AUSTRALIAN
INDUSTRY
STANDARDS

SKILLS FORECAST 2018

AVIATION

INDUSTRY REFERENCE COMMITTEE

AUSTRALIAN INDUSTRY STANDARDS

CONTENTS

EXECUTIVE SUMMARY

The Aviation industry provides vital services to Australia, underpinning the operation of the national economy, enabling links to geographically isolated regions, providing tourism and helping Australian business continue to grow.

The industry had an estimated annual revenue over $43 billion in 2017 and employs over 88,000 people across the major subsectors: domestic commercial aviation, international commercial aviation, general aviation, air-freight aviation, and aviation support infrastructure.

Both the local and international Aviation industry will continue to grow into the future, with demand for Australian trained, highly skilled professionals continuing to increase, posing a challenge to prevent industry poaching of skilled workers from overseas markets. Despite this, the international stage will provide an exciting opportunity for Australia's aviation capacity to continue to expand.

The industry also faces ongoing challenges from developing and emerging technology, including Remotely Piloted Aircraft Systems, digitalisation, new air traffic control systems and ground operations systems to improve efficiency and improve safety. With increasing volumes of people moving through airports around the world, security in Aviation will remain a strong focus into the future, requiring new systems of tracking and skills to ensure the safety of all personnel involved.

The national Aviation workforce faces challenges within aerodrome operations, the ongoing costs of high-quality training, and the sustainability of running regional airports which provide a vital lifeline to many regional communities across Australia. Working with the industry to ensure the retention of the highly skilled staff, where significant investment in training has taken place, is vital to provide longevity and sustainability to the industry.

The ever-changing regulatory environment will also provide ongoing challenges. It is vital to be able to provide fast responses to changes in regulations and legislation that surround the Aviation industry.

Adam Burford

Aviation IRC Chair

This IRC Skills Forecast was agreed to by the Aviation IRC on 24 April 2018.

IRC SKILLS FORECAST

The Industry Reference Committee (IRC) Skills Forecasts focus on the prioritisation of the skill needs of the industry sectors each IRC has responsibility for. They are developed and reviewed annually and submitted on behalf of the IRC to the Australian Industry and Skills Committee (AISC) for approval.

The document is deliberately brief, it does not seek to identify every issue within every sector. It is a snapshot of a continually evolving story that is intended to alert and inform a wide audience and enhance the industry's capacity to act.

IRCs are required to consult broadly with stakeholders to ensure a whole-of-industry view about the opportunities and challenges for the workforce and the Training Package review work necessary to meet industry needs. The information is then used to develop the four-year IRC Proposed Schedule of Work.

AVIATION IRC SKILLS FORECAST

This annual IRC Skills Forecast will be submitted by the Aviation IRC to the AISC for approval.

The IRC Skills Forecast identifies the priority skill needs of the Aviation industry following a research and stakeholder consultation process conducted by Australian Industry Standards (AIS) on behalf of the IRC.

Once approved by the AISC, the IRC Skills Forecast informs the development of a four-year rolling National Schedule for review and development work within the AVI Aviation Training Package.

More information on the National Schedule can be found at: www.aisc.net.au/content/national-schedule.

Quick Fact

61.65 M

PASSENGERS

*Domestic passengers carried. Up 1.2 per cent from 2016 **

AVIATION INDUSTRY REFERENCE COMMITTEE

The Aviation IRC has been assigned responsibility for the AVI Aviation Training Package. More information about the Aviation IRC and its work can be found here:

www.australianindustrystandards.org.au/committee/aviation-industry-reference-committee/.

Aviation IRC Members

Adam Burford (Chair)
Aviation/Aerospace Australia

Claire Roberts
Airservices Australia

David Mogford
Australian Airline Pilots' Association

Douglas Nancarrow
The Royal Aeronautical Society Australian Division

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Quick Fact

1,044,806 TONNES

International scheduled air freight traffic, up 4.8 per cent from 2016[†]

AVIATION INDUSTRY OVERVIEW

AVIATION INDUSTRY OVERVIEW

The Aviation industry underpins Australian business and tourism and has an estimated annual revenue of $43.54 billion, adding $15.91 billion to the Australian economy in 2017. The industry employs more than 88,000 people across its five main subsectors: Domestic commercial aviation, international commercial aviation, general aviation, air-freight transport and aviation support infrastructure.

