



**Quinta Reunión Conjunta GREPECAS–RASG-PA (GREPECAS-RASG-PA/5) y
Vigésima tercera Reunión del Grupo Regional de Planificación y Ejecución del Caribe y
Sudamérica (GREPECAS/23)**

Fase Virtual (Asincrónica, 19 de enero al 17 de febrero de 2026)

Fase Presencial (Ciudad de México, México del 4 al 6 de marzo de 2026)

**Cuestión 6 del
Orden del día: Avances en la planificación de la navegación aérea regional y nacional**

**VOLUMEN III RANP CAR/SAM - MEJORA DE LA PLANIFICACION Y
MONITOREO DE LA IMPLANTACION**

(Presentada por Secretaría)

RESUMEN EJECUTIVO

La nota analiza y observa que los Estados CAR/SAM aún enfrentan dificultades para desarrollar y reportar KPIs del GANP y se evidencia una falta de armonización para monitorear el avance de la implantación de conductores del ASBU. La nota compara la situación regional CAR SAM con las mejores prácticas de la Región MID, cuyo documento "Estrategia de Navegación Aérea" ofrece una estructura clara de prioridades ASBU, métricas de desempeño y gobernanza. Esta estrategia es propuesta como modelo a adoptar en CAR/SAM.

Como resultado del análisis, se presenta un Proyecto de Conclusión para que la Secretaría elabore la "Estrategia de Navegación Aérea de la Región CAR/SAM", en coordinación con Estados, organizaciones e industria, con el objetivo de armonizar prioridades, fortalecer el seguimiento de KPIs y mejorar la gobernanza regional para una implantación alineada al GANP.

Acción:	Las acciones sugeridas se encuentran incluidas en la Sección 4.
<i>Metas Estratégicas:</i>	<ul style="list-style-type: none">• Todos los vuelos son seguros y protegidos• La Aviación es sostenible en términos medioambientales• La Aviación brinda movilidad fluida, accesible y confiable para todo el mundo• Ningún país se queda atrás• Marco jurídico integral• Desarrollo económico
<i>Referencias:</i>	<ul style="list-style-type: none">• Sitio web del portal GANP: www4.icao.int/ganportal• MID Doc. 002 - "Estrategia para la navegación aérea de la Region MID".• Informes de Reuniones GREPECAS 20, 21, 22.• Nota de Información NI/6.1- Mejoras para la Plantilla del Volumen III del RANP.• Nota de Estudio NE/6.1 – Desarrollo de la gestión de KPIs.

1. Introducción

1.1 Las Conclusiones GREPECAS/21/04 y GREPECAS/22/2 (**Ver Apéndice A**) exhortan a los Estados CAR /SAM al aporte de datos de sus indicadores de performance KPI, a nivel de línea base, para poblar las correspondientes Tablas del Volumen III, como parte del desarrollo de la metodología de planificación basada en performance y el despliegue y alineamiento de la Planificación Regional con el Plan Global de navegación aérea (GANP). A la fecha, solamente ocho estados han promulgado y entregado esta información, para ser incluida en el Volumen III.

1.2 La Secretaría ha mantenido la asistencia a los Estados para la gestión de indicadores de performance. En cumplimiento de la Decisión GREPECAS/22/19 (**Ver Apéndice A**), para fortalecer el trabajo con KPIs, se creó el Grupo GADHOC en 2025, bajo la coordinación de las Oficinas Regionales de la NACC y SAM de la OACI, y en colaboración con la Agencia Europea de Seguridad Aérea (EASA). El progreso de estas actividades se presenta en la Nota de Estudio NE/6.1.

2. Análisis

2.1 Se reseña que la implantación de mejoras para la navegación aérea en las Regiones CAR y SAM no se ha detenido desde finales de la década 2010's, dado que evoluciona desde la formulación y uso de los documentos de transición para la planificación basada en performance, el CAR RPBANIP y el SAM PBIP, hasta la actual gestión del Plan Regional de navegación aérea de tres volúmenes – RANP CAR/SAM.

2.2 Luego de aprobarse el texto del Volumen III del RANP CAR/SAM durante la Reunión GREPECAS/20 en base a la Plantilla aprobada por el Consejo en junio 2014, se ha mantenido la asistencia de las Oficinas NACC y SAM y el trabajo de los Estados, Organizaciones e Industria para la implantación del marco ASBU, adoptando conductores operacionales (APTA, FRTO, etc.) , así como los conductores de información y de tecnología CNS que representan la plataforma que requieren los mencionados conductores operacionales.

2.3 El Volumen III aborda la planificación e implantación de ambiciones de mejora de navegación aérea, esencialmente en áreas clave de Eficiencia, Capacidad, Predictibilidad y Seguridad Operacional, a través de soluciones adoptadas del marco ASBU (y eventualmente soluciones o iniciativas NO-ASBU). Los progresos de esta implantación de módulos y elementos de conductores ASBU, desplegados en materias ATM, CNS, AIM, MET, AGA y SAR, se expone en la Cuestión 8 de la Agenda de la presente GREPECAS/23.

2.4 De acuerdo con la Nota de Información NI/6.1- Mejoras para la Plantilla del Volumen III del RANP, el trabajo realizado durante el *Mobility Assignment*, entre marzo y junio de 2025, permitió un extenso benchmarking de la gestión de los planes regionales a nivel global, identificándose, en las Regiones CAR y SAM, diferencias y oportunidades de mejora para la armonización y el monitoreo del estado de la implantación de los módulos y elementos ASBU.

