

EASTERN CARIBBEAN ROUTE BULLETIN

FLIGHT INFORMATION REGION: KZMA

COM CENTER	126.700
BRIEFING	121.500
CLEARANCE	125.900
UNICOM	122.950



MONTSERRAT
115.3 MNI

ANGUILLA
113.9 AI

SABAA
FL290

ST. KITTS
115.1 SKB

ANTIGUA
112.8 ANU

TORTUGA
FL280

GUADELOUPE
115.9 GP

ICAO NACC · REGIONAL AIR NAVIGATION BRIEFING

Eastern Caribbean Air Navigation Services

Operational Capability Assessment of the ECAR States

Based on the Eastern Caribbean AIP (GEN Amendment 29) & AIP Supplements · Published by the Trinidad & Tobago CAA · July 2026

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Scope & Regulatory Basis

The Eastern Caribbean AIP is a regional publication issued by the Trinidad & Tobago Civil Aviation Authority on behalf of ten States and territories, following a common ICAO-compliant framework.



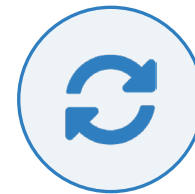
Regional AIP

One AIP published by the TT CAA for the entire Eastern Caribbean, harmonising aeronautical information across all participating States.



ICAO Standards

Compiled per ICAO Annex 15, Doc 8126 (AIS Manual) and Doc 10066 (PANS-AIM) to ensure consistency and interoperability.



Continuous Currency

Maintained through AIP Amendments, AIRAC cycles and AIP Supplements documenting live operational change.

Participating States & Territories

Ten States and territories publish through the single Eastern Caribbean AIP:

 Anguilla Antigua & Barbuda British Virgin Islands Dominica Grenada Montserrat Saint Kitts & Nevis Saint Lucia St Vincent & Grenadines Trinidad & Tobago

Barbados — included for regional comparison. It operates an independent ANSP with radar surveillance and publishes its own national AIP, outside the Eastern Caribbean AIP.



French Antilles (Martinique & Guadeloupe) — DSNA-managed neighbours with full radar surveillance, publishing through France's national AIP, outside the Eastern Caribbean AIP.

Regional Neighbour: French Antilles

Martinique and Guadeloupe are French overseas territories whose air navigation services are provided by France's DSNA. They lie within the Eastern Caribbean but publish through France's national AIP — included here for regional comparison.



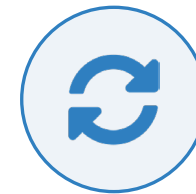
DSNA-Managed ATS

Air traffic services for Martinique (Aimé Césaire / TFFF) and Guadeloupe (Pôle Caraïbes / TFFR) are delivered by France's DSNA, coordinated regionally through the E/CAR CATG CNS Committee.



Full Radar Surveillance

Fort-de-France and Pointe-à-Pitre operate radar surveillance (PSR / SSR / Mode S) with ILS, DVOR/DME and PBN — among the most advanced in the sub-region, comparable to Barbados and Trinidad & Tobago.



SEAFLIGHT Modernisation

The next-generation SEAFLIGHT air traffic control system with full electronic stripping was commissioned at the Fort-de-France control unit on 14 May 2025 by DSNA and ADACEL.

Common Aeronautical & Air Navigation Services



ICAO Aeronautical Information Products

- Aeronautical Information Publication (AIP)
- AIP Amendments & AIP Supplements
- NOTAM
- Aeronautical Information Circulars (AIC)
- Pre-flight Information Bulletins (PIB)
- AIRAC amendments
- Aeronautical Charts
- Digital eAIP publications



Common Air Navigation Services (GEN 3)



Aeronautical Information Services (AIS/AIM)



Aeronautical Charts



Air Traffic Services (ATS)



Aeronautical Communication Services



Meteorological Services (MET)



Search & Rescue Services (SAR)

SECTION 02

Regional CNS Capabilities



Communications

- VHF air-ground communications
- HF communications (where applicable)
- AFTN / AMHS messaging
- ATS inter-centre coordination
- Emergency communications



Navigation

- GNSS (RNAV) & PBN implementation
- DVOR / DME and ILS CAT I
- NDB at selected aerodromes
- Published instrument approaches



Surveillance

- Procedural ATS across the region
- Terminal radar (Barbados)
- ADS-B in selected States
- RNAV surveillance procedures



