



ASSEMBLY — 42ND SESSION

ECONOMIC COMMISSION

Agenda Item 26: Economic Development of Air Transport

MODERNIZATION OF STATISTICAL MANAGEMENT SYSTEMS IN ICAO

(Presented by Chile)

EXECUTIVE SUMMARY

Civil aviation is a dynamic and constantly evolving industry, which requires the availability of timely and reliable data for decision making and strategic planning by States, but the methods currently used by the International Civil Aviation Organization (ICAO) to gather this information from its Member States present significant opportunities for development. It is essential for ICAO to move ahead with the modernization of its data management tools and standards if it is to meet today's demands in the field of information technology, data science and artificial intelligence.

The following text presents a formal proposal to seize these opportunities, inviting ICAO and its Member States to undertake a thorough modernization of their data management systems. Recommendations are made for revising data-collection methodologies, updating technological tools prioritizing open standards, and developing a common framework that guarantees the interoperability of data between States, with the aim of strengthening analysis and strategic planning in the aviation industry.

Action: The Assembly is invited to urge the relevant bodies to:

- a) Review the methods used to collect data requested from the Member States, adopting the best practices used in data science.
- b) Update the data reporting and communication tools and channels used by Member States in delivering information to ICAO, favouring the use of open-source software and free technological standards.
- c) Work on the development of a standard that allows data to be compatible, comparable and interchangeable between countries; and
- d) Develop a methodology that allows reporting countries and designated focal points free access to ICAO databases.

*Strategic
Goals:*

This working paper relates to Strategic Goals:

- Economic development
- No Country Left Behind

¹ Spanish version provided by Chile

<i>Financial implications:</i>	
<i>References:</i>	Reference Manual on the ICAO Statistics Programme, 5th edition, 2013.

1. INTRODUCTION

1.1 ICAO has historically been the international agency responsible for the collection, analysis and publication of aviation industry data, as evidenced at the Tenth Session of the Statistical Division in 2009.

1.2 ICAO requests its Member States to send in periodic information on commercial air carriers, airports, air navigation services and en-route facilities, among other civil aviation statistics.

2. DISCUSSION

2.1 The aviation industry is characterized by rapid evolution and constant innovation. In order to make decisions that drive the industry forward, timely, high-quality information is required.

2.2 ICAO recognizes the value of aviation information through its statistics programme, whereby it asks its Member States to report their statistics using Air Transport Reporting (ATR) Microsoft Excel forms that are e-mailed to sta@icao.int. According to the fifth edition of the Reference Manual on the ICAO Statistics Program (2013), the forms must be filled out rigorously, taking care not to alter their structure or input values in formats different from those requested.

2.3 In recent years there has been a rapid modernization in data-processing methods, the tools that use that data and the frequency with which information is generated, with clear preferences for open-source tools and process automation, cutting information processing and delivery times to a minimum.

2.4 At the same time, the airline industry requires process compatibility so that aviation can develop safely, despite language differences. This has been done by creating common standards and practices at the global level.

2.5 However, the way air transport statistics are gathered today varies greatly from State to State, hampering standardization and comparability. This makes it difficult for Member States to share and compare statistical information. In addition, it is difficult to generate information for groups of countries or geographical areas, since the approaches used in compiling data are generally not compatible across countries.

2.6 Difficulties also arise for air operators, as they have to adapt their systems to deal with each request by a given entity (governments, international organizations, unions, associations, among others).

2.7 Improving procedures, automating processing and standardizing information would yield more and better information, providing important input for decision-makers. It would also make it possible to generate better projections for air transport and reduce the time between publications, with more frequent updates.

2.8 In addition, it could generate more revenue for ICAO, as it could sell such information and issue more frequent and comprehensive reports of interest to the aviation industry.

2.9 As an example, the methodology for collecting basic information on commercial air traffic from the Member States could be revised and Excel forms A, A-S, B and C could be replaced with more up-to-date tools such as centralized data systems, standardized information, use of open-source software, direct connections to Member States' databases and standardized excerpts, among others.

2.10 However, it is important to recognize the valuable work done by the Organization in developing the API Data Service platform, which makes for modernized, flexible and rapid access to the various data sources that ICAO collects and makes available for a fee.

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