2.5 En base al análisis de documentos ANP de varias regiones, se observaron las prácticas en la Region MID de OACI que complementa el desarrollo de su Plan Regional, en especial del Volumen III, con el documento MID Doc 002 - “Estrategia para la navegación aérea de la Region MID”. Ver documento en **Apéndice B**, así como en el enlace:

<https://www2023.icao.int/MID/MIDANPIRG/Documents/eDocuments/MID%20Air%20Navigation%20Strategy-June%202025.pdf>

2.6 El documento adoptado por el MIDANPIRG tiene cuatro objetivos principales:

- I. **Establecer** prioridades regionales de navegación aérea. - El documento identifica los objetivos regionales de navegación aérea, alineados con el GANP y el marco ASBU, para guiar la evolución del sistema ATM en la Región MID.

- II. **Definir y priorizar** los Elementos ASBU (Bloques 0 y 1). - Incluye una matriz completa de Conductores y Elementos ASBU priorizados, indicando cuáles son esenciales (Prioridad 1) y cuáles son *recomendados* (Prioridad 2), creando una hoja de ruta clara para su implementación.
- III. **Establecer** un marco de seguimiento del desempeño y del estado de implementación. - El documento crea un sistema de monitoreo basado en:
 - a) Indicadores de Performance
 - b) Métricas asociadas
 - c) Líneas base
 - d) Metas y plazos
 - e) Áreas de aplicación (Estados, aeropuertos, ACCs)
 Esto permite medir el avance de los Estados y del MIDANPIRG en la implementación de los ASBU prioritarios.
- IV. **Proporcionar** la estructura de gobernanza regional. - Define cómo la MIDANPIRG y sus grupos subsidiarios deben:
 - a) Monitorear el desempeño
 - b) Informar avances
 - c) Revisar y actualizar la Estrategia
 - d) Presentar reportes a la ANC y a los Estados del MID

2.7 En suma, el documento está facilitando la planificación de navegación aérea para la Región MID con los siguientes beneficios:

- a) Alinea la planificación regional y nacional con el GANP. - Sirve como guía regional para que los Estados desarrollen sus Planes nacionales de navegación aérea (NANP) y adopten los ASBU prioritarios de manera coherente y armonizada.
- b) Facilita la armonización y la interoperabilidad regional. - Define prioridades comunes que permiten una implementación de capacidades ATM/ANS en la Región MID, reduciendo fragmentación entre Estados.
- c) Proporciona un marco de monitoreo transparente y comparable. - Gracias a sus indicadores y métricas, permite evaluar:
 - i. el estado de implementación por Estado, aeropuerto o ACC,
 - ii. el progreso respecto a metas regionales,
 - iii. el impacto de cada elemento ASBU en KPIs de seguridad, eficiencia, capacidad, acceso, etc.
- d) Orienta la toma de decisiones y las inversiones en infraestructura, y define claramente roles y responsabilidades de todos los actores (Estados, ANSP, Industria y grupos de MIDANPIRG) en la planificación, implementación, monitoreo, reporte, actualización de la estrategia.

2.8 Por todo lo antes expuesto, el documento “Estrategia para la navegación aérea de la Region MID” puede ser identificado como una referencia para estudiar y, de ser el caso, aplicar en GREPECAS para abordar los retos de la Region CAR/SAM respecto al establecimiento de prioridades, armonización regional, y monitoreo de la implementación de conductores ASBU en las Regiones CAR y SAM.

2.9 Consecuentemente, se presenta la siguiente propuesta de Conclusión:

Proyecto de Conclusión GREPECAS/23/XX		Documento “Estrategia para la navegación aérea de la Región CAR/SAM”	
Qué: La Secretaría, en consulta con Estados, organizaciones y la industria, tomando como base el contenido y los objetivos del MID Doc 002, así como otras referencias similares en Regiones de la OACI, estudie y formule el documento “Estrategia para la navegación aérea de la Región CAR/SAM”.		Impacto esperado: <input checked="" type="checkbox"/> Político / Global <input checked="" type="checkbox"/> Interregional <input type="checkbox"/> Económico <input type="checkbox"/> Ambiental <input checked="" type="checkbox"/> Técnico / Operacional	
Por qué: Para establecer prioridades regionales de navegación aérea. Definir y priorizar los Elementos ASBU. Reforzar el marco de seguimiento del desempeño (KPIs) y establecer un marco armonizado de seguimiento del estado de implementación ASBU. Proporcionar la estructura de gobernanza regional.			
Cuando: De inmediato. Reportar avances al GREPECAS/24		Estado: <input checked="" type="checkbox"/> Válida / <input type="checkbox"/> Invalidada / <input type="checkbox"/> Finalizada	
Quién: <input checked="" type="checkbox"/> Estados <input checked="" type="checkbox"/> OACI <input checked="" type="checkbox"/> Otros: Organizaciones y Industria			

4. Acción Recomendada

4.1 Se invita a la reunión a:

- a) Tomar nota del contenido de la presente Nota y de la descripción del MID Doc 002 - Estrategia para la navegación aérea;
- b) aprobar el proyecto de Conclusión presentado, y respaldar el trabajo de la Secretaría; e
- c) Identificar otras acciones que se consideren pertinentes.

