

Australian Meat Processing Industry Skills Report



Contents

- Acknowledgement of the work of IRCs3**
- Acknowledgement of Country3**
- Purpose4**
- Key Findings and Priorities5**
- Industry Reference Committee6**
- Method6**
- Environmental Analysis7**
 - Whole of Value Chain Approach.....7**
 - Traceability, provenance and blockchain8
 - Current crossovers and divisions of the value chain in the VET system9
 - Biosecurity, Invasive Species and Pest Control10**
 - Sustaining Plants and Animals.....11**
 - Ecosystem Management11**
 - Digital & Automation Practices.....13**
 - Food Safety QA & Regulatory Compliance14**
 - Food safety regulations, codes of practice and guidelines14
 - Regulated occupations15
 - Workplace and Value Chain Risk Management and Safety Culture16**
 - Workplace safety16
- Industry Summary and Trends17**
 - Workforce, Business & Market Summary17**
 - Shortage of skilled workers18
 - Training Summary20**
 - AMP Qualifications20
 - AMP Units of Competency20
 - Employers’ use and views of VET and other forms of training.....21
 - Regional, Rural & Remote Summary22**
 - Aboriginal & Torres Strait Islander Peoples Summary23**

Acknowledgement of the work of IRCs

We acknowledge the work of the members of Industry Reference Committee (IRC) in the preparation of this report and continuing phases of the project. Their voluntary participation and provision of intelligence and data makes the compilation of this information possible.

This report has been developed from six years of contributions from the Industry Reference Committee.

Acknowledgement of Country

Aboriginal and Torres Strait Islander peoples have a proud and continuous connection to Australia's land and waters. We acknowledge the traditional owners and custodians, and the continuing connection of Aboriginal and Torres Strait Islander peoples to the lands, waters and communities. We pay our respects to Elders and Leaders, past, present and emerging, and to all Aboriginal and Torres Strait Islander peoples who have supported our work.

We acknowledge the importance of learning from Aboriginal and Torres Strait Islander peoples' unique history of land and ecosystem management, art, culture and society. Their connections are particularly important given our involvement in work directly connected to utilisation, care and stewardship of Australia's land, waters and ecosystems, and the animals, trees and plants that thrive across Australia.

The Industry Reference Committees and Skills Impact have been working to develop improved participation of Aboriginal and Torres Strait Islander enterprises, businesses, communities and people in our work. We will continue to work to develop strong, mutually beneficial relationships with Aboriginal and Torres Strait Islander partners who can help us deliver better outcomes for Aboriginal and Torres Strait Islander peoples, recognising their expertise in improving quality of life, employment opportunities and skills outcomes in their communities and for the whole of Australia.

Purpose

Skills Impact has prepared this Industry Skills Report at the request of the Australian Meat Processing Industry Reference Committee (IRC). It provides in-depth information about industry-specific skills and issues covered in the *Agribusiness, Food and Fibre Industries Skills Report*.

As one of nine industry-specific Skills Reports with matching structures, this document is designed to assist collaboration across industries and the streamlining and reform of the Australian skills and VET system. This may aid the implementation of the Skills Minister's Priorities by supporting:

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

The IRC requested that this report be prepared to support improvements in the skills system, including work on:

- Industry workforce planning and strategies to address workforce shortages
- Documenting shared standards and regulations across industries to support end-to-end systems planning and avoid duplication
- The provision of evidence, data and intelligence to add value for industries beyond a narrow focus on training package development, and to inform future Industry Clusters or similar bodies approved to undertake work within the Australian skills and VET system
- Creating foundations for potential qualification reforms with a greater emphasis on skills families and portable skills
- Identifying shared 'skills domains' to aid in simplifying and streamlining national VET qualifications across industry groupings.

Key Findings and Priorities

The Australian meat industry is experiencing an extreme labour shortage, with meat processors looking for an average of 64 additional workers per business, and retail butchers looking for an average of nine (9) additional workers per business. Two-thirds of meat/smallgoods processors are operating below 80% capacity (around one-quarter are only operating at 50-60% capacity), while almost half of retail butchers are operating below 80% capacity.

Findings from Australian Meat Industry Council research indicate a complexity of reasons for the labour shortfall, including general unwillingness to work in the industry, other business and employment opportunities being more appealing, a lack of international worker availability, failure of new industry entrants to pass pre-employment medical requirements and low unemployment in local regions.

At the same time, industry trends indicate a need for higher-level skills, including increased safety skills relating to biosecurity issues and infection control.

The IRC has identified priorities for the consideration of the forthcoming Industry Cluster body (assuming establishment proceeds), including:

- The next stage (Stage 2 of 3) of the *AMP Training Package* Whole of Training Package/Core & Foundation Qualifications project
- Evaluation of Stage 1 of the Whole of Training Package/Core & Foundation Qualifications approach for the *AMP Training Package*
- Training and assessment materials to support the delivery of recently updated and new training products for the Meat Processing sector
- Working with other agribusiness, food and fibre industries on research and planning projects to identify and address skills gaps related to traceability, provenance and blockchain
- Identifying digital skills needs using the Digital Workforce Capability and VET framework currently in development (along with other digital capability frameworks).

Environmental Analysis

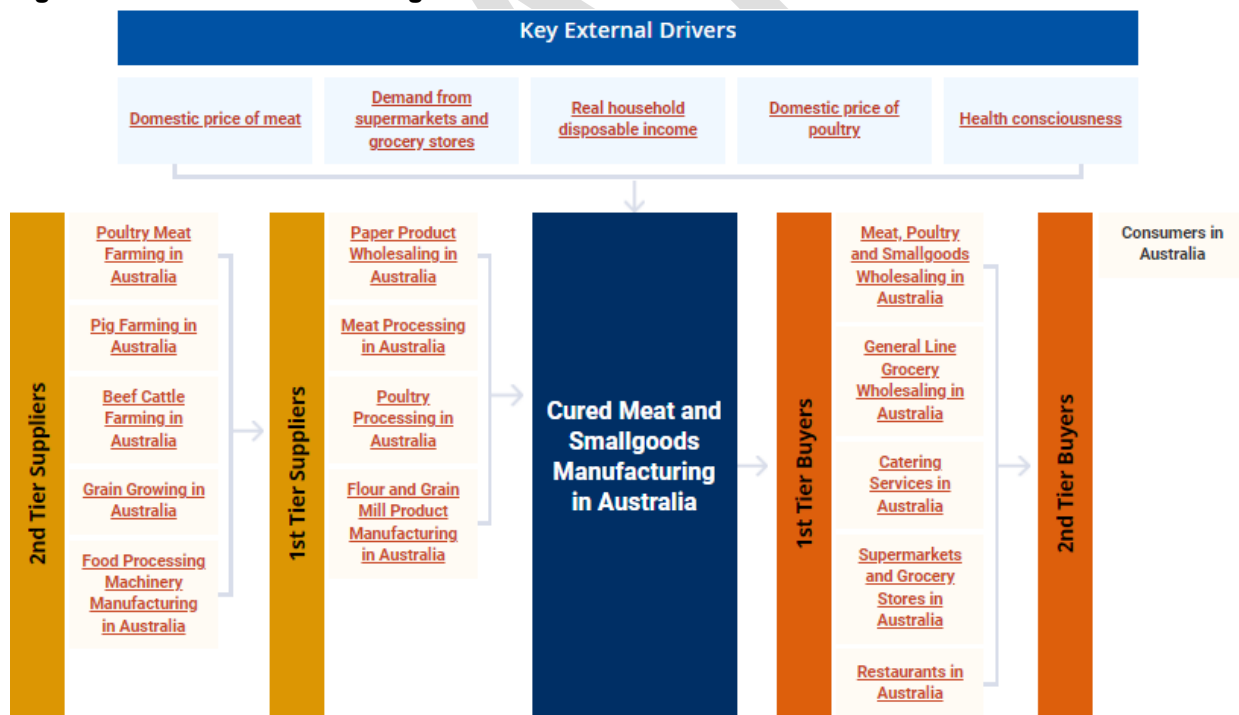
Whole of Value Chain Approach

The Australian meat industry is comprised of processors, wholesalers, retailers and exporters who collectively are responsible for supplying meat to domestic and international markets. Primary activities and skills domains include slaughtering, boning, freezing, preserving, packing and selling meat¹.

