



Australian
Industry and
Skills Committee



AVIATION

AIR TRAFFIC CONTROL

Case for Change

Name of allocated IRC: Aviation

Name of the SSO: Australian Industry Standards

1. Administrative information

For a list of the products proposed to be reviewed as part of this project, please see **Attachment A**.

Name of IRC(s):

Aviation

Name of SSO:

Australian Industry Standards

1.1 Name and code of Training Package(s) examined to determine change is required

AVI Aviation Training Package.

2. The Case for Change

For information on the job roles to be supported through the proposed qualifications updates, enrolments data, completion rates, and the number of RTOs delivering these qualifications please see **Attachment B**.

2.1 Rationale for change

This Case for Change is based on an emerging technology program called One Sky which aims to harmonise civil-military air traffic management systems (CMATS), providing new levels of operational efficiency and safety. These changes will impact on Air Traffic Control job roles and potential new job functions.

Airspace is being transformed at a rapid rate by technology that will allow the transportation of people, products, and services in a faster and more efficient way.

The industry is seeing astonishing growth in drone use in industries such as mining, farming and emergency services, with new applications for the technology appearing every day. This transformation requires skills development to ensure our skies remain safe for traditional aircraft, new airspace users and the community.

In response, this project proposes to review the Diploma of Aviation (Air Traffic Control) and associated Units of Competency to ensure the skills and knowledge requirements contained in the qualification address changes in technology, and national standards including safety regulations associated with the role of an air traffic controller.

If this review is not completed, the qualification will not be aligned with current skills requirements and limit the development of air traffic controllers.

2.2 Evidence for change

The Aviation IRC conducted industry research, held discussions with Airservices Australia, Defence and CASA and conducted an industry consultation webinar. The IRC identified that the impending technological upgrade changes would leave knowledge and procedural skill gaps for the existing 1700 air traffic controllers. The Australian Government's job outlook statistics estimates moderate growth in the number of workers over the next 5 years (<https://joboutlook.gov.au/occupations/air-traffic-controllers?occupationCode=231112>)

The OneSky program will replace the current system and is expected to be rolled out by 2023 to harmonise civil and military air operations. Existing and new air traffic controllers all need to be trained in the operation of this new technology.

Airservices is also looking into a Flight Information Management System (FIMS) and a prototype is to be built with industry partners over coming months. It will look specifically into unmanned traffic management (UTM) systems and identify options for integration of unmanned systems with conventional airspace users while maintaining safety and security.

2.3 Consideration of existing products

Existing units of competency do not address the current skills required to operate the latest technologies in air traffic control operations.

The existing Training Package products for this qualification are contained in the Aviation Training Package and the existing Units of Competency are proposed to be updated to incorporate technology and industry changes. There are no other suitable units available in any other training package to meet this specific need.

2.4 Approach to streamlining and rationalisation of the training products being reviewed

Given the specialised nature of air traffic controllers, the aviation industry requires the qualification to be specific to their occupational needs. Therefore, this project will not streamline multiple qualifications but will rationalise AVI superfluous units of competency, which will be deleted where possible.

3. Stakeholder consultation

3.1 Stakeholder consultation undertaken in the development of Case for Change

*For a full list of industry-specific stakeholders that actively participated in the stakeholder consultation process undertaken to develop the Case for Change, please see **Attachment C**.*

The initial request for this revision was from CASA, Defence and Air Services Australia who are all represented on the Aviation IRC.

Note: Australia has two main users of Air Traffic Control services—Airservices Australia and the Defence.

Defence is responsible for controlling all aircraft operating within military-administered airspace, which includes services to all civilian aircraft in that airspace. Defence is also represented on the Aviation IRC and support the request.

Development of the Case for Change involved consultation with stakeholders via the following communication mechanisms:

- Stakeholder webinar
- Face to Face meetings (Virtual)
- AIS Website
- Stakeholder networks
- Teleconferences
- Emails

Airservices Australia operates from 29 air traffic control towers which include all nine major city airports in addition to 20 regional and remote airports. Operators from these sites will be included in the consultation as directed by Air Services Australia.