APÉNDICE A

CONCLUSIONES DE GREPECAS

CONCLUSIÓN GREPECAS/21/04	ACCIONES PARA EL AVANCE DEL VOLUMEN III DEL PLAN REGIONAL CAR/SAM DE NAVEGACIÓN AÉREA	
<p>Qué:</p> <p>Que:</p> <p>a) los Estados/Territorios prioricen recursos para la actividad permanente de equipos de trabajo en cada Estado, responsables de la gestión del Volumen III del CAR/SAM RANP y los respectivos KPI;</p> <p>b) los Estados y la industria garanticen la participación y procesos CDM que integren a todas las partes interesadas en la planificación del Vol. III e implantación de mejoras de la navegación aérea;</p> <p>c) la autoridad estatal de planificación de navegación aérea y los proveedores/fuentes de datos se coordinen para la recopilación de datos y gestión de KPI a ser insertados en las Tablas de planificación del Vol. III;</p> <p>d) las Oficinas Regionales NACC y SAM de la OACI acentúen la asistencia a los Estados con respecto al Vol. III, incluyendo la difusión sobre la relevancia del ANP CAR/SAM para garantizar implantaciones rentables e interoperables, así como la contribución de dicha planificación para los objetivos de desarrollo socioeconómico en cada Estado; y</p> <p>e) la OACI facilite que los Estados CAR/SAM evalúen la incidencia de la Planificación de navegación aérea regional CAR/SAM en la estructura de espacio aéreo, así como los nuevos conceptos que se están implementando en la Región NAM.</p>		<p>Impacto esperado:</p> <p><input type="checkbox"/> Político / Global</p> <p><input checked="" type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Económico</p> <p><input checked="" type="checkbox"/> Ambiental</p> <p><input checked="" type="checkbox"/> Técnico/Operacional</p>
<p>Por qué:</p> <p>Para avanzar en el desarrollo del Volumen III del Plan regional CAR/SAM de navegación aérea con la participación de todos los Estados y partes interesadas, y avanzar hacia la definitiva aplicación del método de seis pasos de la planificación basada en performance estipulada en el GANP, y asegurar implementaciones rentables e interoperables, así como la contribución de dicha planificación en los objetivos de desarrollo socio-económico en cada Estado</p>		
<p>Cuándo: De inmediato</p>	<p>Estado: <input checked="" type="checkbox"/> Válida / <input type="checkbox"/> Invalidada / <input type="checkbox"/> Finalizada</p>	
<p>Quién:</p> <p>a) Estados/Territorios, b) Estados y la industria, c) Autoridad de los Estados de planificación de navegación aérea y proveedores de datos. d) Oficinas Regionales NACC y SAM de la OACI e) la OACI</p>		

CONCLUSIÓN GREPECAS/22/2		AVANCE DEL DESARROLLO DEL VOLUMEN III DEL RANP CAR/SAM	
Qué: Que los Estados CAR/SAM, en conjunto con ANSP y aeropuertos, con la participación de aerolíneas y Organizaciones internacionales, pueblen las Tablas del Volumen III del RANP CAR/SAM con los datos de indicadores de performance - KPI, priorizando y armonizando la gestión de dichos indicadores de acuerdo con el avance de los Grupos de trabajo para la implantación regional de la navegación aérea a más tardar en GREPECAS/23		Impacto esperado: <input type="checkbox"/> Político / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Económico <input type="checkbox"/> Ambiental <input checked="" type="checkbox"/> Técnico/Operacional	
Por qué: Para asegurar un proceso costo-eficiente en la gestión de los KPI, así como fortalecer la planificación regional enfocada a la navegación aérea segura, eficiente y con capacidad adecuada, con el fin de promover el crecimiento de la Industria, con base en la metodología de planificación basada en la performance por parte de los Estados.			
Cuándo: Presentar versión revisada del RANP VOL III, en GREPECAS 23	Estado: <input checked="" type="checkbox"/> Válida / <input type="checkbox"/> Invalidada / <input type="checkbox"/> Finalizada		
Quién: <input checked="" type="checkbox"/> Estados <input checked="" type="checkbox"/> OACI <input checked="" type="checkbox"/> Otros:	Proveedores ANSP, aeropuertos, aerolíneas, Organizaciones Internacionales, grupos de trabajo.		

