



Agenda

Item 2:

Report of activities and deliverables of the GESEA and Subgroups

b) ATM implementation. Progress of the Subgroups

IMPLEMENTATION BY THE PERUVIAN STATE OF KEY PERFORMANCE INDICATORS OF THE GANP

(Presented by Peru)

SUMMARY

This working paper presents the implementation of monitoring by the Peruvian State of the Key Performance Indicators (KPIs) of the Global Air Navigation Plan (GANP), so that the Aeronautical Authority can initiate the measurement of the performance of the ATFM and ACDM systems.

In this context, an initial version of the Dashboard of indicators for the Peruvian State has been implemented.

References:

- Doc. 9750 Global air Navigation Plan (GANP).
- Report of GREPECAS/20¹(Salvador, Bahia, Brazil, 15 al 18 November 2022).

1. Background

1.1 Air traffic in the FIR Lima has increased progressively after the pandemic, with the number of operations very close to reaching the demand values of 2019. This, together with the start of operations of the new runway at Jorge Chavez International Airport, brings with it the need to expand the monitoring of the Air Traffic Flow Management (ATFM) and Decision Making in collaboration at Airport Level (ACDM) indicators.

1.2 The Peruvian State agrees that the ATFM and the ACDM are the main tools to guarantee a sustainable growth of air traffic, optimize the flow of traffic, minimize delays, guarantee operational safety, coordinate operations in airspaces and airports, which is why, it was necessary to implement them in the most congested airports: Lima and Cusco.

¹ <https://www.icao.int/NACC/Pages/meetings-2022-grepecas20.aspx>

1.3 In this way, in 2018 the Peruvian State created a team in charge of developing procedures to monitor the ATFM service through KPIs to detect significant increases in ground delays and in-flight waiting. In this way, monthly reports began to be prepared with data on operations obtained from both the airport operator and the ANSP.

1.4 That same year, the State saw it necessary to implement the ACDM in the second most congested airport in the country: Cusco; this in order to improve operational efficiency, and punctuality of flights through the collaboration of all parties involved. To do this, they started the development of KPIs *in house*.

1.5 Faced with this reality, and in compliance with paragraph c) of Conclusion GREPECAS/20/071², the Peruvian State created a work team, which is responsible for collecting data and managing the KPIs of the GANP. Initially, this team took as a basis the KPIs that the State measured since 2018, to later adapt them to the GANP and with an ambitious spirit it was possible to extend its application to the PNNA.

1.6 Currently, the State monitors 08 indicators of the GANP and maintains the measurement of 05 indicators *in house* which are necessary and adjust to the needs and reality of operations in Peru.

1.7 In this framework, the meeting is informed of the development of the Peruvian State Indicators Dashboard, through which it allows the Aeronautical Authority to visualize the current degree of implementation of the GANP KPIs, expectations and implementation goals. Additionally, this Dashboard allows the continuous collection of data, KPI measurements, representative reports, dynamic and interactive graphics that allow decision making.

2. Analysis

2.1 Indicators aligned to GANP

2.1.1 Due to the importance of fulfilling the task of measuring and monitoring the different systems, the team developed the measurement of the following ATFM/ACDM indicators:

KPI	AIRPORT
KPI 01: Departure punctuality	Jorge Chávez
KPI 02: Taxi-out additional time	International Airport –
KPI 09 (*): Airport peak capacity (arrivals and departures)	Lima
KPI 10 (*): Airport peak throughput	
KPI 13: Taxi in additional time	Velasco Astete
KPI 14: Arrival punctuality	International Airport -
	Cusco

(*). Recently implemented indicators

² CONCLUSION GREPECAS/20/07: APPROVAL OF THE INITIAL VERSION (VERSION 0) OF VOLUME III OF THE ANP CAR/SAM, AND FOLLOWING ACTIONS FOR THE MANAGEMENT AND DEVELOPMENT OF PERFORMANCE-BASED PLANNING

What:

GREPECAS;

a) Approve the initial version (version 0) of Volume III of the ANP CAR/SAM (Appendix B of the report), formulated on the basis of the ICAO Council Template, and aligned with Recommendation 4.3/1, literal d), of the AN-Conf. 13; and

b) Approve the Program for the management of Volume III of the ANP CAR/SAM (Appendix B of the report), which allows the sustainable implementation of performance-based planning.