State ATS Capability Matrix

State / Territory	ATS Services	CNS Services	Operational Capability
Antigua & Barbuda	ACC, APP, TWR, FIS, Alerting	VHF/HF, DVOR/DME, ILS, GNSS	Regional ATS hub serving E. Caribbean airspace
Trinidad & Tobago	ACC, APP, TWR, Radar, FIS	PSR/SSR, ADS-B, DVOR/DME, GNSS	Operates the Piarco FIR; integrated ATM
Grenada	APP, TWR, FIS	DVOR/DME, ILS, GNSS	International IFR airport, precision approaches
Saint Kitts (TKPK)	APP, TWR, FIS	DVOR/DME, GNSS	International airport with Approach Control
Nevis (TKPN)	AFIS/TWR, FIS	GNSS, VHF	Domestic / regional operations
Saint Lucia	APP, TWR, FIS	DVOR/DME, ILS, GNSS	Dual-airport domestic & international traffic
St Vincent & Gren.	APP, TWR, FIS	DVOR/DME, GNSS	Argyle Int'l plus domestic aerodromes
British Virgin Is.	TWR, APP, FIS	GNSS, RNAV, VHF	Advanced procedural ATS
Dominica	TWR, FIS, Alerting	VHF, GNSS (RNAV)	Procedural ATS supporting IFR/VFR
Anguilla	TWR / FIS	GNSS, VHF	Procedural ATS, regional operations
Montserrat	AFIS, FIS, Alerting	GNSS, VHF	AFIS operations
French Antilles ‡	APP, TWR, Radar, FIS, Alerting	PSR/SSR/Mode S, ILS, DVOR/DME, PBN	DSNA-managed radar surveillance; SEAFLIGHT ATC

All participating States provide Meteorological (MET) and Search & Rescue (SAR) services and the complete ICAO AIM product suite. ‡ French Antilles (Martinique & Guadeloupe) shown for regional comparison — DSNA-managed, published through France's national AIP, outside the Eastern Caribbean AIP.

Recent Operational Changes – AIP Supplements

Selected live changes documented through AIP Supplements, evidence of continuous regional modernisation:



Antigua & Barbuda

Updated Air Navigation Service charges effective 1 January 2026.



Nevis (TKPN)

Ground handling now mandatory for all arriving and departing aircraft via approved agents.



St Vincent & Grenadines

Mustique Airport ATS hours extended to 1200–SS +20 min, new markings and backup power.



British Virgin Islands

New VFR arrival/departure procedures at Lettsome Int'l, with reporting points & RNAV conflict management.



Montserrat

Temporary ATS degradation from the Silver Hills High Site outage affecting advisories.



Dominica

Instrument approach procedures available through Douglas-Charles Airport.

Operational Maturity Assessment

Level 1

Regional ATS Centres

Antigua & Barbuda · Trinidad & Tobago · French Antilles ‡

Level 2

International ANSPs

Barbados · Grenada · Saint Lucia · Saint Kitts · Saint Vincent

Level 3

Regional ATS Providers

Dominica · Anguilla · British Virgin Islands

Level 4

AFIS / Low-density Operations

Montserrat · Nevis domestic operations

‡ French Antilles (Martinique & Guadeloupe) — DSNA-managed, shown for regional comparison, outside the Eastern Caribbean AIP.



SECTION 05 • SURVEILLANCE

Most States operate procedural ATIS

Only a few ANSPs provide surveillance beyond procedural control. The majority rely on procedural ATIS supported by GNSS navigation and controller position reports, with radar and ADS-B available in selected areas.

Surveillance Capability Matrix

State / Territory	PSR	SSR / MSSR	ADS-B	MLAT	Procedural	Capability
Barbados	Yes	Yes	Yes	—	Yes	Full Surveillance ATS
Trinidad & Tobago	Yes	Yes	Limited	—	Yes	Full Surveillance ATS
Antigua & Barbuda	Limited	Regional	Limited	—	Yes	Mixed Surveillance
Grenada	—	—	—	—	Yes	Procedural ATS
Saint Lucia	—	—	—	—	Yes	Procedural ATS
St Vincent & Gren.	—	—	—	—	Yes	Procedural ATS
Saint Kitts & Nevis	—	—	—	—	Yes	Procedural ATS
Dominica	—	—	—	—	Yes	Procedural ATS
British Virgin Is.	—	—	—	—	Yes	Procedural ATS
Anguilla	—	—	—	—	Yes	Procedural ATS
Montserrat	—	—	—	—	Yes	Procedural / AFIS
French Antilles ‡	Yes	Yes	—	—	Yes	Full Surveillance ATS

Yes = published capability · Limited/Regional = partial or regionally-integrated coverage · — = not published. ‡ French Antilles (Martinique & Guadeloupe) shown for regional comparison — DSNA-managed, outside the Eastern Caribbean AIP.

