ANIMAL CARE AND MANAGEMENT INDUSTRY SECTOR

IRC Skills Forecast and Proposed Schedule of Work

2019–2022

Animal Care and Management IRC Skills Forecast and Proposed Schedule of Work 2019-2022

Purpose

The Industry Reference Committee (IRC) Skills Forecast and Proposed Schedule of Work identifies proposed Vocational Education and Training (VET) training package development work necessary to meet the needs of industry and sets out the evidence of that need. The Australian Industry and Skills Committee (AISC) considers this information in prioritising and commissioning training package development work.

The IRC annual review of the Skills Forecast and Proposed Schedule of Work allows the identification of priority projects and provides the likely timing of training package development work over the next four years.

The Skills Forecast and Proposed Schedule of Work needs to provide the AISC with sufficient information on each project to consider:

- What work is to be commissioned

- Clear evidence of employer and industry need

- Alignment to Ministers' Priorities

The Skills Forecast and Proposed Schedule of Work is to be developed in line with:

- Standards for Training Packages 2012

- Training Package Products Policy

- Training Package Development and Endorsement Process Policy

This Skills Forecast presents the latest industry intelligence and resulting schedule of work for priority industry skills areas of the Animal Care and Management Industry Reference Committee (IRC).

This document is not intended to identify and address every challenge faced across all industry sectors; it identifies and addresses the issues, challenges and opportunities that industry has identified as 'priority' for this stage of the schedule and acts as a resource and reference for industry and associated skills, learning and accreditation bodies seeking to act upon them.

Detailed data and information concerning industry skills needs across all sectors covered by the Animal Care and Management IRC, including information from previous Skills Forecasts, can be found on the Skills Impact website www.skillsimpact.com.au and is available to Industry, RTO and consumers in line with Ministerial priorities.

Method & Structure

This Skills Forecast and Proposed Schedule of Work was developed through research of national and industry data sources, and ongoing input from IRC members and key stakeholders.

IRC members undertake their own consultation with industry, and guide consultation processes undertaken on their behalf throughout each year. Consultation may include personal meetings, conference attendance, organised workshops, surveys, project feedback collection and unsolicited contributions sent to the SSO.

The Skills Forecast structure is guided by the Australian Industry Skills Commissions (AISC), which requires the following to be included:

- **Proposed Schedule of Work:** The current proposed schedule of work over the next four-year period as modified from previous plans due to consultation and the need to meet changing priorities

- **Sector overview:** Brief description of the industry and industry sub-sectors, the Training Package, and current challenges and opportunities.

- **Employment & Skills Outlook:** Overview of the data, strategies and policies relevant to the industry.

- **Key Changes and Proposed Responses:** identifying the drivers for change from industry (e.g. occupations, technology, emerging markets), regulation, and nationally important policies, and proposed responses including the impact on stakeholders.

- **Consultation Undertaken:** Information on the consultation previously undertaken to support the proposed responses, including issues and sensitivities raised.

- **Project Details:** details of proposed projects proposed for approval of the AISC to be undertaken in 2019-2020.

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EXECUTIVE SUMMARY

The Animal Care & Management (ACM) Industry is experiencing both organic growth and growth through diversification of demand and services. In particular, organic growth is being experienced in the pet sector, including pet grooming, animal health care, and the nursing, rehabilitation and treatment of animals. Growth through diversification is being led in new and developing markets in assistance, companion and therapy animals and in captive animal management.

The Australian animal care and management sector operates in a dynamic environment shaped by market factors, technology developments, and a range of policy frameworks at local, state, national and international levels, as well as the challenges of dealing with living creatures. The range of benefits to society through interaction with animals is also expanding, following the 20th century decline in the use of animals in working situations. More opportunities are being found to include animals in therapeutic and assistance situations, and owners are looking to enhance the wellbeing of pets, driven by changing attitudes to the place of pets in the family and greater awareness of the roles and responsibilities of owners in relation to animal welfare. Working in animal care and management requires high-level skills and consumers are expecting more from those working within the industry.

Most qualifications related to animal attendants and trainers, pet grooming and styling, companion animals and captive animals have not been fully reviewed since 2010. The current qualifications are no longer considered fit for purpose, particularly in captive animal services and companion and therapy animals. The Animal Care and Management IRC has identified the revision and updating of these qualifications as a priority.

As updates to training involving handling and dealing with horses have been introduced, some unanticipated issues concerning prerequisites and the scope of training have become apparent. On further reviewing the situation, the ACM IRC has identified the need to update a number of qualifications relating to horse handling, care and safety, including the performance horse qualifications that have not been reviewed. There appears to be a significant gap in formal training related to equestrian sports, coaching, training and breeding and work should be undertaken to identify whether there is a need for formal VET programs or incorporation into existing programs. There are currently relevant units, skills sets and requirements in the ACM Animal Care and Management, the RGR Racing and Breeding, and SIS Sport, Fitness and Recreation Training Packages. Work needs to be undertaken on appropriately mapping qualifications and prerequisites, identifying potential duplications and redundancies, and allocation of responsibilities.

In addition, a priority was identified in the 2018-2021 Skills Forecast concerning equine dentistry and the IRC approved a project for submission with the 2019-2020 Skills Forecast to conduct a full review of the ACM50417 Certificate IV in Equine Dentistry. The ACM IRC needs to conduct further research to fully analyse issues relating to scope of veterinary practice, current work methods, international and Australian equine dentistry practices and instruments, and market issues.

The ACM IRC is planning to work with the Racing IRC and the Sport and Recreation IRC to plan for a priority project covering equine-related vocational education and training.

PROPOSED SCHEDULE OF WORK 2019 – 2022

2019-20

Project 1: Review of Multiple Qualifications
The review of qualifications in the ACM Training Package, which are no longer fit for purpose and do not address new ways of working or emerging skills needs. The qualifications cover Animal Studies, Companion Animals, Captive Animals and Pet Grooming.

Qualifications to be reviewed are:
- Certificate I in Animal Studies
- Certificate II in Animal Studies
- Certificate III in Animal Studies
- Certificate III in Captive Animals
- Certificate III in Companion Animal Services
- Certificate III in Pet Grooming
- Certificate IV in Animal Control and Regulation
- Certificate IV in Captive Animals
- Certificate IV in Companion Animal Services
- Certificate IV in Pet Styling

Project 2: Research into Equine-related training
Research project to identify issues relating to scope of training, prerequisites, performance horse training, equestrian training and equine dentistry across ACM, RGR and SIS Training Packages. This project will be undertaken in cooperation with the Racing, and Sports and Recreation IRCs.

2020-21

Project 1: Review of Equine-Related Qualifications
Undertake the Training Package development work as required based on the research project undertaken in 2019-2020.

Project 2: Research into Remote Area Animal Care and Management
Research project to identify special requirements of animal care and management works based in remote localities, particularly relating to worker health and safety, obtaining assistance, establishing supporting networks, dealing with emergency situations and handling a broad variety of animals and situations

2021-22

Project 1: Development of Training Products for Animal Care and Management Workers in Remote Areas
Undertake training product development as required based on the research project undertaken in 2020-2021

Project 2: Review of Allied and Value-Add Animal Health Trades and Qualifications
Undertake Training Package review to incorporate or update training in areas that complement veterinary services, such as rehabilitation, physiotherapy, massage and premium animal products (Project to be assessed for need 2020-2021)

2022-23

Project 1: Quarantine and Biosecurity
Review of the ACM Training Package based on updated regulations, and work undertaken in cross-sector and other Training Package projects on biosecurity, quarantine and related areas.

ANIMAL CARE AND MANAGEMENT IRC

The Animal Care and Management IRC is responsible for national training package qualifications relevant to veterinary services, animal breeding services, pet and companion animal services, captive wildlife operations, animal technology, and animal control.

Animal care and management, especially animal welfare, has relevance to a number of sectors, including agriculture, racing, sport and recreation, medical research, local government and conservation. The new committee provides a central point for coordinated engagement across sectors. These qualifications are included in the *ACM Animal Care and Management Training Package*.

The Chair of the AMC IRC is Dr Laurie Milner and the Deputy Chair is Dr Julia Crawford. During 2018, Professor Gary Wilson resigned from the IRC and another position has remained vacant. Both positions are currently being filled.

IRC membership as at January 2019

Name	Organisation or area of expertise
Laurie Milner	Animal Care, Handling and Welfare
Julie Fielder	Animal Care, Handling and Welfare
Sonia Western	Veterinary and Related Services
Belinda Smith	Veterinary and Related Services
Mark Cumming	Veterinary and Related Services
Brenton Myatt	Pet and Companion Animal Services
Kaye Hargreaves	Pet and Companion Animal Services
John Sunderland	Animal Breeding Services
Tim Mather	Animal Technology
Mike Butcher	Animal Control and Regulation
Julia Crawford	Australian Veterinary Association
Rebecca Coventry	Veterinary Nurses Council Australia Inc.
Robert Johnson	Captive Wildlife Operations
Elly Neuman	Captive Wildlife Operations

SECTOR OVERVIEW

Introduction

The Animal Care & Management (ACM) Industry is experiencing both organic growth and growth through diversification of demand and services. In particular, organic growth is being experienced in the pet sector, including pet grooming, animal health care, and the nursing, rehabilitation and treatment of animals. Animal Medicines Australia reported (2016) an increasing trend towards premium pet products and services (including insurance) as owners look to enhance the wellbeing of pets, driven by changing attitudes to the place of pets in the family and greater awareness of the roles and responsibilities of owners in relation to animal welfare. Growth through diversification is being led in new and developing markets in companion, assistance and therapy animals and in captive animal management.

Economic and employment data for the ACM industry is difficult to obtain. Total economic and employment figures cannot be ascertained through standard data providers, for the following reasons:

- ABS data releases, including the 2016 Census of Population and Housing, provide information to the four-digit level of the Australian and New Zealand Standard Classification of Occupations (ANZSCO), which is inadequate for the purposes of quantifying animal care and management occupations.

- ANZSCO classifications do not include occupations such as 'equine dentists', 'pet shop workers' and other emerging occupations in the animal care and management sector.

- Many occupations are classified under a generic title and there is no way of extracting data for those in service specifically of an animal care and management business, or whose occupation is defined by another industry context but involves animal care and management activities; for example, in recreation or agriculture.

- The Australian and New Zealand Standard Industrial Classification (ANZSIC) only includes one group that unambiguously are under the purview of the ACM Training Package: Veterinary Services (697). While the industry group Parks and Gardens Operations (892) includes animal care and management activities, it is classified within the Amenity Horticulture, Landscaping, and Conservation & Land Management sector and so that data is not presented here.

Additional difficulties are apparent in calculating the position of captive wildlife operations, companion animal services and therapeutic animal services.

Hunting and Trapping (ANZSIC 042) has been previously reported as an industry relevant to the ACM Training Package. There are no nationally recognised training products that relate to recreational hunting and trapping, which provide the foundations for economic and employment data in this category. ACM and AHC Agriculture, Horticulture, Conservation and Land Management training components relate to hunting and trapping only in professional contexts related to animal control, assisting animal health and welfare, safety and quarantine procedures, and conservation and land management. The AMC IRC considers it more appropriate to describe this activity as animal control services. Other hunting and trapping, including for food, sport and recreational reasons, will not be considered by the ACM IRC at this time.

The *ACM Animal Care and Management Training Package* consists of 26 qualifications with 233 Units of Competency and ten Skill Sets.

Sector description

The ACM IRC considers the animal care and management industry sector as integrating all businesses that operate in the following sub-sectors:

- **Veterinary services,** including equine, cattle and other livestock veterinary practices, as well as companion animal veterinary practices

- **Animal breeding services,** including livestock breeding, horse breeding, companion animal breeding and conservation breeding (shared responsibility with agriculture and production horticulture, and racing ircs)

- **Pet and companion, assistance and therapy animal services,** including training, boarding and grooming of pets and companion animals, and training and care of assistance and therapy animals

- **Animal technology services** essential for laboratory animal facility management, specialist breeding services, animal husbandry and technical procedures

- **Captive wildlife operations,** including zoos, wildlife parks, aquariums, animal circuses and other mobile animal displays

- **Animal control services,** related to regulatory services, assisting animal health and welfare, safety and quarantine procedures, and conservation and land management

- **Wildlife care and rehabilitation,** related to rescue and care of sick, injured or orphaned wildlife and release back into the wild

- **Non-veterinary health and welfare services**, including specialist care services, such as dentistry and hoof care, ancillary health practices and animal shelters

The skills required in the ACM industry are identified through job roles as they are relevant to the industry sector of that role. The skills required by an Animal Control Officer working in an Environmental Management capacity will partially differ from those required for an Animal Control Officer in a regulatory environment.

As the ACM Training Package is updated, these roles are becoming more clearly defined with industry guidance. Currently the qualifications in the ACM Training Package cover the following occupations in the associated industry context:

Occupation	
Animal Attendant	Animal Attendants are responsible for the general care and feeding of animals. They monitor the health and diet of the animals, apply basic first aid and maintain their environment. They may work in pet shops, grooming services and boarding facilities.
Animal Attendant (Animal Shelter)	Animal Attendants in animal shelters feed and care for animals, rescue animals and apply basic first aid, and run tours of the shelter or sanctuary.
Assistant Animal Groomer	Assistant Animal Groomers work as junior groomers caring for and grooming companion animals, usually dogs and occasionally cats.
Animal Attendant (Veterinary Clinic)	Animal Attendants in veterinary clinics perform general reception duties and daily clinic routines such as feeding animals and assisting with surgery preparations.
Animal Health Officer (Indigenous Communities)	Animal Health Officers (Indigenous Communities) care, feed and rescue animals within an Indigenous community. They provide basic care for a range of animals and maintain and monitor health care and wellbeing of animals within an Indigenous community.
Animal Care Receptionist	Animal Care Receptionists conduct recordkeeping and clerical duties related to animal patient care and treatment and provide support to the veterinarians and patient care team.