DECISIÓN GREPECAS/22/19		CREACIÓN DEL GRUPO AD-HOC PARA DESARROLLO DE INDICADORES CLAVE DE PERFORMANCE KPI DEL GANP (KPI AD-HOC GROUP - KAHG)	
Que: En el marco del Programa de GREPECAS Fortalecimiento del Plan Regional (RANP) y Planes Nacionales (NANP) de la CAR/SAM, Proyecto A1 indicar Código del proyecto, y para trabajar en conjunto con los grupos de implantación regional, la industria y partes interesadas, se activa un Grupo Ad-hoc para desarrollo de indicadores clave de performance (KPI) del GANP (KPI Ad-hoc Group - KAHG), cuya membresía es Bahamas, Brasil, Chile, Colombia, Cuba, Ecuador, Estados Unidos, Panamá, Perú, República Dominicana, Trinidad y Tabago, IATA e IFATCA, con el propósito de fortalecer la implementación del Volumen III del RANP CAR SAM, cuyos resultados se presenten a GREPECAS/23 con las siguientes tareas:		Impacto Esperado: <input type="checkbox"/> Político / Global <input checked="" type="checkbox"/> Interregional <input type="checkbox"/> Económico <input type="checkbox"/> Medio ambiente <input checked="" type="checkbox"/> Operacional/Técnico	
<ol style="list-style-type: none"> 1. preparar pautas regionales CAR/SAM y material de instrucción estandarizado sobre la metodología de indicadores de performance, colecta, y gestión de datos y cálculos; 2. formular un Plan de acción para implementación progresiva de KPI, que identifique prioridades y recursos requeridos, armonizado con el avance de los grupos de implantación; 3. implementar un Plan de comunicaciones y medios adecuados de difusión (cuadros de mando-<i>dashboards</i>, etc.) de los KPI; y 4. formular una iniciativa regional y/o interregional para actividades de evaluación comparativa de KPI. 			
Porque: Para impulsar la planificación basada en performance alineada con el GANP, fortalecer el Volumen III del RANP CAR/SAM, y acentuar el trabajo colaborativo con los grupos de implantación, la industria y partes interesadas, mejorar las capacidades de los Estados sobre la gestión de indicadores KPI, de manera que se preparen para aplicación de nuevos indicadores del GANP 8va edición y la Plantilla del NANP, a partir de 2026.			
Cuándo: Resultados serán presentado en GREPECAS 23	Estado: <input checked="" type="checkbox"/> Valida / <input type="checkbox"/> Invalida / <input type="checkbox"/> Finalizada		
Quien: <input checked="" type="checkbox"/> Estados <input checked="" type="checkbox"/> ICAO <input checked="" type="checkbox"/> Otros:	Organizaciones Internacionales, usuarios, partes interesadas.		



MID Doc 002

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**MIDDLE EAST AIR NAVIGATION PLANNING
AND IMPLEMENTATION REGIONAL GROUP
(MIDANPIRG)**

MID REGION

AIR NAVIGATION STRATEGY

EDITION MARCH 2024, REVISION FEBRUARY 2025

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AIR NAVIGATION PRIORITIES AND MONITORING OF THE STATUS OF IMPLEMENTATION

1. Introduction

1.1 As traffic volume increases throughout the world, the demands on air navigation service providers in a given airspace increase, and air traffic management becomes more complex.

1.2 It is foreseen that the implementation of the components of the ATM operational concept will provide sufficient capacity to meet the growing demand, generating additional benefits in terms of more efficient flights and higher levels of safety. Nevertheless, the potential of new technologies to significantly reduce the cost of services will require the establishment of clear operational requirements.

1.3 Taking into account the benefits of the ATM operational concept, it is necessary to make many timely decisions for its implementation. An unprecedented cooperation and harmonization will be required at both global and regional level.

1.4 ICAO introduced the Aviation System Block Upgrades (ASBU) framework as a systemic manner to achieve a harmonized implementation of the air navigation services. An ASBU designates a set of improvements that can be implemented globally from a defined point in time to enhance the performance of the ATM system.

1.5 In accordance, with the Resolutions of the 40th Session of the ICAO Assembly, particularly Resolution A40-1 "ICAO global planning for safety and air navigation", the ICAO Assembly urged States and PIRGs to utilize the guidance provided in the GANP for planning and implementation activities which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs. In response to this, the MID Region developed the MID Region Air Navigation Strategy – Part 1, which is aligned with the GANP and ASBU Framework.

1.6 Stakeholders including service providers, regulators, airspace users and manufacturers are facing increased levels of interaction as new, modernized ATM operations are implemented. The highly integrated nature of capabilities covered by the block upgrades requires a significant level of coordination and cooperation among all stakeholders. Working together is essential for achieving global harmonization and interoperability.

2. Strategic Air Navigation Capacity and Efficiency Objective

2.1 The Strategic Objective related to Air Navigation Capacity and Efficiency is to realize sound and economically-viable civil aviation system in the MID Region that continuously increases in capacity and improves in efficiency with enhanced safety while minimizing the adverse environmental effects of civil aviation activities.

3. MID Air Navigation Objectives

3.1 The MID Region air navigation objectives are set in line with the global air navigation objectives and address specific air navigation operational improvements identified within the framework of the Middle East Regional Planning and Implementation Group (MIDANPIRG).

3.2 Blocks '0' and '1' feature Elements are characterized by operational improvements, which have already been developed and implemented in many parts of the world. The MID Region priority 1 Block 0 & 1 Elements are reflected in **Table 1** below.

3.3 The MID Region Air Navigation Strategy aims to maintain regional harmonisation. The States should develop their National Air Navigation Plan (NANP), including action plans for the implementation of relevant priority 1 ASBU Elements and other ASBU elements or non ASBU solutions based on the States' operational requirements and cost benefits analysis.

3.4 The implementation of the ASBU Block 0 Elements in the MID Region started before 2013 and is continuing. For the short and medium term, the MID Region priorities include identified ASBU Elements from Block 0 and Block 1.

