Organización de Aviación Civil Internacional
Oficina para Norteamérica, Centroamérica y Caribe

NOTA DE ESTUDIO

NACC/WG/5 — NE/16 Rev.
08/05/17

Quinta Reunión del Grupo de Trabajo de Norteamérica, Centroamérica y Caribe (NACC/WG/5)
Puerto España, Trinidad y Tabago, 22-26 de mayo de 2017

Cuestión 3
del Orden del Día: **Implementación de Asuntos de Navegación Aérea**
3.3 Avance del ANI/WG en AIM, ATM y CNS

INFORME DE AVANCE DEL PROGRAMA DE TRABAJO DEL GRUPO AD HOC DEL ASBU

(Presentada por el Relator del Grupo Ad hoc del ASBU)

RESUMEN EJECUTIVO

Esta nota presenta el avance alcanzado por el Grupo Ad hoc de Mejoras por Bloques del Sistema de Aviación (ASBU), desde su creación en la Reunión ANI/WG/2. Siguiendo el trabajo del Grupo Ad hoc y sus entregables, la nota incluye los resultados para estos entregables y una recomendación para mejorar la función y la coordinación del Grupo Ad hoc.

Acción:	La acción sugerida se presenta en la Sección 3.
Objetivos Estratégicos:	• Seguridad Operacional • Capacidad y eficiencia de la navegación aérea • Protección del medio ambiente
Referencias:	• Doc 9750 de la OACI, Plan Mundial de Navegación Aérea, 5ta Edición • Plan de Implementación de Navegación Aérea Basado en la Performance para las Regiones NAM/CAR (RPBANIP), Abril 2014

1. Introducción

1.1 La Segunda Reunión del Grupo de Trabajo sobre implementación de Navegación Aérea para las Regiones NAM/CAR (ANI/WG/2) en junio de 2015, estableció el grupo Ad hoc ASBU para discutir el informe de las métricas y la performance en las Regiones NAM/CAR. A continuación se incluye información sobre el programa de trabajo y el avance que ha obtenido a la fecha.

1.2 Para discutir las metas, era importante definir/identificar a los Estados/Territorios incluidos en el enfoque regional de la implementación ASBU. Se recomienda que todos los Estados representados por la Región NAM/CAR sean incluidos y que proporcionen su estado de implementación del Bloque 0 ASBU. Para los Territorios, se asume que el estado de implementación ASBU es el mismo que el de Francia, Países Bajos o el Reino Unido, a menos que los Territorios señalen que autónomamente implementan el ASBU. El Grupo Ad hoc trabajará con los miembros NACC para aclarar como los Territorios están proporcionando el estado de ASBU B0.

2. Avance y Resultados

2.1 El Grupo revisó el *Apéndice Q del informe final de la reunión ANI/WG/2*, en donde se presenta la tabla de los elementos y las metas del Bloque 0 de ASBU. La tabla actualizada se proporciona en el **Apéndice A**.

2.2 La primera tarea para el grupo Ad hoc fue considerar el Formato revisado de Notificación de Navegación Aérea (ANRF) para la región. El ANRF se diseñó para que los Estados informen su estado de implementación de los Módulos/Elementos ASBU. El Grupo Ad hoc personalizó el ANRF para la región y siete Estados y Territorios presentaron sus ANRF ASBU B0 en abril de 2017 y se encuentran disponibles en la página web de la Oficina Regional NACC de la OACI en: http://www.icao.int/NACC/Pages/regional-group-asbu.aspx. La Oficina Regional NACC de la OACI desarrolló una página web en donde los ANRF de los Estados/Territorios estén disponibles para los miembros. El **Apéndice B** muestra una captura de pantalla del sitio web.

2.3 Dado a lo supuesto en 1.2, se recomienda que la Oficina NACC siga el avance de la implementación ASBU y el ANP de los Estados/Territorios en los 21 Estados y un Territorio (Curazao). El **Apéndice C** muestra el estado de la Implementación de los Elementos ASBU B0, así como el ANP de los Estados/Territorios.

2.4 Al 20 de abril de 2017, siete Estados y Territorios presentaron los ANFR. El **Apéndice D** muestra el flujo de trabajo del análisis e implementación de los Elementos ASBU y la Tabla que resume el estado de implementación del Bloque 0 para la Región NAM/CAR de la OACI y el **Apéndice E** muestra la Tabla Resumen del Estado de Implementación del Bloque 0 para los siete Estados y Territorios.

2.5 Es importante notar que el Plan Mundial de Navegación Aérea (GANP), ASBU, las metas AN, los ANP electrónicos de los Estados, el RPBANIP, abril 2014 y los ANRF están interrelacionados. En la Reunión ANI/WG/3 de fecha mayo de 2016, se le solicitó al Grupo Ad hoc revisar e informar sobre las metas de Navegación Aérea (AN) establecidas en el RPBANIP y en la *Declaración de Puerto España*. El Grupo Ad hoc trabajó por medio de teleconferencias y correo electrónico generando lo siguiente:

- Revisión y seguimiento de las metas de AN para informar a la Reunión NACC/DCA/6
- Desarrollar comentarios y recomendaciones para mejorar el sitio web/ANRF de las metas de AN, etc., y
- Apoyo y desarrollo de material para presentar durante el taller de ASBU en agosto de 2016

2.6 La 5ta Edición GANP de la OACI (Doc 9750) fue aprobado por la Asamblea de la OACI en octubre de 2016. Esta edición cambio algunas de las definiciones de los Elementos de los Bloques 0. La NAM actualizó el "Manual ASBU NAM" con base en la 5ta Edición del GANP/ASBU. Se recomienda que la Oficina NACC ajuste las definiciones de los Elementos del Bloque 0. Este cambio se debería reflejar en todos los documentos relevantes como el "Manual ASBU NAM" (4ta Edición o versión 2013), ANRF y en el RPBANIP.

2.7 El RPBANIP es el Plan de Implementación Regional de la OACI para la NACC y está bien alineada con el GANP. Se recomienda que este documento sea actualizado e incorporar los cambios resultantes de la 5ta Edición del GANP.

2.8 El Taller ASBU fue auspiciado por la Sede de la OACI del 22 al 26 de agosto de 2016 en la Oficina Regional NACC de la OACI, Ciudad de México, México. El taller se enfocó en informar a los Estados sobre la metodología en la toma de decisión basada en la performance. El taller también proporcionó información sobre cómo los Estados pueden utilizar un proceso paso a paso para evaluar el análisis de los Elementos ASBU y el estado de implementación así como la forma de llenar el ANRF. Algunos participantes exitosamente dominaron el proceso y tuvieron un resultado positivo. Sin embargo, se recomienda que la Oficina Regional NACC proporcione más asistencia y apoyo a los Estados/Territorios para que se familiaricen más con el GANP mientras planean la implementación de los elementos B0.