Occupation	
Animal Control and Regulation Assistant	Animal Control and Regulation Assistants care for, feed and rescue animals within an animal control centre.
Animal Technician	Animal Technicians work as assistants in laboratories, monitoring and maintaining laboratory animals. They provide food and water and may conduct tests, record data, euthanise research animals and conduct a range of related duties.
Assistant Keeper	Assistant Keepers in wildlife sanctuaries, zoos or theme parks, care for animals, feeding and monitoring their health, diet and reproduction. They help to move animals, prepare and present information to the public, and may also help maintain exhibits and care for young animals.
Pet Shop Worker	Pet Shop Workers care for and sell companion animals and pet care products and services. They provide food, water and a clean environment for animals and perform retail functions. They also provide advice to customers on animal selection and care.
Pet Exerciser	Pet Exercisers provide exercise such as dog walking, nourishment and enrichment for a wide range of dogs and other pets. They may also provide training and conditioning.
Aquarium Assistant	Aquarium Assistant care for and sell aquatic animals. They feed aquatic animals, maintain their environments and perform retail functions. They also provide advice to customers on animal selection and care.
Stallion Handler	Stallion Handlers work in the horse breeding industry, handling stallions during breeding season. They may also be called upon to carry out miscellaneous horse management duties around the stud or property.
Stud Groom	Stud Grooms carry out complex horse care activities on stud farms. They care for and foal down broodmares; carry out mare mating procedures; and handle and care for stallions.
Outdoor Activity Assistant	Outdoor Activity Assistants work under supervision to assist in conducting a range of outdoor recreation activities. They may work in holiday camps or on adventure tourism programs, and assist with activities like horse riding, abseiling, skiing or canoeing.
Stablehand	Stablehands care for horses. Working under the direction of a Trainer, Stable Foreman or Stud Groom, stablehands feed, groom and walk the animals, and keep their environment safe, clean and hygienic.
Hoofcare Practitioner	They inspect, trim and shape the hooves of horses. They remove horse shoes, respond to emergencies and apply first aid
Animal Control Officer	Animal Control Officers manage and implement animal control and regulation policy and laws. They respond to and investigate complaints, operate the local pound, capture animals, prepare and present cases in court, and run animal awareness programs.
Animal Control Officer	Animal Control Officers manage and implement animal control and regulation policy and laws. They respond to and investigate complaints, operate the local pound, capture animals, prepare and present cases in court, and run animal awareness programs.
Zookeeper	Zookeepers care for animals in zoos or wildlife parks. They prepare and design animal diets, manage the animal collection and prepare and maintain enclosures and exhibits. They develop, monitor and review animal behavioural management strategies and husbandry, and assist in designing and delivering educational programs.
Pet Shop Manager	Pet Shop Managers manage retail pet stores. They manage day-to-day business operations, purchase livestock, provide training advice to animal owners, supervise staff and promote their business.
Specialist Pet Shop Manager	Specialist Pet Shop Managers manage retail pet stores that specialise in aquatic species or birds. They manage day-to-day business operations, purchase livestock, manage and maintain aquascapes or aviaries, and supervise small teams.
Animal Shelter Supervisor	Animal Shelter Supervisors oversee the operations of an animal shelter where they undertake feeding and care of animals, conduct animal care education programs and manage and develop a small team of shelter workers and/or volunteers.

Occupation	
Animal Groomer	Animal Groomers manage retail grooming services, caring for and grooming companion animals. They manage day-to-day business operations, provide grooming and training advice, recommend and sell pet care products, supervise staff, and promote the business.
Animal Trainer	Animal Trainers train animals to perform specific commands, tasks and provide training advice to companion animal owners. They may also diagnose and treat behaviour problems in pets and other animals.
Veterinary Nurse	Veterinary Nurses assist Veterinarians in the treatment and care of animals needing medical and/or surgical attention, and in the rehabilitation of sick and injured animals.
Equine Dental Service Provider	Equine Dental Service Providers provide day-to-day dental correction and oral care for horses. Their duties require judgement and the ability to accurately communicate information concerning horse health related to equine dental care to clients.
Stud Groom	Stud Grooms carry out complex horse care activities on stud farms. They care for and foal down broodmares; carry out mare mating procedures; and handle and care for stallions.
Stud Hand	Stud Hand positions are usually the starting point of a career in the horse breeding industry. Duties may include basic horse handling tasks like feeding and handling, as well as cleaning and maintaining stables, paddocks and equipment. Stud Hands may be expected to have experience in working with young horses.
Stud Farm Supervisor	Stud Supervisors supervise and manage horse breeding activities and staff. They carry out stud stable management duties; support artificial insemination procedures; prevent and treat equine injury and disease; and supervise and train staff.
Farrier	Farriers provide foot care services to horses. They inspect, trim and shape the hooves of horses. They also make and fit horse shoes, respond to emergencies and apply first aid in the equine industries.
Senior Animal Technician	Senior Animal Technicians manage small teams and laboratory procedures and undertake animal technology functions at a senior level. They manage the nutrition of research animals and may perform surgical research and post-mortem examinations of research animals.
Stud Manager	Stud Managers administer and oversee the running of horse studs. They are responsible for staff management and training; and support the marketing of livestock. They manage resources, evaluate business performance and may undertake some business planning.
Stallion Handler	Stallion Handlers work in the horse breeding industry, handling stallions during breeding season. They may also be called upon to carry out miscellaneous horse management duties around the stud or property.
General Stud Manager	General Stud Managers oversee the running of an entire horse breeding enterprise. They are responsible for whole property planning and management, managing livestock production systems, marketing livestock, and business planning.
Veterinary Emergency and Critical Care Nurse	Veterinary Emergency and Critical Care Nurses provide support for a range of emergency and critical care procedures within a veterinary hospital, emergency or specialist veterinary clinic.

Businesses

The location of animal care and management businesses is largely influenced by the distribution of the population, as this drives demand for companion animal services. They are concentrated in cities, where urban populations generate high levels of revenue through veterinary services (which are also connected to horse and dog racing businesses). The industry also caters to rural and regional areas associated with livestock farming. Australia's animal health system includes organisations, government agencies, commercial companies, universities and individuals.

The clearest picture for business information is in the Veterinary sector, which is a registered profession. The biggest single employer of Veterinarians is the Federal Government, and governments at all levels

employ veterinarians in different capacities. Veterinarians are also employed in Non-Government organisations. The veterinary sector provides direct employment to more than 28,370 people.[1] Estimates also show there are 12,746 registered veterinarians in Australia, working for government agencies, laboratories and universities, or providing specialised services as private practitioners or in other organisations.[2]

In line with their high populations, New South Wales, Victoria and Queensland account for 77 per cent of veterinary services businesses (see Table 1). While the greatest proportion of businesses are in New South Wales (30 per cent), Queensland is the only state with a higher proportion of businesses (23 per cent) compared with its share of the Australian population and labour force (both 20 per cent). This is a consequence of high pet ownership and extensive livestock farming. Approximately 60 per cent are 'small' businesses, employing between one and 19 people.

Table 1: Veterinary Services businesses (ANZSIC 6970) operating at end of financial year, 2017

State	Non- Employing
Australian Capital Territory	9
New South Wales	306
Northern Territory	14
Queensland	253
South Australia	66
Tasmania	29
Victoria	296
Western Australia	115
Total	**1,088**

Source: 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2013 to Jun 2017 - operating at end of financial ye

The animal care and management sector also include about 4,000 pet grooming businesses[3] and many other specialist businesses providing pet care services, as well as up to 100 wildlife operations, which include zoos, wildlife parks and aquariums and employ up to 7,200 people.[4]

Industry analysis shows that the contribution of the animal care and management sector to the Australian economy includes:

- In 2018, veterinary services' industry value added (IVA)[5] was $2.4 billion, with a revenue of $3.5 billion;[6]

- Total revenue of the zoological sector (including 'botanical gardens operations') was $801 million in 2018; [7]

- Companion animal services contributed $12.2 billion annually to the Australian economy.[8] This value includes the trade in companion animals, pet food, accessories, veterinary services and a range of other pet care services.

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[1] Australian Bureau of Statistics, 2018, 6291.0.55.003 - EQ06 - Employed persons by Industry group of main job (ANZSIC), Sex, State and Territory, November 1984 onwards

[2] Animal Health Australia, 2016, 'Animal Health in Australia 2015', Canberra, Australia, <https://www.animalhealthaustralia.com.au/our-publications/animal-health-in-australia-report>

[3] Pets Australia, 2017, 'So You Want to Be A Pet or Dog Groomer?!' <http://petsaustralia.org/pet-jobs-and-pet- businesses/so-you-want-to-be-a-pet-or-dog-groomer>

[4] IBISWorld, 2018, R8921 Zoological and Botanical Gardens in Australia Industry Report

[5] Industry value added (IVA) is the contribution by businesses in each industry to gross domestic product (GDP).

[6] IBISWorld, 2018, M6970 Veterinary Services in Australia Industry Report

[7] IBISWorld, 2018, R8921 Zoological and Botanical Gardens in Australia Industry Report

[8] Animal Medicines Australia, 2016, *Pet Ownership in Australia 2016*, p.31

Stakeholders

Stakeholders may include but will not be limited to the following:

- RSPCA
- Pets Australia
- Pet Industry Association of Australia
- Association of Pet Boarding and Grooming
- Veterinary Nurses Council of Australia
- Australian Veterinary Association
- Equine Veterinary Association
- Guide Dogs Australia
- Australasian Society of Zoo Keeping
- Zoo and Aquarium Association
- Wildlife Health Australia
- Australian Workers Union
- SeaWorld
- Guwara Wildlife Shelter
- Dogs Victoria
- Blacktown Pound
- Equine Dental Association Australia
- International Association of Equine Dentistry

- Worldwide Association of Equine Dentistry
- Australian Horse Industry Council
- WA Horse Council
- Animal Management in Rural and Remote Indigenous Communities (AMRRIC)
- ANZ Laboratory Animal Association
- Peter MacCallum Cancer Centre
- Children's Cancer Institute
- SAHMRI SA
- Royal Price Alfred Hospital
- Country Fire Authority
- Taronga Zoo
- University of Queensland
- Petucation NSW
- Wagging dogs
- Animal Magic holdings
- Manners n more WA

Other bodies

- RTOs with project units of competency on scope
- Stage and Territory Government departments
- Industry Training Advisory Bodies
- State/Territory Training Authorities
- State and Territory Veterinary Surgeons Boards

Challenges and Opportunities in the Sector

The Australian animal care and management sector operates in a dynamic environment shaped by market factors, technology developments, and a range of policy frameworks at local, state, national and international levels, as well as the challenges of dealing with living creatures.

Job roles, workplaces and industry

There have been significant changes in job roles, workplaces and the industry in the last few years. These changes include:

- The demand for Companion and Therapy Animals has been growing and there is a need to address specific skills required to meet the demand, including appropriately defining the roles of assistance, companion and therapy animals in a training context.

- Pet grooming is a rapidly expanding industry, both in demand for services and expansion to new types of animals. The current pet grooming and pet styling qualifications are not fit for purpose, and employers have been bringing staff in from overseas.

- There is an identified skills gap relating to breeding programs for captive animals, as there is increasing work in the prevention of extinction in rare species, as well as new skill requirements due to changing captivity environments, increase in in captive institutional animal training and enrichment programs, legislation and regulation, and new methods of undertaking work using technology.

- Depression and burnout have been identified as major factors in the high levels of mental health issues within ACM industries, including in Veterinary Medicine where suicide is 4 times greater than the national average.

- ACM industries have been identified as potentially increasing sources of work for Australians with disabilities, a major area of Australian Federal, State and territory government policy development and support over the last decade, and the National Disability Insurance Scheme (NDIS) is currently conducting additional research into the effectiveness of assistance, companion and therapy animals. Currently, enrolment rates for students with a disability are at 11 per cent, one of the higher enrolment rates in the VET sector at more than 4 per cent higher than the All Training Package Average.

Training in Equine Skills

During 2017 and 2018, the Racing IRC and the AMC IRC responded to urgent consumer and safety needs and instituted projects to improve the safety of learners using training products in equine industries.

As the results of that work have been implemented, some unforeseen impacts have become apparent, including the inability to import appropriate units into qualifications in the ACM, RGR and SIS Training Packages due to prerequisite rules designed to ensure safety and knowledge of horse handling. While a Skill Set in Beginners Horse Handling Safety was developed, packaging rules make it difficult to utilise to meet prerequisites in programs without adding both time and expense to learner programs. There are also elements of duplication within the Training Packages caused by the need to meet the varying demands of horse safety in each industry, however these have had an impact on foundational training as well as higher level training.

While examining these issues, the ACM IRC also recognised that the performance horse qualifications have not been reviewed from anything other than a safety perspective. In addition, there may be skills and training gaps in relation to equestrian horse care and management.

In the 2018-2021 Skills Forecast, the ACM IRC requested approval for a project to research needs in equine dentistry. While the project was not approved by the AISC, the IRC has undertaken further consultation and decided in 2018 to submit a project for the full review of the ACM40517 Certificate IV in Equine Dentistry as part of this Skills Forecast. The scope of this project is subject to extreme disagreement across the equine health sector. These disagreements mean that the ACM IRC is

concerned for the potential effectiveness of any project, even though it is apparent that updating of current qualifications must take place.

The potential approaches to a project are:

- A review of the current Cert IV qualification without expansion of techniques
    - While this is supported by some current workers in the field without veterinary qualifications, these workers and associated industry groups also support the development of advanced training at Diploma level
- A review of the current Cert IV qualification to include the skills to use all instruments current within the industry. Including motorised instruments used within the guidelines of state and territory regulatory requirements.
    - While supported by some veterinarians (but see below the AVA's public stance), the use of motorised instruments is opposed by some current workers without veterinary qualifications, as well as at least one industry association for equine dentistry. Their stance is that the use of motorised tools for equine dentistry is an act of veterinary science. In NSW in 2013, veterinary regulations were updated and there were submissions supporting this approach, however this was not accepted in the final regulations as enacted, although there is existing legislation that the controls of the use of motorised instruments in some states.
- A review of equine dentistry to include the development of a Diploma of Equine Dentistry
    - The Australian Veterinary Association opposes the development of a Diploma in equine dentistry, a position supported by many veterinarians and not opposed by others.

Feedback from preliminary consultations indicate that there are members of the non-veterinary equine dental industry who are looking for trade regulation. In order to regulate, the industry will need an accepted minimum standard and nationally recognised qualifications

The position of the Australian Veterinary Association is that "All dental procedures on horses and related species should be performed only by registered veterinarians and be supported by evidenced-based medicine." This would appear to oppose even the provision of a Cert IV qualification, a position that is not supported from apparent current practice. There does not appear to be any legislative or regulatory prohibition relating to a non-veterinarian performing equine dentistry as defined by international Association of Equine Dentistry, and nor does it appear this work would be recognised as breaching Australian regulatory controls on undertaking veterinary work. The position of the American Veterinary Medical Association is that equine dental services should be performed by veterinarians, or by supervised veterinary technicians where state acts allow. However, almost half of all USA states allow non-veterinarians to perform equine dental work.

There has been a view expressed that veterinary equine dental industry is separate and apart from the non-veterinary equine dental industry. The view holds that non-veterinary equine dental service providers should be trained in equilibration techniques using both manual and motorised instruments, and to perform routine and corrective balancing of the cheek teeth and incisor arcades. They should have the knowledge and skills to alleviate painful conditions and to address minor and major malocclusions in the horses' dentition in order to maintain normal crown height and angles that compliment individual biomechanical actions of the head. And to refer all conditions outside their scope of practice to registered equine veterinarians.

