

OneSKY Australia

Delivering a modern, resilient, safe and secure air
traffic management service which unites both
civil and military systems

OneSKY Australia

The OneSKY Australia™ program is the most complex transformation of air traffic management in Australian aviation history, delivering an estimated \$1.2 billion of economic benefits to airspace users.

What is OneSKY?

A partnership between Airservices and the Department of Defence, OneSKY will replace the current independent civil and Defence air traffic management systems with an advanced integrated system known as the Civil Military Air Traffic Management System (CMATS).

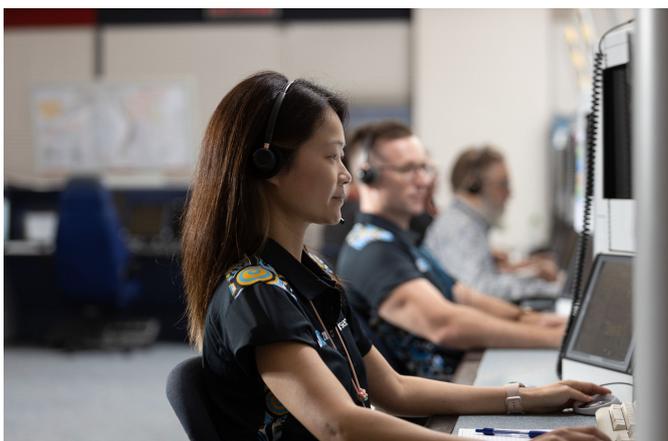
Together under OneSKY, Airservices and Defence will deliver more efficient air services, while supporting future air traffic growth and national security.

OneSKY will provide flexibility to all users of Australian airspace to allow more operational efficiency and resilience. The OneSKY Program includes investment in critical air traffic infrastructure, facilities and services to enhance the safety, efficiency and capacity of the Australian air traffic network.

Over \$1.2 billion in economic benefits

OneSKY will provide the capabilities required to accommodate the unprecedented growth in air traffic and the acceleration of technological advancements set to disrupt the aviation industry.

The program will deliver more than \$1.2 billion of economic benefits to airspace users in Australia over 20 years.



Common capability between Airservices and Defence air traffic management

Business continuity

Uninterrupted service provision for all portions of Australian airspace, improving resilience for unplanned events and optimising use of resources.

Shared use airspace

Providing greater access for all users to available airspace, enabling optimal use of airspace, better fuel planning, preferred routes and optimal flight levels.

Improved productivity

Optimisation of how resources are deployed to ensure a sustainable workload. Achieved through improved decision support tools and dynamically redesigned airspace.

Trajectory based operations

Airspace users can plan their arrival using a continuous descent from cruise to touchdown, enabling opportunity to decrease noise, save fuel and reduce carbon emissions.

Route optimisation

Airspace users can fly preferred routes to suit their needs.

Next generation technology

Australia's current air traffic control systems were ground-breaking technology when introduced in the 1990s and created significant advancements in civil and military air traffic operations at that time. Both the civil air traffic control system (TAAATS) and the military air traffic control system (ADATS) are reaching end of life, presenting the opportunity to harmonise Australia's civil and military air traffic management into one seamless system.

Airservices is delivering several technology initiatives under OneSKY Australia™ including design and delivery of the Civil Military Air Traffic Management System (CMATS), upgrade of the legacy voice communications system, the design of a Regional Tower Solution, enhancement of Defence air traffic control towers, and the integration of OneSKY into the national airways systems.



Voice Communication System

Airservices replaced the legacy voice communications technology at Brisbane, Melbourne, Sydney and Perth with a Voice Over Internet Protocol (VOIP)-based system.

Through OneSKY, the Frequentis 3020X Voice Communications System installed will be upgraded to provide additional functions required for CMATS.



CMATS

Delivered by Airservices in partnership with the Department of Defence, the new Civil Military Air Traffic Management System (CMATS) developed by Thales will replace the current independent civil and defence systems.

The investment in critical air traffic infrastructure, facilities and services will enhance the safety, efficiency and capacity of the Australian air traffic network. The new system will be delivered in three releases as follows



Regional Tower Solution

Airservices will design and deliver an upgrade to the air traffic management system currently in use in regional towers.

