

**61ST CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGION**

*Kuala Lumpur, Malaysia
7 – 11 September 2026*

AGENDA ITEM 1: THEME TOPIC

**SMART SKIES EMERGING TECHNOLOGIES FOR SAFE,
SECURE, SUSTAINABLE & EFFICIENT AVIATION**

(Presented by Malaysia)

SUMMARY

Under this theme, the Conference will examine how air transport can drive development across the Asia-Pacific by harnessing emerging technologies—artificial intelligence, advanced analytics, automation and digital solutions—to strengthen safety through predictive risk analysis, streamline operations for greater efficiency, and accelerate sustainability via emission-reducing technologies and smarter infrastructure. Aligned with ICAO’s GASP and the 2050 net-zero ambition, the discussions will also emphasize equitable access to innovation for both developing and developed States to ensure the region’s aviation growth is competitive, resilient and sustainable.

SMART SKIES EMERGING TECHNOLOGIES FOR SAFE, SECURE, SUSTAINABLE & EFFICIENT AVIATION

1. INTRODUCTION

1.1 The 61st Conference of the Directors General of Civil Aviation of the Asia and Pacific Regions (61st DGCA Conference) is being held in Kuala Lumpur, Malaysia, from 7 – 11 September 2026. This discussion paper is presented under the Conference Theme Topic, "Smart Skies: Emerging Technologies for Safe, Secure, Sustainable and Efficient Aviation."

1.2 This theme supports ICAO's strategic goals and long-term aspirations under the ICAO Strategic Plan 2026–2050, including Zero Fatalities, Net-Zero Carbon Emissions and a Connected Transport System. It enhances safety through technology-enabled risk prevention, advancing sustainability through emission-reducing technologies and innovative operational practices and fostering innovation through collaborative emerging technology solutions that uphold the Delhi Declaration's principles of inclusive development.

2. DISCUSSION

2.1 Emerging technologies—advanced analytics, artificial intelligence (AI), digital platforms, predictive maintenance and real-time data integration—enhance aviation safety by enabling earlier identification of operational risks and supporting data-driven safety management. These capabilities reinforce State safety oversight and service provider safety systems in alignment with ICAO's Global Aviation Safety Plan (GASP), Regional Aviation Safety Plans (RASPs), State Safety Programmes (SSPs) and Annex 19 requirements.

2.2 Airlines and airports can leverage digitalisation, automation, predictive maintenance and intelligent traffic management to streamline operations, reduce delays and lower costs. These technologies optimise resource utilisation, improve on-time performance, enhance passenger experience and increase operational resilience during disruptions.

2.3 Technologies that improve fuel efficiency, optimise trajectories, enable the broader use of sustainable aviation fuels (SAF) and strengthen airport energy and environmental management contribute to emissions reduction. Such innovations support ICAO's Long-Term Global Aspirational Goal (LTAG) of net-zero carbon emissions by 2050, ICAO's broader long-term environmental objectives and the industry's decarbonization pathways.

2.4 Advanced screening, biometric identification, automated border processing, cybersecurity solutions, cyber resilience measures and data-driven risk assessment tools improve threat detection, accelerate passenger processing and enable more efficient allocation of security resources—strengthening aviation security and facilitation while enhancing the resilience of increasingly digitalised aviation systems.

2.5 Technology innovation catalyses economic development by enhancing connectivity, enabling smart airport and digital infrastructure growth, creating high-value employment and attracting investment into new aviation products and services.

2.6 To realise these benefits globally, technology deployment must be equitable. The conference will examine mechanisms for collaboration among governments, industry and technology partners to expand access, build capacity in developing States and mobilise funding and technical assistance, in line with ICAO's No Country Left Behind (NCLB) initiative and its commitment to ensuring that all States can benefit from innovation and technological advancement.

2.7 Recognising the increasing pace of technological innovation, ICAO and States are working to ensure that emerging technologies are introduced safely, securely and responsibly. This includes the development of appropriate governance, assurance and oversight approaches for

technologies such as artificial intelligence, automation and advanced air mobility, consistent with ICAO's Innovation Policy and Assembly Resolution A40-27 on Innovation in Aviation.

2.8 When integrated with safety protocols, operational practices and sustainability initiatives, emerging technologies enable a smarter, more resilient aviation system that advances safety, efficiency, environmental and socioeconomic goals.

3. STRUCTURE OF THE CONFERENCE

3.1 The 61st DGCA Conference will provide a platform for Directors General of Civil Aviation and participants to exchange views, share experiences and deliberate on key issues affecting the aviation sector in the Asia-Pacific region with due consideration given to the Conference Theme Topic, “Smart Skies: Emerging Technologies for Safe, Secure, Sustainable and Efficient Aviation.”

3.2 As with previous Conferences, each agenda item will be discussed according to its respective subject area, while considering the relevance and implications of the Conference Theme Topic. It is expected that active and constructive discussions will take place throughout the Conference, with a view to identifying common challenges, sharing best practices and exploring opportunities for regional collaboration.

3.3 The Conference discussions will focus on how emerging technologies, including artificial intelligence, automation, advanced analytics, digital transformation, autonomous systems, advanced air mobility and other innovative solutions, can contribute to enhancing aviation safety, security, operational efficiency and environmental sustainability. Building on relevant regional initiatives, including the ICAO APAC Workshop on Innovation and Emerging Technologies in Aviation, held in Bangkok, Thailand, on 20–21 November 2025, the Conference will further explore how States and industry can work together to ensure these technologies are introduced responsibly, consistently and for the benefit of the global aviation system.

3.4 The outcomes of the Conference discussions will contribute towards strengthening cooperation among States, international organisations and industry stakeholders, as well as supporting the development of collective actions to advance a safe, secure, sustainable and efficient aviation system in the Asia-Pacific region.

3.5 The 61st DGCA Conference brings together Directors General of Civil Aviation, Ministers, senior government officials, international organisations, industry leaders, and key stakeholders from across the global aviation community to discuss strategic issues shaping the future of international civil aviation.

3.6 As host nation and conference organiser, CAAM has been designated to lead the High-Level Panel Discussions (HLPDs) at the 61st DGCA Conference. The HLPD is the conference’s premier strategic dialogue platform, convening Ministers, Directors General and senior aviation officials to address issues of global significance and to set policy direction for the future of international civil aviation.

4. ACTION BY THE CONFERENCE

4.1 The Conference is invited to:

- a) recognise the role of emerging technologies as enablers of safer, more secure, sustainable and efficient aviation, in support of the aspirations of the ICAO Strategic Plan 2026–2050;
- b) encourage States, industry and international organizations to strengthen regional cooperation, capacity-building and knowledge-sharing to support the safe, responsible and inclusive adoption of emerging technologies in civil aviation, including associated opportunities, challenges and best practices; and

- c) encourage State, industry and international organisations to strengthen collaboration in promoting the safe, secure, ethical and responsible adoption of emerging technologies in accordance with ICAO Standards and Recommended Practices (SARPs) and relevant ICAO guidance.

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