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North American, Central American and Caribbean Office

WORKING PAPER

NACC/WG/RAP/03 — WP/08
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Third Meeting of Rapporteurs of the North American, Central American and Caribbean Working Group (NACC/WG/RAP/03)
(ICAO NACC Regional Office, from 24 to 27 March 2025)

Agenda Item 3: **Update of the NACC/WG Work Programme**

ASBU TASK FORCE UPDATES

(Presented by ASBU Task Force Rapporteur)

EXECUTIVE SUMMARY

This working paper presents the status of Global Air Navigation Plan Study Group (GANP SG) and its subgroup of Aviation System Block Upgrade Panel Project Team (ASBU PPT) activities to prepare for the 42nd ICAO Assembly (A42) session scheduled for 23 September - 3 October 2025, in Montreal, Canada. During the A42, it is expected that the 8th edition of GANP/ASBU will be endorsed. This working paper suggests the approach to be taken to revise National Air Navigation Plans (NANPs) so that NANPs will be aligned with the 8th edition of GANP/ASBU. This paper also suggests the approaches to address the need to provide Key Performance Indicators (KPIs) to the CAR/SAM Regional Planning and Implementation Group (GREPECAS) Air Navigation Plan (eANP) Volume III approved by the 22nd GREPECAS meeting in November 2024.

Action:	a) Note the information contained in this paper; b) Consider the suggested approach to revise NANPs; c) Consider the suggested approach to address the need to provide KPIs GREPECAS e-ANP Volume III; and d) Provide comments to ASBU TF secretariat and rapporteur.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Economic Development of Air Transport • Environmental Protection
References:	• Global Air Navigation Plan (GANP, Doc 9750) https://www4.icao.int/ganpportal/ • Aviation System Block Upgrade (ASBU) Framework https://www4.icao.int/ganpportal/ASBU • ICAO NACC RO's CAR Regional States' NANP • https://www.icao.int/NACC/Pages/regional-group-ASBU.aspx

1. Introduction

1.1. The Aviation System Block Upgrades (ASBU) Task Force (TF) was established during the NACC/WG/5 meeting held in Trinidad and Tobago in May 2017. The objective of the ASBU TF is to facilitate the region in the implementation of harmonized technologies that support the operation guided by the ICAO Global Air Navigation Plan (GANP) and the Aviation System Block Upgrades (ASBU).

1.2. The ASBU TF work programme covers the basis for the preparation and maintenance of National Air Navigation Plans (NANPs) by ICAO member states, organization, and territories in the region. To effectively prepare and maintain the National Air Navigation Plans (NANPs), states need to understand GANP/ASBU in conjunction with their state' current and future needs in aviation technologies. The NANP should be used by the states to strategically plan what capability will be implemented and when to implement it.

1.3. The ICAO publishes a new edition of GANP/ASBU every 3 years. The technological improvement requirements of states also changes while the complex circumstances surrounding them changes. Therefore, it is necessary to periodically update NANPs to align with the newer edition of GANP/ASBU while addressing new and old needs of the states.

2. Preparation for the 8th edition of GANP/ASBU

2.1 The 7th meeting of the ASBU Panel Project Team (ASBU PPT) of the GANP Study Group (GANP-SG/ASBU PPT/7) and the 8th meeting of the GANP Performance Expert Group (GANP-SG/GANP PEG/8) were taken place from 3 to 7 March 2025. The meeting was held at European Organisation for Civil Aviation Equipment (EUROCAE) in Saint-Denis, France.

2.2 The ICAO Assembly, at its 39th Session, agreed on the expansion of the GANP lifecycle through three-year minor and six-year major updates, as relevant, in order to provide for stability. The 8th edition of GANP/ASBU is a major update introducing the Block 2 elements.

2.3 The 14th Air Navigation Conference took place in August/September 2024 where states provided technical inputs to the 8th edition of GANP/ASBU. The 42nd session of ICAO General Assembly is scheduled for September/October 2025 with the expectation that the 8th edition of GANP/ASBU will be endorsed.

2.4 One of the challenges addressed during the GANP-SG/ASBU PPT/7 was the low-level of development of NANP. GANP-SG plans to make additional guidance material for ASBU implementation and the template for the NANP for A42. GANP-SG also plans to conduct regional capacity-building workshops to support states with the development and implementation of NANPs based on the regional ANPs and the GANP.

