

AVIATION IRC

Annual Update to Industry Skills Forecast and Proposed Schedule of Work 2020

IRC Skills Forecast and Proposed Schedule of Work (ISF) are required once every three years. In the intervening years SSOs will report on the research questions listed below.

SSOs can also include additional cases for change to training packages as necessary. This will require evidence on why additional proposal(s) should be considered during an intervening year between the full ISFs (see item 4).

It is important that SSOs work with IRCs and other relevant stakeholders to provide evidence demonstrating to the AISC the veracity of claims. Where possible, statistical data should be used as an evidential basis.

SECTION A

1. Inform the AISC of any new industry workforce, skills developments or trends to emerge since the submission of a full ISF.

The Aviation industry continues to face workforce development challenges. The industry is experiencing a period of prolonged growth, and this requires an increase in aggregate labour supply. Rapid technological innovation will also create demand for increased levels of skill specialisation in the industry.

Over the past 12 months advancements in technologies continue to evolve and emerge, resulting in significant skills related implications for the industry's workforce.

New Technologies in Air Traffic Control Operations

Air traffic control systems and aviation operations have been significantly reshaped over the past few years. Digital Control Towers are planned to be trialled in Australia.¹ This technology increases the amount of information available to air traffic controllers. Digital towers can also be integrated into the air traffic management data networks to improve flow management and collaborative decision-making.

The rapid rise of drones is further changing the aviation traffic systems. The industry is undertaking work to improve the capability and functionality of Unmanned Traffic Management (UTM) systems to accommodate for drones in low altitude airspace. One critical challenge is

¹ Australian Aviation. (2019). "Airservices To Trial Remote Digital Tower Prototype at Sydney." Retrieved from <https://australianaviation.com.au/2019/11/airservices-to-trial-remote-digital-tower-prototype-at-sydney/>

integrating a safe and sustainable air traffic system to support the forecast growth in the emerging air mobility industry sector.²

Air Traffic Control operations are conducted by highly skilled professionals who oversee automated processes to conduct terminal and approach operations. New technologies and systems such as OneSky,³ Long Range Air Traffic Flow Management (LR-ATFM), and Airport Collaborative Decision Making (A-CDM) can increase air traffic predictability and reduce controllers' workload, allowing for improved efficiency in airport operations. These technologies demand "on-the-fly" analysis of large volumes of data, interpretation of diagnostic information, as well as critical thinking and problem-solving.⁴ As aircraft activity in Australia continues to increase, there will be a growing demand for operators capable of accurately interpreting large volumes of flight data and communicating with manned and unmanned flights. These new systems can be effectively supported by updated Aviation qualifications.

2. Qualification utilisation:

Identify circumstances in which employers:

- employ people with VET qualifications
- do not employ people with VET qualifications

People with VET qualifications are employed in the following roles:

- Apprentice Engineers, Engineers, Pilots, maintenance training organisation employees, Flight Training Crew, Air Traffic Controllers and Technical Maintenance officers.

Qualification utilisation by occupational group

The occupational group with the largest VET qualification utilisation in the Aviation industry is Technicians and Trades Workers where 82.8% of workers hold a VET qualification. This group is dominated by Aircraft Maintenance Engineers who are generally qualified through the MEA Aeroskills Training Package. The group with the next highest VET qualification utilisation is Community and Personal Service Workers where 42.1% hold a vocational qualification. Travel Attendants make up 81% of this group. The next group, Professionals, is largely comprised of pilots, air traffic controllers and instructors and here 41.5% of workers hold VET qualifications, compared to 44.8% that hold tertiary qualifications. Approximately 38% of both Administrative and Sales workers have VET qualifications which is roughly twice the share of workers that hold a tertiary qualification in those groups. The major occupations in those groups are transport and despatch clerks and ticket salespeople. The Machinery Operators and Drivers group, which is primarily comprised of aircraft baggage handlers and airline ground crew, have about the same ratio of VET qualifications at 37.6%. The share of Managers with a VET qualification (34%) is higher than the share of Labourers with the same type of qualification (32.4%) who have the lowest qualification rate of any kind. Labourers in the Aviation industry generally comprise of commercial cleaners, kitchenhands and freight handlers.

