



Year in Review

2018-2019



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A skilled and qualified workforce is critical to current and future prosperity of industry and our nation”

Michael Hartman, CEO

Introduction

Practical training is a key element in the development of a high performing and skilled worker. Such an individual is an obvious benefit to any employer, supporting their business to achieve greater results, but the advantages of quality training does not stop there.

An industry equipped with competent and skilled employees has the foundation for growth and competitiveness, and this has positive returns for the wider economy.

One of the most effective ways to build skills is to engage in Australia’s national Vocational Education and Training System. More than 4,000 registered training organisations are available to work with industry to deliver against skills standards, documented within national training packages. This is why it is important that the skills standards are industry-led and remain up-to-date with current practice and developments.

We are amidst the “fourth industrial revolution”, with the rise of digitisation, automation, biotechnology and robotics changing the way work is done. The industries we support are familiar with change and the need to adapt. Work over the past 12 months has focused on the skills needed to keep up with the latest changes in the environment, legislation, technology, products and consumer trends.

Working with industry, government and training providers across Australia we gathered information and evidence to track industry trends, skills opportunities and challenges. Working with Industry Reference Committees (IRCs), this information was documented in Skills Forecasts. The documents were submitted to the Australian Industry and Skills Committee and government in April 2019. Skills Forecasts provide advice about future skills needs and solutions and propose a four-year plan for reviewing and developing skills standards and qualifications for the Vocational Education and Training (VET) sector.

Sixteen projects were approved from the Skills Forecasts during 2018-19. Between July 2018 and June 2019, work was carried out on a total of 32 projects; 16 of the projects were new; the other 15 were in the final stages and were approved out of the 2017-2020 IRC Skills Forecasts. One project was a cross-sector project, where Skills Impact is supporting a Project Expert Panel to identify environmental sustainability skills across all industries.

Our work supports industry to develop a skilled and flexible workforce for the future. National qualifications need to be industry led, reflect real work activities, current skills standards and practices. This is why industry engagement is at the core of all of our work.

We appreciate the input from all of the industry stakeholders we work with, all of whom volunteer their time to provide valuable feedback. They do this by sharing their knowledge about skills needs, opportunities and challenges, because they are passionate about the future of their industry.

Our work is about supporting a national vocational education and training system that is a world leader in documenting and passing on industry and occupational know how and skills. To do this, we work with industry, training providers and government on projects to develop and improve national skills standards and qualifications.

We would like to recognise and thank IRC members and industry stakeholders for volunteering their time and expertise to support the improvement and development of industry skills standards. Thank you also to our staff, Directors, ForestWorks, National Farmers Federation, MINTRAC and Rural Skills Australia for their contributions.

Skills Impact Board and CEO

Left to right: Lisa Marty, Todd Loydell, Julie George (Chair), Michael Hartman (CEO), Duncan Fraser (Deputy Chair), Les Gordon and Paula Fitzgerald.



Snapshot of the Industries we Support



Revenue
\$350bn

Contribution to
Gross Domestic Product:

Over
\$87bn

Total
employment
912,000
(\$38bn worth of wages
in Australia)



Export value
\$59bn

Which is almost 20%
of all Australian industry
exports



Number of
businesses
230,330

Our Role in the Skills Standards Development Program

Skills Impact, as an expert skills and industry service organisation, has been contracted by the Commonwealth Government to perform the role of one of six skills service organisations.

In this role we are accountable for providing technical, operational and secretariat services to support 12 Industry Reference Committees to plan industry engagement and to guide training package development and review activities.

Development and maintenance of skills standards for more than

120
industry sectors:

8
Training packages

400+
qualifications

3000+
units of competency

290+
skill sets

Managed
32 projects

to improve skills standards and qualifications

Supported
12 Industry Reference Committees

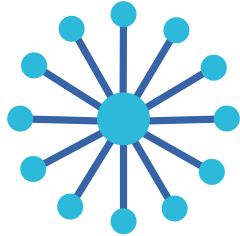
to engage with over
1800 stakeholders

Developed
8 Skills Forecasts,

documenting priority skills and project proposals

Skills Standards Development Program

What is Our Role?



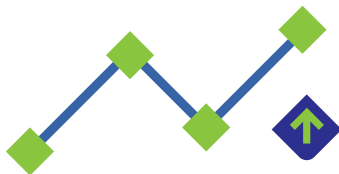
The Australian Industry and Skills Committee (AISC) appoints Industry Reference Committees (IRCs) to oversee the development and review of training packages (qualifications, skill sets and units).

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

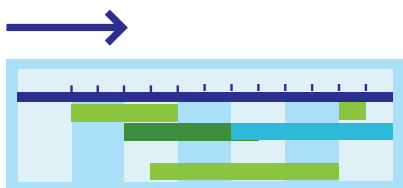


Gaps and emerging skill needs are identified by Industry Reference Committees and industry.

Skills Impact captures this in Skills Forecasts.

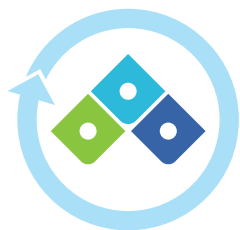


Skills Impact submits IRC Skills Forecasts, Cases for Change, and projects to the AISC for approval.



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

Skills Impact is contracted to carry out projects.



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

Skills Impact submits the work to the AISC.



Revised qualifications, skill sets and units are endorsed by the AISC and made publicly available at training.gov.au

Support to Industry Reference Committees

Twelve Industry Reference Committees (IRCs) guide and direct our Skills Service Organisation 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 skills needs.
- Develop **Skills Forecasts** and 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.

Skills Impact employs dedicated Industry Engagement Managers that provide secretariat support services to eight of the IRCs. Skills Impact has contractual partnerships with ForestWorks and MINTRAC; these two organisations manage the secretariat services for the forest management, timber, pulp and paper and the meat processing sectors, on our behalf.

We support the following IRCs:

- Agriculture and Production Horticulture IRC
- Amenity Horticulture, Landscaping, Conservation & 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 & Paper Manufacturing Industry Training Package
- RGR Racing and Breeding Training Package
- SFI Seafood Industry Training Package

IRC Meetings

This year, Skills Impact supported IRC members to undertake 27 meetings, including booking 213 flights, facilitating and managing the meetings, creating all supporting documentation and minute taking.

IRCs meet to make decisions, discuss concerns, respond to specific questions and to progress the development work on their industry's national training package.

The primary aim of IRC meetings is to review and approve Skills Forecasts, consider whether qualifications meet the needs of industry, provide industry intelligence, and advise the direction of training package development.

Guests are often invited to these meetings. These may be 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 and Training; or representatives of associations or organisations that may have members affected by the decisions the IRC is making.

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 documents developed by industry and used by registered training organisations, like TAFEs, to help design their training programs. Training packages are industry's way of telling trainers what work outcomes are expected to perform particular job roles and to what standard.

Skills Forecasts

Industry engagement is at the core of all of our work. It is fundamental to the work we do to track industry trends, skills opportunities and challenges. Collaboration with industry, government and registered training providers provides insights into the world of work and how industry is developing the skills of their workforce, and where there are skills gaps and opportunities.

Every year, we support Industry Reference Committees to produce updated *IRC Skills Forecasts and Proposed Schedules of Work*, which propose projects to review and develop relevant units of competency, skill sets and qualifications. The Skills Forecasts identify skills gaps, emerging markets and changing work methods. The proposed schedules of work detail a four-year work plan of projects. The Australian Industry Skills Committee (AISC) considers the information in these reports and approves various projects for development.

Nineteen projects were approved by the AISC out of this year's Skills Forecast and Case for Change process. These projects will commence in the second half of 2019:

Agriculture, Horticulture, Conservation and Land Management

- Agronomy Project
- Conservation and Land Management Project
- Biosecurity and Emergency Response Project
- Medicinal Crops Project
- Rural Merchandising and Sales Project
- Horticulture and Nursery Project
- Green Walls and Rooftop Gardens Project

Animal Care and Management

- Exhibited Animal Care and Marine Wildlife Project
- Pet Care and Animal Training Project

Aquaculture and Wild Catch

- Fishtech and Aquabotics Project
- Work with Crocodiles Project

Food, Beverage and Pharmaceutical

- Advanced Wine Operations Skills Project
- Pharmaceutical Bioprocessing Project
- Food and Beverage Processing Project

Forestry and Timber

- New Harvesting Technologies Project
- Timber Merchandising Project
- Timber Truss and Frame Estimating and Design Project

Meat

- Diploma and Advanced Diploma in Meat Processing Project
- Game Harvesting Project
- Halal Meat Processing Project
- Poultry Processing Project

Future Industry Directions and Skills Needs

One of the clear themes to emerge during consultation this year was the need to look at different ways to address industry skill needs. So, in this year's Skills Forecasts some different types of projects were proposed, offering fresh approaches to enhance the work of updating qualifications and skills standards.

For example, industries such as racing and breeding, forestry and timber, requested projects to develop national assessment tools. The racing and breeding industry have developed a strong culture of sharing standards and approaches to ensure high levels of integrity, safety and welfare. The context of training and assessment in the racing industry is similar across Australia and so the industry would like to formalise these shared practices through the development of assessment tools.

In the forestry and timber industry, much of the training takes place on the job. Operating in regional and remote areas, they would like to attract registered training organisations to their sector. The development of assessment tools may offer the flexibility to continue in-house training, while allowing workers to gain a national qualification.

In the pulp and paper industry it is also common for training to happen on the job. Even though employers are using the training package as a guide, employees cannot receive a qualification unless it has been delivered by a registered training organisation. A research project has been proposed to uncover the nuances of why this is happening.

Project proposals have also been submitted to address new and growing industries, such as crocodile farming. While current employment numbers are relatively low, the risks of working with Australia's most dangerous predator, the paramount importance of health and safety, and the critical importance of Indigenous involvement have led the Aquaculture and Wild Catch IRC to recommend development of qualifications to support this new and growing industry



Skills Forecasts are an opportunity for industry to guide and influence the decisions and strategies of the AISC for how best Australia can respond to skill needs."

Michael Hartman, CEO

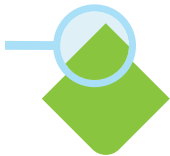
What is the Skills Forecast Process?



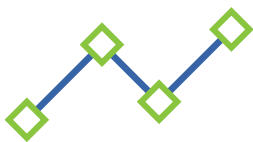
Information is gathered throughout the year to feed into IRC Skills Forecasts.



