



# CMATS – The Civil Military ATM System

## OneSKY Australia Program Update

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To keep pace with changing demand and  
continue to provide  
safe, efficient, flexible, and  
environmentally responsible air services  
while managing the complex  
challenges of the future, the nation's ATM  
system must continue to evolve



Australian Government  
Department of Defence



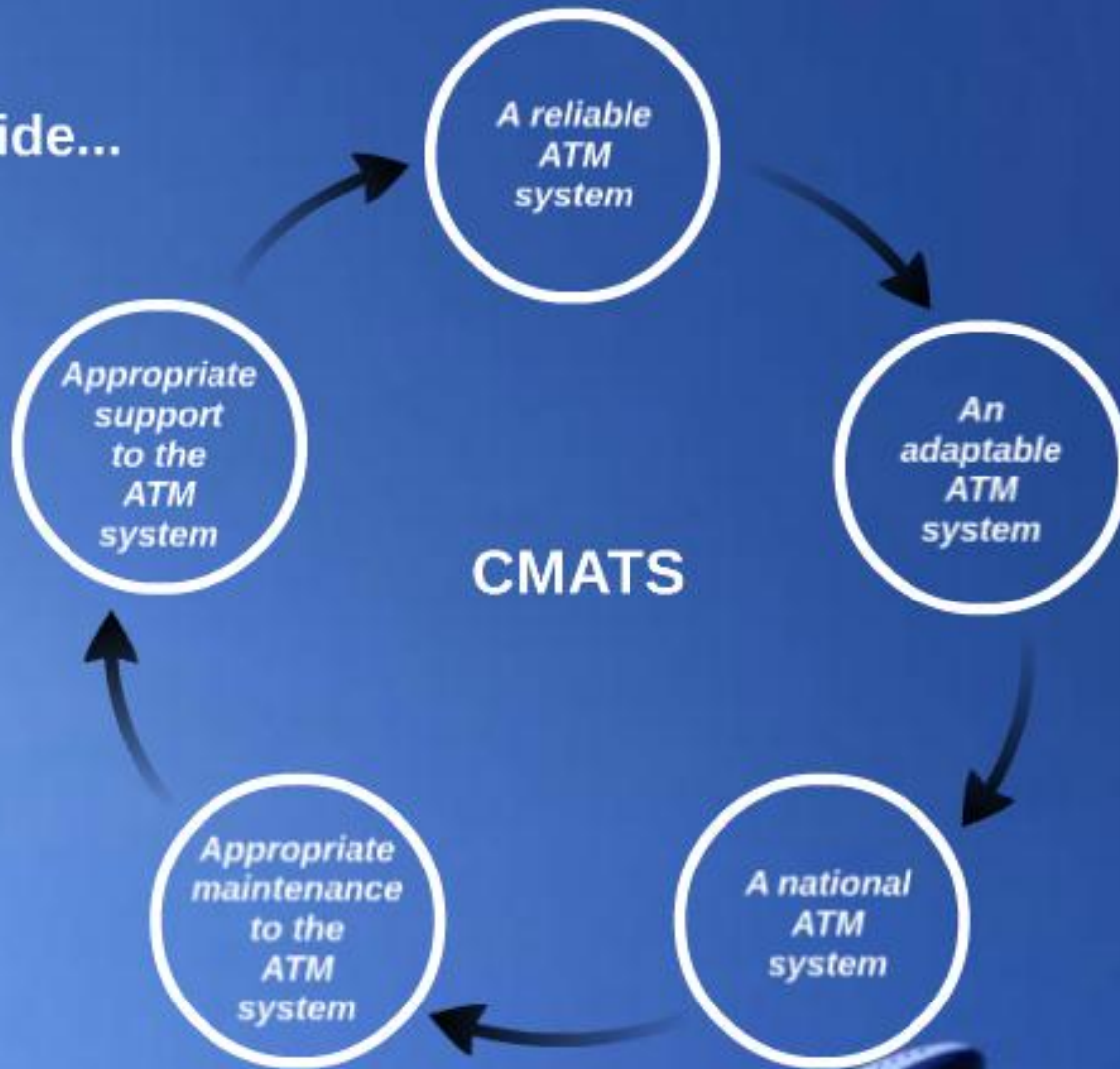
# oneSKY

## AUSTRALIA

One Team ▶ One System ▶ One Sky

# OneSKY Australia Program Primary Goals

To provide...



