

Thales Military ATM solutions

SESAR Joint Undertaking
Communications Coordination Group

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www.thalesgroup.com





Thales ATM solutions to meet Today's & Tomorrow's **Military Needs**

- > Why Military ATM, Why Now?
- > What Are the Military ATM Solutions ?
- > How Does It Integrate the Different Thales products?
- > Use Cases & Concrete Scenarios
- > Q&A

Why Military ATM, Why Now?



Why Military ATM, Why Now? | The Changing Operational Context



A MULTIPOLAR WORLD

- Call for sovereign airspace
- Systemic rivalry (US/China)
- Surge of protectionism and trade warfare calls for sovereign products to guarantee system integrity



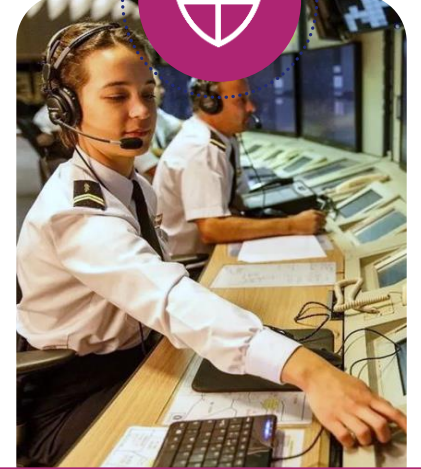
RISING CRISIS & TENSIONS

- Defence budget explosion in Eastern Europe (from <1% to >5% of GDP)
- War in Ukraine: European Peace Facility Program & US Ukraine Supplemental funds incl. ATC/NavAids ; War in Iran.



REARM EUROPE & NATO

- ReArm Europe & safe loans increasing budget capacity
- NATO: 3,5% of GDP def. spending
- Finland & Sweden adhesion to NATO: standardization of air surveillance systems for ops continuity



DEPLOYABLE SYS. & DUAL USE

- Modern combat demands mobile ATM solutions
- 48h deployability in zones lacking infrastructures
- Dual use driven by need to open / close mil. air corridors instantly

Source : Thales "Global Perspectives 2026"

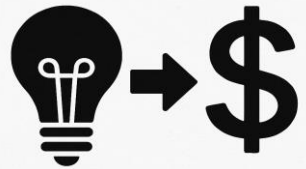


- In 2026, the military ATM market is undergoing its most significant structural shift since the Cold War
- Surge in European rearmament and a "readiness-first" culture
- Increase in investments in deployable Military ATM solutions demand for resilience and military infra. reinforcement to secure operational readiness in current confrontation intensification context

THALES
Building a future we can all trust

Why Military ATM, Why Now? | New Model for Disrupting Military capability

Thales has long been a leading player in Military ATM sector, with numerous major programmes such as the Australian OneSKY and UK Marshall programme



Cost-efficiency

Standard ATM product of worldwide global ATM market ensures competitive pricing & safe with regulation



Ramp-up Readiness

Robust proven civil design ensures easy upgrades and agile supply chain for military needs



Speed

User-friendly and rapid deployment aimed a quick operational readiness for mission success

> **Survivable**
(Degraded Mode)

> **Secure**
(Cyber)

> **Mission Critical**
(with Air Defence)

> **Interoperable**
(with Allied & Civil)

Why Military ATM, Why Now? | Secure Military operations in Shared Airspace

• Traffic Increase & Shared Airspace Convergence

- **All traffic Growth** : Civil, military and drone flights are rising sharply.
- **Dynamic air-space management**: Requires real-time, flexible allocation of sectors and altitudes.
- **Shared-use concept** : Civil and defence users now operate in the same sky volume, demanding joint coordination centres and unified situational awareness.

• Interoperability & Regulatory Pressure

- **Allied-force compatibility** : Common data links, procedures and flight-plan formats.
- **Regulatory tightening**: New ICAO, EU and national rules demand transparent, auditable operations.

