Agenda Item 2: Implementation of the Air Traffic Flow Management (ATFM) and Collaborative Decision-Making (CDM)

Implementation of airport collaborative decision-making (A-CDM)

(Presented by the Secretariat)

SUMMARY

The purpose of this working paper is to present the participants with information on airport collaborative decision-making (A-CDM) and create awareness about its benefits and future implementation difficulties.

REFERENCES:

- AN-Conf/12, Volume II – Aviation System Block Upgrades (ASBU), WP138 and AN-Conf/12-WP162-2 (Report).
- A38-WP/39 & W/336.
- Eurocontrol, A-CDM Manual, Version 4, March 2012.
- ACI Resolution number 1-2013: "Airports urge ICAO, States and other stakeholders to work collaboratively to support and promote the use of airport collaborative decision making"
- RAAC/13, 2013 - Conclusion 13-5 SAM performance-based navigation implementation plan (SAM PBIP) as aligned with the ASBU.

ICAO Strategic Objectives:	*A - Safety* *B – Air navigation capacity and efficiency*

1. Introduction

1.1 The A-CDM concept is a work philosophy for airports, based on joint decision-making through sharing of information amongst the various parties involved in air operations. Aircraft operators, air navigation and ground handling service providers, and airport operators share (updated and precise) information that was not being shared before, with the resulting impact on air operations and benefitting both the stakeholders as well as passengers and the environment.

1.2 A-CDM is a CDM application for a specific environment (airports). CDM can be applied to different processes/procedures/services, since it is only a tool/process for attaining a given objective. ICAO is currently developing A-CDM standards and recommendations, and it is foreseen that guidance will be developed to make up Part 3 of the Manual on Collaborative ATFM. This document will be a joint effort by the ATM, AGA, and Facilitation areas. A-CDM cannot be fully achieved without the participation of at least these three partners.

1.3 At present, A-CDM has been fully implemented in Europe at five international airports: Munich, Paris-Charles de Gaulle, Brussels, Frankfurt, and Rome-Fiumicino, and is in the process of implementation at 30 other airports, including Madrid-Barajas (being tested), Barcelona-El Prat, and Palma de Mallorca in Spain.

Benefits

1.4 Airport operators – A-CDM may improve the efficient use of stands/gates and increase airport capacity;

1.5 Aircraft operators – A-CDM will help them reduce surface movement costs due to lower fuel consumption as a result of reduced taxiing and runway end holding times, also reducing environmental impact;

1.6 Ground handling service providers – A-CDM will make data available more in advance, permit better planning of tasks, and improve, *inter alia*, awareness of aircraft status on the ground, thus reducing delays;

1.7 Air traffic service providers – A-CDM can improve flow control and increase airspace capacity;

1.8 Air traffic controllers – A-CDM can assist in the development of runway improvements and capacity planning;

1.9 Passengers – Passengers will also obtain significant benefits since it will improve punctuality, increase customer satisfaction, reduce lost connections, and they will have better information and service when incidents occur.

2. Discussion

2.1 Although ICAO expects to have the associated SARPs ready only in 2016, Aviation System Block Upgrades (ASBU) have been already approved at the AN-Conf/12, and the 38th Assembly was presented with WP/39 and WP/336 on the importance of implementing A-CDM.

PBIP aligned with the ASBU

2.2 The RAAC/13 meeting reviewed the SAM PBIP (Version 1.4) as aligned with the ASBU, and went on to approve and adopt it at regional level, formulating Conclusion RAAC/13-5 – *SAM Performance-Based Air Navigation Implementation Plan (SAM PBIP) as aligned with the ASBU.*

2.3 The PBIP includes ASBU Module N° B0-80: Improved airport operations through airport collaborative decision-making (A-CDM), designed to "Implement collaborative applications that will allow the sharing of surface operations data among the different stakeholders at the airport. This will improve surface traffic management, reducing delays on movement and manoeuvring areas and enhance safety, efficiency, and situational awareness."

2.4 The SAM initiative consists in working in the Region on the basis of the experience gained at airports throughout the world that have successfully implemented A-CDM and available documentation. The first step is to know the current situation of the Region. To this end, an A-CDM survey has been developed, as shown in **Appendix A** to this working paper.

3. **Suggested action:**

3.1 The Meeting is invited to:

a) take note of the information contained in this working paper;

b) consider the implementation of A-CDM in the SAM Region within the context of the PBIP, pursuant to Conclusion RAAC 13/5, and, as a first step, complete the survey contained in Appendix A; and

c) address any other matters it may deem appropriate.

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APPENDIX A

A-CDM Survey - STATE: _____

	YES	NO
1. How many international airports have implemented the Airport-Collaborative Decision Making (A-CDM) in the State? _____	☐	☐
2. Is the A-CDM planned to be implemented at a short and medium term in the main international airports of your State If the answer is affirmative, specify the airport(s) and the expected date of the implementation _____	☐	☐
3. Has the State's service provider implemented the ATFM?	☐	☐
a) Area Control Centre in the form of Flow Management Post (FMP)?	☐	☐
b) Area Control Centre in the form of Flow Management Unit (FMU)?	☐	☐
c) Centralized ATFM?	☐	☐
4. Has the Collaborative Decision Making (CDM) been implemented in an ATFM environment?	☐	☐
5. Users have shared information with the remaining interested parts of the A-CDM about:		
a) Flight plans and flight itineraries	☐	☐
b) Forecasts	☐	☐
c) Messages status	☐	☐
d) Information on operational planning (stand, gate, landing time, in-block time, turn-round time).	☐	☐
e) Warnings and alerts (i.e. insufficient time to complete a turn-round time).	☐	☐
f) Status of aeronautical/systems aids and meteorological conditions	☐	☐
6. What is the average time that arriving aircraft have to wait in the taxiways or in the aprons because the gate assigned is still busy? _____		
7. What is the average time that aircraft have to wait in the designated stand the arrival of the ground handling? _____		
8. What is the average time of delay of departure aircraft in respect to the scheduled off-block time? _____.		
9. What is the average time in which airlines should inform that the aircraft is not ready to initiate taxiing at the scheduled time? _____.		