The introduction of motorised instruments has resulted in the need for skills that equine dentistry businesses report is needed to be productive and internationally competitive, and reflect the current industry environment, which has experienced the rapid innovation and the development of new instrumentation and techniques over the last 5 years. The issue then arises as to the qualifications needed to use motorised instruments.

There is some evidence that equine dentistry work is being undertaken by workers styling themselves as equine dentists, yet if the levels associated with human dentistry were used to help define job roles, some of these workers would be in job roles as Equine Dental Technicians while others would be clearly

at Equine Dentist level, even without veterinary qualifications. If equine dentistry practice was viewed in this way, questions would arise as to the appropriate AQF Level for each area of practice.

The challenge is also complicated by the potential for sedation of the horse to undertake the equine dentistry work, which in some circumstances requires the presence of a vet. Sedation of horses for manual tool use at times is done by the owner or attending EDP. There is training at AQF Level 5 in administering anaesthesia to animals for scientific purposes and at AQF Level 4 in veterinary nursing qualifications. However, these might be seen as being applied in controlled circumstances with veterinary presence.

While there has been considerable consultation with industry stakeholders in the veterinary, veterinary nursing and equine dentistry spheres, it may be that additional consultation should take place with horse owners to determine how work is currently being undertaken. There is certainly evidence to suggest that some equine dentists are working in conjunction with veterinarians, while others practice independently. There appears to be advanced training available to both veterinarians and non-veterinarians which is not nationally-recognised, including where trainers may not hold veterinary qualifications. There remain difficulties for veterinarians to meet demand for their work and to fill vacant veterinarian positions, which is raised as a potential factor in mental health issues within the profession.

Current equine dentistry qualifications do not meet the certification standards of the International Association of Equine Dentistry. As a result, some Equine Dental practitioners currently practising in Australia have qualified through overseas studies. Along with mandatory continuing educations events overseas as well. . While there are post graduate courses privately provided in Australia by individual businesses (veterinary and non-veterinary), they are not nationally regulated as VET training providers. The USA and the UK have raised the standard of training for non-veterinary equine dental service providers and many qualified equine dental technicians are employed by veterinary practices, horse businesses and training organisations, or work as sole traders in their own businesses.

The ACM IRC may be able to utilise the opportunities presented by looking at equine training issues to broaden consultation and obtain more information about the way that work is currently being undertaken and the animal health and welfare issues that may arise as a result.

Remote Area Animal Care and Management

In December 2018, the Skill Set ACMSS00016 Promote Animal Health in Remote Communities was released. The ACM IRC considers this a significant step forward in supporting those in Indigenous and remote communities with responsibilities for animal health and welfare. This is a first step, but challenges remain and it is important that these workers remain at the forefront of IRC considerations. Almost 5 per cent of students currently enrolled are Indigenous, a higher proportion than found in general enrolments (see APPENDIX 1).

Previous experience suggests that the introduction of relevant and updated training leads to the identification of skills gaps and demand for additional training. The IRC intends to monitor the uptake of this Skill Set, along with feedback from current training product projects and research whether additional support may be needed. The opportunity may exist for a research project to identify special requirements of animal care and management works based in remote localities, particularly relating to worker health and safety, obtaining assistance, establishing supporting networks, dealing with emergency situations and handling a broad variety of animals and situations.

Pets and Companion Animal Services

Australia has one of the highest rates of pet ownership in the world.[9] Population growth and rising disposable income are expected to drive a further growth in Australian households owning a pet, which will require a range of veterinary services over the next decade. Alternative therapies, including specialisations such as animal rehabilitation, physiotherapy, massage and premium animal products have increasingly become popular with animal owners.

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[9]   Animal Health Alliance, 2013, 'Pet Ownership in Australia', <http://animalmedicinesaustralia.org.au/wp-content/uploads/2014/08/Pet-Ownership-in-Australia-2013-Summary-ONLINE-VER.pdf>

Availability of more expensive treatments and application of advanced treatments for broken bones and serious illnesses is also expected to lift the demand for industry services (including pet insurance and pet welfare) as the life expectancy of animals is growing.

Trends such as growing popularity of urban apartment living and the shift towards renting may limit the potential growth in pet numbers, as many of these places prohibit pets. However, legislation is currently being enacted in some jurisdictions to limit the opportunities for landlords to refuse to accept pets and companion animals.

While there are market opportunities for the industry participants to sustain revenue growth, these will be required to continuously promote value-added services.

Training Package Overview

There have been more than 20,000 enrolments across all qualifications each year since 2014, and total program enrolments have increased by 10 per cent since that date (see APPENDIX 1). Certificate II and III enrolments have risen as Certificate IV-level enrolments have decreased.
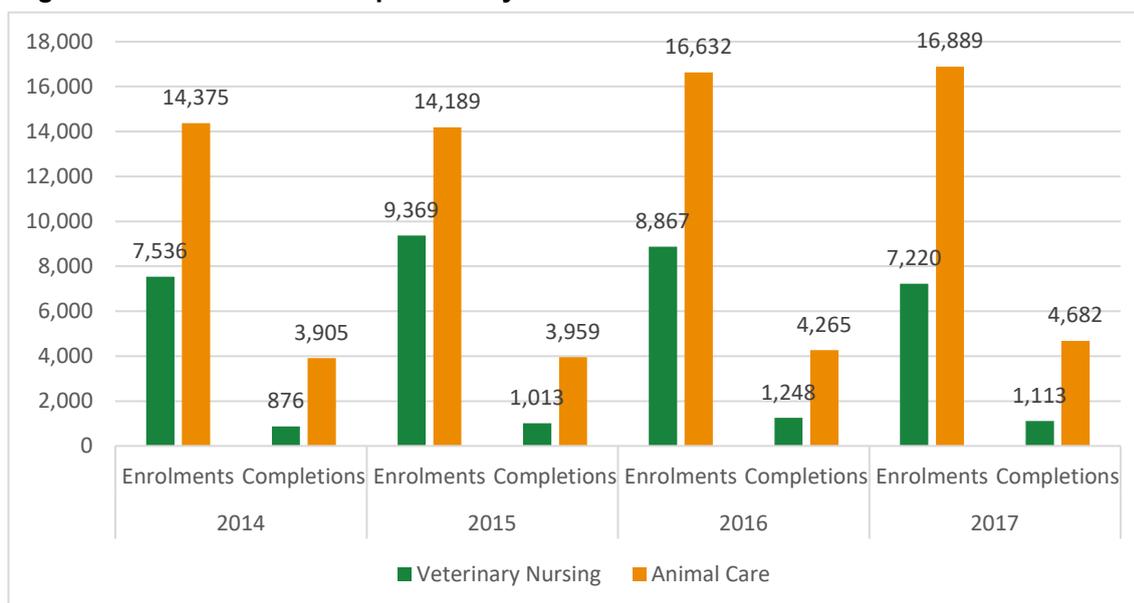
Figure 1: Program Enrolments by AQF Level, 2014-2017
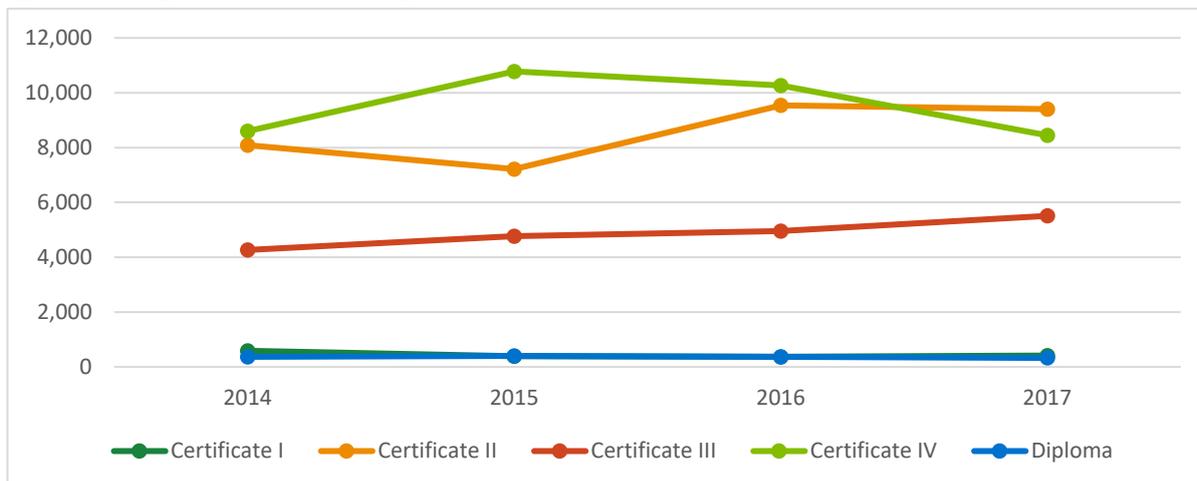
Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

In the period 2014-2017, animal care qualifications accounted for 80 per cent of enrolments, with veterinary nursing qualifications making up the other 20 per cent. Animal care enrolments are increasing year-on-year and veterinary nursing enrolments have decreased in each of the last two years on record.

Figure 2: Enrolments & Completions by Qualification Cluster
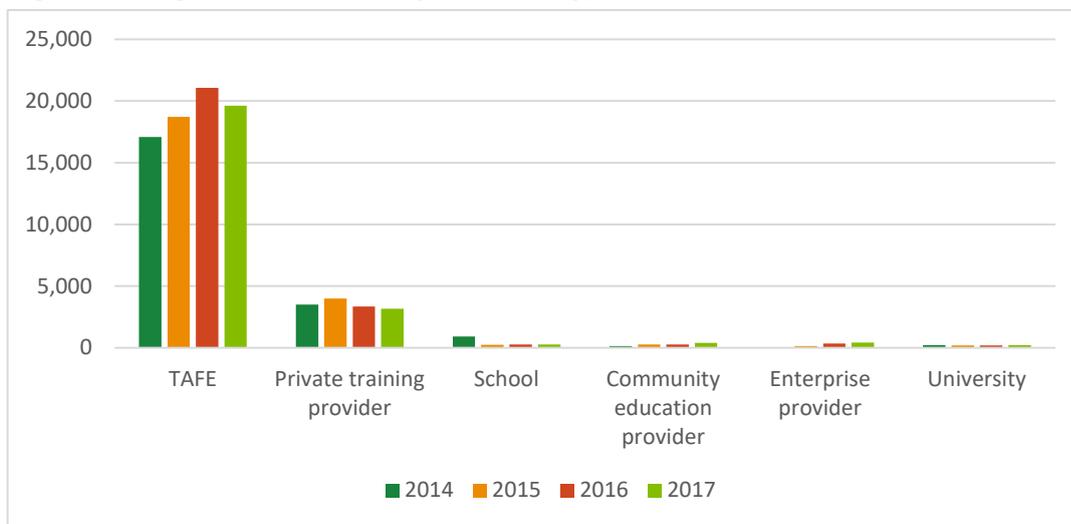

Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

TAFE are responsible for 80 per cent of enrolments, including 92 per cent in Australian Capital Territory and 90 per cent in New South Wales. Queensland shows a mix of TAFE and other RTO providers (47 and 41 per cent respectively). Of the training delivered overseas, 99 per cent are through RTOs (and

are across three qualifications only: Certificate I in Animal Studies, Certificate II in Animal Studies and Certificate IV in Veterinary Nursing).

Figure 3: Program Enrolments by Provider Type, 2014-2017

Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

Government funding supported 63 per cent (442,359) of subject enrolments between 2014 and 2017. This includes 78 per cent (399,494) of TAFE subject enrolments, but only 13 per cent (18,694) of enrolments under other RTOs (84 per cent of other RTO subject enrolments were domestic fee-for-service). Overall, government funded enrolments are increasing, with 12 per cent (13,140) more in 2017 compared with 2014.

Figure 4: Subject Enrolments by State & Funding Types, 2014-2017
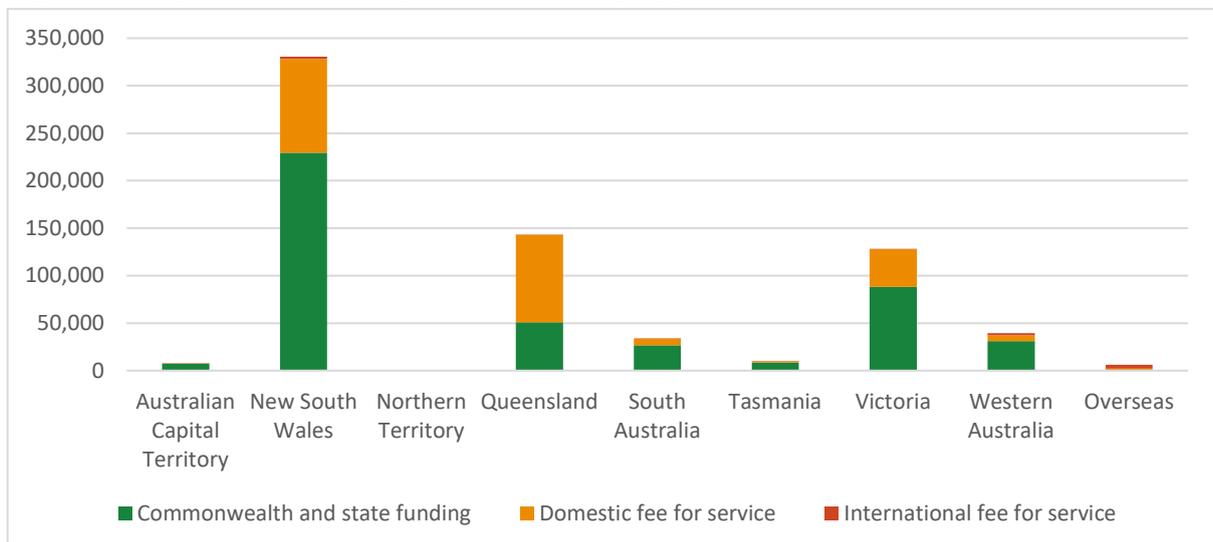
Source: NCVER VOCSTATS, TVA subject enrolments 2014-2017

Apprenticeships and traineeship commencements are less prevalent in New South Wales (14 per cent between 2013 and 2017) compared with Victoria (41 per cent) and Queensland (26 per cent).

Generally, apprenticeship and traineeship commencements in animal care and management are declining, with a 38 per cent drop between 2013 (511) and 2017 (319).