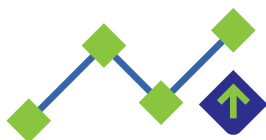
Stakeholders are asked about the future skills requirements of their industries.



Emerging skills gaps and needs, trends and new technologies are identified through research and enquiry.



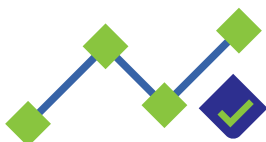
IRC Skills Forecasts are drafted and undergo a review process to collect broader stakeholder feedback. Skills needs are prioritised and potential projects are highlighted.



IRC Skills Forecasts are submitted to AISC for approval.



Some proposed projects are so significant or complex that extra information is required.
A Case for Change is developed and submitted for AISC approval.



Once approved, IRC Skills Forecasts and Cases for Change form the basis for training package development work.

Projects

The work to improve and develop vocational units of competency, skill sets and qualifications is carried out through projects. Each year, several projects are approved by the Australian Industry Skills Committee (AISC). Outlined over the following pages is a summary of each of the projects Skills Impact managed between July 2018 and June 2019.

For each project, units of competency, skill sets and qualifications were drafted in consultation with industry experts. Draft copies of the documents were published for broad public feedback at two key stages. Additional consultation about the skills standards was carried out throughout the life of the project with stakeholders across Australia, including representatives from various sub-sectors of the relevant industries, registered training organisations and Government bodies.

The Industry Reference Committees (IRC) for each sector oversaw the project development, as part of their responsibility to support engagement with their industry and to ensure the projects meet stakeholder needs. Skills Impact developed the training package components and supported IRCs in their oversight role. Skills Impact engages a team of dedicated, specialist contractors who work closely with managers to liaise with stakeholders and develop training package components.

At the time of publishing (September 2019), the majority of the project work has been endorsed by the AISC and the skills standards published on training.gov.au. The projects that are expected to be endorsed later in 2019 are marked by an asterisk.

Meeting Council of Australian Governments' Requirements

Removing Obsolete and Superfluous Qualifications

Across all projects between July 2018 and June 2019, 79 qualifications were reviewed, whereby 11 were deleted and 7 new qualifications created. The new qualifications were required to meet the needs of the protected horticulture industry sector and emerging niche markets in artisan fermented products and cheesemaking. The projects also reviewed 895 units of competency, of which 87 were deleted. To meet emerging technologies and ways of working in niche markets within the food and beverage industry and to enable small organisations to prepare for large animal rescue incidents, 139 new units were developed. During this same period, 65 new skill sets were created and 74 were reviewed, of which 24 were deleted. The growth in skill sets has shown the importance that industry continues to place on micro-credentialing of skills and knowledge.

Key Industry engagement between July 2018 – June 2019

Over 1,686 stakeholders were engaged, including approximately 254 workshops and 89 site visits or face-to-face meetings.

Qualifications

7 new

68 revised

11 deleted

Units of competency

139 new

808 revised

87 deleted

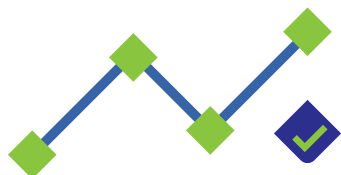
Skill sets

65 new

50 revised

24 deleted

What is the Training Package Project Process?



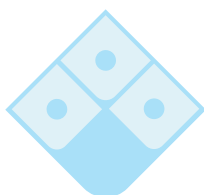
Project Need

The AISC approves future projects out of an IRC Skills Forecast or a Case for Change.



Project Plan

Subject Matter Experts and other stakeholders are consulted to develop a greater understanding for which qualifications, skill sets and units need to be reviewed and developed.



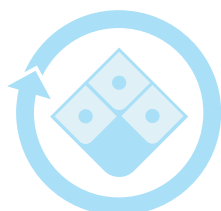
Development

Draft units, skill sets and/or qualifications are developed in consultation with Subject Matter Experts.



Drafts Available

These drafts are made publicly available for further feedback.



Validation

The drafts are updated to reflect feedback and made available for validation, to check whether they are accurate.



Finalisation

A Case for Endorsement is prepared for the AISC, providing a rationale for approval of units, skill sets and qualifications. Once endorsed by the AISC the units, skill sets and qualifications are published on training.gov.au.

Agriculture, Horticulture, Conservation and Land Management

Units of competency



24 new

244 revised

7 deleted

Skill sets



15 new

12 revised

Qualifications



3 new

15 revised

2 deleted

Arboriculture Project

Arboriculture is a specialist profession that recognises and fosters the many benefits of trees, to our health, society, environment, ecology, and economy. Arborists provide care and management of trees in both private and public locations to maintain their health, and make sure they are appropriate for their environment and as safe as possible. Many arborist roles require aerial work or operation of chainsaws – sometimes both at once – so it is vital the workforce is equipped with technical skills and sector specific safety standards.

According to Arboriculture Australia¹, the industry employs over 40,000 workers with a turnover of over one billion dollars annually. However, there is a shortage of skilled workers. An increase in government agency plantings over the past 15 years means the current shortage is likely to increase, particularly in specialist areas. Current entry requirements for accredited training and an ageing workforce have been contributing factors, and industry requires support to keep up the pace.

Industry consultation throughout this project has concentrated on making qualifications match specific job roles and to make them more accessible. Core units of competency have been reduced in the Certificates II and III where appropriate. The Advanced Diploma and Graduate Diploma have been given more flexible entry requirements to allow graduates from related fields to undertake them. Specialisations in the Certificate III and two new skill sets have been developed to create pathways for specialist skills and higher learning. In this way, arboriculture qualifications and skills standards have been updated to better support this thriving industry.



Arboriculture is an extremely important industry that is not well understood amongst the public and it is imperative that we share knowledge within and without the industry as a social responsibility – especially in the current time we are living where the natural environment is under such pressure and scrutiny with changes to climate and evolving city scapes.”

**Daniel Heyburn,
ETS Vegetation Management**

Key Outcomes

- Revised 37 units of competency, including removal of prerequisites from 13 of these units.
- Developed two new units of competency covering skills for using cranes to dismantle trees and managing trees to create and maintain habitat refuges.
- Five units of competency proposed for deletion where they did not meet industry needs or where skills could be integrated into other units.
- Two new skill sets developed to attract and upskill workers including a basic tree worker skill set and an introduction to arboriculture skill set.
- Certificate II in Arboriculture reduced from 20 to 11 core units of competency and designed to focus on practical skills required to operate as a ground-based tree worker across the industry.
- Certificate III in Arboriculture decreased from 23 to 18 units of competency (nine core and nine electives). In addition to the existing Climbing and Elevated Work Platform specialisations, three new specialisations have been included to cover Crane, Environmental and Works Coordinator.
- Added entry requirements for the Diploma of Arboriculture to provide a foundation of arborist skills and knowledge.
- Advanced Diploma of Arboriculture and Graduate Diploma of Arboriculture have more flexible entry requirements to allow for a broader range of learners.
- Certificate IV proposed for deletion.



Following many months of stringent due process, we are delighted that Skills Impact has now reached the completion of its review... Adoption of the revised package is a significant step forward that will set our industry on a solid foundation for the future."

Arboriculture Australia



Carbon & Agribusiness Management Project

Skills to support the areas of carbon farming and agribusiness are needed to keep the industry at the forefront of innovation. These sectors help the agriculture and horticulture industry adapt to shifting climate conditions, technological advances and changing operating environments.

Carbon farming is one way industry can adapt to a changing environment. It can be performed through sequestration (or storing) of carbon in soil and vegetation, or through reduction of greenhouse gas emissions from livestock, soil or vegetation (Department of Primary Industries and Regional Development). Carbon farming can also involve strategic burning methods traditionally used by Indigenous populations. While there is increased uptake and interest in carbon farming practices, due to government incentives like the Emissions Reduction Fund (ERF) and growing public awareness, there is currently no national accredited training available in this area.

Industry has played a key role in developing new skills sets and units of competency in carbon farming, to recognise and support the skills of farmers, managers and conservation and land management personnel working in this space.

"I would like to recommend and endorse the Agribusiness and Carbon Farming Project as a long overdue and worthwhile incentive for the sequestration of carbon from regenerative agriculture. With so much of the country suffering from extended drought, it is imperative to build resilience into agriculture for the fluctuating future."

Richard Makim, Holistic Grazier and Carbon Farmer.

Agribusiness encompasses the business skills required to run a commercial farming enterprise. This can include, but is not limited to, skills in finance, human resources and marketing. It relates to farm managers as well as those selling or marketing agricultural products, such as machinery, grain, stock or chemicals. Increased competition and opportunities to reach global markets mean there is pressure for agricultural businesses to explore new technologies and approaches. Skills in agribusiness are needed to achieve this. Previously, qualifications in agribusiness were focused on adapting skills in business to an agricultural context. However, feedback from industry indicated a desire for workers with agricultural experience who also possess skills in strategy and leadership.

Thanks to the input of industry experts, revised qualifications will soon be available for roles in agribusiness, supporting the future of Australia's agricultural industry as a whole.

Key Outcomes

Carbon Farming

- Seven new units of competency to support key skills in four primary carbon farming methods: savanna burning, vegetation, agriculture and soil.
- Eight new skill sets, including one for those who provide advice on carbon farming projects and others to address specific carbon farming methods, including savanna burning, vegetation, soil-based and agricultural.
- Carbon farming units of competency included as electives in all three revised agribusiness qualifications.



As an instructor that delivers the Agribusiness Diploma and Farm Business Management Skill Set, I jumped at the opportunity to participate in the Carbon & Agribusiness Management Project... Overall the outcomes achieved will better reflect the learning needs of agribusiness and carbon farming.”

**Rod Morris,
Queensland Agricultural Training Colleges**

Agribusiness

- Three qualifications in agribusiness revised to include more core units of competency, where previously they contained one or none, supporting all graduates to develop a base of agribusiness skills required by industry. This includes units of competency in planning and monitoring production processes, reviewing business performance, developing a business plan and managing risk.
- Two new skill sets concentrating on farm business workforce and farm business finance.
- Forty-three revised units of competency across the agribusiness, business, shearing and work health and safety sectors.
- One revised skill set for farm business management.
- Proposed deletion of one unit of competency for AHCBUS604 Design and manage the enterprise quality management system which duplicates the outcomes of – BSBMGT621 Design and manage the enterprise quality management system.