States:

c) Implement task forces to develop data collection activities and management of GANP KPIs as a basis for populating the data in the Planning Tables of Vol. III, with assistance from the Secretariat.

2.1.2 Work is underway so that by 2024, the measurement of these KPIs will be extended to the aerodromes of the following cities: Piura, Tarapoto, Chiclayo, Trujillo, Iquitos, Cajamarca, Pucallpa, Arequipa, Tacna, and Juliaca.

2.1.3 To measure the performance of the ATFM system, the Peruvian State monitors the following GANP performance indicators:

KPI	FMP
KPI 03: ATFM slot adherence	FMP LIMA
KPI 12: Airport / terminal ATFM delay	FMP CUSCO

2.1.4 For the measurement of performance indicators, information from different sources is processed as indicated in the following table:

SOURCE	DESCRIPTION	DATOS
Office of Routes of the DGAC	It provides the list of approved itineraries for air operators for the month to be analyzed.	<ul style="list-style-type: none"> • SIBT • SOBT
ATS Provider (CORPAC) – ROA Office	It provides the list of landing and takeoff operations of airports nationwide. This list is used to determine the week with the highest demand for air traffic and Establish the period that will be analyzed to obtain the indicators	<ul style="list-style-type: none"> • ATD • ATA
Air Traffic Flow Management Unit (FMU)	It provides the list of the hours of the ATFM measures assigned to the provincial flights to Lima that operate during the operation of the ATFM unit.	<ul style="list-style-type: none"> • ETD • CTOT • ATD
Airport operator	It provides the list of the movement of the operations carried out on the platform, as well as the traceability of the trajectory of the arrival flight and its connection with the departure flight, in order to obtain information on the rotation on the ground.	<ul style="list-style-type: none"> • AIBT • AOBT • PEA • RWY

2.1.5 In addition to the ATFM/ACDM KPI, it is planned to include in the monitoring of the Aeronautical Authority from 2024, the measurement of the following KPIs related to operational safety:

KPI
KPI 17: Level-off During climb
KPI 19: Level-off During descent
KPI 21: Number of runway incursions
KPI 23: Number of AIRPROX

2.2 Peruvian state indicators (KPI PER)

2.2.1 When identifying the need to create **our own indicators** associated to Key Performance Areas (KPA) applicable to our need and feasibility in obtaining information, in order to monitor and contribute to the performance of the system, the State implemented the following KPIs.

KPA	KPI
Efficiency	Taxi-out estimated time -EXOT
	Taxi-in estimated time -EXIT
	Aircraft parking position Occupancy Time
Capacity	Use of declared runway capacity during the functioning of the FMP

