



Agenda Item 5: Other Business

ATM PERFORMANCE INDICATORS COURSE

(Prepared by Brazil)

SUMMARY

This information paper presents the course of indicators offered by Brazil to the States to develop performance management, through the monitoring and analysis of ATM performance indicators, as well as to understand their application in the context of the post-operations phase in the Air Traffic Flow Management Service (ATFM).

References:

- Guide for implementation of the ATFM Service in the SAM Region 2021 - 2025;
- Operations Plan for the SAM Region (OPSAM) 2021; and
- Doc 9750 - Global Air Navigation Plan (GANP).

1. Background

1.1 Brazil, through the Department of Airspace Control (DECEA), is responsible for providing air navigation services and resources necessary for airspace control, safely and efficiently. DECEA has been developing ATM performance indicators, in accordance with the criteria proposed by the Global Air Navigation Plan (GANP), which will allow the management and decision-making related to air operations.

1.2 These actions are coordinated through an enterprise of the SIRIUS Brazil Program, related to the improvement of performance-based management, whose main objective is to establish performance management through ATM performance indicators, as well as automated data collection and processing processes and Business Intelligence (BI) dashboards to support the decision-making of DECEA and its subordinate ATC dependencies.

1.3 In this context, one of the goals of DECEA is the implementation of a management platform, fundamental for decision-making and for a more efficient management of the performance of the national ATM system. This tool is the Performance Indicators Management System (SGID), which has been developed and applied with the aim of improving the management process and decision-making of the different members of the Brazilian aeronautical community.

1.4 Additionally, in December 2021, the DECEA ATM Performance Plan (PCA 100-3) was published, which establishes the creation of the ATM Performance Commission (CP-ATM), with the participation of representatives of DECEA, the Regional Bodies responsible for the management of the ATC units, the Air Navigation Management Center (CGNA) and the Airspace Control Institute (ICEA) to define, among other tasks, define indicators, analyses and other products in order to monitor the performance of the Brazilian Airspace Control System (SISCEAB), thus collaborating with the optimization of performance management in the field of DECEA.

1.5 This initiative supports and encourages the products developed by DECEA, which are, among others:

- a) SISCEAB ATM Indicators Course (ATM047);
- b) Methodological Manual of ATM Indicators (MCA 100-12);
- c) SISCEAB ATM Annual Performance Report, since 2019;
- d) ATM Performance Comparative Report between DECEA and EUROCONTROL;
- e) Brazilian participation in international working groups; and
- f) Real-time performance tracking tools.

1.6 Considering that the basis of the ATM is the management of information in a global, integrated and quality-assured manner, providing essential information for the development of the activities of the ATM system, the ATM community will increasingly depend on real-time, relevant, accurate information and quality information for decision-making at different levels.

1.7 The ATM indicators course of SISCEAB aims to teach the basic concepts of ATM performance indicators, as well as their classification and characteristics, providing the necessary knowledge to use tools for the production and interpretation of results of performance indicators in the respective units of SISCEAB.

1.8 In order to provide a new form of management, which allows decision-making processes to be based on quantifiable measures and in accordance with the expectations of the aeronautical community, the DECEA training plan foresees that, by the end of 2022, more than 100 (one hundred) experts will have been trained professionals to perform operational analysis through the use and evaluation of ATM performance indicators.

1.9 With the aim of establishing the ATM indicator methodology for DECEA and the data collection process for ICAO GANP indicators, the SISCEAB ATM Indicators Methodology Manual (MCA 100-22) was developed, which provides knowledge on performance areas, ATM performance indicators, as well as the methodology applied according to the respective database. These indicators were established based on an institutionalized routine, necessary to perpetuate the delivery of data on these indicators.

1.10 In addition to guiding the courses, studies and research of the DECEA and standardizing the methodology of indicators in the field of SISCEAB, this publication also offers an important reference to the national industry in terms of the development of new systems, applications and equipment that can implement the methodologies described therein, and, thus, expand the offer of information to the managers and operators of the ATM Community.

2. Analysis

2.1 Performance-based management is a decision-making method based on three principles: focus on desired or required outcomes; decision-making guided by these results; and use of indicators for decision-making.

2.2 Training in the subject of data management and ATM performance indicators must ensure that the decision-making process is based on relevant managerial data that reflect reality and integrate the various business areas (macro processes), considering all the management levels of the air navigation service provider of the States.

2.3 The proposal of this work is to offer the States of the SAM Region the course of ATM performance indicators, so that, in the short term, the States can develop performance management in their respective ATM systems and obtain the post-operations diagnosis of possible lessons learned and best practices in the operations carried out at airports and in airspace.