3. Acción Sugerida

3.1 Se invita a la Reunión a:

a) Aprobar el Grupo Ad hoc ASBU del ANI/WG como un Grupo de Trabajo ASBU;

b) Reconocer y aprobar el avance del grupo Ad hoc detallado en esta nota;

c) Aceptar el "Manual ASBU NAM" (5 Edición o versión 2016) como el Manual ASBU NACC;

d) Revisar el archivo/actualizar el ANRF de los Estados/Territorios; y

e) Apoyar al TF ASBU.

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APPENDIX A

To discuss Metrics and Targets, their domain must be defined and the NACC Offices/ASBU TF needs to obtain and agree on several definitions (see Notes 1 to 5) which refer to the Metrics and Targets in the table below; NACC Metrics and Targets for ASBU Block 0 Elements.

Note 1 : The number of aerodromes (73) is an assessed number.

Note 2: The target number of assessed aerodromes (60) is a place holder. This target number needs to be discussed and determined.

Note 3: The number of States and Territories (22) is an assessed number.

Note 4: The target number of assessed States and Territories (18) is a place holder. This target number needs to be discussed and determined.

Note 5: The target date of December 2017 is a place holder. This target date needs to be disused and determined.

Table A: The NACC Metrics and Targets for ASBU Block 0 Elements

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
Performance Improvement Area 1: Airport Operations				
ACDM	**1.** Interconnection between aircraft operator & ANSP systems to share surface operations information	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-ACDM-E1 Target 1:** X=60 by December 2017	
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-ACDM-E2 Target 1:** X=60 by December 2017	
	3. Interconnection between airport operator & ANSP systems to share surface operations information	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-ACDM-E3 Target 1:** X=60 by December 2017	
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-ACDM-E4 Target 1:** X=60 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	5. Collaborative departure queue management	**a.** Number of Table AOP I-1 aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed Table AOP I-1 aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-ACDM-E5 Target 1:** X=60 by December 2017	
APTA	**1.** PBN approach procedures with vertical guidance to LNAV/VNAV minima	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-APTA-E1 Target 1:** X=60 by December 2017	
	2. PBN approach procedures with vertical guidance to LPV minima	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-APTA-E2 Target 1:** X=60 by December 2017	
	3. PBN approach procedures without vertical guidance to LNAV minima	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-APTA-E3 Target 1:** X=60 by December 2017	
	4. GBAS Landing System (GLS) procedures to CAT I minima	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-APTA-E4 Target 1:** X=60 by December 2017	
RSEQ	**1.** AMAN via controlled time of arrival to a reference fix	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-RSEQ-E1 Target 1:** X=60 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	2. Departure management	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-RSEQ-E2. Target 1:** X=60 by December 2017	
	3. Departure flow management	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-RSEQ-E3 Target 1:** X=60 by December 2017	
	4. Point merge	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-RSEQ-E4 Target 1:** X=60 by December 2017	
SURF	**1.** A-SMGCS with at least one cooperative surface surveillance system	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-SURF-E1 Target 1:** X=60 by December 2017	
	2. Including ADS-B APT as an element of A-SMGCS	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-SURF-E2 Target 1:** X=60 by December 2017	
	3. A-SMGCS alerting with flight identification information	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-SURF-E3 Target 1:** X=60 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	4. EVS for taxi operations	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-SURF-E4 Target 1:** X=60 by December 2017	
	5. Airport vehicles equipped with transponders	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-SURF-E5 Target 1:** X=60 by December 2017	
WAKE	**1.** New PANS-ATM wake turbulence categories and separation minima	*ICAO has not developed new minima*	**N/A**	
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-WAKE-E2 Target 1:** X=60 by December 2017	
	3. Wake independent departure and arrival procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-WAKE-E3 Target 1:** X=60 by December 2017	
	4. Wake turbulence mitigation for departures procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-WAKE-E4 Target 1:** X=60 by December 2017	
	5. 6 wake turbulence categories and separation minima	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-WAKE-E5 Target 1:** X=60 by December 2017	

Performance Improvement Area 2: Globally Interoperable Systems and Data

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
AMET	**1.** WAFS	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-AMET-E1 Target 1** X=18 by December 2017	
	2. IAVW	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-AMET-E2 Target 1** X=18 by December 2017	
	3. TCAC forecasts	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-AMET-E3 Target 1** X=18 by December 2017	
	4. Aerodrome warnings	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-AMET-E4 Target 1:** X=60 by December 2017	
	5. Wind shear warnings and alerts	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-AMET-E5 Target 1:** X=60 by December 2017	
	6. SIGMET	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-AMET-E6 Target 1** X=18 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	7. Other OPMET information (METAR, SPECI and/or TAF)	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-AMET-E7 Target 1:** X=60 by December 2017	
	8. QMS for MET	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-AMET-E8 Target 1** X=18 by December 2017	
DATM	**1.** Aeronautical Information Exchange Model (AIXM)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-DATM-E1 Target 1** X=18 by December 2017	
	2. eAIP	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-DATM-E2 Target 1** X=18 by December 2017	
	3. Digital NOTAM	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-DATM-E3 Target 1** X=18 by December 2017	
	4. eTOD	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-DATM-E4 Target 1:** X=60 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	5. WGS-84	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-DATM-E5 Target 1** X=18 by December 2017	
	6. QMS for AIM	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-DATM-E6 Target 1** X=18 by December 2017	
FICE	**1.** AIDC to provide initial flight data to adjacent ATSUs	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FICE-E1 Target 1** X=18 by December 2017	
	2. AIDC to update previously coordinated flight data	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FICE-E2 Target 1** X=18 by December 2017	
	3. AIDC for control transfer	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FICE-E3 Target 1** X=18 by December 2017	
	4. AIDC to transfer CPDLC logon information to the Next Data Authority	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FICE-E4 Target 1** X=18 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
Performance Improvement Area 3: Optimum Capacity and Flexible Flights				
ACAS	**1.** ACAS II (TCAS version 7.1)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ACAS-E1 Target 1** X=18 by December 2017	
	2. Auto Pilot/Flight Director (AP/FD) TCAS	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ACAS-E3 Target 1** X=18 by December 2017	
	3. TCAS Alert Prevention (TCAP)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ACAS-E3 Target 1** X=18 by December 2017	
ASEP	**1.** ATSA-AIRB	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ASEP-E1 Target 1** X=18 by December 2017	
	2. ATSA-VSA	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ASEP-E2 Target 1** X=18 8 by December 2017	
ASUR	**1.** ADS-B	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ASUR-E1 Target 1** X=18 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	2. Multilateration (MLAT)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-ASUR-E2 Target 1** X=18 by December 2017	
FRTO	**1.** CDM incorporated into airspace planning	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FRTO-E1 Target 1** X=18 by December 2017	.
	2. Flexible Use of Airspace (FUA)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FRTO-E2 Target 1** X=18 by December 2017	
	3. Flexible route systems	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FRTO-E3 Target 1** X=18 by December 2017	
	4. CPDLC used to request and receive re-route clearances	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-FRTO-E4 Target 1** X=18 by December 2017	
NOPS	**1.** Sharing prediction of traffic load for next day	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-NOPS-E1 Target 1** X=18 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
	2. Proposing alternative routings to avoid or minimize ATFM delays	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-NOPS-E2 Target 1** X=18 by December 2017	
OFTL	**1.** ITP using ADS-B	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-OFTL-E1 Target 1** X=18 by December 2017	
SNET	**1.** Short Term Conflict Alert (STCA)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-SNET-E1 Target 1** X=18 by December 2017	
	2. Area Proximity Warning (APW)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-SNET-E2 Target 1** X=18 by December 2017	
	3. Minimum Safe Altitude Warning (MSAW)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-SNET-E3 Target 1** X=18 by December 2017	
	4. Medium Term Conflict Alert (MTCA)	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-SNET-E4 Target 1** X=18 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
Performance Improvement Area 4: Efficient Flight Paths				
CCO	**1.** Procedure changes to facilitate CCO	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CCO-E1 Target 1:** X=60 by December 2017	
	2. Route changes to facilitate CCO	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CCO-E2 Target 1:** X=60 by December 2017	
	3. PBN SIDs	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CCO-E3 Target 1:** X=60 by December 2017	
CDO	**1.** Procedure changes to facilitate CDO	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CDO-E1 Target 1:** X=60 by December 2017	
	2. Route changes to facilitate CDO	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CDO-E2 Target 1:** X=60 by December 2017	
	3. PBN STARs	**a.** Number of aerodromes for which the need for this Element has been assessed = X. *Metric: X out of 73 have been assessed* **b.** Number of assessed aerodromes which need this Element = Y *Metric*: *Y out of X need this element* **c.** Number of needed implementations that have been completed = Z *Metric. Z out of Y have been completed*	**B0-CDO-3E Target 1:** X=60 by December 2017	

