International Civil Aviation Organization

Sixteenth Meeting of the Asia/Pacific Air Traffic Flow Management and Airport Collaborative Decision-Making Steering Group (ATFM & A-CDM/SG/16)

Bangkok, Thailand, 06 – 10 April 2026

Agenda Item 6a: Regional ATFM Framework, Regional ATFM Concept of Operations, A-CDM Plan and related Guidance Material

DEVELOPMENT OF THE CANSO OPERATIONAL MESSAGING PLATFORM FOR ATFM SHARING AND SYNCHRONIZATION (COMPASS)

(Presented by CANSO)

SUMMARY

This paper introduces the CANSO Operational Messaging Platform for ATFM Sharing and Synchronization (COMPASS), an operational coordination environment supporting collaboration between Air Navigation Service Providers (ANSPs) managing cross-border traffic flows. The COMPASS environment has been developed by Metron Aviation in cooperation with CANSO to support operational coordination and shared situational awareness among participating stakeholders.

COMPASS builds on operational experience gained through the CANSO ATFM Data Exchange Network for the Americas (CADENA) coordination environment and introduces a structured environment where participating stakeholders can maintain shared visibility of regional traffic management measures, operational constraints, and coordination artifacts.

In addition to supporting manual coordination activities, the environment can incorporate operational traffic information to support awareness of demand affecting relevant operational resources.

The environment is intended to support existing regional coordination mechanisms, including those associated with the Asia-Pacific Multi-Nodal ATFM Network (AMNAC), while providing a foundation upon which additional operational capabilities may be developed.

CANSO facilitates engagement with the participating ANSPs through the COMPASS Workgroup (CWG), while Metron Aviation develops and maintains the technical environment.

The meeting is invited to take note of the development of COMPASS and the ongoing collaboration with ANSPs and regional stakeholders to expand its implementation globally.

1. INTRODUCTION

1.1 Air traffic demand continues to grow across many regions, requiring enhanced coordination between Air Navigation Service Providers (ANSPs), airspace users, and regional ATM stakeholders to manage traffic flows efficiently and safely.

1.2 Air Traffic Flow Management (ATFM) relies on timely and accurate information exchange and operational awareness among participating stakeholders. While several regions have established coordination mechanisms, operational coordination across borders and organizations often relies on emails, teleconferences, and informal and untracked communication channels.

1.3 CANSO has supported regional coordination initiatives intended to improve collaboration between ANSPs managing cross-border traffic flows. Experience gained through these efforts has highlighted the value of maintaining a shared operational reference where stakeholders can record and review traffic management initiatives, operational constraints, and related coordination information.

1.4 Building on this operational experience, Metron Aviation, in partnership with CANSO, has developed COMPASS. The COMPASS environment is intended to support coordination and situational awareness among stakeholders managing cross-border traffic flows, while remaining consistent with the distributed and multi-nodal ATFM operational concept adopted in the Asia Pacific region. The environment also provides an operational overview extending beyond a single region, giving stakeholders visibility across regional boundaries and supporting broader situational awareness. On 1 February 2026, the existing CADENA coordination environment transitioned into the COMPASS environment, providing the initial operational deployment of COMPASS.

1.5 Unlike earlier coordination portals that provided manually intensive workflows and primarily served as repositories for operational information, the COMPASS environment is intended to realize a more user-friendly experience that aligns closely with operational practices to improve upon the COMPASS goals of a shared operational workspace supporting regional coordination activities. The baseline environment includes operational capabilities that provide shared visibility of traffic demand affecting relevant operational resources, while allowing additional capabilities to be introduced progressively as regional coordination needs evolve.

2. DISCUSSION

OPERATIONAL COORDINATION CHALLENGES

2.1 Despite the existence of regional coordination mechanisms, several operational challenges continue to affect cross-border traffic management.

2.2 Operational information related to Traffic Management Measures (TMMs) and operational constraints are often distributed across multiple communication channels, including emails, teleconferences, messaging platforms, and locally maintained documents. As a result, different stakeholders may maintain different levels of situational awareness regarding active and planned TMMs and related operational constraints.