Horticulture Technology Project

It wasn't too long ago that we didn't have all-year-round access to a wide variety of fresh leafy vegetables, plants, flowers and fruit. Technological advancements are rapidly changing the way our food is grown. This is particularly true in fields like irrigation and protected horticulture and cropping which involve precise control of inputs into the growing process. While irrigation is about the measured application of water to plants, protected horticulture is about controlling the microclimate surrounding the plant, determining what does not get in as much as what does.

Well designed, managed and installed irrigation and nutritional systems help improve crop quality and yields and allow farmers to adapt to unpredictable climatic conditions. Since irrigation techniques are used across many agricultural and horticultural sectors, it is important that training can deliver skills relevant to all irrigation systems in all industry sectors. This includes types of irrigation such as pressurised and gravity-fed irrigation. Technology also plays a crucial role in how this work is performed and in recent years industry has had to adapt to incorporate the use of new tools, such as wireless sensors and mobile phone apps for the monitoring and delivery of water.

Similarly, the controls used in protected horticulture can help address issues like food waste, pests, disease, adverse weather conditions and food security. The industry also uses much less water—estimated at 600 litres of water per \$100 output for hydroponic crops, compared with 3,700 litres for traditional vegetables and fruit. It is no surprise that protected horticulture is the fastest growing food producing sector in Australia, expanding at a rate of 4-6% a year².

Growing salad ingredients in highly modified shipping containers in cities is just one example of how protected horticulture is tackling food security and sustainability, with the ability to grow 365 days a year, with control over the environment and eliminating the possibility of any pathogens coming into the growing process.

Nationally recognised units of competency, assembled into qualifications are a key way of supporting this growing sector, allowing industry to define the specific skills and knowledge relevant to protected horticulture.

Thanks to the input of industry experts, new and revised units and qualifications will soon be available for roles in these areas. For the first time, there will be skill standards specifically focused on skills in protected horticulture. The irrigation industry can look forward to units and qualifications that address relevant job roles and can be promoted for trade accreditation.

Key Outcomes

Irrigation:

- Expansion of the Certificate III to make it appropriate for trade accreditation and pre-requisites added to allow for use in NSW where these pre-requisites already exist.
- Four new skill sets developed to address job roles.
- Changes to reviewed units of competency to incorporate skills relevant to new technologies and practices.

² Protected Cropping Australia, 'Overview of the Australian Protected Cropping Industry', viewed August 2019, www.protectedcroppingaustralia.com/wp-content/uploads/2016/06/National-Training-Centre-for-Controlled-Environment-Horticulture-PART-1.pdf

Protected Horticulture:

- Three new qualifications and six new units of competency specific to protected horticulture developed to fill existing skill gaps and support a rapidly expanding industry.
- Two relevant units of competency reviewed.

Sports Turf Management Project

Sports turf management is a specialised sector of the horticulture industry, responsible for the construction, preparation, maintenance and restoration of sports turf surfaces. This work requires in-depth applied knowledge of the biology, physiology and cultivation of turf grasses, as well as knowledge of irrigation and drainage techniques.

Australia is home to many famous sporting grounds, including, Adelaide Oval, Melbourne Cricket Ground, The Gabba, and the Sydney Cricket Ground. Sports fans know how much turf can affect play, with sports turf experts often being consulted on the condition of the ground at significant sports events.

It is not just large stadiums where these skills are used. Knowledge of sports turf management techniques is required for the upkeep of sports grounds, horse racing courses, golf courses, bowling greens and a range of other turf surfaces, each requiring unique skills and knowledge.

Given the highly precise and specialised nature of this sector, industry have expressed a need for more detailed and in-depth training and assessment. Cultivating and maintaining sports turf requires input from a team, and skills are needed at all levels – including volunteers, apprentices, tradespeople, managers and consultants. Thanks to the contributions of industry experts, the units of competencies and qualifications in sports turf management have been strengthened to reflect current job roles and practices.



Key Outcomes

- Certificate II in Sports Turf Management reduced from 13 to eight units of competency (five core and three elective) and revised to be more focused on practical skills, with the aim of encouraging use in a VET in Schools programs.
- Certificate III in Sports Turf Management increased from 16 to 23 units of competency (18 core and five electives) revised to reflect the breadth and depth of skills and knowledge required to work across a range of subsectors.
- Diploma of Sports Turf Management increased from 10 to 14 units of competency (10 core and four electives) and revised to reflect the increased complexity of management and consulting roles in the industry.
- Seventeen existing units of competency revised.
- One new unit AHCTRF306 Prepare sports turf surfaces for play developed
- Three new skill sets developed in areas relating to business skills, sports turf volunteers, and technical skills.
- One qualification AHC40816 Certificate IV in Sports Turf Management proposed for deletion as industry feedback suggests it does not reflect current job roles.



As a result of this process the Western Australian Turf Industry now possesses a greatly increased optimism towards the future of Sports Turf Management and the improved level of quality trained turf managers emerging to meet the industry's challenges."

**Tony Guy,
President, Sports Turf Association WA**

Viticulture Project

Viticulture is a branch of horticultural science for the cultivation and harvesting of grapes. While it is commonly associated with the production of wine, viticulture also covers the growing of table grapes to be consumed fresh or as sultanas, raisins or currants. At the start of this project industry identified that the current Diploma of Viticulture did not reflect the full breadth of the sector, focusing too heavily on wine. The qualification also needed to reflect skills in leadership and management that are required of a management role within the viticulture industry.

Biosecurity has become an increasing concern for Australian viticulture, with an outbreak of the devastating phylloxera aphid in Victoria earlier this year. Individuals with the ability to plan and manage biosecurity measures are integral to the longevity of grape growing in Australia – particularly as many operators rely on seasonal workers during harvest. “Australia’s geographic isolation has meant that we have relatively few of the pests that affect viticulture industries overseas. Continued freedom from exotic pests is a vital part of the future profitability and sustainability of Australia’s viticulture industry³.”



Specific knowledge of viticulture, including biosecurity, organic and biodynamic practices, soil and water systems is needed to effectively work in the sector. However, this knowledge cannot be effectively implemented without individuals who have the skills to manage and lead a team.

Thanks to the input of a wide range of industry experts, the viticulture industry will soon have access to an updated Diploma of Viticulture and associated units of competency. The revised diploma includes core units focusing on biosecurity, along with managing staff, soil and water systems. Changes to the qualification and units also reflect the various contexts within the sector – as this qualification needs to be appropriate for all sizes and types of viticulture, not just wine making.

Key Outcomes

- AHCPCM501 Diagnose plant health problems moved from being listed as a core unit to an elective unit in the Diploma of Viticulture.
- AHCWAT503 Manage water systems and AHCBAC509 Plan and manage long-term weed, pest or disease control in crops moved from being electives to core units of competency in the Diploma of Viticulture.
- AHCBIO305 Apply biosecurity measures added as a core unit in the Diploma of Viticulture.
- New elective unit AHCPHT507 Evaluate grapes for production was developed to cover skills specifically needed for wine making, with the view that other units of competency should be applicable to viticulture.

³ Plant Health Australia, 2013, ‘Biosecurity Manual for the Viticulture Industry’, viewed August 2019, www.farmbiosecurity.com.au/wp-content/uploads/2019/03/Biosecurity-Manual-for-Viticulture-Industry.pdf

Ag Chemical Handling Project

Some very useful but potentially hazardous chemicals are an important resource to our agricultural sectors. They are used to manage weeds, pests and diseases and help to protect the quality and value of agricultural produce. Working with potentially hazardous chemicals comes with the responsibility of safe handling and labelling, to protect the safety of people and the environment. In support of safe practices, Globally Harmonised System (GHS) to classify and communicate chemical hazards is now part of national workplace health and safety requirements. Innovation in the industry is also flowing more directly from the research laboratory to the farm, delivering safer applications, for instance, using pellets instead of powders.

Consultation during this project focussed on the skills and knowledge required for the safe storage, transport, use and disposal of hazardous chemicals. Effective application of chemicals will minimise the risk of damage to neighbouring crops. Applying crop protection products is a significant expense in a farming operation, both in terms of chemical products and investment in fit-for-purpose equipment to do the job. From a farming perspective, it is both financially and environmentally beneficial for chemicals applied to hit the intended targets.

There are various types of equipment and chemical application techniques suited to different environments and sectors. The units of competency were updated to allow for contextualisation. Specific reference to “spray drift” was also replaced with “off target” to better reflect other methods of chemical application, for example granular or meat baits and drenches. Prerequisite requirements for some units were also removed as they were related to state based licensing or regulatory requirements which were not applicable in all contexts. Also, the prerequisites did not directly prepare individuals with the underpinning knowledge and skills needed to successfully complete the units they were undertaking. For example, fumigants have unique storage and handling requirements that should not rely on generic chemical storage and transport units as prerequisites.

Key Outcomes

- Two new skill sets were developed, one for Advanced Chemical Spray Application and the other for Agricultural Chemicals.
- Twelve units of competency were reviewed and updated in line with current skills standards for the safe storage, transport, use and disposal of chemicals.

Ag Machinery – Safety and Technology Project

With the advent of machinery, industry has benefitted from greater productivity, efficiency and a reduction in physical and manual labour. Science and innovation in agricultural machinery means we now have many options for more sophisticated tractors, motorised bikes, lawnmowers and harvesters to work more effectively. It has also meant skills are changing and consideration needs to be given to the safe operation of such machinery.

There is always some level of risk involved in operating large and powerful machinery. Research has shown that most accidents on the farm are preventable and follow familiar scenarios. With the right mix of operational skills, knowledge and safety precautions, the frequency of accidents can be reduced. For this reason, industry requested a review into the skills standards relating to the operation of machinery in a rural context.

Quad bike accidents have received considerable attention in recent years, which prompted a review of the Certificate II in Rural Machinery Operations, along with units of competency relating to the use of new technology and safety measures across a range of mobile farm machinery operations. The project also considered the associated risks and safety measures relating to farm mobile machinery operations; gaps for operating commercial lawnmowers; and risks associated with the operation of quad bikes, particularly rollovers when driving in steep, uneven and rocky terrain.