4. MID Region ASBU Threads/Elements Prioritization and Monitoring

4.1 On the basis of operational requirements and taking into consideration the associated benefits, **Table 1** below shows the priority associated for each ASBU element from Block 0 and Block 1, as well as the MIDANPIRG subsidiary bodies that will be monitoring and supporting the implementation of these Threads/Elements:

Priority 1 ASBU Element: Elements that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These Elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.

Priority 2 ASBU Element: Elements recommended for implementation based on identified operational needs and benefits by States.

Priority 1 Thread: Any Thread with at least one priority 1 element

Table 1. MID REGION ASBU THREADS & ELEMENTS (BLOCK 0 & 1) PRIORITIZATION AND MONITORING

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
Information Threads							
DAIM							
DAIM	B1/1	Provision of quality-assured aeronautical data and information	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	2				
	B1/3	Provision of digital terrain data sets	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/4	Provision of digital obstacle data sets	1	2021	AIM SG and AIMDP TF	RANP/ NANP TF	
	B1/5	Provision of digital aerodrome mapping data sets	2				
	B1/6	Provision of digital instrument flight procedure data sets	2				
	B1/7	NOTAM improvements	2				
AMET							
AMET	B0/1	Meteorological observations products	1	2014	MET SG	RANP/ NANP TF	
	B0/2	Meteorological forecast and warning products	1	2014	MET SG	RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/3	Climatological and historical meteorological products	1	2014	MET SG	RANP/ NANP TF	
	B0/4	Dissemination of meteorological products	1	2014	MET SG	CNS SG RANP/ NANP TF	
	B1/1	Meteorological observations information	2				
	B1/2	Meteorological forecast and warning information	2				
	B1/3	Climatological and historical meteorological information	2				
	B1/4	Dissemination of meteorological information	2				
FICE							
FICE	B0/1	Automated basic inter facility data exchange (AIDC)	1	2014	CNS SG ATM SG	RANP/ NANP TF	
<i>Operational Threads</i>							
APTA							
APTA	B0/1	PBN Approaches (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG CNS SG RANP/ NANP TF	
	B0/2	PBN SID and STAR procedures (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG RANP/ NANP TF	
	B0/3	SBAS/GBAS CAT I precision approach procedures	2				
	B0/4	CDO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/5	CCO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/6	PBN Helicopter Point in Space (PinS) Operations	2				
	B0/7	Performance based aerodrome operating minima – Advanced aircraft	1	2021	PBN SG	AIM SG CNS SG ASPIG RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/8	Performance based aerodrome operating minima – Basic aircraft	2				
	B1/1	PBN Approaches (with advanced capabilities)	2				
	B1/2	PBN SID and STAR procedures (with advanced capabilities)	2				
	B1/4	CDO (Advanced)	2				
	B1/5	CCO (Advanced)	2				
FRTO							
FRTO	B0/1	Direct routing (DCT)	2				
	B0/2	Airspace planning and Flexible Use of Airspace (FUA)	1	2014	ATM SG and ASM WG	RANP/ NANP TF	
	B0/3	Pre-validated and coordinated ATS routes to support flight and flow	2				
	B0/4	Basic conflict detection and conformance monitoring	1	2014	ATM SG	CNS SG RANP/ NANP TF	
	B1/1	Free Route Airspace (FRA)	2				
	B1/2	Required Navigation Performance (RNP) routes	2				
	B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	2				
	B1/4	Dynamic sectorization	2				
	B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	2				
	B1/6	Multi-Sector Planning	2				
	B1/7	Trajectory Options Set (TOS)	2				
NOPS							
NOPS	B0/1	Initial integration of collaborative airspace management with air traffic flow management	1	2015	ATM SG ATFM TF	RANP/ NANP TF	
	B0/2	Collaborative Network Flight Updates	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/3	Network Operation Planning basic features	2				
	B0/4	Initial Airport/ATFM slots and A-CDM Network Interface	2				
	B0/5	Dynamic ATFM slot allocation	2				
	B1/1	Short Term ATFM measures	2				
	B1/2	Enhanced Network Operations Planning	2				
	B1/3	Enhanced integration of Airport operations planning with network operations planning	2				
	B1/4	Dynamic Traffic Complexity Management	2				
	B1/5	Full integration of airspace management with air traffic flow management	2				
	B1/6	Initial Dynamic Airspace configurations	2				
	B1/7	Enhanced ATFM slot swapping	2				
	B1/8	Extended Arrival Management supported by the ATM Network function	2				
	B1/9	Target Times for ATFM purposes	2				
	B1/10	Collaborative Trajectory Options Program (CTOP)	2				
ACAS							
ACAS	B1/1	ACAS Improvements	1	2014	ATM SG CNS SG	RANP/ NANP TF	
SNET							
SNET	B0/1	Short Term Conflict Alert (STCA)	1	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/2	Minimum Safe Altitude Warning (MSAW)	1	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/3	Area Proximity Warning (APW)	1	2020	ATM SG	CNS SG RANP/ NANP TF	
	B0/4	Approach Path Monitoring (APM)	2				
	B1/1	Enhanced STCA with aircraft parameters	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B1/2	Enhanced STCA in complex TMA	2				
GADS							
GADS	B1/1	Aircraft Tracking	2				
	B1/2	Operational Control Directory	1	2021	ATM SG	RANP/ NANP TF	
RSEQ							
RSEQ	B0/1	Arrival Management	1	2021	ATM SG ATFM TF	CNS SG ASPIG RANP/ NANP TF	
	B0/2	Departure Management	2				
	B0/3	Point merge	2				
	B1/1	Extended arrival metering	2				
SURF							
SURF	B0/1	Basic ATCO tools to manage traffic during ground operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/2	Comprehensive situational awareness of surface operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/3	Initial ATCO alerting service for surface operations	1	2021	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B1/1	Advanced features using visual aids to support traffic management during ground operations	2				
	B1/2	Comprehensive pilot situational awareness on the airport surface	2				
	B1/3	Enhanced ATCO alerting service for surface operations	2				
	B1/4	Routing service to support ATCO surface operations management	2				
	B1/5	Enhanced vision systems for taxi operations	2				
ACDM							
ACDM	B0/1	Airport CDM Information Sharing (ACIS)	1	2014	ASPIG	CNS SG, AIM SG, ATM SG, RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/2	Integration with ATM Network function	1	2014	ASPIG	CNS SG, AIM SG, ATM SG, RANP/ NANP TF	
CSEP	B1/1	Basic airborne situational awareness during flight operations (AIRB)	2				
	B1/2	Visual Separation on Approach (VSA)	2				
	B1/3	Performance Based Longitudinal Separation Minima	2				
	B1/4	Performance Based Lateral Separation Minima	2				
DATS	B1/1	Remotely Operated Aerodrome Air Traffic Services	2				
OPFL	B0/1	In Trail Procedure (ITP)	2				
	B1/1	Climb and Descend Procedure (CDP)	2				
TBO	B0/1	Introduction of time-based management within a flow centric approach	2				
	B1/1	Initial Integration of time-based decision making processes	2				
Technology Threads							
ASUR							
ASUR	B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B0/2	Multilateration cooperative surveillance systems (MLAT)	1	2021	CNS SG	ATM SG, ASPIG, RANP/NA NP TF	
	B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B1/1	Reception of aircraft ADS-B signals from space (SB ADS-B)	2				
NAVS							
NAVS	B0/1	Ground Based Augmentation Systems (GBAS)	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B0/2	Satellite Based Augmentation Systems (SBAS)	2				
	B0/3	Aircraft Based Augmentation Systems (ABAS)	1	2021	CNS SG	PBN SG, ATM SG, AIM SG, RANP/ NANP TF	
	B0/4	Navigation Minimal Operating Networks (Nav. MON)	1	2021	CNS SG	PBN SG, RANP/ NANP TF	
	B1/1	Extended GBAS	2				
COMI							
COMI	B0/1	Aircraft Communication Addressing and Reporting System (ACARS)	2				
	B0/2	Aeronautical Telecommunication Network/Open System Interconnection (ATN/OSI)	2				
	B0/3	VHF Data Link (VDL) Mode 0/A	2				
	B0/4	VHF Data Link (VDL) Mode 2 Basic	2				
	B0/5	Satellite communications (SATCOM) Class C Data	2				
	B0/6	High Frequency Data Link (HFDL)	2				
	B0/7	AMHS	1	2014	CNS SG	RANP/ NANP TF	
	B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	1	2021	CNS SG	RANP/ NANP TF	
	B1/2	VHF Data Link (VDL) Mode 2 Multi-Frequency	2				
	B1/3	SATCOM Class B Voice and Data	2				
B1/4	Aeronautical Mobile Airport Communication System (AeroMACS) Ground-Ground	2					
COMS							