Block 0 Modules	Elements	Metrics	Targets	Progress & Remarks
TBO	**1.** ADS-C over oceanic and remote areas	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-TBO-E1 Target 1** X=18 by December 2017	
	2. CPDLC over continental area	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-TBO-E2 Target 1** X=18 by December 2017	
	3. CPDLC over oceanic and remote area	**a.** Number of States that have completed the need analysis for this Element = X *Metric*: *X out of 22 States have assessed* **b.** Number of assessed States that need this Element =Y *Metric: Y out of X States need this element* **c.** Number of States where Element is needed that have completed implementation = Z *Metric*: *Z out of Y States have implemented*	**B0-TBO-E3 Target 1** X=18 by December 2017	

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APPENDIX B
ASBU AD HOC GROUP WEBSITE

The ICAO NACC web page links to the ASBU Task Force site. From the home page, you can get to the ASBU TF site via ANI/WG site. The URL is:
http://www.icao.int/NACC/Pages/regional-group-asbu.aspx

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ASBU

ASBU ADHOC Group

Based on the ANI/WG Terms of Reference for expediting the work progress and to focus on the regional priorities, the ANI/WG/3 Meeting considered necessary and therefore agreed on the creation of an Ad hoc Group to support review, follow-up and reporting the achievement of the Air Navigation (AN) targets established in the RPBANIP and Port-of-Spain Declaration.

The ANI/WG ASBU Ad Hoc Group informed the NACC/DCA/6 Meeting on its assessment of the progress, showing underreporting of States and the need to change the current metrics, based on the minimum standardization of the modules to be implemented in the region. Similarly, the need for all States to notify ASBU elements to be implemented was suggested, as well as the designation of the Point of Contact to be responsible for the follow up of these implementations, in order to optimize project monitoring.

This web site is presented as a tool to stimulate and encourage States to present their progress and facilitate the arduous task entrusted to the Ad Hoc Group.

Con base en los Términos de Referencia para acelerar el avance del trabajo y para enfocarse en las prioridades regionales, la Reunión ANI/WG/3 consideró necesario y por lo tanto acordó la creación de un Grupo Ad hoc para apoyar la evaluación, seguimiento e informar el logro de las metas de Navegación Aérea (AN) establecidas en el RPBANIP y la Declaración de Puerto España.

El Grupo Ad hoc ASBU del ANI/WG informó a la Reunión NACC/DCA/6 sobre la evaluación del avance, mostrando la falta de informes de los Estados y la necesidad de cambiar las métricas actuales, con base en la estandarización mínima de los módulos a ser implementados en la región. Similarmente, se sugirió la necesidad de todos los Estados de notificar los elementos ASBU a ser implementados, así como la designación de Puntos de Contacto a ser responsables del seguimiento de estas implementaciones, para optimizar el monitoreo del proyecto.

Esta página se presenta como una herramienta para estimular y alentar a los Estados a presentar su avance y facilitar las arduas tareas delegadas al Grupo Ad hoc.

Rapporteur: **Betty Castaing**, (Dominican Republic).

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APPENDIX C

To discuss Metrics and Targets, their domain must be defined. The NACC Offices and ASBU TF needs to obtain and agree on several definitions which refer to the Metrics and Targets shown in APPENDIX A. Table B consists of 21 States and 15 Territories. Among them, 21 States and one Territory will be included to address Metrics and Targets of ASBU B0 Implementation Status. This table lists: (1) NACC States and Territories; (2) the number of international aerodromes to be included in the status report ("APT" column); (3) the Block 0 ANRF submission status ("B0" column); and (4) the preparation of State Air Navigation Plan ("ANP" column).

Table C: The NACC States and Territories with Aerodrome Counts and B0 Status

State/Territory	Status			State/Territory	Status		
	APT	B0	ANP		B0	B1	ANP
Antigua & Barbuda	1	Yes	No	Haiti	1	No	No
Anguilla (GBR)	N/A	N/A	N/A	Honduras	1	No	No
Aruba (NLD)	N/A	N/A	N/A	Jamaica	1	No	No
Bahamas	1	No	No	Martinique (FRA)	N/A	N/A	N/A
Barbados	1	No	No	Mexico	3	No	No
Belize	1	No	No	Monserrat (GBR)	N/A	N/A	N/A
Bermuda (GBR)	N/A	N/A	N/A	Nicaragua	1	No	No
Bonaire (NLD)	N/A	N/A	N/A	Republica Dominicana	2	Yes	No
British Virgin Islands (GBR)	N/A	N/A	N/A	Saba (NLD)	N/A	N/A	N/A
Canada	20	Yes	Yes	Saint Barthelemy (FRA)	N/A	N/A	N/A
Cayman Islands (GBR)	N/A	N/A	N/A	Saint Kitts & Nevis	1	No	No
Costa Rica	1	Yes	No	Saint Lucia	1	Yes	Yes
Cuba	1	Yes	No	Saint Vincent & the Grenadines	1	No	No
Curacao (NLD)	1	Yes	No	Sint Eustatius (NLD)	N/A	N/A	N/A
El Salvador	1	No	No	Sint Maarten (NLD)	N/A	N/A	N/A
Guadeloupe (FRA)	N/A	N/A	N/A	Trinidad and Tobago	1	Yes	No
Grenada	1	No	No	Turks and Caicos Islands (BGR)	N/A	N/A	N/A
Guatemala	1	No	No	United States	30	Yes	Yes

Note 1: The States and Territories which will be included in the ASBU B0 Implementation Status Report should be discussed and agreed upon.