• Digitalisation & Resilience

- **AI & automation**: Predictive flow-management, automated conflict detection/resolution.
- **Data sharing**: Real-time exchange of flight intent, weather, and threat data between civil-military networks.
- **Cyber-security**: Hardened communications, redundancy and rapid recovery to protect mission-critical services

• UAV / U-Space Integration & Air-Defence Linkage

- **UAV corridors & U-Space services**: Registration, identification, geofencing and dynamic de-confliction built into ATM.
- **Air-defence coordination**: Seamless hand-off of IFF, threat alerts and engagement zones to preserve both safety and mission freedom.

Why Military ATM, Why Now? | Challenges for Military ATM

> Military ATM must simultaneously support a wide spectrum of mission

- routine training flights
- logistics convoys
- high-tempo combat sorties
- humanitarian relief
- joint-force exercises
- ...



> The ATM therefore has to accommodate highly variable flight profiles, rapid changes in priority, and the need to de-conflict civilian and military traffic in shared airspace.

What Are the Military ATM Solutions ?



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What Are the Military ATM Solutions ? | Vision & Value Proposition

Thales **Military ATM** supports Air Forces, Army, Navy, and Civil Defense
to **enable air mobility** by delivering **trusted ATM capability**,
Approach and Tower, at every Airbase securing military air operations,
enhancing civil-military cooperation, and operational silos with air defense
thanks to native dual-use platforms interoperable with C4I
optimizing forces agility and coordination between allied.

**SOVEREIGN &
INTEROPERABLE**

**DUAL USE
BY DESIGN**

DEPLOYABLE

What Are the Military ATM Solutions ? | Building Blocks



Fix airBase



Deployable

INTEGRATION

CRITICAL INFRASTRUCTURE

SOVEREIGN CYBERSECURIZATION

CIVIL & MILITARY INTEROPERABILITY

**STANDALONE
PRODUCT**

DUAL

Automation

- ☐ Air Traffic Control
- ☐ Communication

Surveillance

- ☐ ADS-B / MLAT / WAM
- ☐ PSR
- ☐ SSR

Navigation Aids

- ☐ ILS
- ☐ VOR
- ☐ DME

Networking & Weather

- ☐ AFTN/AMHS/AIS
- ☐ SWIM/LARA
- ☐ AWOS

MILITARY

- AirC4I
- C-UAS

- PAR
- UAS-Sensor

- TACAN
- DF

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What Are the Military ATM Solutions ?



What is expected ?

- > Civil/military integration
- > Resilience in contested environments
- > Modularity & scalability
- > Broad equipment
 - Integration of multiple Thales products
 - ATC & Radars with IFF Mode 4, 5,
 - ATC & PAR
 - ATC, C4I & C-UAS interfaces etc...
- > Long-term support with evolution roadmap
 - Fast deployment,
 - DF plug & play with Asterix Cat205, etc.

How Does It Integrate the Different Thales Products?



Multi-Product Integration Overview

> ATM systems ATC, NAVAIDS ...

> Surveillance, Sensors ...

> Air defence C-UAS, AirC4I ...

> Military ATM is not a new silo,
it is a unifying framework
leveraging existing Thales strengths



Automation I Military Communication & Control versus Civil

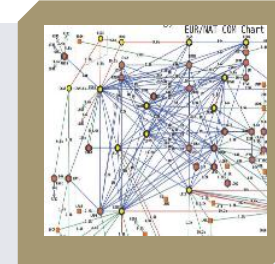
Air mobility operations rely on continuous coordination between aircraft, controllers and command structures.

In austere and degraded environments, deployable and resilient communication and control systems are essential to ensure safe operations, prioritise critical missions and maintain operational tempo.



ATC with advanced Multi Sensor Tracking System

Integrated multi-sensor tracking enabling real-time airspace awareness, precise sequencing and safe separation for high-tempo operations.



AFTN/AMHS

also used to connect to AirC4I

Interoperable messaging and data exchange ensuring integration with civil ATM systems and seamless coordination with national and coalition networks.



RADIO

Secure VHF/UHF communications ensuring reliable air-ground coordination, even in contested and interference-prone environments.