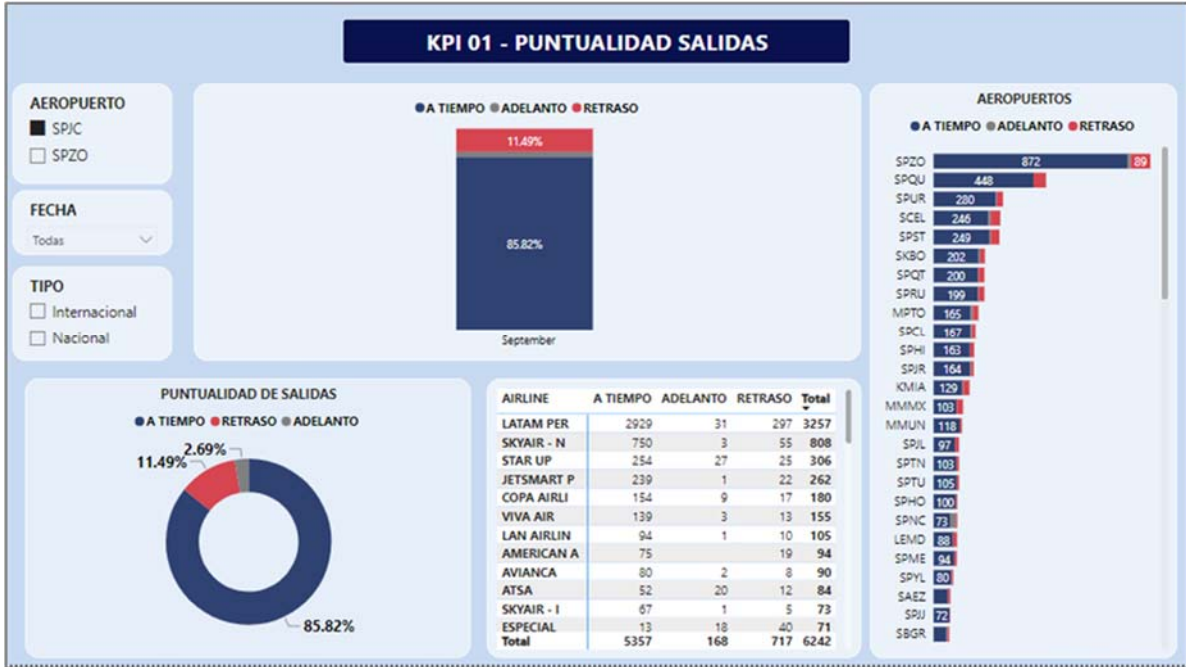
2.3 **Indicator monitoring Dashboard**

2.3.1 In order to visualize graphically and dynamically the various indicators, a platform was developed using PowerBI tools in a secure portal that allows monitoring the performance of the system for adequate decision-making by the Aeronautical Authority of Peru.

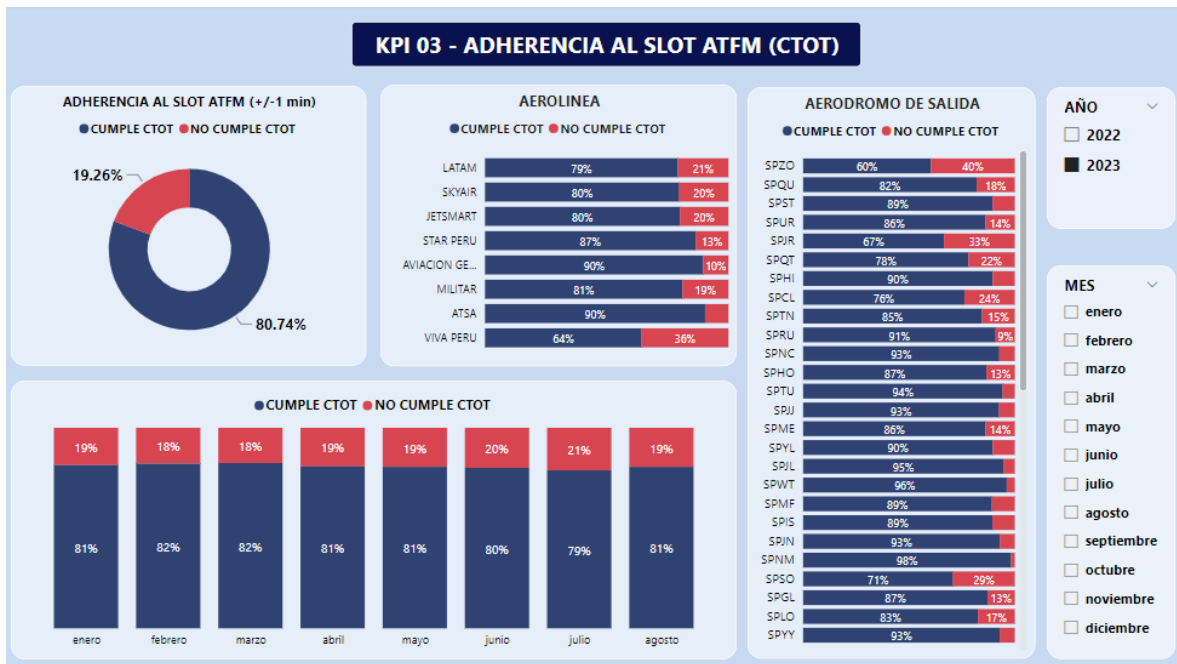
2.3.2 Below are some graphs of this tool, which allows you to dynamically track the KPIs indicated above in a timely and accurate manner.