The meat processing value chain encompasses all stakeholders (up- and down-stream suppliers, farmers and raw materials suppliers, traders and retailers) who are often linked in cooperative and collaborative relationships to provide consumers with products and services. The meat processing industry notes that a whole of value chain approach is essential not only for understanding the ways in which industries work together in end-to-end systems, but also to implement robust and adaptable practices for current and future working.

Value chains are shaped by consumer demand and external trends, and industry partnerships develop to provide products with specific attributes in response to these, including sustainable packaging and specific animal welfare and feed practices (e.g. grass-fed or antibiotic-free). Figure 1 below displays the cured meat and smallgoods value chain and the external drivers that influence industry partnerships and processes.

Figure 1: Cured meat and smallgoods value chain



Source: IBISWorld (2022); Cured Meat and Smallgoods Manufacturing in Australia

The *Agribusiness, Food and Fibre Industries Skills Report* further details overlaps between the meat processing industry and other industries across the Australian economy. There are many shared and transferable skills across industries, including for biosecurity and handling animals. The relevance and

¹ IBISWorld (2022); *Meat Processing in Australia*

portability of *AMP Training Package* products is demonstrated by 201 instances of AMP units being imported into non-AMP Training Package qualifications.

There are numerous external impacts on the meat processing industry that operators need to be aware of to increase revenue and adapt to unexpected disruptions. During the COVID-19 pandemic, supply chains and global trade have been interrupted and, in some cases, shut down. The most serious cases involved the break-out of COVID-19 clusters in several meat processing plants, affecting the health of workers and placing pressure on business operations due to precautionary restrictions imposed by state authorities. The flow of products and workers in and out of Australia was severely impacted, with the curtailing of seasonal workers entering the country to fill job positions, and global markets becoming less accessible, especially with disruptions to freight and cargo transport.

Processors are responding by strengthening value chains both locally and nationally. The chicken meat industry, for example, is largely vertically integrated, with individual companies operating all aspects of production, from breeding farms, multiplication farms, hatcheries, feed mills and processing plants. Such integration allows businesses to focus on value-adding by responding to consumer demand for high welfare products, including through the certification of organic and free-range meat from local producers.

Meat Standards Australia (MSA) was developed by the Australian red meat industry to improve the eating quality consistency of beef and sheep meats. The system is informed by over one million consumer taste tests that judge how different 'paddock to plate' variables (e.g. environmental, feed and genetic differences) impact on final eating quality. These measures are used to project meat quality (articulated as a number between 30 and 80), which is dependent on compliance across a series of critical control points. The MSA provides a consistent industry benchmark, which can be used across all processors, geographic regions and over time².

Further value-adding to products is being sought through such developments as:

- Investments in automation technology (to improve workplace efficiency and animal health monitoring)
- Improving nutritional management and feed use efficiency
- Improving biosecurity practices within the supply chain
- Enhancing chicken welfare and handling methods
- Management strategies for chicken health
- Improving the supply chain security by investment in feedstocks, genetics and logistics³.

Value-adding is also occurring through the diversification of products. Consumer trends have even seen some meat processing companies investing in plant-based protein products. This reflects the perceived health and environmental benefits of these products, and caters to the growing 'flexitarian' market by providing complementary meat alternatives⁴. This entails the further sharing of skills and practices with plant protein processors already operating and participating in the delivery of the *Food, Beverage and Pharmaceutical Training Package*.

Traceability, provenance and blockchain

The *Agribusiness, Food and Fibre Industries Skills Report* outlines the increasing importance of traceability and provenance information across all value chain industries.

² MLA (2021); *Meat Standards Australia*; <https://www.mla.com.au/marketing-beef-and-lamb/meat-standards-australia/>; viewed 31/08/2022.

³ AgriFutures Australia (2019); *Chicken Meat Program RD&E Plan 2019-22*; p.19

⁴ Grain Central (2022); Meat businesses invest in plant protein; <https://www.graincentral.com/news/meat-industry-investing-in-plant-protein/>; viewed 08/03/2022.

The *National Protein Roadmap*⁵ defines the first of ten growth opportunities as expanding and improving 'integrity systems in the red meat sector to help verify the origin of production, support compliance, prevent risks and support research'. Taking advantage of this opportunity could add \$1.8 billion in export revenue by 2030. This would require all value chain contributors to participate and upskill in traceability and credentialing systems, as well as being enabled to access real time data so that decision-making becomes increasingly sophisticated and so reduces operational costs and risks, and facilitates better price premiums.

Product quality and consumer trust are critical to the meat industry's reputation and prosperity. To maintain these attributes, businesses have been at the forefront of implementing and regulating innovative ways of verifying the biological and geographical origin of produce and maintaining food safety standards.

The traceability of animals and meat products requires systems and arrangements that track movement across all stages of the supply chain, including farms, feedlots, transporters, saleyards, processing facilities and export pathways⁶. Further information may be tracked and verified on how meat products have been produced, including the origin of ingredients (provenance), animal nutrition, animal handling, sustainable packaging, fair trade arrangements, organic status, methods of transportation, labour conditions, carbon footprint, water use, animal welfare, chemical residues and production impacts on biodiversity and air quality⁷. This not only provides businesses with data to help control and optimise processing activities (including regulatory compliance and guaranteeing food safety standards), it also provides consumers with evidence of desirable product characteristics, which are displayed on websites, product packaging and labels (including with the use of QR codes).

Additionally, technological solutions, such as blockchain, can validate sourcing claims and so combat food fraud, which remains an expensive challenge and continues to harm 'Brand Australia'⁸. Traceability systems also allow the swift identification of any sources of food contamination, as occurred in 2021 with the tracing of tainted horse meat in pet food⁹.

Current crossovers and divisions of the value chain in the VET system

The Australian meat industry has critical value chain connections to other industries, as outlined in detail in the *Agribusines, Food and Fibre Industries Skills Report*.

Current cross-overs requiring collaboration include:

- Agriculture, food and beverage, seafood and crops
 - Industries which have direct links to meat production and processing are covered through a number of Training Packages, including Agriculture, Horticulture and Conservation & Land Management (AHC), Food, Beverage and Pharmaceutical Processing (FBP), and Seafood Industries (SFI)
- Groceries and food wholesalers, retailers and exporters
 - Range of industries associated with consumer-facing food services from supermarkets and food service industries to the local delicatessen, as well export to international markets. This includes skills covered in the Retail Services (SIR) Training Package

⁵ CSIRO Futures (2022); *Protein - A Roadmap for unlocking technology-led growth opportunities for Australia*; CSIRO, Canberra; p.22.