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
COMS	B0/1	CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace	2				
	B0/2	ADS-C (FANS 1/A) for procedural airspace	2				
	B1/1	PBCS approved CPDLC (FANS 1/A+) for domestic and procedural airspace	2				
	B1/2	PBCS approved ADS-C (FANS 1/A+) for procedural airspace	2				
	B1/3	SATVOICE (incl. routine communications) for procedural airspace	2				

5. Implementation and Monitoring of the priority 1 ASBU Elements

5.1 The monitoring of air navigation performance and its enhancement is achieved, inter-alia, through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets. The monitoring of the priority 1 ASBU Threads/Elements is carried out through the MID eANP Volume III.

5.2 MIDANPIRG through its activities under the various subsidiary bodies will continue to update and monitor the implementation of the ASBU Threads and elements to achieve the air navigation targets.

5.3 The priority 1 Threads/Elements along with the associated elements, applicability, performance Indicators, supporting Metrics, and performance Targets are shown in the **Table 2** below.

Note: Further details on the ASBU elements objectives, description, implementation requirements and performance impact assessment can be found on the ICAO GANP Portal <https://www4.icao.int/ganpportal/ASBU>

6. Governance

6.1 Progress report on the status of implementation of the different priority 1 Threads/Elements should be developed by MIDANPIRG Subsidiary bodies. A consolidated MID Air Navigation Report showing the status of implementation of the different priority 1 ASBU Elements by Thread will be developed by the RANP/NANP TF on annual basis and presented to MIDANPIRG for endorsement.

6.2 The MIDANPIRG will be the governing body responsible for the review and update of the MID Region Air Navigation Strategy.

6.3 The MID Region Air Navigation Strategy will guide the work of MIDANPIRG and its subsidiary bodies and all its member States and partners.

