

International Civil Aviation Organization

MIDANPIRG/21 & RASG-MID/11 Meetings

(*Abu Dhabi, UAE, 4 – 8 March 2024*)

Agenda Item 5.2: MID region Air Navigation priorities and targets

OUTCOMES OF THE RANP/NANP TF/1

(Presented by the Secretariat)

SUMMARY This paper presents the outcome of the first meeting of RANP/NAPT task force. Action by the meeting is at paragraph 3. Reference - MIDANPIRG/20 and RASG-MID/10 Meetings Report (Muscat, Oman, 14 – 17 May 2023)

- RANP/NANP TF/1 Meeting Report (Cairo, Egypt, 19-22 February 2024)

1. INTRODUCTION

1.1 The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). Developed in collaboration with and for the benefit of stakeholders, the GANP is a key contributor to the achievement of ICAO's Strategic Objectives and has an important role to play in supporting the United Nations 2030 Agenda for Sustainable Development.

1.2 The content of the GANP is organized into a multilayer structure with each layer tailored to different audiences. This allows for better communication with both high-level and technical managers with the objective that no State or stakeholder is left behind. The four-layer structure is made up of global (strategic and technical), regional and national levels, and provides a framework for alignment of regional, sub-regional and national plans.

1.3 The meeting may wish to note that minor changes are introduced in the GANP every three (3) years and major changes every six (6) years. Therefore, reviewing and updating the MID Region Air Navigation Strategy and MID ANP, Vol III, would be required to be done regularly by experts' group.

1.4 Based on the above, MIDANPIRG/20, through Decision 20/12 established the RANP/NANP Task Force to ensure alignment of the MID Region Air Navigation Strategy and MID ANP Vol III with the latest edition of the GANP and assist States developing NANPs:

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MIDANPIRG DECISION 20/12: RANP/NANP TASK FORCE

That,

- a) RANP/NANP Task Force be established to ensure alignment of the MID Region Air Navigation Strategy and MID ANP Vol III with the latest edition of the GANP and assist States developing NANPs;
- b) the terms of reference of the RANP/NANP Task Force be developed during the first meeting of RANP/NANP Task Force; and
- *c)* States support the RANP/NANP Task Force through:
 - i. assignment of Focal Point to contribute to the work of the Task Force; and
 - *ii. sharing states' experience and provision of required data in timely manner.*

2. DISCUSSION

2.1 The first meeting of the RANP/NANP TF/1 was held in Cairo, Egypt, 19-22 February 2024. 55 participants from 10 States and 2 international organizations have attended this meeting with the following outcomes:

Election of Chairperson

2.2 The RANP/NANP TF/1 meeting unanimously elected Mr. Nasser Al-Khalaf, Air Traffic Controller & ANS Advisor, Qatar Civil Aviation Authority (QCAA) as the Chairperson and Mr. Abdullah M. Albathi, Director of Air Navigation Safety Systems, Saudi Arabia General Authority of Civil Aviation (GACA), as the Vice Chairperson of the RANP/NANP TF.

Terms of Reference

2.3 The meeting may wish to note that the draft Terms of Reference was developed by the RANP/NANP TF/1 meeting at **Appendix A**.

MID Air Navigation Report 2023

2.4 The MIDANPIRG meeting, through Conclusions 20/9 and 20/11 respectively urged States to implement performance-based approach and provide the ICAO MID Office, with relevant data necessary for the development of the MID Region Air Navigation Report – 2023.

2.5 As of 25 February 2024, 7 MID States (Bahrain, Egypt, Jordan, Kuwait, Oman, Saudi Arabia and UAE) out of 15 States have provided updated data and information to ICAO. Accordingly, the RANP/NANP TF/1 tasked the Secretariat to consolidate the MID Air Navigation Report-2023 based on the preliminary results reported to the Task Force as well as the last update provided by remaining States in the previous year for presentation to and endorsement by MIDANPIRG/21.

MID Region Air Navigation Strategy

2.6 The meeting may wish to note that the MID Region Air Navigation Strategy (ICAO MID Doc 002) was reviewed and updated by the RANP/NANP TF/1 meeting as at **Appendix B**.

2.7 The meeting underlined the need for the MIDANPIRG Sub Groups to allocate enough

time in their agenda for the detailed discussion of the ASBU Threads relevant to their technical areas, including the identification of priorities, definition of applicability areas, performance indicators, metrics, targets, etc.

