



Agenda Item 2: Optimisation of the SAM airspace

a) Progress made in regional PBN implementation

ACTIONS TO INCREASE EFFICIENCY IN EN-ROUTE AIRSPACE IN ARGENTINA AND MEASUREMENT OF ITS PERFORMANCE

(presented by Argentina)

SUMMARY

This working paper presents the improvements made in en-route airspace in the North and South sectors of the Ezeiza FIR and the South sector of the Córdoba FIR, and describes how improvement was measured in the case of Córdoba.

References:

- ICAO Doc 4444, PANS-ATM
- MCA 100-17

1. Background

1.1 In June/July 2017, EANA received training in the methodology set forth in MCA 100-17 on ATC sector capacity measurement.

1.2 Since 2015, only the Ezeiza FIR has been providing en-route surveillance control service along the airway.

1.3 In August 2017, EANA measured the capacity of en-route sectors of the CBA FIR that lacked surveillance control service.

2. Discussion

2.1 In 2016, EANA developed a plan to increase the number of sectors that provided en-route surveillance control service, not only to provide the service, but also to be radar CTAs, so as not to be limited by the width of the airway.

2.2 In 2017, EANA conducted studies on theoretical VHF and surveillance coverage, in order to assess coverage at national level and the steps required to provide en-route surveillance control service.

2.3 Once the technical requirements had been verified, an assessment was made of the steps required for conducting a risk analysis, training the personnel, and starting service provision.

2.4 In September 2017, the South sector of the Córdoba FIR started to provide en-route surveillance control services.

2.5 Once the service had been established, EANA decided to measure again the capacity of the South en-route sector of the Córdoba FIR in order to measure the impact of the improvement made.

2.6 The results obtained were as follows:

- 2.6.1 Reduction by **9.36%** of secondary task time (TTS)
- 2.6.2 Reduction by **33.82%** of ATC-pilot communication time (TCom)
- 2.6.3 Increase by **30%** of the reference number (Nref)
- 2.6.4 Increase by **23%** of the peak number (Npico)
- 2.6.5 Increase by **18%** of hourly sector capacity (CHS)

2.7 The improvement was not only a qualitative nature, through ATC service and user perception, but was also measured and calculated in quantitative terms.

2.8 In February 2018, 2 radar CTA sectors were created in the EZE FIR of the size of the EZE FIR (excluding the oceanic sector) where surveillance control service is provided. The benefits obtained will be measured in due course.

2.9 It is expected that radar CTA sectors will be implemented in 2018 in the South sector of the Córdoba FIR and in the Mendoza FIR.

2.10 Likewise, EANA considers that the implementation of ATS surveillance services in the aforementioned routes will permit, in the short to medium term, an effective reduction of en-route longitudinal separation of aircraft.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information provided in this working paper; and
- b) analyse the improvements made and the measurement methods used.