KEY AVIATION METRIC

REVENUE
$43.54B

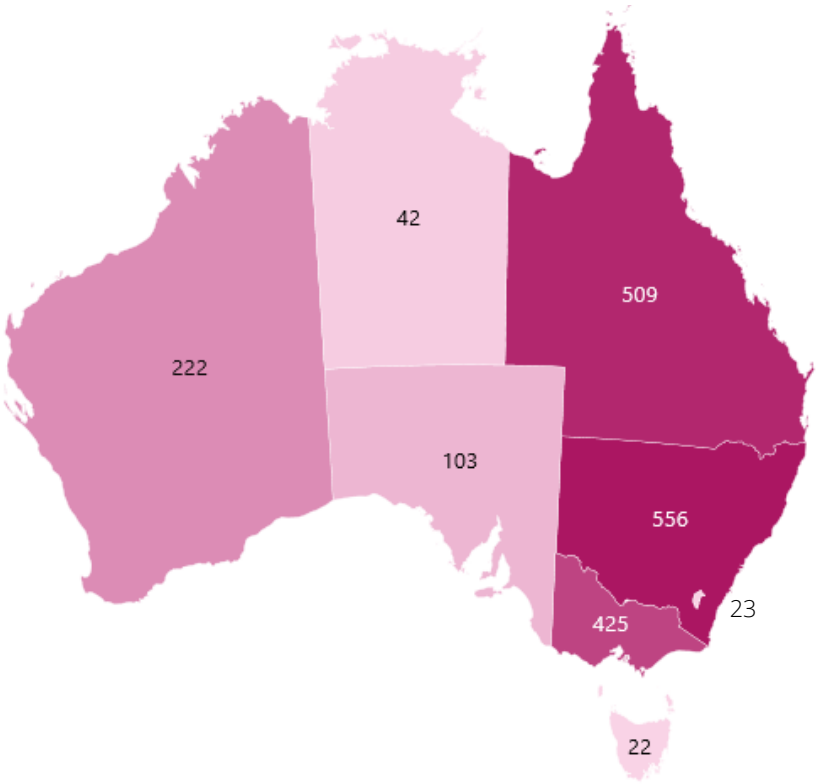
PROFIT
$4.12B

AVERAGE WAGE PER YEAR
$81,708

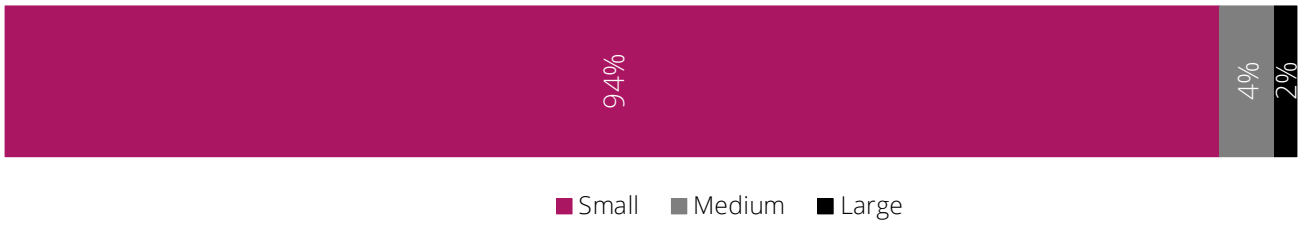
EMPLOYMENT GROWTH TO 2023
11.5%

Source: IBISWorld Reports on Airport Operations, Domestic Airlines, International Airlines, Non-Scheduled Air Transport.

ENTERPRISE DENSITY BY STATE/TERRITORY



AVIATION BUSINESS COMPOSITION



Source: Australian Bureau of Statistics (2018) *8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2013 to Jun 2017*. Australian Government.

EXPLANATORY NOTES

Counts of Australian Businesses

Distinct from the Census and Labour Force data, the Counts of Australian Businesses data uses a top down approach where industries are primarily classified by the single predominant industry class associated with a business' ABN. A limitation of this approach is that organisations with a presence in several States/Territories will be counted only once. This can lead to enterprise figures appearing low for a given state/territory, but it's not that there are no enterprises existing in the state/territory, it's that the headquarters are located elsewhere. A further consideration is that organisations in more than one industry will also be only counted in one industry.

Quick Fact

8.97M

MEL-SYD

*Domestic passengers travelled through Melbourne - Sydney, up 2 per cent from 2016 **

KEY AVIATION STAKEHOLDERS

Employers

Airbus Group Asia Pacific
Airport security providers – Major, Regional and Remote
Airports – Major, Regional and Remote
Alliance Airlines
Aviation Australia
Basair Aviation College
Becker Helicopters
Boeing Australia Holdings Pty Ltd
Cobham Aviation Services
Council operated aerodromes
Dedale Asia Pacific
Flight Academy Australia
Heliwest
Insitu Pacific
Jetstar
LifeFlight
Medical Rescue
Moorabbin Flying Services
Qantas Airways Limited
QantasLink
Regional Express (REX)
Rotor-Lift Aviation
Sharp Airlines
Virgin Australia
Westpac Lifesaver Rescue Helicopter
Yamaha Motor Australia Pty Ltd

Employer Representatives

Australian Helicopter Industry Association
Australian Airports Association
Aviation-Aerospace Australia
Flight Safety Foundation
Regional Aviation Association of Australia
Recreational Aviation Australia
Royal Aeronautical Society (RAeS) Australia
Royal Federation of Aero Clubs
Safeskies Australia

Employee Representatives

Australian & International Pilots Association
Australian Federation of Air Pilots
Australian Services Union
Flight Attendants Association of Australia
Transport Workers Union

Licensing / Regulatory

Airservices Australia
Civil Aviation Safety Authority
Australian Transport Safety Bureau

Government

Department of Defence
Department of Infrastructure and Regional Development
Federal, State/Territory Departments

Industry Advisory

State and Territory Industry Training Advisory Bodies (ITABs)

Training Organisations

TAFEs, Private RTOs, Enterprise RTOs

AVI AVIATION TRAINING PACKAGE

The AVI Aviation Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in aerodrome operations, airport safety, ground operations, cargo services, customer service, aviation transport protection, aviation search and rescue, management and supervision, air traffic control, flight operations (pilots – aeroplane, helicopter, commercial, military, remote and pilot in command) and flight instruction.

The AVI Aviation Training Package comprises 21 qualifications, 44 Skill Sets, and 216 Units of Competency and associated assessment requirements and covers aviation safety, ground operations and flight operations.

The AVI Aviation Training Package contains the following qualifications:

Certificates

Certificate I in Aviation (Foundation Skills)
Certificate II in Aviation Transport Protection (Checked Baggage Screener)
Certificate II in Aviation (Flight Operations-Cargo Services)
Certificate II in Aviation (Ground Operations and Service)
Certificate II in Aviation Transport Protection (Passenger and Non-Passenger Screener)
Certificate III in Aviation (Remote Pilot - Visual Line of Sight)
Certificate III in Aviation (Ground Operations and Service)
Certificate III in Aviation (Rescue Crewman)
Certificate III in Aviation (Cabin Crew)
Certificate III in Aviation (Aerodrome Operations)
Certificate IV in Aviation (Aviation Supervision)
Certificate IV in Aviation (Flight Operations Supervision)
Certificate IV in Aviation (Aircrewman)

Diploma - Advanced Diploma

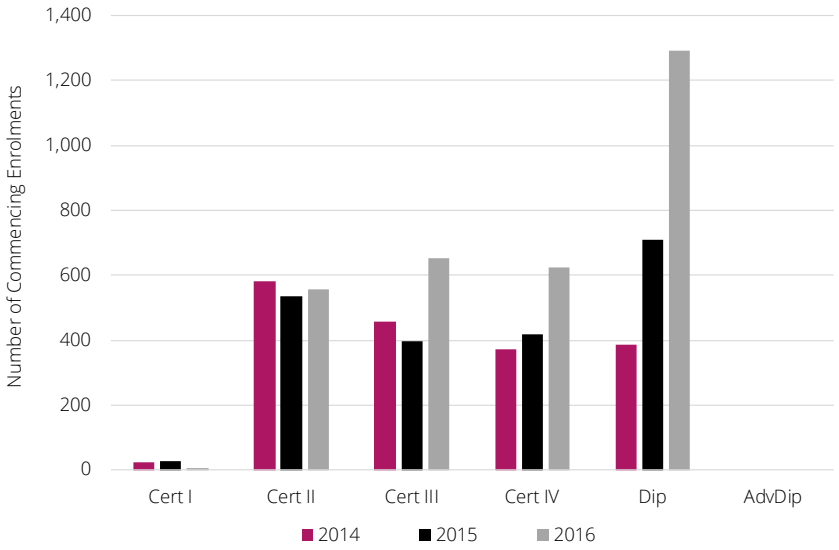
Diploma of Aviation (Air Traffic Control)
Diploma of Aviation (Commercial Pilot Licence - Aeroplane)
Diploma of Aviation (Instrument Rating)
Diploma of Aviation (Commercial Pilot Licence - Helicopter)
Diploma of Aviation (Flight Instructor)
Diploma of Aviation (Aviation Management)
Advanced Diploma of Aviation (Pilot in Command)
Advanced Diploma of Aviation (Chief Flight Instructor)

The AVI Aviation Training Package is in the Scope of Registration of 90 Registered Training Organisations.