Cyber-secured networks

End-to-end protected communications architecture ensuring data integrity, resilience and sovereign control of operations.



VCS

Mission-critical voice management system providing seamless coordination between pilots and tower, approach & command elements.



Direction Finder

Helps controllers to locate an aircraft by determining the direction to a radio source from the aircraft.

Navigation I Military versus Civil

Safe and resilient NavAids for Navigation, Approach and Landing,

- Dual-Use civil and military
- Exceeds all ICAO, NATO & EUROCONTROL requirements
- In operations in more than 180 countries
- Unmatched reliability and availability



ILS / DME

Precision Instrument Landing System. ICAO CAT I certified, with full capabilities up to CAT III (depending on site conditions)



D-ILS / DME

Deployable Precision Instrument Landing System (ICAO cat I)



VOR

VOR for resilient Navigation, Approach and Landing



Mobile CVOR

Mobile Conventional VOR for Navigation, Approach and Landing



TACAN

Tactical Air Navigation System for Navigation, Approach & Landing



Deployable TACAN

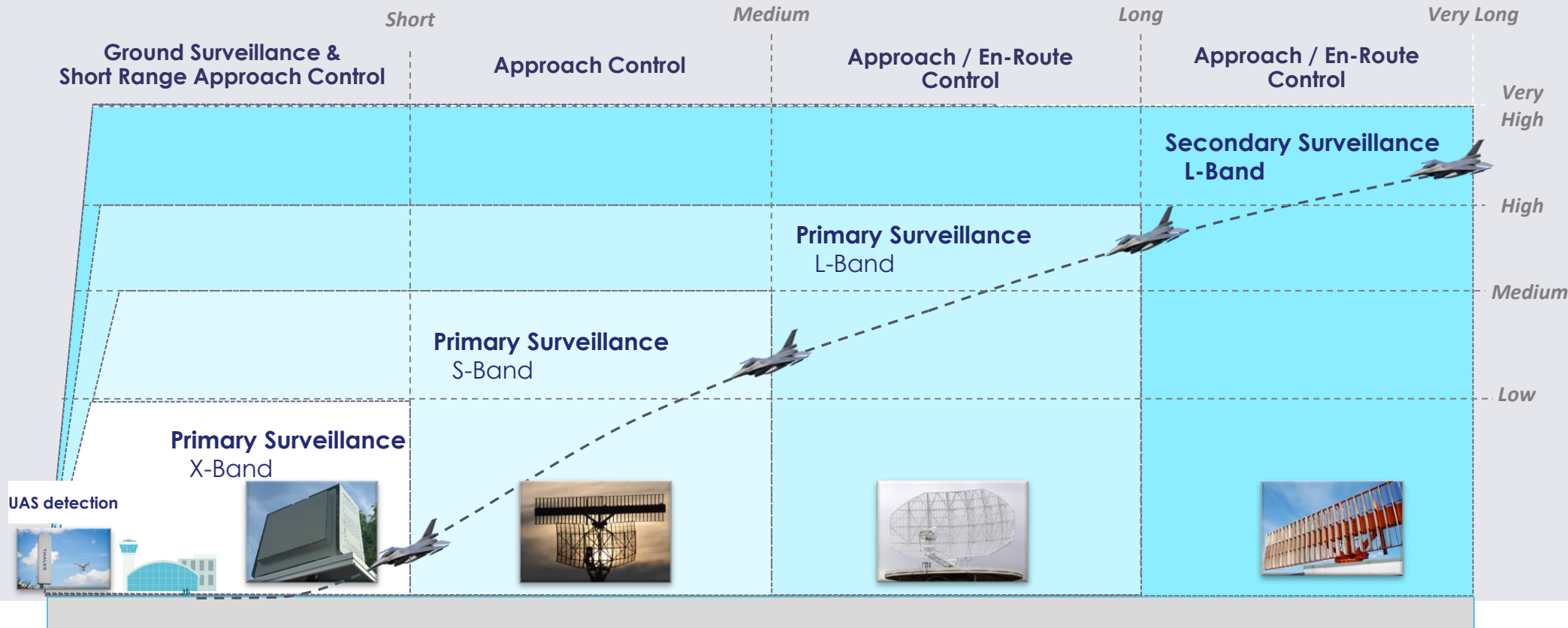
Deployable Tactical Air Navigation System for Navigation, Approach & Landing

Man-Portable TACAN

Surveillance I Military Approach by dual-use radars

In contested environments, maintaining accurate and reliable situational awareness is critical to ensure safe air operations and effective mission execution.

