INTERNATIONAL CIVIL AVIATION ORGANIZATION

Seventh Meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG7)

Dakar, Senegal, 5 - 8 August 2024

Agenda Item 3.3: Implementation of ASBU elements and Achievements of IIM Projects Management

WP3.3E Achievements of COM 5 Project on Assessment of AFI Air Navigation Services Cyber Resilience project

(Presented by IIM COM 5 Project team)

SUMMARY
This working paper outlines the progress of IIM COM 5 Project on the Assessment of AFI Air Navigation Services Cyber resilience and the challenges encountered.   Action by the meeting in paragraph 3
REFERENCE(S):   ▪ APIRG/26 Report   ▪ Aviation Cyber Security Strategy
Relates to **ICAO Strategic Objectives**: **B – Air Navigation Capacity and Efficiency.**

1. INTRODUCTION

1.1 The IIM/SG COM 5 Project, titled "Assessment of AFI Air Navigation Services Cyber Resilience," focuses on enhancing cyber safety and cyber resilience within Air Navigation and Information Management (CNS/ATM) systems across the AFI region.

1.2 Project Objectives:

This project aims to achieve the following objectives:

- Assess Cyber Threats: Evaluate the potential cyber threats facing AFI Air Navigation Systems;

- Promote Cyber Resilience Culture among stakeholders in the AFI Region, including Civil Aviation Authorities (CAAs), Air Navigation Service Providers (ANSPs), and other relevant counterparts;

- Develop a Cyber Resilience Framework.

1.3 Project main phases

The IIM COM 5 project is comprised of five key activities, each at a distinct stage of implementation (as illustrated in the figure):

1.3.1. Project Definition: This stage establishes the project's scope, objectives, timeline, and deliverables.

1.3.2. ANS Cyber Risk Assessment: This activity involves identifying and evaluating potential cyber threats and vulnerabilities within Air Navigation Systems (ANS) in the AFI region.

1.3.3. Regulatory Analysis: This stage examines existing regulations and guidance related to aviation cyber resilience.

1.3.4. Development of the AFI ANS Cyber Resilience Framework: This activity focuses on creating a comprehensive framework with guidelines for AFI ANSPs and member States. The framework will address best practices for cyber risk management, security controls, and incident response.

1.3.5. AFI ANS Cyber Resilience Awareness: This activity aims to raise awareness and understanding of cyber threats and best practices among stakeholders in the AFI region.

2. DISCUSSIONS

2.1. Project Documentation Review

2.1.1. Requested by the IIM Chair and Secretariat, the project documentation has been reviewed, focusing on updates to the project plan. A proposal to extend the project timeline until 2025 was submitted on May 17th, 2024, for consideration.

2.2. AFI ANS Cyber Resilience Framework

2.2.1. The AFI ANS Cyber Resilience Framework provides AFI member States and ANSPs with general guidelines for assessing cybersecurity risks, threats, and vulnerabilities to Air Navigation Service as well as implementing methods to mitigate these risks.

2.2.2. The framework was updated in 2024 to ensure alignment with the latest resources and initiatives, including:

- Aviation Cybersecurity Strategy
- ICAO Cybersecurity Action Plan
- ICAO Cybersecurity Culture in Civil Aviation
- ICAO Aviation Cybersecurity Guidelines
- CANSO Cybersecurity Guidance Material (Standard of Excellence in Cybersecurity & ATM Cybersecurity Policy Template)
- National Institute of Standards and Technology Cybersecurity Framework (Version 2.0)

2.2.3. The updated framework considers what's most relevant and appropriate for the AFI region.

2.2.4. The final framework was submitted to the IIM SG Secretariat and all Project Team Coordinators by June 30th, 2023 (Appendix D).

2.3. Project Cost Estimation

2.3.1. The project cost estimation is provided in Appendix E.

2.4. Air Navigation Services Cyber Resilience Awareness

2.4.1. A workshop on AFI aviation cybersecurity is planned for October 2024, led by ICAO ESAF with WACAF, the ICAO Cybersecurity Panel, and the FAA. The IIM COM 5 project is actively involved in the ongoing preparatory activities.

2.5 The way forward

2.5.1   This section outlines the immediate priorities for moving the project forward:

2.5.2   Finalize the 2024 AFI ANS Cyber Resilience Framework Update (Target Completion: September 2024):

2.5.3   Active Participation in AFI Aviation Cybersecurity Workshop (October 2024): The IIM COM 5 project team will actively participate in the preparatory activities for the upcoming AFI Aviation Cybersecurity Workshop, including the tabletop exercise.

3. ACTIONS BY THE MEETING

3.1 The meeting is invited to:

a) Take note of the progress made so far by the project team;

b) Recognize the need to enhance technical personnel capabilities in improving cyber resilience of Air Navigation Services (ANS) systems.

c) Encourage States and industry stakeholders within the APIRG framework, to participate in the upcoming workshops dedicated to the topic of cyber resilience of ANS systems.

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