# Scope

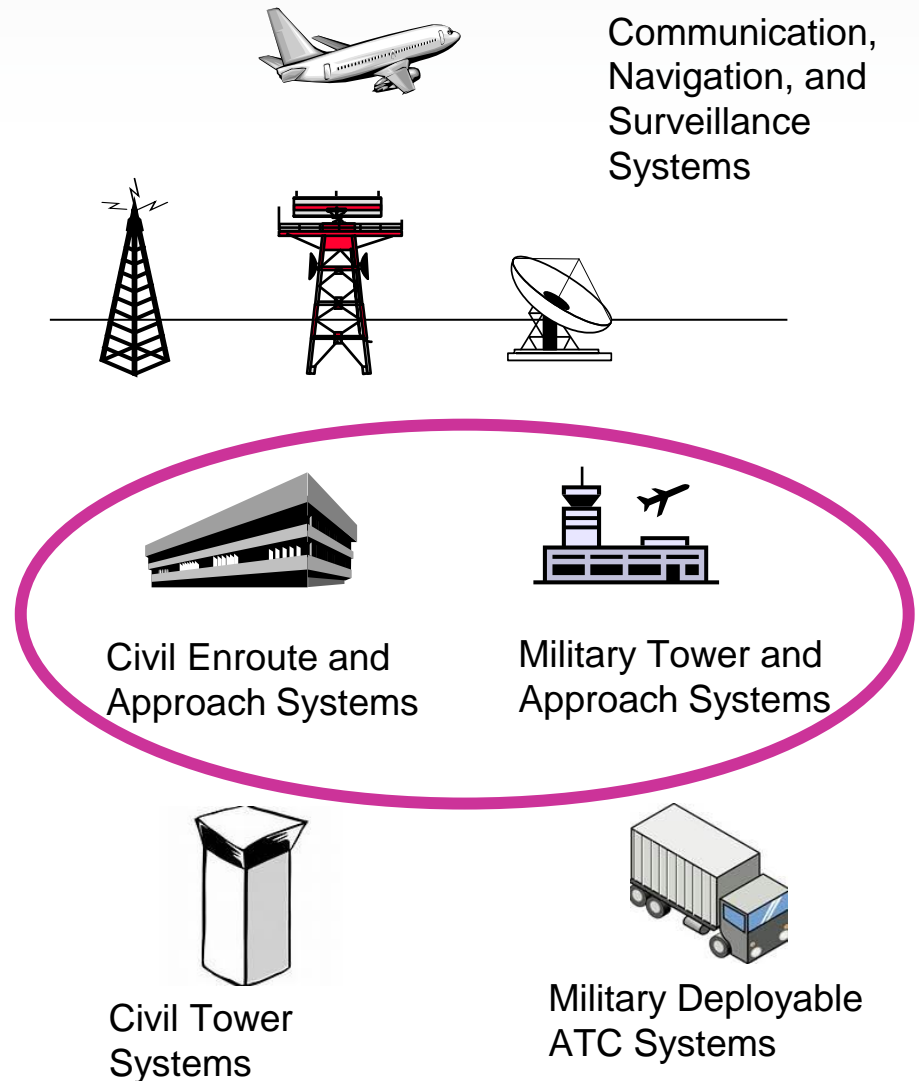
## Airservices

CMATS replaces TAAATS  
Enroute and Approach  
automation at 4 locations.