6.4 Progress on the implementation of the MID Region Air Navigation Strategy and the achievement of the agreed air navigation targets will be reported to the ICAO Air Navigation Commission (ANC), through the review of the MIDANPIRG Reports, MID Air Navigation Reports, etc.; and to the stakeholders in the Region within the framework of MIDANPIRG.

**Table 2. MONITORING THE IMPLEMENTATION OF THE PRIORITY 1 ASBU
THREADS/ELEMENTS (Block 0 & 1) IN THE MID REGION**

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
<i>Information Threads</i>							
DAIM							
DAIM B1/1	Provision of quality-assured aeronautical data and information	All States	Indicator*: Regional average implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information). Supporting Metrics: 1. Number of States that have migrated to AIM automated data-centric environment based on (AIXM V5.1+) 2. Number of States Implementing Quality Assurance and Quality Control (QA/QC) Processes 3. Number of States that have established formal arrangements with at least 50% of their AIS data originators.	(2023) 53%	80%	Dec 2024	N/A
DAIM B1/3	Provision of digital terrain data sets	All States	Indicator*: Regional average implementation status of DAIM B1/3 (Provision of Terrain digital datasets). Supporting Metric: Number of States that provide required Terrain digital datasets.	(2022) 35%	60%	Dec 2024	N/A
DAIM B1/4	Provision of digital obstacle data sets	All States	Indicator*: Regional average implementation status of DAIM B1/4(Provision of obstacle digital datasets). Supporting Metric: Number of States that provide required obstacle digital datasets.	(2022) 35%	60 %	Dec 2024	N/A
AMET							
AMET B0/1	Meteorological observations products	All states	Indicator*: Regional average implementation status of B0/1 (Meteorological observations products).	(2022) 65%	80%	Dec 2021	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			<p>Supporting Metrics: Number of States that provide the following Meteorological observations products, as required:</p> <ol style="list-style-type: none"> 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information. 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, etc.) 8. Vertical wind and temperature profiles 9. Wind shear alerts 				
AMET B0/2	Meteorological forecast and warning products	All states	<p>Indicator*: Regional average implementation status of B0/2 (Meteorological forecasts and warning products)</p> <p>Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required:</p> <ol style="list-style-type: none"> 1. World Area Forecast System (WAFS) gridded products. 2. Significant Weather (SIGWX) 3. Aerodrome Forecast (TAF) 4. Trend Forecast (TREND) 5. Take-off Forecast 6. SIGMET 7. Aerodrome Warning 8. Wind Shear Warning 	(2022) 60%	90%	Dec 2021	N/A
AMET B0/3	Climatological and historical meteorological products	All states	<p>Indicator: % of States that provide Climatological and historical meteorological products, as required.</p> <p>Supporting Metric: Number of States that provide Climatological and historical</p>	(2022) 60%	85%	Dec 2021	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			meteorological products, as required.				
AMET B0/4	Dissemination of meteorological products	All states	Indicator: % of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM) Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)	(2022) 60%	85%	Dec 2021	N/A
FICE							
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented. Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs.	(2023) 26%	70%	Dec 2026	N/A
Operational Threads							
APTA							
APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima. Supporting metric: Number of Runways ends at international aerodromes served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima.	(2017) 46.7%	100%	Dec 2018	Capacity/ KPI 10
APTA B0/2	PBN SID and STAR procedures (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities). Supporting Metric: Number of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities).	(2022) 55%	70%	Dec 2022	Efficiency Capacity/ KPI 10 KPI 11 KPI 17 KPI 19/

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
APTA B0/4	CDO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSK, HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CDO implemented and published as required. Supporting Metric: Number of International Aerodromes with CDO implemented and published as required. *As per the applicability area	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 19
APTA B0/5	CCO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSK, HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CCO implemented and published as required. Supporting Metric: Number of International Aerodromes with CCO implemented and published as required. *As per the applicability area	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 17
APTA B0/7	Performance based aerodrome operating minima – Advanced aircraft	All States	Indicator: % of States authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft. Supporting Metric: Number of States 1- having provisions for operational credits to enable lower minima based on advanced aircraft capabilities. (Reference: Annex 6 Part I para. 4.2.8.2.1) 2- Number of States Putting in place an approval process for the operational credit to Aircraft operator conducting PBAOM operations for low visibility operations (Reference: Doc 9365 (AWO Manual)), as applicable.	(2022) 50%	80%	Dec 2025	Capacity/ KPI 10
FRTO							
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to	(2022) 63%	70%	Dec 2022	Efficiency Access and equity/ KPI 04 KPI 05

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			<p>improve efficiency of Airspace.</p> <p>Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace.</p> <p>* As per the applicability area</p>				KPI 17 KPI 18/ KPI 19
FRTO B0/4	Basic conflict detection and conformance monitoring	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	<p>Indicator*: % States that implemented MTCD and MONA, for ACCs, as required.</p> <p>Supporting metric: The number of States that implemented MTCD and MONA for ACCs, as required.</p> <p>* As per the applicability area</p>	(2022) 63%	100%	Dec 2022	Capacity/ KPI 06 Safety/ KPI 20 KPI 23
NOPS							
NOPS B0/1	Initial integration of collaborative airspace management with air traffic flow management	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	<p>Indicator*: % of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process.</p> <p>Supporting metric: number of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process.</p> <p>* As per the applicability area</p>	(2022) 42%	70%	Dec 2022	Efficiency Capacity/ KPI 04 KPI 05 KPI 17 KPI 18 KPI 19/
ACAS							
ACAS B1/1	ACAS Improvements Operational	All States	<p>Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons</p> <p>Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for</p>	(2022) 87%	100%	Dec 2024	Safety/ KPI 20 KPI 23