⁶ MLA (2021); *Meat safety and traceability*; <https://www.mla.com.au/meat-safety-and-traceability/>; viewed 31/08/2022.

⁷ CSIRO Futures (2022); *Protein - A Roadmap for unlocking technology-led growth opportunities for Australia*; CSIRO, Canberra; p.23.

⁸ R. McLeod (2017); *Counting the Cost: Lost Australia food and wine export sales due to fraud*; Food Innovation Australia Ltd.

⁹ ABC News (2021); *Contaminated pet food investigation traces toxic horse meat back to NT property*; <https://www.abc.net.au/news/rural/2021-08-10/contaminated-pet-food-linked-to-horses-from-nt-property/100364254>; viewed 31/08/2022.

- Regulation Services
 - Meat producers, processors, distributors and retailers work with a range of regulation and regulators, including food safety and retail regulation
- Professional Support Services
 - Supportive occupations such as packaging and waste management, sales and marketing
- Transport & Logistics
 - The disruptions of the COVID-19 pandemic, especially during 2020 and 2021, highlighted the importance of access to meat products and major distribution issues. This is partially covered by the Transport and Logistics (TLI) Training Package
- Research
 - Significant research efforts are being undertaken that inform industry, including in the introduction of technology, animal welfare, waste minimisation, packaging and consumer trends

Biosecurity, Invasive Species and Pest Control

Australia's reputation for producing 'clean and green' products in relatively uncontaminated environments with fresh and natural ingredients is an important point of difference for organisations in local and international markets. A major part of this reputation involves adherence to biosecurity controls.

Animal health biosecurity requires processors to implement everyday monitoring, work practices and adherence to biosecurity management plans. This includes keeping records on visitors to processing sites, the treatment and health of animals, animal feed, animal waste, animal deaths, pest and rodent control and animal and product movements to and from work sites¹⁰.

Contingency plans are also required for when a biosecurity outbreak might occur. All operators in the meat processing value chain must be vigilant to signs of animal biosecurity concerns, including the emergence of exotic and notifiable diseases such as Lumpy Skin Disease and Foot and Mouth Disease, which are present in countries to the north of Australia. Both diseases would be extremely disruptive to Australia's livestock and meat industries because they cause reduced animal productivity and increased mortality, and any disease incursion would likely affect Australia's access to export markets¹¹. Dr Peter Dagg from Animal Health Australia warns that, should Foot and Mouth Disease reach Australia from nearby Indonesia, current rules dictate that there would likely be an immediate imposition of a national livestock standstill to limit the movement of animals and, correspondingly, the spread of disease¹². This falls under the *AUSVETPLAN*, which provides a nationally-agreed approach, and identifies that workers must have the capabilities for early detection, vaccination, establishment of quarantine zones, and restricting the movement of implicated animals, animal products and related equipment¹³.

Biosecurity controls also impact on the structure and scheduling of the workforce. The meat processing industry was exposed to the impacts of COVID-19, a zoonotic disease, due to its very high labour intensity, operational difficulties associated with social distancing, highly exposed supply chain and few options for employees to work from home. This was also a reflection of the circumstances of the people making up the

¹⁰ Australian Pork Ltd. (2022); *Biosecurity management plan and resources*; <https://www.australianpork.com.au/biosecurity/biosecurity-management-plan-and-resources>; viewed 31/08/2022.

¹¹ ABARES (2022); *Outlook for livestock: June quarter 2022*; <https://www.awe.gov.au/abares/research-topics/agricultural-outlook/livestock#opportunities-and-challenges>; viewed 31/08/2022.

¹² Beef Central (2022); *What would a national livestock standstill entail?*; <https://www.beefcentral.com/news/what-would-a-national-livestock-standstill-entail/>; viewed 14/06/2022.

¹³ AMPC (2022); *Red meat industry response to lumpy skin disease*; <https://ampc.com.au/news-events/news/red-meat-industry-response-to-lumpy-skin-disease/>; viewed 30/05/2022.

workforce, many of whom co-habited and shared transportation to and from the workplace. Such challenges saw industry leaders renewing protocols and planning for biosecurity risks, including staggering shift patterns, enacting physical distancing where possible, increasing hygiene requirements and mandating rapid antigen testing. As a result of these actions, meat works across most of Australia were able to continue operating, underpinned by the application of high safety standards in every aspect of operations.

Sustaining Plants and Animals

The meat processing industry's social licence is dependent on the humane, effective and hygienic treatment of animals. This involves feeding and handling livestock, preparing them for slaughter, restraining them appropriately and applying effective stunning and slaughter methods in accordance with animal welfare regulations and workplace requirements.

In 2021, 97.5% of cattle and 80% of ovine were processed through an establishment accredited under the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS). This is an independently audited program to demonstrate compliance with animal welfare standards from receipt of livestock to the point of humane processing. The AAWCS was recently reviewed by the AMIC Standards Committee, which was comprised of state and federal government representatives, industry stakeholders, scientific and technical experts and animal welfare organisations.

The meat processing industry is further seeking greater harmonisation of evidence-based animal welfare practices through the development and implementation of the Australian Animal Welfare Standards and Guidelines for Livestock at Processing Establishments. These national processing standards are anticipated to be finalised in mid-2023¹⁴.

The meat industry is implementing other continuous improvement strategies, including through skills and training. In 2020, the chicken meat sector developed guidelines to minimise the risks associated with potential production system closures and to guarantee suitable monitoring of animal welfare during substantial business disruptions, as seen with COVID-19. A new training program was also developed to deliver 'effective stunning and slaughter of poultry training workshops' across processing plants in Australia to improve poultry welfare outcomes¹⁵. The training is targeted at team leaders and QA personnel who have responsibilities for managing and monitoring the stunning and slaughter process. Participants address both performance criteria and knowledge components to better understand commercial poultry stunning and slaughter systems because of the impact these have on welfare outcomes and product quality.

Ecosystem Management

The *Agribusiness, Food and Fibre Industries Skills Report* describes wider contexts surrounding the meat processing industry, related actions on ecosystem management and environmental sustainability, and an overview of the *Australia State of the Environment 2021* report. This is especially relevant to beef production, which, across the value chain, is seeking to mitigate and minimise greenhouse gas emissions associated with rumination, energy consumption, vegetation management, feed sourcing (including feed that inhibits methane production, e.g. the seaweed Red Asparagopsis), soil carbon and sequestration¹⁶. The Australian Red Meat Industry's *Carbon Neutral by 2030 Roadmap* outlines four key skills and knowledge areas that are being developed in order to realise carbon neutrality: emissions avoidance, carbon storage, integrated management systems, and leadership building. Already, a small but growing number of Australian beef brands are leading in these areas and are displaying claims of being carbon

¹⁴ RMAC (2022); *Australian Beef Sustainability Framework: Annual Update 2022*

¹⁵ AgriFutures Australia (2021); *Effective stunning and slaughter for poultry training workshops*; <https://agrifutures.com.au/related-projects/effective-stunning-and-slaughter-for-poultry-training-workshops/>; viewed 31/08/2022.

