



**Item 2A
Agenda:**

Competitiveness

**PROPOSAL FOR THE IMPLEMENTATION OF
A DATA OBSERVATORY FOR THE SAM REGION**

Working Paper presented by Colombia, "*The Country of Beauty*"

SUMMARY

This study note presents the proposal for the creation and implementation of the Data Observatory for the SAM Region, aligned with the ICAO Strategic Plan 2026-2050. The Observatory will optimize the collection, analysis, and dissemination of key information to enhance operational safety, environmental sustainability, and air transport connectivity in the South American region.

The availability of timely and relevant data becomes an essential factor that will enable the articulation and standardization of data from various sources, improve decision-making, and strengthen collaboration among Member States. Additionally, it will contribute to the efficient management of air traffic and the reduction of operational risks through the use of technologies such as Big Data and artificial intelligence.

The Data Observatory is not only a technological advancement but also a strategic step towards a safer, more efficient, and sustainable aviation system in South America. To maximize its potential, it is essential to implement continuous training programs for Member State personnel, ensuring effective management and optimal utilization of the advanced tools offered by the platform.

Referencias:

- Strategic Plan 2026-2050 ICAO-Dic.2024
- Informe de la décimo séptima reunión de Autoridades de Aviación Civil de la Región Sudamericana de la OACI (RAAC17)-2023
- <https://istars.icao.int/Sites>
- <https://data.icao.int/newdataplus/>
- <https://portal.cgna.decea.mil.br/carsamma/home/>
- <https://www.icao.int/SAM/SSP/Pages/default.aspx>

**Objetivos
Estratégicos
de la OACI:**

- *Every Flight Is Safe and Secure*
- *Aviation Is Environmentally Sustainable*
- *Aviation Delivers Seamless, Accessible, and Reliable Mobility for All*
- *No Country Left Behind*

	<ul style="list-style-type: none"> • <i>The International Civil Aviation Convention and Other Treaties, Laws, and Regulations Address All Challenges</i> • <i>The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All</i>
--	---

1. Introduction

1.1 Efficient management of aeronautical information is a key factor for the safety and efficiency of air traffic in the SAM region. The implementation of a Data Observatory will enable real-time data collection, analysis, and visualization, facilitating evidence-based decision-making and strengthening operational safety.

1.2 The absence of a centralized platform for aeronautical data management in the region limits the ability of authorities to identify trends, mitigate risks, and optimize air traffic efficiency. Currently, decision-making relies on fragmented systems that hinder an accurate assessment of the aviation sector's status in the region.

1.3 It is recommended that SAM region States adopt advanced tools for data collection and analysis, as well as train personnel responsible for air navigation services' safety and operations. This will enhance airspace supervision, reduce operational risks, and ensure a safer and more efficient aviation system.

2. Discussion

Currently, global platforms such as iSTARS, ICAO Data+, and CARSAMMA facilitate aeronautical information analysis. However, the SAM region lacks a centralized tool for the integrated management of aeronautical data.

The Data Observatory will enable:

2.1 **Data Standardization:** Implementation of data normalization policies to ensure consistency and quality in the information used for strategic decision-making in operational safety and air traffic efficiency.

2.2 **Regional Coordination:** Integration of efforts among aeronautical authorities to establish uniform procedures for information exchange and analysis, strengthening intergovernmental cooperation and enhancing air navigation management efficiency.

2.3 **Governance:** A governance model will be established based on equitable representation of Member States, ensuring that each country retains autonomy over its information and strategic decisions. To guarantee data transparency and security, international cybersecurity standards and regulated access protocols will be implemented, protecting the confidentiality of shared information. Additionally, a regional technical committee will be created to oversee the administration of the Observatory, promoting cooperation without compromising State sovereignty.

2.4 **System Interoperability:** Synchronization with existing global platforms, enabling real-time data integration and improving responsiveness to incidents and critical situations within the regional airspace.

2.5 **Use of Advanced Technologies:** Implementation of Big Data and artificial intelligence for predictive analysis, facilitating the detection of operational patterns and trends. This will allow for risk anticipation and improved route planning and airport operations.

2.6 **Environmental Impact Assessment:** Monitoring of emissions and noise levels to ensure compliance with international and national regulations, enabling corrective measures to reduce aviation's environmental footprint in the region.

2.7 **Regional Training:** Capacity-building in data management and artificial intelligence applied to aviation, ensuring that Member States have trained personnel to efficiently operate and maintain the Data Observatory platform.

2.8 **Alignment with ICAO Strategic Objectives 2026-2050:** This initiative will ensure compliance with international standards and strategic objectives, positioning the SAM Region as a leader in aviation data utilization and establishing a safer, more efficient, and sustainable air transport system.

2.9 **Implementation Leadership:** To strengthen the implementation of the Data Observatory for the SAM Region, it is suggested that Colombia, the country of beauty, in collaboration with other Member States, assume a leadership role in coordinating efforts and providing technical support. This approach will promote effective and equitable cooperation for the benefit of the entire region.

3. **Suggested Action**

3.1 The Meeting is invited to

- a) Approve the implementation of the Data Observatory for the SAM Region.
- b) Establish a collaborative framework for aeronautical data standardization: Develop common policies and procedures for data collection, storage, and analysis, ensuring consistency and quality across the region.
- c) Designate a working group for the governance of the Observatory: Form a committee with representatives from each Member State to oversee the Observatory's management, ensuring the autonomy and security of each country's information.
- d) Coordinate efforts with existing platforms to optimize information exchange: Integrate the Observatory with global systems such as iSTARS, ICAO Data+, and CARSAMMA to enhance interoperability and real-time data access.
- e) Promote data analysis training programs for Member States: Implement training programs on data management and artificial intelligence applied to aviation, ensuring that personnel are equipped to efficiently operate and maintain the platform.
- f) Implement an information security management system: Adopt international cybersecurity standards and establish regulated access protocols to protect the confidentiality and integrity of shared data

- g) Establish key performance indicators (KPIs) to evaluate the Observatory's success: Define and monitor KPIs to measure the effectiveness of the Observatory in improving operational safety, air traffic efficiency, and environmental sustainability.

- END -