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UNITING AVIATION

# ICAO Global Provisions on A-CDM

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**ICAO Regional Seminar on  
Airports Preparedness for the ACDM Implementation**

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# A comprehensive strategy for Air Navigation



The screenshot shows the ICAO GANP Portal website. At the top, there is the ICAO logo and the text "ICAO GANP PORTAL". Below this is a navigation bar with dropdown menus for "Global Strategic", "Global Technical", "Regional", and "National", and a "Login" button. The main content area features a large image of a man in a suit holding a tablet, with a control tower and an airplane in the background. The text reads: "WELCOME TO THE GLOBAL AIR NAVIGATION PLAN PORTAL". Below this, it states: "The GANP Portal is a web portal where all aviation stakeholders will be able to find the most relevant information related to the GANP". A section titled "THE GLOBAL AIR NAVIGATION PLAN" follows, with a description: "The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). It also supports planning for local and regional implementation." The final paragraph states: "In order to better communicate with technical and high-level managers and to not leave any State or stakeholder behind, a multilayer structure, tailored for the various audiences, is proposed for the sixth edition of the GANP. This multilayer structure of four layers; two global levels, a regional level and a national one, would also provide a framework for alignment of regional, sub-regional and national plans."

- The *Global Air Navigation Plan (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.
- The Assembly 41 endorsed the Seventh edition of the GANP.

<https://www4.icao.int/ganportal/>

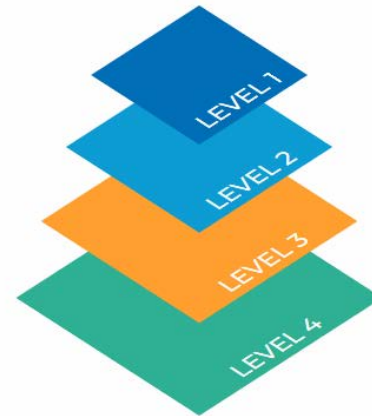
# Global Air Navigation Plan

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



**GLOBAL STRATEGIC** ✕

Provides high-level strategic directions for decision makers to drive the evolution of the global air navigation system towards a common agreed vision.

**GANP STRATEGY**

**GLOBAL TECHNICAL** ✕

Supports technical managers in planning the implementation of basic air navigation services and operational improvements in a cost-effective manner.

**ASBUs AN-SPA BBBs & PF**

**REGIONAL** ✕

Addresses regional and sub-regional needs aligned with the global objectives.

- AFI ANP
- EUR ANP
- NAM ANP
- CARSAM ANP
- APAC ANP
- MID ANP
- NAT ANP

**NATIONAL** ✕

Development by States, in coordination with relevant stakeholders, of air navigation plans aligned with regional and global plans.

