for learners and improve training pathways.



Units Supported by Curriculum

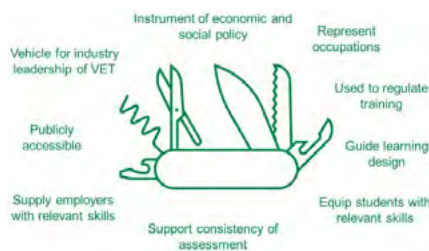
Units of competency and qualifications are what currently make up ‘training packages’, but they by themselves do not make up a complete package of training. They define occupational outcomes and include a range of knowledge and assessment requirements, but they do not describe the training activities that need to take place.

Units describe the end point of competency, not how somebody should be trained. They are occupational skill standards, not training standards or curriculum.

It is pleasing to see the Government exploring the options to add these missing pieces to the training package, whilst also exploring increasing industry involvement in the development and assessment of competency.

Units have become the vehicle to carry a range of information that should be in a package of training. They have become what Steven Hodge at Griffith University describes as a Swiss army knife for VET training delivery.

They are used for regulation among other things, with RTOs being held accountable for teaching a unit when it has not been written in to be a training standard.



Source: Steven Hodge, Deputy Head of the School of Education and Professional Studies at Griffith University

Thin Markets and RTO Delivery Challenges

- Low ratios of learner to trainer, access and safety issues
- Highly technical skills and or skills requiring access to expensive materials and machinery
- Learners spread across large geographical areas with low numbers of students in any one area

The training delivery market struggles to operate in high cost and thin markets with serious consequences for a number of industries and occupations.

Skills Impact provides services to a portfolio of industries with a predominance of operations in regional, rural and remote locations. These areas are generally high-cost training environments with student numbers spread over a broad geographic range, leading to lower potential enrolment numbers for RTOs working in any particular region.

Regulatory requirements for providers in these thin markets are the same as for those in urban areas. The viability of delivery under these conditions is challenging and often not sustainable, resulting in a lack of training solutions to regions or in specific skill areas and/or a significant compromise in quality of delivery. Many of the skills needs in these regional, rural and remote industries also require expensive materials or machinery. Some of the skills are highly technical and challenging to deliver. All of these factors have resulted in a lack of delivery options for many skills, occupations and areas in Australia. Training delivery is consolidating in areas where delivery is viable and not in areas of greatest industry need.

Factors in an RTO's decision to add or remove a qualification or unit

Availability of skilled and qualified trainers	88%
Availability of equipment, infrastructure, or other resources	87%
Demand for the training from employer	88%
Availability of prospective students	90%
Changes in industry priorities	84%
Ability to meet ASQA compliance requirements	87%
WHS or other risks associated with delivery	82%
Access to public funding to support delivery	72%
Cost of course design and/or materials	74%
Geographical spread of students and/or workplaces	59%
The ability to deliver the desired elements in your institution or a workplace	80%

Source: S. Hodge, D. Cox, and J. Skues (2021); A focus on learning: Balancing outcomes and development in Australian Vocational Education and Training.

Contextualisation of Units

There are more than 15,000 units in the VET system, despite efforts to reduce them. Training providers collectively struggle to deliver and be audited against 16,000 discrete units. As a result, many units end up never being delivered, despite describing identified industry work practices and training needs.

It seems that there are two large contributing factors to this issue:

- New units are developed to describe new ways of work, but at the same time it is almost impossible to delete existing units that describe older methods of work that are still in use.
- When units are written broadly enough to apply across multiple industries, they lack contextualisation and become meaningless for each industry. As a result, many units with the same subject matter exist across many industries, but as separate units which contain details specific to an industry.

The number of units could be significantly reduced by national contextualisation statements and materials to deal with new and old methods of work, and issues of application specific to each industry. This is an approach that has recently been demonstrated for the new infection control units, developed in response to the COVID-19 emergency.

Award Winning Skills

Congratulations to this year's finalists

We were thrilled to see so many 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.



Caitlin Radford

Apprentice of the Year Award Winner

Certificate III in Agriculture

Fifth-generation farmer Caitlin Radford grew up living on the land. Hailing from Moriarty on the North-West Coast of Tasmania, Caitlin started her Certificate III in Agriculture as a part-time apprentice through the family farming business. Caitlin has since progressed into a Diploma of Agribusiness Management through TasTAFE.



Kevin Nunn

VET Teacher/Trainer of the Year Award Winner

Forestry management and timber training

Kevin Nunn remembers the anxiety and adrenaline he experienced when he felled his first big Ash tree by himself. Having had to learn this skill on the job without any formal training, Kevin jumped at the opportunity to help develop and deliver timber training with TAFE Gippsland. His work there has helped to put TAFE Gippsland on the map for forestry management and timber training.



