



Agenda

Item 2:

Report of activities of the GESEA and Subgroups

b) ATM implementation. Progress of the Subgroups

PROGRESS MADE IN THE IMPLEMENTATION OF THE ATFM SYSTEM IN PERU

(Presented by Perú)

SUMMARY

This working paper presents the progress made in the ATFM implementation, as well as the impact of COVID in ATFM system in Peru, aimed at informing SAM community about the status of the ATFM system, COVID impact in ATFM and the foreseen demand for II Semester 2022.

References:

- Air Navigation Plan - Perú, DGAC.
- ATFM Manual, Doc. 9971, Third edition, ICAO.
- CONOPS ATFM CAR/SAM (2019-2024), ICAO.
- Guide for the implementation of the ATFM service in the SAM Region 2020-2025, ICAO.
- SAM/IG meeting reports.

1. Background

1.1 The Peruvian State is committed to optimizing the provision of the ATFM service in the national territory, in order to manage the existing imbalances between demand / capacity in the most congested airports in the country. In this sense, this working paper has been developed in order to inform the community of the current situation of the ATFM system, the impact of COVID on the ATFM and the demand projection for the second semester of 2022.

1.2 Regarding the impact of the pandemic on the provision of the ATFM service, several limitations were identified that affected its provision. The first of these took place when the Government of Peru, on March 16, 2020, imposed strict restrictions in order to reinforce prevention measures to avoid the spread of Coronavirus (COVID-19), suspending flights from Europe and Asia. Additionally, the ANSP reported a decrease in the personnel in charge of providing the service, due to the large number of personnel at high risk of contagion, who had to perform remote work.

1.3 Likewise, the declared capacity suffered a considerable decrease, due to a reduction in the capacity of the ATS system (directly influenced by the reduction of personnel) and by a reduced airport capacity, data provided by the air operators, who had to maintain the minimum regulatory separation between passengers, in compliance with the national regulations granted by the MINSa health authority.

1.4 The following paragraphs describe a brief analysis of the impact of COVID 19 on the ATFM, the resilience to face the situation through the development of new products / tools and a demand projection for the second half of 2022.

2. Analysis

2.1. Utilization of temporary capacities

2.1.1 On 17 March 2020, FMU Lima suspended the provision of services in compliance with Peruvian regulations issued by the Government, declaring the state of health emergency COVID 19 at the national level. The impact of the pandemic was evident in the temporary capacities issued by both the ANSP and the aerodrome operator.

2.1.2 In this sense, for July 2020 (Summer 2020 season) operations were resumed with a temporary reduced capacity of 12 combined operations for the AIJC due to limitations of the health emergency. For the Winter 2020 season, the need to expand operations led to an increase of 20 combined operations.