**NANP TEMPLATE**

**CBA CHECKLIST**

**Performance Improvement Areas (PIA) 1:**

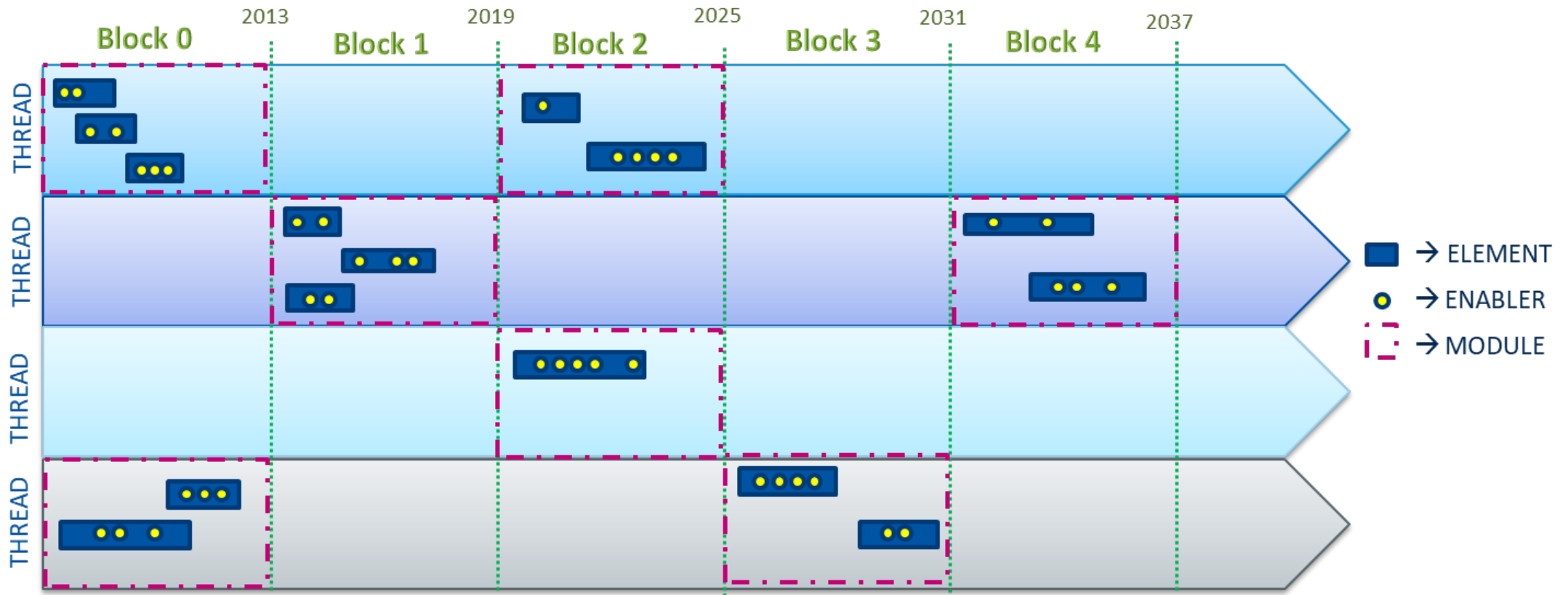
**Airport Operations**

**Operational Thread: ACDM**



<https://www4.icao.int/ganportal>

# Aviation System Block Upgrades (ASBU) Framework



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

# Aerodrome Design and Operations Panel A-CDM Drafting Group

- Created on 2014 (AP/3) to advance ADOP Job Card 017
- Participation of experts from China, France, Germany, Japan, UAE, USA, Sweden, ACI, CANSO, IATA and EUROCONTROL



<b>Title</b>		Enhance airport capacity by promoting A-CDM	<b>Reference:</b>	ADOP.017.02		
<b>Source</b>		ADOP/1				
<b>Problem Statement</b>		As growth in air traffic increases, airport capacity will be a significant constraining factor and such initiatives as A-CDM will play an important part in helping to utilize current capacity more effectively.				
<b>Specific Details (including impact statements)</b>		The use of airport collaborative decision making (A-CDM) between different partners in aviation (airports, ANSPs, aircraft operators and ground handlers, etc.) ensures coordinated effort to increase efficiency and capacity at airports. The end result of this "punctuality management" enables the turnaround process of a flight at an aerodrome to be as efficient and predictable as possible through the sharing of operations data and coordination of various service activities at airports including those in the terminal buildings (facilitation/security). Some airports at certain parts of the world are already fully or partly implementing A-CDM. Provisions need to be developed on a global basis to harmonize different approaches.				
<b>Expected Benefit</b>		Maximization of existing airport capacity; Reduction in apron and taxiway congestion and delays at airports; Reduced cost for airlines. Environmental gains in terms of reduction in emissions; Passenger experience improved through more accurate and timely information delivered to passenger displays and service desks.				
<b>Reference Documents</b>		ASBU B0-ACDM B1-ACDM,	<h1>COMPLETED</h1>			Attachments
<b>Primary Expert Group:</b>		ADOP				
WPE No.	Document affected	Description of Amendment proposal or Action	Supporting Expert Group	Expected dates:		
				Expert Group	Effective	Applicability
1 3 142	PANS-ATM/OPS/Aerodromes.	Develop provisions to support A-CDM in PANS-ATM/OPS/Aerodromes.	PASG/ ATMOPSP /FLTOSP	Dec 2016		Q4/2018
61 245	Doc 9971	Develop guidance material to support A-CDM. New/updated guidance in appropriate manuals.	PASG/ ATMOPSP /FLTOSP	Dec 2016		
		Take into consideration facilitation and security procedures for better integration of airside/landside. Possible provisions in Annexes 9, 17 and/or related documents	ATB Panels (FALP and AVSECP)	Dec 2018	Q3/2020	Q4/2020
Initial Issue Date: 17 June 2015		Date approved by ANC: 18 February 2016	Session/Meeting: 201-8			