Note 2: Contents highlighted in “pink” indicate information which needs to be verified or submitted.

Note 3: Contents highlighted in “green” indicate information is verified and/or submitted.

Note 4: It is recommended that all States and Territories (if applicable) have a State ANP that is aligned with NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) and GANP.

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APPENDIX D

The analysis and implementation workflow of ASBU Elements is depicted in the Figure D below.

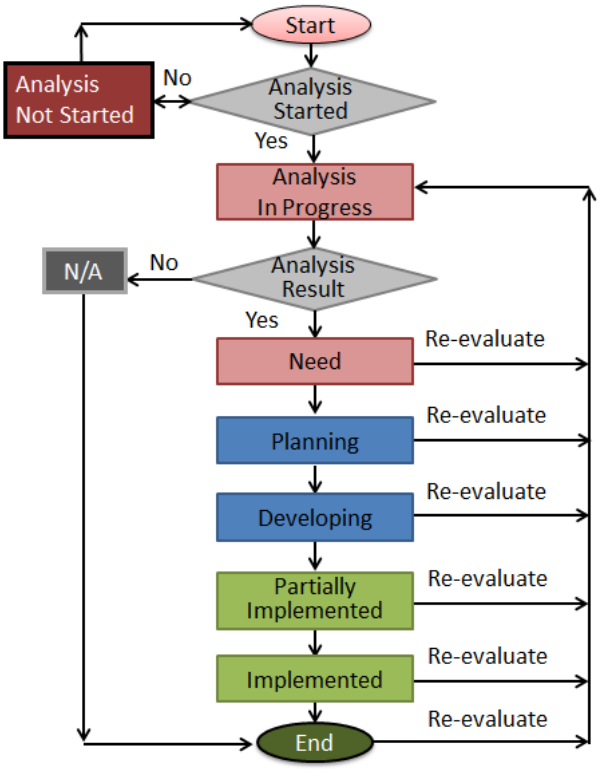

Figure D: Analysis and Implementation Workflow

The significance of each step in the workflow is as follows: Note that the status definitions are written from the Regional view (i.e., NACC) consisting multiple States. From the State view (i.e., United State of America), the exact same definitions are applicable, however only the State determines its own status.

- Analysis Not Started – The requirement to implement this ASBU Element has not yet been assessed by any State in the Region
- Analysis In Progress – A Need Analysis as to whether or not this ASBU Element is required is in progress by at least one State in the Region
- N/A – The Region has decided not to implement this ASBU Element
- Need - One or more States in the Region have determined the ASBU Element is required, but none have begun planning for the implementation
- Planning – Implementation of this ASBU Element is planned, but not started
- Developing – Implementation of this ASBU Element is in the development phase, but not yet operational
- Partially Implemented – Implementation of this ASBU Element is partially completed and/or operational in at least one area of the Region
- Implemented - Implementation of this ASBU Element has been completed and/or is fully operational in all areas of the Region where the need was identified

Table D is a summary of the ICAO NACC Block 0 Implementation Status. As of April 21, a total of nine (9) States and Territories submitted their ANRFs among 22 NACC States and Territories. APPENDIX E shows the results of these reports.

Assumptions 1: For States who have not submitted their ANRFs yet, all implementation status were recorded as Need Analysis "Not Started".

Assumptions 2: Numbers of aerodromes needs to be verified.

Table D: ICAO NACC Block 0 Implementation Status Summary Table (as of Apr 21, 2017)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information	17		1		2	20	2	31
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information	17		1		2	20	32	1
	3. Interconnection between airport operator & ANSP systems to share surface operations information	17		1		2	20	2	31
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information	17		1		2	20	2	31
	5. Collaborative departure queue management	19			2	22			30
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima	15			1		3	20	34
	2. PBN approach procedures with vertical guidance to LPV minima	15			1		3	20	34
	3. PBN approach procedures without vertical guidance to LNAV minima	16				1		22	34
	4. GBAS Landing System (GLS) procedures to CAT I minima	15	21		3	1	2		31
RSEQ	1. AMAN via controlled time of arrival to a reference fix	18			5		20		30
	2. Departure management	18			5	20		30	
	3. Departure flow management	18	20		5		30		
	4. Point merge	18			55				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system	18			4			21	30
	2. ADS-B APT	18			4			21	30
	3. A-SMGCS alerting with flight identification information	18			5			20	30
	4. EVS for taxi operations	38			35				
	5. Airport vehicles equipped with transponders	18			5				50
WAKE	1. New PANS-ATM wake turbulence categories and separation minima	37			36				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	38			5				30
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	38			5			30	
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds	38			5				30
	5. 6 wake turbulence categories and separation minima	38	1		4				30
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS	14							8
	2. IAVW	14			1				7
	3. TCAC forecasts	14							8
	4. Aerodrome warnings	17					2	21	33