¹⁶ MLA (2022); *Carbon footprint and reduction options for Harvest Road Group operations*

neutral or methane-reduced on their products¹⁷. The chicken meat industry, meanwhile, is seeking to improve its environmental performance by reducing odour and litter and better disposing of waste, both in internal shed and outdoor settings¹⁸.

Climate change, including extreme events such as drought, bushfires and floods, is impacting on meat processing inputs. For example, seasonal conditions in sheep producing regions influence flock sizes, with the national flock rising from its lowest size in 100 years in 2020 (64 million head) to almost 71 million head in 2021¹⁹. This means processors need to plan operations for years with both low and high volumes of animals for slaughter. Meat & Livestock Australia (MLA) describe an 'influx' of lambs for the market in 2022, which has seen processing volumes rise by almost 20% compared to the previous year. This gives rise to logistical challenges, but also increased opportunities for accessing high-value export markets, including with the Australia-UK Free Trade Agreement (A-UK FTA)²⁰.

Reducing waste is a key objective across the meat processing value chain. The meat industry strives to ensure carcasses are utilised as much as possible, including through the recovery of by-products such as hides so that they do not become landfill. Meat and poultry are, however, the most refrigeration-intensive industries, and breaks and deficiencies in the cold food chain have been estimated to waste 155,000 tonnes of meat (worth \$670 million) each year²¹. The refrigerated cold food chain begins in abattoirs, where refrigeration conditions are crucial for upholding product quality and minimising bacterial load. Across the value chain (up to and including retail), the main causes of wastage include packaging failure, cold storage malfunction, and transport refrigeration not being at optimal temperature. The Red Meat Advisory Council are one of several bodies to have developed strategic plans to manage and reduce production, processing and consumption waste²². To meet these objectives, the industry is exploring and implementing best practice processes and skills development for controlling traceability systems, upholding equipment and insulation standards and utilising the most appropriate packaging (including greater use of vacuum packing and freezing to improve shelf life and reduce the intensity of refrigeration requirements).

The Australian Meat Processor Corporation (AMPC) is leading projects 'to help maximise the efficiency and viability of the red meat processing sector by supporting the development of cross-sectoral solutions that enhance the sustainability of red meat processing, and neighbouring industries, through circular economy approaches'²³. With partners including MLA and the Australian Government Department of Agriculture, Water and the Environment (as part of its Rural R&D program), an Anaerobic Digestion Advisor (ADAdvisor) tool has been developed for businesses to assess the economic feasibility of anaerobic digestion using waste from red meat processing and the intensive livestock industries. Anaerobic digestions enable processors to manage waste effectively, reduce greenhouse gas emissions, and prevent potentially valuable renewable bio-energy from being discarded in landfill or channelled to sewers²⁴.

In 2022, AMPC also delivered the first containerised microfiltration, ultrafiltration, reverse osmosis water recycling unit to a meat processing plant in Queensland as part of a pilot project to recycle water for non-potable uses. The project aims to help businesses develop capabilities for reducing their water needs and to create low-cost Class A recycled water for re-use in plant cooling and heating systems²⁵. A second water

¹⁷ Beef Central (2022); *Carbon neutral beef brands continue to emerge, but premiums remain elusive*; <https://www.beefcentral.com/trade/carbon-neutral-beef-brands-continue-to-emerge-but-premiums-remain-elusive/>; viewed 09/06/2022.

¹⁸ AgriFutures Australia (2019); *Chicken Meat Program RD&E Plan 2019-22*; p.18

¹⁹ MLA (2021); *Industry projections 2021*; https://www.mla.com.au/globalassets/mla-corporate/about-mla/documents/mla_october-update-australian-sheep-industry-projections-071021.pdf

²⁰ MLA (2022); *Sheep projections*; <https://www.mla.com.au/prices-markets/Trends-analysis/sheep-projections/>; viewed 13/08/2022.

²¹ P. Brodribb, M. McCann & J. Motavallian (2020); *A study of waste in the cold food chain and opportunities for improvement*; Department of Agriculture, Water and the Environment and Refrigerants Australia.

²² RMAC (202); *Red Meat 2030*

²³ AMPC (2021); *A circular economy approach to increasing value in agri-food industries approaching net zero carbon*; <https://www.ampc.com.au/research-development/sustainability/a-circular-economy-approach-to-increasing-value-in-agri-food-industries-approaching-net-zero-carbon>; viewed 31/08/2022.

²⁴ ADAdvisor (2022); *Anaerobic Digestion Advisor*; <https://adadvisor.info/>; viewed 31/08/2022.

²⁵ RMAC (2022); *Australian Beef Sustainability Framework: Annual Update 2022*; p.36

recycling unit has now been delivered to a meat processing plant in Western Australia²⁶.

Digital & Automation Practices

Most meat processing operations require significant labour input for processing tasks, such as boning and butchering. Digital technologies are increasingly being used by market leaders and, while small and medium businesses may not have the capital to invest in these advancements currently, there is likely to be a steady shift to their use becoming widespread.

Presently, digital and automation practices are becoming commonplace across these sectors:

- The rendering sector, including independent rendering businesses and those part of an integrated meat processing plant, employ sophisticated technologies and techniques to convert animal by-products into a range of different food and non-food products.
- The cured meat and smallgoods sector is utilising smart devices to improve operators' ability to track utility usage, optimise cold storage temperatures and reduce utility costs.
- The retail sector is employing more use of technology, particularly for slicing products.

Australian Government funding is supporting industry modernisation, including through the Building a More Competitive Meat Industry measure²⁷ as part of the Busting Congestion for Agricultural Exporters package of reforms. A digital modernisation roadmap has been commissioned to inform industry on investing in technology and identifying opportunities to improve regulatory activities; for example, integrating smart technologies into export verification activities and modernising administrative procedures²⁸.

The Meat Industry Strategic Plan²⁹ states that a key to the industry's success will be the ability to optimise systems, technologies and practices. This includes utilising the latest technologies in information management, communication and market analysis to make evidence-based decisions to drive production and investment decisions that align with consumer preferences.

Through its primary research development corporations, the Australian Meat Processor Corporation (AMPC) and Meat and Livestock Australia (MLA), the industry continues to invest in the development of new technologies.

AMPC note that there is great potential for businesses of all sizes to adopt new advanced manufacturing technologies to help improve the productivity of meat processing operations. Their strategic objective is 'that human product handling is halved through technology advancement to reduce injury rates, maximise yield and processing efficiency by 2030'³⁰. Recently completed projects include 'Remote operations – shadow robots'³¹, which explored the use of automated and semi-automated remote-controlled robots to perform operations usually carried out by workers on a processing line. This foreshadows future workplaces, where there is greater worker safety, operational precision (including waste reduction), data collection and insights, staff retention (due to improving working conditions and reducing bodily stress), and the attraction of highly skilled workers. Through its extension programs, AMPC ensures that its research and development programs link directly to implementation. This includes comparing developments with the *AMP Training Package* to assess whether updates are required. However, it should be noted that AMPC have previously suggested to the IRC that many of the emerging skills and jobs would not be meat

²⁶ AMPC (2022); *Second advanced water recycling trial begins in Western Australia*; <https://ampc.com.au/news-events/news/second-advanced-water-recycling-trial-begins-in-western-oz>; viewed 31/08/2022.