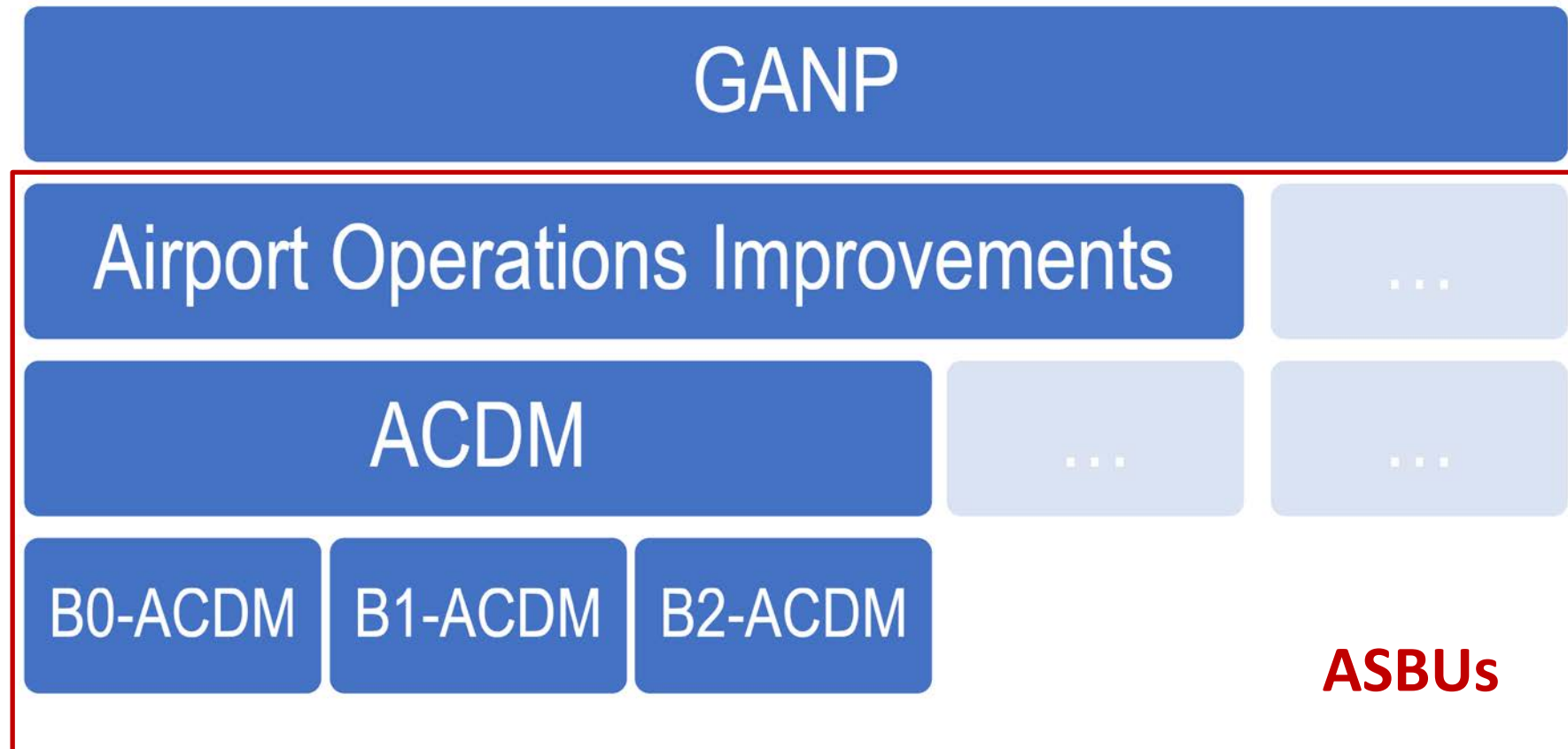
# ICAO A-CDM Guidance Material



- Guidance material included in Part III of Doc 9971 *Manual on Collaborative Air Traffic Flow Management*
- Strong operational focus
- Lessons learnt and best practices
- Project management approach to implementation