² Airservices. (2019). *Corporate Plan 2019-20*.

³ Deloitte Access Economics. (2018). *Connecting Australia: The Economic and Social Contribution of Australia's Airports*.

⁴ Air Services. (2019). *Corporate Plan 2019-20*.



3. Are employers using training outside the national system and if so, why?

Some aviation enterprises are using enterprise training for short courses that do not require demonstration of competency against a nationally accredited standard i.e. Internal policy and procedures training, and refresher training to maintain and validate competency.

Non-accredited training is used in some circumstances as it can be more flexible, adaptable and efficient for enterprise solutions.

In addition to AQF and enterprise training, the following accredited courses are registered on TGA:

Accredited course	2015	2016	2017	2018
30919QLD - Diploma of Aircraft Maintenance Engineering - Mechanical TB1	172	177	166	95
52821WA - Certificate III in Aviation (Support Services and Operations)	0	0	31	45
52694WA - Diploma of Aviation Management	32	26	27	0
10100NAT - Course in Aviation-Aircraft Operation (Theory)	51	28	5	0
10460NAT - Course in Preparation for Airline Transport Pilot Licence (Aeroplane/Helicopter)	122	182	152	199

4. Identify qualifications with low and no enrolments. Provide reasons and evidence for the need to retain/delete these qualifications.

There are 41 Units of Competency and 2 qualifications that have had zero enrolments in the last four years in the AVI Training Package. 32 of those Units and both qualifications were updated last year to improve relevance to industry. Five of the remaining units are currently in draft undergoing a similar process. The following Units have zero enrolments and no recent update (2016).

AVIP2001 Capture records into a records keeping system

This unit is an elective in AVI20219 Certificate II in Aviation (Ground Operations and Service) and was an elective in the superseded and equivalent qualification. The zero enrolments for the period spanning both qualifications suggest it is not fit for purpose for industry use and may be suitable for deletion from the national register.

AVIY0015 Perform an aerobatic sequence

This unit is included in AVISS00031 Aerobatic Pilot Skill Set. The unit is not included in any AVI Training Package qualifications. Enrolment data for Skill Sets is not reliably captured by NCVER, however the zero enrolment in this unit suggests neither the unit or Skill Set are used by industry and may therefore be suitable for deletion from the national register.

AVIY4057 Perform helicopter deck landing operations

This unit is the only unit in the AVISS00044 - Marine Transfer Pilot Skill Set. The unit is not included in any AVI Training Package qualifications. Enrolment data for Skill Sets is not reliably captured by NCVER, however the zero enrolment in this unit suggests neither the unit or Skill Set are used by industry and may therefore be suitable for deletion from the national register.