Joshua Nickl

Apprentice of the Year Award Finalist

Certificate III in Retail Baking (Combined)

Since starting his apprenticeship, Joshua Nickl began competing in industry competitions. His first was the Baking Association of Australia's Pastry Apprentice of the Year in 2016 where he achieved third place. The following year he worked hard to top that achievement and became the 2017 National Apprentice Pastry Chef of the Year. In 2018, Joshua not only topped his class at Canberra Institute of Technology, he was awarded Most Outstanding Apprentice of All Trades.



Cheyne Pearce

Trainee of the Year Award Runner-up

Certificate IV in Horticulture

Inspired by a deep connection to the land and sea, Cheyne Pearce wanted a job where he could work in the natural world and perform a role in its care and protection. To fulfil his passion for the environment and equip himself with the right skills, Cheyne studied a Certificate II in Horticulture at North Metropolitan TAFE, continuing on to the Certificate III and IV. He landed a dream job as a trainee at Kings Park and Botanic Gardens.



Nicole Barrow

Trainee of the Year Award Finalist

Certificate IV in Veterinary Nursing

Nicole Barrow has always known she wanted to work with animals. Having gained some experience in the horse breeding industry, Nicole signed up for a traineeship at Rose City Veterinary Hospital in Benalla. Working in a small practice, with only two veterinarians on duty at any one time, meant Nicole got a lot of first-hand experience dealing with different kinds of emergencies. Nicole was also awarded Student of the Year at the Box Hill Institute.



Phoebe Storey

Trainee of the Year Award Finalist

Certificate IV in Veterinary Nursing

After a childhood spent riding and competing on horses, it was natural that Phoebe Storey would choose a career working with animals. She completed a Bachelor of Animal Science, but still wanted hands-on experience, so enrolled as a trainee at Redgum Vet & Pet Boarding, undertaking a Certificate IV in Veterinary Nursing. Phoebe's commitment and dedication to her field of work saw her named Port Augusta's Trainee of the Year in 2018. Also in 2019, she won the District Council of Mount Remarkable's Junior Citizen of the Year.



Cassandra O'Carroll

Australian School-based Apprentice of the Year Award Runner-up

Certificate II in Conservation and Land Management

During the devastating 2019-20 bushfires, Cassandra was able to apply the scientific skills she learnt in her School-based Traineeship at the Kiama Community College to help injured wildlife. As school captain of Bomaderry High School, Cassandra created the Sustainable Schools Competition where schools compete for prize money by undertaking eco-friendly initiatives.

St Paul's College, Kempsey

School Pathways to VET Award Winner

AHC Agriculture, Horticulture and Conservation and Land Management Training Package

St Paul's College in Kempsey is within the Macleay Valley Food Bowl precinct, which has around 650 local agribusinesses. The college empowers students to aim for personal excellence in all areas of their life. In 2015 the college expanded its vocational education program and opened a trades skill centre to focus on primary industries, hospitality and construction. The 2019-20, bushfires severely affected the region and many college families and students were impacted directly. Teachers, students and families joined BlazeAid to build new fences, supporting the local farmers devastated by the fires. The students used the fencing skills they acquired in the primary industries course.

Tasmanian Secondary Colleges RTO

School Pathways to VET Award Finalist

AHC Agriculture, Horticulture and Conservation and Land Management Training Packages and ACM Animal Care and Management Training Package

The Tasmanian Secondary Colleges (TSC) RTO was registered in 2006 to provide VET in schools programs at the eight senior secondary colleges in Tasmania. By delivering training and assessment in 59 qualifications to a range of industries across Tasmania, TSC RTO nurtures the future workforce for many Tasmanian businesses. Every student who graduated from TSC RTO in 2019 has transitioned to employment.

South West Institute of TAFE

Large Training Provider of the Year Award Winner

AHC Agriculture, Horticulture and Conservation and Land Management Training Packages and FBP Food, Beverage and Pharmaceutical Training Package

South West Institute of TAFE (SWTAFE) is the largest VET provider in south-west Victoria. In 2019, SWTAFE delivered training to 5,000 students, which was a 27 per cent increase on the previous year. A large proportion of training is targeted at skills shortages in growth sectors, including nursing, aged care, community services, health, and food and fibre.

TasTAFE

Large Training Provider of the Year Award Finalist

AHC Agriculture, Horticulture and Conservation and Land Management Training Package and FBP Food, Beverage and Pharmaceutical Training Package

TasTAFE works with government and industry to meet skills needs and to support economic growth. Training 20,000 students, TasTAFE focuses on job-readiness and employment outcomes. In 2020, the institute embraced the challenges of COVID-19 and quickly transitioned to digitally supported learning.