MID ANP Volume III

2.8 The meeting may wish to note the RANP/NANP TF/1 meeting recalled that the latest version of the MID Air Navigation Plan Volume III was endorsed by MIDANPIRG through Conclusion 20/8. The meeting reviewed the MID Air Navigation Plan Volume III and agreed that it is still current.

Development of National Air Navigation Plan (NANP)

2.9 The RANP/NANP TF/1 meeting thanked Kuwait, Saudi Arabia and UAE for sharing their experience in the development of National Air Navigation Plan (NANP).

2.10 The meeting noted that, although Kuwait, Saudi Arabia and UAE have used the recommended ICAO 6 step approach for the development of their NANP, they used different methodologies for the implementation of the PBA and they endorsed different structures/layouts and content of the NANP.

2.11 The meeting noted that the NANP is dynamic; it could be structured as a combination of multiple Documents, a web portal, a phone application, etc. The meeting agreed on the importance of automated processes/tools for the development and implementation of NANP; and monitoring and reporting purpose.

2.12 The meeting recalled that the GANP & NANP Workshop (Cairo, Egypt, 5-8 March 2023) identified the following challenges related to the implementation of PBA:

- a) Lack of understanding of the performance based approach and its benefits and necessary coordination between all stakeholders at National level;
- b) Lack of automated tools to collect the data necessary for the measurement of the ANS Performance (KPIs);
- c) Lack of historical data in some States;
- d) Lack of human and financial resources in some States;
- e) Lack of guidance related to the implementation of the 6 step approach and development of the NANP.

2.13 The meeting underlined the importance of alignment of the different plans of the service providers and operators at National Level (Airport Operators, ANSPs and Airlines) and the need for cooperation and collaboration at National Level for a successful development and implementation of NANP. The meeting highlighted also the importance of consultation with the users and concerned States and stakeholders, as appropriate, during the development of NANP (the 6 Steps).

2.14 The meeting recalled that MIDANPIRG, through Conclusion 20/9, tasked the ICAO MID Office to conduct assistance missions/Workshops at National level on GANP/NANP in 2023-2024. The meeting noted that the ICAO MID Office conducted an assistance mission/Workshop to Kuwait (28 May – 1 June 2023) to support the development of NANP. The meeting encouraged States that need assistance for the development of NANP, to request assistance from the ICAO MID Office.

2.15 The meeting invited States to take into consideration the experiences of Kuwait, Saudi Arabia and UAE in the development of NANP; and share their experiences in this endeavor with the upcoming RANP/NANP TF/2 meeting, highlighting the best practices, lessons learned and challenges.

RANP/NANP TF Focal Points

2.16 The meeting underlined the importance of designation of Focal Points and Alternates for the RANP/NANP Task Force, to facilitate coordination within State and with ICAO related to collection of data and reporting on the status of implementation of the priority1 ASBU Elements as well as on the progress achieved in the implementation of the performance based approach and development of NANP. The list of RANP/NANP TF Focal Points is at **Appendix C**.

2.17 Based on the above, the meeting is invited to review and agree on the following Draft Conclusion and Decision:

Why	MIDANPIRG through Decision 20/12 established the RANP/NANP TF and tasked it to
	develop draft of Terms of Reference (ToR).
What	RANP/NANP TF Terms of Reference (ToR)
Who	MIDANPIRG/21
When	March 2024

DRAFT MIDANPIRG DESION 21/X: RANP/NAP TASK FORCE TOR

That, the RANP/NANP Task Force Terms of Reference (ToR) at Appendix A are endorsed.

Why	To identify priority 1 ASBU threads/elements, their baseline and linked KPA/KPI, to be
	monitored and reported at Regional level.
What	MID Air Navigation Strategy, Edition February 2024 (ICAO MID DOC 002)
Who	ICAO MID Office
When	March 2024

DRAFT MIDANPIRG CONCLUSION 21/X: MID REGION AIR NAVIGATION STRATEGY, EDITION, FEBRUARY 2024

That, the MID Region Air Navigation Strategy, Edition February 2024 (ICAO MID DOC 002), is endorsed and be published by the ICAO MID Office.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
 - a) note the outcomes of the RANP/NANP TF/1 meeting;
 - b) urge States to
 - i. nominate required Focal Points (main and alternates) to ICAO MID Office;
 - ii. provide required data and information to ICAO MID in a timely manner; and
 - c) review and endorse the Draft Decision and Conclusion at para 2.17.