Figure 5: Apprentice and Trainee commencements and completions, 2013-2017
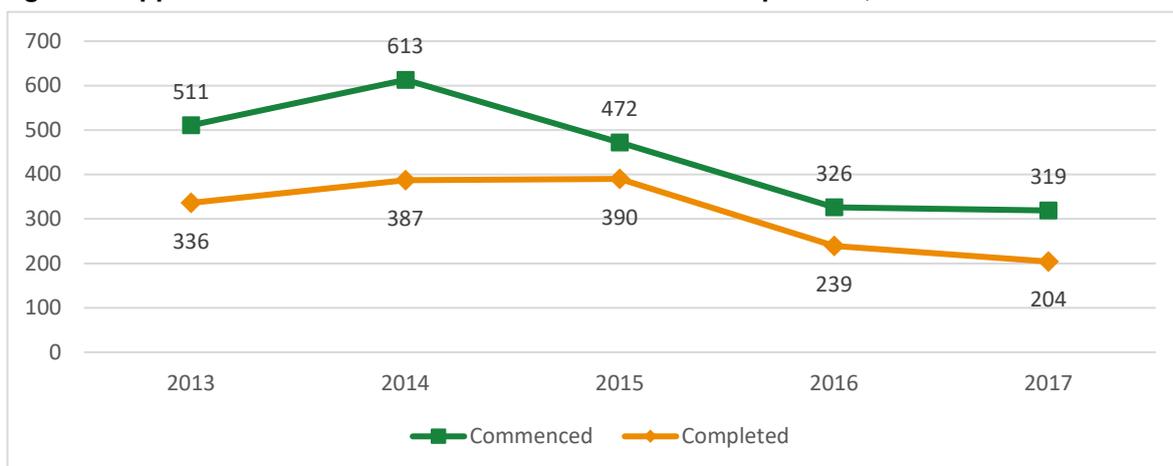
Source: SAS Visual Analytics Viewer

EMPLOYMENT & SKILLS OUTLOOK

Employment

Total employment figures for the animal care and management industries cannot be ascertained through the standard data providers, such as Australian Bureau of Statistics (ABS), due to the following reasons:

- The Australian and New Zealand Standard Classification of Occupations (ANZSCO) is a skill-based classification system developed to standardise the collection, analysis and dissemination of occupation-related information[10]. ANZSCO classifications are organised from the one- to six-digit level, each with increasing specificity. ABS data releases, including the 2016 Census of Population and Housing, provide information to the four-digit level; however, this is inadequate for the purposes of quantifying animal care and management occupations.

    - For example, 'farriers' (six-digit ANZSCO code 322113) are grouped under the four-digit classification '3221 Metal Casting, Forging and Finishing Trades Workers', along with such occupations as 'blacksmith' and 'metal polisher'. As these occupations are associated with other, or multiple, industries, ascertaining overall figures does not elucidate the number of farriers employed; hence the data cannot be used here in any meaningful way[11].

- ANZSCO classifications do not include occupations such as 'equine dentists' or 'pet shop workers' (albeit, the latter may be an unlisted occupation as part of the six-digit classification, '361199 Animal Attendants and Trainers n.e.c.', which includes some of the occupations 'not elsewhere classified').

- Many occupations are classified under a generic title and there is no way of extracting data for those in service specifically of an animal care and management business, or whose occupation is defined by another industry context and involves animal care and management activities: for example, in recreation, law and regulatory enforcement (including animal control), science and agriculture

- While ABS releases that are organised by ANZSIC classifications, which define industries and their sectors, *do* include data for all occupations within that industry (thus alleviating the issue above), there is only one ANZSIC group that clearly comes under the purview of the ACM Training Package: Veterinary Services (697).

There are three animal care and management occupation groups defined by ANZSCO classification:

- 'Animal attendants and trainers', including:

    - Dog trainer or handler

    - Horse trainer

    - Pet groomer

    - Zookeeper

- 'Veterinary nurses'

- 'Veterinarians'

According to these categories, there are 39,059 people employed in animal care and management occupations. Approximately 57 per cent are employed full-time.

While ABS data shows that there are 23,285 people in the occupations 'veterinarian' and 'veterinary

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[10] http://www.abs.gov.au/ANZSCO, viewed November 2018

[11] Other examples include 'dog breeder' (one of six occupations grouped within a six-digit classification) being grouped under 'livestock farmers' (four-digit), and 'dressage Instructor' (six-digit) being grouped under 'Sports Coaches, Instructors and Officials'.

nurse'[12], there are 28,370 people employed in veterinary services[13], suggesting that there are over 5,000 support staff employed in the industry. Current levels of employment in Veterinary Services have grown by 115 per cent since 2000, when there were 13,175 employed persons.

Despite the number of employed veterinarians increasing over recent years, the occupation is on the national skills shortage list[14]. Indeed, the supply of suitable candidates has not kept up with the demand for veterinarians, with an average of 0.8 suitable applicants per vacancy having contributed to only 28 per cent of vacancies being filled. Shortcomings in both skills (such as customer service) and experience (often associated with a specialisation) are cited by employers, regardless of the job location or specialisation for which they were recruiting.

Figure 6: ANZSCO Occupation Counts & Projections
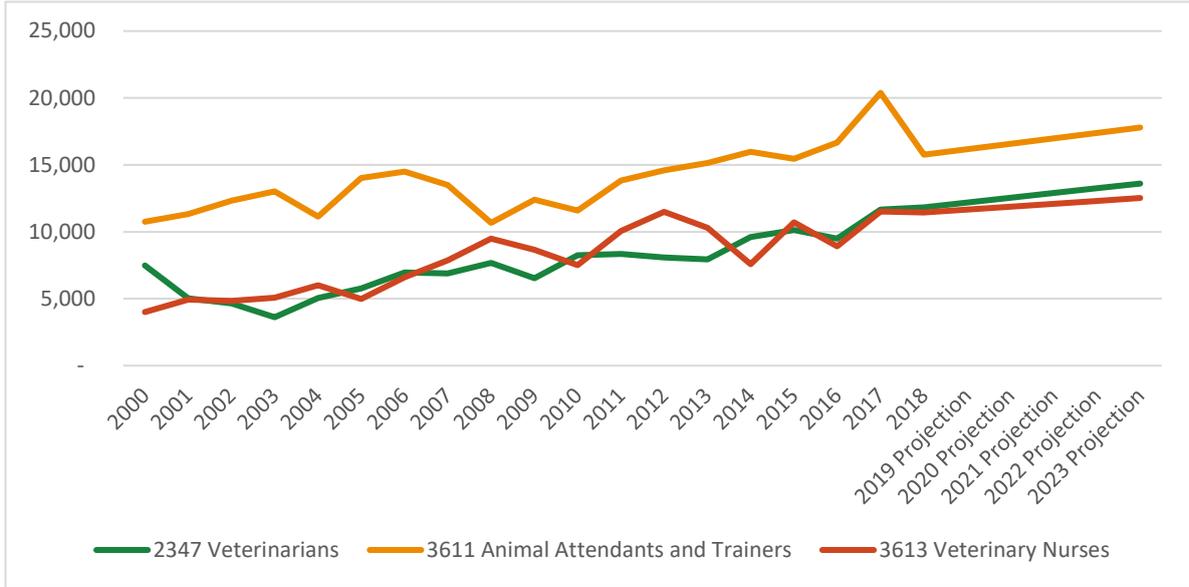
Sources: a) Australian Bureau of Statistics, 2018, 6291.0.55.003 - EQ08 - Employed persons by Occupation unit group of main job (ANZSCO), Sex, State and Territory, August 1986 onwards; b) Department of Jobs and Small Business, Labour Market Information Portal, Occupation projections – five years to May 2023[15].

High demand for animal care and management services means that associated occupations are in a growth phase. Higher incomes and insurance levels are driving demand for veterinary services, with people increasingly willing to invest in animals' wellbeing and life-prolonging procedures.

Of the highlighted occupations, 'animal attendants and trainers' accounted for 40 per cent of employed persons. The greatest proportion of animal care and management jobs are based in New South Wales (34 per cent) and Victoria (28 per cent).
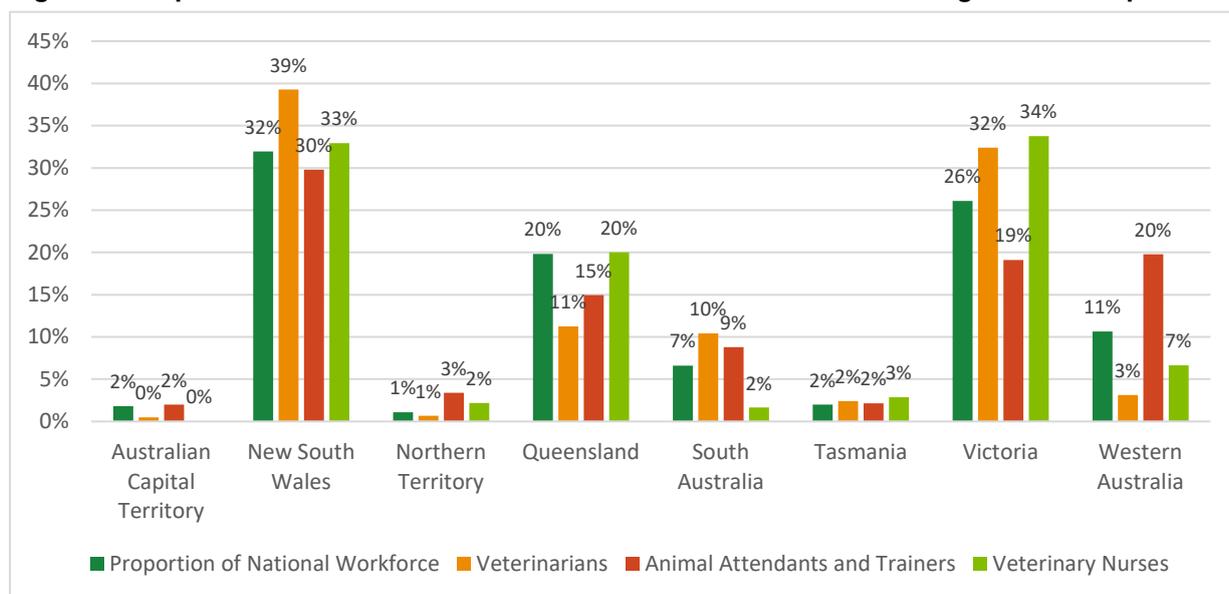
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[12] Australian Bureau of Statistics, 2018, 6291.0.55.003 - EQ08 - Employed persons by Occupation unit group of main job (ANZSCO), Sex, State and Territory, August 1986 onwards
[13] Australian Bureau of Statistics, 2018,6291.0.55.003 - EQ06 - Employed persons by Industry group of main job (ANZSIC), Sex, State and Territory, November 1984 onwards
[14] Department of Jobs and Small Business, 2018, Veterinarian ANZSCO 2347-11 (May 2018), viewed October 2018, <https://docs.jobs.gov.au/system/files/doc/other/234711ausveterinarian_1.pdf>.
[15] Occupational growth projections from source 'b)' have been applied to 2018 occupational figures from source 'a)' (with 2000 to 2018 being calculated as an average of employment figures for each quarter). Both sources utilise the Australian Bureau of Statistics Labour Force Survey.

Figure 7: Proportions of National Labour Force and Animal Care and Management Occupations

Sources: a) 6202.0 - Labour Force, Australia, August 2018: Table 12. Labour force status by Sex, State and Territory - Trend, seasonally adjusted and Original; b) 6291.0.55.003 - EQ08 - Employed persons by Occupation unit group of main job (ANZSCO), Sex, State and Territory, August 1986 onwards

The overall labour force for the occupations in Table 2 is 76 per cent female (including 90 per cent of veterinary nurses). In the Veterinary Services sector, there is an average wage of $53,180[16].
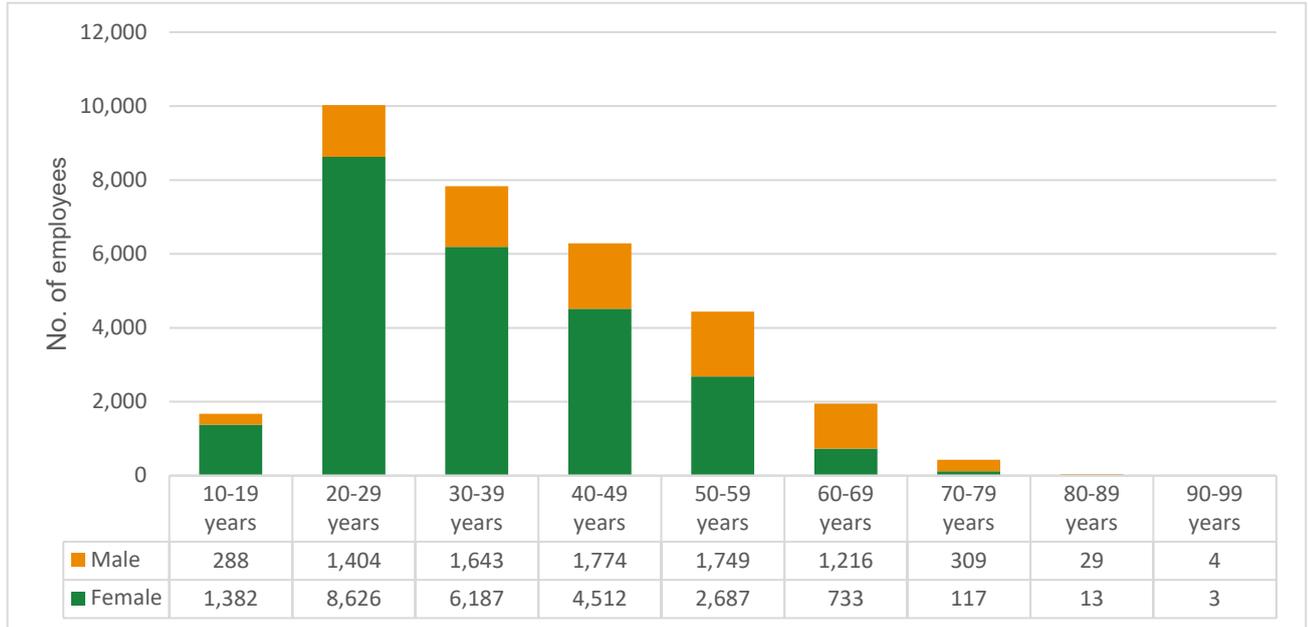
Table 2: Employed persons by state and sex, 2018

Occupation Group	Sex	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	Total
2347 Veterinarians	Female	58	3,340	47	1,033	853	133	2,168	251	**7,883**
	Male	0	1,305	32	297	379	151	1,663	116	**3,943**
3611 Animal Attendants and Trainers	Female	223	3,443	334	2,078	1,141	159	2,071	1,919	**11,368**
	Male	92	1,256	201	283	246	181	944	1,202	**4,406**
3613 Veterinary Nurses	Female	0	3,372	161	2,107	188	326	3,452	760	**10,366**
	Male	0	401	88	188	0	0	415	0	**1,092**
Total	**Female**	**281**	**10,155**	**541**	**5,218**	**2,182**	**618**	**7,691**	**2,930**	**29,617**
	Male	**92**	**2,962**	**322**	**768**	**625**	**332**	**3,022**	**1,319**	**9,442**

Source: 6291.0.55.003 - EQ08 - Employed persons by Occupation unit group of main job (ANZSCO), Sex, State and Territory, August 1986 onwards

While the majority of animal care and management employees are female, the proportion of females to males decreases up to the ages of 60 years and over, at which point male employees become the majority (see Figure 8).