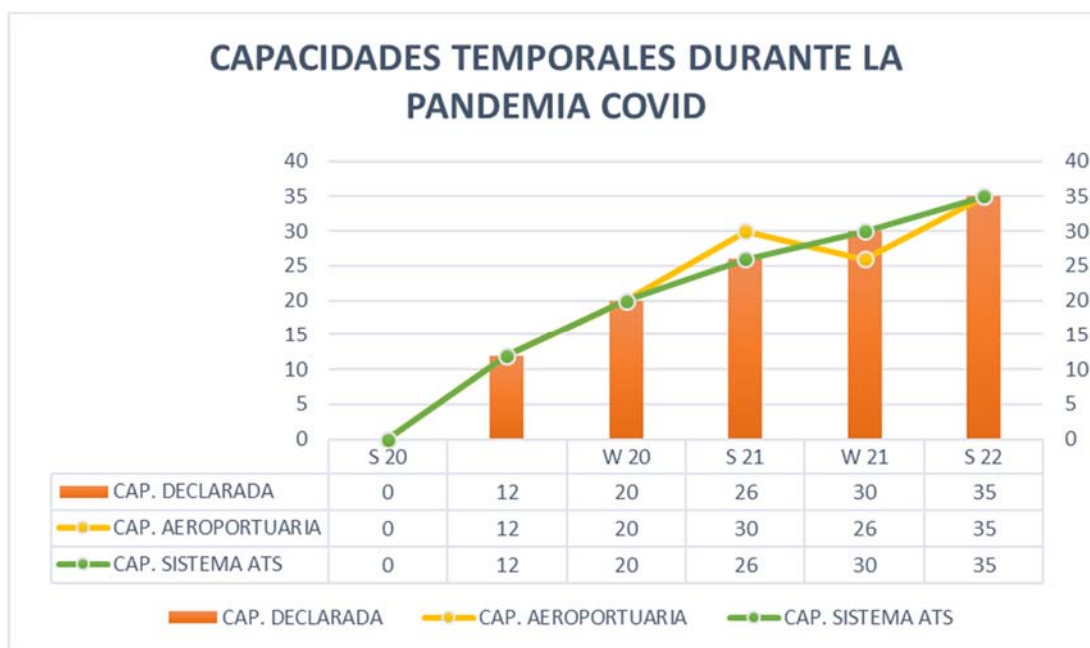


Figure 1 Temporary capacities

2.1.3 As detailed in Figure 1, during the following seasons it was possible to continue with the increase in temporary capacity, this was achieved thanks to the effort of all stakeholders, who despite their own limitations joined their strengths to achieve greater capacity.

2.1.4 All this effort to continue increasing capacity has currently led us to 35 combined operations per hour, which allows us to continue contributing to the reactivation of the aeronautical system and therefore the economic reactivation of Peru.

2.2. Air operations

2.2.1 As shown in Figure 2, closure of borders in the country as of March 16 due to the pandemic, reduced in 58% commercial operations in the AIJC, compared to the previous year. However, during 2021 and the present year, air transport in Peru is recovering at a slow pace and, despite the fact that international flights are not yet close to the numbers of operations registered in 2019, domestic operations in the current year, have presented a growth of 61% compared to March 2021.