TRAINING DATA

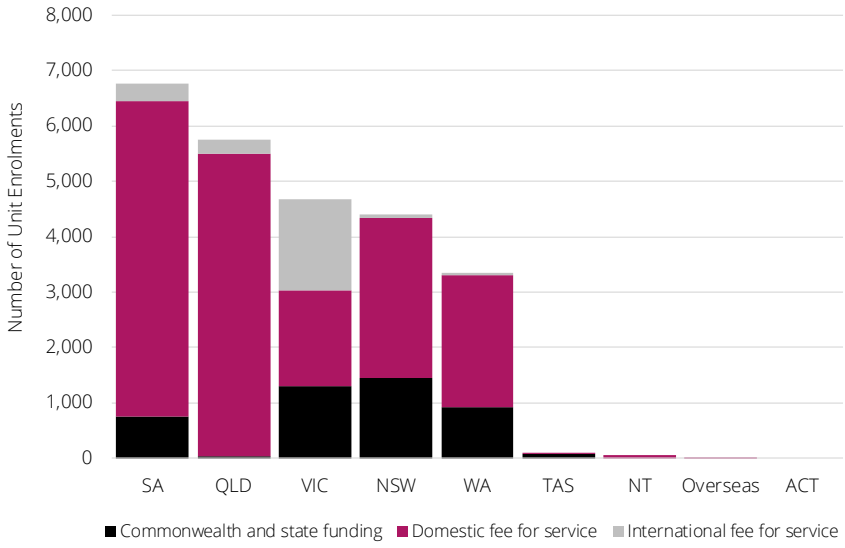
The below charts investigate commencing enrolments by Australian Qualification Framework (AQF) level and funding source by State/Territory, where commencing enrolments of Units are averaged over three years.

COMMENCING ENROLMENTS BY AQF LEVEL



Aviation qualifications have seen significant uptake to 2016, Diplomas experienced a compound growth rate of 49.8 per cent from 2014.

UNIT ENROLMENT COUNT BY STATE AND FUNDING TYPE 2014, 2015 AND 2016 AVERAGE



On average, South Australia has seen the most commencing enrolments in Aviation Units of Competency regardless of funding source. Victoria recorded 25 per cent more international fee for service than Government funded Units of Competency.

EXPLANATORY NOTES

Training Charts

Total VET Activity (TVA) data is collected from all types of training providers and not only those in receipt of Commonwealth or State funding. TVA data collection commenced in 2014.

Exemptions

Where the submission of training data to TVA conflicts with defence or national security legislation or jeopardise the security or safety of personnel working in defence, border protection, customs or Australian police departments, an exemption from reporting training data is available.

Organisations that deliver training for vital services to the community (such as emergency, fire, first aid and rescue organisations) may have received an exemption to submit data to TVA. From 1 January 2016 however, the exemption from reporting applies only in respect of training activity not delivered on a fee for service / commercial basis.

CHALLENGES AND OPPORTUNITIES

INTERNATIONAL AVIATION GROWTH

The international Aviation industry will continue to grow strongly for the foreseeable future, benefiting both Australia and other markets world-wide. This is largely driven by international economic growth in provincial areas, higher disposable incomes in emerging markets, and increased air travel in developing economies. Asian countries are anticipated to account for 66 per cent of the global middle class by 2030[1] which is likely to impact the Australian tourism and business aviation market.

International aviation activity is forecast to grow strongly to 2030, with domestic and international activity through Australia's capitals expected to double[2]. The growing number of people living in Australia that were born overseas will also fuel future growth, further increasing demand for travel through Australian airports.

As air travel demand increases, Australian airlines and airports are facing greater competition for skilled labour, both locally and from other countries. This is already evident for qualified pilots and engineers. Many developing countries are raising pilot wages to attract foreign-trained talent to support their growth[3]. Incentives and methods to retain skilled Aviation industry employees, as well as ensuring the Vocational Education and Training (VET) meets demands of industry, will be highly important in the future.

EMERGING TECHNOLOGY AND AUTOMATION

Australia's Civil Aviation Safety Authority (CASA) has recently stated that the advance in technologies including on-board digital automation, and production methods are likely to continue to challenge the Aviation industry over the next five years[4].

Across the world and within Australia, businesses are investing and developing new information-based technologies to streamline and automate manual processes in airports. These changes are anticipated to reduce workplace health and safety concerns, while changing the skill needs of the workforce. This will increase the efficiency of operations through automated system monitoring, maintenance; enabling more time spent on value-added activities, including personalised customer service[5].

Technology-based solutions will also provide new career paths for existing employees, with opportunities to train and further enhance skills. For example, demand for analytical skills, digital literacy, information management and mobile applications (development and implementation), among others, will continue to rise.

Despite the known effects, aviation employers are already expressing concern about the digital skills capability of key segments of the workforce in the industry. The rising impact of technological change on the skills training of the workforce will need to be closely monitored in the coming years.

SECURITY IN AVIATION TRAVEL

The Aviation industry is under ever-increasing risk from both cyber, and real-word threats. The increasing rate of technological change is putting pressure on airport operators to maintain a robust level of cyber-security. Ensuring the safe handling of personal data of all passengers in airports, and on planes, as well as their personal safety, will continue to be a challenge for aerodrome operators.

Similarly, there is increased risk of real-world attacks, either in the air or in high-density airport facilities. Maintaining high standards of security and training people to identify suspicious behaviour will be necessary to ensure continued reliable safe travel operations.

REMOTELY PILOTED AIRCRAFT SYSTEMS (RPAS)

Remotely Piloted Aircraft Systems (RPAS), also known as Unmanned Aircraft Systems (UAS), or drones, are rapidly emerging in civil aviation. These technologies are expected to play a significant role in the Aviation industry and other secondary industries over the next 20 years. RPAS and other unmanned remote pilot systems are offering enormous opportunities across a wide range of other industries, including scientific research, emergency services and commercial aviation.

