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ENHANCING SAFETY AND COORDINATION ON AIRPORT APRONS: A CALL FOR ICAO IMPLEMENTATION GUIDANCE ON APRON MANAGEMENT SERVICES (AMS)

(Presented by Kazakhstan)

EXECUTIVE SUMMARY

Apron management services (AMS) are critical to ensuring safe, efficient, and coordinated operations on airport aprons, where aircraft interface with ground services in a complex and congested environment. The recent inclusion of AMS-related Standards and Recommended Practices (SARPs) in Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*, marks an important step toward improving apron safety and efficiency. However, implementation challenges remain for many States, particularly due to the absence of ICAO guidance material.

This working paper proposes that ICAO initiate the development of comprehensive guidance material to support States in establishing scalable, context-appropriate AMS frameworks. Such guidance would address key aspects, including infrastructure, staffing, procedures, and stakeholder coordination, enabling harmonized implementation across a diverse range of aerodromes.

<i>Strategic Goals:</i>	This working paper relates to <i>Every Flight is Safe and Secure</i>
<i>Financial implications:</i>	The financial impacts will depend on approved decisions.
<i>References:</i>	Annex 14 — <i>Aerodromes</i> Volume I — <i>Aerodrome Design and Operations</i> Assembly Resolution A40-27 — <i>Innovation in Aviation</i>

1. INTRODUCTION

1.1 The apron is a critical interface where aircraft, vehicles, ground handling personnel, and airport infrastructure interact, often within a complex and congested environment.

1.2 Recognizing the complexity and safety risks associated with apron operations, the latest amendment to Annex 14 — *Aerodromes* Volume I — *Aerodrome Design and Operations*, introduced new Standards and Recommended Practices (SARPs) related to apron management services (AMS).

1.3 While this is a significant step forward, ICAO has yet to issue corresponding implementation guidance. This absence presents a challenge to States and operators attempting to operationalize AMS in line with global expectations.

2. DISCUSSION

2.1 Operational necessity of AMS

2.1.1 AMS enhances situational awareness, prevents movement conflicts, improves turnaround coordination, and mitigates apron-related safety hazards. As air traffic grows and apron environments become more congested, formalizing AMS has become increasingly urgent.

2.2 Implementation challenges faced by States

2.2.1 States may face challenges such as:

- a) defining the scope of AMS responsibilities (e.g., pushback clearance, stand assignment, vehicle flow monitoring);
- b) determining infrastructure needs, such as the establishment of a dedicated apron management unit or tower;
- c) recruiting and training personnel with appropriate technical and communication skills; and
- d) coordinating with stakeholders, including ATC, ground handlers, airport operators, and airlines.

2.3 The need for ICAO guidance

2.3.1 To date, there is limited ICAO material detailing how AMS should be structured and operated. A dedicated guidance document would assist States and airport operators in:

- a) designing organizational models for AMS;
- b) establishing procedures for apron control and safety assurance;
- c) defining qualifications and training requirements for AMS staff; and

- d) integrating AMS into airport collaborative decision-making (A-CDM) and other collaborative platforms.

2.4 Scalable solutions for diverse aerodromes

2.4.1 ICAO guidance may promote scalable implementation models tailored to airport size and traffic volume:

- a) major international hubs may benefit from dedicated apron management control tower (AMCTs) with real-time surveillance and advanced coordination systems; and
- b) regional or lower-traffic airports may implement centralized coordination through existing air traffic control (ATC) or airport operations centers, supported by simplified procedures and basic technologies.

2.4.2 This tiered approach would promote global consistency while accommodating the diverse operational environments of ICAO Member States.

3. CONCLUSION

3.1 While the adoption of AMS-related SARPs is a welcome advancement, effective and harmonized implementation requires robust supporting guidance material.

3.2 ICAO is encouraged to take proactive steps to develop such material, ensuring it reflects international best practices, supports varying levels of airport complexity, and strengthens apron safety and efficiency worldwide.

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