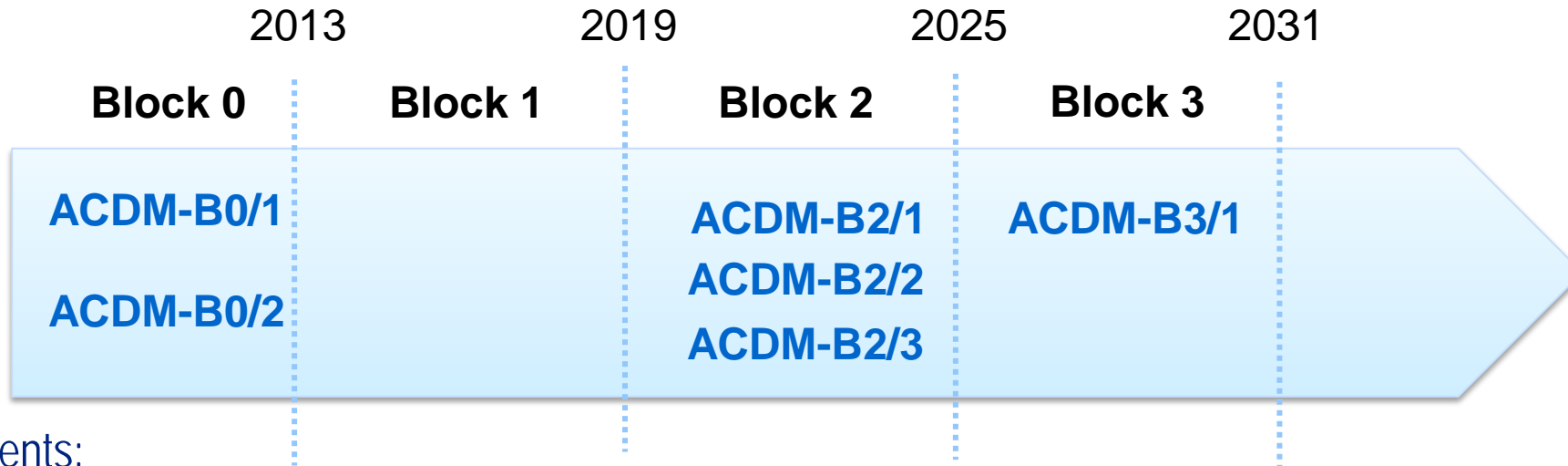
Who? / What? / When? / How?