Deployable surveillance and identification capabilities enable forces to track, identify and manage all aircraft, including non-cooperative or degraded targets, under any operational conditions.



Air Defence interoperability | Military Surveillance C-UAS & AirC4I

Identification is key



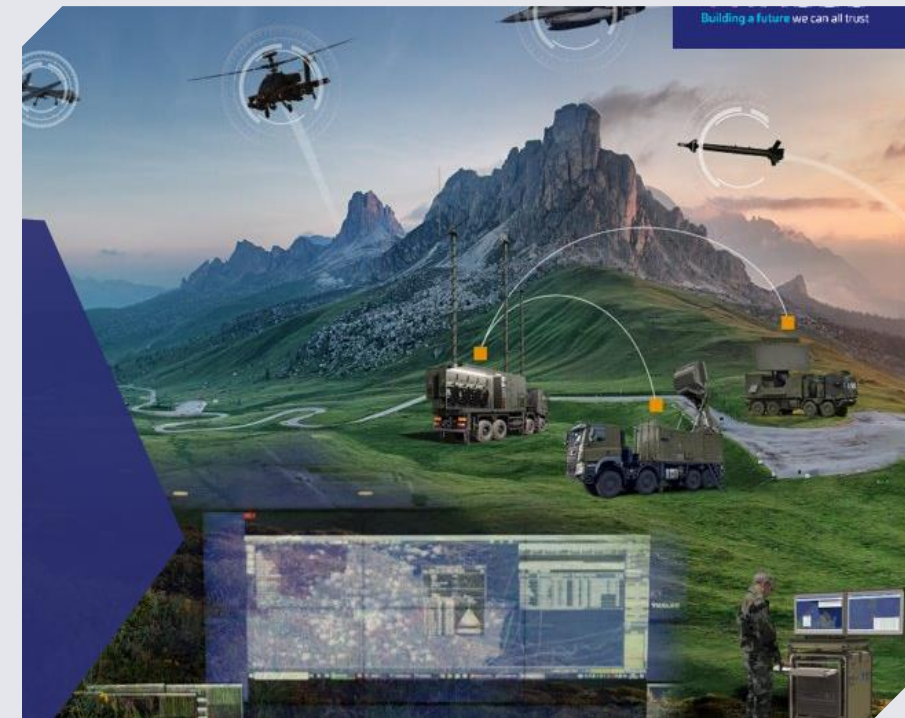
Sky Defender / SkyView

Provide robust, high-quality air-and-surface situational awareness in harsh conditions, supporting tailored defensive, offensive and support missions



EagleShield

Detects, classifies and neutralizes hostile drones using radar, RF, EO/IR sensors with AI-driven soft/hard-kill options



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Use Cases & Concrete Scenarios

