International Civil Aviation Organization

MIDANPIRG/22 & RASG-MID/12 Meetings

(Doha, Qatar, 4 – 8 May 2025)

Agenda Item 5.3 ANS (AIM, PBN, AGA-AOP, ATM-SAR, CNS and MET)

OUTCOMES OF THE ASPIG/7 MEETING

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the Seventh Aerodromes Safety Planning and Implementation Group (ASPIG/7) Meeting dealing with Aerodromes Design and Operations matters.

Action by the meeting is at paragraph 3.

REFERENCE

- MIDANPIRG/21_RASG-MID/12 Report
- ASPIG/7 Report

1. INTRODUCTION

1.1 The Seventh Aerodromes Safety Planning and Implementation Group (ASPIG/7) Meeting was successfully held in Riyadh, Saudi Arabia, from 6 to 10 April 2025. The Meeting was gratefully hosted by the General Authority of Civil Aviation (GACA) of Saudi Arabia.

1.2 The Seventh Meeting of the Aerodrome Safety, Planning and Implementation Group (ASPIG/7) was attended by a total of fifty-three (53) in-person participants from seven (7) States (Bahrain, Egypt, Iraq, Jordan, Oman, Saudi Arabia, and Yemen) and Ten (10) online participants from four (4) States (Kuwait, Qatar, Sudan and Syria) and supported by five (5) International Organizations (ACI, CANSO, Eurocontrol, IATA, IFALPA, and WBA).

1.3 This meeting marked a vital milestone in MID States collective efforts to enhance aerodrome safety and planning, strengthen regional implementation, and align AGA activities with the Global/Regional Aviation Safety Plan (GASP) and the Global/Regional Air Navigation Plan (GANP).

2. DISCUSSION

2.1 The ASPIG/7 meeting addressed the following topics.

Follow-up on Regional Capacity and Efficiency Initiatives

2.2 The meeting reviewed the implementation status of the previously endorsed Conclusions related to aerodrome capacity and efficiency, as outlined in **Appendix A.**

Basic Building Block (BBB) Framework for Airport Operations

2.3 The meeting was briefed on the structure of the ICAO Global Air Navigation Plan (GANP), with emphasis on the Basic Building Block (BBB) Framework for Airport Operations, which covers Aerodrome Design and Operations.

2.4 It was noted that the BBB provides a foundational set of essential services distinct from the ASBU framework, serving as the minimum operational standard required by ICAO for the safe and orderly development of international civil aviation.

2.5 The meeting encouraged States to strengthen the capacity of their aerodrome-related technical personnel, particularly inspectors and airport operator staff, to support effective BBB implementation. In this regard, a revised conclusion was agreed upon to replace the PIRG-RASG Conclusion 1/2 and be submitted to MIDANPIRG/22 for endorsement:

WHY	To support the effective implementation of the Basic Building Block (BBB) Framework for Airport Operations across the MID Region.
WHAT	States' capacity building needs for AGA inspectors and airport operator technical personnel to be submitted to the ICAO MID Office using **Appendix B**
WHO	States
WHEN	By the third quarter (Q3) of the current year

MIDANPIRG DRAFT CONCLUSION 12/XX: STRENGTHENING CAPACITY BUILDING FOR BBB IMPLEMENTATION IN THE MID REGION

That, in order to support the effective implementation of the Basic Building Block (BBB) Framework for Airport Operations, States are urged to provide the ICAO MID Office, ***by the third quarter (Q3) of the current year****, with information on their capacity building needs for AGA inspectors and airport operator technical personnel, using the standardized template provided in* ***Appendix B****.*

ASBU Operational Threads: Surface Operations (SURF)

2.6 The meeting reviewed the current status and planning framework for the implementation of Advanced Surface Movement Guidance and Control Systems (A-SMGCS) in the MID Region, in alignment with the Surface (SURF) thread of the ICAO ASBU framework, as outlined in the Global Air Navigation Plan (GANP).