The wide-spread rapid adoption of these emerging technologies is presenting challenges to existing policy and regulatory frameworks. Response to these emerging technologies include the redevelopment of the existing Remote Pilot Licensing Certificate, developed to protect the safety of the public by enacting RPAS flight rules and regulations[6].

INTERNATIONAL OPPORTUNITIES

Strong international opportunities exist for Australian aviation training providers, both in terms of overseas operations and involvement in expanding the aviation capacity of other nations. In the field of aircraft manufacturing and engineering, Australia is considered a leader in the provision of through-life services, particularly applied to military aircraft. In addition, there are several aviation engineering and engineering training areas in which Australia possesses significant international expertise. These hold a sizeable potential for international growth.

AIR TRAFFIC CONTROL

Aviation in Australia is undergoing a significant overhaul of operational handling. Air Traffic Control operations are conducted by highly skilled professionals who oversee automated processes to conduct terminal and approach operations. As aircraft activity in Australia continues to increase, the demand for operators who are capable of accurately interpreting large volumes of flight data, communicating with manned and unmanned flights, while maintaining situational awareness of the broader airspace environment will increase and be in significant demand.

The Air Traffic Management systems that used to track civil and military aviation in Australia are currently being upgraded. The new air traffic management system, known as oneSKY, is being implemented, and will enable all air traffic over Australia to be viewed in real-time[7]. The new system will harmonise civil and military air operation, and allow flexible use of air space, improving safety and communications between the two systems.

Whilst the new system will be supported through new or revised VET skills and knowledge, the role of the air traffic controller will increasingly demand "on-the-fly" analysis of large volumes of data, interpretation of diagnostic information, as well as critical thinking and problem-solving.

GROUND OPERATIONS

The advent of autonomous systems and vehicles will improve the efficiencies of loading/unloading cargo, safety, reducing human factor incidents, and turnaround times between flights. However, not all tasks in ground operations will be automated. Most aircraft refuelling tasks and the opening of internal and external aircraft cargo holds for loading and unloading cargo have not yet been designed for automatic or robotic-assisted opening. Within ramp operation roles, tasks are likely to predominantly focus on equipment maintenance skills to support autonomous ground operations equipment.

Examples of new skills and changes to job roles could include the ground operators' role changing to a body-language interpreter, which seeks to identify signals beyond the scope of computer checks. Customer service (including check-in, baggage handling) will also become more about interacting with people and promoting their individual identity.

EMPLOYMENT AND SKILLS OUTLOOK

Quick Fact

27 M

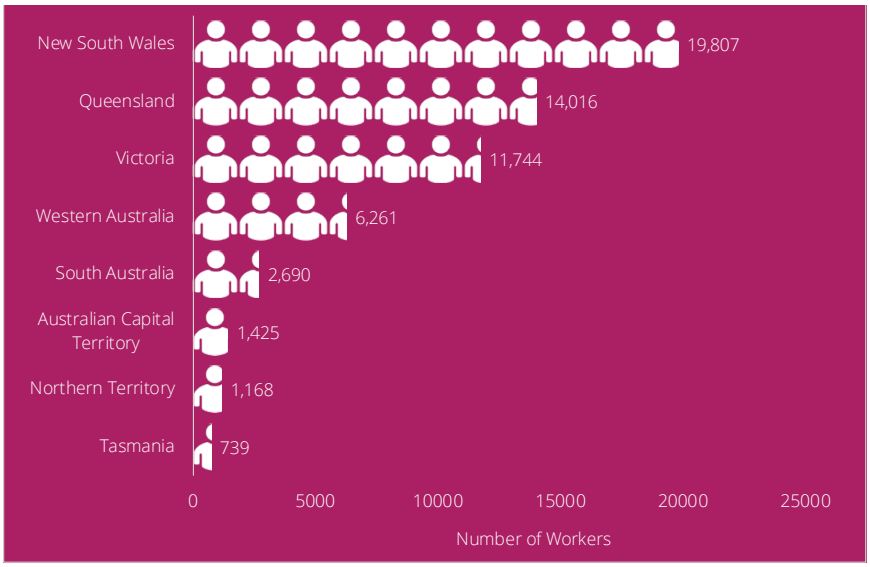
MILLION

Passenger movements through Sydney, Australia's busiest domestic airport[†]

EMPLOYMENT DEMOGRAPHICS

The following charts provide an overview of the Aviation workforce at a glance. These include age profiles, top five occupations by employment, gender-composition by employment type, workers by State/ Territory, and the projected employment for the next five years.

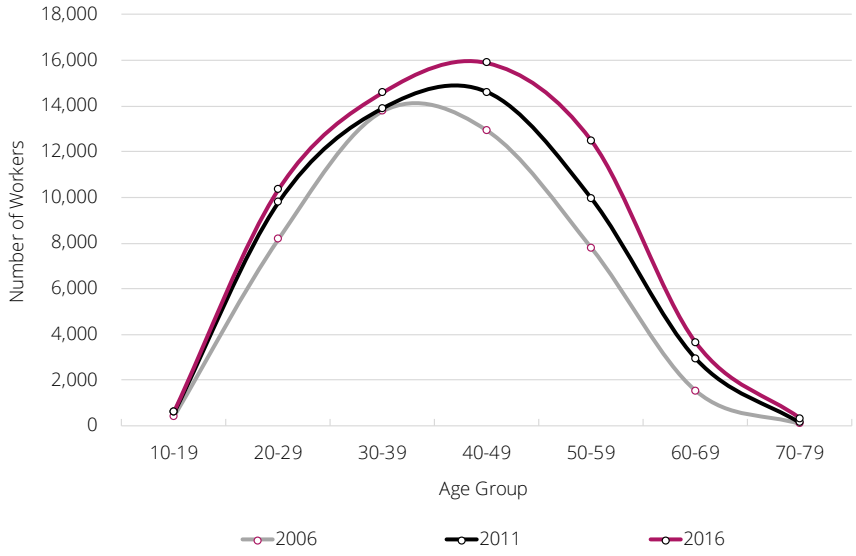
AVIATION WORKFORCE BY STATE/TERRITORY



Queensland makes up 20 per cent of the national population yet accounts for 24.2 per cent of the Aviation workforce. Victoria and South Australia are under-represented for their population size.

