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MID Region Air Navigation Strategy

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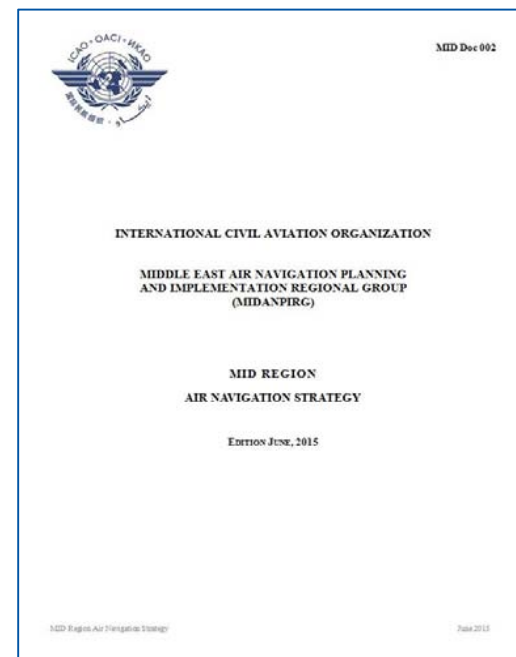
Outline

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- Strategy Main Objectives
- MID ASBU Block 0 Modules Prioritization
- Monitoring Mechanism



Background

- **The Strategy was endorsed by MSG/4 meeting (Cairo, 24-26 November 2014), based on the outcome of the relevant MIDANPIRG subsidiary bodies and inputs received from stakeholders.**
- **The Strategy was further reviewed and updated by MIDANPIRG/15 meeting, Bahrain, 8-11 June 2015, and endorsed as ICAO MID Doc 002, which is available on the MID Office website.**





Strategy Main Objectives

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) to:

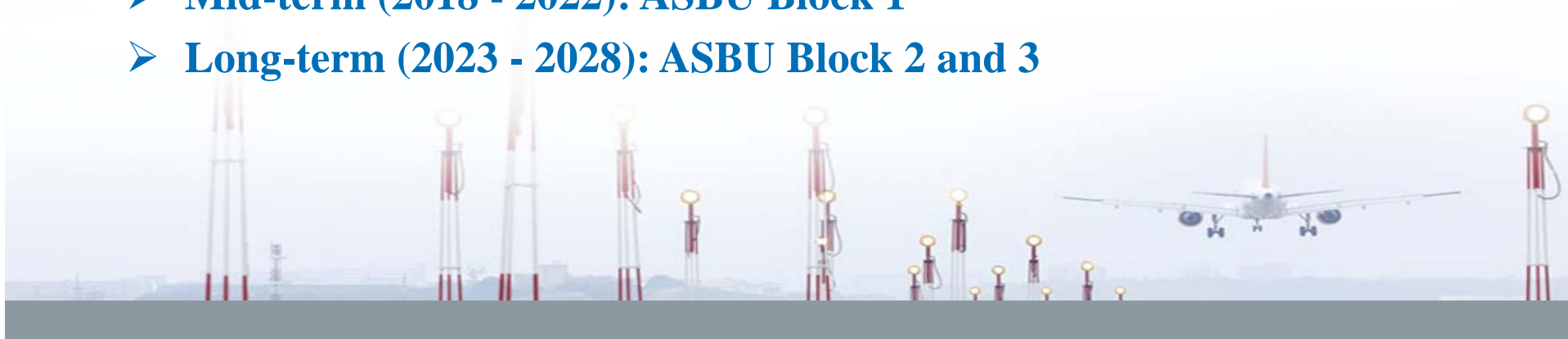
- realize sound and economically-viable civil aviation system in the MID Region that continuously increases in capacity and improves in efficiency with enhanced safety while minimizing the adverse environmental effects of civil aviation activities; and
- maintain regional harmonization.





The Strategy presents a 15 year rolling approach for the implementation of the ASBU Modules in the MID Region in accordance with GANP (2013-2028) as follows:

- **Near-term (2013 - 2017): ASBU Block 0**
- **Mid-term (2018 - 2022): ASBU Block 1**
- **Long-term (2023 - 2028): ASBU Block 2 and 3**





MID ASBU Block 0 Modules Prioritization

- **The MID Region Air Navigation Strategy includes 11 ASBU Block 0 Modules identified as priority for implementation in the MID Region.**

Note. States should develop their national performance framework, including action plans for the implementation of relevant priority 1 ASBU Modules and other modules according to the State operational requirements.