Key Outcomes

- The Certificate III in Rural Machinery Operations has been revised to align with current job roles and work functions. Units of competency have been added to the elective list to enable greater flexibility in achieving the qualification and to reflect the breadth of machinery used by the occupations that are serviced by this qualification.
- Two new units of competency have been developed, one focusing on the operation of commercial lawnmowers and the other on the operation of tractors with attachments. The new tractor unit does not replace the existing AHCMOM202 Operate tractors which applies to those who need training on less powerful tractors under direct supervision before they can safely move on to more complex vehicles.
- Significant updates to AHCMOM211 Operate side by side utility vehicles and AHCMOM212 Operate quad bikes.



Apiculture (Bees) Project

An increasing demand for pollination services has seen many beekeepers, who traditionally focused on honey production, moving in to pollination services as well. Paid pollination services are now provided by 44% of beekeepers⁴. Crops dependent on bees, such as almonds and cherries, make up a significant part of pollination services to increase crop productivity. Almond orchards used 195,000 hives during their busy pollination season in 2016 and will need to find an additional 70,000 hives over the next five years⁵.

To be competitive, beekeepers need business management and communication skills. In an environment where biosecurity threats are ever-present, key skills are also required to improve biosecurity control measures, including aligning beekeeping practices with the latest biosecurity standards.

Industry reiterated the need for beekeeping skills of the future to run broad and deep to cater to modern expectations of the role, including biohazard management, and expertise in marketing skills. The Certificate III in Beekeeping has been revised to reflect these skills. New technologies and materials in the industry, such as the on-hive honey extraction hives and synthetic frames and boxes, have also been embedded into the units of competency where appropriate.

A newly endorsed qualification and units of competency in beekeeping will provide new opportunities to harvest the industry expertise and build its profile.

Key Outcomes

- The Certificate III in Beekeeping and 21 units of competency have been reviewed to address skills relating to biosecurity and pollination services along with marketing activities.
- A new unit of competency to cover the skills and knowledge required to transport bees has been developed to assist beekeepers that move bee hives to different sites.
- A new unit AHCNRM301 Establish an Australian native stingless bee colony was developed for the niche market in Australia using native bees.
- Four new skill sets have been developed to support specialist knowledge in bee husbandry with Australian native stingless bees, queen bee breeding and beekeeping and business skills in pollination services.

⁴ Australian Bureau of Agricultural and Resource Economics and Sciences, 2016, 'Australian honey bee industry: 2014-15 survey results', viewed April 2017, www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrdl/DAFFService/display.php?fid=pb_auhbi9aas_20161208.xml

Pest Management Project

Pest animals and weeds cost farmers billions of dollars a year through livestock losses, disease transmission and controls. Pest management is an important aspect of sustainable agriculture. Wild dog predation on-farm livestock (and in transit) is a significant contributor to farming losses. Western Australia alone experiences a \$25 million loss in its rangelands each year⁵ due to wild dogs. Ongoing problems with wild dogs nationwide have prompted industry to question the extent of vertebrate pest and weed control knowledge required to manage the issue successfully. The National Wild Dog Action Plan Working Group for Training and Education were part of a full review to establish what was necessary to bolster qualifications

Skills Impact consulted with industry experts to carry out a full review of the Certificate III in Pest Management, Vertebrate Pest Management Planning Skill Set and 29 units of competency. Consultation helped to distinguish the specialist skills needed for different types of pest control, such as the specific methods for trapping and destruction of predator pests that are different from those required for rodent control. Skills and knowledge to reduce the impact on domestic pets and wildlife were also considered, as well as interpreting and applying state/territory regulations regarding chemical use, storage and transport. Skills in managing animal activist groups and communication were also considered, as an important part of driving education about the humane destruction of predator pests.

Key Outcomes

- The Certificate III in Rural and Environmental Pest Management was revised to include specialist streams for weed control and pest control.
- 29 units of competency reviewed to embed skills in pest management, biosecurity, explosives, fauna, infrastructure, and natural area restoration.
- The AHCSS00072 Pest Management Planning Skill Set was reviewed, for individuals required to consult with stakeholders and design and develop pest management plans



⁵ Department of Primary Industries and Regional Development WA, 'Wild dogs in Western Australia', viewed August 2019, www.agric.wa.gov.au/state-barrier-fence/wild-dogs

Animal Care Management

Units of competency



33 new

39 revised

Skill sets



6 new

Qualifications



1 new

3 revised

Animal Incident Management Project

Situations requiring large animal rescue are not limited to rural areas. We coexist with animals across many environments, including workplaces, sanctuaries and tourist attractions. Rescuing large animals or groups of animals during an emergency requires unique skills and knowledge. Fire and rescue, veterinarians, farmers, council rangers and transporters routinely deal with incidents involving domestic animals or wildlife. The safety and welfare of people and animals in these circumstances is paramount, and training is essential to achieving this.

Thanks to the contributions of experts in the field, a revised qualification and three new skill sets have been developed which incorporate the specific skills standards for managing incidents involving large animals or groups of animals.

Key Outcomes

- Fifteen new units of competency have been developed, along with three new skill sets to support skills in safety, participating in a team, and complex incidents involving large animals, including skills at a management or specialist level.
- The Certificate IV in Animal Control and Regulation has been revised to include two new animal incident management units of competency.
- Three units of competency related to animal control and regulation were also updated, to strengthen animal welfare regulations and requirements.

Animal Technology Project

Animal technology is a specialist profession responsible for the care and welfare of laboratory animals. As a field, animal technology supports scientific research, including the development of new medical treatments and diagnoses.

It is imperative that qualifications stay up to date and relevant to support an ethical standard of practice, with a strong focus on animal welfare. There was also a need to streamline the qualifications to ensure they matched specific job roles and complied with the Australian Qualifications Framework.

Thanks to the input of stakeholders across Australia, three qualifications and a new skill set are now available to support the training and development of Animal Technicians. The unique skills standards for this job role have been embedded in these documents.



What is an animal tech today? Our industry is under a constant state of change with progressing technologies and better understanding of its effects on our staff. We need to ensure the future generation of technicians are prepared for a growing industry and all its challenges"

**Mathew Salzone,
Florey Neuroscience Institutes**

Key Outcomes

- The Certificate III in Animal Technology and Diploma of Animal Technology have had their elective units of competency separated into two groups, allowing for a more targeted, job specific selection. The Certificate III in Captive Animals has had one minor update to an elective unit code.
- Thirteen units of competency have been updated and two new units were developed to cover skills for preparing for and assisting with aseptic surgery and reviewing and monitoring research proposals for an Animal Ethics Committee.
- One new Animal Ethics Skill Set was developed, aimed at increasing the awareness of the importance of ethics in animal research.

Horse Education Project

Horse Educators are experts in horse communication, they understand horse psychology and body language to build trust and achieve partnership. Horses are capable of amazing things, but before a horse can learn to race, jump, show or participate in dressage, it needs to be educated to be ridden and to wear riding equipment.

Horse educators may work in a breeding stud or work independently, supporting a variety of industries where horses are used. Situations with horses can be dangerous and safety is of utmost importance. Horse educators need to be equipped to handle a range of situations when educating horses. They also need to have high level riding and/or driving skills.

National skills standards for Horse Educators have been developed as part of this project, which involved extensive industry consultation.

Key outcomes

Five new and three revised units of competency have been developed for the various skills for educating horses, from basic handling skills, to Interpreting equine behaviour, transporting horses and educating horses to be ridden and driven.

Microchipping Cats and Dogs

One unit relating to the microchipping of cats and dogs has been reviewed alongside this project. The review addressed how learners would aseptically perform microchip implantation procedures to correct standards, for identification and traceability purposes.



My position within the ANZLAA committee allowed me to reach out to over 300 members around Australia to encourage involvement with the review process to assure that only current and best practices are included in the qualification. The response from the industry was overwhelming with many people assisting in the review process, offering their knowledge in their areas of expertise"

**Paula Porter,
TAFE SA**

Farriery Project

Farriers often work behind the scenes, shoeing and caring for horses in racing, breeding, recreational and sports settings. A range of developments in equine industries means the skills needed to be a Farrier are shifting.

This Farrier project focused on various aspects of this trade to ensure that the Certificate IV in Farriery provided the correct level of skills and knowledge. Strong views were expressed from industry associations and industry experts that it should remain a core-only trade qualification with no elective units of competency, as a means of ensuring consistent outcomes nationally. This has been preserved in the revised Certificate IV in Farriery. The units within the qualification have also been reviewed and a gap in the training around running a small business has been filled with the inclusion of some business units to address the skills needed for farriers to work in their own business as sole traders or micro/small business operators.

The main drivers of the project were to reflect the scope of work, level of autonomy and responsibility of Farriers. As Farriers are predominantly sole traders, there was a need to strengthen their business skills to support self-employment after the completion of their apprenticeship. It also addressed the increased requirements for animal welfare and safety when interacting with equines. There is a mandated 120 hours of work placement to ensure those individuals who do not undertake the training through an apprenticeship scheme have access to the workplace and supervision by a qualified farrier, who is a commercially active provider of farriery services.

This project also developed a qualification for an emerging industry group that provides equine barefoot trimming and hoof care services. Previously there was no nationally recognised training or qualification for this group, and locally produced courses were being run outside of the national system.

Key outcomes

- Certificate IV in Farriery was revised to truly reflect the level Farriers are required to work at, which saw the strengthening of business skills and requirements for animal welfare and safety.
- New Certificate III in Equine Hoof Care was developed to support the job role of Barefoot Trimmers.
- A new skill set was developed for equine emergency shoe replacement.



Cert IV in Farriery Meets the Mark

We caught up with Master Farrier at Flemington Stables Mark Cumming, who was involved in the Farriery Project and is excited the Cert IV is now available for training providers to use.

Farriery is an increasingly sophisticated occupation and the skills and tasks involved have changed over the years, so it was important to make sure the qualification matched up with how the job is done today.

Mark said he looks forward to hiring apprentices in future, who will be trained in a qualification developed by industry for industry.

Pictured: Industry Engagement Manager Diana McNaughton with Mark Cumming and racehorse Think Alike

Work Safely Around Animals (Infection Control)

The increasing threat of exotic and infectious diseases, particularly within the equine industry due to the high volume of horse transportation, has resulted in the need to increase awareness of animal diseases as a public safety threat to humans. Animal care workers need skills and knowledge to prevent the contraction of zoonotic diseases (that spread between animals and humans) and strategies to control the spread of diseases when working with animals.