Source: Australian Bureau of Statistics (2017) *2016 Census – Employment, Income and Education*. Australian Government.

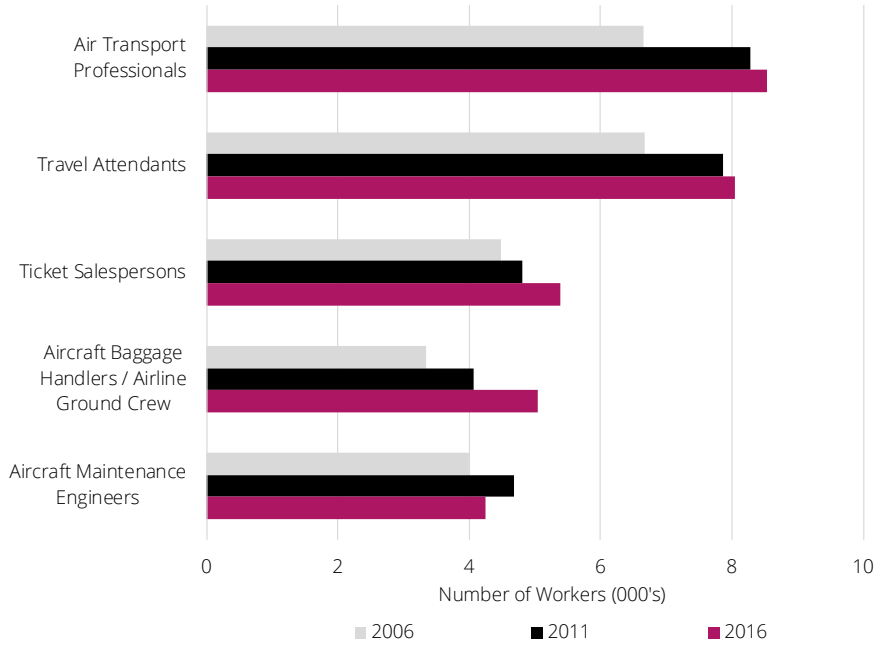
AVIATION INDUSTRY AGE PROFILE – 2006 TO 2016



While there have been increases at every age range over the last ten years, there has been considerable growth in the workforce aged over 40; a 25 per cent growth at 40-49, more than 50 per cent growth at 50-59, and the number of 60-69 more than doubling since 2006.

Source: Australian Bureau of Statistics. *Census – 2006, 2011, 2016*. Australian Government.

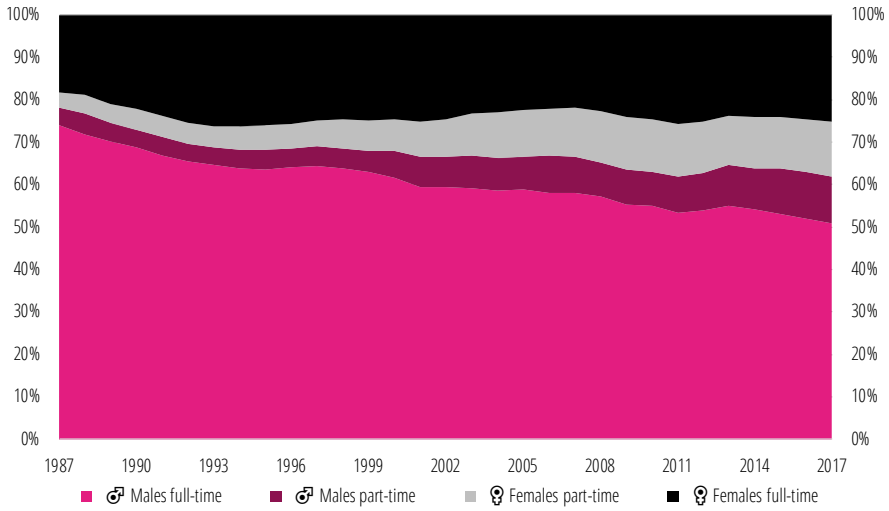
TOP FIVE AVIATION OCCUPATIONS BY EMPLOYMENT



While all the top five occupations in Aviation experienced growth since 2006, Aircraft Maintenance Engineers experienced a decline in 2016 from 2011. Although Air Transport Professionals might take the top spot, this group comprises pilots, air traffic controllers, and flying instructors.

Source: Australian Bureau of Statistics. *Census – 2006, 2011, 2016*. Australian Government.

GENDER BY EMPLOYMENT TYPE



In the last 30 years, the number of women in the Aviation industry has nearly doubled, to approximately 40 per cent of the workforce. This can be largely attributed to an increase in part-time workers in the industry, which now accounts for a third of the female workforce.

Source: Australian Bureau Statistics (2017) *6291.0.55.003 - Labour Force, Australia, Detailed*. Australian Government.

PROJECTED AND HISTORICAL AVIATION WORKFORCE (2005 – 2023)

The number of people in the Airport Operations workforce is expected to remain steady up to 2023. Over the same time, the Freight and Passenger Transport workforce is expected to grow by 12.4 per cent.

Source: IBISWorld Reports on Airport Operations, Domestic Airlines, International Airlines, Non-Scheduled Air Transport.

EXPLANATORY NOTES

Census Data

Each respondent to the Census is asked to provide the industry of their employer at the location of where the person works. This question is designed to address the problem of single organisation operating in several industries, with the assumption being that the individual respondent is typically working in fewer industries than the company they work for. This approach aims to provide better industrial resolution in the data, however it is worth noting that the industry designation is dependent on the individual's interpretation of the question. An example where this could provide misleading data might be a plumber in the Gas Supply industry describing their employer's business (at the location that they are working) as plumbing which would therefore be counted in the Plumbing Services industry.

Labour Force Data

Outside of Census years, the size of an industry's workforce is established by the Australian Bureau of Statistics using the Labour Force survey. This dataset provides a 30-year view of the industry where, like the Census, industry is assigned at the discretion of the individual respondent. Given that the survey is sample-based, it should also be understood that the smaller the industry being measured, the larger the margin of error.

The scope of the Labour Force survey is limited to the civilian population of Australia and therefore members of permanent defence forces are excluded from the survey.

IBISWorld Data

IBISWorld data is comprised from a variety of economic, demographic, government and company data, including the Australian Bureau of Statistics.

AVIATION INDUSTRY SKILL SHORTAGES

On behalf of the Aviation IRC, AIS conducted an online survey for stakeholders, between 4 December and 16 January 2018. The IRC sought feedback on the current skill shortages and the reasons for the shortages, as perceived by industry stakeholders.

