

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

*Kuala Lumpur, Malaysia
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**AGENDA ITEM 6: ECONOMIC DEVELOPMENT OF
AIR TRANSPORT**

**HARNESSING ARTIFICIAL INTELLIGENCE TO MODERNIZE
THE AIR TRANSPORT ECONOMIC REGULATORY
FRAMEWORK FOR INCLUSIVE REGIONAL GROWTH**

(Presented by Lao PDR)

SUMMARY

This Discussion Paper addresses the potential of Artificial Intelligence (AI) to transform and modernize the economic regulatory frameworks governing international air transport, with a focus on developing States like Lao PDR. This paper explores how AI analytics, predictive market modeling, and automated regulatory oversight can lower compliance costs, enhance fair competition, and optimize bilateral air service agreements (ASAs). It urges regional collaboration and technical guidance to establish adaptive, data-driven regulatory environments across the Asia-Pacific region.

HARNESSING ARTIFICIAL INTELLIGENCE TO MODERNIZE THE AIR TRANSPORT ECONOMIC REGULATORY FRAMEWORK FOR INCLUSIVE REGIONAL GROWTH

1. INTRODUCTION

1.1 Modern economic regulation in air transport is essential for ensuring fair market access, encouraging private sector investment, safeguarding consumer rights, and maintaining competitive air services. However, traditional regulatory mechanisms often struggle to keep pace with rapid market fluctuations, evolving airline business models, and complex global supply chains.

1.2 Lao PDR submits this paper to explore how Civil Aviation Authorities (CAAs) can deploy AI tools to modernize economic regulatory frameworks, reduce administrative burdens, and make regulatory oversight more responsive to regional economic dynamics.

2. DISCUSSION

2.1 AI-Assisted Market Analysis and Tariff Oversight

2.1.1 Civil aviation authorities, particularly in developing nations, frequently face resource constraints in monitoring passenger and cargo tariffs, capacity utilization, and market dynamics in real time.

2.1.2 AI-driven data analytics can process massive volumes of market, traffic, and pricing data to identify anti-competitive practices, predatory pricing, or unjust discrimination. This enables regulators to maintain fair competition and protect consumer interests without placing excessive reporting burdens on airlines.

2.2 Dynamic Air Services Agreement (ASA) Modeling

2.2.1 Negotiations surrounding Bilateral Air Services Agreements (ASAs) rely heavily on traffic forecasting, route viability assessments, and economic impact evaluations.

2.2.2 AI predictive modeling allows CAAs, to simulate market scenarios, forecast passenger demand, and evaluate the economic impact of liberalizing specific traffic rights (e.g., 3rd, 4th, and 5th Freedom rights). This data-driven insight strengthens negotiating capabilities and ensures that economic agreements directly support national development goals and regional connectivity.

2.3 Streamlining Regulatory Compliance and Reducing Administrative Costs

2.3.1 Compliance monitoring for economic licensing, airline ownership and control rules, consumer protection standards, and slot allocations can be time- and labor-intensive.

2.3.2 Automating regulatory workflows using machine learning reduces processing times for economic permits and licensing approvals. For developing civil aviation administrations, smart regulatory frameworks reduce operational overheads, streamline administrative burdens, and create a transparent, business-friendly environment for foreign direct investment.

2.4 Inclusive Capacity Building for Smart Regulation

2.4.1 Developing robust AI-enabled regulatory frameworks requires specialized technical skills, data infrastructure, and legal governance models that vary across the Asia-Pacific region.

2.4.2 In alignment with ICAO's *No Country Left Behind* (NCLB) initiative and the principles of inclusive development outlined in the Delhi Declaration, regional cooperation must support technology transfer, regulatory harmonization, and joint training initiatives for civil aviation regulators.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) recognize the potential of artificial intelligence to modernize economic regulatory frameworks, streamline administrative oversight, and support market liberalization in air transport;
- b) encourage Member States to explore AI and data analytics tools to enhance traffic forecasting, ASA negotiations, consumer protection, and market monitoring; and
- c) request ICAO and regional bodies to develop technical guidance, policy frameworks, and capacity-building programs to help developing States adopt smart, data-driven economic regulatory practices in civil aviation.

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