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	5. Wind shear warnings and alerts	18					2	21	32
	6. SIGMET	14			2				6
	7. Other OPMET information (METAR, SPECI and/or TAF)	17							56
	8. QMS for MET	14						1	7
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)	14				2	2		4
	2. eAIP	13					2	1	6
	3. Digital NOTAM	14	1			2	3		2
	4. eTOD	16	1			1	3	20	32
	5. WGS-84	13				1			8
	6. QMS for AIM	13					2		7
FICE	1. AIDC to provide initial flight data to adjacent ATSUs	14	1	1	1	1	2	1	1
	2. AIDC to update previously coordinated flight data	14	1	1	1	2	2		1
	3. AIDC for control transfer	14	1	1	1	2	2		1
	4. AIDC to transfer CPDLC logon information to the Next Data Authority	14			4	2	1	1	
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)	15			2		2	2	1
	2. APFD function	14			6		1	1	
	3. TCAP function	14			7			1	
ASEP	1. ATSA-AIRB	16			5				1
	2. ATSA-VSA	17			4				1
ASUR	1. ADS-B	13			1	4	1		3
	2. Multilateration (MLAT)	14			3	2		2	1
FRTO	1. CDM incorporated into airspace planning	14			1	1	1	1	4
	2. Flexible Use of Airspace (FUA)	14			2	1	2		3
	3. Flexible routing	14	1		2		1	1	3
	4: CPDLC used to request and receive re-route clearances	14			2	1	2		3
NOPS	1. Sharing prediction of traffic load for next day	13	1				5	1	2
	2. Proposing alternative routings to avoid or minimize ATFM delays	13	1				5	1	2
OPFL	1. ITP using ADS-B	16			5				1
SNET	1. Short Term Conflict Alert implementation (STCA)	14			1				7
	2. Area Proximity Warning (APW)	14			1				7
	3. Minimum Safe Altitude Warning (MSAW)	14			1				7
	4. Medium Term Conflict Alert (MTCA)	14			1				7
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO	15			1		3	21	33
	2. Airspace changes to facilitate CCO	15	20		2		3	1	32
	3. PBN SIDs	15					3	22	33
CDO	1. Procedure changes to facilitate CDO	15			1		3	21	33
	2. Airspace changes to facilitate CDO	15	20		1		3	1	33
	3. PBN STARs	15	1				2	22	33
TBO	1. ADS-C over oceanic and remote areas	16			1				5
	2. CPDLC over continental areas	15			2	1	1		3
	3. CPDLC over oceanic and remote areas	15			2		1		4

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APPENDIX E

As of April 21, 2017, a total of nine (9) NACC States and Territories submitted their ANRFs. Tables for their Block 0 Implementation Status is provided below:

Table E1: Antigua and Barbuda ASBU Block 0 Implementation Status Summaries
Table E2: Canada ASBU Block 0 Implementation Status Summaries
Table E3: Costa Rica ASBU Block 0 Implementation Status Summaries
Table E4: Cuba ASBU Block 0 Implementation Status Summaries
Table E5: Curacao ASBU Block 0 Implementation Status Summaries
Table E6: Republica Dominicana ASBU Block 0 Implementation Status Summaries
Table E7: Saint Lucia ASBU Block 0 Implementation Status Summaries
Table E8: Trinidad and Tobago ASBU Block 0 Implementation Status Summaries
Table E9: United States of America ASBU Block 0 Implementation Status Summaries

Note 1: In the case of missing information, the status of Element implementation was recorded as Need Analysis "Not Started".
Note 2: Some ASBU Elements changed in the 5th edition of GANP and the tables are formatted for the most recent edition. However, some data was sent in the 4th edition format. Information on Elements such as ACDM-E1, -E2, -E3, -E4; APTA-E1, E2 and SURF-E4, needs to be verified by each State and Territory.

Table E1: Antigua and Barbuda ASBU Block 0 Implementation Status Summaries (as of October 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information								√
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information								√
	3. Interconnection between airport operator & ANSP systems to share surface operations information								√
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information								√
	5. Collaborative departure queue management				√				
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima				√				
	2. PBN approach procedures with vertical guidance to LPV minima				√				
	3. PBN approach procedures without vertical guidance to LNAV minima							√	
	4. GBAS Landing System (GLS) procedures to CAT I minima				√				
RSEQ	1. AMAN via controlled time of arrival to a reference fix	√							
	2. Departure management	√							
	3. Departure flow management	√							
	4. Point merge	√							
SURF	1. A-SMGCS with at least one cooperative surface surveillance system	√							
	2. ADS-B APT	√							

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	3. A-SMGCS alerting with flight identification information	√							
	4. EVS for taxi operations				√				
	5. Airport vehicles equipped with transponders	√							
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds	√							
	5. 6 wake turbulence categories and separation minima	√							
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings						√		
	5. Wind shear warnings and alerts						√		
	6. SIGMET				√				
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)					√			
	2. eAIP								√
	3. Digital NOTAM						√		
	4. eTOD					√			
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs	√							
	2. AIDC to update previously coordinated flight data	√							
	3. AIDC for control transfer	√							
	4. AIDC to transfer CPDLC logon information to the Next Data Authority	√							
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)						√		
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB	√							
	2. ATSA-VSA	√							
ASUR	1. ADS-B					√			
	2. Multilateration (MLAT)				√				
FRTO	1. CDM incorporated into airspace planning					√			
	2. Flexible Use of Airspace (FUA)				√				
	3. Flexible routing				√				
	4: CPDLC used to request and receive re-route clearances				√				
NOPS	1. Sharing prediction of traffic load for next day						√		
	2. Proposing alternative routings to avoid or minimize ATFM delays						√		

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
OPFL	1. ITP using ADS-B	√							
SNET	1. Short Term Conflict Alert implementation (STCA)				√				
	2. Area Proximity Warning (APW)				√				
	3. Minimum Safe Altitude Warning (MSAW)				√				
	4. Medium Term Conflict Alert (MTCA)				√				
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO						√		
	2. Airspace changes to facilitate CCO						√		
	3. PBN SIDs						√		
CDO	1. Procedure changes to facilitate CDO						√		
	2. Airspace changes to facilitate CDO						√		
	3. PBN STARs						√		
TBO	1. ADS-C over oceanic and remote areas	√							
	2. CPDLC over continental areas	√							
	3. CPDLC over oceanic and remote areas	√							
	Total (68)	**22**	**0**	**0**	**17**	**4**	**12**	**1**	**12**

Table E2: Canada ASBU Block 0 Implementation Status Summaries (as of January 2017)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information						√		
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information						√		
	3. Interconnection between airport operator & ANSP systems to share surface operations information						√		
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information						√		
	5. Collaborative departure queue management					√			
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima							√	
	2. PBN approach procedures with vertical guidance to LPV minima							√	
	3. PBN approach procedures without vertical guidance to LNAV minima							√	
	4. GBAS Landing System (GLS) procedures to CAT I minima		√						
RSEQ	1. AMAN via controlled time of arrival to a reference fix						√		
	2. Departure management					√			
	3. Departure flow management		√						
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system							√	
	2. ADS-B APT							√	

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	3. A-SMGCS alerting with flight identification information							√	
	4. EVS for taxi operations	√							
	5. Airport vehicles equipped with transponders								√
WAKE	1. New PANS-ATM wake turbulence categories and separation minima	√							
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds	√							
	5. 6 wake turbulence categories and separation minima	√							
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings							√	
	5. Wind shear warnings and alerts							√	
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)					√			
	2. eAIP						√		
	3. Digital NOTAM		√						
	4. eTOD							√	
	5. WGS-84					√			
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs			√					
	2. AIDC to update previously coordinated flight data			√					
	3. AIDC for control transfer			√					
	4. AIDC to transfer CPDLC logon information to the Next Data Authority							√	
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)								√
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB				√				
	2. ATSA-VSA	√							
ASUR	1. ADS-B								√
	2. Multilateration (MLAT)							√	
FRTO	1. CDM incorporated into airspace planning								√
	2. Flexible Use of Airspace (FUA)								√
	3. Flexible routing								√
	4: CPDLC used to request and receive re-route clearances						√		
NOPS	1. Sharing prediction of traffic load for next day								√
	2. Proposing alternative routings to avoid or minimize ATFM delays								√