AVIATION SKILL SHORTAGES

70.6 per cent of employers reported experiencing a skills shortage in the last 12 months. The occupations reported as being in shortage were:

1. Educators, Trainers and Assessors
2. Pilots
3. Maintenance engineers/technicians
4. Avionic/Software Engineers
5. Aerodrome Reporting Officers

REASONS FOR SHORTAGE

Employers identified the following reasons for the shortage with the most frequent response listed first.

1. Cost/time to achieve the required qualification
2. Wages/salaries considered too low
3. Ageing workforce / current staff retiring
4. Competition from other organisations
5. Geographic location of the vacancy

Quick Fact

↑5.3%

INTERNATIONAL

36.616 million scheduled international passengers carried from 2016 †

PRIORITY SKILLS

The priority skills of the Aviation industry are drawn from stakeholder responses to the Aviation IRC Skills Forecast survey conducted between 4 December and 16 January 2018.

SKILL CATEGORY

In order of priority to the industry, the following skills were identified from the survey as the most important for the Aviation workforce within the next three to five years.

1. PILOTING
2. HEALTH/SAFETY
3. COMPLIANCE
4. ORGANISATIONAL
5. MAINTENANCE/ SERVICING

GENERIC SKILLS

The Generic Skills listed are provided to AIS by the Department of Education and Training. Within the survey, the IRC asked stakeholders to rank these skills in order of importance to the industry. Ranking of the 12 generic workforce skills in order of importance to the Aviation industry are as follows.

1. Science, Technology, Engineering, Mathematics (STEM)
2. Managerial/Leadership
3. Design mindset / Thinking critically / System thinking / Solving problems
4. Technology
5. Learning agility / Information literacy / Intellectual autonomy and self-management
6. Communication / Virtual collaboration / Social intelligence
7. Language, Literacy and Numeracy (LLN)
8. Data analysis
9. Customer service / Marketing
10. Environmental and Sustainability
11. Financial
12. Entrepreneurial

WORKFORCE SUPPLY SIDE CHALLENGES AND OPPORTUNITIES

TRAINER/INSTRUCTOR SHORTAGES

While commercial Aeroplane and Helicopter Pilots are in high demand, the occupation cannot be qualified as being in shortage due to the large number of candidates with basic licences and Skill Sets acquired as recreational or General Aviation (GA) Pilots. With the number of pilots currently predicted to increase substantially in the medium to long-term, the need for qualified and appropriately skilled Flight Instructors, Flight Examiners and Flight Operations Inspectors is also likely to increase.

Similar shortages of Flight Instructors and Flight Examiners (for both aeroplanes and helicopters) are being experienced in other countries, with fierce competition for some specialist training skills. Multi-crew training and advanced simulator training skills are in particularly high demand[8].

The offshoring and/or outsourcing of aircraft maintenance functions by Australian airlines in recent years has had a significant effect on the maintenance engineering training landscape. Several generalist engineering training providers have stopped their aviation courses. There is significant concern within the industry that closing engineering training facilities will impede the ability of training providers and maintenance businesses to rebound or take advantage of international growth opportunities.

AERODROME OPERATIONS

Strong demand for ground operations occupations at airports, including Aircraft Baggage Handlers, Airline Ground Crew, Load Controllers and Airports Works Safety Officers, continues to increase. The demand for these occupations is primarily driven by airport growth, with most major capital city airports being expanded or planned for expansion.

High staff turnover rates are a challenge and risk for the viability of regional and capital city aerodrome operations. The annual employee replacement rate is estimated to be 25 per cent, indicating a lack of depth and experience in many operational and support roles[8].

REGIONAL AIRPORT OPERATING COSTS

Competitive market conditions remain a challenge for regional and remote aerodromes, from both financial and workforce perspectives. The regional airports of Australia play a significant role in the sustainability of rural communities. They enable tourism, logistics, access to health care and education, and connect communities together.

The Australian Airports Association's commissioned report revealed that over 60 per cent of regional airports ran budget deficits in 2014-2015, with nearly 40 per cent expected to have persistent budget deficits over the next ten years. The costs of airport upgrades, maintenance and operation are higher in regional centres, further increasing the financial pressures. Across all regional airports, the expected budget deficit will be greater than $17 million per annum for the next decade[9].

The increasing costs of compliance and security will have major disruption in the management of these regional airports. The aviation workforce in these centres will be at risk of a reduction in employment opportunities. Federal, state and government policy, including privatisation opportunities, will play an important role in the future of regional airports.

TRAINING COSTS

Training providers have indicated that aviation flight training in Australia is widely recognised as being high-quality compared with other countries. This quality comes at a high financial cost. The "poaching" of qualified pilots is an issue affecting industry's willingness to invest in training. Flight training schools have raised significant concerns regarding the dual costs of maintaining separate RTO and Flying School accreditation, with many questioning the cost/benefit ratio of continued operations. High compliance costs drive up training costs, which flow onto the Aviation industry and trainees.

The current cost barriers faced by individuals and businesses are well understood. However, there is a need for the industry to invest more in upskilling its current and future workforce, through public and private funding mechanisms.

REFERENCES

1 Kharas, H. and Gertz, G. (2010) 'The New Global Middle Class: A Cross-Over from West to East', in Li, C. (ed.) *China's Emerging Middle Class: Beyond Economic Transformation*. Washington, DC: Brookings Institution Press.

2 Commonwealth of Australia (2016) *Trends: Transport and Australia's Development to 2040 and Beyond*. Canberra, ACT.

3 PricewaterhouseCoopers (2015) *Tailwinds: 2015 Airline Industry Trends*.

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7 Airservices Australia (2017) *About the OneSKY program*. Available at: http://www.airservicesaustralia.com/projects/onesky/about/. .

8 Australian Industry Standards (2016) *Aviation Workforce Skills Study*.

9 ACIL Allen Consulting (2016) *Regional Airport Infrastructure Study: Economic Contribution and Challenges of Regional Airports in Australia*. Melbourne, VIC.