2.3 During rapidly evolving operational situations such as weather disruptions, airspace restrictions, or capacity reductions, maintaining a consistent understanding of regional traffic management measures and responses can require significant manual coordination between stakeholders.

2.4 In addition, records of regional coordination activities are often distributed across multiple communication channels or locally maintained systems, making it difficult to reconstruct operational decisions or conduct post-event analysis.

DEVELOPMENT OF THE COMPASS ENVIRONMENT

2.5 COMPASS provides a coordination environment where participating stakeholders can maintain a shared operational reference of traffic management activities and related coordination information.

2.6 Within this environment, ANSPs may publish traffic management measures, operational advisories, ATFM daily plans (ADP), and other coordination information relevant to the management of traffic flows and regional constraints.

2.7 In addition to manual coordination functions, the COMPASS environment can utilize operational flight information derived from standard ATS flight messages distributed through existing AFTN networks. This information can be used to produce flight lists associated with a specific operational resource such as an airport or a flight information region (FIR). This capability allows participating stakeholders to maintain visibility of demand affecting those operational resources and supports coordination during regional traffic management activities.

2.8 Participation in the COMPASS environment does not require new system interfaces or infrastructure. Operational coordination information may be entered directly into the COMPASS environment using standard inputs, allowing participation to be scaled according to each stakeholder's operational needs and resources. This approach is intended to accommodate differing levels of operational maturity while remaining extensible to more advanced system-to-system interfacing.

2.9 The environment extends the concept of earlier coordination portals by combining the publication of operational coordination information with data-supported operational awareness of traffic demand affecting specific operational resources. It also supports situational awareness across regional boundaries by providing stakeholders with visibility beyond a single region. Additional optional functionality may be introduced over time to support expanded operational monitoring, analysis, data sharing, and more advanced information exchange capabilities beyond the baseline environment.

2.10 COMPASS supports regional ATFM coordination activities conducted through mechanisms such as AMNAC by providing participating stakeholders with a shared operational reference consistent with the Distributed Multi-Nodal ATFM network concept adopted in the Asia Pacific region.

OPERATIONAL BENEFITS

2.11 By providing a shared coordination environment that combines operational coordination information with data-supported visibility of traffic demand, COMPASS supports several operational objectives relevant to regional ATFM coordination, including:

- Improved data-supported visibility of traffic demand affecting selected operational resources such as an airport or FIR
- Improved network situational awareness among participating ANSPs
- Improved visibility of regional TMMs
- Reduced reliance on fragmented coordination channels for regional coordination
- Support for collaborative decision-making during regional traffic management activities
- A coordination environment that allows optional expansion of operational capabilities as regional ATFM practices evolve

GOVERNANCE AND DEVELOPMENT

2.12 COMPASS is supported by a community of participating stakeholders through the CWG, where participating ANSPs and industry partners exchange operational perspectives and identify coordination needs.

2.13 The technical environment is developed and maintained by Metron Aviation, while CANSO facilitates engagement with participating ANSPs and their stakeholders through the CWG.

NEXT STEPS

2.14 CANSO will continue working with ANSPs and regional stakeholders to refine the COMPASS environment and expand participation. Ongoing engagement includes operational demonstrations, feedback collection through CWG meetings, and continued dialogue with regional stakeholders.

2.15 Feedback from participating organizations will inform the continued evolution of the COMPASS environment and its role in supporting regional coordination activities.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) take note of the development of the COMPASS environment as a collaborative environment supporting ATFM information and coordination;

b) acknowledge the importance of structured operational information exchange and coordination in strengthening regional and interregional ATFM collaboration;

c) encourage interested ANSPs to engage with CANSO through the CWG meetings and provide operational input; and

d) encourage ANSPs in the region, if interested, to participate in a dedicated regional virtual meeting to discuss COMPASS and its evolution to support the APAC operational environment.

— END —