



WORKING PAPER

**SEVENTH WORLDWIDE AIR TRANSPORT CONFERENCE
(ATCONF/7)**

Montréal, HQ, 16 to 20 November 2026

Agenda Item 4: Emerging technologies, new business models and other associated aspects

4.3: Leveraging air transport data and the digital ecosystem for seamless, secure and resilient operations

**DATA GOVERNANCE AND DIGITALIZATION AS PILLARS OF SUSTAINABILITY,
PLANNING AND OPERATIONAL CONTINUITY IN CIVIL AVIATION**

(Presented by Venezuela (Bolivarian Republic of) and supported by 19 LACAC Member States²)

EXECUTIVE SUMMARY

This paper discusses the importance of data governance and statistical analysis as continuing structural enablers for economic planning, regulatory oversight, and sustainable growth of air transport. It also addresses how integrated information management optimizes day-to-day operations and strengthens the institutional response to market disruptions. States are clearly facing challenges in implementing traditional analytical tools, and the International Civil Aviation Organization (ICAO) is asked to foster technical cooperation, assistance and technology transfer under the principle *No Country Left Behind*, promoting upgrades to interoperable platforms.

Action: The Conference is invited to:

- recognize data governance and continuous statistical analysis as essential tools for strategic planning, economic sustainability, and informed decision-making in routine and emergency management of air transport;
- urge Member States to upgrade their civil aviation data management infrastructures, moving from traditional analytical flows to integrated digital platforms that are cyber-secure and interoperable; and
- request ICAO, in accordance with the *No Country Left Behind* principle, to strengthen technical cooperation, assistance and specialized training programs for developing States, facilitating the adoption of analytical methodologies and advanced digital infrastructures for economic and operational oversight.

<i>Strategic Goal:</i>	This working paper relates to the Strategic Goal: <i>The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All; and No Country Left Behind.</i>
<i>Financial implications:</i>	N/A

¹ Spanish version provided by Venezuela (Bolivarian Republic of).

² Belize, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, and Uruguay.

<i>References:</i>	ICAO Strategic Plan (2026–2050) Report of the Sixth Worldwide Air Transport Conference (ATConf/6) ICAO Guiding Principle <i>No Country Left Behind</i>
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1. INTRODUCTION

1.1 The sustainable development of international air transport requires management based on precision, predictability and operational efficiency. According to the International Civil Aviation Organization's (ICAO) Strategic Plan 2026–2050, timely access to standardized and interoperable data is fundamental to public policymaking, balanced economic regulation, and strategic decision-making.

1.2 For civil aviation authorities, the ability to process integrated analytical data in real time is not only a tool for responding to contingencies, but is also key to daily route management, the balancing of commercial supply, and optimization of operational capacity.

2. DISCUSSION

2.1 **Data as a structural asset for aviation management:** The daily management of airspace and commercial air traffic requires ongoing analytical monitoring of variables such as passenger and cargo flows, load factors and operational capacity. The experience of Venezuela shows that rigorous statistical monitoring makes it possible to evaluate market dynamics, adjust flight frequency, guarantee fair competition among operators, and sustainably optimize territorial connectivity as a continuing administrative practice.

2.2 **Inherent resilience of the analytical model:** When aviation authorities have stable data flows, their ability to adapt to operational disruptions or unforeseen events comes naturally. Analytical slot management and capacity assessment in alternate nodes make it possible to mitigate impacts, maintain service continuity, and ensure safety in any working scenario.

2.3 **The challenge of the digital divide and traditional tools:** Despite human analytical achievements, the management of statistical flow by means of local or manual tools such as local databases and spreadsheets is subject to structural vulnerabilities. This limitation highlights the urgent need to evolve towards automated interfaces that are cybersecure and interoperable in real time, in line with the global digital transformation objectives of ICAO.

2.4 **Strengthening Technical Cooperation and Assistance:** The transition to data-driven management models must be inclusive. ICAO needs to strengthen knowledge transfer, training and technical cooperation to enable civil aviation authorities to scale their analytical capabilities autonomously and sustainably, ensuring that all States participate on an equal footing in the digital aviation environment.

3. CONCLUSION

3.1 The governance and continuous analysis of data are indispensable tools that offer technical sovereignty and operational efficiency for sustainable air transport planning.

3.2 The modernization of information systems must be driven by ICAO's multilateral commitment and technical assistance, ensuring the sustainability and robustness of global civil aviation under the principle of *No Country Left Behind*.