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Fourth Meeting of the APAC ANSP Committee (AAC/4)

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Agenda Item 4: Discussion on Working Papers

DRIVING ATM PERFORMANCE AT THE AAC

Presented by Singapore

SUMMARY

Amidst multiple demands and limited resources, performance measurement enables air navigation service providers (ANSPs) to identify their individual areas of strengths and improvements, using an universally-accepted, evidence-based and data-driven approach, to prioritise resources and investments to areas that matter most. Adopting such a robust approach helps build consensus on the actions needed and secure support for investments and capacity building efforts. The 34th meeting of the APANPIRG approved the establishment of the ICAO Asia Pacific Data Analytics Group (DAG) to initiate performance measurement and benchmarking. AAC driven by ANSPs can complement the work of the DAG by identifying performance gaps and proposing mitigating solutions for the region and properly define a good data management approach to help the States build up data and analytics capabilities to support the regional projects. This paper presents a proposal for the AAC to undertake two projects, namely “Gate-to-Gate Efficiency Study” and the “Regional Data Management Framework” projects under AAC Workstream 2 and encourages ANSPs to participate as leads or members.

1. INTRODUCTION

1.1 Air traffic volume in Asia Pacific is expected to triple over the next 20 years. While these present tremendous opportunities, air navigation service providers (ANSPs) will also need to confront multifold challenges. First, increase in volume will require corresponding ramp-up in manpower and operations to sustain safe and efficient air traffic management. Second, the advent of drones, air taxis, High-Altitude Operations and commercial space vehicles through controlled airspace will increase demand on airspace and add operational complexities. Third, climate change will cause more frequent, severe and unpredictable weather events, affect air traffic flow and reduce the throughput of existing capacities. Fourth, increased public awareness will drive higher expectations for sustainable practices in aviation. These challenges are complex and require the collective effort of member States to resolve and to design new ConOps for the future.

1.2 Amidst multiple demands and limited resources, performance measurement enables ANSPs to identify their individual areas of strengths and improvements, using an universally-accepted, evidence-based and data-driven approach, to prioritise resources and investments to areas that matter most. Adopting such a robust approach helps build consensus on the actions needed and secure support for investments and capacity building efforts.

1.3 APANPIRG first discussed performance measurement at its 26th meeting and at its 30th meeting approved the Asia Pacific Performance Measurement Framework. At its 34th meeting, APANPIRG approved the establishment of the ICAO Asia Pacific Data Analytics Group (DAG) to initiate performance measurement and benchmarking. At the ATM/SG/13 meeting, the ICAO APAC DAG agreed on eight key performance indicators (KPIs) that are aligned with the Global Air Navigation Plan (GANP) and published its first report. The eight KPIs are airport peak arrival/ departure capacity, airport peak arrival/ departure throughput, additional taxi-out/ in time, and arrival/departure punctuality.

1.4 The DAG is driven by States and has taken a ops-oriented approach to initiate performance benchmarking. While the DAG has made good progress, each State independently collating and processing performance information manually has added to workload. More in-depth analysis could be achieved if Member States share their operational data which will enable the region to analyze performance measurement holistically by taking a flight-centric rather than a State-centric approach. In addition, having common datasets and a common analytics platform will be a critical enabler for all projects proposed with the AAC.

2. DISCUSSION

2.1 AAC can help ANSPs build capacity and achieve the benefits of performance management set out in para 1.2. Driven by ANSPs, it can complement the work of the DAG by identifying performance gaps and proposing mitigating solutions for the region and properly define a good data management approach to help the States build up data and analytics capabilities to support the regional projects. For a start, we propose that the AAC, under Workstream 2, initiates two performance management projects:

- a) **Gate-to-gate efficiency study.** As flights transcend different FIRs, ANSPs will find value in measuring the flight performance for every segment of the identified city-pairs. This will help the region to identify areas with performance gaps and propose mitigation measures to enhance regional performance.
- b) **Regional Data Management Framework.** There is an increasing number of regional projects requiring data contribution by member States or where data is not available, to acquire data as a region. However, the region has varying data science capabilities and different States have different data governance framework. A regional data management framework will help govern the acquisition, storage and use of operational and performance data. The project can also discuss third-party data acquisition and how data can be reused and repositioned for the different regional projects, including but not limited to the work of the DAG.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Support the setting up of the “Gate-to-Gate Efficiency Study” and the “Regional Data Management Framework” projects under AAC Workstream 2; and
- b) Encourage ANSPs to participate in these two projects as leads or members.

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