Performance Improvement Areas (PIA)	Module	Priority	Module Name
PIA 1: Airport Operations	APTA	1	Optimization of Approach Procedures including vertical guidance
	WAKE	2	Increased Runway Throughput through Optimized Wake Turbulence Separation
	RSEQ	2	Improved Traffic Flow through Sequencing (AMAN/DMAN)
	SURF	1	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)
	ACDM	1	Improved Airport Operations through Airport-CDM
PIA 2: Globally Interoperable Systems and Data - Through Globally Interoperable System Wide Information Management	FICE	1	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration
	DATM	1	Service Improvement through Digital Aeronautical Information Management
	AMET	1	Meteorological information supporting enhanced operational efficiency and safety
PIA 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM	FRTO	1	Improved Operations through Enhanced En-Route Trajectories
	NOPS	1	Improved Flow Performance through Planning based on a Network-Wide view
	ASUR	2	Initial Capability for Ground Surveillance
	ASEP	2	Air Traffic Situational Awareness (ATSA)
	OPFL	2	Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B
	ACAS	1	ACAS Improvements
	SNET	2	Increased Effectiveness of Ground-based Safety Nets
PIA 4: Efficient Flight Path – Through Trajectory- based Operations	CDO	1	Improved Flexibility and Efficiency in Descent Profiles (CDO)
	TBO	2	Improved Safety and Efficiency through the initial application of Data Link En-Route
	CCO	1	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)



MID ASBU Block 0 Modules Prioritization (Cont'd)

Performance Improvement Areas (PIA)	Module	Priority	Module Name
PIA 1: Airport Operations	APTA	1	Optimization of Approach Procedures including vertical guidance
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	SURF	1	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)
	ACDM	1	Improved Airport Operations through Airport-CDM
PIA 2: Globally Interoperable Systems and Data - Through Globally Interoperable System Wide Information Management	FICE	1	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration
	DATM	1	Service Improvement through Digital Aeronautical Information Management
	AMET	1	Meteorological information supporting enhanced operational efficiency and safety
PIA 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM	FRTO	1	Improved Operations through Enhanced En-Route Trajectories
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	TBO	2	Improved Safety and Efficiency through the initial application of Data Link En-Route
	CCO	1	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)



B0 – APTA: Optimization of Approach Procedures including vertical guidance			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
States' PBN Implementation Plans	All	Indicator: % of States that provided updated PBN implementation Plan	80 % by Dec. 2014
		Supporting metric: Number of States that provided updated PBN implementation Plan	100% by Dec. 2015
LNAV	All RWYs Ends at International Aerodromes	Indicator: % of runway ends at international aerodromes with RNAV(GNSS) Approach Procedures (LNAV) Supporting metric: Number of runway ends at international aerodromes with RNAV (GNSS) Approach Procedures (LNAV)	All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches by Dec. 2016
LNAV/VNAV	All RWYs ENDS at International Aerodromes	Indicator: % of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) Supporting metric: Number of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV)	All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches by Dec. 2017



B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
A-SMGCS Level 1*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 1 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 1	70% by Dec. 2017
A-SMGCS Level 2*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 2 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 2	50% by Dec. 2017

*Reference: Eurocontrol Document – “Definition of A-SMGCS Implementation Levels, Edition 1.2, 2010”



B0 – ACDM: Improved Airport Operations through Airport-CDM

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
A-CDM	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented improved airport operations through airport-CDM Supporting metric: Number of applicable international aerodromes having implemented improved airport operations through airport-CDM	40% by Dec. 2017



B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
AMHS capability	All States	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	70% of States with AMHS capability by Dec. 2017
AMHS implementation /interconnection	All States	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	60% of States with AMHS interconnected by Dec. 2017
Implementation of AIDC/OLDI between adjacent ACCs	All ACCs	Indicator: % of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with neighboring ACCs	70% by Dec. 2017



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MID ASBU Block 0 Modules Prioritization (Cont'd)

