



International Civil Aviation Organization

**The Twentieth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group
(ATM/AIS/SAR/SG/20)**

Singapore, 05 – 09 July 2010

Agenda Item 3: Regional Performance Framework and Metrics

GLOBAL PERFORMANCE-BASED APPROACH AND MEASUREMENT

(Presented by the Secretariat)

SUMMARY

One of the key aspects of the performance based approach is the development of regional performance objectives with measurable outcomes and associated metrics. This will facilitate regional and global management. This paper introduces the background information on the global performance-based approach which resulted in an initial set of four metrics adopted by the Twentieth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20, September 2009) to be used as a basis for performance measurement of the regional work programme.

This paper relates to

Strategic Objectives:

- A: Safety – Enhance global civil aviation safety*
- C: Environmental Protection – Minimize the adverse effect of global civil aviation on the environment*
- D: Efficiency – Enhance the efficiency of aviation operations*
- E: Continuity – Maintain the continuity of aviation operations*

Global Plan Initiatives:

All GPIs

1. INTRODUCTION

1.1 The performance-based approach to planning stems from requirements associated with the results-based environment that States, ICAO and industry have been steadily moving toward. The ICAO *Global ATM Operational Concept* (Doc 9854) provides a clear statement of the expectations of the Air Traffic Management (ATM) Community. Eleven of these expectations, also referred to as key performance areas (KPAs), have been identified in the operational concept. To support this approach, the *Manual on Global Performance of the Air Navigation System* (Doc 9883) was developed. The manual provides a step-by-step approach to performance-based planning on the basis of the KPAs identified in the operational concept. The performance-based approach is structured upon the following principles:

- 1) strong focus on desired/required results;
- 2) informed decision making, driven by the desired/required results; and
- 3) reliance on facts and data for decision making.

2. PERFORMANCE-BASED APPROACH

2.1 Assessment of achievements must be periodically checked through performance reviews, which in turn require adequate performance measurement and data collection capabilities. Putting in place a performance-based approach requires knowledge sharing, training and some specific expertise. In the long run, all of this is expected to result in a safer and more efficient aviation system. As the work effort is challenging, requiring a globally coordinated effort, the aviation community should be encouraged to follow a common approach toward development and implementing a performance-based approach to safety of aviation and air navigation system planning and implementation.

3. DATA COLLECTION, PROCESSING, STORAGE AND REPORTING

3.1 Data collection, processing, storage and reporting are fundamental to the performance-based approach. It should not be assumed that all data which is needed is simply available “somewhere” and only needs to be copied. Although re-use of data prepared by others is sometimes possible, the data reporting chain generally starts at the “grass-roots level”, and properly setting up and managing the entire chain is an integral part of the approach. Establishing a data reporting chain usually involves participation from many ATM community members. Their willingness to participate requires the establishment of a performance data reporting culture, a capability to successfully manage disclosure and confidentiality aspects, and deciding on a case-by-case basis which approach works best: mandatory or voluntary reporting.

3.2 In the end, data will be condensed into a few indicators which represent the high level knowledge about the performance of the system. But before we get to this point, data from a variety of sources will need to be collected, quality-checked and stored. This also requires initiatives at the technical level: harmonization and standardization of reporting requirements; and investments in appropriate IT infrastructure. The above-mentioned harmonization and standardization of reporting requirements is needed to allow consistent interpretation of data across different reporting sources. This in turn is a prerequisite for meaningful benchmarking (comparison of reporting sources) and aggregation of data (calculation of totals across reporting sources).

4. STEP-BY-STEP APPROACH

4.1 The manual describes a step by step process to the performance-based approach as follows:

- Step 1: Define/review scope, context and general ambitions/expectations;
- Step 2: Identify opportunities, issues and set objectives;
- Step 3: Quantify objectives;
- Step 4: Select solutions to exploit opportunities and resolve issues;
- Step 5: Implement solutions; and
- Step 6: Assess achievement of objectives.

4.2 The initial set of four metrics adopted by APANPIRG/20 addresses Step 6.

5. ACTION BY THE MEETING

5.1 The meeting is invited to note the information on the global performance-based approach as above.

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