Infection control is a broad issue affecting all spaces where animals are handled, such as farms, shelters, catteries/kennels, grooming businesses, and remote indigenous communities that may have community animals. The need for skills to manage infection control in these scenarios was addressed in the development and review of thirteen units of competency and the development of one new skill set for promoting animal health in remote communities. The revised skills standards aim to prepare individuals handling and caring for animals in disease identification, control and biosecurity, to minimise breakouts of infections and improve the wellbeing of animals and humans alike.

Key Outcomes

- Eight new units of competency were developed relating to biosecurity and infection control for individuals working in with animals, including equine native wild animals, companion animals and animals in remote aboriginal communities.
- Five units of competency were revised to include references to infection control and, where relevant, biosecurity.
- One new skill set was developed for promoting animal health in remote communities.

Veterinary Nursing Project

Working in frontline animal health has obvious appeal to animal lovers, but the skills required for the role are sophisticated. Knowledge of animal anatomy and physiology is required, as well as skills to assist with surgery preparation and to communicate with clients and members of a team. The Veterinary Nurses Council of Australia, National Industry Advisory Group for Veterinary Nursing and the Australian Veterinary Association agreed that many graduates were lacking the skill levels needed to carry out the work required in veterinary practices. In response, entry requirements were added to the Certificate IV in Veterinary Nursing and Diploma of Veterinary Nursing. Work placement hours were also added to the assessment requirements of units of competency within these qualifications to allow individuals the valuable practical experience required to develop skills and knowledge required in the industry.

Entry to the Certificate IV in Veterinary Nursing is open to individuals who hold a Certificate II in Animal Studies, or hold a relevant Certificate III or higher level qualification in an animal science discipline, or can demonstrate equivalent skills and knowledge in a relevant animal science discipline to any of the above qualifications.

Entry to the Diploma of Veterinary Nursing is open to individuals who hold a Certificate IV in Veterinary Nursing or other equivalent veterinary nursing qualification and have extensive experience working at Certificate IV level or above in a veterinary practice, and have demonstrated the ability to:

- work autonomously and within an interprofessional team
- independently provide nursing care for a broad range of medical and surgical conditions for a variety of species

- communicate effectively with a variety of people within the organisation
- supervise and direct other staff within the workplace
- problem solve and support others within the working environment
- independently support clients to maintain animal health
- develop and review organisational administration processes
- maintain currency of industry skills and knowledge.

Both qualifications have mandatory work placement hours incorporated into some of their units of competency that stipulate a minimum of 240 hours must be carried out in the workplace for assessment purposes. This is aimed at directing that delivery and assessment takes place in a setting that allows individuals to gain valuable practical experience in a workplace in order to demonstrate they have acquired the skills and knowledge required to work in the industry.

The Australian Industry and Skills Committee (AISC) considered and endorsed the Certificate IV in Veterinary Nursing and associated units of competency at their meeting on the 4 December 2018. They considered and endorsed the Diploma of Veterinary Nursing on 13 August 2019.

Key outcomes

- Entry requirements and work placement hours added to the Certificate IV in Veterinary Nursing and Diploma of Veterinary Nursing.
- Certificate IV in Veterinary Nursing updated to remove six units of competency that were also included in the Certificate II of Animal Studies. These units were replaced by five new units, covering the following skills areas:
 - ACMGAS307 Identify animal anatomy and physiology for animal care work
 - ACMGAS308 Communicate effectively with clients and team members
 - ACMVET409 Provide specific animal care advice
 - ACMVET413 Preparing for anaesthesia and monitor animal anaesthesia and analgesia
 - ACMVET416 Assisting with the preparation of veterinary drugs and poisons.
- The Diploma of Veterinary Nursing was revised to combine four Veterinary Nursing Diploma qualifications into one qualification with a common core and optional specialisations. Entry requirements specify the skills and knowledge that a Veterinary Nurse must know and be able to demonstrate before being accepted into this highly specialised profession.

Aquaculture and Wild Catch

Units of competency



15 new

135 revised

47 deleted

Skill sets



7 new

7 revised

7 deleted

Qualifications



14 revised

5 deleted

Job roles and industry practices have changed significantly in recent years. Industry can now access qualifications and skills standards that reflect these changes and incorporate the essential skills for managing biosecurity issues and threats, advancements in technologies, regulations and compliance.

The new and revised qualifications and skills standards were published on the training.gov.au website in June 2019, within the national SFI Seafood Industry Training Package. This means they are now available for use by registered training organisations for industry.

They were developed as part of three national projects, covering the full spread of the industry, over a period of 16 months.

- Aquaculture, Fishing Operations & Biosecurity Project
- Fisheries Compliance Project
- Seafood Post Harvest Project

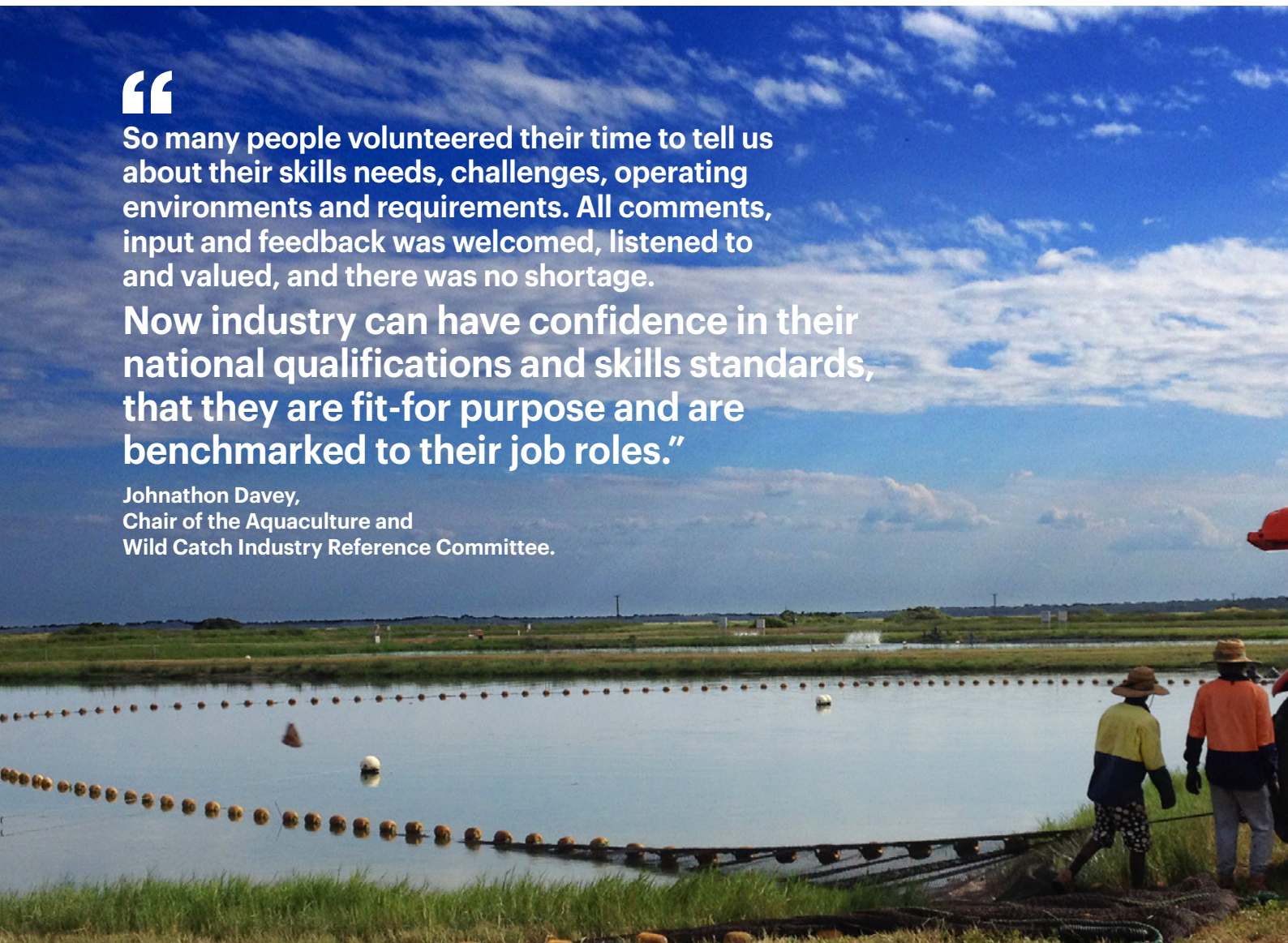
It has been the most significant review of the industry's skills standards in almost a decade, with almost 200 industry members providing feedback and dedicating their time and expertise throughout this process.



So many people volunteered their time to tell us about their skills needs, challenges, operating environments and requirements. All comments, input and feedback was welcomed, listened to and valued, and there was no shortage.

Now industry can have confidence in their national qualifications and skills standards, that they are fit-for purpose and are benchmarked to their job roles."

**Johnathon Davey,
Chair of the Aquaculture and
Wild Catch Industry Reference Committee.**



Aquaculture, Fishing Operations & Biosecurity Project

To protect their industry against diseases and pests, the aquaculture, fishing and seafood industry in Australia works under strict environmental and biosecurity guidelines, and is subject to multiple legislative and regulatory requirements.

At the same time, their operating environment is constantly evolving due to new technologies and market requirements.

As such, the qualifications have undergone significant streamlining and development, to remove redundancies and support skill needs in biosecurity, advanced aquaculture and aquaculture technologies.

“I want every single person on my site to understand biosecurity as part of site induction and they need to know why they need to do it. I want biosecurity to be as common as putting a life jacket on.”

Abby Irish, Fish Health Manager, Tassal



Visit to Gazander Oysters



There is a huge expansion of aquaculture and a need for people with high skills for example in Barramundi farms – we do have people with Higher Education qualifications but they still need the work/practical skills for hatcheries”.

**John Manson,
NSW Fishing Industry
Training Committee and Oyster farmer**



Humpty Doo Barramundi Farm visit

Seafood Post Harvest Project

The time and handling processes between when seafood is caught or harvested and when it is received by the customer is crucial to the quality and safety of the product. Those involved in the processing, packing, transport and selling of seafood are expected to uphold strict food handling, hygiene and biosecurity standards, and are subject to regulatory and legislative requirements.

Qualifications relating to job roles in seafood post harvest have been reviewed to address changing technology, regulations and markets. For instance, the outbreak of white spot virus in Australian prawns in recent years has shed light on the need for more thorough biosecurity measures, particularly in detecting disease or pests during post harvest operations.

