



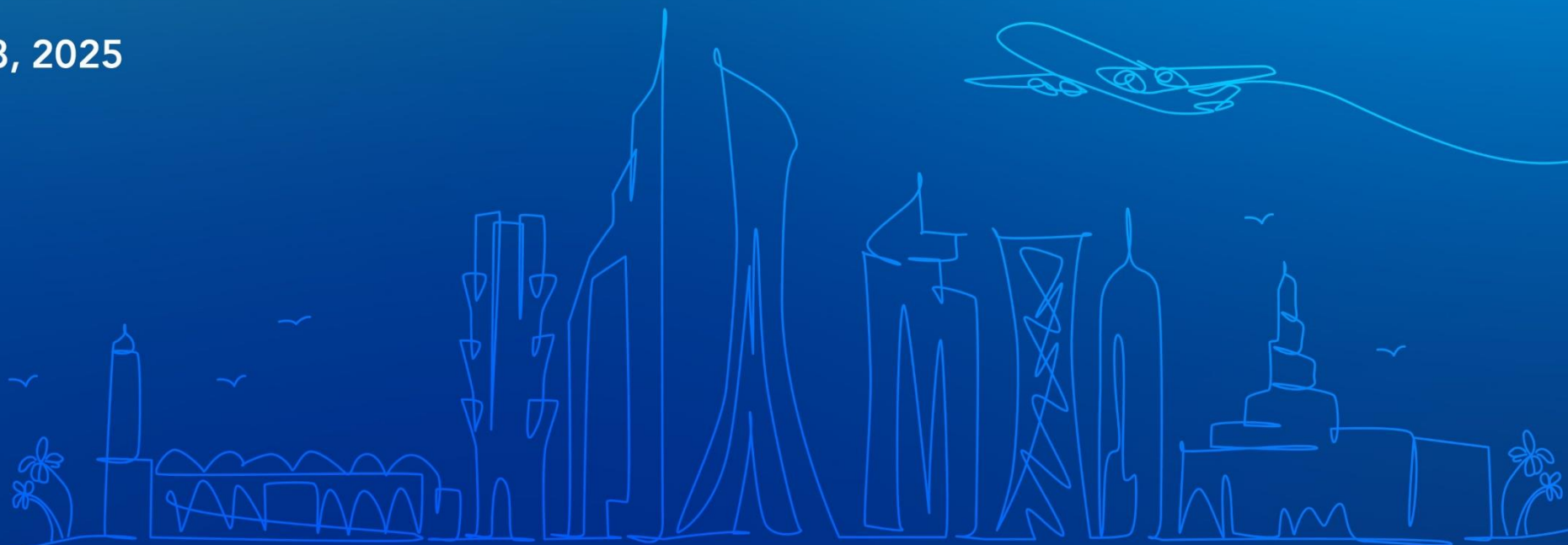
الهيئة العامة للطيران المدني
CIVIL AVIATION AUTHORITY
قطر QATAR



ICAO

MIDANPIRG/22 & RASG-MID/12

Doha, Qatar | May 4-8, 2025





Innovation and Cybersecurity Updates for the MID Region

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Innovation Updates for the MID Region



01

The ICAO Policy on Innovation



- **Purpose and Scope:**
 - ✓ *The ICAO Policy on Innovation aims to enhance ICAO's role in assisting Member States to benefit from innovation in aviation, ensuring equitable access under the "No Country Left Behind" (NCLB) initiative. It promotes a technology-agnostic, timely, and globally harmonized approach to innovation.*
- **Key Objectives:**
 - ✓ *Support the development of global policies, standards, and tools to address innovation.*
 - ✓ *Foster an environment where innovation flourishes across all ICAO regions.*
 - ✓ *Promote awareness, accessibility, and deployment of innovation among all Member States.*
 - ✓ *Strengthen ICAO's internal efficiency and effectiveness through innovation.*