Surveillance-Capable ANSPs



Surveillance maturity 5/5

Most advanced surveillance provider in the Eastern Caribbean.

- PSR, SSR/Mode S & ADS-B
- Radar vectoring & approach
- Integrated surveillance displays
- Flight data processing



Surveillance maturity 5/5

Operates the Piarco FIR, one of the largest in the Caribbean.

- PSR, SSR & oceanic surveillance
- Integrated ATM system
- ADS-B in selected sectors
- RNAV surveillance procedures



Surveillance maturity 3/5

Manages ATS for portions of the Eastern Caribbean.

- Terminal surveillance support
- Selected ADS-B locations
- Neighbour-system integration
- Procedural en-route ATS



Surveillance maturity 5/5

DSNA-operated Martinique & Guadeloupe — among the region's most advanced.

- PSR, SSR/Mode S & ADS-B
- Radar approach & vectoring
- SEAFLIGHT ATC with e-stripping
- ILS, DVOR/DME & PBN

ADS-B Status & Regional Surveillance Groups

ADS-B Implementation

Barbados

Operational

Trinidad & Tobago

Operational (selected sectors)

Antigua & Barbuda

Limited / partial

Remaining ECAR States

No published operational ADS-B; procedural services remain primary

ICAO NACC surveillance capability groups

Level 1 – Full Surveillance

Barbados · France · Trinidad & Tobago

PSR, SSR, ADS-B, radar vectoring, integrated surveillance

Level 2 – Partial Surveillance

Antigua & Barbuda

Limited surveillance with regional integration & selected ADS-B

Level 3 – Procedural ATS

Grenada · Dominica · St Lucia · SVG · St Kitts & Nevis · Anguilla · BVI · Montserrat

Procedural control supported by GNSS & ATS coordination

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BRIEFING 127.500
CLEARANCE 125.100
UNICOM 122.950

Anchor regional CNS modernisation on the surveillance-capable ANSPs

For ADS-B integration, CANSNET, SWIM and surveillance interoperability, Barbados, Trinidad & Tobago, Antigua & Barbuda and the French Antilles are best positioned to lead and support States that depend on procedural ATS.



Barbados

Full radar & ADS-B surveillance
ANSP



Trinidad & Tobago

Piarco FIR with integrated ATM



Antigua & Barbuda

Regional hub with partial
surveillance



French Antilles

DSNA radar surveillance &
SEAFLIGHT ATC

- ACTIVE ROUTE
- ALTERNATE ROUTE
- WAYPOINT
- CONTROLLED AIRSPACE

COM CENTER	126.700
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PART TWO

Updated Assessment & Regional Analysis

A performance-based review of operational maturity, ASBU implementation and strategic direction for regional modernisation.

**Updated ANS Assessment****ASBU Maturity & Implementation****SWOT — ICAO Doc 9883****Conclusions & Recommendations**

— ACTIVE ROUTE
--- ALTERNATE ROUTE
● WAYPOINT
○ CONTROLLED AIRSPACE

Updated Air Navigation Services Assessment

A refreshed regional read confirms a mature ICAO-compliant baseline, with modernisation now focused on surveillance and data integration.

10

States under one regional AIP

2

Full-surveillance ANSPs

8

Procedural ATS providers

100%

ICAO AIM product suite
(Need to review)



Key findings

- Unified regional AIP delivers a complete, ICAO-compliant AIM product suite across all ten States.
- Navigation is mature region-wide through PBN / GNSS and published instrument procedures.
- Surveillance is the principal capability gap — most States operate procedural ATS.
- Continuous AIP Supplements confirm active, incremental modernisation.



Overall regional standing

Solid ICAO-compliant foundation; the modernisation agenda now centres on surveillance and regional data integration.

Updated Regional ASBU Maturity

Maturity mapped against the ICAO GANP Aviation System Block Upgrades (ASBU) framework across the four performance improvement areas.

Performance Improvement Area	Block 0	Block 1	Block 2
Airport Operations	In progress	Planned	Planned
Interoperable Systems & Data (SWIM)	In progress	Planned	Planned
Optimum Capacity & Flexible Flights	Implemented	In progress	Planned
Efficient Flight Path (PBN, CDO/CCO)	Implemented	In progress	Planned

Status: ■ Implemented ■ In progress ■ Planned

Regional posture: Block 0 largely consolidated, with Block 1 elements emerging in lead ANSPs.