Key Outcomes

Of both Aquaculture, Fishing Operations and Biosecurity and Seafood Post Harvest Projects

As both projects shared similar skill needs, many of the units of competency are applicable to both. The two projects took place concurrently. The key outcomes have been presented together, for ease of reference.

Qualifications:

- Merging of three qualifications (Certificate I in Aquaculture, Certificate I in Fishing Operations and Certificate I in Seafood Processing) to create one qualification – Certificate I in Seafood Industry.
- Include skills standards for environmental management in the Certificate III in Aquaculture, Certificate III in Fishing Operations and Certificate IV in Aquaculture, removing the need for separate Certificate III and IV in Seafood Industry (Environmental Management Support).

- The Certificate IV in Fishing Operations, Diploma of Fishing Operations and Diploma of Seafood Processing have been deleted, based on advice from industry that there are no job outcomes for these qualifications. Training required by managers can be adequately met by the BSB Business Services Training Package.
- Skills standards for sales and distribution have been incorporated into the Certificate II, III and IV in Seafood Post Harvest Operations, removing the need for separate Certificate II, III and IV in Seafood Industry (Sales and Distribution).
- New units of competency developed to incorporate skills related to biosecurity.

Units of competency:

Skills standards for addressing biosecurity concerns have been strengthened across all relevant units of competency. New units have been developed for inspecting and cleaning aquatic work equipment, identifying and reporting signs of aquatic diseases and pests, applying aquaculture biosecurity measures and planning and implementing an aquaculture biosecurity plan. These new units have been listed as core units within Aquaculture and Fishing Operations qualifications.

Skill sets:

New skill sets were developed to allow for different entry and exit points between sector-specific qualifications. New skills sets have been developed for basic aquatic biosecurity and aquatic biosecurity, aquaculture chemicals, crocodile handling and processing, sector representation and fisheries compliance.





Visit to Paspaley Pearling Company

Fisheries Compliance Project

Fisheries officers are an integral part of the fishing industry in Australia, working to ensure all commercial and recreational fishing is undertaken in a sustainable way.

The skills for this job role are influenced by advancements in technology, which are changing the way Fisheries Officers manage threats such as illegal, unreported and unregulated fishing activities; and potential biosecurity breaches. It is important that fishing regulations are responsive to these changes in order to ensure the longevity of the industry. These are multi-jurisdictional issues involving the Commonwealth, state and territory domains, adding a further layer of complication.

Qualifications, skill sets and units of competency for fisheries compliance have been updated in line with current regulations and technology, supporting the Australian fishing industry and Australian seafood into the future.

Key Outcomes

- New skill sets were developed to create opportunities for staff to develop skills in surveillance operations and resource management observation.
- New unit developed for conducting fisheries management awareness programs, to provide skills and knowledge that link to the unit for promoting fisheries management awareness programs.
- The unit for SFICOMP310C Operate off-road vehicles has been replaced by TLIC2025 Operate four wheel drive vehicle, because it was deemed inadequate to meet the needs of Fisheries Compliance Officers in their work role, especially for officers working in remote regions.

Food, Beverage and Pharmaceutical

Units of competency



33 new

250 revised

32 deleted

Skill sets



13 new

31 revised

17 deleted

Qualifications



3 new

10 revised

4 deleted

Artisanal Food & Beverage Project

Artisanal cheeses, beers, spirits and fermented foods and beverages are growing in popularity in Australia, and small entrepreneurial businesses, when well run, are flourishing. These businesses are often located in regional areas, bringing much needed growth and employment opportunities to their communities. With a Kombucha cider in one hand and a raw fermented goat milk kefir in the other, the industry is asserting itself by blending local ingenuity and skills in food sciences, using technical and agile skills to ensure the manufacture, distribution and sale of safe, wholesome and consistently high-quality products.

It takes specialist skills and knowledge to produce such premium small-batch products. However, current training options are limited and often do not support the nuanced skills required.

This has now changed, thanks to the industry representatives who volunteered their time and expertise to this project. As result of their efforts, two new qualifications in fermented food and beverages and cheesemaking are now available for use.

The two new qualifications have been designed specifically for the hands-on approach of artisanal production, in which methods are adapted based on the products being made, and the variation of conditions, raw materials and equipment. This means areas like Tasmania that are known for artisanal products will be better equipped to maintain the high quality of their products. **“It raises that standard to keep ensuring Tassie products get premium prices and attracts brand recognition.”**

Pip Dawson, CEO, Fermentasmania

Key Outcomes

- Two new qualifications, Certificate IV in Artisan Fermented Products and Diploma of Artisan Cheesemaking have been created.
- The Certificate IV in Artisan Fermented Products offers three specialisations, with new units of competency developed for brewing, distilling, and food and non-alcoholic beverages.
- The Diploma of Artisan Cheesemaking was developed to meet the current job outcomes of those making premium, high-value cheeses on a small scale, where the provenance of the milk is known, and where specialised techniques are used.
- Nine new skill sets developed. Five aim to develop specialist artisanal skills and knowledge for artisanal ‘maker’ roles covering cheese, olives, brewing, distilling and fermenting. Two address the presentation of artisanal food in a retail context. Two address setting up an artisanal food or beverage production business.
- Twenty-seven new units of competency developed to cover the more hands-on and adaptable approach of artisanal production, covering skills relevant to brewing, distilling, fermenting and cheese making, as well as in food technology, food science, bottling and packaging, and people management.
- Seven existing units of competency reviewed to ensure they are suitable for use in all areas of artisanal food and beverage production.

**Artisanal food and beverage skills standards are expected to be endorsed by the AISC later in 2019.*



Say Cheese: new diploma in artisan cheese an important step for industry

The first nationally recognised Diploma of Artisan Cheesemaking will soon be available for use by registered training organisations. It was developed as part of the Artisanal Food and Beverage Project, which was driven by industry demand for training in high level, specialised cheesemaking. Industry want future generations of aspiring cheesemakers to be able to access training in Australia, supporting the regions where small batch cheesemaking businesses are taking off.

The passion of the artisanal food and beverage industry as a whole was evident throughout the project. Individuals shared their stories and invited us into their businesses to ensure the needs of industry were understood. Overall, engagement was recorded with 247 stakeholders across all of Australia's states and territories.

Gina Dal Santo is a cheesemaker and lecturer at The Artisan Cheese Making Academy Australia (ACMAA), which operates as part of TAFE SA. She's just one of the many industry volunteers who've helped develop the new cheesemaking qualification. It was a lack of accredited cheese making courses in Australia that made Gina decide to start ACMAA, tailoring the Certificate III in Food Processing.

"I saw the opportunity to start something big. Since then we've run short courses, done a Churchill Fellowship on cheese education overseas, and secured not only a Cert III in Food Processing, which I contextualise for cheese making, but soon a new diploma in cheese!"

Gina was enthusiastic in offering her expertise to developing a Diploma in Cheesemaking. "Without industry being involved and without looking at what industry is asking for, perhaps the Diploma of Artisan Cheese Making would not have eventuated. The decision to create a qualification with 'cheese' in the title is a first for Australia and I am extremely pleased to be involved with the decision-making."

Emma De Souza, Production Manager Grandvewe Cheeses, left behind her busy Sydney life for a career in cheesemaking.

While Gina's course was running when Emma first sought training, she was shocked to find there was nothing available in Tasmania, where she was living – even though the area is known for its cheese. Emma was fortunate enough to find employment with a local artisanal cheese maker who trained her on-the-job, but her example demonstrates the need for a qualification focussed on cheesemaking.

"In a country with an abundance of high quality milk products, it's absurd we don't have a specific qualification for cheese making. The industry needs training options that address both the art and science of cheesemaking in both theoretical and practical ways, and these options need to be accessible to people located across the country where the raw materials are sourced and artisan products are actually being made. This project is an important first step to ensuring future cheesemakers of Australia can access training."

The reason the new Diploma in Artisan Cheese Making will soon be available, is because people like Emma and Gina spoke up about the needs of their industry. Skills Impact would like to thank the wide range of stakeholders from every state who contributed to this project.



The industry needs training options that address both the art and science of cheesemaking in both theoretical and practical ways"

**Emma De Souza,
Production Manager at Grandvewe Cheeses**



Food Science and Technology Project

The safety and credibility of quality Australian food products is supported by strict food safety standards. Food audits are important for demonstrating compliance to the Food Standards Code, providing consumers assurance that the foods they eat are produced in safe, contamination-free environments.

This project worked with experts in the food processing industry to identify the skills and knowledge requirements of technical food and beverage workers involved in food safety and quality management, and product development.

Four qualifications, 78 units of competency and four skill sets were reviewed and developed to incorporate the technical skills to develop, monitor and evaluate food and beverage products in line with current food safety regulations and practices. This includes planning, preparing for, conducting, and reporting on an internal/external audit against a food safety and quality management program. Knowledge of the current regulatory requirements, Hazard Analysis and Critical Control Points (HACCP) and quality assurance and food safety management systems were also embedded in the skills standards.

Changing and rigorous regulations place a greater need for compliance on all operators across all food and beverage sectors, both internal to organisations and external through government departments and regulators. A key factor to address in this project included ensuring qualifications and units of competency address changes to the Food Standards Code (March 2016).

Key Outcomes

- The Certificate IV of Food Science and Technology and Diploma of Food Science and Technology were both fully reviewed, with a Food Safety Auditing specialisation added to the Certificate IV in Food Science and Technology.
- A Diploma of Food Safety Auditing was also created to recognise higher level auditing skills.
- Food Safety Auditor Skill Set has been developed to support food safety auditing requirements for the industry and to provide pathways for learners in this area.
- The Certificate IV in Food Processing was reviewed to better align with the skills required of those working in supervisory or management roles in food processing environments.
- The Diploma of Food Processing was deleted, due to low enrolments for the past three years, and the core of the qualification being the same as the core of the Certificate IV in Food Processing.

Wine Operations Project

Increasing international demand for premium Australian wines is a major strategic focus of the industry, especially with Australian free trade agreements opening up opportunities. To remain competitive, the industry is adopting new technologies, processes and methods. This project reviewed wine industry qualifications and units of competency to reflect changing industry skills requirements. It looked at the skills requirements of wine-making assistants, vineyard staff, sales assistants, cellar door staff, cellar production staff, customer service staff, managers and supervisors across all operations.