TERMS OF REFERENCE (TOR) OF THE MIDANPIRG RANP/NANP TASK FORCE (RANP/NANP TF)

I. TERMS OF REFERENCE

1.1 The terms of reference of the RANP/NANP Task Force are:

- a) monitor the status of implementation of the priority 1 ASBU Threads/Elements included in the MID Region Air Navigation Strategy;
- b) identify the difficulties and challenges associated with the implementation of the MID Region priority 1 ASBU Threads/Elements and provide progress reports, as required;
- c) consolidate the MID Region Annual Air Navigation Report prior to its submission to MIDANPIRG for endorsement;
- keep under review the MID Region Air Navigation Strategy, and considering global and regional developments and the inputs from States and the MIDANPIRG Sub-Groups, propose changes to the MID Region Air Navigation Strategy for final review and endorsement by MIDANPIRG;
- e) support the implementation of the GANP, its framework and timelines ensuring harmonization and coordination of efforts aimed at improving international civil aviation capacity and efficiency including establishment of priorities, targets and indicators consistent with globallyharmonized objectives, taking into account operational needs;
- f) provide a forum for discussion, coordination, cooperation and sharing of experiences and best practices amongst States and stakeholders, of subjects related to GANP implementation and development of National Air Navigation Plans (NANP);
- g) promote the implementation of the Performance Based Approach (PBA) and the six-step performance management process described in the Manual on Global Performance of the Air Navigation System (Doc 9883);
- h) support MID States in the development and maintenance of their National Air Navigation Plans (NANP) based on a Performance Based Approach (PBA) as described in the Manual on Global Performance of the Air Navigation System (Doc 9883) and the MID Air Navigation Plan (Volume III);
- i) promote the need for automated processes/tools for the collection of data and reporting related to the implementation of the Performance Based Approach (PBA), including the status of ASBU implementation by each member State;
- j) consolidate all feedback and proposed amendments/improvements received from MIDANPIRG Sub-Groups on the GANP implementation;
- k) report its activities/outcomes directly to MIDANPIRG; and
- 1) review periodically its Terms of Reference and propose amendments, as necessary.

II. COMPOSITION

- 2.1 The Task Force is composed of:
 - a) ANS regulatory, technical and operational experts from MIDANPIRG Member States;
 - b) concerned International and Regional Organizations, as observers; and
 - c) other representatives from provider States and Industry may be invited on ad hoc basis, as observers, when required.

III. WORKING ARRANGEMENTS

- 3.1 The Chairperson, in close coordination with the Secretariat, shall make all necessary arrangements for the most efficient working of the Task Force. The Task Force shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paperwork (paperless meetings). Permanent contact shall be maintained between the Chairpersons, Secretary and Members of the Task Force to advance the work. Best advantage should be taken of modern communications facilities, particularly videoconferencing (Virtual Meetings) and e-mails.
- 3.2 Face-to-face meetings for the review and coordination of deliverables will be conducted on annual basis.

- END -

MIDANPIRG/21 & RASG-MID/11-WP/29 Appendix B

MID Doc 002



INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

MID REGION

AIR NAVIGATION STRATEGY

EDITION FEBRUARY MARCH, 20232024

MID Region Air Navigation Strategy

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MarchFebruary 20243

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MID Region Air Navigation Strategy

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MID Region Air Navigation Strategy

April February 202419

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 6th Edition 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.

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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

Throad	Element	Title	Priority	Start	Мог	nitoring	Domorks		
Tineau	code	The	THOTHY	Date	Main	Supporting	Keinai Ks		
Information	n Threads								
DAIM									
	B1/1	Provision of quality- assured aeronautical data and information	1	2021	AIM SG	RANP/NA NP TF			Formatted: Centered
	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	2					•	Formatted: Centered
	B1/3	Provision of digital terrain data sets	1	2021	AIM SG	RANP/NA NP TF		•	Formatted: Centered
DAIM	B1/4	Provision of digital obstacle data sets	1	2021	AIM SG	RANP/NA NP TF			Formatted Table Formatted: Centered
	B1/5	Provision of digital aerodrome mapping data sets	2						Formatted: Centered
	B1/6	Provision of digital instrument flight procedure data sets	2					•	Formatted: Centered
	B1/7	NOTAM improvements	2						Formatted: Centered
AMET					L				
	B0/1	Meteorological observations products	1	2014	MET SG	RANP/NA <u>NP TF</u>			Formatted: Centered
AMET	B0/2	Meteorological forecast and warning products	1	2014	MET SG	RANP/NA NP TF	,		Formatted: Centered
	B0/3	Climatological and historical meteorological products	1	2014	MET SG	RANP/NA NP TF			Formatted : Centered