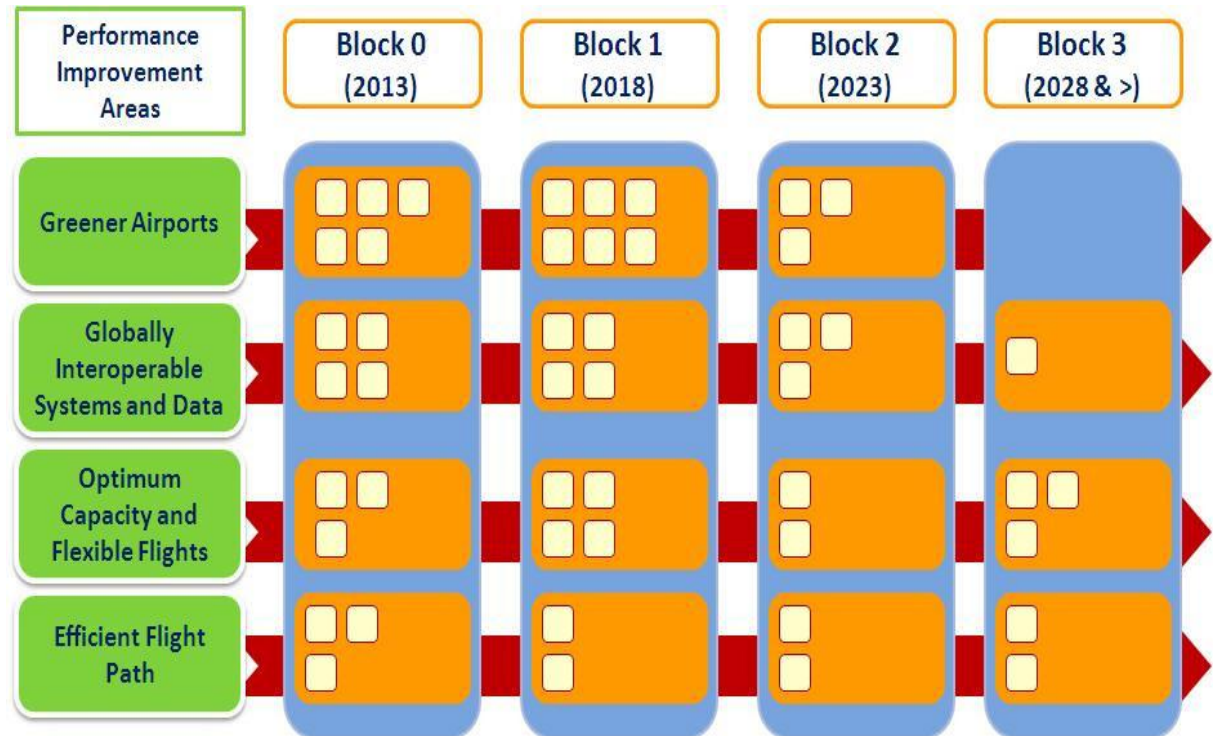
- Adelaide and Cairns TCUs being integrated to ATSCs before transition.
- Eurocat Tower automation being replaced by INTAS.

## Defence

CMATS replaces ADATS  
Tower and Approach  
automation at 12 locations.



# Global Interoperability



# New Operational Capability



TAAATS	CMATS
<p>Supports tower, terminal area, continental enroute, and oceanic services in civil airspace.</p>	<p>Supports tower (Defence sites), terminal area, continental enroute, and oceanic services in civil and military airspace.</p>
<p>Separate Melbourne and Brisbane civil platforms with limited flight data sharing to support situational awareness and automated coordination. Manual coordination with ADATS platforms.</p>	<p>A single national platform, a common flight data region, and data synchronisation between all civil and military partitions.</p>
<p>Common civil-military situational awareness, through common data display, alerting and tools in Perth / Pearce terminal areas.</p>	<p>Common civil-military situational awareness, through common data display alerting and tools for entire Australian FIR.</p>
<p>Some Defence ATC radars interfaced to ML or BN or PH platforms.</p>	<p>All Airservices and Defence ATC radars interfaced to the national system</p>
<p>Integrated AMAN (Maestro) for major airports</p>	<p>Integrated AMAN and DMAN for major airports, and interfaced to National Operations Centre ATFM systems.</p>
<p>Various safety nets and alerts including STCA, MSAW, DAIW and RAM. FPSNA in limited use.</p>	<p>Various safety nets and alerts including STCA, MSAW, SUA and RAM. New functions include MTCD, LTCD, CFL, VCA, and Conflict Probe.</p>