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[16] IBISWorld Industry Wizard

IRC Skills Forecast and Proposed Schedule of Work 2019–2022

Figure 8: Animal Care and Management Occupations by Age Group and Sex

	10-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years	70-79 years	80-89 years	90-99 years
Male	288	1,404	1,643	1,774	1,749	1,216	309	29	4
Female	1,382	8,626	6,187	4,512	2,687	733	117	13	3

Source: Census of Population and Housing, 2016, Table Builder

As this trend continues, the female proportion of the labour force will increase further (see Figure 9).

Figure 9: Animal Care & Management Labour Force by Sex
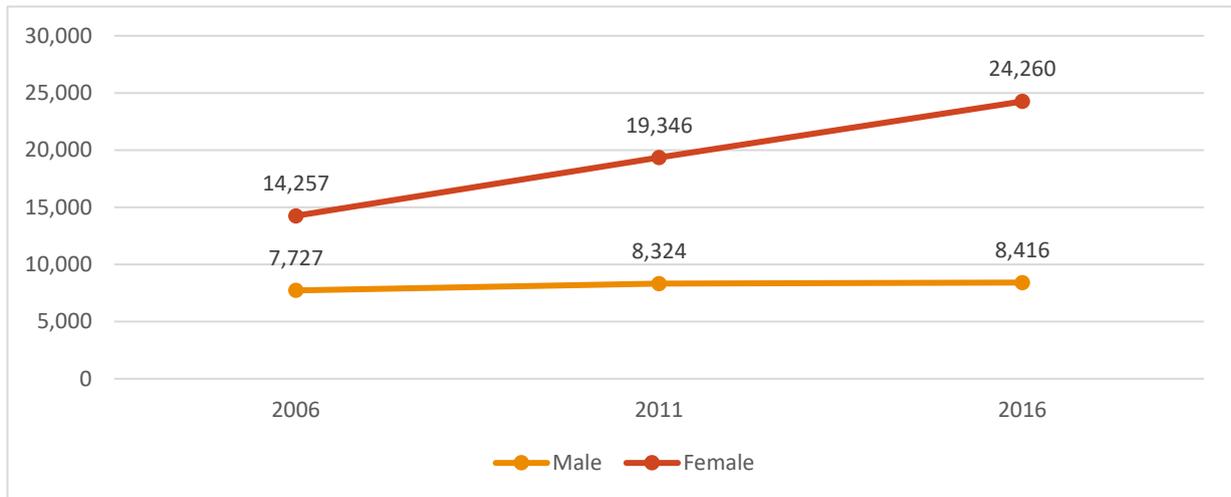
Sources: Census of Population and Housing, 2006, 2011, 2016 Table Builders

> *Case Study*
>
> **The Police Dog Handler, the Customs Dog Handler and the Local Government Animal Control Officer**
>
> The difficulties in obtaining accurate employment (and economic) information is demonstrated by animal care and management professionals who operate in the police, customs and local government. It is likely that all 3 job roles, requiring advanced levels of animal care and management skills, will not be recorded as roles relating to animal care and management.
>
> One of the required characteristics of a Police Dog handler is to have "all-round ability in police duties" (Victorian Dog Squad Information Booklet): That is, they need to be police officers. They will be classified as Police Officers under occupational codes, in this case 441312 Police Officer which does not recognise dog handling as a specialisation or have another available code. In most forces, the 'dog squad' also supports special operations, requiring more advanced tactical police skills.
>
> The Australian Border Force provides a career path as a Detector Dog Handler for Border Force Officers, who are selected from General Duties Officers (https://www.abf.gov.au/about-us/what-we-do/border-protection/detector-dogs/training). They offer a 7-month intensive internal training program. The Department of Agriculture and Water Resources also offers similar roles for Senior Biosecurity Officer/Detector Dog Handler to work in relation to plants and exotics diseases.
>
> Local Government Animal Control Officers are usually required to have (or hold the equivalent of) formal VET qualifications to perform their roles. Yet the applicable occupation categories for animal handlers fails to reflect these roles, with the list of tasks under ANZSCO 3611 Animal Attendants and Trainers failing to mention any element of animal control or capture. The other applicable code is ANZSCO 5995 Inspectors and Regulatory Officers. However, the usual tasks of animal control offers aren't included in the tasks of inspectors and regulatory officers, other than in the most general terms. The only specific role recognised is "Dog catcher" as part of non-classified officers.

Skills

Foundational skills in animal care and management focus on the safety, health and welfare of animals, including handling, feeding, grooming, supervision, training and exercise. More advanced skills are required in veterinary nursing, especially for care in crisis, emergency and serious situations.

This section focuses on the skills requirements being addressed in proposed projects for 2019-2020.

Companion and Therapy Animals

Most of the focus of companion animal training has been in relation to pets, with some training available for the training of assistance dogs, such as Guide Dogs. Assistance animals (usually dogs but options are expanding) can aid in physical functions, such as turning appliances on and off, fetching items for owner, opening doors, and alerting occupants to problems. Assistance animals have been shown to facilitate a reduction in the services of paid human assistance. The NDIS are researching and reviewing the effectiveness of Assistance Animals, and Headspace NSW has recently received a substantial grant for development of programs in Assistance/Therapy animals.

Increasingly animals are being used in Australia to aid and assist in therapy for a number of disorders, including:

- Hearing and vision impaired;
- mobility impairments due to physical disability;
- Epilepsy;

- Diabetes;

- Autism spectrum and other developmental disorders;

- PTSD;

- Dementia;

- Learning difficulties;

- Mental health issues;

- Stress;

- Grief;

- Drug addiction.

Both training and care skills will need to be enhanced to ensure the safe and effective training and utilisation of assistance animals. Assistance Animal Training Organisations are registered, and the expansion of assistance and therapy animal services is likely to increase the demand for skills in these areas.

While assistance and therapy animals have traditionally been dogs, there is also an expansion into the types of animals and situations where they may be utilised. Recently animals visiting hospital wards have included horses and alpacas[17].

New skills are being developed in support services for animal health, such as animal rehabilitation, physiotherapy, massage and other premium animal products. Job Skills in companion and therapy animal:

- Understanding legislation and guidelines

- Classification of roles and terminology i.e. Therapy Animals v Assistance and their roles i.e. to assist people with PTSD, Dementia, Aged care, Autism, alleviate psychosomatic disorders etc

- Public Safety and WHS skills regarding external settings

- Risk Management

- Animal Welfare

- Coordination and management of conduction of animal assistance activities i.e. Hospitals, Facility homes, classrooms and nursing homes

- Selection and evaluation of animals to fit the purpose of the assistance

- Facilitating Animal and patient interactions
    - Techniques for introducing animals to various settings
    - Appropriate settings for access of Assistance Animals

- Recognising and responding to stress and or illness

- Identifying detailed animal behaviour regarding the activities required to be performed by the animal.

Pet Grooming

Pet grooming covers a wide variety of skills from basic clipping and scissoring for fur and nails, through to competition-level grooming. New techniques are being introduced as a result of improved technology, offering more options for styling. In addition, market demand is growing both in size and in types of pets.

The required skills have been in short supply in Australia, and recently Pets Australia commenced the

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[17] https://www.abc.net.au/news/2018-10-30/therapy-alpacas-patients-hospital-beaudesert-qld/10337328

International Working Pet Groomer Scheme[18] to encourage workers from the USA, Japan, Thailand and the UK to some to Australia on working holidays.

Updated Skills in Pet grooming and styling include:

- Better understanding of dog behaviour and psychology to ensure animal welfare and operators' safety;

- More detailed care of domestic cats;

- Carry out styling on cats of different breeds and coat type;

- Styling products and their uses (accessories);

- Colouring using dye and/or chalk;

- Shaping and carving fur;

- Lift, handle and restrain dogs/cats;

- Grooming, styling and handling of other pets.

Captive Wildlife Animal

The skills required in captive wildlife animal situations include exhibit design, record keeping, maintenance, cleaning, mobile exhibitions, animal training, diving, presentations and teaching, as well as the standard animal care requirements.

Consultation with businesses and stakeholder organisations indicates a growing gap in skills requirements and formal training provided through nationally-recognised qualifications as a result of a number of factors including:

- Increased knowledge and understanding of animal welfare needs;

- Improved habitat provision and living environments;

- Breeding program requirements;

- First aid and injury prevention requirements across a broader variety of animals;

- Need to deal with animal stress;

- Greater interactivity or expectations of interactivity between humans and animals.

There is increasing work in the prevention of extinction in rare species, which is receiving additional attention and support from government and non-government organisations. In particular, skills are needed in animal conditioning to provide the optimal breeding potential in captive wildlife situations that can aid the survival of species. There has been a significant increase in animal training programmes developed in the captive animal sector but there is a lack of certified training courses for this with most being done in house or overseas.

Updated skills requirements include:

- Training or behaviour modification and leading towards using the most positive, least-intrusive techniques in animal training;

- Captive animals and marine animal incident response;

- Skills in using the five domains of welfare to aid conditioning;

- Advanced animal conditioning techniques (the more commonly used term now is training or behaviour modification);

- To be able to assist in Animal Stranding;

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[18] https://petsaustralia.org/pet-jobs-and-pet-businesses/international-working-pet-groomer-scheme/

- Animal Behaviour awareness and "Goal Based Enrichment";
- Transport and injured marine animal;
- Applying triage techniques;
- Undertake and manage rescue activities;
- Apply knowledge of cetacean and pinnipedian species biology;
- Demonstrate cetacean and pinnipedian rehabilitation and release;
- Release cetaceans and pinnipedian from entanglement.

Compassion Fatigue

Compassion fatigue is the term being used to describe the state that animal care workers experience when they continually help people and animals in distress.[19]

There are skills needed to address Compassion Fatigue, including:

- Trigger recognition and avoidance;
- Expanding the workplace environment to include external, supportive reminders;
- Workplace coping strategies;
- Recognising symptoms in yourself and others;
- Assisting yourself and others;
- Dealing with scared, angry and traumatized pet owners;
- Recognise factors relating to euthanasia induced stress and, occupational stress and distress associated with working with animals in shelters, veterinary clinics and biomedical research facilities;
- Sustaining compassion in the workplace and building a dialect of compassionate care in the workplace;
- Recognising critical situations.

The impacts of Compassion Fatigue are having an impact on student enrolments, student and graduate recruitment, and current practitioner health and welfare.[20]

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[19] https://www.mnn.com/health/healthy-spaces/stories/what-compassion-fatigue
[20] https://www.abc.net.au/news/2019-01-13/vet-shortage-as-suicide-rates-high/10708686

KEY DRIVERS FOR CHANGE AND PROPOSED RESPONSES

This section will cover the proposed projects for 2019 – 2020.

Key Drivers	Proposed Solutions	Stakeholder Impact	Risks of not Proceeding
Review of Qualifications in Animal Studies			
Changes to public attitudes towards animal welfare Improving safety considerations during training Addressing Compassion Fatigue Units haven't been updated for content since 2010-2012	Incorporated into the review of multiple qualifications to ensure that broad, flexible training can be provided	Improved health and welfare of participants in animal care industries Improved foundational skills for workers Improved understanding of community expectations and how to meet them Safer learning environments Improved mobility for workers	Continued impacts of Compassion Fatigue Units losing fitness for purpose Units not providing appropriate foundation skills for new units/ qualifications leading to duplication and additional units
Review of Qualifications in Companion Animals			
Increasing regulation and requirements, including to support the NDIS Meeting increased market demands, and expanding uses and animal types Increasing utilisation of assistance and therapy animals Units haven't been updated for content since 2010-2012	Incorporated into the review of multiple qualifications. Qualifications to include expanded uses and types of animals in assistance and therapy situations Qualifications to be updated to include enhanced training and care requirements.	Increased availability of companion, assistance and therapy animals for those in need Improved support for the NDIS Meet additional regulation and requirements of government at all levels, hospitals, aged care facilities and local communities	Delays in being able to meet increasing demand, particularly in relation to support for the NDIS. Units losing fitness for purpose Units not providing appropriate foundation skills for new units/ qualifications leading to duplication and additional units

Key Drivers	Proposed Solutions	Stakeholder Impact	Risks of not Proceeding
Review of Qualifications in Captive Wildlife Animals			
Additional skills requirements required by employers Need to protect rare species (legislative, government policy and public interest driven) New technology introduced in facilities Units haven't been updated for content since 2010-2012	Incorporated into the review of multiple qualifications. Qualifications to be updated to meet new skills Potential for higher level qualification to meet demands for protection of rare species and other advanced skills	Improved skill levels available to employers Improved protection of Australian ecology and natural history Improved welfare for animals in captivity Improved safety for facility visitors	Failure to meet public expectations of facilities, and consequent operational issues Increasing need to import labour and skills expertise Units losing fitness for purpose Units not providing appropriate foundation skills for new units/ qualifications leading to duplication and additional units
Review of Qualifications in Pet Grooming/Styling			
Meeting increased market demand Meeting expansion of market to new situations and animals Reliance on international labour and skills No requirement for management level qualification as skills are mostly shared business skills Units haven't been updated for content since 2010-2012	Incorporated into the review of multiple qualifications Qualifications to be updated to meet new skills Deletion of the management level qualification	Improved access to local labour and skills for employers and self-employed Improved access to service for consumers	Reliance on international labour and skills Retention of a redundant qualification with skills that can be met in existing qualifications in other training packages Units losing fitness for purpose Units not providing appropriate foundation skills for new units/ qualifications leading to duplication and additional units

Key Drivers	Proposed Solutions	Stakeholder Impact	Risks of not Proceeding
Review of Qualification in Animal Control and Regulation			
Potential for updated animal control legislation and regulation since last update Need to distinguish between contexts in which skills are utilised Units haven't been updated for content since 2010-2012	Incorporated into the review of multiple qualifications Qualifications to be updated to meet new skills	Learners to have additional contextual information to select best training options Improved mobility of labour and skills to improve employer and employee options	Failure to maintain currency with legislation and regulation Units losing fitness for purpose
Research into equine-related training			
Training may not match consumer needs Work practices may be impacting on horse safety and welfare Required updating of equine dentistry training may be delayed through inability to reach consensus approach to requirements Required skills for equestrian pursuits may be a skills gap Units in Performance Horse qualifications haven't been updated for content since 2010-2012	Research and submission of a project proposal Consultation with horse owners and equestrians as to skills needs	Improved training for learners in performance horse Improved access to labour and skills for consumers Enhancement of safety and skills in equestrian Possibility for resolution of industry issues relating to equine dentistry, including defined scope of practice Creation of nationally-recognised training products subject to quality assurance to replace current unrecognised training	Safety and welfare issues for horses, carers and riders Continued provision of unrecognised training in equestrian and equine dentistry Units losing fitness for purpose

CONSULTATION UNDERTAKEN

Consultation has been undertaken throughout 2018 – 2019 and continues. Each IRC member undertakes their own consultations and networking with industry stakeholders and organisations, training organisations.