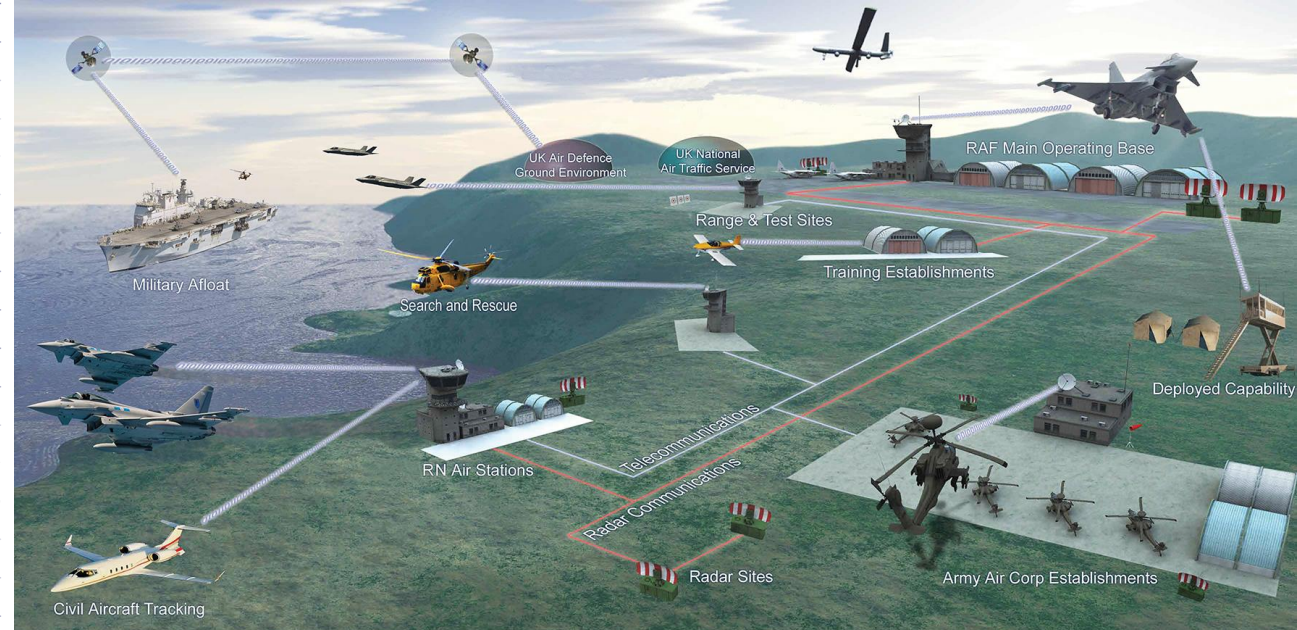


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UK MoD / MARSHALL Programme

- Provide military terminal Air Traffic Management capability for the UK MoD for 22 years (service contract)
- Over 100 military sites involved (including overseas locations)
- Over 50 different CNS/ATM* equipment and services
- Over 30 ATC systems
- Over 35 ATC radars
- More than 50 ILS/TACAN/VOR/DME and MLAT systems

*CNS/ATM : Communication Navigation Surveillance/Air Traffic Management



OneSky: One dual System for Civil & Military ATC in Australia

- First fully integrated Civil and Military ATM systems worldwide
- Improving flight co-ordination
- Safely increasing the use of airspace
- Ensuring uninterrupted service
- Optimizing traffic flow



Bolivian Project integrating Air Defence and Civil Air Traffic

- Overall Turnkey Project
- 11 Radar sites (Primary and Secondary Surveillance Radars)
- 5 Civil and Military Air Traffic Control Centers
- 5 VHF/UHF Radio-communication sites
- Radar and Communication (Voice + Data) Wide Area Network covering a 1M+ km²



USMC/USAF Man-Portable TACAN

Full TACAN capabilities built in Functions - Antenna Control Unit, AC-DC Power Supply, Remote capabilities

EXPEDITIONARY FORCES

- TACAN navigation in a non-established base
- Secure with a non -jammable system
- Fast deployment for fast changing environments

FORWARD-OPERATING MILITARY TEAMS

- Use in hostile environment in which existing nav aids were destroyed or Recover a new navigation aid capability at a landing site, immediately & efficiently

FOR MILITARY FORCES AND/OR MILITARY ANSP

- Relocate airports & runways and establish temporary landing capability



Kandahar Airbase, Afghanistan

- Turnkey **system of system** contract
- **Global delivery of all required systems** (surveillance, communication, navigation) to reach **NATO standard**
- **All civil works activities** integrated to the **main contract** (runway, taxiways, aprons, radar building, ATC Tower...)
- **90% of the overall provision from France/Italy/USA**



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