2.7 It was noted that A-SMGCS is essential for enhancing the safety and efficiency of surface operations, particularly in conditions of low visibility and high traffic density, through capabilities such as surveillance, conflict detection, routing, and visual guidance.

2.8 The meeting was apprised of the implementation dependencies between A-SMGCS services and functions, as detailed in **Appendix C**, highlighting the need for progressive and coordinated deployment across key components such as Surveillance, RMCA, CATC, CMAC, Routing, and automated visual guidance.

2.9 To support structured implementation and monitoring, the meeting emphasized the importance of timely deployment and noted that a dedicated reporting template provided in **Appendix D** was made available to States for planning purposes.

2.10 The meeting acknowledged that comprehensive and harmonized reporting of A-SMGCS deployment plans is essential for enabling the ICAO MID Office to deliver targeted support and conduct effective regional performance assessments. To reinforce this strategic objective and outcome-oriented approach, a draft conclusion was agreed upon for submission to MIDANPIRG/22 for endorsement:

WHY	To support the progressive implementation of A-SMGCS services in alignment with the ASBU Surface (SURF) thread and enhance monitoring and planning at the regional level.
WHAT	Updated information on the status of A-SMGCS deployment plans at aerodromes listed in the MID ANP Applicability Area, validated by airport operators, using the reporting template in **Appendix D**.
WHO	States (in coordination with the concerned airport operators)
WHEN	By the third quarter (Q3) of the current year

MIDANPIRG DRAFT CONCLUSION 12/XX: MONITORING THE IMPLEMENTATION OF ADVANCED SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS (A-SMGCS) IN THE MID REGION

That, in support of the progressive implementation of A-SMGCS services aligned with the ASBU Surface (SURF) thread, States are urged to provide the ICAO MID Office, ***by the third quarter (Q3) of the current year****, with updated information on the status of A-SMGCS deployment plans at aerodromes listed in the RANP Applicability Area, using the reporting template provided* ***in Appendix D****. The information should be validated by the concerned airport operators and should consider the implementation dependencies outlined in* ***Appendix C****.*

ASBU Operational Threads: Airport Collaborative Decision Making (ACDM)

2.11 The meeting reviewed the current status of Airport Collaborative Decision-Making (A-CDM) implementation across the MID Region and discussed potential frameworks to support its further rollout and performance monitoring.

2.12 The meeting emphasized the importance of utilizing harmonized planning tools to ensure consistency in A-CDM implementation tracking, specifically referencing the action milestones outlined in **Appendix E** and the monitoring template provided in **Appendix F**. Accordingly, a draft conclusion was agreed upon for submission to MIDANPIRG/22 for endorsement:

WHY	To monitor the progress of A-CDM implementation across the MID Region and ensure alignment with the milestones outlined in the A-CDM Planning and Implementation Framework.
WHAT	Submission of the status of A-CDM Deployment Plans, confirmed by aerodromes listed in the RANP applicability area, using the standard reporting template provided in **Appendix F**.
WHO	States, in coordination with concerned aerodrome operators
WHEN	By the third quarter (Q3) of the current year

MIDANPIRG DRAFT CONCLUSION 12/XX: MONITORING A-CDM IMPLEMENTATION PROGRESS IN THE MID REGION

That, with reference to the A-CDM Planning and Implementation Milestones presented in ***Appendix E****, States are urged to submit,* ***by the third quarter (Q3) of the current year****, the status of their A-CDM Deployment Plans to the ICAO MID Office, as confirmed by aerodromes listed in the*

*Regional Air Navigation Plan (RANP) applicability area, using the standard reporting template provided in **Appendix F**.*

2.13 The meeting recalled that A-CDM is a cross-functional, performance-based concept that promotes real-time information sharing and operational collaboration among airport operators, air navigation service providers, ground handlers, and air carriers. Its implementation is vital to optimizing airport operations, minimizing delays, and enhancing capacity and efficiency.