# Airport CDM in the Global ICAO context





# Operational Thread - ACDM

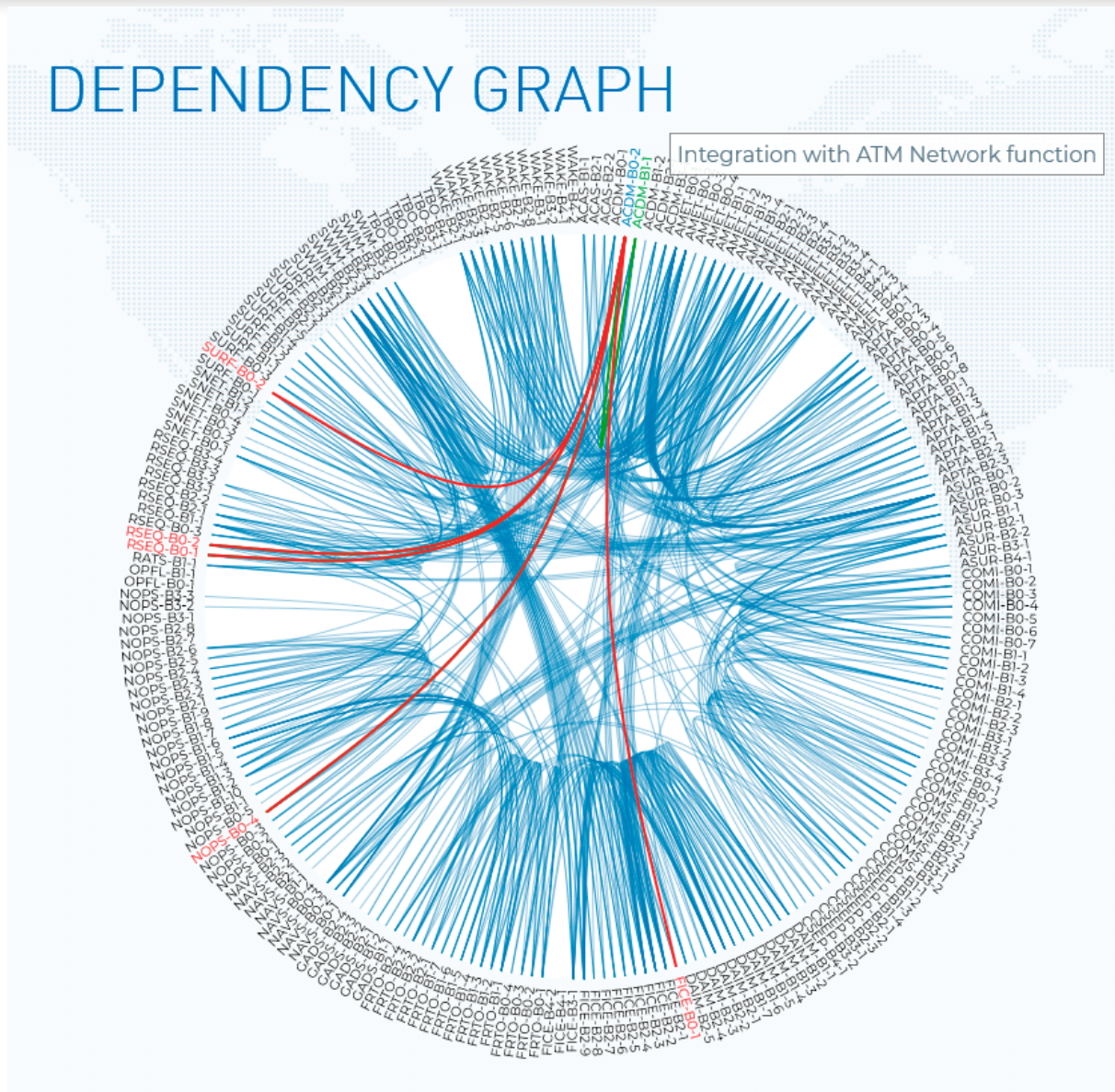


ASBU Elements:

- **ACDM-B0/1** Airport CDM Information Sharing (ACIS)
- **ACDM-B0/2** Integration with ATM Network function
- **ACDM-B2/1** Airport Operations Plan (AOP)
- **ACDM-B2/2** Airport Operations Centre (APOC)
- **ACDM-B2/3** Total Airport Management (TAM)
- **ACDM-B3/1** Full integration of ACDM and TAM in TBO

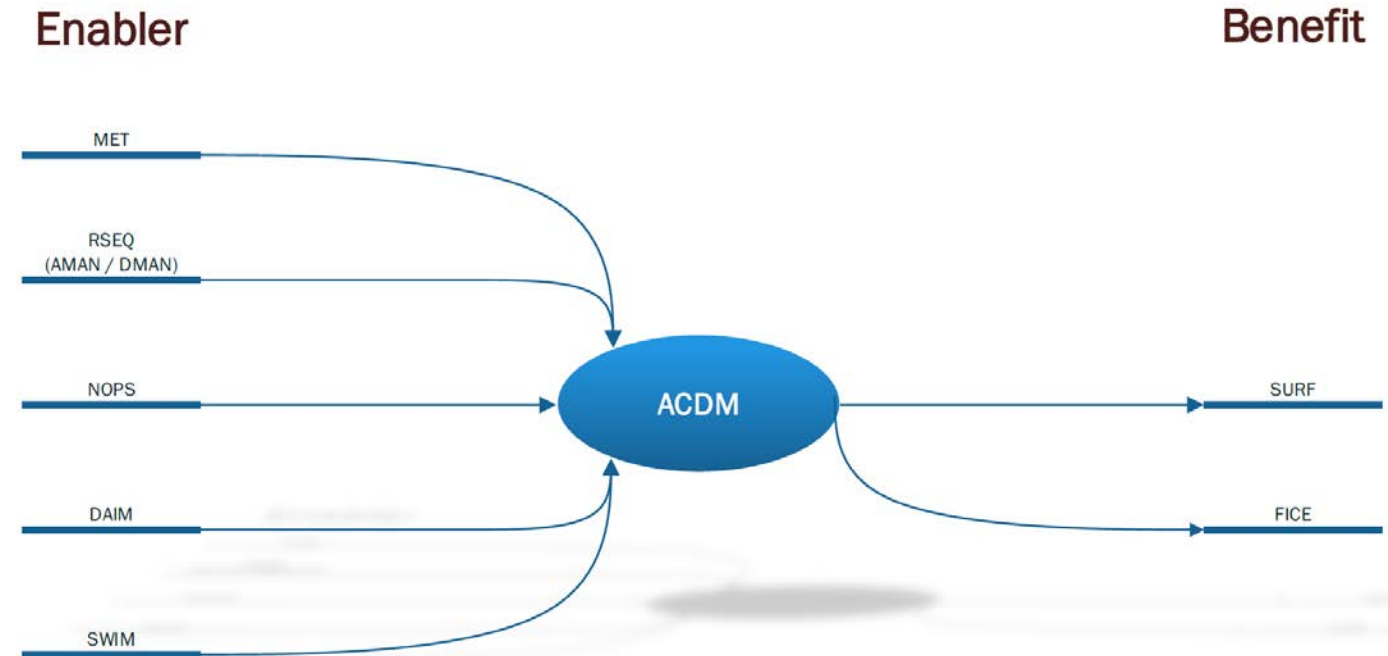
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# A-CDM in context