This involves leveraging the Saab Integrated Tower Automation Suite (INTAS) Tranche 2 solution currently used at major airport towers.

This technology will be adapted to meet the needs of regional aerodromes.



Airservices Defence OneSKY Towers

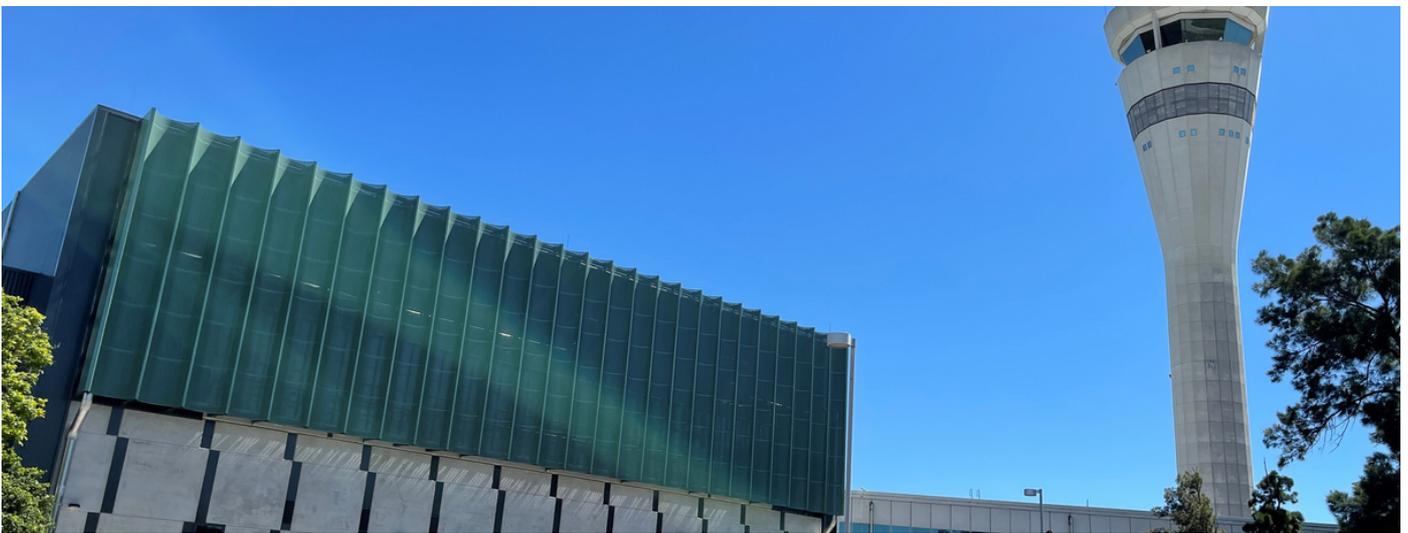
Airservices will leverage the Regional Tower Solution to upgrade the air traffic management capability at four Defence air traffic control towers (Edinburgh, Gingin, Richmond, and the Oakey Army Aviation Centre).

This will replace the legacy Australian Defence Air Traffic System (ADATS) technology to provide enhanced air traffic management.

World-class infrastructure

OneSKY will deliver purpose-built Airservices buildings to house and support the Civil Military Air Traffic Management System (CMATS) and its associated operations room as Airservices transitions to the new system.

As the existing system must be maintained until CMATS is operational, a new building with independent systems ensures a seamless transition for airspace users, maintaining business resilience with uninterrupted service provision.



CMATS Air Traffic Services Centres (ATSCs)

Purpose-built Civil Military Air Traffic Management System (CMATS) Air Traffic Services Centres (ATSC) will be constructed to house the operations room, equipment rooms, service rooms, showers, sleep rooms, locker rooms and Air Traffic Control support areas.

Power to the ATSCs is delivered by a separate Building Services Centre which includes four generators, uninterrupted power supply and associated switchboards to provide the required level of redundancy.

The decommissioning and removal of the existing air traffic management system (TAAATS) will also require refurbishment of existing TAAATS operations rooms and upstairs office spaces.

OneSKY Equipment Rooms

The OneSKY Equipment Rooms (OER) are a dedicated equipment room to house CMATS operational equipment. New buildings will house the Melbourne and Brisbane OER. The Perth OER will be a partial build within the existing Air Traffic Services Centre building.