Two qualifications, 15 skill sets and 106 units of competency were updated to address some of the following factors that are driving change in wine operations roles:

- better efficiency and productivity
- innovation in technology, processes and methods
- increased emphasis on wine as a customer focused industry, especially in sales and service
- environmental impacts and water availability
- leadership in the vineyard and production sectors
- clear employment and qualification pathways.

Food & Beverage Manufacturing – Cross Sector Project

As part of the work in the Wine Operations Project, 38 cross-sector units of competency that apply across multiple qualifications in the FBP Food, Beverage and Pharmaceutical Training Package were reviewed. These 'cross-sector' units related to skills in bottling and packaging, operations, team work, planning, logistics, work health and safety, and laboratory work tasks.

Key Outcomes

- Thirteen laboratory units of competency (coded FDFLAB) and four wine-specific units (coded WGG) were deleted as they duplicated the outcomes of units available in the MSL Laboratory Operations Training Package.
- Specific references to wine operations in bottling and packaging units of competency (coded FBPBPG) have been removed, to allow for their application to a wider range of food and beverage products.
- The Certificate III in Wine Industry Operations and associated units of competency were revised to align to the Australian Qualification Framework (AQF), removing overlap between the Certificate II and Certificate III.

Pharmaceutical Manufacturing Standards Project

The Australian Pharmaceuticals industry is a knowledge-based, technology intensive industry. Many of the staff employed in the industry have university qualifications. However, for production and packaging operators, technicians, supervisors and managers there are specific skills required of these roles that are not covered by university qualifications. In particular, there is a considerable amount of process and packaging operations work involved in these roles. Vocational skills standards to support the practical application of these skills is key to this work being undertaken in the context of current Good Manufacturing Practice (GMP).

This project worked with industry experts to identify the practical skills and knowledge required of production and packaging operators, technicians, supervisors and managers, to reflect these in the national skills standards.

Key Outcomes

- Twenty-one units of competency were revised and three new units were developed to cover the practical skills and knowledge required of the industry, including the legislative GMP requirements of the Therapeutic Goods Administration (TGA).
- The structure and packaging rules of the Certificate II, II and IV in Pharmaceutical Manufacturing were revised, incorporating the updated units of competency.
- Deletion of the Diploma of Pharmaceutical Manufacturing as the job roles covered by this qualification typically require higher education qualifications.
- Deletion of the Certificate I in Diploma of Pharmaceutical Manufacturing as it was no longer required by industry.



Forestry and Timber

Units of competency



8 new

72 revised

1 deleted

Skill sets



2 new

Qualifications



14 revised

Advances in Woodmachining and Sawdoctoring Project

The timber processing industry is part of a sophisticated and integrated supply chain whose products are in strong demand from the Australian housing construction industry. Likewise, processed timber is a major material for high-value solid wood products such as flooring and furniture.

Technological advancements and market demands have had a significant impact on how jobs are performed in the sector, particularly for wood machinists and saw doctors (now proposed to be called 'saw technicians'). As a result of this project, the timber industry will soon have access to revised qualifications in these areas, reflecting current practices, equipment and terminology.

The development and revision of the qualifications and units of competency involved consultation with 40 Technical Advisory Committee members. As these are skills relevant across the sector, the project has taken place in conjunction with the Sawmill Timber and Process Optimisation Project.

Key Outcomes

- The Certificate III in Saw Technology and Certificate III in Wood Machining that underpin the apprenticeship and traineeships programs in the timber processing sector have undergone major review. These qualifications, and their associated units of competency, provide competencies for wood machinists and saw doctors, two critical job roles in the sector. Over the years, these job roles have evolved in complexity, particularly in the large softwood sawmills.
- In addition, two qualifications have been revised to include additional units of competency to facilitate pre-apprenticeships in sawmilling and processing (FWP20316 Certificate II in Sawmilling and Processing) and to include an additional imported unit (FWP40216 Certificate IV in Timber Processing).
- Two new skill sets have been developed to facilitate a career pathway towards higher level technical jobs through skills in troubleshooting hydraulic and pneumatic systems. They contain relevant units of competency imported from the Manufacturing and Engineering Training Package.

- One unit for maintaining frame saw blades has been proposed for deletion because feedback from stakeholders indicated that it is no longer relevant to current workplaces.

* Woodmachining and sawdoctoring skills standards are expected to be endorsed by the AISC later in 2019.

Sawmill Timber and Process Optimisation Project

Virtually all job roles in large softwood sawmills are expected to integrate principles of timber and process optimisation to maximise the overall volume and value of timber recovery. In recent years, new job roles have also emerged in the softwood processing sector, such as Optimisation Managers and Optimisation Technicians. These roles focus on process improvement across an enterprise's operations. They use optimisation software to process information from a range of scanning technologies.

In order to help the timber industry adapt to these changes, a number of new units of competency have been developed to support production efficiencies in sawmills. Existing units relating to the main stages of sawmill production processes have also been revised to meet skill needs and comply with the standards for training packages. One unit for maintaining frame saw blades, which has low enrolments, has been proposed for deletion. Feedback indicated that it is no longer relevant to workplaces.

The development and revision of the units took 11 months and involved consultation with 40 Technical Advisory Committee members. As these skills are relevant across the sector, the project has taken place in conjunction with the Advances in Wood Machining and Sawdoctoring Project.

Key Outcomes

Six new units of competency have been developed and 11 units have been revised to address skills requirements for optimisation of timber and material flow, particularly within softwood sawmills.

* Sawmill timber and process optimisation skills standards are expected to be endorsed by the AISC later in 2019.

Cross Laminated Timber Building Systems Project

A new generation of engineered timber products is refashioning building construction. The advantages of timber products include their renewability, natural aesthetics, strength, carbon storage and versatility for innovative design. Growing building construction activity and use of timber has been a driver for timber products demand, particularly the new generation of engineered wood products – cross-laminated timber (CLT) and Glulam. Capital investments in new processing and manufacturing plants for CLT and Glulam have also increased. Workers require specific skills to operate machines and Computer Numerical Control (CNC) equipment and to manage different stages of the production processes. The skills and knowledge to operate machines used in different stages of the CLT and Glulam production processes were identified as part of this project and embedded in national skills standards.

Units of competency relating to CLT and Glulam production were reviewed, to incorporate the skills and knowledge that is required to operate machinery, so all job functions are accurately described. The project determined that the revised units and processes will not only be used within the CLT and Glulam manufacturing sector, but also within other traditional timber product manufacturing sectors. The improvements applied to these units are inclusive of all industry subsectors that share similar processes and job functions and will not affect traditional users such as timber and wood panel manufacturers.

The project also liaised with the Prefabricated Building Systems Project to develop new units of competency for high-level design, off-site manufacture and on-site installation of prefabricated timber building systems. CLT and Glulam are timber components integrated into prefabricated timber building systems through the assembly process. Feedback from the technical advisory committee members indicated that the highest skill priority for businesses lies at the interface between CLT manufacturers and the designers who are unfamiliar with working with CLT panels.

Key Outcomes

- Twenty-one units of competency were revised, related to timber product design, production planning, Computer Numerical Control (CNC) machining and lamination operations.
- Four new units of competency were developed, in the area of design, manufacture and installation of prefabricated timber building systems (developed in conjunction with the Prefabricated Building Systems Project).



Prefabricated Building Systems Project

The prefabrication and construction of timber building systems is an important commercial sector across Europe, Japan, the United States of America and New Zealand and an emerging sector in Australia. It is the future of the timber and construction industry, improving quality and value within the industry. The increased development of panelised building systems and changing manufacturing processes, driven by the strong demand in building construction, has resulted in the demand for specific skills to operate Computer Numerical Control (CNC) equipment, use of tools for on-site product installation, management of prefabrication processes and providing advice for regarding product conformance.

Units of competency for timber truss and frame design and manufacture were revised, to reflect emerging industry skill requirements, including prefabrication of panelised building systems, so that all job functions are accurately described.

This project looked at the skills and knowledge requirements of production supervisors and fabricators involved in the construction and management of prefabrication processes and technology for panelised timber building systems.

The skills and knowledge required in this industry sector were related to design, prefabrication and installation; many of these skills were already covered by existing units of competency from a range of training packages including property services, furnishing, manufacturing and engineering, forest and wood products and construction (carpentry). However, there is specific capabilities required for the prefabrication of timber building systems and to perform tasks within the scope of prefabrication processes. Thus, four new units of competency were developed to address the identified skill gaps.

Key Outcomes

- Revised three units of competency. The range of products has been expanded in relevant units to include Cross Laminated Timber and Glulam.
- Four new units of competency were developed, in the area of design, manufacture and installation of prefabricated timber building systems (developed in conjunction with the Cross Laminated Timber Building Systems Project).



Meat

Units of competency



13 new

1 revised

Skill sets



3 new

Meat Processing Project

Australian meat has a reputation for being high quality. This reputation is underpinned by clean and safe industry practices, including quality assurance programs.

Knowing where meat has come from is a crucial part of quality assurance, with some overseas markets requiring businesses to implement specific plans (TACCP and VACCP). The skills to support traceability programs are key. So too is the ability to identify and describe aspects that impact the overall quality and price of an animal. A number of factors can influence the quality of meat. Industry has developed processes to protect the quality of meat products, from contaminants, pests and food fraud.

The skills and knowledge to support some of these systems and processes were reviewed as part of this project. Working closely with industry, 13 new and two revised units of competency and three new skill sets have been developed across eight different industry areas.

These areas included animal health data collection, operating and managing biogas facilities, improving meat quality, conducting and reporting workplace incident investigations, food safe pest-control management, managing threats and vulnerabilities and material handling through traceability of products. Each of these areas are important for continued international and domestic market access for the meat industry, and for meeting regulatory requirements. The new units and skill sets will support the meat industry to remain sustainable and competitive now and into the future.



Key Outcomes

Thirteen new and two revised units of competency and three new skill sets have been developed across the following skills areas:

- Animal Health Data Collection
- Operation and management of biogas facilities in a processing plant
- Improving meat quality (by identifying secondary sexual characteristics in beef)
- Conduct a workplace incident investigation
- Preparation of market reports for sheep and beef
- Food-safe pest control management
- Material handling through traceability of products.