2.4 Strategic airspace and runway analyses for the States of the SAM Region will be essential for the application of adjusted ATFM measures, to provide the operational efficiency of the system, increasing ATC capacity, reducing flight distance/time, the number of waits in flight, providing more fluidity in airspace and at airports.

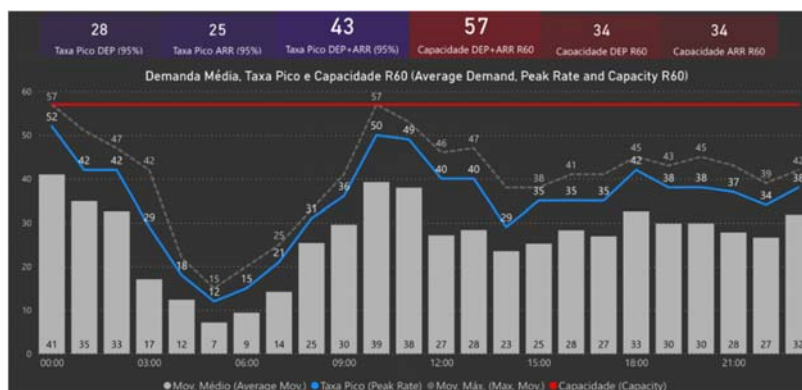
2.5 In order to support the States in complying with the provisions of the GANP, as well as for the post-operations phase of the national ATFM, in accordance with the Guide for the Implementation of the ATFM Service in the SAM Region, Brazil will provide the course of ATM performance indicators (20 places) in two phases: the first, theoretical, to be carried out remotely in the months of May and June 2023; and the second phase, which will be carried out in person, from July 3 to 14, 2023, at the CGNA, Rio de Janeiro, Brazil.

2.6 The course will address, in the face-to-face phase, concepts of data collection and processing, with the aim of building a viable database for the application of ATM performance indicators, based on practical exercises on the characteristics of the indicators, their classification, data validation and the respective data sources, as well as defining the best way to visualize the results.

2.7 The course will also address the methodology and application of the ATM performance indicators of the GANP, with emphasis on the indicators of punctuality of departure and arrival (KPI01 and KPI14), additional taxi time of departure and arrival (KPI02 and KPI13), additional time in terminal area (KPI08) and peak rate of arrival at the airport (KPI09).

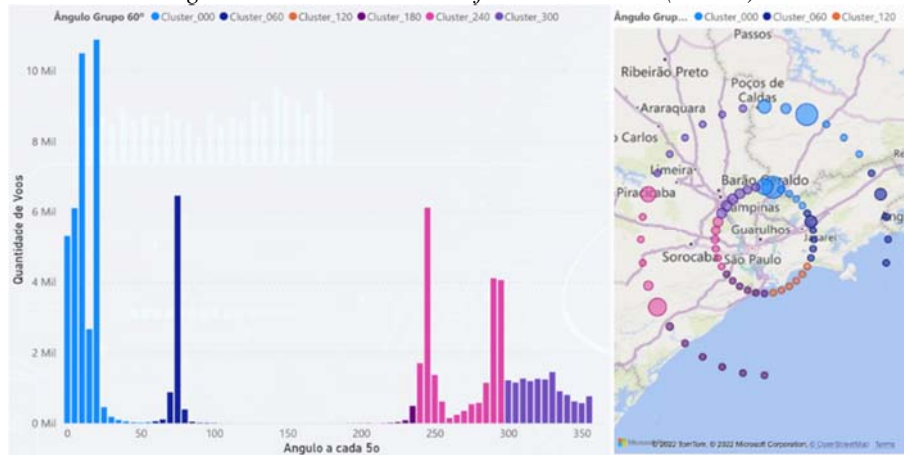
2.8 Figure 1 presents a summary of the peak arrival rate indicator (KPI09) at São Paulo International Airport (Guarulhos), according to the methodology described in the ICAO GANP. Figure 2, in turn, presents the distribution of flights arriving through the terminal area of São Paulo to Guarulhos Airport, information that makes up the calculation of the indicator of additional time of arrival at TMA (KPI08), also according to the GANP.

Figure 1 – Peak arrival rate indicator (KPI09).



Source: SGID.

Figure 2 – Additional time of arrival at TMA (KPI08).



Source: SGID.

3. Suggested actions

3.1 Take note of the information presented in this information paper;

3.2 Contact ICAO SAM Office in case of interest in attending the course offered by DECEA.

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