



Agenda Item 3: Implementation of the Air Traffic Flow Management (ATFM) and improvement of flow coordination procedures between Units.

MEASURES TAKEN BY EANA FOR THE IMPLEMENTATION OF ATFM

(Presented by Argentina)

SUMMARY

This information paper aims to report the measures taken by Argentina's ANSP, EANA SE, regarding the tasks related to ATFM implementation.

References:

- The Bogota Declaration, 6/12/2013
- GUIDE FOR THE APPLICATION OF A COMMON METHODOLOGY FOR THE ESTIMATION OF AIRPORT CAPACITY AND ATC SECTORS FOR THE SAM REGION.
- Doc. 9971OACI
- Manual on Collaborative Air Traffic Flow Management
- Doc. 4444 PANS-ATM, OACI
- Caribbean/South American Air Traffic Flow Management
- AIC 05/2019, Argentina
- Res. 180/19 ANAC

1. Introduction

1.1 The department of statistics has been part of EANA from the beginning. This department works with different databases and indicators to measure the performance of the service being provided.

1.2 In order to implement the ATFM service, Runway and Sector capacities have been measured since 2016.

1.3 In 2017, Argentina's ATFM Concept of Operations was redacted.

1.4 During the 1° Quarter of 2018, with the help from CGNA/DECEA, the AFTM personnel that would be operating as well as the Supervisors from Argentina's ACCs were trained.

1.5 In order to implement the ATFM service, the demand was calculated through a combination of the feasibilities, which were authorized by the Aeronautical Authority and an estimated number for the general aviation.

1.6 On May 21, 2018, the ATFM service began to be provided in FIR EZE.

1.7 In the RLA/06/901 meeting –ATFM Seminar, EANA submitted the tasks that were undertaken since the initial concept to the implementation of the service.

1.8 In September 2018, a new training was given to ATFM specialists. 6 from EANA, ANAC, INAC (Venezuela) and CORPAC (Peru) attended this training.

1.9 It was decided that as from October 20, 2018, no NOTAM would be issued on this matter to avoid its over usage and considering that the FMUs were already well known. For this reason, adopted measures will be informed through AMHS messaging and EANA's website, which allow active measures to be openly shown to all aeronautical users, notwithstanding consulting them with the FMU EZE in real time by telephone or e-mail.

1.10 In March 2019, ANAC's Resolution No. 180 was approved, establishing the schedule feasibility approval procedure. In which the FMU EZE is included in order to make observations regarding the planning of schedules, re-schedules and cancelations.

1.11 As from April 2019, ATFM specialists began their training on CADENA with planning personnel and videoconferences began to be held.

2. Discussions

Capacity Estimation

2.1. EANA is responsible for measuring Runways and Airspaces' Capacity. These are measured using manuals written in-house which are based on the common guide published by ICAO for the Runway Capacity measurement and MCA 100-7 regulation for airspaces capacity measurement.

2.2 The following indicators were gathered through Runway Capacity measurements:

- a) Runway occupancy time in departures (According to aircraft category)
- b) Runway occupancy time in arrivals (According to aircraft category)
- c) Final approach time (According to aircraft category)
- d) Mix of aircrafts
- e) Physical, Theoretical and Declared runway Capacity.

2.3 These indicators make it possible to identify the percentage of available capacity utilization, as well as the variation in capacity after a construction work or a change in aircrafts which operate in that same runway.

2.4 Furthermore, if there is a temporary taxiway closure or any other variable that may affect runway occupancy times, these indicators are used as input to plan the operation.

2.5 The following indicators were gathered through Sector Capacity measurements:

- a) Average time sector occupancy (with standard deviation)
- b) Average time of secondary tasks (with standard deviation)
- c) Average time of ATC-Pilot communication (with standard deviation)
- d) Reference number
- e) Peak number
- f) Hourly Sector capacity

2.6 These indicators make it possible to determine the ATC sector capacity and which are the variables that define it. Besides, if there is a change in the airspace these allow the measurement of variations in the capacity.

2.7 As regards the TMA BAIRES, for example, it was analyzed that when the wind changes to the North the capacity decreases as a consequence of an increase in the time of sector occupancy.

2.8 In the case of Cordoba SUR, for example, it was analyzed that the capacity increased when implementing ATS surveillance service.

Demand Estimation

2.9 The demand is estimated through a series of feasibilities approved by the Aeronautical Authority with an estimated of the general aviation.

2.10 This methodology makes it possible to have, with certain anticipation, an estimated number of operations that will take place a particular day if information of feasibilities is available.

2.11 In the case of the General Aviation it is suggested to use Average or 90th Percentage (for special events) or a Manual if available.

2.12 This makes is possible to estimate the following aspects for an airport or group of airports on a certain day and time:

- a) Number of commercial and non-commercial aircrafts per time interval.
- b) Total number of aircrafts per day.
- c) Distribution of points and sectors.

Delays

2.13 Delays are now focused on the delays from the airport of origin which are given to EANA by the Airlines informing the number of delayed minutes per flight and which are then analyzed.

2.14 The origin delay indicators from January and March for the years 2018 and 2019 are indicated below in order to assess the effect of implementing ATFM service:

- 1) January19 vs January18:
 - a. Variation in departures/take-offs: +11%
 - b. Variation in the total number of delayed minutes: +53%
 - c. Variations in delayed flights: +72%
 - d. Variation in average delay: -11%
- 2) March 19 vs March 18:
 - a. Variation in departures/take-offs: +3%
 - b. Variation in the total number of delayed minutes: +5,93%
 - c. Variations in delayed flights: +12,69%
 - d. Variation in average delay: -6%

2.15 These results have shown an increase in the amount of traffic, a slight increase in the number of delayed minutes, a significant increase in the number of delayed flights, but a decrease in the average delay per flight.

2.16 The reduction in the average delay per flight, with an increase in traffic and minutes means that the number of these is being distributed more even, upholding the equity principle. La reducción de la demora promedio por vuelo, con incremento de cantidad tránsito y de cantidad de minutos significa que la misma está siendo distribuida de forma más uniforme, respetando el principio de equidad.

EANA training for new AFTM operators

2.17 The last AFTM training was given in March in order to incorporate 7 people to the team. This training is based on the content contemplated in the Concepts of Operations and includes the following modules:

- a) Regulation
- b) Meteorology
- c) Aeronautical information
- d) Statistics
- e) MEIC (Program on stress management in critical incidents)
- f) ATFM

EANA Training for ANS Operators

2.18 EANA has developed an internet platform to give online training to their personnel.

2.19 This is developed in Moodle Platform and allows the possibility of remote training through virtual classrooms.

2.20 The course lasts 30 hours taking place over 21 days and includes slides, bibliography and several activities to reinforce content learning and a forum for consultation.

2.21 A number of 256 people from ATM, AIS and CNS were trained, in the first two AFTM virtual classrooms.

3 Suggested actions:

3.1 The Meeting is invited to:

- a) Take note on the information provided;
- b) analyze and suggest common indicators to measure the AFTM performance.
- c) suggest standard ATFM training content; and
- d) analyze implementing online training.