²⁷ Australian Government (2020); *Modernising the meat export regulatory system*; <https://www.awe.gov.au/about/news/media-releases/modernising-meat-export-regulatory-system>; viewed 31/08/2022.

²⁸ AMPC (2020); *Digital Transformation Roadmap*; https://www.ampc.com.au/getmedia/b704265d-af17-4356-ba0c-676ba7ce15d5/AMPC_DigitalTransformationRoadmap_Factsheet.pdf?ext=.pdf

²⁹ RMAC (2020); *Meat Industry Strategic Plan*

³⁰ AMPC (2022); *Advanced manufacturing*; <https://www.ampc.com.au/research-development/advanced-manufacturing>; viewed 31/08/2022.

³¹ AMPC (2021); *Shadow Robotics*

processor roles, but roles associated with the care and maintenance of the technology. They have also noted the high cost of current technology in meat processing operations due to the maintenance and repair requirements of equipment given the nature of the operations.

Over recent years, MLA has worked with industry, research institutes and technology vendors to develop Advanced Livestock Measurement Technologies for globally competitive Australian meat value chains (ALMTech)³². This program consisted of streams to develop lean meat yield technology, eating quality measurement technology, robotic technology, industry databases, and data decision systems. Developments included DEXA (Dual energy X-ray absorptiometry), a digital tool for measuring meat, fat and bone on a carcass (carcass composition)³³. Other technologies developed for abattoirs included a microwave fat-depth scanner for lamb and beef, a 3D imaging camera for beef, the PorkScan Mk2 system, probe technologies and blockchain systems integration³⁴.

It is important for all employees in the meat industry to be highly skilled to be able to keep up to date with the latest processes and technology to ensure that graduates have current skills and knowledge to work in this sector of the industry.

Food Safety QA & Regulatory Compliance

Food safety regulations, codes of practice and guidelines

Please see the *Agribusiness, Food and Fibre Industries Skills Report* for further details on industry-specific and cross-industry practices and legislation. It describes how quality assurance programs, such as Hazard Analysis Critical Control Point (HACCP), and legislation are playing a key role in ensuring product integrity in meat processing. High food safety standards play a key role in preserving the industry's reputation for clean and consistent meat products.

Complying with federal, state and territory legislation is an important requirement for all industry operators. Areas requiring skills and knowledge to address legislative and regulatory compliance include:

- animal health, welfare and ethical obligations
- food handling and safety requirements
- microbiological sampling and testing requirements
- biosecurity and quarantine procedures
- local government regulations
- workplace health and safety responsibilities
- waste handling and disposal.

For example, animal welfare compliance requires skills for their unloading, handling, stunning and slaughter, as well as confirmation of unconsciousness and death, in addition to required euthanasia or humane killing.

To be competitive in national and international markets, a number of programs and initiatives have been implemented to ensure products are meeting the needs of consumers and importing countries. This

³² MLA (2020); *Rural R&D for Profit Program: Advanced Livestock Measurement Technologies for Globally Competitive Australian Meat Value Chains (ALMTech)*

³³ MLA (2020); *DEXA technology*; <https://www.mla.com.au/globalassets/mla-corporate/news-and-events/documents/dexa-factsheet-lr.pdf>

³⁴ MLA (2020); *Rural R&D for Profit Program: Advanced Livestock Measurement Technologies for Globally Competitive Australian Meat Value Chains (ALMTech)*; <https://www.mla.com.au/research-and-development/reports/2020/grant-agreement-rnd4profit-15-02-031-advanced-measurement-technologies-for-globally-competitive-australian-meat-value-chains/>; viewed 31/08/2022.

requires that workers be consistently skilled to achieve the intended outcomes of these programs.

The Australian Export Meat Inspection System (AEMIS) is an integrated set of objective hygiene and performance standards that are specified and verified by the Australian Government to ensure the safety, suitability and integrity of meat products. The *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS4696)* states that a suitably qualified meat inspector performs post-mortem inspection and assesses the suitability of each carcass and its carcass parts³⁵.

The National Residue Survey tests Australian cattle tissue samples for pesticides, environmental contaminants and veterinary medicines to ensure potential chemical residues do not pose a risk to consumers. The program ensures exports satisfy Australian certification and importing country requirements. It further supports quality assurance initiatives and provides meat processing facilities with evidence that satisfies state and territory government regulatory and licensing requirements³⁶.

The number and complexity of meat safety regulations, codes of practice and guidelines means that it is extremely difficult for new businesses to become established quickly. Skills and training are critical for addressing these barriers, for developing the capabilities of new entrants to the industry and supporting business prosperity.

Regulated occupations

Regulated occupations have legal (or industry) requirements or restrictions that must be adhered to so to perform the work. Regulated occupations require a licence from, or registration by, a professional association or occupational licensing authority. The National Training Register (training.gov.au) identifies which occupations require that a formal qualification, skill set or unit of competency be held for specific licensing, legislative or certification requirements (see **Table 1** below).

The only meat industry-specific occupation that requires a licence is that of meat inspector. Registration can be with a federal or state authority, depending on the nature of the enterprise. Other professionals who work with meat processors, as well as a range of other industries, who require formal licensing or qualifications include veterinarians, animal welfare officers, electricians, plumbers and forklift operators, which are all occupations. Requirements for meat inspection, veterinary and animal welfare officer credentials and on-site presence differs depending on the jurisdiction and whether the establishment produces export or domestic products³⁷.

Table 1: Licensing, Legislative or Certification requirements

Qualification Title	Licensing, Legislative or Certification requirement
Certificate III in Meat Processing (Meat Safety)	People seeking registration as a meat inspector should check the current requirements with their state or territory food authority or the Australian Government – Agriculture, as appropriate, when selecting electives.

³⁵ Australian Government (2021); *Australian Export Meat Inspection System (AEMIS): Post-mortem inspection roles of the Food Safety Meat Assessor (FSMA) in red meat processing establishments*; <https://www.awe.gov.au/sites/default/files/documents/fsma-inspection-roles-meat-reform.pdf>

³⁶ RMAC (2022); *Australian Beef Sustainability Framework: Annual Update 2022*

³⁷ RSPCA (2021); *Animal welfare in abattoirs, poultry processors and knackereries – regulatory scorecard*; p.28.

Certificate IV in Meat Processing (Meat Safety)	<p>People seeking registration as a meat inspector should check the current requirements with their state or territory food authority or the Australian Government – Agriculture, as appropriate, when selecting electives.</p> <p>This qualification differs from the Certificate III in Meat Processing (Meat Safety) in that it addresses the skills and knowledge necessary to oversee the implementation of Approved Arrangements and workplace health and safety programs.</p>
Diploma of Food Safety Auditing	Regulatory food safety audits in Australia are covered by state, territory and Commonwealth legislative frameworks that support the requirements of the National Food Safety Audit Policy 2009. Users must check requirements with the relevant regulatory authority before delivery.

Source: training.gov.au

Workplace and Value Chain Risk Management and Safety Culture

Workplace safety

Please see the *Agribusiness, Food and Fibre Industries Skills Report* for further details on issues relating to workplace safety.

Workplace safety is of particular concern to the meat processing industry due to the specific tools and animals that people work with. The National Meat Industry Training Advisory Council Limited (MINTRAC) highlight common workplace risks:

- Handling of Knives
- Use of Plant Equipment
- Manual handling
- Chemical Spillage
- Livestock Handling
- Slips, trips and falls
- Bullying
- Fatigue

Knives are likely to be the most used tool in any meat production unit. Care must be taken in handling such sharp objects.