2.14 The meeting noted that although MIDANPIRG/21 and RASG-MID/11 had endorsed the establishment of a dedicated MID A-CDM Task Force (ACDM-TF), concerns were raised regarding the growing number of subsidiary bodies under MIDANPIRG. As a more streamlined alternative, the meeting considered the establishment of a flexible and agile AOP Thread Go-Team.

2.15 The proposed AOP Go-Team was highlighted as a pragmatic and resource-efficient solution, capable of delivering tailored technical assistance to States and airports, supporting A-CDM implementation, and ensuring alignment with ICAO's A-CDM methodology and regional priorities. The team would also monitor the performance and maturity of existing A-CDM systems, including during adverse operational conditions.

2.16 The meeting was convinced that the deployment of an AOP Go-Team offers a more effective approach than forming a permanent Task Force. It reduces administrative burden, accelerates implementation timelines, and enables integration with other airport operational threads, such as A-SMGCS, without necessitating additional structural layers within the regional framework. Accordingly, a draft conclusion was agreed upon for submission to MIDANPIRG/22 for endorsement:

WHY	To support the establishment and assess the operational performance of AOP Threads, including A-CDM and A-SMGCS, at selected aerodromes within the MID ANP applicability area.
WHAT	States are to confirm their acceptance of ICAO AOP Go-Team missions and facilitate coordination and logistical arrangements, following formal notification from the ICAO MID Office regarding the selected aerodromes.
WHO	Concerned States, in close coordination with the designated aerodrome operators
WHEN	By the third quarter (Q3) of the current year

MIDANPIRG DRAFT CONCLUSION 12/XX: FACILITATION OF ICAO AOP GO-TEAM MISSIONS FOR A-CDM AND A-SMGCS

*That, in order to support the establishment and assess the operational performance of Airport Operational Threads including A-CDM and A-SMGCS systems, at selected aerodromes defined at the MID ANP applicability Area, concerned States be urged to confirm, **by the third quarter (Q3) of the current year**, their acceptance of ICAO AOP Go-Team missions. This confirmation should follow the formal notification from the ICAO MID Office regarding the aerodromes selected for support. States are further encouraged to facilitate the coordination and logistical arrangements required to enable these missions, in close collaboration with the designated aerodrome operators.*

ICAO GANP / RANP & MID States NANP Matters

Outcomes of the RANP-NANP TF/2 Meeting

2.17 The meeting was briefed on the outcomes of the Second Meeting of the Regional Air Navigation Plan and National Air Navigation Plan Task Force (RANP-NANP TF/2), with a particular focus on aligning national implementation priorities with regional planning objectives.

2.18 The meeting acknowledged that RANP-NANP TF/2 served as a key platform for

harmonizing State-level initiatives with the MID Region Air Navigation Plan (MID ANP), thereby ensuring consistency in planning, monitoring, and reporting of air navigation implementation activities.

2.19 The meeting took note of the practical recommendations and decisions stemming from RANP-NANP TF/2, which underscored the need to:

- Ensure regular updates and alignment between National Air Navigation Plans (NANPs) and the MID ANP;
- Monitor the progress of key infrastructure and operational threads through structured reporting mechanisms;
- Improve the integration of ASBU modules, ensuring that national plans include realistic and measurable targets;
- Encourage States to designate focal points for each ASBU thread and provide implementation status using ICAO-provided templates; and
- Strengthen coordination between civil aviation authorities and air navigation service providers.

2.20 The meeting further highlighted the importance of closing the gap between planning and implementation by reinforcing the role of the ICAO MID Office in tracking progress and offering targeted guidance to States. Enhanced coordination mechanisms were recognized as essential for maintaining momentum in ASBU-related deployments, particularly within AOP Threads.