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Thread	Element	Title	Priority	Start	Mor	nitoring	Remarks	
mcau	code	The	THOTHY	Date	Main	Supporting	ixeniai K5	
	B0/4	Dissemination of meteorological products	1	2014	MET SG	CNS SG <u>RANP/NA</u> <u>NP TF</u>		
	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								
ICE	B0/1	Automated basic inter facility data exchange (AIDC)	1	2014	CNS SG ATM SG	RANP/NA NP TF		
perationa	l Threads						oring Remarks Supporting Formatted: Centered CNS SG Formatted: Centered NPTE Formatted: Centered Image: Second Seco	
PTA								
APTA	B0/1	PBN Approaches (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG CNS SG RANP/NA NP TE		
	B0/2	PBN SID and STAR procedures (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG RANP/NA NP TF		
	B0/3	SBAS/GBAS CAT I precision approach procedures	2					
	B0/4	CDO (Basic)	1	2014	PBN SG	ATM SG RANP/NA		
РТА	B0/5	CCO (Basic)	1	2014	PBN SG	ATM SG RANP/NA		
	B0/6	PBN Helicopter Point in Space (PinS) Operations	2			<u>NP TF</u>		
	B0/7	Performance based aerodrome operating minima – Advanced aircraft	1	2021	PBN SG	AIM SG <u>CNS SG</u> <u>ASPIG</u> <u>RANP/NA</u> NP TE		
	B0/8	Performance based aerodrome operating minima – Basic aircraft	2					
MID Region	Air Navigation	Strategy		- 3 -		March-February	_202 <u>4</u> 3	

	Element			Start	Mor	nitoring	
Thread	code	Title	Priority	Date	Main	Supporting	Remarks
	B1/1	PBN Approaches (with advanced capabilities)	2				
	B1/2	procedures (with advanced capabilities)	2				
	B1/4	CDO (Advanced)	2				
	B1/5	CCO (Advanced)	2				
FRTO							
	B0/1	Direct routing (DCT)	2				
	B0/2	Airspace planning and Flexible Use of Airspace (FUA)	1	2014	ATM SG	RANP/NA <u>NP TF</u>	
	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 <u>RANP/NA</u> <u>NP TF</u>	
	B1/1	Free Route Airspace (FRA)	2				
FRTO	B1/2	Required Navigation Performance (RNP)	2				
FRTO TRTO NOPS	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	2				
	B1/6	Monitoring Multi-Sector	2				
	B1/7	Trajectory Options	2				
NOPS		set (10s)					
		Initial integration of					
	B0/1	collaborative airspace management with air traffic flow management	1	2015	ATM SG	<u>RANP/NA</u> <u>NP TF</u>	
NOPS	B0/2	Collaborative Network Flight Updates	2				
	B0/3	Network Operation Planning basic features	2				

					Mor	nitoring	
Thread	Element code	Title	Priority	Start Date	Main	Supporting	Remarks
	B0/4	Initial Airport/ATFM slots and A-CDM	2				
	B0/5	Dynamic ATFM slot	2				
	D1/1	Short Term ATFM	2				
	D1/1	measures	2				
	B1/2	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	Management supported by the ATM Network function	2				
	B1/9	Target Times for ATFM purposes	2				
	B1/10	Trajectory Options Program (CTOP)	2				
CAS							
CAS	B1/1	ACAS Improvements	1	2014	ATM SG	RANP/NA	
SNET	<u> </u>		<u> </u>	I	CN3 30	<u>INF IF</u>	
	B0/1	Short Term Conflict	1	2017	ATM SG	CNS SG RANP/NA	
	B0/2	Minimum Safe Altitude Warning	1	2017	ATM SG	<u>NP TF</u> CNS SG <u>RANP/NA</u>	
NET	B0/3	(MSAW) Area Proximity Warning (APW)	1	2020	ATM SG	<u>NP TF</u> CNS SG <u>RANP/NA</u>	
		Approach Path				<u>NP TF</u>	
	B0/4	Monitoring (APM)	2				
	B1/1	enhanced STCA with aircraft parameters	2				
	B1/2	Enhanced STCA in complex TMA	2				
GADS							