MINTRAC describe manual jobs as usually being repetitive and requiring physical strength. In such conditions the risks of injury, illness or death are exacerbated because fatigue can lead to incidents where people are cut, fall, injured by equipment or exposed to chemical hazards. To manage these risks MINTRAC advise developing workers' skills and knowledge to:

- Control risks by adopting effective measures that are practicable in the workplace contexts
- Identify hazards associated with specific work tasks and settings
- Understand the nature of the risk and the likelihood of problems arising
- Review control measures to ensure they are working as planned³⁸.

To further support workplace health and safety (WHS), AMPC delivered its first WHS Conference in June

³⁸ MINTRAC (2022); *Fact Sheet*; <https://mintrac-whs.com.au/fact-sheet/>; viewed 31/08/2022.

2022, where red meat processors and stakeholders engaged with demonstrations from research and development providers, insights from other manufacturing industries on innovative WHS practices and procedures and roundtable discussions with AMPC to shape future investment³⁹.

In addition to physical hazards, the meat processing industry is also recognising that many in the workforce experience mental health challenges⁴⁰. Various resources are promoted through websites such as FarmHub⁴¹, and recognising the signs of diminished wellbeing is being highlighted as a skill to be developed by meat processing supervisors.

Industry Summary and Trends

Workforce, Business & Market Summary

The Australian Meat industry accounts for almost 100,000 employees and over 6,400 individual businesses, which operate and trade in locations spanning all states and territories and comprise a variety of small, medium and large enterprises. Businesses conduct activities in and for food services, abattoirs, meat retailing, boning rooms, meat safety, rendering, slaughtering, quality assurance, retail butchers, smallgoods, livestock handling, packing operations, leadership and agribusiness.

Overall, the Australian Meat Processing industry have a total revenue of over \$52 billion and contributed almost \$8 billion to overall GDP (industry value added).

Table 2: Industry businesses and employment

Training Package-Related Industries	Businesses	Employment	Revenue (\$billion)	Industry Value Added (\$billion)
Australian Meat Processing (AMP)	6,409	98,343	\$52.22	\$7.94

Source: IBISWorld Industry Wizard

The significance of the meat processing industry has been underlined by the COVID-19 pandemic. The increased demand for meat products meant this industry was classified as 'essential' and remained in operation during state-based pandemic-related restrictions. Notwithstanding the various challenges associated with disrupted supply chains, shipping and workforce availability (as in all industries) the meat processing industry has implemented robust adaptations and innovations to continue to meet demand.

Australian meat processors export over 65% of production by value⁴². Despite volatility associated with the Chinese market and COVID-19, revenue from meat exports has remained at a consistently high level over the past few years⁴³. However, food prices are rising across the world, in part due to the Russian invasion of Ukraine, which has created additional pressures for meat-producing value chains through grain shortages and rising energy prices, which in turn have led to higher fertiliser prices. While higher input costs are lowering the ratio of food supply to demand, high meat prices are likely to sustain meat processors especially as demand for meat products is projected to remain high due to key local and export markets

³⁹ AMPC (2022); *AMPC WHS Conference*; <https://www.ampc.com.au/news-events/events/ampc-whs-conference>; viewed 31/08/2022.

⁴⁰ The Conversation (2020); *Animals suffer for meat production – and abattoir workers do too*; <https://theconversation.com/animals-suffer-for-meat-production-and-abattoir-workers-do-too-127506>; viewed 31/08/2022.

⁴¹ FarmHub (2022); *Mental Health Resources*; <https://farmhub.org.au/mental-health/>; viewed 31/08/2022.

⁴² IBISWorld (2022); *Meat Processing in Australia*

⁴³ ABARES (2022); *Agricultural overview: June quarter 2022*; <https://www.awe.gov.au/abares/research-topics/agricultural-outlook/agriculture-overview#agricultural-exports-forecast-to-be-record-65-billion-in-202223>; viewed 31/08/2022.

continuing their economic recovery⁴⁴.

Due to Australia's mature meat market, IBISWorld anticipate that meat processors will likely continue relying on export markets to boost sales and expand revenue. This involves expanding into new or under-explored markets including through:

- The Australian red meat export market diversification program, which has added three new business development specialists with skills for promoting trade flows and to capitalise on recent market access gains in Saudi Arabia, Thailand and Vietnam⁴⁵.
- The Australia-India Comprehensive Economic Cooperation and Trade Agreement (AI-ECTA) was signed by ministers for both countries in April 2022 and will open several opportunities for the meat industry including the elimination of tariffs on sheepmeat⁴⁶.

Shortage of skilled workers

The meat processing industry continues to be constrained by widespread labour shortages jeopardising the short- and long-term viability of many businesses. Industry participants are of critical importance because the skills, knowledge and expertise that they bring or develop are essential to the industry's growth⁴⁷.

The National Skills Commission (NSC) regularly reviews the national skills needs of Australia and has responsibility for releasing an annual Skills Priority List (SPL). A key element of the SPL is the determination of occupational shortages, when 'employers are unable to fill or have considerable difficulty filling vacancies for an occupation or cannot meet significant specialised skill needs within that occupation, at current levels of remuneration and conditions of employment and in reasonably accessible locations'⁴⁸. Occupational shortages designated by the NSC for meat processing are:

Table 3: Skills Priorities

ANZSCO Code	Occupation	Current national shortage overall?	Future demand (five-year period)
351211	Butcher or Smallgoods Maker	Yes	Strong
311312	Meat Inspector	Yes	Moderate
839312	Product Grader	Yes	Moderate
142111	Retail Manager (General)	No (shortage in NSW & NT)	Moderate
831211	Meat Boner and Slicer	No	Moderate
831212	Slaughterer	No	Moderate

Source: National Skills Commission (2021); Skills Priority List

Meat industry labour shortages have further been evidenced in results from a stakeholder survey conducted in February 2022 by the Australian Meat Industry Council (AMIC). The survey sought to establish the extent of industry labour shortages and reasons for them. Results included:

⁴⁴ ABARES (2022); *Outlook for livestock: June quarter 2022*; <https://www.awe.gov.au/abares/research-topics/agricultural-outlook/livestock#domestic-factors-to-have-strongest-impacts-on-livestock-sector-prices>; viewed 31/08/2022.

⁴⁵ Australian Government (2021); *Money on the table for Meat Exporters*; The Hon. David Littleproud MP; <https://minister.awe.gov.au/littleproud/media-releases/money-table-meat-exporters>; viewed 29/09/2021.

⁴⁶ ABARES (2022); *Outlook for livestock: June quarter 2022*; <https://www.awe.gov.au/abares/research-topics/agricultural-outlook/livestock#opportunities-and-challenges>; viewed 31/08/2022.