The AMC IRC has overseen, and guided consultations undertaken by Skills Impact both to support the development of the Skills forecast 2019-2022, and as part of consultations on the completion of current projects within the ACM Training package. Organisations that have been consulted by Skills Impact include:

- RSPCA
- Guide Dogs Victoria
- Australian Veterinary Association (AVA)
- Veterinary Nurses Council of Australia (VNCA)
- Zoo and Aquarium Association
- Australian Workers Union
- Veterinary Advisory Services
- Good 2 Go Equine Dentistry
- Advanced Animal Dentistry
- International Equine Dentist Assoc.
- Pets Australia
- Pet Industry Association of Australia
- Association of Pet Boarding and Grooming
- Animal Pest Management Services
- ANZLAA
- SeaWorld
- Guwara Wildlife Shelter
- Blacktown Pound
- Animal Magic Holdings
- Wagging School
- Dogs Victoria
- Horse Problems Australia
- Hoofcare Practitioner (individual)
- Godolphin
- Horse SA
- WA Horse Council
- Racing and Wagering WA

- Eventing NSW
- Victorian Master Farriers Association
- Victorian Racing Academy
- Australian College of Equine Podiotherapy
- CFA
- NSW Fire and Rescue
- JobLink Plus
- Compassion Fatigue researcher (individual)
- SAHMRI SA
- Peter MacCallum Cancer Centre
- Children's Cancer Institute
- Health NSW
- Royal Price Alfred Hospital
- Australian Institute of Family Counselling
- Centenary Institute
- Department of Agriculture
- Author (individual)
- Australian College of Applied Animal Studies
- University of Western Australia
- Macquarie University
- University of Queensland
- University of Adelaide
- Flinders University
- John Curtin University
- ANU
- University of Sydney

In addition, consultation have been undertaken with RTO, Industry Training Advisory Bodies and State Training Authorities.

Issues and sensitivities raised during consultations have been covered elsewhere in the Skills Forecast.

2019–2022 PROJECT DETAILS
Project 1: Review of multiple qualifications

Description

The proposed project is for the review of qualifications in the *ACM Training Package*, which are no longer fit for purpose and do not address new ways of working or emerging skills needs. The qualifications cover Animal Studies, Companion Animals, Captive Animals and Pet Grooming.

Rationale

The Animal Care & Management (ACM) Industry is experiencing both organic growth and growth through diversification of demand and services. In particular, organic growth is being experienced in the pet sector, including pet grooming, animal health care, and the nursing, rehabilitation and treatment of animals. Animal Medicines Australia reported (2016) an increasing trend towards premium pet products and services (including insurance) as owners look to enhance the wellbeing of pets, driven by changing attitudes to the place of pets in the family and greater awareness of the roles and responsibilities of owners in relation to animal welfare. Growth through diversification is being led in new and developing markets in assistance, companion and therapy animals and in captive animal management.

While total employment figures for the Animal Care and Management industries cannot be easily calculated (see under "data" below), the available data does show a spike in growth, especially in Animal Attendants and Trainers. According to analysis of Industry Data from the Australian Apprenticeships and Traineeships Information Service, employment in the ACM sector has grown more than five per cent over the last five years and more than 85 per cent of ACM graduates were employed after completion of their training.[21]

Most qualifications related to animal attendants and trainers, pet grooming and styling, companion animals and captive animals have not been fully reviewed since 2010. Qualifications are no longer considered fit for purpose, particularly in captive animal services, and companion and therapy animals.

Government policies based on consumer demand have also led to increased regulatory environments and additional market opportunities. For example, the ACT Animal Welfare & Management Strategy 2017- 2022 lists nine areas of regulatory governance, including Animal Welfare, Domestic Animals control, Animal Diseases, Nature Conservation, Pest Plants & Animals, and Planning & Development. In Victoria, legislation to commence operation during 2019 extends the rights of tenants to have pets and companion animals in rental properties.

Changes in job roles, workplace or industry

There have been significant changes in job roles, workplaces and the industry in the last few years. These changes include:

- The demand for Companion and Therapy Animals has been growing and there is a need to address specific skills required to meet the demand, including appropriately defining the roles of assistance, companion and therapy animals in a training context.

- Pet grooming is a rapidly expanding industry, both in demand for services and expansion to new types of animals. The current pet grooming and pet styling qualifications are not fit for purpose, and employers have been bringing staff in from overseas.

  o During consultations, the Dog groomers association of Western Australia supported this part of the projects, noting "Pet Grooming is an ever-growing market, and jobs in the industry are on the rise as pet owners have become more aware of the importance of regular professional grooming. From the feedback we have received from the students entering industry, updated qualifications are needed as the Certificate III in Pet Grooming does not prepare them for running their own salons or businesses, which industry is

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[21] https://www.aapathways.com.au/industries/animal-care-and-management

primarily self-employed sole traders. There has been misconception in regards to Certificate III in Pet Grooming that this will qualify the student to work independently and run their own business. Employers have expressed their interest about having a lower level salon assistant as a first step into industry and an extension on the nominal hour for the Certificate IV in Pet Styling and additional units. We believe the Certificate IV in Pet Styling still needs to be available for the Grooming students and future students and be the key certificate. More groomers in industry already are looking at becoming qualified or increasing their qualifications, now, or in the future.

- There is an identified skills gap relating to breeding programs for captive animals, as there is increasing work in the prevention of extinction in rare species, as well as new skill requirements due to changing captivity environments, legislation and regulation, and new methods of undertaking work using technology.

- Depression and burnout have been identified as major factors in the high levels of mental health issues within ACM industries, including in Veterinary Medicine where suicide is 4 times greater than the national average.

- ACM industries have been identified as potentially increasing sources of work for Australians with disabilities, a major area of Australian Federal, State and territory government policy development and support over the last decade, and the National Disability insurance Scheme is currently conducting additional research into the effectiveness of assistance, companion and therapy animals.

- The contribution and role of Animal Care graduates (both Cert II, III and IV) to the Tourism industry. the demand for graduates with skills in conducting tours is high. Local Wildlife sanctuaries and Parks largely employ Animal studies graduates for this role rather than Tourism or Guiding graduates.

Need for Graduates

According to analysis of Industry Data from the Australian Apprenticeships and Traineeships Information Service, between 85 per cent and 100 per cent of ACM Graduates were employed after completion of their training.

Growth trends in the industry and employment of foreign workers in animal care and management sectors in Australia indicate an ongoing and growing need for graduates. This demand may be escalated by current work to improve employment prospects among Australians with disabilities.

Timeline for Latest changes

All relevant qualifications and units of competency underwent transition to meet the Standards for Training Packages and were released in November 2017. Two units of competency have also had typographical errors corrected or minor updates released in December 2018.

However, the relevant qualifications and units of competency have not been reviewed for relevance, content, new work methods or duplication since a period between November 2010 (30 of the 41 units) and December 2012.

Low enrolments and New Components

Generally, the qualifications and units of competency included in the project have good enrolment numbers. The exceptions relate to:

- Select units within the Captive Animal Unit Sector: Consultation indicates that this is most likely due to the units no longer being fit for purpose.

- Units within the Cert IV in Pet Styling: Consultation indicates this qualification may not be required and should be incorporated into the Cert III in Pet Grooming, with additional competencies to be covered by new ACM Skill Sets and current BSB qualifications and Skill Sets.

Consultation with industry during 2018 undertaken directly and through current and recent ACM projects indicates that there is a strong need to update current qualifications to incorporate new components, particularly in relation to:

- Companion and Therapy Animals

  o Increasingly animals are being used in Australia to aid and assist in therapy for a number of disorders, including: hearing and vision impairment; mobility impairments due to physical disability, epilepsy, diabetes, autism spectrum and other developmental disorders; PTSD; dementia; learning difficulties; mental health issues; stress; grief; and drug addiction.

  o Assistance animals have been demonstrated to facilitate a reduction in the services of paid human assistance and can aid in physical functions, such as turning on and off appliances, fetching items for owners, opening doors and alerting owners to visitors. The NDIS are researching and reviewing the effectiveness of Assistance Animals.

  o There are a number of private training businesses delivering non-accredited training in this area.

- Captive Animals

  o Consultations during 2018 have indicated that employers in the captive animal sector believe the current training to be out of date and not fit for purpose, due to changes in the ways that work is being undertaken, the increasing recognition of new animal welfare needs, advances in technology and changes to habitat designs.

  o A specific skill gap has also been identified relating to breeding programs nationally (and internationally) that are looking to ensure that fewer species of animals become extinct. Greater skills are needed in animal conditioning so that stress levels of animals are in the range that is conducive to optimal breeding.

- Mental health issues

  o Murdoch University is currently undertaking research into factors that can protect animal care workers after earlier research demonstrated higher than average levels of mental health issues, including suicide. People working in Veterinary Medicine are nearly four times more likely to commit suicide than the general population.

  o One of the causes is described as Compassion Fatigue, an emotional and physical burden created by the trauma of helping others in distress, which leads to a reduced capacity for empathy toward suffering in the future. Compassion Fatigue affects those working as laboratory animal technicians, veterinary nurses and veterinarians, animal shelter employees, people working with assistance, compassion and captive animals, animal control officers and ancillary staff such as receptionists, volunteers and foster carers. Organisations such as the Peter MacCallum Cancer Centre are developing training to address this issue and are willing to help develop units of competency.

  o The project would be expected to develop generic units relating to mental health issues which would be utilised by qualification across the ACM training package

Data

A review of the enrolment/completion data and available employment data for related occupations outcomes shows that this data is not accurate enough to ascertain true employment outcomes. The data does show that there has been a spike in growth in Animal Attendants and Trainers (the relevant occupations for this project) from 2016 to 2017 (latest available figures), and the future projections have not been adjusted based on this latest data. Consultations with industry have indicated that there is significant growth in the Animal Attendants and Trainers occupations.

Detailed data is included in relevant sections of this Skills Forecast and in the Table A document separately submitted to the AISC.

Ministers Priorities Addressed

Obsolete and duplicate qualifications removed from the system

The project includes review of 10 qualifications to be updated to reflect updated work practices and job outcomes. The project includes review of qualifications that may be deleted, with the potential for the development of additional Skills Sets.

More information about industry's expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed choices

Information will be made available to training providers to assist in developing training and options in growth areas driven by diversification of products and services, and in changes to the ways that job roles are undertaken. Attention will be given to the requirements for meeting increasing training demands from people with disabilities.

The training system better supports individuals to move more easily between related occupations

The qualifications being reviewed are mainly entry and trade level qualifications, which provide foundations for future career pathways. Updating the units will ensure modern and changing approaches to work are addressed and provide better foundational training.

Improved efficiency of the training system through units that can be owned and used by multiple industry sectors

ACM units are currently imported into the AHC Training Package and opportunities for mutual importation will be identified. The Post-trade qualification will be reviewed with a view to utilising qualifications from the BSB training package as replacements.

Foster greater recognition of skill sets

It is likely this project will result in the identification and development of additional Skill Sets, particularly relating to assistance, companion and therapy animals, captive animals and pet grooming.

Consultation Plan

The ACM IRC will oversee and guide consultation, including identification of relevant experts and stakeholders. Initial development work will be undertaken in consultation with relevant subject matter experts. Drafts changes will be created and reviewed by the experts. The drafts will then be made available for public consultation and feedback, with consultation sessions to be held around Australia. Following this, the final drafts will be validated through further consultation and Quality Assurance processes. The Case for Endorsement will be finalised and submitted to the ACM IRC for review and final approval, prior to submission to the AISC.

Broad consultation will be undertaken during the project, covering skills and training needs relating to:

- Companion animals, including dogs, cats, small mammals (e.g. rabbits, ferrets) and other animals;
- Working animals, including guide dogs, assistance animals, sheep dogs, guard dogs, animals used in law enforcement and horses;
- Native animals including mammals, birds, reptiles, fish and crustaceans;
- Exotic animals including pest species (e.g. rabbits and wild pigs);
- Animals used for research or teaching; and
- Animals used for recreation, entertainment or display, including horses and animals in zoos.

Stakeholders for Consultation

Stakeholders may include but will not be limited to the following:

- RSPCA
- Pets Australia
- Pet Industry Association of Australia
- Association of Pet Boarding and Grooming
- Veterinary Nurses Council of Australia
- Australian Veterinary Association
- Guide Dogs Australia
- Australasian Society of Zoo Keeping
- Zoo and Aquarium Association
- Wildlife Health Australia
- Australian Workers Union
- SeaWorld
- Guwara Wildlife Shelter
- Dogs Victoria
- Blacktown Pound

- Australian Institute of Family Counselling
- ANZ Laboratory Animal Association
- Peter MacCallum Cancer Centre
- Children's Cancer Institute
- SAHMRI SA
- Royal Price Alfred Hospital
- Country Fire Authority
- MAS National
- Taronga Zoo
- University of Queensland
- Petucation NSW
- Wagging dogs
- Animal Magic holdings
- Manners n more WA

Other bodies
- RTOs with project units of competency on scope
- Stage and Territory Government departments
- Industry Training Advisory Bodies
- State/Territory Training Authorities

Scope of Project
Overview

Overall timing: 12 months from delivery of signed Activity Order
Expected Date for Endorsement: July 2020

Key Activity Timing

Months	Activity
1	Project planning and briefing, identification of experts and consultation with IRCs
2-3	Workshops with subject matter experts including research and functional analysis
4-6	Development of draft documents in preparation for public consultation
6 - 8	Public Consultation
9	Review of public consultation and Equity Review
10-11	Validation and Quality Assurance, final consultation for STA
12	Approval of Case for endorsement to IRCs and submission to AISC

Summary of Components

All work is within the ACM Training Package.