2.21 The meeting encouraged States to institutionalize regular reviews of their NANPs to maintain alignment with the MID ANP and the ASBU planning framework. States were also urged to identify ASBU thread focal points and report implementation data using standardized ICAO templates to support regional monitoring and performance assessment.

Seamless Operation Program in the Kingdom of Saudi Arabia

2.22 The meeting was briefed on the Seamless Operation Program, a national initiative aimed at transforming airport operations at four major international airports in the Kingdom of Saudi Arabia—Riyadh, Jeddah, Dammam, and Madinah. The Program is aligned with Vision 2030 and the Saudi National Aviation Strategy and seeks to deliver measurable improvements in efficiency, predictability, and sustainability.

2.23 The meeting noted that the Seamless Operation Program is a comprehensive, multi-stakeholder initiative involving 296 targeted actions, 25 entities, and 36 working groups. Through integrated governance and digital transformation—including real-time data sharing, predictive analytics, and collaborative decision-making platforms—the Program enhances performance across key operational domains such as aircraft flow, airfield efficiency, and service integration.

2.24 The Program is structured around three core pillars:

(1) unification of aviation stakeholders;
(2) establishing a global benchmark in airport operations; and
(3) driving operational transformation across airports, airlines, ground handlers, and ANSPs.

2.25 The meeting recognized the Program's high-impact enablers, including A-CDM deployment enhanced by AI-based predictive tools, airspace optimization through the Saudi Future Airspace Concept, and the automation of operational processes. These innovations support improved aircraft flow management, enhanced turnaround predictability, and a reduction in delays.

2.26 The meeting also noted the five-year performance framework underpinning the Program, guided by eight core KPIs that track runway capacity, taxi times, on-time performance, turnaround adherence, and gate punctuality—ensuring a data-driven, results-oriented approach.

2.27 The Program's success at Riyadh and Jeddah airports has led to its expansion to Dammam and Madinah airports, with ongoing efforts to integrate additional operational domains, including baggage and cargo flows.

2.28 The meeting encouraged States to consider the Seamless Operation Program as a model for airport system transformation, highlighting the benefits of multi-stakeholder coordination, performance-based planning, and technology integration. Saudi Arabia's experience demonstrates how aligning national strategies with ICAO frameworks, supported by structured KPIs, can achieve sustainable improvements in airport capacity and operational efficiency.

Use of Alphanumeric Callsigns to Reduce Callsign Confusion

2.29 The meeting was informed of the safety risks associated with callsign confusion and the benefits of adopting alphanumeric callsigns, as presented by ACI on behalf of CANSO, IATA, and UAE. The use of alphanumeric callsigns was highlighted as an effective mitigation measure, particularly in reducing risks linked to runway incursions and communication errors.

2.30 The meeting noted that callsign confusion, especially when aircraft operate with similar or identical flight numbers, poses a significant safety concern both in flight and on the ground. Such occurrences may lead to miscommunication between ATC and flight crews, incorrect aircraft movements during taxiing, and delayed or erroneous responses to instructions.

2.31 The meeting acknowledged that callsign confusion is a documented contributing factor to the Global High-Risk Categories of Occurrence (G-HRCs), such as runway incursions, as outlined in ICAO Doc 10004 (Global Aviation Safety Plan 2026–2028). Alphanumeric callsigns enhance the clarity and uniqueness of aircraft identifiers, thus mitigating this risk.

2.32 The meeting recalled regional initiatives, including MIDANPIRG Conclusion 15/2 and its related actions, which urged States to de-conflict similar callsigns and report related events. However, implementation remains limited in many States due to awareness and system capability gaps.

2.33 The meeting was informed of successful implementation examples by some operators, demonstrating how stakeholder collaboration, among ANSPs, airlines, and airport operators, has contributed to the effective adoption of alphanumeric callsigns and reduction in callsign similarity.