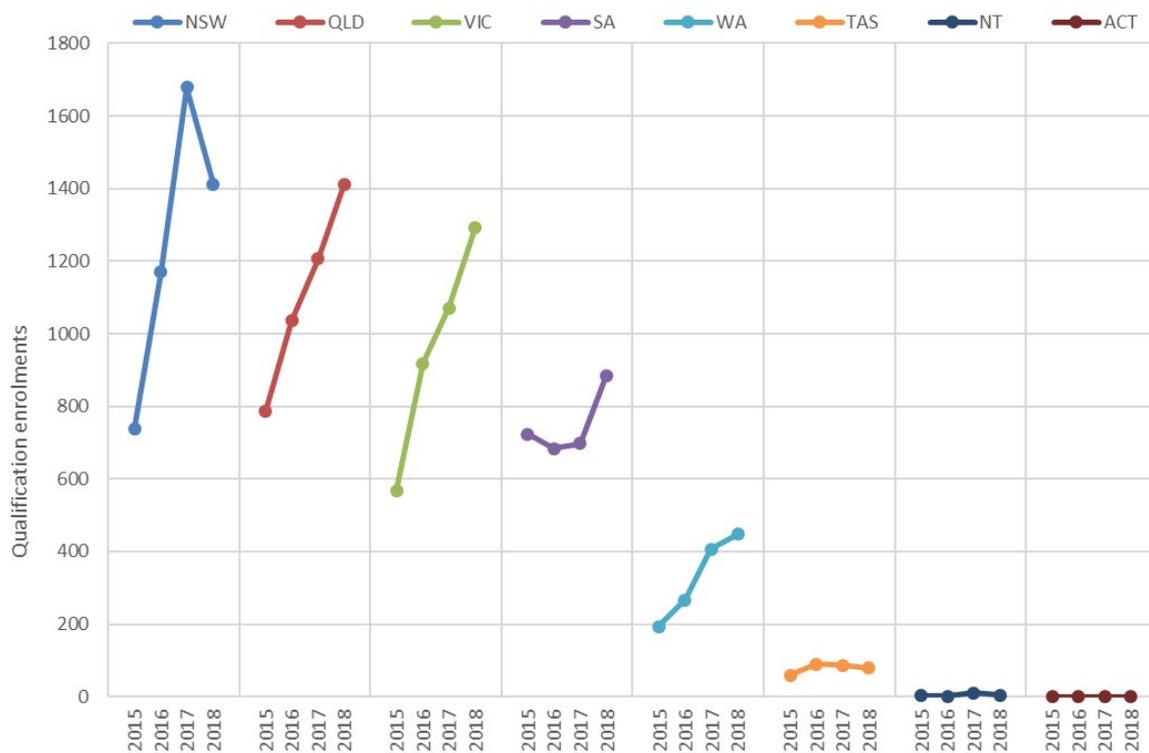
AVIY4061 Perform aerobatic manoeuvres

This unit is included in AVISS00031 Aerobatic Pilot Skill Set. The unit is not included in any AVI Training Package qualifications. Enrolment data for Skill Sets is not reliably captured by NCVET, however the zero enrolment in this unit suggests that neither the unit or Skill Set are used by industry and may therefore be suitable for deletion from the national register.

Qualification enrolments by state/territory

Enrolments in Aviation qualifications have grown strongly in most States and Territories, driven largely by increases in two qualifications; Diploma of Aviation (Commercial Pilot Licence – Aeroplane) and Certificate III in Aviation (Remote Pilot) which have grown by 267.6% and 545.4%, respectively, since 2015. The growth in these qualifications accounts for 92% of the growth in Aviation qualifications nationally. The sharp decline in New South Wales in 2017, is almost entirely due to a decline in Certificate III in Aviation (Rescue Crew Officer), which both rose and declined suddenly around a peak in 2017 suggesting a specific training program has come to an end in the State.

Qualification enrolments by State/Territory



Source: NCVET VOCSTATS

5. Reasons for non-completion of qualifications and skill sets (including micro-credentials). Where students complete qualifications or skill sets, what was the purpose of undertaking them (e.g. finding employment, upskilling)?

Data on reasons for non-completion are unfortunately not available at the qualification and Skill Set level in Total VET Activity (TVA) data. Our analysis relates to the study reason of students that passed, failed or withdrew from units of competency.

'To get a job' was the reason provided in more than half of the results in 2018, which was more than double the next highest reason, 'It was a requirement of my job' (22.8%). Already having a job was the strongest predictor of success, with 'I wanted extra skills for my job' and 'It was a requirement of my job' having the highest pass rates (97% and 94.4% respectively). Despite accounting for 8.8% of results overall, 'Withdrawn' accounted for 21.5% of those who selected 'To try a different career', making it the second most popular reason given for that result type.

