SECOND MEETING of the

AERODROME SAFETY,

PLANNING & IMPLEMENTATION

GROUP

ASPIG/2

(Virtual Meeting, 24 – 26 November 2020)

Agenda Item 4 – WP1: Follow-up on the ASPIG/1 Conclusions and Decisions related to Aerodrome Capacity and Efficiency

DRAFT CONCLUSION 1/6: STATES NEEDS FOR THE BBB-AOP IMPLEMENTATION

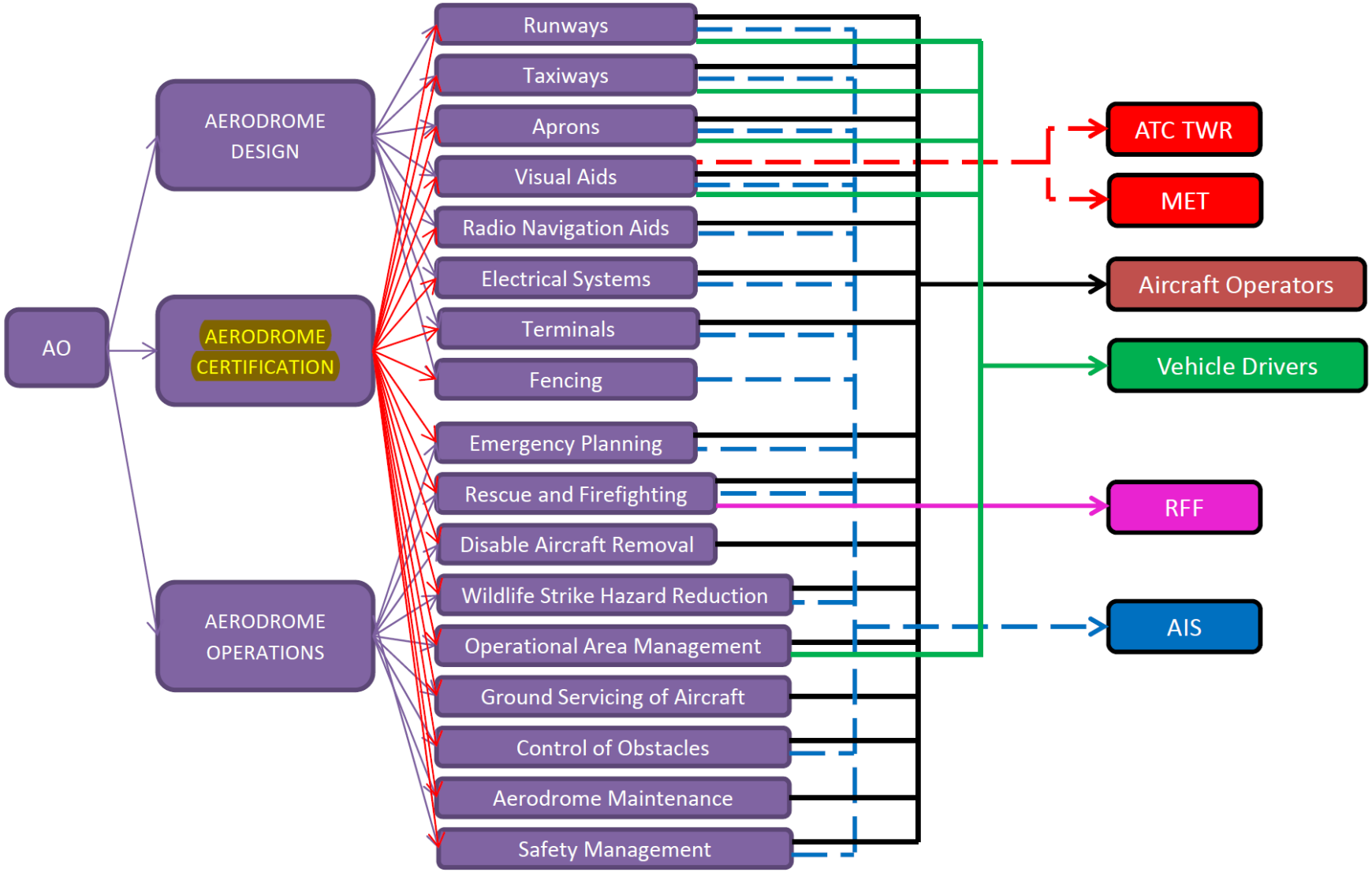
That, in order to support the implementation of the BBB for Airport Operations and prioritize the necessary technical assistance in line with the MID Region NCLB Strategy, States:

a) provide the ICAO MID Office, by **February 2020** with their Needs for the BBB-AOP Implementation using the Table at Appendix 6A.; and
b) are encouraged to volunteer to provide the necessary technical assistance.

STATES NEEDS FOR THE BBB-AOP IMPLEMENTATION

MID REGION CAPACITY BUILDING NEEDS ON AGA AREA REGIONAL TECHNICAL ASSISSTANCE ON AIRPORTS DESIGN AND OPERATIONS		
AGA Sub-Areas		
Airport Design	Airport Capacity and Master Plan	
	Airside Design	
	Visual Aids	
	Radio Navigation Aids	
	Electrical Systems	
	Terminals	
	Fencing	
Aerodrome Operations	Aerodrome Emergency Plan	
	Rescue and Firefighting	
	Disable Aircraft Removal	
	Wildlife Strike Hazard Reduction	
	Operational Area Management	
	Airside Adverse Condition Operations	
	Ground Servicing of Aircraft	
	Control of Obstacles	
	Aerodrome Maintenance	Airside Electrical
		Pavement Management
		Drainage Management
		Airside Markings
		Civil Engineering
	Safety Management	SMS Implementation
		Phased Approach Implementation Plan
		Gap Analysis

THE BBB-AOP IMPLEMENTATION: AO SUPPORT & END USERS



Agenda Item 4 – WP1: Follow-up on the ASPIG/1 Conclusions and Decisions related to Aerodrome Capacity and Efficiency

DRAFT CONCLUSION 1/7: A-SMGCS IMPLEMENTATION SEMINAR

That,

a) ICAO organize an A-SMGCS Implementation Seminar in **2020**; and

b) States are encouraged to participate actively in this event.

DRAFT CONCLUSION 1/8: AIRPORT PLANNING SEMINAR

That,

ICAO organize an Airport Planning Seminar in **2021** and States are encouraged to participate actively in this event.

Agenda Item 4 – WP1: Follow-up on the MSG/6 Conclusions and Decisions related to Aerodrome Capacity and Efficiency

Conclusions and Decisions	Concerns/ Challenges (rationale)	Deliverable/ To be initiated by		Target date	Status/Remarks
MSG Conclusion 6/7: ACDM Implementation					**Completed**
That, a) an ACDM Implementation Workshop be organized by the ICAO MID Office jointly with ACAO in 2019; and a) States be urged to develop an action plan for A-CDM implementation in line with the MID Air Navigation Strategy.	To support the effective implementation of A-CDM	Filled Questionnaire Questionnaire on ACDM implementation	States ICAO MID Office	20 March 2019 28 February 2019	Workshop conducted (October 2019) State Letter Ref.: AN 5/23-19/072
MSG Conclusion 6/6: Survey on ACDM Implementation					**Actioned**
That, a) concerned States (according to the B0-ACDM applicability area included in the MID Air Navigation Strategy) be urged to provide the ICAO MID Office with the contact details of their designated ACDM Focal Points; and b) a Survey on ACDM implementation be carried out for the monitoring of ACDM implementation, using the template at Appendix 5.3A.	To monitor the effective implementation of the ACDM module of the ASBU Block 0	Filled Questionnaire Questionnaire on ACDM implementation (**Appendix A to the current presentation**)	States ICAO MID Office	20 March 2019 **28 February 2019**	**State Letter Ref.: AN 5/23-19/072**

Action by the Meeting:

- The meeting is invited to review, update and agree on the minimum reporting areas on the essential infrastructure and core services to be implemented by Aerodromes, and agree to present the AOP Minimum Reporting Area Template as at **Appendix B** to the MIDANPIRG/19 & RASG-MID/9 for endorsement.