2.34 The meeting encouraged States to promote the use of alphanumeric callsigns as a proactive safety measure and to consider incorporating relevant actions into their National Aviation Navigation/Safety Plans, as appropriate.

3. ACTION BY THE MEETING

3.1 The meeting is invited to endorse the proposed Draft Conclusions outlined in the following paragraphs:

- 2.5 – Strengthening Capacity Building for BBBs Implementation in the MID Region;
- 2.10 – Monitoring the Implementation of Advanced Surface Movement Guidance and Control Systems (A-SMGCS);
- 2.12 – Monitoring A-CDM Implementation Progress in the MID Region; and
- 2.16 – Facilitation of ICAO AOP Go-Team Missions for A-CDM and A-SMGCS;

Conclusion ID #	conclusions and decisions	Why: concerns/challenges/rationale	deliverables		When: Deadline	Last Revised Deadline	Drafted by	Endorsed by	status	Date of completion	Actions required by the State	States that didn't reply/take action yet	Remarks
			What: item(s)	Who: responsible									
CAPACITY & EFFICIENCY													
MIDANPIRG C 18/24	**STATES NEEDS FOR THE BBB-AOP IMPLEMENTATION**								**Ongoing**				
	That, in order to support the implementation of the BBB for Airport Operations and prioritize the necessary technical assistance in line with the MID Region NCLB Strategy: a) States requiring assistance are urged to provide the ICAO MID Office, by March 2021, with their Needs for the BBB-AOP Implementation using the Table at **Appendix 5.2J**; and b) States and stakeholders having the required experience and expertise are encouraged to volunteer to joint efforts with ICAO for the provision of necessary technical assistance.	Monitor the MID States BBB-AOP Implementation needs	Survey on MID States BBB-AOP Implementation needs	States	Mar-20	18-Aug-21	ASPIG/2	MIDANPIRG/18		**Action condcution on yearly basis**	Complete the Questionnaire on MID States BBB-AOP Implementation needs	Libya, Oman, and Yemen	(Revised Date: due to the Pandemic Crisis the deadline has been extended to 2021)
MIDANPIRG C 18/25	**AIRPORT PLANNING SEMINAR**								**Completed**				
	That, ICAO organize an Airport Planning Seminar in 2022 and States are encouraged to participate actively in this event.	Prepare States to the upcoming requirements on Airport Master plan	Airport Planning Seminar	ICAO	Dec-22		ASPIG/2	MIDANPIRG/18		15-Sep-22	Participation to the event		At the Draft stage: This conclusion amended the DRAFT CONCLUSION 1/8: AIRPORT PLANNING SEMINAR (ref: ASPIG/1 Meeting Report)
MIDANPIRG C 18/26	**A-SMGCS IMPLEMENTATION SEMINAR**								**Completed**				
	That, a) ICAO organize an A-SMGCS Implementation Seminar/Workshop in 2021- 2022; and b) States are encouraged to participate actively in this event.	Ensure proper Implementation of the A-SMGCS on Aerodromes as part of the ASBU Block 0 SURF module of the GANP 6th Edition	A-SMGCS Implementation Seminar/Webinar	ICAO	Dec-22		ASPIG/2	MIDANPIRG/18		1-Feb-23	Participation to the event		At the Draft stage: This conclusion amended the DRAFT CONCLUSION 1/7: A-SMGCS IMPLEMENTATION SEMINAR (ref: ASPIG/1 Meeting Report)
MIDANPIRG C 18/27	**MID REGION ACDM IMPLEMENTATION PLAN**								**Ongoing**				
	MID REGION ACDM IMPLEMENTATION PLAN That, by March 2021, concerned States (according to the applicability area included in the MID Region Air Navigation Strategy) be urged to: a) provide the ICAO MID Office with the contact details of their designated National ACDM Implementation Focal Points; and b) populate the Questionnaire on ACDM Implementation Plan, using the template at **Appendix 5.2K**.	Ensure proper implementation of the ASBU Block 0 ACDM module of the GANP 6th Edition	List of MID States ACDM focal points & Survey on ACDM Implementation Plan	States	Mar-21	18-Aug-21	ASPIG/2	MIDANPIR/18			Provide State's ACDM focal Point & complete the Questionnaire on the State's ACDM Implementation Plan		**Important Note : States concerned by this conclusion are : BAHRAIN, EGYPT, IRAN, KUWAIT, OMAN, QATAR, SAUDI ARABIA & UAE as agreed and defined on the MID eANP**
PIRG-RASG D 3/3	**ESTABLISHMENT OF THE MID REGION ACDM TASK FORCE (MID ACDM-TF)**								**Completed**				
	That, the MID Region Airport Collaborative Decision-Making Task Force (MID ACDM-TF) be established, subject to review and confirmation of ASPG/6, in accordance with the Terms of Reference at **Appendix 2A.**	Establish an interface between the Airports, the CAAs and ICAO MID Office to ensure the proper implementation of the ACDM	ACDM TF ToRs	States	Mar-24		ASPIG/5	MIDANPIG/21 RASG/11			Endorsed		**Pending ToRs confirmation by the ASPIG/6**

