



INTERNATIONAL CIVIL AVIATION ORGANIZATION

SIXTH MEETING OF THE PERFORMANCE BASED NAVIGATION
TASK FORCE (PBN/TF/6)

Hong Kong, China, 3 – 5 February 2010

Agenda Item 6: State / Industry Presentations

**6.3 EXPANDING THE SCOPE OF PBN IMPLEMENTATION
PROGRESS REPORTING**

(Presented by IATA)

SUMMARY

This paper proposes expanding the scope of the PBN Progress Reporting Template to enable States to better measure and report progress in alignment with ICAO performance framework requirements.

In order to accurately assess the benefit and measure the return on investment of PBN implementation, it is important to include measurable outcomes such as enhancement to safety, increase to capacity, cost effectiveness and environmental improvement.

Strategic Objectives:

A: Safety- Enhance global civil aviation safety

C: Environmental Protection – Minimise 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:

GPIs 5, 11

1. INTRODUCTION

1.1 ICAO, industry and States are working together toward the development of a performance based global air traffic management (ATM) system based on the Global Air Navigation Plan and the Global ATM Operational Concept. One of the key aspects of the performance based approach is the development of regional performance objectives with measurable outcomes and metrics.

1.2 A recent Special Implementation Project (SIP) workshop on the development of national performance framework to achieve a global ATM system recommended that States collect and provide required data to the regional office that meets the regional metrics to be developed by the APANPIRG for efficiency, which includes capacity, cost effectiveness, greenhouse gas emissions and fuel burn.

2. DISCUSSION

2.1 The ICAO Resolution A36-23 target of achieving PBN approach procedures with vertical guidance (APV) for all instrument runway ends (30% by 2010, 70% by 2014 and 100% by 2016) is a measure of compliance, but not a measure of performance. In order to accurately assess the benefit and return on investment of PBN implementation, it is important to measure progress in terms of PBN's ability to fulfill local and regional strategic objectives such as improved safety, increased air traffic

capacity, improved efficiency with straighter routes, increased access with lower weather minima, and mitigation of environmental impact.

2.2 For example, In October 2009, the ICAO High Level Meeting on Environment declared that States will work together to achieve a global annual average fuel efficiency improvement of 2% until 2020. The industry is committed to delivering 1.5% annual improvement from now until 2020 and there was understanding and agreement that governments need to close the gap with accelerated implementation of major infrastructure improvements. PBN implementation will be a significant contributor to achieving improved fuel efficiency, but our ability to meet this goal is only as good as our ability to measure and document the progress.

2.3 Planning within a performance framework also becomes vital when evaluating the costs and associated benefits from the application of RNP AR APCH procedures, which are well recognized to allow safe access to terrain impacted airports. When implemented solely to gain efficiency, however, the benefits must be carefully measured against upfront and recurring investments which include costs to the operator to equip, certify, train, etc.

2.4 The PBN Implementation Progress Report Template was introduced at the Fifth Meeting of the PBN Task Force as the common template for State PBN implementation progress reporting and includes targets such as the number of approach procedures with vertical guidance (APV) and the number of RNAV arrivals and departures completed.

2.5 Expanding the Progress Report Template to include the impact on safety, gains in efficiency, environmental savings and infrastructure cost reduction will allow for measurable determination of the regional impact and real benefits gained as a result of PBN implementation. Data can be collected and reported for each RNAV route, approach, arrival and departure operation.

2.6 Environmental benefits will need to be calculated based on a common set of principles and an agreed mathematical model.

2.7 The key benefits of expanding State reporting of PBN:

- a) Allows stakeholders to better assess their return on investment in PBN.
- b) Provides justification to stakeholders for further investment in PBN.
- c) Communicates the region's commitment to reducing aviation's environmental impact.
- d) Establishes a platform for State recognition of progress and success in PBN implementation.

3. ACTION BY THE MEETING

3.1 The meeting is requested to:

- a) Revise and expand the scope of the PBN progress report template to allow for measurable determination of the real benefits of PBN implementation (as recommended by the SIP workshop on the development of national performance frameworks to achieve a global ATM system).
- b) Develop or adopt established principles and a mathematical model to ensure environmental benefits are calculated in a standardized manner.

3.2 States are urged to:

- a) Use the expanded PBN Implementation Progress Report Template (once developed) for all future reporting on their status of PBN implementation.