Thank you for your Attention

APPENDIX A

Airport Collaborative Decision Making (A-CDM)
Survey Questionnaire

Name of the State/Administration:

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 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:

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 B

AOP MINIMUM REPORTING AREAS

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
AERODROME DESIGN								
1.	Annex 14 - Vol 1, Chapter 1 PANS-Aerodromes, Part 1, 2	**Aerodrome Master Plan**		The lack of airports master plans affect their short to medium term capacity enhancement projects; restricting their ability to fulfil capacity needs.				
2.	Annex 14 - Vol 1, Chapter 2, 3 PANS-Aerodromes, Part 1, 2 MID ANP, Vol II - AOP	**Runways**		In view of the vital function of runways in providing for safe and efficient aircraft landings and take-offs, it is imperative that their design take into account the operational and physical characteristics of the aeroplanes expected to use the runway, as well as engineering considerations.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
3.	Annex 14 - Vol 1, Chapter 2, 3 PANS-Aerodromes, Part 1, 2	**Taxiways**		A properly designed taxiway system ensures a smooth, continuous flow of aircraft ground traffic, operating at the highest level of safety and efficiency and contributes to optimum aerodrome utilization				
4.	Annex 14 - Vol 1, Chapter 2, 3 PANS-Aerodromes, Part 1, 2	**Aprons**		Apron design should take into account safety procedures for aircraft manoeuvring and contribute to a high degree of efficiency for aircraft movements and dispensing apron services.				
5.	Annex 14 - Vol 1, Chapter 2, 5, 6, 7 PANS-Aerodromes, Part 1 MID ANP, Vol II - AOP	**Visual Aids**		Visual aids contribute to the safety and operational efficiency of aircraft and vehicle movements. Design and Good maintenance of these aids is essential to ensure that the cues that they provide are available in all circumstances.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
6.	Annex 10 - Vol 1, Chapter 3	**Radio Navigation Aids**		Radio Navigation Aids contribute to the safety and operational efficiency of aircrafts. Good maintenance of these aids is essential to ensure that the cues that they provide are available in all				
7.	Annex 14 - Vol 1, Chapter 8 PANS-Aerodromes, Part 1 MID ANP, Vol II - AOP	**Electrical Systems**		Electrical systems contribute to the safety and operational efficiency of aircraft and vehicle movements. Their design and good maintenance of these aids is essential to ensure that the cues that they provide are available in all circumstances				
8.	Annex 14 - Vol 1, Chapter 1	**Terminals**		Architectural and infrastructure-related requirements for the optimum implementation of international civil aviation security measures shall be integrated into the design and construction of new facilities and alterations to existing facilities at an aerodrome.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
9.	Annex 14 - Vol 1, Chapter 9 PANS-Aerodromes, Part 1	**Fencing**		Lack of fences on an aerodrome could lead to the entrance to the movement area of animals large enough to be a hazard to aircraft.				
AERODROME OPERATIONS								
10.	Annex 14 - Vol 1, Chapter 2 PANS-Aerodromes, Part 1, 2 MID ANP, Vol II - AOP	**Aerodrome Data**		Determination and reporting of aerodrome-related aeronautical data shall be in accordance with the accuracy and integrity classification required to meet the needs of the end-users of aeronautical data				
11.	Annex 14 - Vol 1, Chapter 9 PANS-Aerodromes, Part 1	**Emergency planning**		Lack of adequately effective emergency planning can seriously affect the effects of an emergency, particularly in respect of saving lives and maintaining aircraft operations.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
12.	Annex 14 - Vol 1, Chapter 2, 9 PANS-Aerodromes, Part 1 MID ANP, Vol II – AOP	**Rescue and Firefighting**		Lack of adequately effective rescue and firefighting service can affect capabilities to save lives in the event of an aircraft accident or incident occurring at, or in the immediate vicinity				