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
OPFL	1. ITP using ADS-B				√				
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO							√	
	2. Airspace changes to facilitate CCO		√						
	3. PBN SIDs							√	
CDO	1. Procedure changes to facilitate CDO							√	
	2. Airspace changes to facilitate CDO		√						
	3. PBN STARs							√	
TBO	1. ADS-C over oceanic and remote areas								√
	2. CPDLC over continental areas								√
	3. CPDLC over oceanic and remote areas								√
	Total (68)	**7**	**5**	**3**	**5**	**4**	**7**	**15**	**22**

Table E3: Costa Rica ASBU Block 0 Implementation Status Summaries (as of March 2017)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information							√	
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information							√	
	3. Interconnection between airport operator & ANSP systems to share surface operations information							√	
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information							√	
	5. Collaborative departure queue management	√							
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima								√
	2. PBN approach procedures with vertical guidance to LPV minima								√
	3. PBN approach procedures without vertical guidance to LNAV minima								√
	4. GBAS Landing System (GLS) procedures to CAT I minima								√
RSEQ	1. AMAN via controlled time of arrival to a reference fix				√				
	2. Departure management				√				
	3. Departure flow management				√				
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system				√				
	2. ADS-B APT				√				

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	3. A-SMGCS alerting with flight identification information				√				
	4. EVS for taxi operations				√				
	5. Airport vehicles equipped with transponders				√				
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds				√				
	5. 6 wake turbulence categories and separation minima				√				
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings								√
	5. Wind shear warnings and alerts	√							
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)								√
	2. eAIP								√
	3. Digital NOTAM								√
	4. eTOD								√
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs		√						
	2. AIDC to update previously coordinated flight data		√						
	3. AIDC for control transfer		√						
	4. AIDC to transfer CPDLC logon information to the Next Data Authority				√				
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)				√				
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB				√				
	2. ATSA-VSA				√				
ASUR	1. ADS-B				√				
	2. Multilateration (MLAT)				√				
FRTO	1. CDM incorporated into airspace planning	√							
	2. Flexible Use of Airspace (FUA)	√							
	3. Flexible routing	√							
	4: CPDLC used to request and receive re-route clearances	√							
NOPS	1. Sharing prediction of traffic load for next day		√						
	2. Proposing alternative routings to avoid or minimize ATFM delays		√						

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
OPFL	1. ITP using ADS-B				√				
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO								√
	2. Airspace changes to facilitate CCO				√				
	3. PBN SIDs								√
CDO	1. Procedure changes to facilitate CDO								√
	2. Airspace changes to facilitate CDO								√
	3. PBN STARs		√						
TBO	1. ADS-C over oceanic and remote areas								√
	2. CPDLC over continental areas								√
	3. CPDLC over oceanic and remote areas								√
	Total (68)	**6**	**6**	**0**	**24**	**0**	**0**	**4**	**28**

Table E4: Cuba ASBU Block 0 Implementation Status Summaries (as of Nov 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information					√			
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information					√			
	3. Interconnection between airport operator & ANSP systems to share surface operations information					√			
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information					√			
	5. Collaborative departure queue management					√			
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima								√
	2. PBN approach procedures with vertical guidance to LPV minima								√
	3. PBN approach procedures without vertical guidance to LNAV minima					√			
	4. GBAS Landing System (GLS) procedures to CAT I minima					√			
RSEQ	1. AMAN via controlled time of arrival to a reference fix				√				
	2. Departure management				√				
	3. Departure flow management				√				
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system							√	
	2. ADS-B APT							√	
	3. A-SMGCS alerting with flight identification information					√			
	4. EVS for taxi operations	√							
	5. Airport vehicles equipped with transponders					√			
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds				√				
	5. 6 wake turbulence categories and separation minima				√				
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings								√
	5. Wind shear warnings and alerts								√
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)								√
	2. eAIP							√	
	3. Digital NOTAM					√			

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD						√		
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs							√	
	2. AIDC to update previously coordinated flight data					√			
	3. AIDC for control transfer					√			
	4. AIDC to transfer CPDLC logon information to the Next Data Authority				√				
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)							√	
	2. APFD function							√	
	3. TCAP function							√	
ASEP	1. ATSA-AIRB				√				
	2. ATSA-VSA				√				
ASUR	1. ADS-B								√
	2. Multilateration (MLAT)							√	
FRTO	1. CDM incorporated into airspace planning								√
	2. Flexible Use of Airspace (FUA)								√
	3. Flexible routing						√		
	4: CPDLC used to request and receive re-route clearances								√
NOPS	1. Sharing prediction of traffic load for next day						√		
	2. Proposing alternative routings to avoid or minimize ATFM delays						√		
OPFL	1. ITP using ADS-B				√				
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO							√	
	2. Airspace changes to facilitate CCO							√	
	3. PBN SIDs							√	
CDO	1. Procedure changes to facilitate CDO							√	
	2. Airspace changes to facilitate CDO							√	
	3. PBN STARs							√	
TBO	1. ADS-C over oceanic and remote areas								√
	2. CPDLC over continental areas				√				
	3. CPDLC over oceanic and remote areas				√				
	Total (68)	**1**	**0**	**0**	**15**	**12**	**4**	**14**	**22**

Table E5: Curacao ASBU Block 0 Implementation Status Summaries (as of January 2017)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information			√					
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information			√					
	3. Interconnection between airport operator & ANSP systems to share surface operations information			√					
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information			√					
	5. Collaborative departure queue management	√							
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima								√
	2. PBN approach procedures with vertical guidance to LPV minima								√
	3. PBN approach procedures without vertical guidance to LNAV minima	√							
	4. GBAS Landing System (GLS) procedures to CAT I minima				√				
RSEQ	1. AMAN via controlled time of arrival to a reference fix				√				
	2. Departure management				√				
	3. Departure flow management				√				
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system				√				
	2. ADS-B APT				√				
	3. A-SMGCS alerting with flight identification information				√				
	4. EVS for taxi operations				√				
	5. Airport vehicles equipped with transponders				√				
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds				√				
	5. 6 wake turbulence categories and separation minima		√						
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings								√
	5. Wind shear warnings and alerts								√
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)								√
	2. eAIP								√
	3. Digital NOTAM					√			