-	Element			Start	Mo	nitoring	
Thread 3 GADS 3 RSEQ 4 RSEQ 4 RSEQ 4 SURF 4 SURF 4 SURF 4 R 4	code	Title	Priority	Date	Main	Supporting	Remarks
	B1/1	Aircraft Tracking	2				
GADS	D1/2	-Operational Control	- 1	2021		RANP/NA	
	B1/2	Directory	1	2021	ATM SG	NP TF	
RSEQ							
						CNS SG	
	B0/1	Arrival Management	1	2021	ATM SG	ASPIG	
		_				<u>RANP/NA</u> NP TF	
RSEQ	B0/2	Departure	2				
	B0/3	Management Point merge	2				
	D0/5	Extended arrival	2				
	D1/1	metering	Z				
SURF							
	B0/1	Basic ATCO tools to				ATM SG	
		manage traffic during	1	2014	ASPIG	CNS SG	
		ground operations				NP TF	
	B0/2	Comprehensive				ATM SG	
		situational awareness	1	2014	ASPIG	CNS SG RANP/NA	
		or surface operations				<u>NP TF</u>	
	B0/3	Initial ATCO alerting				ATM SG	
		operations	1	2021	ASPIG	CNS SG RANP/NA	
		1				NP TF	
		Advanced features					
SURF	B1/1	support traffic	2		ASPIG	ATM SG	
SURF		management during				CIVE SU	
		ground operations					
	B1/2	situational awareness	2		ASPIG	ATM SG	
		on the airport surface				CIND DO	
	B1/3	alerting service for	2		ASPIG	ATM SG	
		surface operations				CNS SG	
		Routing service to				ATMSG	
	B1/4	surface operations	2		ASPIG	CNS-SG	
		management					
	B1/5	Enhanced vision systems for taxi	2		ASPIG	ATM-SG	
		operations				CNS SG	
ACDM							
						CNS SG.	
		Airport CDM				AIM SG,	
	B0/1	Information Sharing	1	2014	ASPIG	ATM SG.	
		(ACIS)				NP TF	
ACDM						CNS SG,	
	B0/2	Integration with ATM Network	1	2014	ASPIG	AIM SG, ATM SG	
	2012	function		2011	1.5.10	RANP/NA	
		runcuon				NP TF	

					Monitoring		
Thread	Element	Title	Priority	Start	Mo	nitoring	Remarks
	code			Date	Main	Supporting	
		Basic airborne situational awareness					
	<u>B1/1</u>	during flight operations (AIRB)	2				
	<u>B1/2</u>	Visual Separation on Approach (VSA)	2				
<u>CSEP</u>	2412	Performance Based					
	<u>B1/3</u>	Longitudinal Separation Minima	2				
	<u>B1/4</u>	Performance Based Lateral Separation	2				
		Minima Remotely Operated					
DATS	<u>B1/1</u>	Aerodrome Air Traffic Services	2				
	B0/1	In Trail Procedure	2				
<u>OPFL</u>		(ITP)	-				
	<u>B1/1</u>	Procedure (CDP)	2				
		Introduction of time-					
TRO	<u>B0/1</u>	within a flow centric	2				
<u>TBO</u>	714	Initial Integration of					
	<u>B1/1</u>	time-based decision making processes	2				
Technology	v Threads						
ASUR							
		Automatic				ATM SG.	
	B0/1	<u>Dependent</u> <u>Surveillance –</u>	1	2021	CNS SG	ASPIG.	
		Broadcast (ADS- B)ADS-B				<u>NP TF</u>	
		<u>Multilateration</u>				ATM SG, ASPIG	
	B0/2	surveillance systems	1	2021	CNS SG	RANP/NA	
ASUR		(MLAT)MLAT Cooperative				ATM SG	
	B0/3	Surveillance Radar Downlink of Aircraft	1	2021	CNS SG	ASPIG.	
		Parameters (SSR- DAPS)SSR-DAPS				<u>KAMP/NA</u> <u>NP TF</u>	
	B 1/1	Reception of aircraft					
	B1/1	space (SB ADS-	2				
NAVS		<u>B</u> SB ADS B					
		Ground Based					_
	B0/1	Augmentation Systems (CBAS)	2				
NAVS	D0/0	Satellite Based					
	B0/2	Augmentation Systems (SBAS)	2				