Updated ASBU Implementation Level

Indicative implementation level of key ASBU Block 0 modules, assessed from published Eastern Caribbean AIP capabilities.

B0-APTA Optimised approaches (PBN)



B0-DATM Digital AIM / eAIP



B0-AMET Meteorological information



B0-FICE Flight & flow info (AIDC / AMHS)



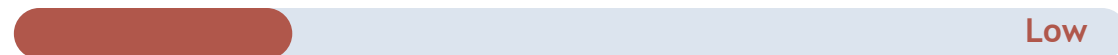
B0-ASUR Initial surveillance (ADS-B)



B0-CDO Continuous climb / descent ops



B0-SNET Ground-based safety nets



B0-ACDM Airport collaborative decisions



Indicative assessment for planning purposes; qualitative bands (High / Medium / Low) reflect published capability, not audited implementation percentages.

SWOT Analysis — ICAO Doc 9883 Methodology

Framed by the ICAO Doc 9883 performance-based approach across the Key Performance Areas: safety, capacity, efficiency and cost-effectiveness.



Strengths

- Unified regional AIP with full ICAO AIM suite
- Mature PBN / GNSS navigation region-wide
- Established ATS hubs — Antigua and the Piarco FIR



Weaknesses

- Mostly procedural ATS with limited surveillance
- Fragmented, partial ADS-B coverage
- Contingency & single-site vulnerabilities (e.g. outages)



Opportunities

- ADS-B, SWIM and new communication network, regional integration
- Harmonised PBN and CDO / CCO procedures
- Capacity-building led by surveillance-capable ANSPs



Threats

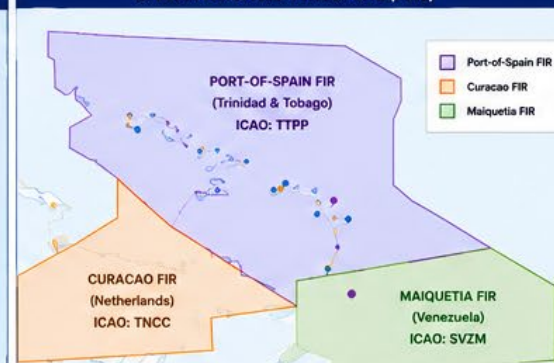
- Traffic growth outpacing procedural capacity
- Funding limits and equipment obsolescence
- Resilience and cyber-security exposure



1. ECAR REGION – GEOGRAPHIC OVERVIEW



2. ECAR AIRSPACE STRUCTURE (FIRs)



3. AIRPORTS IN THE ECAR REGION

STATE / TERRITORY	ICAO CODE	AIRPORT NAME	TYPE
Anguilla	TQPF	Clayton J. Lloyd Intl.	International
Antigua & Barbuda	TAPA	V.C. Bird Intl.	International
Barbados	TBPB	Grantley Adams Intl.	International
British Virgin Islands	TUPX	Terrance B. Lettsome Intl.	International
Dominica	TDPD	Douglas-Charles	International
Grenada	TGPY	Maurice Bishop Intl.	International
Montserrat	TRPG	John A. Osborne	International
Saint Kitts & Nevis	TKPK	Robert L. Bradshaw Intl.	International
Saint Lucia	TLPL	Hewanorra Intl.	International
Saint Vincent & the Grenadines	TVSV	Argyle Intl.	International
Trinidad & Tobago	TTPP	Piarco Intl.	International

LEGEND – STATES / TERRITORIES

Anguilla	Antigua & Barbuda	Barbados	British Virgin Islands	Dominica	Grenada	Montserrat	Saint Kitts & Nevis	Saint Lucia	Saint Vincent & the Grenadines	Trinidad & Tobago
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(Same color used throughout all graphics for each State/Territory)