B0 – DATM: Service Improvement through Digital Aeronautical Information Management			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
1- National AIM Implementation Plan/Roadmap	All States	Indicator: % of States that have National AIM Implementation Plan/Roadmap	80% by Dec. 2016
		Supporting Metric: Number of States that have National AIM Implementation Plan/Roadmap	90% by Dec. 2018
2-AIXM	All States	Indicator: % of States that have implemented an AIXM-based AIS database	60% by Dec. 2015
		Supporting Metric: Number of States that have implemented an AIXM-based AIS database	80% by Dec. 2017 100% by Dec. 2019
3-eAIP	All States	Indicator: % of States that have implemented an IAID driven AIP Production (eAIP)	60% by Dec. 2016
		Supporting Metric: Number of States that have implemented an IAID driven AIP Production (eAIP)	80% by Dec. 2018 100% by Dec. 2020
4-QMS	All States	Indicator: % of States that have implemented QMS for AIS/AIM	70% by Dec. 2016
		Supporting Metric: Number of States that have implemented QMS for AIS/AIM	90% by Dec. 2018



B0 – DATM: Service Improvement through Digital Aeronautical Information Management			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
5-WGS-84	<i>All States</i>	Indicator: % of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Supporting Metric: Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD)	Horizontal: 100% by Dec. 2017
		Indicator: % of States that have implemented WGS-84 Geoid Undulation Supporting Metric: Number of States that have implemented WGS-84 Geoid Undulation	Vertical: 90% by Dec. 2018
6-eTOD	<i>All States</i>	Indicator: % of States that have implemented required Terrain datasets	Area 1 : Terrain: 50% by Dec. 2015, 70% by Dec. 2018 Obstacles: 40% by Dec. 2015, 60% by Dec. 2018
		Supporting Metric: Number of States that have implemented required Terrain datasets	
		Indicator: % of States that have implemented required Obstacle datasets	Area 4: Terrain: 50% by Dec. 2015, 100% by Dec. 2018 Obstacles: 50% by Dec. 2015, 100% by Dec. 2018
		Supporting Metric: Number of States that have implemented required Obstacle datasets	
7-Digital NOTAM*	<i>All States</i>	Indicator: % of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM	80% by Dec. 2016
		Supporting Metric: Number of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM	90% by Dec. 2018



B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
SADIS 2G and Secure SADIS FTP	All States	Indicator: % of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service	90% by Dec. 2015
		Supporting metric: number of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service	100% by Dec. 2017
QMS	All States	Indicator: % of States having implemented QMS for MET	60% by Dec. 2015
		Supporting metric: number of States having implemented QMS for MET	80% by Dec. 2017



B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories			
Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
Flexible use of airspace (FUA)	All States	Indicator: % of States that have implemented FUA	40% by Dec. 2017
		Supporting metric*: number of States that have implemented FUA	
Flexible routing	All States	Indicator: % of required Routes that are not implemented due to military restrictions (segregated areas)	60% by Dec. 2017
		Supporting metric 1: total number of ATS Routes in the Mid Region	
		Supporting metric 2*: number of required Routes that are not implemented due to military restrictions (segregated areas)	



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MID ASBU Block 0 Modules Prioritization (Cont'd)

B0 – NOPS: Improved Flow Performance through Planning based on a Network-Wide view

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
ATFM Measures implemented in collaborative manner	All States	Indicator: % of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision Supporting metric: number of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision	100% by Dec. 2017



B0 – ACAS: ACAS Improvements

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
Avionics	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	80% by Dec. 2015
		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	100% by Dec. 2016



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MID ASBU Block 0 Modules Prioritization
(Cont'd)

B0 – CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
PBN STARs	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with PBN STAR implemented as required.	100% by Dec. 2016 for the identified Aerodromes/TMAs
		Supporting Metric: Number of International Aerodromes/TMAs with PBN STAR implemented as required.	100% by Dec. 2018 for all the International Aerodromes/TMAs
International aerodromes/TMAs with CDO	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with CDO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CDO implemented as required.	100% by Dec. 2018 for the identified Aerodromes/TMAs



B0 – CCO: Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)

Elements	Applicability	Performance Indicators/Supporting Metrics	Targets
PBN SIDs	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with PBN SID implemented as required.	100% by Dec. 2016 for the identified Aerodromes/TMAs
		Supporting Metric: Number of International Aerodromes/ TMAs with PBN SID implemented as required.	100% by Dec. 2018 for all the International Aerodromes/TMAs
International aerodromes/TMAs with CCO	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with CCO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CCO implemented as required.	100% by Dec. 2018 for the identified Aerodromes/TMAs



Monitoring Mechanism

- Progress report on the status of implementation of the different priority 1 Modules should be developed by the Air Navigation System Implementation Group (ANSIG) and presented to the MIDANPIRG Steering Group (MSG) and/or MIDANPIRG on regular basis.
- The MIDANPIRG and its Steering Group (MSG) will be the governing body responsible for the review and update of the MID Region Air Navigation Strategy.
- The MID Region Air Navigation Strategy will guide the work of MIDANPIRG and its subsidiary bodies and all its member States and partners.