3.2 Evidence of Industry Support

*For a list of the issues raised by stakeholders during consultation and the IRC's response to these, please see **Attachment D**.*

The proposed revision is supported by the regulators - CASA and Air Services Australia. Industry support has been provided by Australian Airports Association, the Australian Airline Pilots' Association (AusALPA), Regional Aviation Association of Australia, the Department of Defence and airline operators Qantas and Virgin Australia.

The following evidence of industry support is from post webinar feedback held on Mach 15, 2021:

- *Updating current AVI50115 Diploma with the technological skills and knowledge presently required (where gaps exist) for the ATC role is achievable. It is preferable for any updates deemed necessary to be achieved through adding skills and knowledge outcomes to existing units of competency, as opposed to creating additional units of competency.*

Reference to changes to ATC systems and the technological impact of these changes on skills and knowledge requirements for future ATC roles may not be known until after the first draft of the updated qualification, which is due for release in November this year.

- *It is important to note that the rapid shift in ATC systems and outputs may present an opportunity for additional updates to the AVI TP within the next 12-18 months, and possibly after the cfc for this round of updates will be submitted for approval in June 2022. **(Flights Ops RTO Vic)***
- *The next Diploma update will be more critical than this one. Much of the proposed future technology will change the systems we use but fundamentally the skills we use as Enroute ATCs will not change dramatically in CMATS.*

*Remote tower technology is a different scenario. This will fundamentally change the way a TWR controller operates, their situational awareness and the systems available to assist them. However, this technology is still some time away and would require a significant change to the way we train Tower ATCs. UAVs (drones) and how we manage them is still some time off. Until we know what service CASA want us to provide, it's difficult to identify the skills set required. **(Air Services, RTO Melbourne)***

- *We support the Air Traffic Control Project Case for Change **(Industry Advisory Body, WA)***

Please see attachment D

3.3 Proposed stakeholder consultation strategy for project

*Note: For a full list of industry-specific stakeholders who are planned to be contacted to participate in the stakeholder consultation process undertaken for this project, please see **Attachment E**.*

- Key Industry stakeholders have been identified in consultation with industry regulators, associations, and the Aviation IRC.
- AIS, on behalf of the Aviation IRC, will promote the opportunity to contribute through stakeholder webinars, the AIS website, EDM's, AIS newsletter and public notifications. Stakeholders will also be notified of key milestones throughout the life of the project, including requests for feedback on draft materials.

Stakeholder engagement and consultation will occur over the life of the project via a combination of the following methods:

- Direct engagement: Face to face consultations, Site visits, Phone, emails, video/teleconferencing
- Industry forums and conferences
- Webinars
- Online feedback mechanisms
- STA direct engagement

Given the size of Australia and all stakeholders are not centrally located in major cities, a range of consultation strategies will be used so stakeholders in rural, regional, and remote areas, and in smaller jurisdictions have multiple avenues to provide feedback. The project will leverage the Australian Airports Association and the Regional Aviation Association of Australia stakeholder network.

This includes but is not limited to, online/video consultation, email correspondence and promotional activity via targeted communications including social media. A recently developed Engagement hub on the AIS

website provides a one stop portal for information about how all stakeholders can participate and inform Training Package development work.

4. Licencing or regulatory linkages

There are no licencing requirements contained in this qualification. However, the qualification addresses the skills and knowledge requirements to meet regulatory standards for air traffic controllers. This includes:

CASA standards ([Manual of Standards Part 172](#)—Air Traffic Services)

[Part 172 of CASR 1998](#) specifies the regulatory framework for the approval of air traffic services providers. It includes standards for air traffic facilities, safety management and the provision of air traffic services.

Part 172 affects:

- Airservices Australia
- aerodrome operators
- the aviation community
- Department of Defence, if it chooses to certify its air traffic control operations under Part 172. (However, Defence does not require approval for the provision of services to civil aircraft as it operates under its own Act)

5. Project implementation

5.1 Prioritisation category

It is proposed that this review be progressed as a routine project.

In line with the AISC Prioritisation Report and to coordinate the release of updated products prior to the scheduled implementation of OneSky in Australia, the IRC recommends a routine update and implementation of this project.

