Seventh Meeting of the Aerodromes Safety, Planning and Implementation Group

ASPIG/7 (Riyadh, Saudi Arabia, 6-10 April 2025)

A-SMGCS Implementation in the MID Region

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Presentation Overview

01 ICAO Global Air navigation Plan (GANP)

02 Aviation System Block Upgrades (ASBUs)

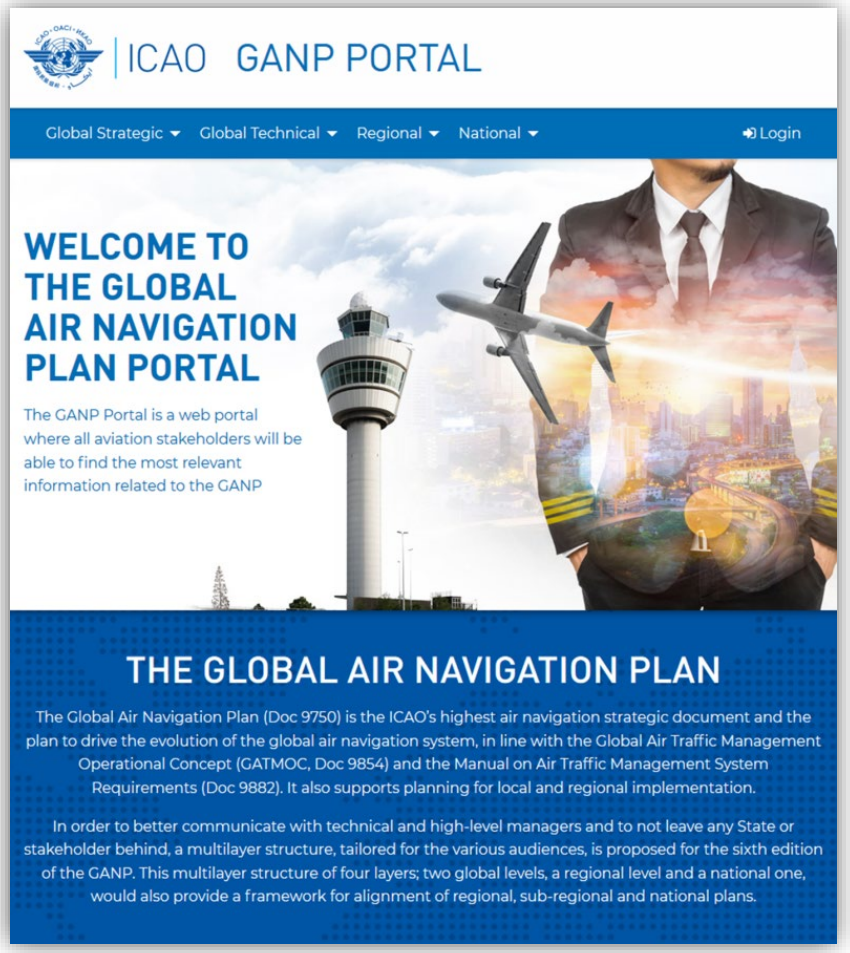
03 ASBUs AOP Threads : SURFACE OPERATIONS (SURF)

04 Action by the meeting

01

ICAO Global Air navigation Plan (GANP)

The GANP is an important planning tool for setting global priorities to drive the evolution of the global air navigation system and ensure that the vision of an integrated, harmonized, globally interoperable and seamless system becomes a reality.