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)*

Appendix D

ICAO Region	State	Location name	Location Indicator (ICAO code)	Visual Aids and Signals (1=Yes, 0=No)	Surveillance (1=Yes, 0=No)	RNAV6 (1=Yes, 0=No)	CATC (1=Yes, 0=No)	CMAC (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									

Action Milestones

for the MID ACDM Planning and Implementation

State/: _ _ _ _ _ _ _ _ _ _ _ _ _ _

State ACDM Focal Point Name/email: _ _ _ _ _ _ _ _ _ _ _ _ _ _

Approach to implementation

1. **Is the A-CDM implementation a national program/project or a local airport by airport project?** *(Please select the applicable box)*

It is a national program where A-CDM is being implemented at several airports with one entity managing the overall program to facilitate common procedures and approach to the implementations	
It is an "airport-by-airport" approach where each project is managed at "local" level	
It is a combination of a national program and separate airport projects manager at "local" level	
There is not yet an implementation plan for A-CDM	

Please add free text comments if needed:

2. **If A-CDM has been/is Implemented / going to be implemented, please indicate at which airports and by what year:**

Airport	Year

Add additional lines as needed

For EACH airport mentioned above, please provide separate responses to QUESTIONS 3 to 22:

A-CDM Implementation Plan

Status of A-CDM implementation

3. **In which of the following phases is the A-CDM implementation?**
   (Please select the box that is the most suitable option)

No planning, i.e. nothing in relation to A-CDM has started yet	
Initial planning, i.e. collecting information about guidance material etc. to set the scope of the projects	
Planning well underway, i.e. scope set, engaged with stakeholders etc.	
Ready to launch A-CDM implementation project	
A-CDM implemented, i.e. procedures are in place and used in the "day-to-day" operations (Please indicate number of years for A-CDM used in day-to-day operations.	

A-CDM Project Scope

4. **Which one of the A-CDM conceptual elements are being implemented as part of the A-CDM** project? (*Please select the applicable box(es))*

Information sharing	
Milestone Management	
Variable Taxi Times	
Collaborative Management of Flight Updates	
Pre Departure Sequencing	
A-CDM in adverse conditions	
Integration with Air Traffic Flow Management (ATFM)	

Please add free text comments if needed:

5. **How is Information sharing implemented as par to the solution/planned A-CDM solution?**
   (*Please select the applicable box(es))*

Via Information Sharing platform collecting data in real-time from various systems.	
Via manual interaction and information exchange	
A combination of the two alternatives above	

Please add free text comments if needed:

6. **What Milestones (based on the Eurocontrol model) are captured/planned to be captured for the Milestone Management?** *(Please select the applicable box(es) and please indicate if the implementation/planned implementation uses any other names for the milestones)*