Qualifications

- Review – ten qualifications
    - Updating – up to nine qualifications
    - Deletion – up to four qualifications
- New – up to two qualifications

Units of Competency

- Review – 41 units
    - Updating – up to 40 units
    - Deletion – up to 20 units
- New – up to 15 units

Skill Sets

- Review – six skill sets
    - Updating and Deletion – no relevant skill sets
- New – up to ten skill sets

Table A

- Table A is submitted separately to the AISC.

Project 2: Research into equine-related training

Research project to identify issues relating to scope of training, prerequisites, performance horse training, equestrian training and equine dentistry across ACM, RGR and SIS Training Packages. This project will be undertaken in cooperation with the Racing, and Sports and Recreation IRCs.

IRC SIGNOFF

This IRC Skills Forecast and Proposed Schedule of Work was agreed as the result of a properly constituted Rural and Related Industry Reference Committee decision.

Signed for and on behalf of the **Animal Care and Management Industry Reference Committee** by its appointed Chair.

Dr. Laurie Milner

[date}

29/4/19

APPENDIX 1: ADDITIONAL TRAINING PACKAGE DETAILS

Qualification Enrolments

To display a robust snapshot of enrolment data, the figures displayed in Table 3 include those reported for qualifications with the same name. Please refer to the legend at the bottom of the table for more details.

Table 3: Enrolments by qualification

Qualification Code	Qualification Name	2014	2015	2016	2017	Total
ACM10117[i]	Certificate I in Animal Studies	589	388	372	419	**1,768**
ACM20117[i]	Certificate II in Animal Studies	8,085	7,217	9,539	9,407	**34,248**
ACM20217[iii]	Certificate II in Horse Care	n/a	n/a	n/a	n/a	**n/a**
ACM30117[i]	Certificate III in Animal Studies	1,105	1,233	1,496	2,020	**5,854**
ACM30217[i]	Certificate III in Animal Technology	115	99	53	34	**301**
ACM30317[i]	Certificate III in Captive Animals	517	720	1,309	1,494	**4,040**
ACM30417[i]	Certificate III in Companion Animal Services	2,294	2,411	1,721	1,578	**8,004**
ACM30517[vi]	Certificate III in Farriery	141	116	122	127	**506**
ACM30617[i]	Certificate III in Pet Grooming	94	193	257	256	**800**
ACM30717[iv]	Certificate III in Horse Breeding	n/a	n/a	n/a	n/a	**n/a**
ACM30817[iii]	Certificate III in Performance Horse	n/a	n/a	n/a	n/a	**n/a**
ACM30918[iii]	Certificate III in Equine Hoof Care	n/a	n/a	n/a	n/a	**n/a**
ACM40117[ii]	Certificate IV in Animal Control and Regulation	136	146	125	153	**560**
ACM40217[i]	Certificate IV in Captive Animals	81	146	303	248	**778**
ACM40317[i]	Certificate IV in Companion Animal Services	988	1,286	1,133	965	**4,372**
ACM40418[ii]	Certificate IV in Veterinary Nursing	7,389	9,181	8,670	7,037	**32,277**
ACM40517[ii]	Certificate IV in Equine Dentistry	8	1	9	16	**34**
ACM40617[ii]	Certificate IV in Pet Styling	3	19	27	27	**76**
ACM40717[iii]	Certificate IV in Horse Breeding	n/a	n/a	n/a	n/a	**n/a**
ACM40818[v]	Certificate IV in Farriery	n/a	n/a	n/a	n/a	**n/a**
ACM50117[i]	Diploma of Animal Technology	219	214	166	145	**744**
ACM50212	Diploma of Veterinary Nursing (Surgical)	8	17	14	22	**61**
ACM50312	Diploma of Veterinary Nursing (Dental)	0	0	0	0	**0**
ACM50317[iii]	Diploma of Horse Stud Management	n/a	n/a	n/a	n/a	**n/a**
ACM50417[iii]	Diploma of Performance Horse Management	n/a	n/a	n/a	n/a	**n/a**
ACM50412[i]	Diploma of Veterinary Nursing (Emergency and Critical Care)	38	45	56	48	**187**
ACM50512	Diploma of Veterinary Nursing (General Practice)	101	126	127	113	**467**
Total		**21,911**	**23,558**	**25,499**	**24,109**	**95,077**

i Data includes qualifications that are superseded by, and equivalent to, the current qualification

ii Data includes qualifications that are superseded by, but not equivalent to, the current qualification

iii This is a new qualification without enrolment data

iv Superseded qualifications are under a different Training Package (data not included)

v Superseded qualifications are at a lower AQF level (data not included)

*vi Superseding qualification is at a higher AQF level (data not included)*

Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

Training Providers, locations and Funding

Currently, there are 190 registered training organisations with ACM training components on scope, and 44 with ACM10[22].

The greatest proportion of enrolments between 2014 and 2017 were in New South Wales (57 per cent), followed by Victoria (17 per cent).
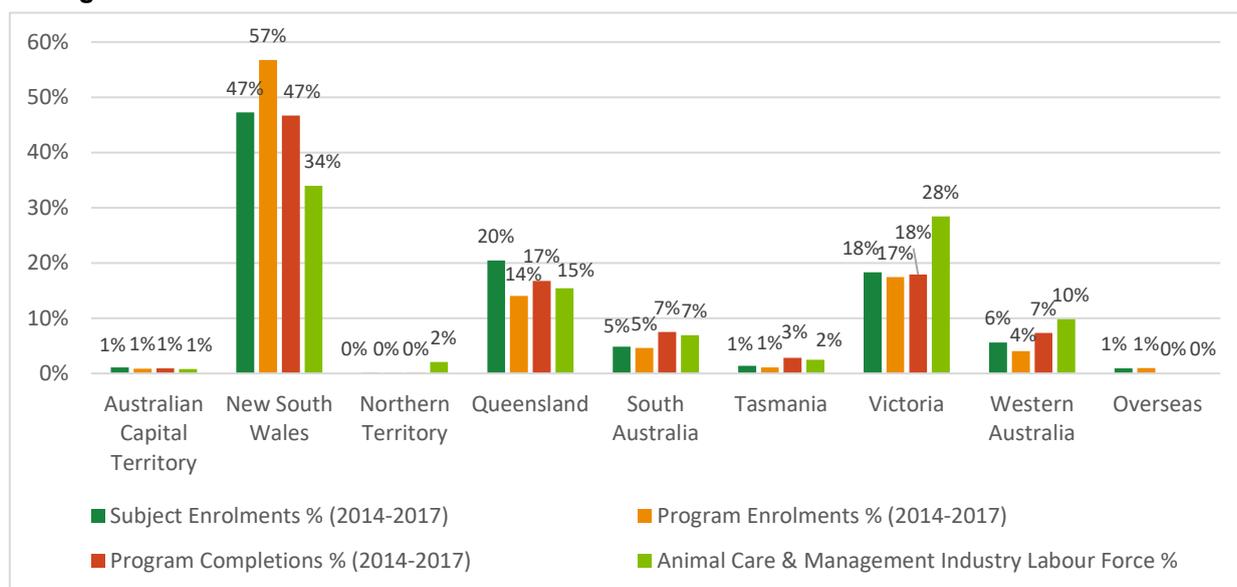
Figure 10: Training Package Delivery Locations and Enrolment Numbers, 2014-2017
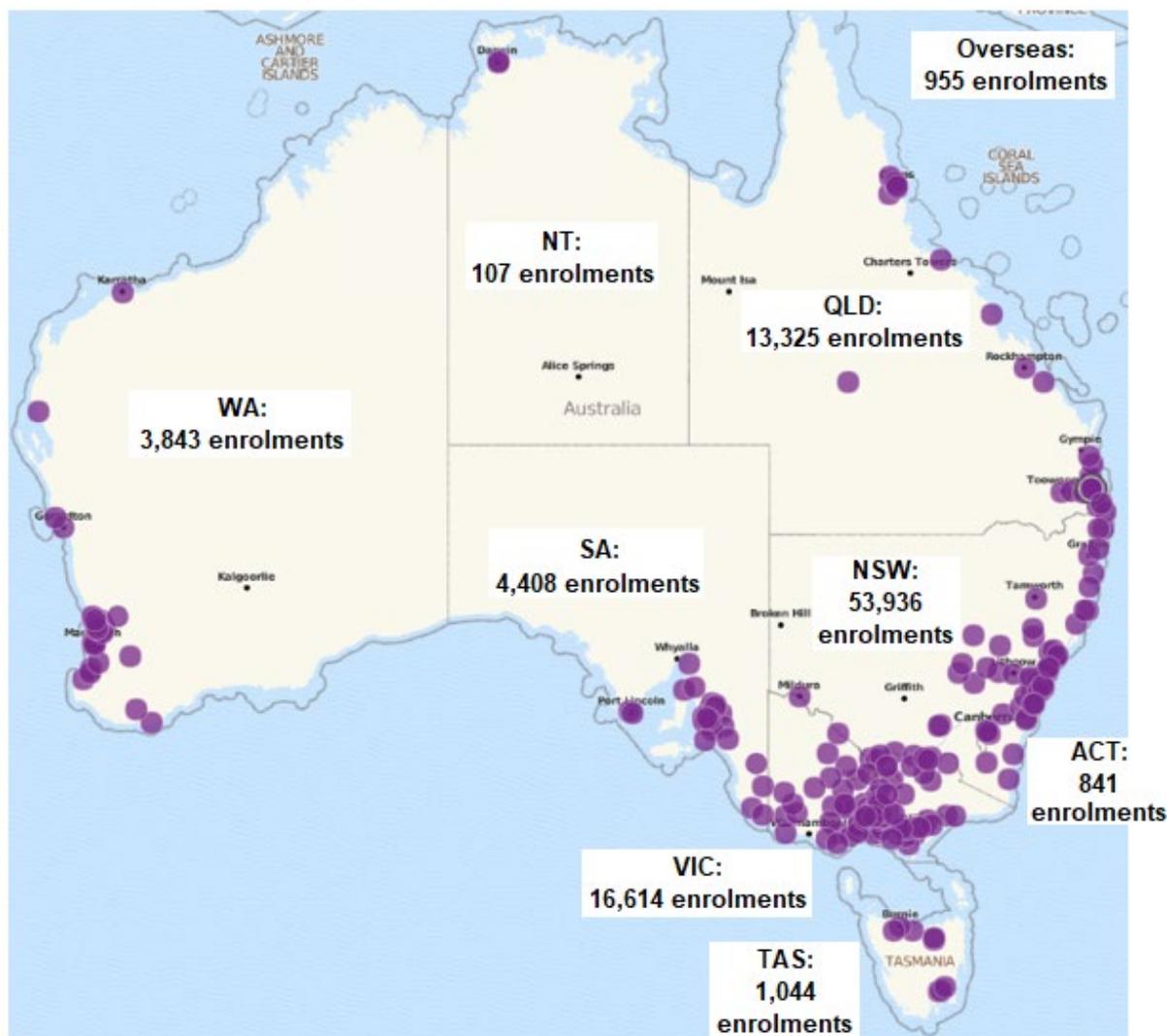
Sources: a) NCVER Atlas of total VET 2017 – data visualisation; b) NCVER VOCSTATS, TVA program enrolments 2014-2017

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[22] training.gov.au

Figure 11: Subject Enrolments, Program Enrolments, Program Completions & Animal Care & Management Labour Force

Sources: a) NCVER VOCSTATS, TVA program enrolments 2014-2017; b) NCVER VOCSTATS, TVA subject enrolments 2014-2017; c) 6202.0 - Labour Force, Australia, August 2018: Table 12. Labour force status by Sex, State and Territory - Trend, Seasonally adjusted and Original

Student Profile

The total student cohort enrolled in ACM qualifications between 2014 and 2017 was 88 per cent female and 12 per cent male (with no significant changes in raw numbers or proportions year-on-year). Veterinary Nursing qualification enrolments were 95 per cent female, while Animal Care enrolments were 84 per cent female.

The highest proportion of students were in the age groups 'under 19' (45 per cent) and '20 to 29 years' (39 per cent). Indeed, VET in schools program enrolments have grown by 417 per cent, from 599 in 2006 to 3,099 in 2017 (although there has been a nine per cent drop since an enrolment high of 3,393 in 2014)[23]. Completions trends for age and sex closely mirror those for enrolments.

The majority of enrolments and completions continue to be by students in major cities, with remote and very remote students accounting for a combined 1.6 per cent of enrolments and 1.1 per cent of completions between 2014 and 2017.

[23] NCVER, 2018, ViS program enrolments 2006-2017

Figure 12: Student Remoteness by Enrolments & Completions (2014-2017)
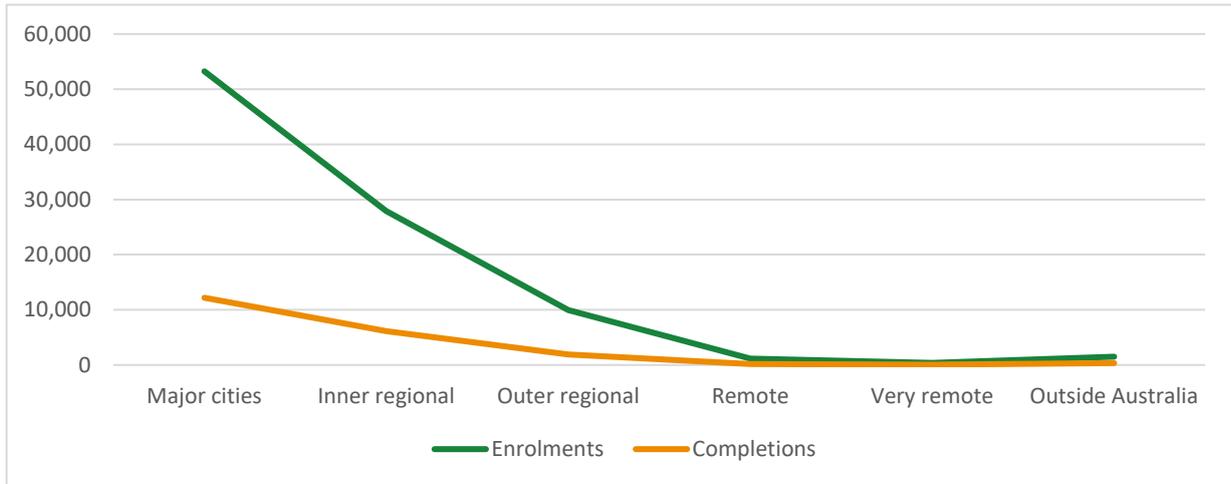
Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

Between 2014 and 2017, Indigenous students represented 4.6 per cent of enrolments (4,314) and 3.5 per cent of completions (723). Comparing 2014 and 2017 figures, Indigenous student enrolments were 14 per cent higher and completions rose by 44 per cent.