5.2 Project milestones

- AISC project approval – June 2021
- Draft 1 consultation – November 2021
- Stakeholder validation – March 2022
- Quality Assurance – April/May 2022
- Final consultation with states and territories – June 2022
- CfE submitted for approval – 30 June 2022.

5.3 Delivery or implementation issues

Implementation issues raised by stakeholders and how these issues will be considered as part of the update/review include training and assessment in the COVID environment. The key concern currently is the restricted access and use of simulators because of COVID protocols. This limits the exposure to training scenarios that are essential to maintain controller skills in high intensity decision making and problem-solving situations.

Whilst Air Traffic Control jobs are largely unaffected by COVID, other issues that may present include:

- Cognitive underload
- Monotony

- Deviating from foundation practises
- Managing spikes in traffic

Once the OneSky program rollout comes online, controllers will need access to training to operate the new systems and complete assessments and Air Services requirements before returning to duty.

6. Implementing the Skills Minister’s Priority reforms for Training Packages (2015 and October 2020)

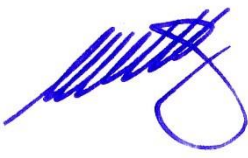
The project submission will support industry’s expectations for training delivery and provide a revised Companion Volume Implementation Guide (CVIG) to support delivery of the new products.

The qualification will be developed to ensure it is applicable to roles related to Air Traffic duties in Australia. The qualification and units of competency are highly technical and relate to this specific role. This development will also enable air traffic controllers to move between States and Territories.

The qualification and associated Units of Competency are only used in aviation Air Traffic Control contexts. Australian Defence also use this qualification to comply with all civilian air traffic regulations and procedures. The qualification enables workforce mobility between civil and Defence aviation.

There will be no Skill Sets developed as part of this revision.

This Case for Change was agreed to by the Aviation IRC

Name of Chair	Stephen Leahy
Signature of Chair	
Date	20 May 2021

Attachment A: Training Package components to change

SSO: Australian Industry Standards

Contact details: David Dixon - Chief Operating Officer

Date submitted: 20 May 2021

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Qualification	AVI50115Y	Diploma of Aviation (Air Traffic Control)	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIE5002Y	Apply air traffic control communication procedures and services	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIF5003Y	Manage human performance and team resources during air traffic control operations	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIF5013Y	Provide search and rescue alerting and emergency response	01/Mar/2016 - Review	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review (endorsement date, nature of this update transition, review, establishment)	Change Required
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIW5013Y	Operate air traffic control equipment and workstations	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIY5022Y	Manage traffic flow	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIY5048Y	Provide approach control services	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIY5049Y	Provide area control services	01/Mar/2016 - Review	Update
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIY5050Y	Provide aerodrome control services	01/Mar/2016 - Review	Update

Project number	Project Name	Qualification/ Unit / Skillset	Code	Title	Details of last review <i>(endorsement date, nature of this update transition, review, establishment)</i>	Change Required
1	Air Traffic Controller: Review of Diploma of Aviation (Air Traffic Control)	Unit	AVIZ5049Y	Manage situational awareness in the air traffic control environment	01/Mar/2016 - Review	Update

Attachment B: Job role, enrolment information, the number of RTOs currently delivering these qualifications

Please set out the job roles to be supported through the updated qualifications, enrolment data over the past three years in which data is available for each qualification, completion rates for each qualification, and the number of RTOs delivering these qualifications.

Job role	Qualification to be updated to support the job role	Enrolment data (for the past three years)	Completion rates (for the past three years)	Number of RTOs delivering (for the past three years)
2311, Air Transport Professionals	AVI50115Y Diploma of Aviation (Air Traffic Control)	287	69	2
	AVIE5002Y Apply air traffic control communication procedures and services	285	74	2
	AVIF5003Y Manage human performance and team resources during air traffic control operations	290	75	2
	AVIF5013Y Provide search and rescue alerting and emergency response	288	78	2
	AVIW5013Y Operate air traffic control equipment and workstations	285	72	2
	AVIY5022Y Manage traffic flow	288	74	2

	AVIY5048Y Provide approach control services – endorsed for deletion	0	0	2
	AVIY5049Y Provide area control services	233	47	2
	AVIY5050Y Provide aerodrome control services	58	26	2
	AVIZ5049Y Manage situational awareness in the air traffic control environment	289	67	2