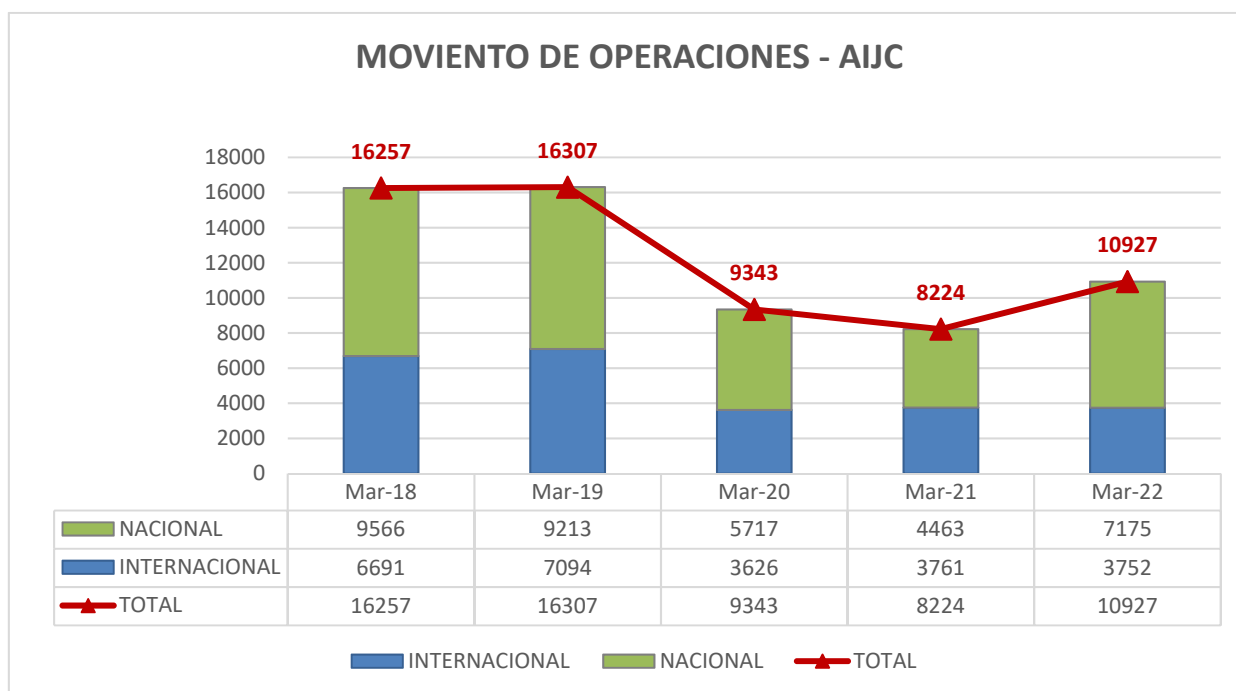


Figure 1 Operations AIJC

2.3. Optimization of ATFM system

2.3.1 The Peruvian State noted the need to optimize the ATFM system implemented in 2016, in order to improve the provision of the service and comply with the guidelines and recommendations granted by ICAO, which is why and in a resilient way that, in mid-2020, implemented the development of the following products:

ATFM Daily plan (PDA)

2.3.2 There was a need to share relevant information during the months of the pandemic, the Peruvian State identified the opportunity to initiate the development of the ATFM Daily Plan. In this way, on April 2, 2020, the first PDA was developed, taking as reference the template of Appendix D of the Guide for the implementation of the ATFM service in the SAM region 2020-2025, which is published through the ANSP website, thus achieving a more efficient development of the pre-tactical phase.

Post operations analysis

2.3.3 After the development of the PDA, the Peruvian State began the preparation of the Daily Post Operations Report, with the aim of monitoring the development of the ATFM service, this report is shared with the interested parties as part of the analysis phase after the operations of the ATFM system.

2.3.4 At the same time, guided by ICAO Doc 9971, Third edition, Ad Hoc Teleconferences were implemented, same that used the CDM methodology, among the interested parties, as detailed below:

2.4. CDM

2.4.1 In order to work on different issues related to the provision of the ATFM service, meetings were held using the CDM methodology, covering various topics and were held among various participants. Among the topics to be discussed, are: the daily sending of the schedule of coordinated flights (without itinerary) by the airport operator to the Affluence Management Unit (FMU Lima); the meteorological input for the development of the ATFM Daily Plan; the coordination for the declaration of temporary capacities, the development of the BRISA, among others.

2.5. GANP aligned indicators

2.5.1 From 2018 to date, the ATFM service provided by the ANSP is monitored through various ATFM Indicators, which allow the system to be measured. These indicators have been reviewed and aligned with the published GANP indicators.

2.5.2 The following table illustrates the indicators used by the Peruvian State to measure the ATFM system, in the column "previous identification of the indicator" the name of the KPI used by the State is indicated, the same one that had its own formula and methodology for the calculation. In the column "Updated identification of the Indicator (aligned to the GANP)" the KPIs that have been aligned with the calculation methodology granted by ICAO are recorded.

Phase of flight or event	Previous identification of the indicator	Updated identification of the Indicator (GANP aligned)	Definition
Off Block	KPI01	KPI 01 - Departure punctuality	Proportion of flights departing from the gate on time, relative to scheduled time (EOBT). Shown in percentage.
Taxi-out	KPI PER23	KPI 02 - Taxi-out additional time	Average of the extra time of taxiing of aircraft departing. Shown in minutes.
Take-off	KPI PER03	KPI 03 - ATFM Slot Adherence (CTOT)	Percentage of flights that take off within your ATFM slot (CTOT) assigned by the FMU. Presented in percentage.
Landing	KPI PER22	KPI 09 - Airport peak capacity	Maximum number of operations that an airport can accept in a time frame. It can be calculated for arrivals, departures or arrivals + departures. It is expressed in:

			Number of departures, arrivals, (departures + arrivals) / time.
	KPI PER21	KPI 12 - Airport/Terminal ATFM delay	ATFM delay attributed to arrival flow restrictions at a given airport and/or associated terminal airspace volume. Displays in minutes.
	KPI20	KPI PER 20 (<i>in house</i>) - Maximum airport capacity during the operation of the FMP	Number of hours in which the declared capacity is exceeded, compared to the operating hours of the FMP. Shown in percentage.
Taxi -in	KPI PER24	KPI 13 - Taxi-in additional time	Average of the extra time of taxiing of aircraft arrival. Shown in minutes.
In Block	KPI14	KPI 14 - Arrival Punctuality	Proportion of flights arriving to the gate on time, relative to scheduled time (EIBT). Shown in percentage.

2.5.3 As can be noted, the State has eight (08) indicators, of which seven (07) correspond to the guidelines granted in the GANP, while one indicator, the KPI PER 20, has been prepared in-house with the aim of monitoring that the operating hours of the FMU are adjusted to the needs of demand.

2.6. KPI ATFM PER Dashboard

2.6.1 From the monitoring of the service through indicators, it is clear the need to have a dashboard that allows to visualize in a graphic and dynamic way the data referred to the ATFM, that is why the State developed, using the tools of Power BI, a platform that allows the monitoring of the service for an adequate decision making.

2.6.2 Here are some graphs that show the dynamic result of this tool, the same one that allows you to track ATFM KPIs in a timely and accurate manner.