# A-CDM is not

- Managing the arrival or departure sequencing: That's an ATM function
  - Runway SEQuencing ASBU
  - A-CDM function is a collaborator
- Managing the Surface routings on controlled surfaces
  - ATM function
  - SURF ASBU
- Managing the efficiency of the ATM environment
  - ATM function
  - NOPS (and beyond) ASBU



# What is A-CDM

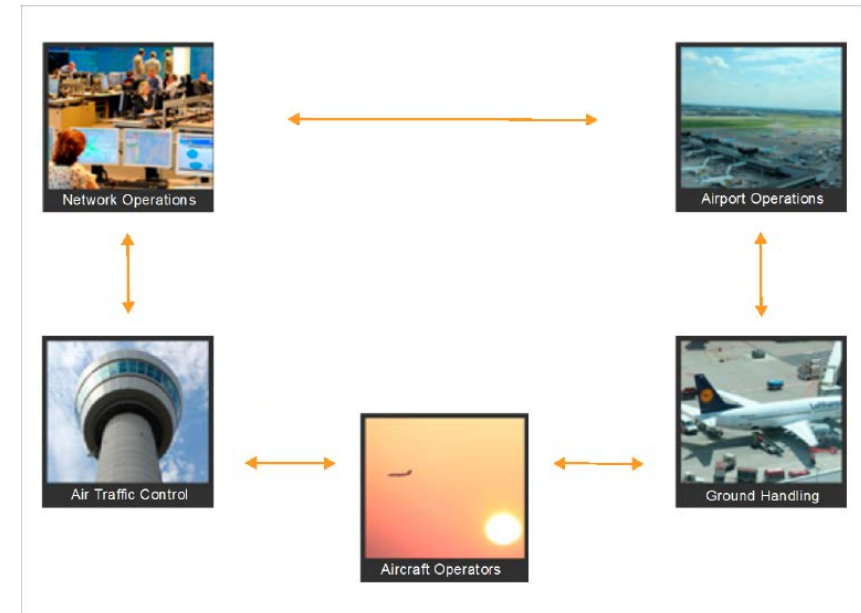


- Collaborative decision-making (CDM) is defined as a process focused on how to decide on a course of action articulated between two or more community members. Through this process, ATM community members share information related to that decision and agree on and apply the decision-making approach and principles.
- A-CDM is a set of processes developed from the general philosophy of CDM in aviation and is applied to the operations at aerodromes.

**A-CDM is scalable and modular**

# Purpose of A-CDM

- The main objective is to generate a common situational awareness that will foster improved decision-making.
- A-CDM allows aerodromes, aircraft operators, air traffic controllers, ground handling agents, pilots and air traffic flow managers to exchange operational information and work together to efficiently manage operations at aerodromes.