⁴⁷ National Farmers' Federation (2022); *Pre-Budget Submission 2022-23*; p.22

⁴⁸ National Skills Commission (2021); *Skills Priority List Methodology*; p.5

- Current operating capacity of businesses:
 - Two-thirds of meat/smallgoods processors are operating below 80% capacity
 - Around one-quarter of meat/smallgoods processors are only operating at 50-60% capacity.
 - Almost half of retail butchers are operating below 80% capacity.
- Current gap in skilled workers:
 - For meat/smallgoods processors to operate at full capacity, businesses would require an average of an additional three (3) leading hands/supervisors, 26 skilled workers and 35 general labourers.
 - For retail butchers to operate at full capacity, businesses would require an average of an additional four (4) qualified retail butchers, four (4) customer service workers or labourers, and one (1) smallgoods maker.
- Labour shortage reasons:
 - A general unwillingness to work in the industry
 - Meat/smallgoods processors: 85%
 - Retail butchers: 81%
 - Other business and employment opportunities locally are more appealing
 - Meat/smallgoods processors: 63%
 - Retail butchers: 33%
 - A lack of international worker availability
 - Meat/smallgoods processors: 80%
 - Retail butchers: 11%
 - Failure to pass pre-employment medical requirements
 - Meat/smallgoods processors: 20%
 - Retail butchers: 5%
 - Low unemployment in the region
 - Meat/smallgoods processors: 27%
 - Retail butchers: 2%

AMIC is calling for urgent action by federal and state governments to protect vulnerable food supply chains across Australia, as COVID-19 continues to force essential workers to stay home and businesses to temporarily close or operate at very low staffing levels⁴⁹. Beef Central note that this labour crisis will be exacerbated when workers involved in the first round of Pacific Island labour recruitment programs complete their four-year contracts and return home⁵⁰.

Considering that the current situation is unsustainable, AMIC are one of several industry representatives advocating for changes to visa arrangements and Meat Industry Labour Agreement guidelines⁵¹. To help attract the next generation of workers to the meat processing industry, stakeholders are also promoting

⁴⁹ AMIC (2022); *Domestic meat shortages loom as processors face COVID- induced labour shortage*; <https://amic.org.au/domestic-meat-shortages-loom-as-processors-face-covid-induced-labour-shortage/>; viewed 17/03/2022.

⁵⁰ Beef Central (2022); *Processing labour crisis threatens to deepen, as 'first-round' Pacific workers head home*; <https://www.beefcentral.com/processing/processing-labour-crisis-threatens-to-deepen-as-first-round-pacific-workers-head-home/>; viewed 06/06/2022.

⁵¹ AMIC (2022); *Access to Labour*; <https://amic.org.au/access-to-labour/>; viewed 31/08/2022.

traineeship and apprenticeship opportunities. Regional Industry Engagements Partnerships (RIEP) are supporting connections between industry and secondary schools, including guest speakers and careers information. This promotional drive is to reframe negative conceptions of jobs, and to emphasise rewarding career pathways that involve a rich variety of tasks and develop multi-skilled individuals.

Stakeholders have also recognised the value of industry leadership for enhancing workforce attraction, retention and capabilities development efforts. Red meat processing participants are sponsored by AMPC to complete the Australian Rural Leadership Program⁵². Through this program participants can expand their networks, build resilience, consider innovative practices and strengthen their leadership capabilities, including to help build the long-term future of the industry's workforce.

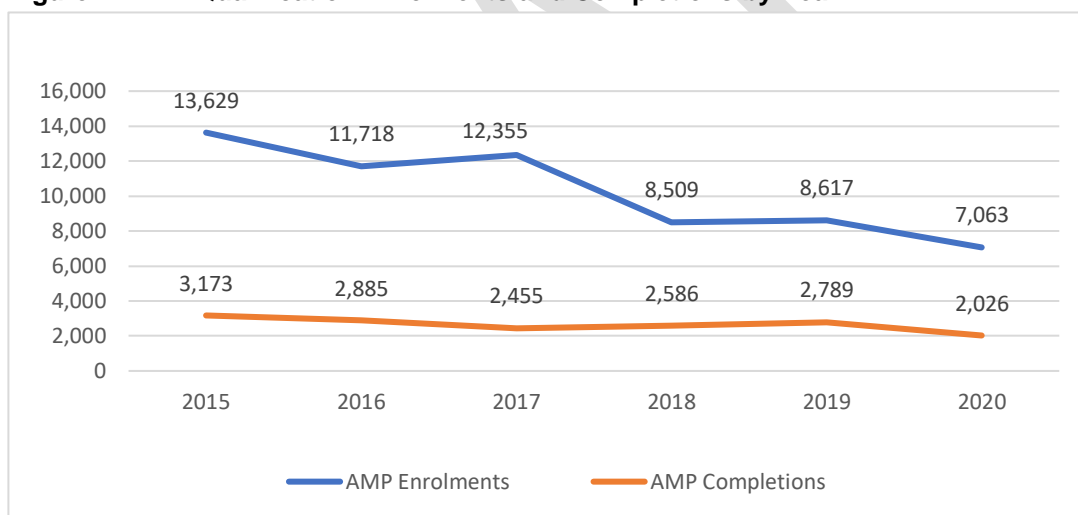
Training Summary

AMP Qualifications

In 2020, there were 7,063 enrolments in *AMP Training Package* qualifications.

There were 2,026 qualification completions in 2020.

Figure 2: AMP Qualification Enrolments and Completions by Year



Source: NCVER VOCSTATS, TVA program enrolments 2015-2020

The greatest number of qualification enrolments in 2020 were in Queensland (2,116), followed by New South Wales (1,867) and Victoria (1,855).

AMP Units of Competency

In 2020, there were 65,390 enrolments in AMP units of competency (hereafter 'units'). This includes enrolments through qualifications (in any training package), apprenticeships and non-apprenticeships, skill sets and micro-credentials.

⁵² AMPC (2022); *Bernard graduates the Australian rural leadership program*; <https://ampc.com.au/news-events/news/bernard-graduates-the-australian-rural-leadership-program>; 30/05/2022.

Figure 3: AMP Training Package Unit Enrolments by Year



Source: NCVER VOCSTATS, TVA subject enrolments 2015-2020

Please see the *Agribusiness, Food and Fibre Industries Skills Report* for additional information on learners' motivations for undertaking training.

Employers' use and views of VET and other forms of training

The training practices of industry businesses are shaped by a variety of considerations, including regulatory standards, the availability of labour, labour turnover rates and state funding for training. Employers also look to ensure that production is minimally affected when scheduling job rotation and training, and this will shape negotiations with potential training providers.

Most new entrants to the industry have limited job experience and low educational attainment. On commencement of work, employers often facilitate new workers' enrolment in formal qualifications such as the *Certificate II in Meat Processing (Abattoirs)*; however, due to high turnover rates, only around half of workers complete their qualifications. Meanwhile, new workers who are temporary visas holders will usually only be trained in foundational hygiene, health and safety protocols⁵³.

On completion of qualifications, many businesses encourage workers to enrol in higher-level qualifications or skills sets if it appropriate to their development and career pathway. This training is chosen to suit the job, which is not necessarily meat-specific, and can be in areas such as human resources (HR), workplace health and safety (WHS), marketing, and shipping and logistics. Employers report that, alongside these workers with higher level employability skills, a large proportion of the labour force are reluctant to undertake formal training due to language or literacy challenges, but will retain positions requiring knife skills.