Graph 01: Cover page Dashboard KPI of the Peruvian State



Graphic 02: KPI 01 Departure punctuality



Graphic 03: KPI 03_ATFM SLOT adherence (CTOT)

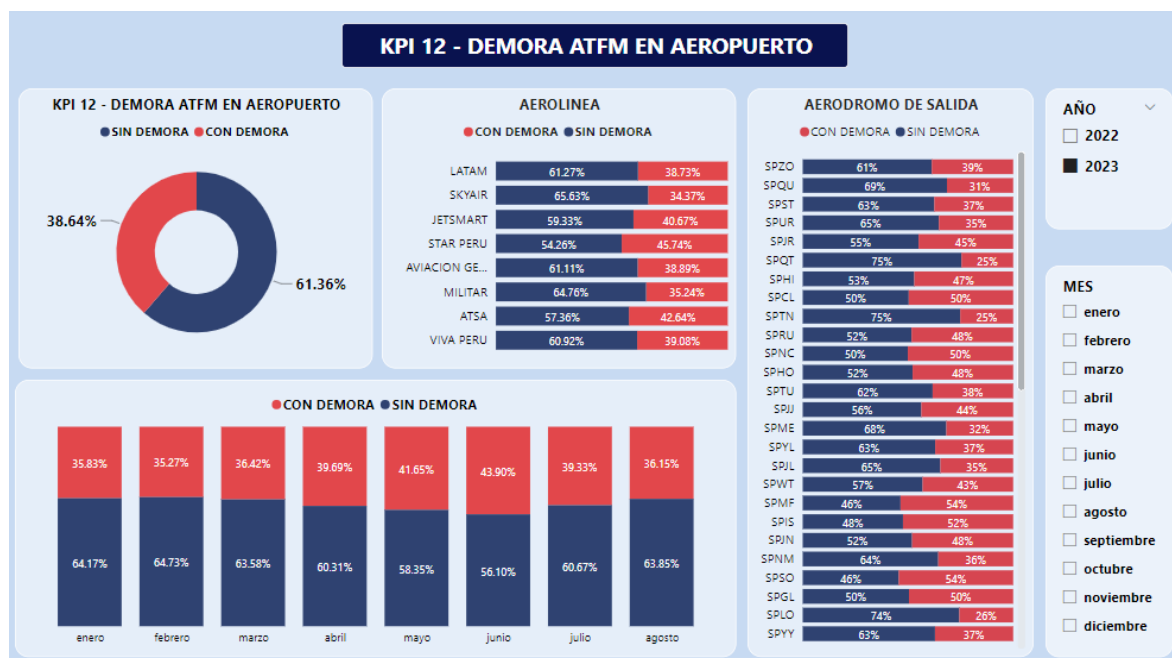


Gráfico 04: KPI 12_ Airport / terminal ATFM delay

2.3.3 It is important to note that the creation of the Dashboard of Indicators of the Peruvian State does not affect the commitment of the State to continue feeding the Dashboard of the ATFM Operations Plan of the SAM Region (OPSAM).

3. Suggested actions

3.1 The Meeting is invited to:

- a) Take note of the information provided in the working paper;
- b) it is suggested that States comply with paragraph c) of Conclusion GREPECAS/20/07 to implement work teams to develop data collection activities and management of GANP KPI indicators;
- c) It is suggested that States implement the monitoring of standardized indicators in the Seventh Edition of the Global Air Navigation Plan (GANP); and
- d) It is suggested to the States to create a Database with the KPIs of the GANP, which allows monitoring the performance of the system.