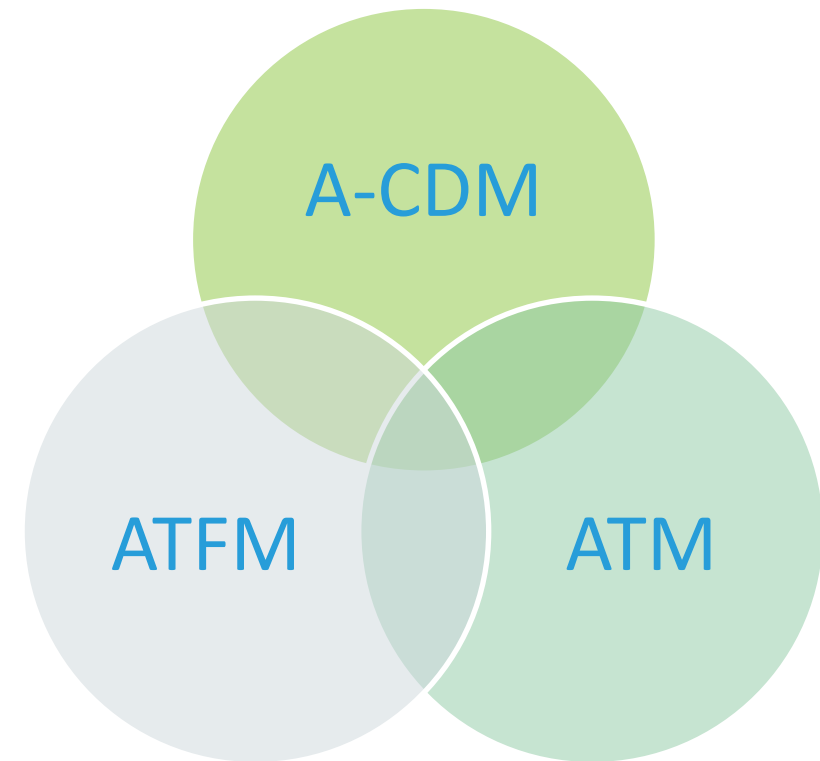
# Objectives of A-CDM

- Predictability
- On-time performance
- Use of infrastructure
- Apron and Taxiway congestion



# Integration

- Airport centered
- No need for any major structure
- Local project before anything else
- Can be integrated to ATM in general, and ATFM in particular (not compulsory)
- Further benefits in a SWIM environment



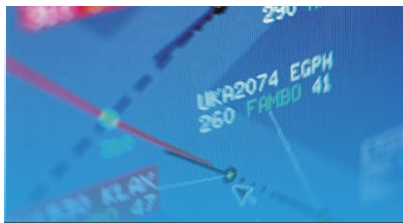
# ACDM Regular and irregular operational activities

- *Regular operations*
- *Irregular operations*
  - *planned*
  - *unplanned*





# ACDM Benefits




**Safety**

Indirect benefits for safety, providing for an overall improvement in the quality of services delivered



**Efficiency**

Efficient and optimized use of resource



**Environment**

Reduced taxi time; reduced fuel and carbon emission; and lower aircraft engine run time.



**Capacity**

Enhanced use of existing infrastructure of gate and stands. Reduced workload.

# ICAO GANP KPIs related to ACDM

- Departure Punctuality
- Taxi-out additional time
- ATFM slot adherence
- Airport peak capacity
- Airport peak throughput
- Taxi-in additional time

# MID Air Navigation Plan (eANP), Vol II

## PART II – Aerodromes / Aerodrome Operations (AOP)

### 2. General Regional Requirements

#### *Aerodrome capacity management*

2.13 When international aerodromes are reaching designed operational capacity, a better and more efficient utilization of existing runways, taxiways and aprons is required. Runway selection procedures and standard taxi routes at aerodromes should ensure an optimum flow of air traffic with a minimum of delay and a maximum use of available capacity. They should also, if possible, take account of the need to keep taxiing times for arriving and departing aircraft as well as apron occupancy time to a minimum. The airport collaborative decision making (A-CDM) concept should be implemented to improve airport capacity as early as possible.

<https://www.icao.int/MID>

# Total Airport Management (TAM)

- While A-CDM is mainly focused on airside operations, The Total Airport Management (TAM) concept is an overarching concept for planning, coordinating and connecting airside and landside processes (such as security and border control etc.), as well as for integration of these processes with the wider ATM network, all of which influence airport capacity, and efficiency and predictability of operations.
- Include concept of:
  - airport operations plan (AOP);
  - airport operations centre (APOC).





**Thank you for your Attention**