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			aircraft with a max certificated take-off mass greater than 5.7 tons				
SNET							
SNET B0/1	Short Term Conflict Alert (STCA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Short-term conflict alert (STCA) Supporting metric: number of States that have implemented Short-term conflict alert (STCA) * As per the applicability area	(2018) 100%	100%	Dec 2018	Safety/ KPI 20 KPI 23
SNET B0/2	Minimum Safe Altitude Warning (MSAW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Minimum safe altitude warning (MSAW) Supporting metric: number of States that have implemented Minimum safe altitude warning (MSAW) * As per the applicability area	(2018) 100%	100%	Dec 2018	Safety/ KPI 20
SNET B0/3	Area Proximity Warning (APW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Area Proximity Warning (APW) for ACCs, as required. Supporting metric: number of States that have Implemented Area Proximity Warning (APW) for ACCs, as required. * As per the applicability area	(2022) 67%	100%	Dec 2022	Safety/ KPI 20
GADS							
GADS B1/2	Operational Control Directory	All States	Indicator: % of States that provided GADSS Point of Contact (PoC) information Supporting Metric: Number of States that provided GADSS Point of Contact (PoC) information.	(2022) 73%	100%	Dec 2022	N/A
RSEQ							
RSEQ B0/1	Arrival Management	OBBI, HECA, HEBA, HELX, HESN, HESH, OTBD, OTHH, OEJN, OEDF, OEMA, OERK OMDB, OMAA	Indicator*: % of Aerodromes that have implemented arrival manager (AMAN), where required/applicable. Supporting Metric: Number of Aerodrome that have implemented arrival manager (AMAN), where required/applicable.	(2022) 36%	80%	Dec 2024	Capacity Efficiency/ KPI 08 KPI 10 KPI 11 KPI 14/

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			* As per the applicability area				
SURF							
SURF-B0/1	Basic ATCO tools to manage traffic during ground operations	All International Aerodromes	Indicator: % of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations Supporting metric: Number of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations	(2022) 90%	100%	Dec 2022	Efficiency/ KPI 02 KPI 13 Safety/ KPI 20 KPI 21
SURF-B0/2	Comprehensive situational awareness of surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the surveillance service of A-SMGCS Supporting metric: Number of Airports having implemented the surveillance service of A-SMGCS * As per the applicability area	(2022) 61%	80%	Dec 2022	Safety/ KPI 20 KPI 21
SURF-B0/3	Initial ATCO alerting service for surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the A-SMGCS alerting service. Supporting metric: Number of Airports having implemented the A-SMGCS alerting service. * As per the applicability area	(2022) 74%	80%	Dec 2022	Safety/ KPI 20
ACDM							
ACDM B0/1	Airport CDM Information Sharing (ACIS)	HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA	Indicator*: % of Airports having implemented ACIS. Supporting metric: number of Airports having implemented ACIS. * As per the applicability area	(2022) 75%	90%	Dec 2024	N/A
ACDM B0/2	Integration with ATM Network function	HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA.	Indicator*: % of Airports having integrated ACDM with the ATM Network function. Supporting metric: Number of Airports having integrated ACDM with the ATM Network function * As per the applicability area	(2022) 25%	50%	Dec 2024	N/A

Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI	
Technology Threads							
ASUR							
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, , Sudan, UAE	Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area	(2022) 60%	80%	Dec 2022	N/A
ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)	Bahrain, , Kuwait, Oman, Qatar, Saudi Arabia, UAE	Indicator*: % of States that have implemented Multi-lateration (M-LAT) for provision of ATS. Supporting Metric: Number of States that have implemented Multi-lateration (M-LAT) for provision of ATS. Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area	(2022) 63%	80%	Dec 2022	N/A
ASUR B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	Bahrain, Egypt, Iran, Iraq, Kuwait, Lebanon, Jordan, Oman, Qatar, Saudi Arabia, Sudan and UAE	Indicator*: % of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) * As per the applicability area	(2022) 83%	90%	Dec 2023	N/A
NAVS							
NAVS B0/3	Aircraft Based Augmentation Systems (ABAS)	All States	Indicator: % of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-	(2022) 40%	70%	Dec 2022	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			off mass greater than 5,700 Kg to enable PBN Operations Supporting metric: Number of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations				
NAVS B0/4	Navigation Minimal Operating Networks (Nav. MON)	All States	Indicator: % of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation Supporting metric: Number of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation.	(2022) 47%	70%	Dec 2022	N/A
COMI							
COMI B0/7	ATS Message Handling System (AMHS)	All States	Indicator: % of States that have established AMHS interconnections with adjacent COM Centres Supporting metric: Number of States that have established AMHS interconnections with adjacent COM Centres	(2022) 73%	90%	Dec 2022	N/A
COMI B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	All States	Indicator: % of States that have established National IP Network for voice and data communication Supporting metric: Number of States that have established National IP Network for voice and data communication	(2022) 60%	80%	Dec 2022	N/A