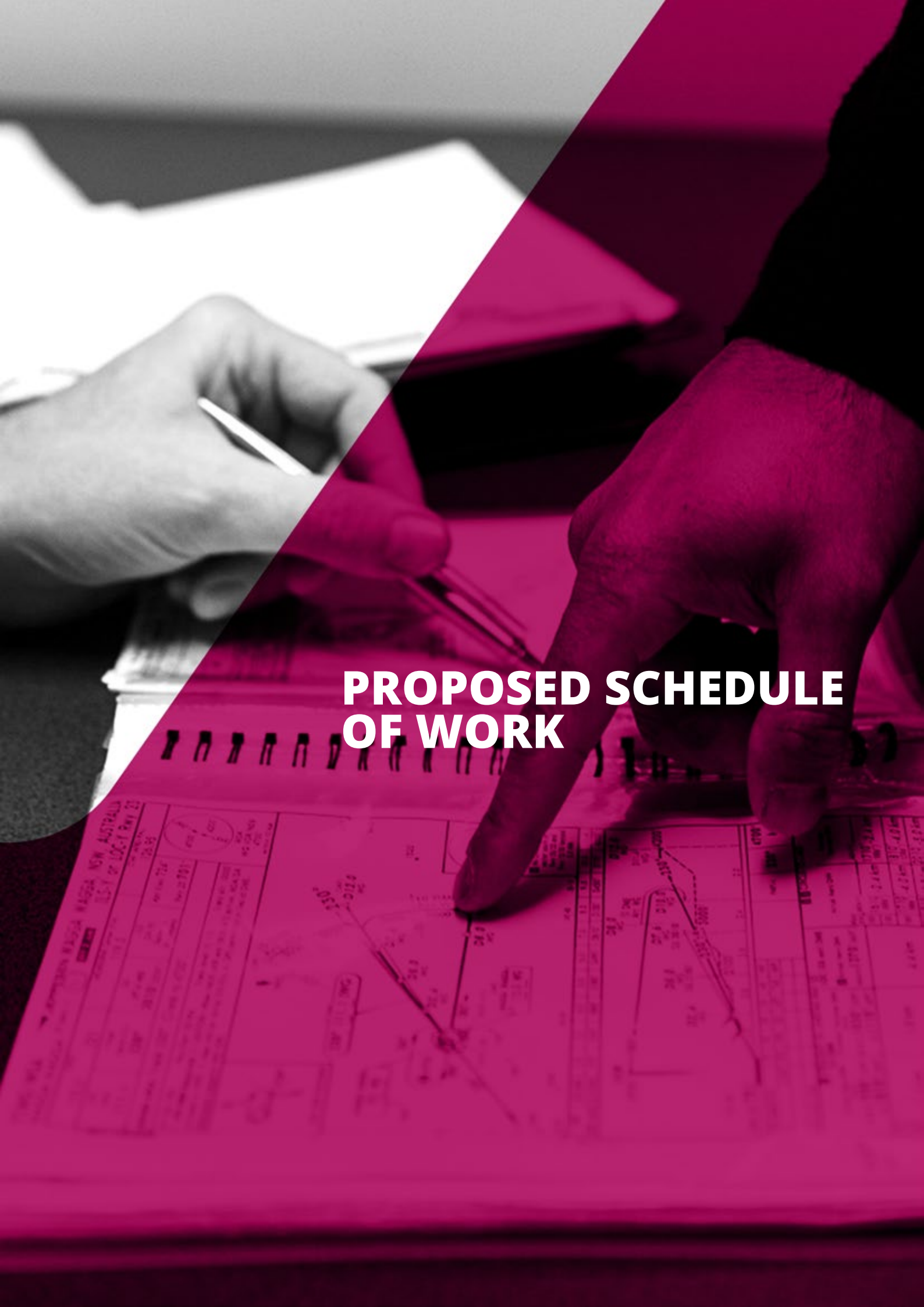
* Bureau of Infrastructure, Transport and Regional Economics (2017) *Domestic aviation activity, Statistical Report.* Canberra, ACT.

† Bureau of Infrastructure, Transport and Regional Economics (2017) *International airline activity, Statistical Report*. Canberra, ACT.

Quick Fact

24.17 M DOMESTIC

*Passengers travelled through regional airports, up 1.3 per cent from 2016**



PROPOSED SCHEDULE OF WORK

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KEY DRIVERS

Emerging aviation technology-based solutions (including the automation of work practices) will provide new career paths for existing aviation employees, with opportunities to retrain and further enhance skills. The increasing demand for analytical skills, digital literacy, information management and mobile applications (development and implementation), among others, will continue to rise. Aviation employers are demanding increased digital skills capabilities and increased skills transferability across operational roles in the Aviation industry.

Ongoing Australian aviation safety regulatory changes will also necessitate periodic review of Training Package materials to ensure they are fit for purpose and meet Australia's national and international aviation safety regulatory obligations. The rising impact of technological change and ongoing aviation regulatory updates upon the skill needs of the workforce require existing AVI Aviation Training Package materials be periodically reviewed and updated to meet these future skill challenges.

PROPOSED RESPONSES

The Aviation IRC has proposed a project to review two flight operations qualifications and associated Units of Competency. This project will consider the effects of technological change and regulatory updates on the industry skills of Flight Operations-Cargo Service and Rescue Crewman roles.

It is proposed that the AVI20116 Certificate II in Aviation (Flight Operations-Cargo Services) qualification be refocused to address the emerging industry skills of allied emergency services personnel (Search and Rescue, Fire, Police et al) that are required to undertake flight duties within fixed and rotary wing operational environments, as part of their wider occupational duties.

The project will also seek to enhance the skills of Rescue Crewmen operating in helicopter emergency services roles through the provision of additional skills pathways as part of the AVI30216 Certificate III in Aviation (Rescue Crewman) qualification, including broader allied emergency services functions within public safety search and rescue, fire, emergency medicine and policing operational roles.

The Aviation IRC will also consult with the Public Safety sector to consider rationalising aviation-focused skills currently contained in the PUA12 Public Safety Training Package for future inclusion in the scope of flight operations skills within the AVI Aviation Training Package.

This project seeks to enhance the vocational skills and professionalisation pathways for emergency services and allied public safety occupations, whilst adopting new advances to technological skills, and ensuring compliance with aviation safety regulatory requirements.

AUSTRALIAN
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STANDARDS

PROPOSED SCHEDULE OF WORK

2018-19

Industry Skills

New or revised civil aviation safety regulations and changing industry skills requirements will require AVI Aviation Training Package development.

Where imported Units of Competency are identified as either deleted or superseded, the IRC may also elect to revise the affected qualification(s) through the IRC Minor Change process.

2019-20

Industry Skills

New or revised civil aviation safety regulations and changing industry skills requirements will require AVI Aviation Training Package development.