13.	Annex 14 - Vol 1, Chapter 2, 9 PANS-Aerodromes, Part 1	**Disable Aircraft Removal**		Disabled aircraft can interfere with normal activity of an aerodrome. In addition, runway and taxiway closures can substantially reduce the number of arrivals and departures and restrict movement around the aerodrome, resulting in the reduction of the aerodrome capacity.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
14.	Annex 14 - Vol 1, Chapter 9 PANS-Aerodromes, Part 1	**Wildlife Strike Hazard Reduction**		Lack of measures (successful bird/wildlife control programme) on an airport and in its vicinity to minimize the likelihood of collisions between wildlife and aircraft will increase the risk to aircraft operations				
15.	Annex 14 - Vol 1, Chapter 2, 9 PANS-Aerodromes, Part 1	**Operational Area Management**		Lack of appropriate airport operational services will affect the safety and efficiency of aircrafts operations.				
16.	Annex 14 - Vol 1, Chapter 9	**Ground Servicing of Aircraft**		Lack of appropriate Ground Servicing of Aircraft will affect the safety and efficiency of aircrafts operations.				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
17.	Annex 14 - Vol 1, Chapter 4, 6 PANS-Aerodromes, Part 1	**Control of obstacles**		The airspace around aerodromes shall be maintained free from obstacles so as to permit the intended aeroplane operations at the aerodromes to be conducted safely and to prevent the aerodromes from becoming unusable by the growth of obstacles around the aerodromes				
18.	Annex 14 - Vol 1, Chapter 10 PANS-Aerodromes, Part 1	**Aerodrome Maintenance**		A maintenance programme, shall be established at an aerodrome to maintain facilities in a condition which does not impair the safety, regularity or efficiency of air navigation				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
19.	Annex 14 _ Vol1, Chapter 2 PANS-Aerodromes, Part 2	**Global Reporting Format**		Assessing and reporting the condition of the movement area and related facilities is necessary in order to provide the flight crew with the information needed for safe operation of the aeroplane. The runway condition report (RCR) is used for reporting assessed information.				
20.	Annex 14 - Vol 1, Chapter 1 PANS-Aerodromes, Part 1	**Safety Management**		Implementation of SMS seeks to proactively mitigate safety risks before they result in aviation accidents/ incidents and improve operational efficiencies.				
AERODROME CERTIFICATION								
21.	Annex 14 - Vol 1, Chapter 1 to 10 PANS-Aerodromes, Part 1, 2	**Aerodrome Certification**		Lack of certification of an aerodrome means that aerodrome does not meet the specifications regarding the facility and its operation				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
22.	PANS-Aerodromes, Part 1	**Safety assessments and Aerodrome Compatibility**		The compatibility between aeroplane operations and aerodrome infrastructure and operations when an aerodrome accommodates an aeroplane that exceeds the certificated characteristics of the aerodrome should be assessed				
ASBU MODULES								
23.	[MIDANPIRG Conc. ……] MID eANP	**ACDM-B0/1**		To generate common situational awareness, which will foster improved decision making within aerodromes, by sharing relevant surface operations data among the local stakeholders involved in aerodrome operations.				
24.	[MIDANPIRG Conc. ……] MID eANP	**SURF-B0/1**		To improve safety and efficiency during ground operations by providing proper indications to pilots and vehicle drivers				

AERODROMES OPERATIONS (AOP)								
	ICAO Reference Document	**Description**	**Date first reported**	**Remarks/ Impact of non-implementation**	**Action by States**	**Corrective Action Plan planned by the State (including timelines/target dates)**	**Identified implementation impediment and action thereon**	**Status**
25.	[MIDANPIRG Conc. ……] MID eANP	**SURF-B0/1**		To better maintain ATCO awareness of ground operations.				
26.	[MIDANPIRG Conc. ……] MID eANP	**SURF-B0/1**		Detection by the ATCO of potentially unsafe situations with regard to runway operations.				

Note: ICAO Current Council definition of a Deficiency:

'A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation'.