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	Flamme			St.	Mo	nitoring	
Thread	code	Title	Priority	Date	Main	Supporting	Remarks
	B0/3	Aircraft Based Augmentation Systems (ABAS)	1	2021	CNS SG	PBN SG <u></u> ATM SG <u></u> AIM SG <u></u> <u>RANP/NA</u> NP TF	
	B0/4	Navigation Minimal Operating Networks (Nav. MON)	1	2021	CNS SG	PBN SG <u>.</u> RANP/NA NP TF	
	B1/1	Extended GBAS	2				
COMI	I						
	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	2				
	B0/5	Satellite communications (SATCOM) Class C Data	2				
COMI	B0/6	High Frequency Data	2				
	B0/7		1	2014	CNS SG	RANP/NA	
	B0/7 B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	1	2021	CNS SG	<u>NP TF</u> <u>RANP/NA</u> <u>NP TF</u>	
	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	L.						
COMS	B0/1	CPDLC (FANS 1/A & ATN B1) for domestic and	2				
(ID D -		procedural airspace					

Three	Element	T:41-	Dutantitu	Start	Mor	nitoring	Demosilar
Thread	code	Title	Priority	Date	Main	Supporting	Kemarks
	B0/2	ADS-C (FANS 1/A) for procedural airspace	2				
	B1/1	PBCS approved CPDLC (FANS 1/A+) for domestic and procedural	2				
	B1/2	airspace PBCS approved ADS-C (FANS 1/A+) for procedural	2				
	B1/3	SATVOICE (incl. routine communications) for procedural airspace	2				
. I	mplementatio	on and Monitoring of	the priorit	y 1 ASB	U Elements		
5.1 hrough io air naviga the MID o	The mo lentification of tion system Ta ANP Volume	nitoring of air navig relevant air navigation argets. The monitoring III.	ation perfo n Metrics a of the price	rmance nd Indica ority 1 A	and its enha ators as well SBU Thread	ancement is ac as the adoption s/Elements is c	hieved, inter-alia and attainment of arried out throug
5.2 and monit	MIDAN or the implement	PIRG through its acti entation of the ASBU	vities unde Threads and	r the var d elemen	ious subsida ts to achieve	ry bodies will of the air navigation	ontinue to updat on targets.
5.3 Indicators	The price, supporting M	ority 1 Threads/Elemen letrics, and performance	nts along w e Targets a	ith the as are shown	ssociated eler in the Tabl	ments, applicab e 2 below.	ility, performanc
Note : Fu performa	rther details nce impact asso	on the ASBU eleme essment can be found o	nts objecti n the ICAO	ives, des GANP P	cription, im Portal <u>https://</u>	plementation 4 /www4.icao.int/	requirements an ganpportal/ASB
5. G	overnance						
5.1 should be he status RANP/NA	Progress developed by of implement <u>ANP TF</u> on and	s report on the status MIDANPIRG Subsid ation of the different nual basis and presente	of implem ary bodies. priority 1 A d to MIDA	entation A conso ASBU E NPIRG 1	of the differ blidated MID lements by f for endorsem	rent priority 1 Air Navigatio Fhread will be tent.	Threads/Element n Report showin developed by th
5.2 Region A	The MI ir Navigation S	DANPIRG will be the Strategy.	governing	body resj	ponsible for t	he review and	update of the MI
5.3 podies an	The MI d all its membe	D Region Air Navigation or States and partners.	on Strategy	will guid	de the work o	of MIDANPIRC	and its subsidar
6.4 of the agro review of within the	Progress eed air navigat the MIDANP framework of	s on the implementatio ion targets will be repo IRG Reports, MID Ai MIDANPIRG.	n of the MI rted to the l r Navigatio	D Regior ICAO Ai on Report	n Air Navigat r Navigation ts, etc.; and t	tion Strategy an Commission (2 to the stakehold	d the achievemen ANC), through th lers in the Regio
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I		Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
	Informa	tion Threads						
	DAIM							
I	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).	<u>5553</u> %	80%	Dec 2021	N/A
				 Supporting Metrics: Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+) Number of States that have established formal arrangements with at least 50% of their AIS data originators. 				
	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).	35%	60%	Dec 2021	N/A
				Supporting Metric: Number of States that provide required Terrain digital datasets				
	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).	35%	60 %	Dec 2021	N/A
				Supporting Metric: Number of States that provide required obstacle digital datasets				
	AMET	1	I		1		1	I
	AMET B0/1	Meteorological observations products	All states	Indicator*: Regional average implementation status of B0/1 (Meteorological observations products).	65%	80%	Dec 2021	N/A
				Supporting Metrics: Number of States that provide the following Meteorological observations products, as required: 1. Automatic Weather Observation System (AWOS)				