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD		√						
	5. WGS-84								√
	6. QMS for AIM						√		
FICE	1. AIDC to provide initial flight data to adjacent ATSUs					√			
	2. AIDC to update previously coordinated flight data					√			
	3. AIDC for control transfer					√			
	4. AIDC to transfer CPDLC logon information to the Next Data Authority					√			
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)						√		
	2. APFD function						√		
	3. TCAP function				√				
ASEP	1. ATSA-AIRB				√				
	2. ATSA-VSA				√				
ASUR	1. ADS-B					√			
	2. Multilateration (MLAT)					√			
FRTO	1. CDM incorporated into airspace planning						√		
	2. Flexible Use of Airspace (FUA)						√		
	3. Flexible routing		√						
	4: CPDLC used to request and receive re-route clearances					√			
NOPS	1. Sharing prediction of traffic load for next day						√		
	2. Proposing alternative routings to avoid or minimize ATFM delays						√		
OPFL	1. ITP using ADS-B				√				
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO						√		
	2. Airspace changes to facilitate CCO						√		
	3. PBN SIDs							√	
CDO	1. Procedure changes to facilitate CDO						√		
	2. Airspace changes to facilitate CDO						√		
	3. PBN STARs							√	
TBO	1. ADS-C over oceanic and remote areas	√							
	2. CPDLC over continental areas						√		
	3. CPDLC over oceanic and remote areas						√		
	Total (68)	**3**	**3**	**4**	**18**	**8**	**13**	**2**	**17**

Table E6: Republica Dominicana ASBU Block 0 Implementation Status Summaries (as of Nov 1, 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information	√							
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information	√							
	3. Interconnection between airport operator & ANSP systems to share surface operations information	√							
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information	√							
	5. Collaborative departure queue management	√							
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima						√		
	2. PBN approach procedures with vertical guidance to LPV minima						√		
	3. PBN approach procedures without vertical guidance to LNAV minima								√
	4. GBAS Landing System (GLS) procedures to CAT I minima						√		
RSEQ	1. AMAN via controlled time of arrival to a reference fix	√							
	2. Departure management	√							
	3. Departure flow management	√							
	4. Point merge	√							
SURF	1. A-SMGCS with at least one cooperative surface surveillance system	√							
	2. ADS-B APT	√							
	3. A-SMGCS alerting with flight identification information	√							
	4. EVS for taxi operations	√							
	5. Airport vehicles equipped with transponders	√							
WAKE	1. New PANS-ATM wake turbulence categories and separation minima	√							
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	√							
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds	√							
	5. 6 wake turbulence categories and separation minima	√							
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS	√							
	2. IAVW	√							
	3. TCAC forecasts	√							
	4. Aerodrome warnings	√							
	5. Wind shear warnings and alerts	√							
	6. SIGMET	√							
	7. Other OPMET information (METAR, SPECI and/or TAF)	√							
	8. QMS for MET	√							
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)						√		
	2. eAIP						√		
	3. Digital NOTAM						√		

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD						√		
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs						√		
	2. AIDC to update previously coordinated flight data						√		
	3. AIDC for control transfer						√		
	4. AIDC to transfer CPDLC logon information to the Next Data Authority				√				
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)	√							
	2. APFD function	√							
	3. TCAP function	√							
ASEP	1. ATSA-AIRB	√							
	2. ATSA-VSA	√							
ASUR	1. ADS-B						√		
	2. Multilateration (MLAT)	√							
FRTO	1. CDM incorporated into airspace planning								√
	2. Flexible Use of Airspace (FUA)						√		
	3. Flexible routing								√
	4: CPDLC used to request and receive re-route clearances						√		
NOPS	1. Sharing prediction of traffic load for next day						√		
	2. Proposing alternative routings to avoid or minimize ATFM delays						√		
OPFL	1. ITP using ADS-B	√							
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO								√
	2. Airspace changes to facilitate CCO								√
	3. PBN SIDs								√
CDO	1. Procedure changes to facilitate CDO								√
	2. Airspace changes to facilitate CDO								√
	3. PBN STARs								√
TBO	1. ADS-C over oceanic and remote areas	√							
	2. CPDLC over continental areas	√							
	3. CPDLC over oceanic and remote areas	√							
	Total (68)	**37**	**0**	**0**	**1**	**0**	**15**	**0**	**15**

Table E7: Saint Lucia ASBU Block 0 Implementation Status Summaries (as of Dec 5, 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information					√			
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information					√			
	3. Interconnection between airport operator & ANSP systems to share surface operations information					√			
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information					√			
	5. Collaborative departure queue management					√			
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima								√
	2. PBN approach procedures with vertical guidance to LPV minima								√
	3. PBN approach procedures without vertical guidance to LNAV minima								√
	4. GBAS Landing System (GLS) procedures to CAT I minima		√						
RSEQ	1. AMAN via controlled time of arrival to a reference fix				√				
	2. Departure management				√				
	3. Departure flow management				√				
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system				√				
	2. ADS-B APT				√				
	3. A-SMGCS alerting with flight identification information				√				
	4. EVS for taxi operations				√				
	5. Airport vehicles equipped with transponders				√				
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds				√				
	5. 6 wake turbulence categories and separation minima				√				
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW				√				
	3. TCAC forecasts								√
	4. Aerodrome warnings							√	
	5. Wind shear warnings and alerts							√	
	6. SIGMET				√				
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET							√	
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)	√							
	2. eAIP								√
	3. Digital NOTAM	√							

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD	√							
	5. WGS-84								√
	6. QMS for AIM						√		
FICE	1. AIDC to provide initial flight data to adjacent ATSUs				√				
	2. AIDC to update previously coordinated flight data				√				
	3. AIDC for control transfer				√				
	4. AIDC to transfer CPDLC logon information to the Next Data Authority				√				
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)	√							
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB				√				
	2. ATSA-VSA				√				
ASUR	1. ADS-B					√			
	2. Multilateration (MLAT)				√				
FRTO	1. CDM incorporated into airspace planning				√				
	2. Flexible Use of Airspace (FUA)				√				
	3. Flexible routing				√				
	4: CPDLC used to request and receive re-route clearances				√				
NOPS	1. Sharing prediction of traffic load for next day						√		
	2. Proposing alternative routings to avoid or minimize ATFM delays						√		
OPFL	1. ITP using ADS-B				√				
SNET	1. Short Term Conflict Alert implementation (STCA)	√							
	2. Area Proximity Warning (APW)	√							
	3. Minimum Safe Altitude Warning (MSAW)	√							
	4. Medium Term Conflict Alert (MTCA)	√							
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO				√				
	2. Airspace changes to facilitate CCO				√				
	3. PBN SIDs						√		
CDO	1. Procedure changes to facilitate CDO				√				
	2. Airspace changes to facilitate CDO				√				
	3. PBN STARs								√
TBO	1. ADS-C over oceanic and remote areas				√				
	2. CPDLC over continental areas				√				
	3. CPDLC over oceanic and remote areas				√				
	Total (68)	**8**	**1**	**0**	**37**	**6**	**4**	**3**	**9**