Where imported Units of Competency are identified as either deleted or superseded, the IRC may also elect to revise the affected qualification(s) through the IRC Minor Change process.

2020-21

Industry Skills

There are no AVI Aviation Training Package products currently identified for review or development during this forecast period.

Where imported Units of Competency are identified as either deleted or superseded, the IRC may elect to revise the affected qualification(s) through the IRC Minor Change process.

2021-22

Industry Skills

There are no AVI Aviation Training Package products currently identified for review or development during this forecast period.

Where imported Units of Competency are identified as either deleted or superseded, the IRC may elect to revise the affected qualification(s) through the IRC Minor Change process.

AUSTRALIAN
INDUSTRY
STANDARDS

2018-19 PROJECT DETAILS

INDUSTRY SKILLS

Description

The project is to review and develop AVI Aviation Training Package material due to new or revised civil aviation safety regulations, industry feedback and changing operational requirements.

Rationale

The project ensures that the AVI Aviation Training Package meets industry skill requirements and proposed updates to civil aviation safety regulations (see page 14).

Ministers' Priorities Addressed

- The project **does** propose removal of obsolete and superfluous qualifications from the National Register
- The project **will ensure** that information is made available about cargo services and flight operations training delivery to training providers
- The project **will support** individuals transferring flight operational skills across Australian emergency services sectors
- The project **does not** propose creation of Units of Competency that can be owned and used by multiple industry sectors, due to the discrete and targeted nature of the required aviation skills and knowledge
- The project **does** propose the development of additional Skill Sets for the AVI Aviation Training Package
- The project **does not** propose the incorporation of existing accredited course materials into the AVI Aviation Training Package

Consultation Plan

The Aviation IRC will undertake consultations within Australia's aviation emergency services and allied public safety stakeholder networks through the project's duration.

AIS will undertake consultation on the IRCs behalf with State Training Authorities and other key national stakeholders, including seeking public feedback and input into development of material through the project's duration.

Scope of Project

The project is planned to be undertaken from July 2018 to March 2019, with a Case for Endorsement planned for submission in April 2019.

AUSTRALIAN
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STANDARDS

Training Package

AVI Aviation Training Package Release 4.0

Qualifications

Two qualifications to be revised

- AVI20116 Certificate II in Aviation (Flight Operations-Cargo Services)
- AVI30216 Certificate III in Aviation (Rescue Crewman)

Units of Competency

17 Units of Competency to be revised

- AVID0001 Package dangerous goods for air transport
- AVID2001 Accept dangerous goods for air transport
- AVID2003 Prepare freight for flight
- AVID2004 Conduct aviation freight weighing operations
- AVID2005 Accept freight for air transport
- AVID2006 Load and secure aviation freight and baggage
- AVID2007 Unload aviation freight and baggage
- AVIF0002 Provide first aid in an aviation environment
- AVIF2010 Implement regulations and policies during aviation safety and service operations
- AVIF0012 Apply aviation work health and safety procedures
- AVIF2020 Employ fatigue risk management practices in an aviation workplace
- AVIW2030 Be airborne extracted by suspended rope
- AVIW2031 Be airborne extracted using suspended extraction equipment
- AVIW2032 Fast rope from a helicopter
- AVIW2033 Rappel from a helicopter
- AVIZ2050 Maintain security awareness and vigilance in an aviation workplace

Skill Sets

Up to three new Skill Sets may be developed or revised and aligned to flight operations emergency services roles.

AUSTRALIAN
INDUSTRY
STANDARDS

2019-20 PROJECT DETAILS

INDUSTRY SKILLS

Description

The project is to review and develop AVI Aviation Training Package material due to new or revised civil aviation safety regulations and changing industry skill requirements.

Rationale

The project ensures that the AVI Aviation Training Package meets industry skill requirements and proposed updates to civil aviation safety regulations (see page 14).

Ministers' Priorities Addressed

- The project **does not** propose removal of obsolete and superfluous qualifications from the National Register
- The project **will ensure** that information is made available about cargo services and flight operations training delivery to training providers
- The project **will support** individuals transferring skills across the Australian helicopter industry
- The project **does not** propose creation of Units of Competency that can be owned and used by multiple industry sectors, due to the discrete and targeted nature of the required skills and knowledge
- The project **does not** propose the development of additional Skill Sets for the AVI Aviation Training Package
- The project **does not** propose the incorporation of existing accredited course materials into the AVI Aviation Training Package

Consultation Plan

The Aviation IRC will undertake consultations within Australia's aviation networks through the project's duration.

AIS will undertake consultation on the IRCs behalf with State Training Authorities and other key national stakeholders, including seeking public feedback and input into development of material through the project's duration.

Scope of Project

The project is planned to be undertaken from July 2019 to June 2020, with a Case for Endorsement planned for submission in August 2020.

AUSTRALIAN
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STANDARDS

Training Package

AVI Aviation Training Package Release 5.0

Qualifications

Five qualifications to be revised

- AVI10116 Certificate I in Aviation (Foundation Skills)
- AVI40216 Certificate IV in Aviation (Aviation Supervision)
- AVI40316 Certificate IV in Aviation (Flight Operations Supervision)
- AVI50115 Diploma of Aviation (Air Traffic Control)
- AVI50616 Diploma of Aviation (Aviation Management)

Units of Competency

All Units of Competency within the listed qualifications not yet reviewed within the period 2016-20.

Skill Sets

All Skill Sets and associated Units of Competency not yet reviewed within the period 2016-20.

AUSTRALIAN
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AUSTRALIAN INDUSTRY STANDARDS

Australian Industry Standards (AIS) provides high-quality, professional secretariat services to the Aviation IRC in our role as a Skills Service Organisation. AIS provide services to eleven allocated IRCs which cover Aviation, Corrections, Gas, Electricity Supply (Generation and Transmission, Distribution and Rail), Electrotechnology, Maritime, Public Safety (including Police, Fire and Emergency Services, Defence), Rail, Transport and Logistics, and Water industries. AIS supports these important industry sectors using our world class in-house capability and capacity in technical writing, quality assurance, project management and industry engagement in the production of Training Packages.

AIS was established in early 2016, 20 years after its predecessor the Transport and Logistics Industry Skills Council (TLISC) was established in 1996. More information about AIS can be found at http://www.australianindustrystandards.org.au.

- We support industry growth and productivity through our modern innovative approach to establishing skills standards
- We provide high-quality, professional secretariat services to help our allocated industry reference committees develop the skills that industry needs
- We partner with industry to shape the workforce of the future