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

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	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
AMET	Meteorological	All states	 (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 	60%	90%	Dec 2021	N/A
B0/2	forecast and warning products		 implementation status of B0/2 (Meteorological forecasts and warning products) Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required: World Area Forecast System (WAFS) gridded products Significant Weather (SIGWX) Aerodrome Forecast (TAF) Trake-off Forecast 6. SIGMET Aerodrome Warning Wind Shear Warning 				
AMET B0/3	Climatological and historical meteorological products	All states	Indicator: % of States that provide Climatological and historical meteorological products, as required. Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required	60%	85%	Dec 2021	N/A
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)	60%	85%	Dec 2021	N/A

		Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
				Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)				
	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	26%	70%	Dec 2020	N/A
	Operatio	onal Threads						
	АРТА							
	APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDs at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima Supporting metric: Number of Runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima	55 <u>52</u> %	100%	Dec 2017	Capacity/ KPI 10
	APTA B0/2 APTA B0/4	PBN SID and STAR procedures (with basic capabilities) CDO (Basic)	All RWYs ENDs at International Aerodromes OBBI, OIE,	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). Indicator*: % of International Aerodromes with CDO	55% 65%	70%	Dec 2022 Dec 2021	Efficiency Capacity/ KPI 10 KPI 11 KPI 17 KPI 19/ Efficiency/
	D 0/4		OIKB, OIFM, OJAI,	implemented <u>and published</u> as required.				KPI 19

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		Performance Indicators/	Baseline			KPA/
Element	Applicability	Supporting Metrics	(<u>2022</u> 2023)	Target	Timeline	КРІ
	OLBA, -OOMS, OTHH, OTBD, OEJN, OEDF, OERK, HSSSHSSK, HSPN, OMAA, OMAA, OMAL, OMAD, OMDB, OMDB, OMSJ, OMRK and OMEL	Supporting Metric: Number of International Aerodromes with CDO implemented <u>and</u> <u>published</u> as required. *As per the applicability area				
APTA CCO (Basic) B0/5	OMFJ OBBI, OIE, OIKB, OIFM, OJAI, OLBA, -OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSSHSSK, HSPN, OMAA, OMAL, OMAD, OMAD, OMDB, OMSJ, OMRK and OMEJ	Indicator*: % of International Aerodromes with CCO implemented <u>and published</u> as required. Supporting Metric: Number of International Aerodromes with CCO implemented <u>and</u> <u>published</u> as required. *As per the applicability area	65%	100%	Dec 2021	Efficiehcy/ KPI 17
APTA 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 authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft. 1- having provisions for operational credits to enable lower minima based on advanced aircraft capabilities.	<u>8550</u> %	10080%	Dec 20212025	Capacity/ KPI 10

							VDA/
	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
			operations (Reference: Doc				
			<u>9365 (AWO Manual)), as</u> applicable.				
			<u> </u>				•
FRTO							
	I	T	1	1			
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA)	Bahrain, Egypt, Jordan, 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 improve efficiency of Airspace. 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	63%	70%	Dec 2022	Efficiency Access and equity/ KPI 04 KPI 05 KPI 17 KPI 18/ KPI 19
			Airspace.				
			* As per the applicability area				
FRTO B0/4	Basic conflict detection and conformance monitoring	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % States that implemented MTCD and MONA, for ACCs, as required. Supporting metric: The number of States that implemented MTCD and MONA for ACCs, as required.	63%	100%	Dec 2021	Capacity/ KPI 06 Safety/ KPI 20 KPI 23
NODC			* As per the applicability area				
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	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 Supporting metric: number of States implementing	42%	70%	Dec 2022	Efficiency Capacity/ KPI 04 KPI 05 KPI 17 KPI 17 KPI 18 KPI 19/
			procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process.				