Eurocontrol Milestones	Applied	Alternative name
Milestone 1 - ATC Flight Plan Activated		
Milestone 2 - CTOT Allocation/EOBT – 2 Hrs		

Milestone 3 - Take off from Outstation		
Milestone 4 - Local Radar Update/FIR Entry		
Milestone 5 - Final Approach		
Milestone 6 - Landed		
Milestone 7 - In Block		
Milestone 8 - Aircraft at Gate		
Milestone 9 - TOBT Entered		
Milestone 10 - TSAT Issued		
Milestone 11 - Boarding Starts		
Milestone 12 - Aircraft Ready		
Milestone 13 - Start-up Request		
Milestone 14 - Start-up Approved		
Milestone 15 - Off Block		
Milestone 16 - Take Off		

Please add free text comments if needed:

7. Are you planning to apply the concept of Target Off Block Times?

(Please select the applicable box)

No	
Yes, and this will be the responsibility of the Airlines and/or appointed Ground Handlers to manage and update the Target Off Block Times (TOBT) in order to ensure that TOBT is accurate and reliable.	

a. If yes, will the project provide a solution that facilitates predictive TOBT calculations? *(Please select the applicable box)*

No	
Yes	

8. What methodology is applied/going to be applied for calculating Variable Taxi Time?

(Please select the applicable box)

"Table look up" utilizing fixed taxi time from gates to runways.	
Dynamic Variable Taxi Time using self-learning algorithms based on real-time and statistical surveillance data	

9. How is Target Start-Up Approval Time (TSAT) being calculated as part of Pre-Departure Sequencing?

(Please select the applicable box)

Manual TSAT calculations	
Automatic TSAT calculations utilizing a Pre Departure Sequence or full Departure Management system/capability	

a. If TSAT Is calculated automatically, at what key milestones are the TSAT calculated/re-calculated? *(Please select the applicable box(es))*

Milestone 1 - ATC Flight Plan Activated	
Milestone 2 - CTOT Allocation/EOBT – 2 Hrs	

Milestone 3 - Take off from Outstation	
Milestone 4 - Local Radar Update/FIR Entry	
Milestone 5 - Final Approach	
Milestone 6 - Landed	
Milestone 7 - In Block	
Milestone 8 - Aircraft at Gate	
Milestone 9 - TOBT Entered	
Milestone 10 - TSAT Issued	
Milestone 11 - Boarding Starts	

10. **How TSAT information is shared to Airlines operators/Ground Handling Agencies?**

(Please select the applicable box(es))

Via A-CDM portal/web interface/application	
Via mobile application	
Via Automatic Parking Aid displays at gate	
Data link	
Radio communication	

11. **What are the key parameters for data exchange between ACDM and ATFM?**
(Please specify in free text in the text box)

12. **To establish the A-CDM project, has any guidance material been used to facilitate the scope and objectives?**
(Please select the applicable box)

Yes	
No	

a. If yes, please indicate what guidance material has been used. *(Please select the applicable box(es))*

ICAO Doc 9971	
Eurocontrol A-CDM Manual	
CANSO A-CDM Guidance Material	
FAA Surface CDM material	
IATA Guidance material	
Specific airport “operational guidelines” materials	
Other material like Eurocae or ETSI standards for A-CDM (*Please specify)*	

Please add free text comments if needed:

Local Concept of Operations

13. **Has a “Local Concept of Operations” document for the A-CDM implementation been established?**
(Please select the applicable box)

Yes	
No	

a. If yes, please indicate the scope of the document. *(Please select the applicable box(es))*

It sets out the objectives that A-CDM is aiming to achieve	
It provides a common vocabulary with all definitions for A-CDM	
It provides information about information sharing and the sources for the information collected	
It provides information about the milestones used in the A-CDM process	
It defines each participating stakeholder's role and responsibilities as part of the A-CDM process	
It provides how A-CDM shall operate during irregular operations	
It provides descriptions of the process steps for various regular and irregular operations	
It includes how to measure the success of A-CDM once implemented, i.e. Key Performance Indicators (KPIs)	