3. Approach to revise NANPs

3.1 Section 2.4 described the low-level development of NANPs at the global level. Fortunately, NACC region was very successful in developing NANPs. In 2018, the NACC RO identified 20

states, one territory, and one organization in the CAR region that should prepare their NANPs. With three NANP workshops in 2018, 18 states/territory/organization successfully submitted their NANPs. These NANPs are based on the 5th edition of ASBU and focused on the needs and implementation status of ASBU Elements.

3.2 Section 2.4 also stats that the GANP-SG will make the NANP template available at the A42. The similarity/diversity between the NANP templates prepared by the GANP-SG and NACC's is unknown.

3.3 Suggested approach to be considered:

a) Study the GANP-SG prepared NANP template when it becomes available.
b) Ask GANP-SG if the usage of their NANP template is enforced.
c) Assuming the usage of GANP-SG prepared NANP template is not enforced, (1) consider the benefits of GANP-SG prepared NANP template and determine if we will use this template as is; and (2) consider creating the revised NACC NANP template for the 8th edition with GANP-SG prepared NANP template in mind.

4. Approach to address to KPIs needs for GREPECAS e-ANP Volume III

4.1 GREPECAS e-ANP Volume III is ICAO's Performance Framework KPI centric (refer to https://www4.icao.int/ganpportal/ASBU/KPI). States are expected to provide the Performance Framework specified KPIs calculated by the specified methods using specific data, to be included in the GREPECAS e-ANP Volume III. Refer to Attachment A for KPIs.

4.2 NACC/WG/ATFM TF reported during the AO/TF/5/ATFM/TF/7/CIIFRA/9 via WP/04 that the framework they established produced measurable outcomes such as:

a) On-time performance improved by 12% in monitored sectors;
b) Airspace capacity utilization increased by 8% in key corridors; and
c) Carbon emissions per flight hour reduced by 5%, supporting sustainability goals.

4.3 Meanwhile, some discussion took places about the value of ICAO's Performance Framework KPIs from states viewpoint. Lack of available data and resource to gather/analyse data were concerns of some states in our region. As a result, ATFM TF suggested the CAR Performance Indicators (CARPIs) where the data should be available, and the CARPI is useful for their operation and planning. Refer to Attachment B for CARPIs.

4.4 Suggested approach to be considered are:

a) Study ICAO's Performance Framework KPIs and determine which KPI is useful to you, which KPI you can produce, and which KPI you will/plan to produce to be included in the GREPECAS e-ANP Volume III.
b) Study CARPIs and determine which CARPI is useful to you, which CARPI you can produce and which CARPI you will/plan to produce.
c) If the option to create the revised NACC NANP template described in Section 3.3, c. (2) is selected, consider creating a section where the states' record their intention to implement ICAO's Performance Framework KPIs and/or CARPI.

5. Suggested Actions

5.1 The meeting is invited to:

a) Note the information contained in this paper.
b) Consider the suggested approach to revise NANPs;
c) Consider the suggested approach to address the needs to provide KPIs GREPECAS e-ANP Volume III; and
d) Provide comments to ASBU TF secretariat and rapporteur.

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Attachment A
ICAO Performance Framework – Key Performance Indicators (KPIs)

KPI	Name	Definition	Data Source
KPI01	Departure punctuality	Percentage of flights departing from the gate on-time (compared to schedule).	Refer to KPI data requirement
KPI02	Taxi-out additional time	Actual taxi-out time compared to an unimpeded/reference taxi-out time.	Refer to KPI data requirement
KPI03	ATFM slot adherence	Percentage of flights taking off within their assigned ATFM slot (Calculated Take-Off Time Compliance).	Refer to KPI data requirement
KPI04	Filed flight plan en-route extension	Flight planned en-route distance compared to a reference ideal trajectory distance.	Refer to KPI data requirement
KPI05	Actual en-route extension	Actual en-route distance flown compared to a reference ideal distance.	Refer to KPI data requirement
KPI06	En-route airspace capacity	The maximum volume of traffic an airspace volume will safely accept under normal conditions in a given time period.	Refer to KPI data requirement
KPI07	En-route ATFM delay	ATFM delay attributed to flow restrictions in a given en-route airspace volume	Refer to KPI data requirement
KPI08	Additional time in terminal airspace	Actual terminal airspace transit time compared to an unimpeded time. Actual trajectories are generally longer in time and distance due to path stretching and/or holding patterns. In the example below the unimpeded trajectories are shown in red, and the actual trajectories in green and blue.	Refer to KPI data requirement
KPI09	Airport peak capacity	The highest number of operations an airport can accept in a one-hour time frame (also called declared capacity). Can be computed for arrivals, departures or arrivals+departures.	Refer to KPI data requirement
KPI10	Airport peak throughput	The 95th percentile of the hourly number of operations recorded at an airport, in the “rolling” hours sorted from the least busy to the busiest hour. Can be computed for arrivals, departures or arrivals+departures.	Refer to KPI data requirement
KPI11	Airport throughput efficiency	Airport throughput (accommodated demand) compared to capacity or demand, whichever is lower. Can be computed for arrivals, departures or arrivals+departures.	Refer to KPI data requirement
KPI12	Airport/Terminal ATFM delay	ATFM delay attributed to arrival flow restrictions at a given airport and/or associated terminal airspace volume	Refer to KPI data requirement
KPI13	Taxi-in additional time	Actual taxi-in time compared to an unimpeded/reference taxi-in time	Refer to KPI data requirement

