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Agenda Item 6: **Other Business**

TRINIDAD AND TOBAGO'S PATH TO FULFIL ICAO'S TRANSITION FROM AERONAUTICAL INFORMATION SERVICES (AIS) TO AERONAUTICAL INFORMATION MANAGEMENT (AIM)

(Presented by Trinidad and Tobago)

EXECUTIVE SUMMARY
The effective management of aeronautical data is essential, particularly as technological advancements in civil aviation continue to empower operational improvements. In this context, ICAO's Global Air Navigation Plan (GANP) Doc 9750 and the Roadmap for the Transition from Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM) provide strategic guidance to States. This information paper presents the experience of the Trinidad and Tobago Civil Aviation Authority (TTCAA) in its ongoing transition from AIS to AIM. It is intended that the lessons learned and insights gained throughout this process will be shared so that it may support and inform the efforts of Eastern Caribbean (E/CAR) States as these states progress toward achieving their specific AIS to AIM transition objectives.

Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• ICAO Doc 9750 - GANP • ICAO Annex 15 - Aeronautical Information Services • ICAO Roadmap - Transition from AIS to AIM • ICAO Doc 8126 - AIS Manual • ICAO Doc 10066 - Procedures for Air Navigation Services (PANS) AIM • ICAO Doc 9839 - Manual on QMS for AIS • ICAO Doc 9868 - Procedures for Air Navigation Services Training • ICAO Doc 9991 - AIS Training Manual

1.   Introduction

1.1   In 2012 the Executive Management of the TTCAA implemented an Organisational Structure in its AIM Department to more effectively fulfil the twenty-one (21) steps of ICAO's Roadmap for the Transition from AIS to AIM.

1.2   Three (3) Units were created - Operations, Publications and Quality Assurance.

- AIM Operations functions on a 24/7 basis and manages NOTAM, Flight Plans, Aeronautical Fixed Telecommunication Network (AFTN) and Message Switching using the Aeronautical Message Handling System (AMHS).

- AIM Publications Unit is responsible for the publication of the Aeronautical Information Publication (AIP) and its amendments, AIRAC and NON AIRAC Supplements, Aeronautical Information Circulars (AICs) on behalf of Trinidad and Tobago, and the E/CAR States.

- AIM Quality Assurance Unit manages and maintains the AIM Department's Quality Management System (QMS) gaining ISO 9001:2008 Standard certification in 2017 and transition to the ISO 9001:2015 Standard in 2018. Air Navigation Services Certification from the TTCAA's Safety and Regulatory Division was obtained in September 2024. The Unit holds responsibility for the AIM elements included in this certification.

2.   Further additions to the AIM Organisational Structure

2.1   In 2017, the Geomatics Unit was added to the AIM Organisational Structure and the Unit is responsible for the management of Electronic Terrain and Obstacle Data (eTOD) and Aeronautical Charting.

2.2   In 2022, the post of AIM Officer Technical Development and Training was added to the Organisational Structure to address AIM technical development and training requirements in accordance with ICAO Annex 15 - AIS, Doc. 8126 - AIS Manual, Doc. 10066 - PANS AIM and Doc. 9868 -PANS Training.

3.   Capacity Building and Training Requirements

3.1   While the three (3) Units established in 2012 have progressed in their development, the continuous development of aeronautical data requirements for Air Traffic Management (ATM) necessitates ongoing training for AIM staff to ensure compliance with ICAO Standards and Recommended Practices (SARPs) for quality-assured aeronautical data. In 2023 the ICAO Document 9991 AIS Training Manual was released which supports the development of standardised AIM training.

3.2   The development and delivery of training for AIM Operations staff necessitate the temporary reassignment of course developers and instructors from the AIM Operations Unit, which reduces the Unit's available operational capacity. This often presents challenges in maintaining the optimum 24/7 service continuity within the AIM Operations Unit.

3.4   Staffing for the AIM Geomatics Unit requires personnel with qualifications in geospatial functions, necessitating recruitment external to the AIM Department and the TTCAA. As a result, these staff members required training to meet ICAO's requirements for eTOD and aeronautical charting. Given that the Unit is relatively new, ongoing training and capacity development remain essential for the Unit's development and operational effectiveness.

3.5   The AIM Quality Assurance Unit was initially staffed with two personnel from within the AIM Department. However, the Unit lead opted for early retirement in 2021, followed by the

resignation of the second officer in 2022. Consequently, recruitment efforts were directed externally to the TTCAA to secure staff with industry experience in QMS. While the internal staff made significant contributions to the establishment and initial oversight of the AIM QMS, the appointment of professionals with industry expertise has further reinforced the Unit's capacity and enhanced its operational effectiveness. The introduction of best practices consistent with ISO 9001 and relevant ICAO standards leads to a more structured approach to audits, enhanced quality oversight, and improved alignment with international requirements. The Unit is therefore well-positioned to ensure regulatory compliance, support the AIS to AIM transition, and advance continuous improvement initiatives that contribute to achieving the Organisation's safety and service excellence objectives.

4.   Insights Gained

4.1   Staff attrition resulting from retirements and resignations necessitates proactive human capacity planning to ensure the development and retention of critical skill sets within the Department. This situation poses challenges, particularly in facilitating the effective transfer of AIM-related knowledge, as coordinating cross-functional familiarisation sessions across Units becomes increasingly difficult. To mitigate these challenges, greater emphasis must be placed on formal succession planning and structured staff training, with a focus on capturing and transferring tacit knowledge. These measures are essential to ensure a seamless transition between personnel, preserve institutional memory, and maintain the sustained operational effectiveness of the Department.

4.2   The current AIM manpower plan does not account for the factors outlined in Section 3.2. Therefore, future revisions of the manpower plan must incorporate these considerations to ensure more effective and sustainable workforce planning. Additionally, the plan should provide for a formal review every three years, aligned with the AIM strategic plan and the evolving needs of the AIS-to-AIM transition.

5.   Conclusions

5.1   ICAO's evolving requirements for quality assured aeronautical data emphasise the importance for high-level decision makers to recognise that the adequate provision and management of such data by ICAO Contracting States is essential. Leveraging technological advances in civil aviation depends critically on the availability of reliable, quality-assured aeronautical data to ensure the safe, effective, and efficient management of Air Traffic.

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