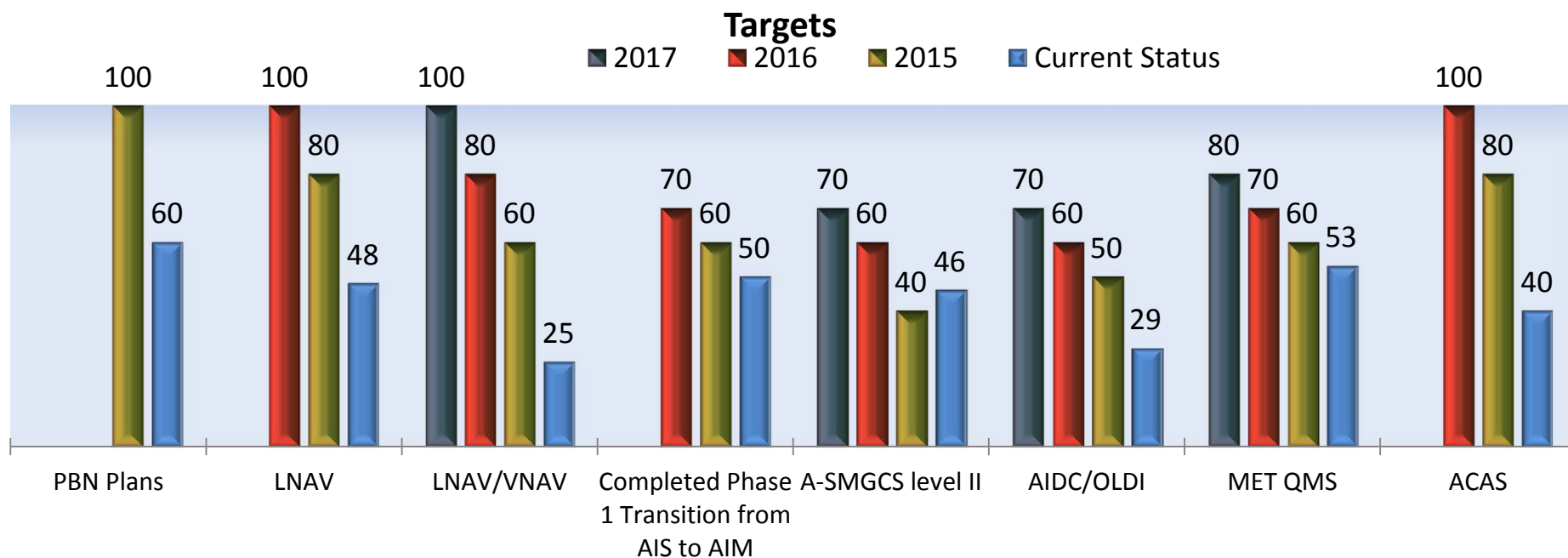
- **Progress on the implementation of the MID Region Air Navigation Strategy and the achievement of the agreed air navigation targets will be reported to the ICAO Air Navigation Commission (ANC), through the review of the MIDANPIRG reports; and to the stakeholders in the Region within the framework of MIDANPIRG.**
- **MIDANPIRG through its activities under the various subsidiary bodies will continue to update and monitor the implementation of the ASBU Modules and take necessary measures to achieve the air navigation targets.**
- **The monitoring tables are included in the MID eANP Volume III.**
- **The status of implementation is reflected also in the Regional Performance Dashboard.**



Module Code	Monitoring		Remarks
	Main	Supporting	
B0-APTA	PBN SG	ATM SG, AIM SG, CNS SG	
B0-SURF	ANSIG	CNS SG	Coordination with RGS WG
B0-ACDM	ANSIG	CNS SG, AIM SG, ATM SG	Coordination with RGS WG
B0-FICE	CNS SG	ATM SG	
B0-DATM	AIM SG	-	
B0-AMET	MET SG	-	
B0-FRTO	ATM SG		
B0-NOPS	ATM SG		
B0-ACAS	CNS SG		
B0-CDO	PBN SG		
B0-CCO	PBN SG		



Results as of June 2015





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