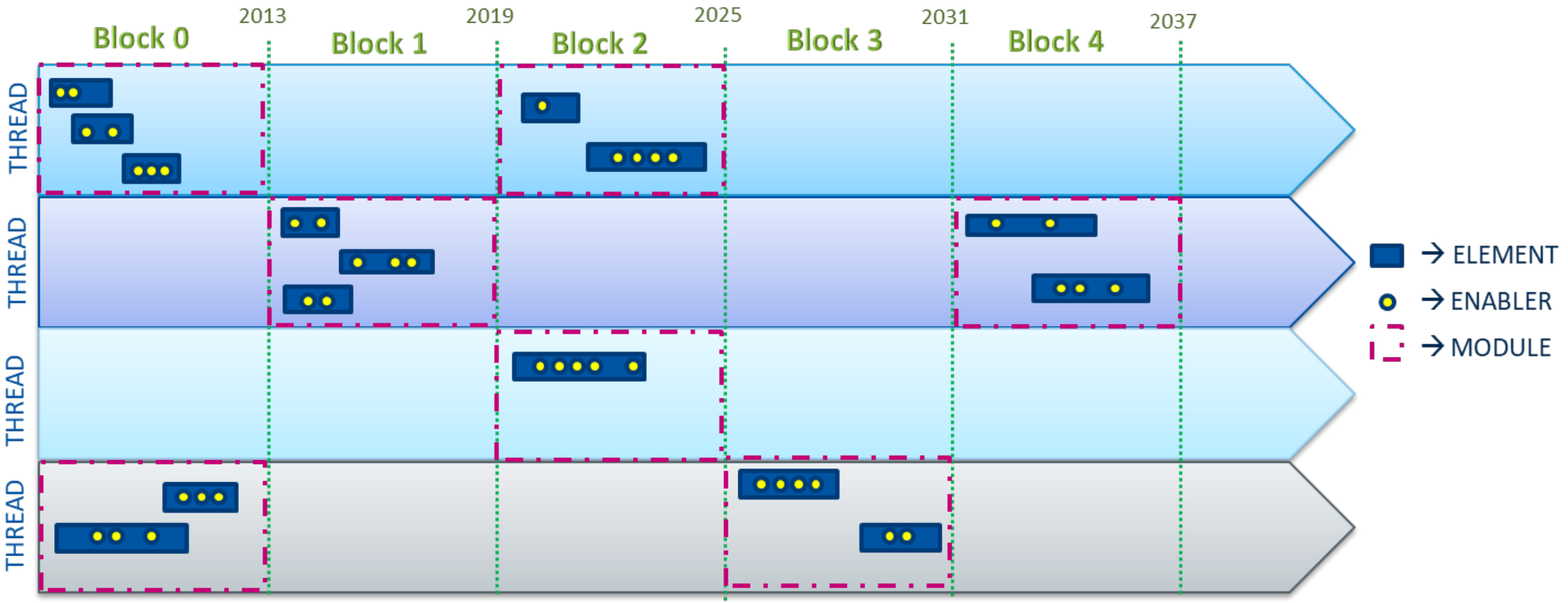


02

Aviation System Block Upgrades (ASBUs)

The Aviation System Block Upgrades (ASBUs) framework drives the evolution of the global air navigation system towards the achievement of the identified performance ambitions by defining operational improvements and associated performance benefits, derived from specific concepts of operations defined in the different evolutionary steps of the conceptual roadmap.

Aviation System Block Upgrades (ASBU) Framework



https://www4.icao.int/ganpportal/

ICAO Global Air Navigation Plan
ASBUs: AOP Threads

https://www4.icao.int/ganpportal

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03

ASBUs AOP Threads : SURFACE OPERATIONS (SURF)

SURF-B0/1	Basic ATCO tools to manage traffic during ground operations
SURF-B0/2	Comprehensive situational awareness of surface operations
SURF-B0/3	Initial ATCO alerting service for surface operations
SURF-B1/1	Advanced features using visual aids to support traffic management during ground operations
SURF-B1/2	Comprehensive pilot situational awareness on the airport surface
SURF-B1/3	Enhanced ATCO alerting service for surface operations
SURF-B1/4	Routing service to support ATCO surface operations management
SURF-B1/5	Enhanced vision systems for taxi operations
SURF-B2/1	Enhanced surface guidance for pilots and vehicle drivers
SURF-B2/2	Comprehensive vehicle driver situational awareness on the airport surface
SURF-B2/3	Conflict alerting for pilots for runway operations
SURF-B3/1	Optimization of surface traffic management in complex situations