Please add free text comments if needed:

Stakeholder Engagement

14. Which stakeholders are involved in the A-CDM implementation?
(Please select the applicable box(es))

Airport operator	
Airline operators	
Ground handlers	
Air Navigation Service Provider	
Network Operations/ATFM unit	
Others (*Please specify)*	

15. Has a Memorandum of Understanding (MOU) been established between the stakeholders?
(Please select the applicable box)

Yes	
No	

Please add free text comments if needed:

Project Implementation

16. Has a project group been established with all stakeholders involved?
(Please select the applicable box)

Yes	
No	

Please add free text comments if needed:

17. Is there a shared leadership or is the project management led by one organization?
(*Please select the applicable box)*

Shared leadership	

Leadership is appointed from one organization	

a. Please explain why one of the options is applied:

18. Is the project group meeting held on a regular basis or ad-hoc?
(*Please select the applicable box)*

Regular	
Ad-hoc	

a. Please explain why one of the options is applied:

19. What are the objectives identified in the project that A-CDM is aiming to achieve?
(Please select the applicable box(es))

Increase predictability	
Increase on-time performance	
Improve resource utilization	
Reduce taxi times	
Increase airport efficiency	
Reduce environmental nuisance	
Optimise the use of available capacity	
Improved safety	
Other *(please indicate what other objectives are identified in box below)*	

Please add free text comments if needed:

20. Has the project identified a more detailed Key Performance Framework with Key Performance Indicators to facilitate the measurements of the A-CDM implementation?
(Please select the applicable box)

Yes	
No	

a. If yes, would the project team be willing to share this work with the ICAO Regional officer for Aerodromes and Ground Aids (AGA) to aid in its future work such as the establishment of more detailed A-CDM guidelines? *(Please select the applicable box)*

Yes	
No	

Please add free text comments if needed:

Training

21. Has the project established training in any of the following areas for the implementation of A-CDM?

(Please select the applicable box(es))

Initial training for stakeholders to "what is A-CDM"	
Advanced training for stakeholders to "what is A-CDM"	
Training on how to operate under A-CDM procedures for all stakeholders	
Specialized/tailored training for each user in relation to "what do I need to do when A-CDM is operational at the airport"?	

Please add free text comments if needed:

Challenges

22. **Please rank what hold most true in relation to your A-CDM implementation.**
(Please use 1-5 where 1 indicates "no, do not agree at all" and 5 is "yes, agree completely").

A-CDM as a concept is too complicated and vague	
Developed guidelines are not enough to understand how A-CDM shall be implemented successfully	
It is challenging to understand what an A-CDM implementation is, i.e. what has to be achieved to say "yes, we have A-CDM at our airport"	
The challenge is to understand what system(s) is(are) and information are needed to implement A-CDM	
It is challenging to get all stakeholders engaged and committed to the A-CDM project	
It is challenging to manage the A-CDM project	
It is challenging to understand what value A-CDM will bring	
It is very complicated to establish how to measure the success of A-CDM	

Please add free text comments if needed:

APPENDIX F

ICAO Region	State	Location name	Location indicator [ICAO code]	ACDM Information Sharing (1=Yes, 0=No)	Milestones Approach (1=Yes, 0=No)	Variable Taxi Time Calculation (1=Yes, 0=No)	Collaborative Pre-Departure Sequencing (1=Yes, 0=No)	ACDM in Adverse Conditions (1=Yes, 0=No)	Colaborative Mangement of Fligh Updates (1=Yes, 0=No)
MID	QATAR	HAMAD INTERNATIONAL	OTHH						
MID	QATAR	DOHA INTERNATIONAL	OTBD						