Technical Operations Centre

Located in the Air Traffic Services Centres, the Technical Operations Centre (TOC) provides system monitoring, system administration and fault reporting management; system recovery using control and monitoring tools; configuration changes and preventive maintenance actions to restore system functionality.

Joint Software Support Facility

Located in Melbourne, the Joint Software Support Facility (JSSF) will provide a range of support functions for the Civil Military Air Traffic Management System (CMATS) including test and evaluation, data adaptation, final verification and installation.

The JSSF will be co-located with the Support Platform Space on the ground floor of the Melbourne Air Traffic Services Centre (ATSC) to provide immediate customer support.

These facilities will include the Air Traffic Management Support Group as well as Air Traffic Control, Defence and Contractor support engineers.

Support Platform Space

The Support Platform Space (SPS) will provide a range of support functions for CMATS including Thales software support, fault investigation and software development.

The SPS will be co-located with the Joint Software Support Facility in Melbourne to provide immediate customer support.

These facilities will include the Air Traffic Management Support Group as well as Air Traffic Control, Defence and Contractor support engineers.

Customer Training Area

Delivered by Thales, the Customer Training Area (CTA) is a refurbished area located within the Thales World Trade Centre in Melbourne. Thales will use this facility to provide CMATS training to both Airservices and Defence personnel.

The CTA supports the training element of the Contractor System Verification Facility.

Joint Secure Facility

Located within the Brisbane Control Tower Complex, the Joint Secure Facility will provide a secure operating area to deliver Defence Darwin and Townsville approach services (Secure Mode Operations) and National Airspace Management Operations (NAMO).

Provision of this secure operating environment will require addition of a secure equipment area within the Brisbane OneSKY Equipment Room to support the Defence secure equipment.

Training support facilities

The training support facilities include the CMATS Pseudo Pilots Rooms, Operational Simulator and Training Systems (OSTS), Ab Initio Simulator and Training Systems (ASTS) and Part Task Trainers used for skill-specific training.

Located at each CMATS operational centre, the OSTS will support the initial and ongoing training of air traffic controllers and provides the business continuity function, while the Pseudo Pilots Rooms will accommodate the Pseudo Pilot consoles which simulate air traffic control training scenarios on the OSTS consoles.

Located in Melbourne, the ASTS will support initial entry training.

Contractor System Verification Facility

The Customer System Verification Facility (CSVF) houses the training, integration, and testing tools to support CMATS development.

A temporary facility located within the Melbourne airport precinct, the CSVF is an important part of verifying CMATS capability in a simulated air traffic control environment as development of the system progresses.

Enabling the benefits

Airservices is introducing initiatives to ensure the people and processes are in place for Airservices and our customers to get the most benefit from the new capabilities that CMATS will deliver.

These fall within four streams of work; Digitise, Centralise, Optimise, and Evolve.



Digitise

Transforming the way we manage our Australian airspace using technology as a fundamental enabler.

Projects include the Aviation Resource Centre, Decision Support Tool - Task Load, and Pre-Shift Briefing.



Optimise

A less restrictive airspace construct will enable better management of traffic volumes for both military and civilian operations.

This will enable optimisation of air traffic flow, including maximising use of runways to reduce travel delays.

Greater access to air navigation data will also enhance the ability to plan the most effective and safe flight route on any given day.

Projects include User Preferred Routes and Dynamic Airborne Reroute Procedure, Continuous Descent Operations, Decision Support Tool - Separation, Wake Turbulance Management, and Single Flight Data Region.



Centralise

A national approach to the oversight and operation of Australian airspace for both military and civil use.

Airservices will enable the ability to coordinate a national response to unplanned events and optimise deployment of our resources.

Projects include National Operations Management Centre, National Operations Disruption Response Capability, and National Airspace Management Office.



Evolve

Being a more resilient business requires us to be adaptive and agile, and find new perspectives to improve and be more efficient.

Not only will this support our resiliency for unplanned events, it will also alleviate resourcing challenges, and empower our people to develop and broaden their skillsets.

Projects include Dynamic Sectorisation and Endorsement Modernisation.