Pulp and Paper Manufacturing

Units of competency



40 revised

Skill sets



10 new

Pulp and Paper Manufacturing Safety Compliance Project

Australia's pulp and paper manufacturing industry is a world leader in sustainability and innovation, with independently-certified renewable resources, global best practices in recycling and continuously improving its energy and water efficiency and emissions. At its core is a workforce of operators, technicians, production specialists and managers that require specific skills and knowledge to safely operate and manage the machines and equipment. There are many and varied health and safety risks and hazards pertaining to pulp and paper manufacturing sites, including hazardous chemical use, extreme heat and steam, and use of large machinery.

This project reviewed pulp and paper units of competency with regard to workplace health and safety requirements, including major hazard facilities. It investigated the replacement of PPM Pulp and Paper Training Package boiler units with MSM Manufacturing Training Package boiler units that are required for High Risk Work Licences. However, industry stakeholders requested the retention of the PPM Boiler units. As a result, the MSM boiler units were added as electives to 6 of the 7 pulp and paper qualifications.

Key Outcomes

- Major Hazard Facility requirements and a list of workplace health and safety aspects has been included in 40 units of competency.
- Ten new skill sets were developed for specialised operators.



Racing and Breeding

Units of competency



13 new

27 revised

Skill sets



9 new

Qualifications



12 revised

Greyhound Health Assistance Services Project

Racing greyhounds have unique health and welfare requirements. In recent years, there has been an increase in the range of health services on offer, such as massage and other non-invasive therapies. These alternative therapies, coupled with veterinary care, can have positive physical and mental health benefits for racing greyhounds. They can help to prevent injury, improve range of motion and alleviate pain or stiffness.

The national skills standards for the Greyhound Health Assistant job role have been identified as part of this project. Greyhound Health Assistants require knowledge and skills relating to the greyhound musculoskeletal system, conducting physical examinations and applying massage and non-invasive treatments.

Thanks to the contributions of industry, a qualification and skill set are now available to support the training of those wishing to specialise in greyhound health assistance.

Key Outcomes

In close consultation with industry, the skills and knowledge requirements for this job role have been documented as part of four new units of competency and seven revised units. A specialisation for greyhound health assistant has been created within the Certificate IV in Greyhound Racing Industry as well as a specific Greyhound Health Assistant Skill Set.



Horse Breeding Skills Project

The horse racing industry has at its foundation the largest and most complex horse breeding sector in Australia. Many racehorses go on to become broodmares and stallions at stud farms, at which point their nutritional requirements, health care, exercise and education needs change. Those caring for them and their offspring require a diverse range of skills and knowledge. Due to the high value of racehorses, there are numerous job roles dedicated to breeding quality foals.

This is also true of those working in the breeding sector for equestrian or recreational purposes, though some of the skills and practices may differ. It is vital to factor in these varied methods of horse breeding when considering the learning, training and skill needs of the sector.

Horse breeding experts around the country have come together to provide advice on the current skills, knowledge and practices required to work in a range of job roles across all types of horse breeding. As a result, updated qualifications, skill sets and units of competency are now available for use by industry and registered training organisations. This includes specific units and specialisations to suit varied job roles and kinds of breeding, including foal and yearling preparation. Throughout this review, knowledge of pedigrees, animal welfare issues, business management, and regulations pertaining to the breeding of thoroughbreds and standardbreds have also been considered.

Key Outcomes

- Three Horse Breeding qualifications migrated from the ACM Animal Care and Management Training Package to the RGR Racing and Breeding Training Package to reflect industry usage, including Certificate III in Horse Breeding, Certificate IV in Horse Breeding, and Diploma of Horse Breeding. Changes were made to the core and elective units of competency and packaging rules.
- Five new skills sets were developed for job roles in the horse breeding industry, targeting specific breeding operations which in some horse studs are undertaken by different personnel or occur at different stages of the breeding cycle. The use of skill sets will allow individuals to develop the skills they need according to their role, the season and the need or desire to build their skills. The five new skill sets address skills in natural horse breeding supervision, stallion care, artificial insemination, mare and foal care and yearling preparation.
- The Certificate III in Racing Services was reviewed to add an additional track maintenance stream/specialisation. In addition, packaging rules and electives for stud hand specialisation have been updated for the Certificate II in Racing Industry.
- Nineteen revised units of competency have been recoded from ACM (Animal Care and Management) to RGR (Racing) to reflect industry usage.

Three new units of competency developed:

- Work effectively in horse breeding sector is included in the Certificate III in Horse Breeding, covering the skills and knowledge required to work effectively as part of a team on a horse breeding stud.
- Collect, process and evaluate horse semen for artificial insemination is included in horse breeding qualifications, covering the skills and knowledge required to collect, process, analyse quality and supply horse semen to clients for artificial insemination breeding.
- Plan and implement an enterprise horse breeding strategy is included in the Diploma of Horse Breeding, covering the skills and knowledge required to plan, develop and implement a horse breeding strategy for an enterprise or stud farm.



Visit to Arrowfield Stud



The horse breeding sector provides the horses required for our domestic racing and also provides many of the horses that race in Hong Kong and Asia so it is fantastic that the unique, highly skilled work requirements are now available in the national racing and breeding skills standards that have been endorsed by our industry. Related to this is the work our industry does in looking after horses and greyhounds through to their retirement, providing whole of life tracking, along with appropriate transition from racing to breeding, recreation and equestrian pursuits all being supported by these standards.

It is also encouraging to now have the work of Greyhound Health Assistants recognised in the national skills standards. Coupled with veterinary care, the therapies they offer in massage and other non-invasive therapies can have positive physical and mental health benefits for racing greyhounds with appropriately skilled and accredited therapists.

**Ron Fleming,
Deputy Chair of the Racing and
Breeding Industry Reference Committee**

Retraining Horses & Greyhounds to New Environments Project

When horses and greyhounds leave the racing industry they may be given a new purpose in a domestic, equestrian, recreational or farm environment. The re-training process requires specific skills and knowledge in handling, assessing suitability and horse or greyhound behavior. It involves a transition from one lifestyle to another and so it is important that horses and greyhounds are assessed and trained to suit their new environments.

Although bred for racing, many end up as fantastic pets or even champion horses. Olympian Rebel Morrow who was part of Australia's 2004 Athens Eventing Team, purchased her Olympic mount Oaklea Groover for \$300 after he was no longer able to race. Morrow took him on as a four year old and from the moment she pointed him at a fence, Morrow said she knew she had something special.

The industry has developed programs to help racing animals adapt to new environments. This project has focused on identifying the skills people in these programs need and use. In close consultation with industry experts, national vocational qualifications have been developed to support the job roles of those that specialise in this line of work. They offer the racing industry access to training that more thoroughly addresses the skills needed to retrain horses and greyhounds for new environments, opening up new opportunities for workers and the industry as a whole.

Olympian Rebel Morrow who was part of Australia's 2004 Athens Eventing Team, purchased her Olympic mount Oaklea Groover for \$300 after he was no longer able to race. Morrow took him on as a four year old and from the moment she pointed him at a fence, Morrow said she knew she had something special.

Key Outcomes

Greyhound Transition to Pet program

- Four new units of competency developed to cover skills in assessing greyhounds for suitability to transition to a pet, developing and implementing greyhound transition to pet plans, carrying out greyhound adoptions, and interpreting and managing greyhound behaviours.
- The Certificate IV in Greyhound Racing Industry qualification reviewed to include trainer, health assistant, transition to pet specialisations.
- Two new skills sets, Greyhound Preparation for Transitioning to a Pet Skill Set and Greyhound Adoption Skill Set, created for job roles relevant to transitioning greyhounds from the racing and breeding sector to pets.

Racehorse Transition to new Purpose

- Two new units of competency developed to cover skills in re-educating horses to manage behaviours and/or transition to new purposes and advising on transitioning and rehoming horses. It involved considerable cross-industry consultation in conjunction with the ACM Horse Education Project. The re-education and transitioning of horses to new purposes units, while of particular interest to the racing industry, have been written to be applicable to all horses (not just racehorses as was originally proposed). It is anticipated that these units will be imported into qualifications and skill sets in other training packages.
- One new skill set, Horse Re-education and Transitioning Skill Set, developed to cover knowledge and skills relating to handling, assessing, re-educating and managing horse behaviour. It applies to all breeds of horses and disciplines and has particular relevance to racehorses and performance horses.

Although bred for racing, many end up as fantastic pets or even champion horses.



Cross Sector

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 system to ensure the workforce is equipped with the skills required for new, and more sustainable, ways of working. The Australian Industry Skills Committee (AISC) has convened an Environmental Sustainability Expert Panel and appointed Skills Impact to support their work. The panel will provide advice to the AISC on how industry skill needs for environmental sustainability can be addressed through the VET system.

In the second half of 2019, Skills Impact will consult with all Industry Reference Committees to gather feedback on the cross-industry topic of environmental suitability, specifically in relation to the training packages for which they are responsible. Their perspectives will form the advice about how to manage environmental sustainability skill standards and qualifications that the Panel will provide to the AISC later in 2019.

This project follows the Case for Change that was developed in 2017, which analysed cross-industry environmental sustainability skill areas, in the light of existing training packages.



Projects for 2019-2020

The following projects have been identified by industry and approved by the Australian Industry Skills Committee (AISC) for 2019-20.

Visit www.skillsimpact.com.au/projects for further details and to provide your feedback and input into the project process.

Agriculture, Horticulture, Conservation and Land Management

- Agronomy Project
- Conservation and Land Management Project
- Biosecurity and Emergency Response Project
- Medicinal Crops Project
- Rural Merchandising and Sales Project
- Horticulture and Nursery Project
- Green Walls and Rooftop Gardens Project

Animal Care and Management

- Exhibited Animal Care and Marine Wildlife Project
- Pet Care and Animal Training Project

Aquaculture and Wild Catch

- Fishtech and Aquabotics Project
- Work with Crocodiles Project

Food, Beverage and Pharmaceutical

- Advanced Wine Operations Skills Project
- Pharmaceutical Bioprocessing Project
- Food and Beverage Processing Project

Forestry and Timber

- New Harvesting Technologies Project
- Timber Merchandising Project
- Timber Truss and Frame Estimating and Design Project

Meat

- Diploma and Advanced Diploma in Meat Processing Project
- Game Harvesting Project
- Halal Meat Processing Project
- Poultry Processing Project



559A Queensberry St
(PO Box 466)
North Melbourne VIC 3051

Ph 03 9321 3526

Fx 03 9326 7800

Em inquiry@skillsimpact.com.au

skillsimpact.com.au