Figure 2 Dashboard KPI ATFM PER_1

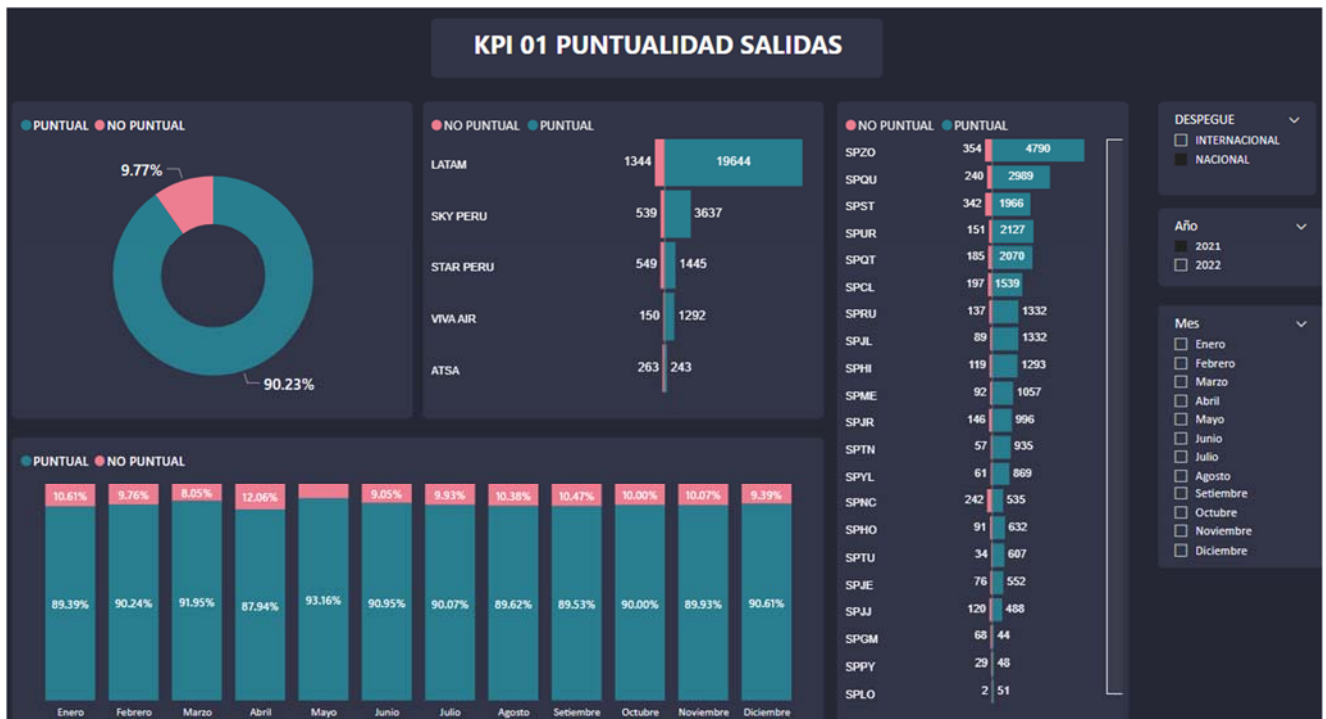


Figure 4 Dashboard KPI ATFM PER_2

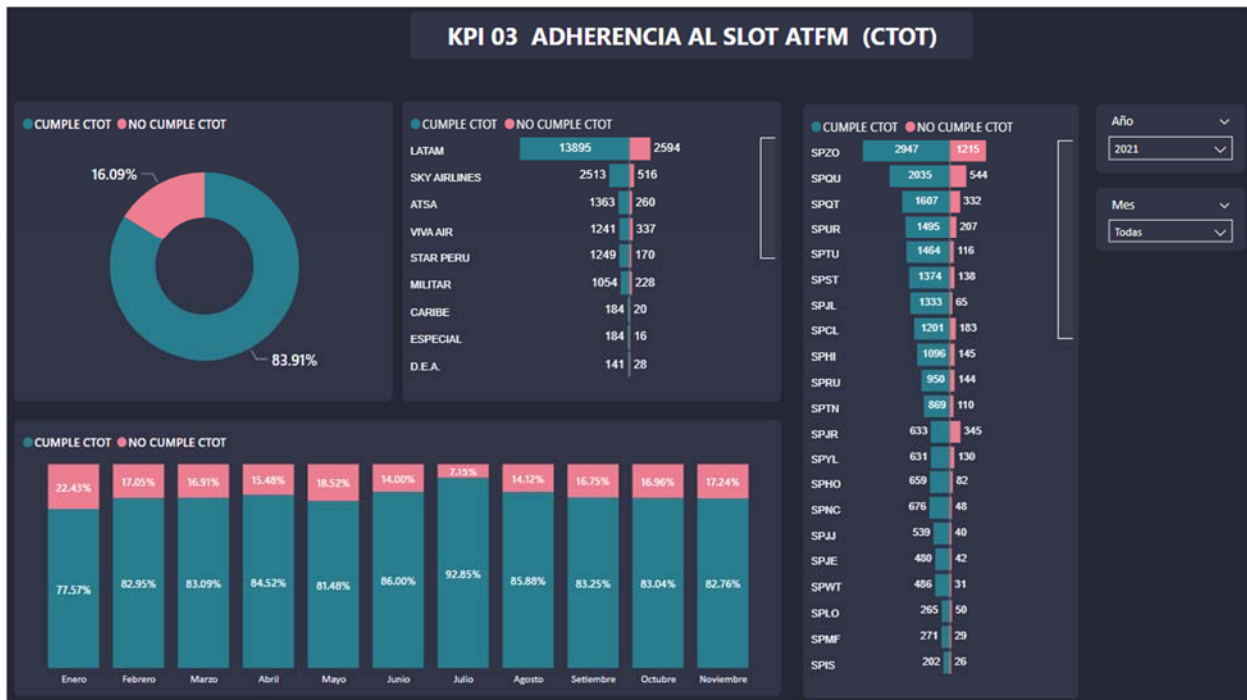


Figure 5 Dashboard KPI ATFM PER_3

3. Suggested actions

3.1 The Meeting is invited to:

- a) Take note of the information provided in this working paper;
- b) it is suggested that States use the CDM methodology for their Teleconferences, considering that the tool allows sharing information, unifying ideas for decision-making whose result will include several stakeholders;
- c) it is suggested that States adopt standardized indicators granted by ICAO; and
- d) assess the KPI proposed by the Peruvian State, analyzing its applicability in a regional standardization.