4. ATS SERVICE TIERS BY STATE / TERRITORY

State / Territory	ATS Service Tier	Description
French Antilles (Martinique, Guadeloupe)	Radar Control	Direct vectoring, conflict detection and separation using composite radar / MLAT
Trinidad & Tobago	Radar Control	Direct vectoring, conflict detection and separation using composite radar / MLAT
Barbados	Radar Control	Direct vectoring, conflict detection and separation using composite radar / MLAT
Antigua & Barbuda	Radar Control	Direct vectoring, conflict detection and separation using composite radar / MLAT
Dominica	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Saint Lucia	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Grenada	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Saint Vincent & the Grenadines	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Saint Kitts & Nevis	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Montserrat	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
Anguilla	RASA	Enhanced procedural control with shared-display radar monitoring (OCS RASA procedures)
All Participating States (Fallback)	Procedural Control	Traditional separation from flight-plan and position-report data; backup during outages or in non-surveillance areas

5. ATS SERVICES AVAILABILITY BY STATE / TERRITORY

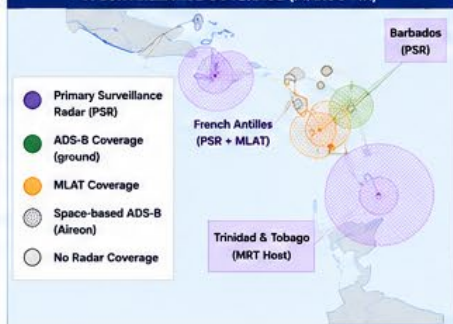
State / Territory	ACC (En-route)	APP (Terminal)	TWR (Aerodrome)	FIS	AFIS	Alerting Service
French Antilles (Martinique, Guadeloupe)	✓	✓	✓	✓	✓	✓
Trinidad & Tobago	✓	✓	✓	✓	✓	✓
Barbados	✓	✓	✓	✓	✓	✓
Antigua & Barbuda	✓	✓	✓	✓	✓	✓
Dominica	✓	✓	✓	✓	✓	✓
Saint Lucia	✓	✓	✓	✓	✓	✓
Grenada	✓	✓	✓	✓	✓	✓
Saint Vincent & the Grenadines	✓	✓	✓	✓	✓	✓
Saint Kitts & Nevis	✓	✓	✓	✓	✓	✓
Montserrat	✓	✓	✓	✓	✓	✓
Anguilla	✓	✓	✓	✓	✓	✓

6. COMMUNICATIONS INFRASTRUCTURE

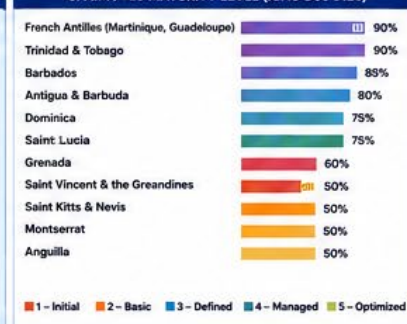
State / Territory	VHF Air-Ground	HF	AFTN/AMHS	SATCOM (Backup)
French Antilles (Martinique, Guadeloupe)	✓	✓	✓	✓
Trinidad & Tobago	✓	✓	✓	✓
Barbados	✓	✓	✓	✓
Antigua & Barbuda	✓	✓	✓	✓
Dominica	✓	✓	✗	✗
Saint Lucia	✓	✓	✗	✓
Grenada	✓	✓	✗	✓
Saint Vincent & the Grenadines	✓	✓	✗	✓
Saint Kitts & Nevis	✓	✓	✗	✓
Montserrat	✓	✓	✗	✗
Anguilla	✓	✓	✗	✗