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
			* As per the applicability area				
ACAS							
ACAS B1/1	ACAS Improvements Operational	All States	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	87%	100%	Dec 2024	Safety/ KPI 20 KPI 23
			Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons				
SNET		1		1			
SNET B0/1	Short Term Conflict Alert (STCA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait	Indicator*: % of States that have implemented Short-term conflict alert (STCA)	100%	100%	Dec 2018	Safety/ KPI 20
		Libya, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Supporting metric: number of States that have implemented Short-term conflict alert (STCA)				
SNET B0/2	Minimum Safe Altitude Warning	Bahrain,	Indicator*: % of States that have implemented Minimum	100%	100%	Dec 2018	Safety/
2012	(MSAW)	Egypt, Iran, Iraq, Jordan, Kuwait, <u>Libya</u> , Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	safe altitude warning (MSAW) Supporting metric: number of States that have implemented Minimum safe altitude warning (MSAW)				KPI 20
SNET	Area Proximity	Dahrain	* As per the applicability area Indicator*: % of States that	67%	100%	Dec 2021	Safety/
B0/3	Warning (APW)	Egypt, Iran, Iraq, Jordan, Kuwait, Libya.	have implemented Area Proximity Warning (APW) for ACCs, as required				KPI 20
		Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Supporting metric: number of States that have Implemented Area Proximity Warning (APW) for ACCs, as required				
CADS			* As per the applicability area				
GADS		4.11.02		500	10071	D ana:	NT/4
GADS B1/2	Operational Control Directory	All States	Indicator: % of States that provided GADSS Point of Contact (PoC) information	/ 3%	100%	Dec 2021	N/A
			Supporting Metric: Number of States that provided GADSS Point of Contact (PoC) information				
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	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
RSEQ							
RSEQ B0/1	Arrival Management	OBBI, HECA, HEBA, HELX, HESN, HESN, 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 * As per the applicability area	36%	80%	Dec 2024	Capacity Efficiency/ KPI 08 KPI 10 KPI 11 KPI 14/
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	90%	100%	Dec 2021	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	61%	80%	Dec 2021	Safety/ KPI 20 KPI 21
SURF- B0/3	Initial ATCO alerting service for surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OERK, 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	74%	80%	Dec 2021	Safety/ KPI 20
ACDM		<u> </u>		<u> </u>			
ACDM B0/1	Airport CDM Information Sharing (ACIS)	HECA, OBBI, OIII, OKBK<u>OKKK</u>, OOMS, OTHH,	Indicator*: % of Airports having implemented ACIS Supporting metric: number of Airports having implemented ACIS	75%	90%	Dec 2024	N/A

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (20222023)	Target	Timeline	KPA/ KPI
ACDM B0/2	Integration with ATM Network function	OEJN, OERK, OMDB, OMAA HECA, OBBI, OIII,	* As per the applicability area Indicator*: % of Airports having integrated ACDM with the ATM Network	25%	50%	Dec 2024	N/A
		OKBKOKKK, OOMS, OTHH, OEIN, OERK, OMDB, OMAA.	function. Supporting metric: Number of Airports having integrated ACDM with the ATM Network function * As per the applicability area				
Techno	logy Threads						
ASUR							
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	(Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Qatar, Sudan	Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities <u>for</u> <u>provision of ATS</u> Supporting Metric: Number of States that have	60%	80%	Dec 2022	N/A
		UAE)	implemented ADS-B to improve surveillance coverage/capabilities <u>for</u> <u>provision of ATS</u>				
ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)	Bahrain, Egypt, Jordan, Kuwait, Oman, <u>Qatar,</u> Saudi Arabia, Qatar, UAE	 As per the applicability area 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 	63%	80%	Dec 2022	N/A
			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				
ASUR	Cooperative	Bahrain,	Indicator*: % of States that	83%	90%	Dec 2023	N/A 🔦
B0/3	Surveillance Radar	Egypt, Iran,	have implemented Downlink			202.12	

				-			KPA/
	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (<u>20222023</u>)	Target	Timeline	KPI
	Downlink of Aircraft Parameters (SSR-DAPS)	Iraq, Kuwait, Lebanon, Jordan, Oman, Qatar, Saudi Arabia, Sudan and UAE	of Aircraft Parameters (SSR- DAPS) Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR- DAPS)				
NAVS			As per the applicability area				
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- 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	40%	70%	Dec 2021	N/A ←
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	47%	70%	Dec 2022	N/A
сомі		T		1		1	
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	73%	90%	Dec 2020	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	60%	80%	Dec 2021	N/A

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Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline (<u>20222023</u>)	Target	Timeline	KPA/ KPI
		Supporting metric: Number of States that have established National IP Network for voice and data communication				

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RANP/NANP Task Force

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