Table E8: Trinidad and Tobago ASBU Block 0 Implementation Status Summaries (as of November 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information							√	
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information							√	
	3. Interconnection between airport operator & ANSP systems to share surface operations information							√	
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information							√	
	5. Collaborative departure queue management				√				
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima						√		
	2. PBN approach procedures with vertical guidance to LPV minima						√		
	3. PBN approach procedures without vertical guidance to LNAV minima								√
	4. GBAS Landing System (GLS) procedures to CAT I minima				√				
RSEQ	1. AMAN via controlled time of arrival to a reference fix				√				
	2. Departure management				√				
	3. Departure flow management				√				
	4. Point merge				√				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system				√				
	2. ADS-B APT				√				
	3. A-SMGCS alerting with flight identification information				√				
	4. EVS for taxi operations				√				
	5. Airport vehicles equipped with transponders				√				
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				√				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart				√				
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds				√				
	5. 6 wake turbulence categories and separation minima				√				
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings						√		
	5. Wind shear warnings and alerts						√		
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								√
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)						√		
	2. eAIP								√
	3. Digital NOTAM						√		

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD								√
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs						√		
	2. AIDC to update previously coordinated flight data						√		
	3. AIDC for control transfer						√		
	4. AIDC to transfer CPDLC logon information to the Next Data Authority						√		
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)							√	
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB	√							
	2. ATSA-VSA	√							
ASUR	1. ADS-B					√			
	2. Multilateration (MLAT)					√			
FRTO	1. CDM incorporated into airspace planning							√	
	2. Flexible Use of Airspace (FUA)					√			
	3. Flexible routing							√	
	4: CPDLC used to request and receive re-route clearances								√
NOPS	1. Sharing prediction of traffic load for next day							√	
	2. Proposing alternative routings to avoid or minimize ATFM delays							√	
OPFL	1. ITP using ADS-B	√							
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO						√		
	2. Airspace changes to facilitate CCO						√		
	3. PBN SIDs						√		
CDO	1. Procedure changes to facilitate CDO						√		
	2. Airspace changes to facilitate CDO						√		
	3. PBN STARs						√		
TBO	1. ADS-C over oceanic and remote areas								√
	2. CPDLC over continental areas								√
	3. CPDLC over oceanic and remote areas								√
	Total (68)	**3**	**0**	**0**	**18**	**3**	**16**	**9**	**19**

Table E9: United States of America ASBU Block 0 Implementation Status Summaries (as of August 2016)

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
Performance Improvement Area 1: Airport Operations									
ACDM	1. Interconnection between aircraft operator & ANSP systems to share surface operations information								30
	2. Interconnection between aircraft operator & airport operator systems to share surface operations information							30	
	3. Interconnection between airport operator & ANSP systems to share surface operations information								30
	4. Interconnection between airport operator, aircraft operator & ANSP systems to share surface operations information								30
	5. Collaborative departure queue management								30
APTA	1. PBN approach procedures with vertical guidance to LNAV/VNAV minima								30
	2. PBN approach procedures with vertical guidance to LPV minima								30
	3. PBN approach procedures without vertical guidance to LNAV minima								30
	4. GBAS Landing System (GLS) procedures to CAT I minima								30
RSEQ	1. AMAN via controlled time of arrival to a reference fix								30
	2. Departure management							30	
	3. Departure flow management						30		
	4. Point merge				30				
SURF	1. A-SMGCS with at least one cooperative surface surveillance system								30
	2. ADS-B APT								30
	3. A-SMGCS alerting with flight identification information								30
	4. EVS for taxi operations				30				
	5. Airport vehicles equipped with transponders								30
WAKE	1. New PANS-ATM wake turbulence categories and separation minima				30				
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart								30
	3. Wake independent departure and arrival operations (WIDAO) for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart							30	
	4. Wake turbulence mitigation for departures (WTMD) procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart based on observed crosswinds								30
	5. 6 wake turbulence categories and separation minima								30
Performance Improvement Area 2: Globally Interoperable Systems and Data									
AMET	1. WAFS								√
	2. IAVW								√
	3. TCAC forecasts								√
	4. Aerodrome warnings								30
	5. Wind shear warnings and alerts								30
	6. SIGMET								√
	7. Other OPMET information (METAR, SPECI and/or TAF)								30
	8. QMS for MET								√
DATM	1. Standardized Aeronautical Information Exchange Model (AIXM)								√
	2. eAIP								√
	3. Digital NOTAM								√

Module	Elements	Need Analysis				Implementation Status (if Element is needed)			
		Not Started	In Progress	Need	N/A	Planning	Developing	Partially Implemented	Implemented
	4. eTOD								30
	5. WGS-84								√
	6. QMS for AIM								√
FICE	1. AIDC to provide initial flight data to adjacent ATSUs								√
	2. AIDC to update previously coordinated flight data								√
	3. AIDC for control transfer								√
	4. AIDC to transfer CPDLC logon information to the Next Data Authority					√			
Performance Improvement Area 3: Optimum Capacity and Flexible Flights									
ACAS	1. ACAS II (TCAS version 7.1)				√				
	2. APFD function				√				
	3. TCAP function				√				
ASEP	1. ATSA-AIRB								√
	2. ATSA-VSA								√
ASUR	1. ADS-B								√
	2. Multilateration (MLAT)								√
FRTO	1. CDM incorporated into airspace planning								√
	2. Flexible Use of Airspace (FUA)								√
	3. Flexible routing								√
	4: CPDLC used to request and receive re-route clearances								√
NOPS	1. Sharing prediction of traffic load for next day								√
	2. Proposing alternative routings to avoid or minimize ATFM delays								√
OPFL	1. ITP using ADS-B								√
SNET	1. Short Term Conflict Alert implementation (STCA)								√
	2. Area Proximity Warning (APW)								√
	3. Minimum Safe Altitude Warning (MSAW)								√
	4. Medium Term Conflict Alert (MTCA)								√
Performance Improvement Area 4: Efficient Flight Paths									
CCO	1. Procedure changes to facilitate CCO								30
	2. Airspace changes to facilitate CCO								30
	3. PBN SIDs								30
CDO	1. Procedure changes to facilitate CDO								30
	2. Airspace changes to facilitate CDO								30
	3. PBN STARs								30
TBO	1. ADS-C over oceanic and remote areas								√
	2. CPDLC over continental areas					√			
	3. CPDLC over oceanic and remote areas								√