✓ Available ✗ Limited / Partial ✗ Not Available

7. SURVEILLANCE COVERAGE (PIARCO FIR)



8. AIM / AIS MATURITY LEVEL (ICAO Doc 8126)

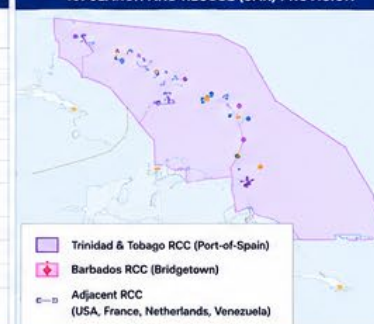


9. MET SERVICES CAPABILITY

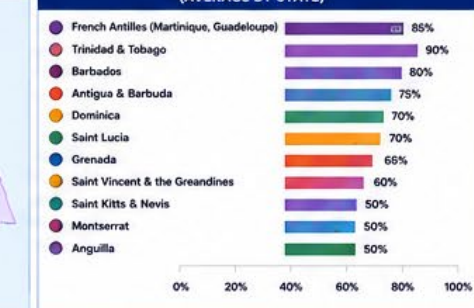
State / Territory	Aerodrome Forecast	TAF	METAR	SIGMET	WAFS Data
French Antilles (Martinique, Guadeloupe)	✓	✓	✓	✓	✓
Trinidad & Tobago	✓	✓	✓	✓	✓
Barbados	✓	✓	✓	✓	✓
Antigua & Barbuda	✓	✓	✓	✓	✓
Dominica	✓	✓	✓	✓	✗
Saint Lucia	✓	✓	✓	✓	✗
Grenada	✓	✓	✓	✓	✗
Saint Vincent & the Grenadines	✓	✓	✓	✓	✗
Saint Kitts & Nevis	✓	✓	✓	✓	✗
Montserrat	✓	✓	✓	✓	✗
Anguilla	✗	✓	✓	✓	✗

✓ Available ✗ Limited ✗ Not Available

10. SEARCH AND RESCUE (SAR) PROVISION



11. OVERALL BBB IMPLEMENTATION LEVEL (AVERAGE BY STATE)



SERVICE ABBREVIATIONS

ACC	Area Control Centre	AFIS	Aerodrome Flight Information Service
APP	Approach Control	AIS	Aeronautical Information Service
TWR	Aerodrome Control Tower	MET	Meteorological Service
FIS	Flight Information Service	SAR	Search and Rescue

BBB MATURITY SCALE (ICAO)



NOTE

Data based on E/CAR reporting, TTCAA, ICAO State Letters, AIP and other official sources as of July 2026.

ICAO Strategic Objectives



Conclusions

1

The Eastern Caribbean maintains a mature, ICAO-compliant aeronautical information and navigation foundation under a single regional AIP.

2

Surveillance is the defining capability gap — only Barbados and Trinidad & Tobago provide full radar and ADS-B services.

3

ASBU maturity is concentrated in Block 0, with Block 1 elements emerging only in the lead ANSPs.

4

Continuous AIP Supplements evidence active modernisation, though progress remains uneven across States.

5

Regional collaboration through surveillance-capable ANSPs is the fastest route to closing capability gaps.

SECTION 11 • RECOMMENDATIONS

A phased pathway for ICAO NACC

Sequencing modernisation around the surveillance-capable ANSPs while supporting States that rely on procedural ATS.



Short term

0–12 months

- Expand ADS-B as Barbados, T&T & Antigua, France
- Strengthen ATS contingency & AFTN / AMHS resilience



Medium term

1–3 years

- Adopt SWIM & CANSNET for regional data sharing
- Harmonise PBN and CDO / CCO procedures



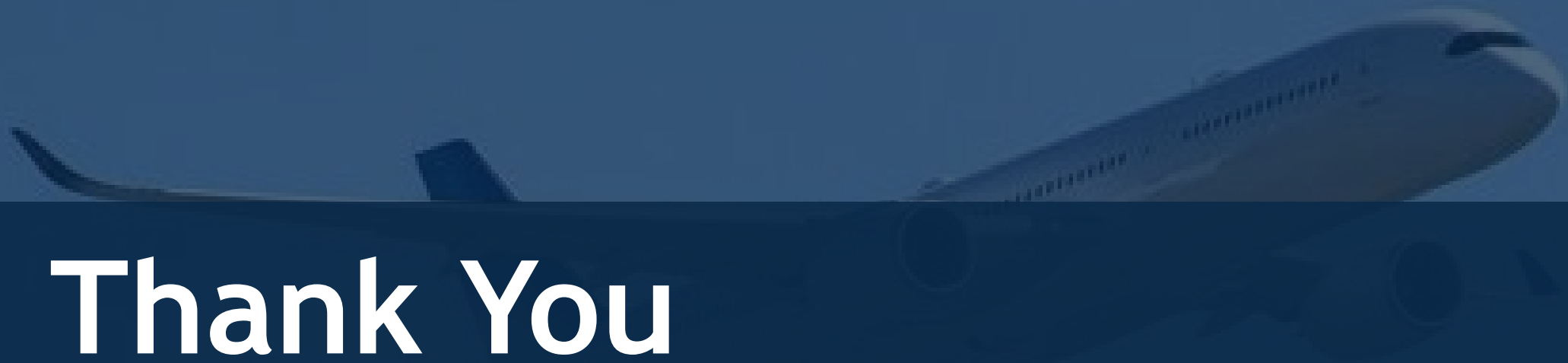
Long term

3–5 years

- Regional surveillance interoperability & integrated ATM
- Capacity-building for procedural-only States

WAYPOINT

CONTROLLED AIRSPACE



Thank You

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