Attachment C: List of stakeholders that actively participated in the consultation process of the Case for Change

Name of stakeholder	Title	Organisation	Organisation type (e.g. Employer, peak body, union, RTO, regulator)	Jurisdiction/town/city (e.g. NSW/Sydney)
Defence	Operational Training Head at Airservices Australia	Airservices Australia	Enterprise RTO	National
Defence	Head of Airforce Capability	Airforce Training Group	Defence	National
Defence	Head of section	CASA	Regulator	National
Defence	Head of section	Department of Defence	Defence	National
Lynda Green	Training Package Content Officer	AATIS	Other	National
Melinda Tempany	Senior Academic Quality Systems Specialist	Airservices Australia	Employer RTO	National
Anthony Mckay	Executive Director	Aviation Aerospace Australia	Peak body	National
Lynda Douglas	Director, National Skills Framework	Dept of Defence	Employer RTO Other	National
Suzie Hounsham	Senior Program Officer	DTWD	Other	State (WA)
Karen Haines	Learning Design and Development	ERGT	RTO	State (WA)
Amanda Green	Project Officer	LDSC	Other	State (WA)
Louise McIntyre	CMM	Victoria University	Other	State (Vic)

Attachment D: Issues Raised by Stakeholders during consultation on the development of the Case for Change

Stakeholder Type	Issues Raised	IRC's Response to Issues Raised
Industry Reference Committee (IRC) Representatives	There were no issues raised at this time	N/A
Peak Industry Bodies	There were no issues raised at this time	N/A
Employers (Non-IRC)	There were no issues raised at this time	N/A
Regulators	There were no issues raised at this time	N/A
Registered Training Organisations (RTOs)	There were no issues raised at this time	N/A
Training Boards/Other	There were no issues raised at this time	N/A
State and Territory Training Authorities (STAs)	<p>Stakeholder participation: Attachment C refers to active participation from 41 stakeholders which are listed generically (e.g., as Unions, Peak Industry Bodies). Note that the other three (3) Cases for Change for the AVI Aviation Training Package also refer to active participation from the same number and generic list of stakeholders. Given the specific outcomes of air traffic control it would be useful to understand which stakeholders actively participated in development of this Case for Change.</p> <p>Please provide more detailed information to us and the AISC on the stakeholders who have actively participated in development of the Air traffic Control Case for Change</p>	<p>The industry webinar held on March 15 had participation from over 60 registrants who were briefed on the four aviation Cases for Change. This group were subsequently added to the specific Case for Change based on their registration.</p> <p>We also decided not to provide this data on the public consultation for privacy reason however it is provided on this submission.</p>
Unions	There were no issues raised at this time	N/A

Attachment E: List of stakeholders to be contacted as part of the development of the Case for Endorsement

Name of stakeholder	Title	Organisation	Organisation type (e.g. Employer, peak body, union, RTO, regulator)	Jurisdiction/town/city (e.g. NSW/Sydney)
Defence	Operational Training Head at Airservices Australia	Airservices Australia	Enterprise RTO	National
Defence	Head of Airforce Capability	Airforce Training Group	Defence	National
Defence	Head of section	CASA	Regulator	National
Defence	Head of section	Department of Defence	Defence	National
Lynda Green	Training Package Content Officer	AATIS	Other	National
Melinda Tempany	Senior Academic Quality Systems Specialist	Airservices Australia	Employer RTO	National
Anthony Mckay	Executive Director	Aviation Aerospace Australia	Peak body	National
Lynda Douglas	Director, National Skills Framework	Dept of Defence	Employer RTO Other	National
Suzie Hounsham	Senior Program Officer	DTWD	Other	State (WA)
Karen Haines	Learning Design and Development	ERGT	RTO	State (WA)
Amanda Green	Project Officer	LDSC	Other	State (WA)
Louise McIntyre	CMM	Victoria University	Other	State (Vic)

The Case for Endorsement development will also involve contacting stakeholders from the following organisational types across all states and territories within Australia as required:

- Industry Reference Committee (IRC) Representatives
- Employers (Non-IRC)
- Peak Industry Bodies
- Unions
- Other regulators as relevant
- RTOs
- Other/Consultants