Correlation with Appendix A

06

Action by the meeting:

The meeting may wish to agree on the following Draft Conclusion:

DRAFT CONCLUSION 7/11: A-SMGCS IMPLEMENTATION IN THE MID REGION

That, That, with reference to the Table of Implementation Dependencies between A-SMGCS Services and Functions at ***Appendix A****, States be urged to provide the ICAO MID Office, by the* ***by Q3 of the current Year****, with updated information on the progress of A-SMGCS deployment plans at airports included in the RANP Applicability Area, using the reporting template provided at* ***Appendix B,*** *as confirmed by the concerned airport operators.*

Thank You!

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Implementation Dependencies between the A-SMGCS Services and Functions

A-SMGCS Services	ICAO GANP SURF Thread (corresponding Element)	A-SMGCS Components	Services/Functions Required ✓							
			Surveillance	RMCA	CATC	CMAC	Routing	Automated Switching of	Automated Switching of	Automated Activation A-VDGS
Surveillance	SURF – B0/2	Surveillance	⚙							(✓)
Airport Safety Support Service	SURF – B0/3	RMCA	✓	⚙						
	SURF – B1/3	CATC	✓		⚙		(✓)			
		CMAC	✓			⚙	(✓)			
Routing Service	SURF – B1/4	Routing	✓				⚙			
Guidance Service	SURF – B2/1	Automated Switching of TCL	✓				✓	⚙		(✓)
		Automated Switching of Stop Bars	✓				✓		⚙	
	-	Automated Activation of A-VDGS	(✓)							⚙

Note 1: *The highlighted cells* ⚙ *indicates that* ***an ECI technical enabler is required***.

Note 2: *The symbol* (✓) *denotes* ***Optional***

Implementation Dependencies between the A-SMGCS Services and Functions

Acronyms / Descriptions:

- ***Automated Switching of TCL*** *: Automated Switching of Taxiway Centreline Lights (TCL). This Function provides individual guidance information to any mobile which has a cleared route. This is also known as Follow the Greens (FtG).*
- ***Automated Switching of Stop Bars*** *: This function provides the capability to switch off and on stop bars (some stop bars after being turned off are automatically turned back on after a specified time or when activated by sensors) following a Clearance input by the Controller. They can either be placed at a RWY Holding Position (as already in use at many airports) or across a taxiway.*
- ***Automated Activation of A-VDGS*** *: Automated Activation of Advanced-Visual Docking Guidance Systems (A-VDGS).This Function:*
  - *shall switch on the A-VDGS of an unoccupied assigned stand when the position of the mobile is D metres or T seconds away from the stand.*
  - *may be used to enhance the Surveillance Service for mobiles approaching the stand*
  - *should provide the Actual In/Off Block Time (AIBT/AOBT) and stand status to external systems*
- ***CATC*** *: Conflicting ATC Clearances (CATC)*
- ***CMAC*** *: Conformance Monitoring Alerts for Controllers (CMAC)*
- ***ECI*** *: Electronic Clearance Input*
- ***RMCA*** *: Runway Monitoring and Conflict Alerting (RMCA)*

ICAO Region	State	Location name	Location indicator (ICAO code)	Visual Aids and Signals (1=Yes, 0=No)	Surveillance (1=Yes, 0=No)	RNAV& (1=Yes, 0=No)	CATC (1=Yes, 0=No)	CNAC (1=Yes, 0=No)	Routing (1=Yes, 0=No)	Automated Switching of TCL (1=Yes, 0=No)	Automated Switching of Stop Bars (1=Yes, 0=No)	Automated Activation of A-VDGS (1=Yes, 0=No)
MID	QATAR	HAMAD INTERNATIONAL	OTHH									
MID	QATAR	DOHA INTERNATIONAL	OTBD									