# New Operational Capability



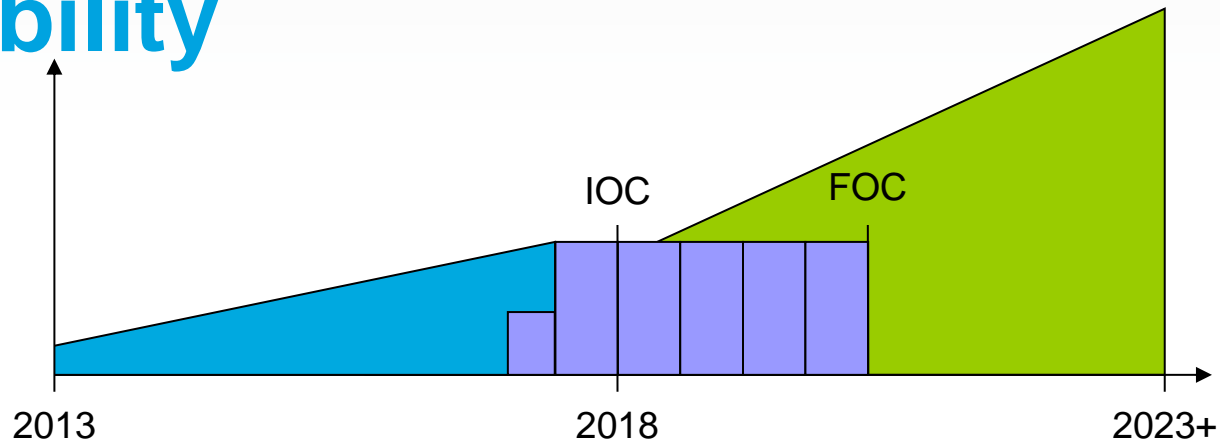
TAAATS	CMATS
Limited ability to combine/de-combine airspace volumes on same platform and ability to release military volumes to civil jurisdiction and manage Special Use Airspace (SUA).	Ability to combine/de-combine any adjoining airspace volumes. Dynamic configuration of sector boundaries, SUA and real-time civil-military jurisdiction change possible. Demand forecasting functionality to optimise sectorisation.
Limited PBN Approach operations.	Ability to manage multiple PBN procedures to a runway.
Separate displays of weather and other aeronautical data systems at controller workstation	Integrated display and processing of weather and aeronautical data within system to aid situational awareness and ATC decision making. Able to process Digital NOTAMs.
	Allows display and 'probe' of proposed trajectories for conflict detection and traffic management needs.
	Flight data will be updated by NOC ATFM systems.
	Will support ASAS and Mode S downlinks (e.g. TCAS Resolution Advisories).

# New Technical Capability



TAAATS	CMATS
<p>Commissioned in 1998 and last major hardware upgrade in 2003. Over 200 incremental system changes since commissioning.</p>	<p>Modern ICT design and industry data exchange standards, contemporary hardware and software and best-practice software assurance.</p>
<p>Complexity and cost in system upgrades due to design, bespoke interfaces, age and divergence over time from 'standard' product.</p>	<p>Modular design and maximum use of industry standard interfaces to facilitate upgrade. Intent to remain aligned to product roadmap and global standardisation of ASBUs.</p>
<p>Limited resilience to cyber attack and limited disaster recovery of a partition at an alternate site.</p>	<p>Enhanced information security protocols, dual redundant architecture and improved disaster recovery of a partition at an alternate site.</p>
<p>System capacity of current platforms constraining additional functionality in some areas.</p>	<p>System capacity specifications accommodate anticipated airport developments and traffic growth over system life.</p>
<p>System upgrades require operation in degraded fallback mode while reconfiguring system.</p>	<p>Seamless upgrade capability will allow software and adaptation data change without impact to ATC operations or reduction in services.</p>
<p>Limited Test &amp; Evaluation (T&amp;E) capability to replicate operational platform for testing prior to commissioning.</p>	<p>Enhanced T&amp;E platform with small R&amp;D capability for HMI, system functions and procedures development.</p>
	<p>Various improvements to WHS, HMI, record &amp; playback, and fail soft contingency capability.</p>

# Transforming Capability



## Capability Readiness

Developing capability inputs to meet IOC needs, ready for transition to operations.

## Capability Realisation

Realising new capability in service delivery following staged transition.

## OneSKY Transition

Staged transition from ADATS and TAAATS in stable environment.

# The OneSKY Program – current status