Figure 13: Completions and enrolments by Indigenous status
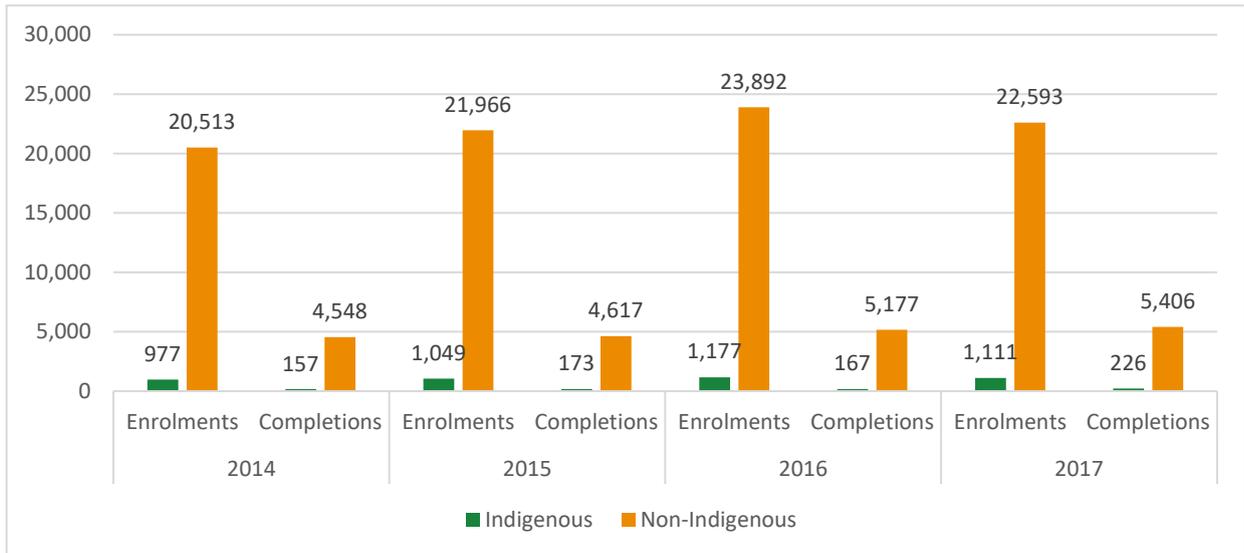
Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

Students with a disability represented 11 per cent of enrolments (9,062) and 14 per cent of completions (2,607). Enrolments by students with a disability were 38 per cent higher in 2017 compared with 2014, and completions were 45 per cent higher.

**Figure 14: Completions and enrolments by disability status**
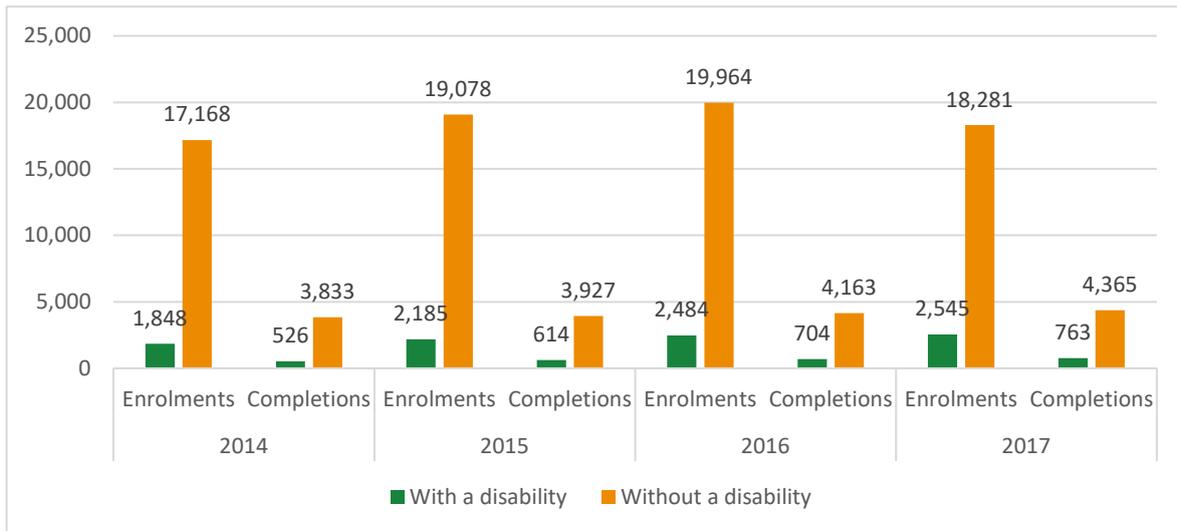
Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

Occupational Outcomes

The majority of ACM Training Package enrolments are intended to lead to the occupations of 'veterinary nurse' (ANZSCO code 361311) and 'animal attendant and trainer '(ANZSCO code 361199).

Figure 15: Qualification Occupations[24] by Enrolments, 2014-2017
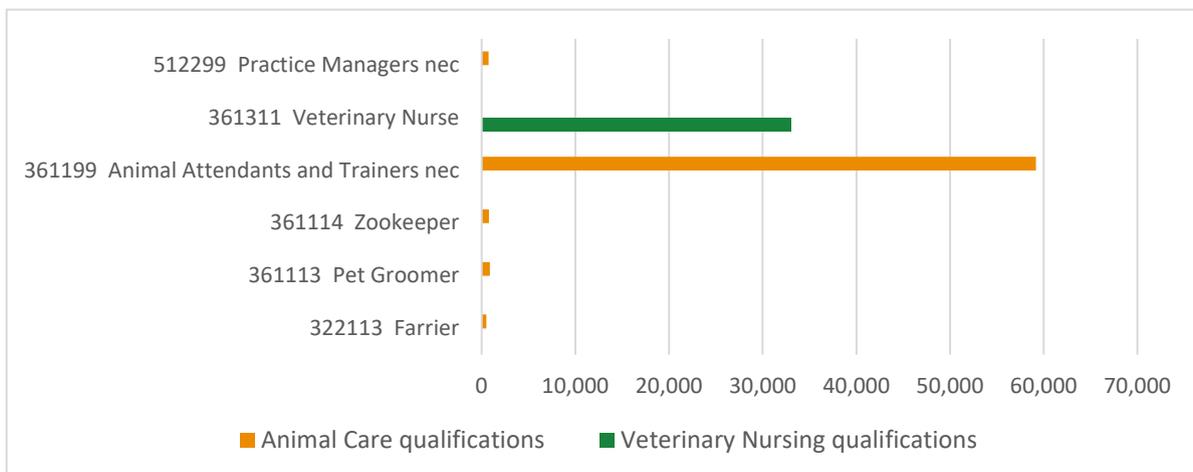
Source: NCVER VOCSTATS, TVA program enrolments 2014-2017

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[24] The primary (or most significant) occupation type that the program relates to if a student's program of study can be classified to more than one ANZSCO code

APPENDIX 2: INDUSTRY REGULATIONS AND STANDARDS

The Australian animal care and management industry sector operates in a complex environment of legislations, regulations and standards.

At the heart of the system is Animal Welfare legislation and regulation which exist at all levels of Australian Government. Each state and territory government is responsible for its own legislation regarding animal welfare, wildlife protection, and vertebrate pests. The Australian Government has no legislative responsibility for animal welfare and vertebrate pests. At the Commonwealth level, the sector has to comply with the *Biosecurity Act 2015* and the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (Cwlth).

Working with this legislation is a network of supporting legislation and regulation which covers:

- Veterinary services (additional notes below)

- Exhibited, Imported and Captive Animal (additional notes below)

- Domestic Animals (additional notes below)

- Animal research and technology (additional notes below)

- Live animal export (additional notes below)

- Game and Feral Animal Control

- Nature and conservation

- Biosecurity

- Environment Protection and Biodiversity Conservation

Veterinary services regulations

State governments oversee the maintenance of veterinary standards through registration boards and veterinary services legislation. Supporting occupations assisting veterinarians are required to meet standards consistent with this level of practice, allowing the veterinarian to meet required standards.

Local governments also coordinate regulations relating to the management of companion animals, including registration, limiting the number of cats and dogs per household, compulsory sterilisation and microchipping. Legislation such as the *Stock Medicines Act*, the *Stock Foods Act*, the *Poisons Act*, and various other food and drug Acts control the use of poisons and specify maximum residue limits for agricultural and veterinary chemicals in human food.

Animal technology regulations

- Gene Technology Act 2000 (Cwlth)

- AS/NZS 2243.3:2002 Safety in laboratories – Microbiological aspects and containment facilities

- Australian code of practice for the care and use of animals for scientific purposes

- Guidelines to promote the wellbeing of animals used for scientific purposes

- Quarantine Act 1908 (Cwlth) and Regulation 2000

- The 3Rs: National Centre for the Replacement Refinement and Reduction of Animals in Research (NC3Rs)

- Physical Containment Level 2 – Animal Facility

- Code of practice for hazardous substances

- Biological hazards in Australian workplaces.

Pet and companion animal regulations

Breeders of purebred and cross-bred dogs and cats are required to comply with the standards in the animal welfare codes of practice available in their jurisdictions, i.e. the *Animal Welfare Code of Practice – Breeding Dogs and Cats (the Breeding Code)* in NSW, or the *Code of Practice for the Operation of Breeding and Rearing Businesses* (2014) in Victoria. Breach of a standard in the codes can result in a penalty infringement notice or prosecution under the animal welfare legislations and related regulations.

Similarly, all training, boarding and shelter establishments are required to comply with relevant codes of practice available in states and territories.

Various licensing systems for dog and cat breeders exist in Victoria and the Australian Capital Territory. In Victoria, breeding establishments are required to register with their local council if the establishment has three or more fertile female dogs and if the establishment sells dogs. In the ACT, the *Domestic Animals Act 2000* requires a person who owns a cat over three months or a dog over six months that is not desexed to have a permit. This applies regardless of whether the person intends for the animal to breed. The *Domestic Animals (Breeding) Legislation Amendment Act 2015* establishes a licensing scheme for breeders. Options for regulating breeders are being considered in New South Wales, being supported by the NSW Government, the RSPCA and the Pet Industry Association of Australia.[25]

A working group on companion animals has been established under the *Australian Animal Welfare Strategy* to develop national standards and guidelines for dogs and cats as a priority task. The standards and guidelines for dogs and cats will provide pet owners clear information about their responsibilities with regard to the health and wellbeing of their pets.

The National Disability Insurance Scheme is utilising a registration system for Assistance Animal Training based on State and Territory requirements.

Captive wildlife regulations

At the Commonwealth level, the sector has to comply with the *Biosecurity Act 2015* and the *Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection) Act 2001*.

The Australian Government regulates the import and export of plants and animals (alive, dead, or parts) through the Department of Agriculture and Water Resources (DAWR). DAWR are responsible for biosecurity and the regulation of international movements (exports and imports) of wildlife and wildlife products.

Each state and territory has its own legislation, responsibilities and standards for the professional exhibition and maintenance of native animals in zoos. Permits for the keeping of native and exotic species in zoos and aquaria are issued by the relevant authorities in each state or territory.

Live animal export legislation

The *Australian Meat and Live-stock Industry Act 1997* and the *Export Control Act 1982* are the two Acts that cover live animal export, and they are administered by Department of Agriculture and Water Resources (DAWR).

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[25] NSW Young Lawyers Animal Law Committee, 2015, 'Companion Animal Breeding Practices in NSW', *<https://www.lawsociety.com.au/cs/groups/public/documents/internetyounglawyers/1036875.pdf>*

APPENDIX 3: INDUSTRY PRIORITY FOR GENERIC SKILLS

Industry Reference Committees were consulted on ranking the generic skills priorities for the industry from a list provided by the Department of Education and Training. The table below outlines the advice received.

Rank	Generic Skill
1	**Language, Literacy and Numeracy (LLN) skills**
	Foundation skills of literacy and numeracy.
2	**Other generic skills**
	Ethical animal use Animal awareness and behaviour Emotional intelligence of animals
3	**Learning agility/Information literacy/Intellectual autonomy and self-management skills**
	Ability to identify a need for information. Ability to identify, locate, evaluate, and effectively use and cite the information. Ability to discriminate and filter information for importance. Ability to do more with less. Ability to quickly develop a working knowledge of new systems to fulfil the expectations of a job. Ability to work without direct leadership and independently.
4	**Customer service/Marketing skills**
	Ability to interact with another human being, whether helping them find, choose or buy something. Ability to supply customers' wants and needs both via face to face interactions or digital technology. Ability to manage online sales and marketing. Ability to understand and manage digital products.
5	**Managerial / Leadership skills**
	Ability to effectively communicate with all functional areas in the organisation Ability to represent and develop tasks and work processes for desired outcomes Ability to oversee processes, guide initiatives and steer employees toward achievement of goals

Rank	Generic Skill
6	**Communication/Collaboration including virtual collaboration/Social intelligence skills**
	Ability to understand and apply the principles of creating more value for customers with fewer resources (lean manufacturing) and collaborative skills.
	Ability to critically assess and develop content that uses new media forms and leverage these media for persuasive communications.
	Ability to connect with others deeply and directly, to sense and stimulate reactions and desired interactions.
7	**Technology use and application skills**
	Ability to create and/or use of technical means understand their interrelation with life, society, and the environment.
	Ability to understand and apply scientific or industrial processes, inventions, methods, etc.
	Ability to deal with increasing mechanisation and automation and computerisation.
	Ability to do work from mobile devices rather than from paper.
8	**Financial skills**
	Ability to understand and apply core financial literacy concepts and metrics, streamlining processes such as budgeting, forecasting, and reporting, and stepping up compliance.
	Ability to manage costs and resources, and drive efficiency.
9	**Entrepreneurial skills**
	Ability to take any idea, whether it be a product and service, and turn that concept into reality and not only bring it to market but make it a viable product and/or service.
	Ability to focus on the very next step to get closer to the goal.
	Ability to weather the ups and downs of any business.
	Ability to sell ideas, products or services to customers, investors or employees etc.
10	**Science, Technology, Engineering and Maths (STEM) skills**
	Sciences, mathematics and scientific literacy.
11	**Design mindset/Thinking critically/System thinking/Solving problems skills**
	Ability to adapt products to rapidly shifting consumer tastes and trends.
	Ability to determine the deeper meaning or significance of what is being expressed via technology.
	Ability to understand how things that are regarded as systems influence one another within a complete entity, or larger system.
	Ability to think holistically.

Rank	Generic Skill
12	**Data analysis skills**
	Ability to translate vast amounts of data into abstract concepts and understand data-based reasoning.
	Ability to use data effectively to improve programs, processes and business outcomes.
	Ability to work with large amounts of data: facts, figures, number crunching, analysing results.
13	**Environmental and sustainability skills**
	Ability to focus on problem-solving and the development of applied solutions to environmental issues and resource pressures at local, national and international levels.