01

The ICAO Policy on Innovation



- **Strategic Focus Areas:**
 - ✓ *Facilitate innovation sharing and collaboration.*
 - ✓ *Conduct horizon scanning and barrier analysis.*
 - ✓ *Develop standardization roadmaps and regulatory support tools.*
 - ✓ *Embed innovation culture within ICAO.*
 - ✓ *Establish Key Performance Indicators (KPIs) for monitoring.*
- **Governance:**
 - ✓ *The policy is effective from 17 March 2025 and subject to annual review and periodic updates by the ICAO Council.*



02

ICAO Regional Offices: Roles and Responsibilities



- ***Implementation and Promotion:***
 - ✓ *Integrate the ICAO Policy on Innovation into regional strategies and work programmes.*
 - ✓ *Foster a culture of innovation among Regional Office staff and regional stakeholders.*
 - ✓ *Assign Innovation Champions within the Regional Offices.*
- ***Support to States:***
 - ✓ *Assist States in developing, accessing, and implementing innovations.*
 - ✓ *Facilitate regional capacity-building initiatives and knowledge-sharing platforms.*



02

ICAO Regional Offices: Roles and Responsibilities



- **Stakeholder Engagement:**
 - ✓ *Engage with traditional aviation stakeholders, emerging innovators, and out-of-sector contributors.*
 - ✓ *Encourage partnerships and collaborative innovation initiatives.*
- **Monitoring and Reporting:**
 - ✓ *Conduct horizon scanning and share regional innovation developments with HQ.*
 - ✓ *Report quarterly on regional innovation activities, success stories, and challenges*



03

Member States: Expected Actions



- ***Policy Integration:***

- ✓ *Embed innovation principles into national aviation policies, strategies, and regulations.*
- ✓ *Develop national innovation strategies aligned with ICAO's framework.*

- ***Capacity Building:***

- ✓ *Conduct awareness workshops and training programmes to build innovation competencies.*



03

Member States: Expected Actions



- ***Facilitating Innovation:***
 - ✓ *Create mechanisms to promote accessibility to innovations across the country.*
 - ✓ *Foster innovation in less developed or underrepresented areas.*
- ***Horizon Scanning and Best Practices:***
 - ✓ *Monitor emerging technologies and trends.*
 - ✓ *Share successful practices and lessons learned with ICAO and other States.*
- ***Barrier Identification and Resolution:***
 - ✓ *Analyze and address legal, regulatory, and infrastructural barriers to innovation.*



03

Member States: Expected Actions



- ***Interoperability and Harmonization:***
 - ✓ *Ensure innovations are interoperable with international aviation systems.*
 - ✓ *Align national regulatory frameworks with ICAO standards and guidance.*
- ***Monitoring and Reporting:***
 - ✓ *Develop KPIs to track national innovation activities.*
 - ✓ *Provide regular updates to ICAO through regional channels.*



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Cybersecurity Updates for the MID Region



04

Artificial Intelligence (AI) and ANS Cybersecurity



- *The meeting may wish to emphasize on the transformative potential of Artificial Intelligence (AI) in modernizing Air Navigation Services/systems.*
- *AI technologies can greatly enhance operational efficiency and safety by improving conflict detection, trajectory prediction, and providing decision support tools.*
- *Applications include real-time conflict resolution, speech recognition for communication error detection, accurate flight path forecasting, and recommendations for optimal runway configurations.*



04

Artificial Intelligence (AI) and ANS Cybersecurity



- *Recognizing the growing integration of AI into ATM, the meeting may wish to highlight the following:*
 - ✓ *the critical need to address cybersecurity risks associated with AI systems.*
 - ✓ *While AI offers considerable benefits, it also introduces new vulnerabilities that could threaten aviation safety if not properly secured.*
 - ✓ *Ensuring the resilience and security of AI-driven systems is crucial, aligning with ICAO's efforts to develop guidance on AI integration, including cybersecurity considerations.*



05

Upcoming Regional Event

To support regional readiness, the meeting may wish announce that Oman will graciously host the ANS Cybersecurity Table-Top Exercise, combined with an AI innovation initiatives workshop, in Q3 of 2025. This event aims to enhance cybersecurity awareness and strengthen preparedness among MID States through practical collaboration and knowledge sharing.



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Thank You