Study reason	Passed	Failed	Withdrawn
To get a job	19571	357	1872
It was a requirement of my job	9301	300	248
To try a different career	2539	31	704
For personal interest or self-development	2296	156	348
I wanted extra skills for my job	1898	23	36
Other reasons	1068	7	233
To get into another course of study	725	8	141
To get a better job or promotion	687	39	133
To develop my existing business	171	12	32
To start my own business	150	7	31

6. Identify, where possible, opportunities for use of cross-sector units developed by the AISC.

Future opportunities for use of cross-sector units may be possible in areas of accessibility, soft skills, digital technologies, data analysis and cyber security. These may include the following currently endorsed Cross Sector units:

- BSBXCM301 - Engage in workplace communication
- BSBXCM401 - Apply communication strategies in the workplace
- BSBXCM501 - Lead communication in the workplace
- BSBXDB301 - Respond to the service needs of customers and clients with disability
- BSBXDB401 - Develop and implement recruitment processes that are inclusive of people with disability
- BSBXDB501 - Support staff members with disability in the workplace
- BSBXDB502 - Adapt organisations to enhance accessibility for people with disability

- BSBXTW301 - Work in a team
- BSBXTW401 - Lead and facilitate a team

7. If there are jobs that have experienced changes in skill requirements, provide evidence for these changes and their impact.

Security screeners at major Australian International and Domestic airports are using advance 3D CT Scanning Technology to screen items on entry. It is likely the need for these skills will increase as the equipment is rolled out nationally and expanded into ports and freight terminals. A single unit Skill Set has been developed in the AVI Aviation Training Package and is due for submission to AISC in 2020. Once the equipment is in use in all major airports and terminals, a review will be undertaken to determine if these skills are core to all learners undertaking a Certificate II in Transport Security Protection.

The Australian Government is proposing to introduce a new screener accreditation scheme. If approved, the scheme will change the training requirements for new aviation security screening officers. These changes may affect the Certificate II in Transport Security Protection.

8. Identify barriers to employers hiring apprentices and trainees. Are employers using alternative pathways/labour strategies to address these barriers?

The length of an apprenticeship is four years which is challenging for competitive and volatile industries where organisations experience difficulties retaining skilled staff such as those within the Airline industry. There is also some limitation on the locations where apprentices can be employed and undertake their training.

Some roles are required to be undertaken by fully qualified people to meet safety and regulatory requirements. These roles are not suitable for apprentices and trainees due to the supervision requirements.

9. Other relevant activities.

More than 500 aircraft, provided by over 150 operators, were available to support the recent firefighting efforts across Australia. These assets have a vital role in the aerial firefighting capability to support firefighters on the ground to protect communities, essential infrastructure and the environment. The Aviation IRC has indicated their intent to contribute to the review and development of skills identified in the 2019 Public Safety Case for Change for aviation related roles and functions used by fire and emergency management agencies.

SECTION B

STAKEHOLDER CONSULTATION

An extensive consultation process has been undertaken in the development of the Annual Update of the Skills Forecast and Proposed Schedule of Work.

Stakeholders involved in the consultation process;

13 IRC Members (see listed earlier in the Skills Forecast)

1003 AIS Aviation specific components of the AVI Aviation Training Package subscribers

8 State Training Authorities

Ongoing Consultation

The AISC seeks to ensure SSOs undertake broad and meaningful (e.g. face-to-face) industry consultation, including rural, regional and remote stakeholders.

Provide details of employers and businesses for each sector and state that SSOs have met with as part of:

1. ongoing engagement and validation with industry and stakeholders
2. collection of industry intelligence
3. promotion of the VET system
4. cultivating and maintaining networks and partnerships with industry including engagement in rural and regional areas.

This section relates to ongoing consultation as well as that during specific training package development work, as per Schedule 3 (Items 3, 12, 14, 18 and 19) of the funding agreement.