Non-formal and informal training is often used to complement and enhance employees' VET learning. Larger businesses may retain in-house trainers and assessors who deliver internal programs, perhaps designed with reference to VET training packages. Regardless of the provider, most formal and non-formal training is delivered on-the-job due to the practical, tactile nature of most tasks. COVID-19, however, caused many businesses to pause arrangements for training providers to enter the workplace to deliver training and assessment⁵⁴. While COVID-related restrictions have eased, discontinuity in the development

⁵³ C. Shah (2017); *Employers' perspectives on training: three industries*; NCVER, Adelaide.

⁵⁴ K. Bowman & V.J. Callan (2021); *Engaging more employers in nationally recognised training to develop their workforce - employer interviews - support document 3*; NCVER, Adelaide; p.12

of new workers has increased pressure on businesses, while also deflating *AMP Training Package* enrolments because there has been a lower intake of new learners while enrollees from previous years re-engage in their training.

In response to the challenges meat processors experience in recruiting, training and retaining staff, industry have been working with innovative training providers such as Virtually There⁵⁵ to develop immersive online virtual reality (VR) programs that introduce people to working in abattoirs. The gamification of learning is reported to have great potential for developing learners' skills and knowledge in identifying cuts of meat and using tools to sharpen knives and bone carcasses.

Regional, Rural & Remote Summary

Meat processing businesses are commonly located in rural areas to reap the benefits of lower land prices and being close to livestock producers. This reduces transport costs for animals and carcasses and livestock are held in transit for less time, which lessens incidents of stress and bruising during transportation. There is also an increasing number of meat processors who purchase feedlots close to their abattoirs to maximise the efficiency of livestock supply, operations and transport⁵⁶.

Alongside these situational advantages, there are challenges for meat processors accessing skilled workers in regional and rural locations. Low unemployment rates often mean there are few opportunities to recruit locals. For potential workers from urban areas, a lack of infrastructure and services means migrating to regional and rural locations can be an unattractive proposition. Businesses are then forced to offer incentives through higher wages, but this can be financially challenging and often still falls short of the rates offered by mining and solar farm businesses.

There are further practical challenges associated with accommodation. Housing can be very expensive in some areas, making it difficult for new workers to establish themselves. Travel is another logistical challenge because work shifts tend to commence at around 5:30am before public transport begins operating. Ride sharing agreements are difficult to maintain as people may live significant distances from one another. During the height of COVID-19 restrictions, co-habitation and ride sharing arrangements were also identified as responsible for outbreak clusters.

The sustainability and growth of regional Australia and its industries is entwined with factors such as the viability of businesses and their ability to attract and develop the next generation of workers. This, according to the *National Regional, Rural and Remote Tertiary Education Strategy* ('the Napthine Review')⁵⁷, is facilitated by the provision of tertiary education:

'Increased educational attainment across RRR [Regional, Rural and Remote] communities will lead to increased productivity and further strengthen industries, economies and communities. Enhancing RRR industries and communities will also help to attract more students and professionals to the regions. Families will have greater confidence in relocating to, or remaining in, RRR locations if they know their children will have equal opportunities to undertake tertiary education. [...] Investments to overcome the disparity in educational outcomes between metropolitan and RRR areas will 'future proof' Australia and provide the foundation for national success.'

Commonwealth of Australia (2019); National Regional, Rural and Remote Tertiary Education Strategy; pp.16-17

To help address the many challenges for providing adequate skills and training opportunities in regional Australia, the Government appointed Australia's first Regional Education Commissioner in December 2021. The Commissioner will oversee implementation of recommendations from the Napthine Review. This will complement the VET reform agenda as well as efforts by regional industries to improve productivity and

⁵⁵ Virtually There (2022); *Case Studies*; <https://www.virtuallytherevr.com/case-studies.html>; viewed 31/08/2022.

⁵⁶ IBISWorld (2022); *Meat Processing in Australia*; p.21.

⁵⁷ Commonwealth of Australia (2019); *National Regional, Rural and Remote Tertiary Education Strategy*.

profitability. The Transition Advisory Group⁵⁸ are clear that businesses in regional areas must be adequately represented in the reformed VET system so that appropriate training is delivered where and when it is needed. This requires improving employer engagement with the national training system, creating collaborative relationships between employers and training providers and working towards longer-term workforce development objectives.

The *Agribusiness, Food and Fibre Industries Skills Report* provides additional information on the many and intersecting challenges of stimulating industry growth, communities and skill and training opportunities in regional, rural and remote areas.

Aboriginal & Torres Strait Islander Peoples Summary

Referencing 2016 Census data, Meat and Livestock Australia (MLA) note that Aboriginal and Torres Strait Islander people comprised a higher proportion of the meat processing workforce (2.8%) than in Australian industries in general (1.7%)⁵⁹. The industry awaits data from the 2021 Census (which is to be released in a staged approach between mid-2022 and mid-2023) to effectively analyse progress on workforce diversity. While some stakeholders have expressed concerns over Indigenous representation in the meat value chain workforce⁶⁰, there are also notable ongoing initiatives to support skills, training and employment opportunities.

Assisted by the Indigenous Land and Sea Corporation (ILSC), Gunbalanya Meats operates a small abattoir and retail butcher shop in the community of Gunbalanya on West Arnhem Land in the Northern Territory. Beef and buffalo meat are processed and distributed to a variety of customers, including a chain of Arnhem Land Progress Aboriginal Corporation community stores in the NT⁶¹ and meat wholesalers and retailers in Darwin. Gunbalanya Station and Meats are important employers at Gunbalanya, and host a number of local Aboriginal people who train and work in beef production and meat processing⁶².

MLA have recently completed a feasibility study, now fast-tracked for implementation, that examined the commercial viability of new Indigenous 'Blackfella Beef' products and services, led by Western Kanguulu and Wangan Jagalingou Indigenous groups in Queensland. The study concluded that processing 2,000 cattle annually could deliver \$4 million in additional sales for the brand. This would support reinvestment in community development, and provide regional skills, training and employment opportunities for Indigenous people in the meat processing industry and throughout the value chain⁶³.

⁵⁸ Transition Advisory Group (2021); *Final Advice – New Industry Engagement Arrangements*; Australian Government Department of Education, Skills and Employment; p.2.

⁵⁹ Meat & Livestock Australia (2022); *2021 State of the Industry report*; https://www.mla.com.au/globalassets/mla-corporate/prices-markets/documents/trends--analysis/soti-report/2789-mla-state-of-industry-report-2021_d11_single.pdf

⁶⁰ ABC News (2021); *Indigenous workforce in beef industry nearly halves over short period*; <https://www.abc.net.au/news/rural/2021-07-07/naidoc-indigenous-employment-beef-cattle-pastoral-grazing/100270438>; viewed 31/08/2022.

⁶¹ ABC News (2021); *Gunbalanya abattoir loading five planes a week to get Arnhem Land beef to customers*; <https://www.abc.net.au/news/rural/2021-02-05/indigenous-abattoir-beef-flies-steaks-on-a-plane-from-gunbalanya/13121234>; viewed 31/08/2022.

⁶² Australian Government (2021); *Gunbalanya Station and Meats*; <https://www.ilsc.gov.au/home/project-profiles/gunbalanya-station-and-meats/>; viewed 31/08/2022.

⁶³ MLA (2019); *Milestone report: Feasibility study for developing an Indigenous branded range of beef products and services (Producer Innovation Fast-track)*; <https://www.mla.com.au/contentassets/d01f58d2534547c3a1584dd15d5f68a7/p.psh.0882-final-report.pdf>