KPI14	Arrival punctuality	Percentage of flights arriving at the gate on-time (compared to schedule)	Refer to KPI data requirement
KPI15	Flight time variability	Distribution of the flight (phase) duration around the average value.	Refer to KPI data requirement
KPI16	Additional fuel burn	Additional flight time/distance and vertical flight inefficiency converted to estimated additional fuel burn attributable to ATM	Refer to KPI data requirement
KPI17	Level-off during climb	Distance and time flown in level flight before Top of Climb.	Refer to KPI data requirement
KPI18	Level capping during cruise	Flight Level difference between maximum Flight Levels on a measured airport pair and maximum Flight Levels on similar unconstrained airport pairs.	Refer to KPI data requirement
KPI19	Level-off during descent	Distance and time flown in level flight after Top of Descent.	Refer to KPI data requirement
KPI20	Number of aircraft accidents	'Accident' is defined in ICAO Annex 13, Chapter 1-Definitions; ADREP: Accident Data Report	Refer to KPI data requirement
KPI21	Number of runway incursions	Number of occurrences at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft. (CICTT Taxonomy definition)	Refer to KPI data requirement
KPI22	Number of runway excursions	Number of veer offs or overruns of the runway surface.	Refer to KPI data requirement
KPI23	Number of alerts	Number of airproxes, TCAS alerts, loss of separation as well as near collisions or collisions between aircraft in flight	Refer to KPI data requirement

Attachment B
CAR Regional Performance Indicators (CARPI)

KPI	Name	Explanation	Data Source
CARPI 01	Aerodrome Flight Counts	Count of IFR Arrivals and Departures at an Aerodrome for day, month and year periods	ATC/ATFM/Billing System
CARPI 02	Airspace Flight Counts	Number of flights controlled in an FIR or Sector for day, month and year periods	ATC/ATFM/Billing System
CARPI 03	Aerodrome type of operation count	Group the number of Arrival and Departures at an Aerodrome into domestic and international flights	ATC/ATFM/Billing System
CARPI 04	Airspace type of operation count	Group the number of flights into domestic and international flights	ATC/ATFM/Billing System
CARPI 05	Aerodrome Flight Trends	Compare CARPI01 and 03 against various baselines to identify trends. Baselines could be before and after pandemics, capability improvements, investment projects etc.	ATC/ATFM/Billing System
CARPI 06	Airspace Flight Trends	Compare CARPI02 and 04 against various baselines to identify trends. Baselines could be before and after pandemics, capability improvements, investment projects etc.	ATC/ATFM/Billing System
CARPI 07	Workload per Aerodrome Flight	Quantify the number of aerodrome operations divided by the number of operational ATCOs in the Tower and/or TMA	ATC/ATFM/Billing System/HR Systems
CARPI 08	Workload per Airspace Flight	Quantify the number of flights in a specific airspace divided by the number of operational ATCOs in the ACC	ATC/ATFM/Billing System/HR Systems
CARPI 09	Workload Trend at an Aerodrome	Compare the workload per ATCO before and after events such as technology implementation, significant changes in traffic, special events or other system changes	ATC/ATFM/Billing System/HR Systems
CARPI 10	Workload Trends in Airspace	Compare the workload per ATCO before and after events such as technology implementation, significant changes in traffic, special events or other system changes	ATC/ATFM/Billing System/HR Systems

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