Entity Name	Sector	State	Rural/Regional/Remote (RRR)	Activity
Airbus Group Asia Pacific	Aviation	International		1,2,4
Airport security providers	Ground Operations	National	Rural/Regional/Remote	1,2,4
Airports	Aviation	National	Rural/Regional/Remote	1,2,4
Alliance Airlines	Flight Operations	International	Rural/Regional/Remote	1,2,4

Basair Aviation College	Flight Operations	Multi-state	Regional	1,2,3,4
Becker Helicopters	Flight Operations	State	Regional	1,2,4,3
Boeing Australia Holdings Pty Ltd	Aviation	National		1,2,4
Cobham Aviation Services	Aviation	State, multi-state, national and international	Rural/Regional/Remote	1,2,4
Council operated aerodromes	Aviation	National	Rural/Regional/Remote	1,2,3,4
Dedale Asia Pacific	Aviation	International		1,2
Flight Academy Australia	Flight Operations	State		1,2,3
Heliwest	Flight Operations	WA	Rural/Regional/Remote	1,2,4
Insitu Pacific	Aviation	State	Yes	1,2
LifeFlight	Flight Operations	State	Rural/Regional/Remote	1,2,3,4
Medical Rescue	Flight Operations	State	Rural/Regional/Remote	1,2,3,4
Qantas Airways Limited, including	Aviation	International	Rural/Regional/Remote	1,2,3,4

Jetstar and QantasLink				
Regional Express (REX)	Aviation	National	Rural/Regional/Remote	1,2,3,4
Rotor-Lift Aviation	Aviation	State		1,2,3
SAAB Australia	Aviation	National		1,2
Sharp Airlines	Flight Operations	State	Rural/Regional/Remote	1,2,4
Virgin Australia	Aviation	International		1,2,3
Westpac Lifesaver Rescue Helicopter	Flight Operations	Multi-state	Regional/Remote	1,2,3,4
BAE Systems Pty Ltd	Aviation	International	Regional	1,2,3
Northrop Grumman Australia	Aviation	International		1,2,3
THALES Australia	Aviation	International	Regional	1,2,3,4
Tiger Air	Aviation	National	Regional	1,2
Air Services Australia	Aviation	National	Rural/Regional/Remote	1,2,3,4

Australian Airports Association	Aviation	National	Rural/Regional/Remote	1,2,3,4
Australian Helicopter Industry Association	Aviation	National		1,2,3
Aviation-Aerospace Australia	Aviation	National		1,2,3
Flight Safety Foundation	Aviation	International		1,2
Recreational Aviation Australia	Aviation	National	Rural/Regional	1,2,4
Regional Aviation Association of Australia	Aviation	National	Rural/Regional/Remote	1,2,3,4
Royal Federation of Aero Clubs	Aviation	National	Rural/Regional/Remote	1,2,3,4
Safeskies Australia	Aviation	National	Rural/Regional/Remote	1,2,3,4
Women in Aviation	Aviation	National	Rural/Regional/Remote	1,2,3,4
Australian & International Pilots Association	Flight Operations	International		1,2

Australian Federation of Air Pilots	Flight Operations	National		1,2
Flight Attendants Association of Australia	Flight Operations	National		1,2
Transport Workers Union	Aviation	National		1,2,3
Aerial Application Association of Australia	Flight Operations	National	Rural/Regional/Remote	1,2,3,4
Australian Youth Aerospace Association (AYAA)	Aviation	National		1,2,3

SECTION C

PROPOSED NEW WORK

2020-21

Currently there are no AVI Aviation Training Package products currently identified by the Aviation IRC 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 upgrade process.

2021-22

Air Traffic Controller - Review

The Aviation IRC has proposed a project to review the Diploma of Aviation (Air Traffic Control) and associated Units of Competency to ensure the skills and knowledge requirements outlined in the qualification address changes in technology, and national standards including safety regulations associated with the role of an air traffic controller

2022-24

Aviation 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.