



ICAO

UNITING AVIATION

ICAO WORKSHOP ON THE NEW VERSION OF THE GANP AGA

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A comprehensive strategy for Air Navigation



The screenshot shows the ICAO GANP Portal homepage. At the top left 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 globe, 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'. At the bottom, there is a section titled 'THE GLOBAL AIR NAVIGATION PLAN' with a detailed description of the plan's purpose and structure.

ICAO GANP PORTAL

Global Strategic ▾ Global Technical ▾ Regional ▾ National ▾ Login

WELCOME TO THE GLOBAL AIR NAVIGATION PLAN PORTAL

The GANP Portal is a web portal where all aviation stakeholders will be able to find the most relevant information related to the GANP

THE GLOBAL AIR NAVIGATION PLAN

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.

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.

Doc 9750 *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 new operational improvements in a cost-effective manner.




ASBUs & PF AN-SPA BBBs

REGIONAL ✕


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




AFI ANP




APAC ANP




EUR ANP




MID ANP



NAM ANP




NAT ANP




CARSAM ANP

NATIONAL ✕

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



NANP TEMPLATE



CBA CHECKLIST

Basic Building Block (BBB)

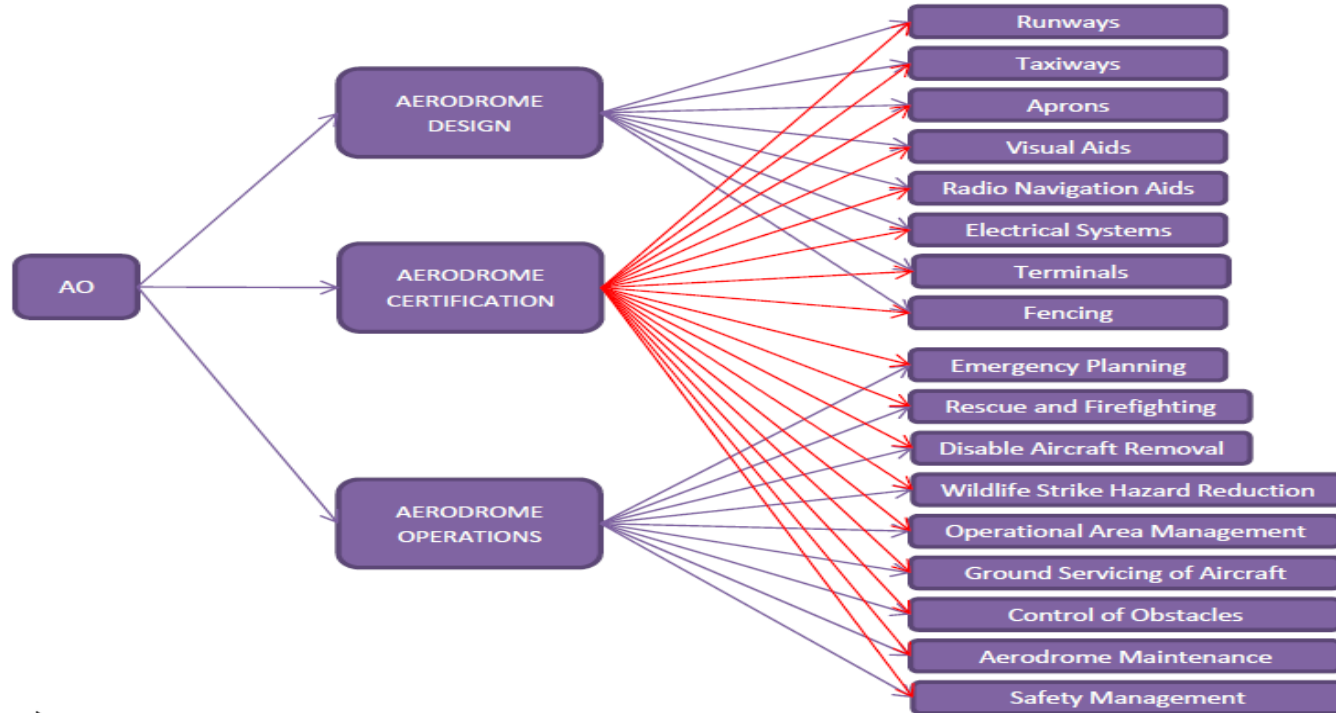
- The BBB framework outlines the foundation of any robust air navigation system
- The identification of the essential services to be provided for international civil aviation in accordance with ICAO Standards
- These essential services are defined in the areas of aerodromes, air traffic management, search and rescue, meteorology and information management
- In addition to essential services, the BBB framework identifies the end users of these services as well as the assets (CNS) infrastructure that are necessary to provide them



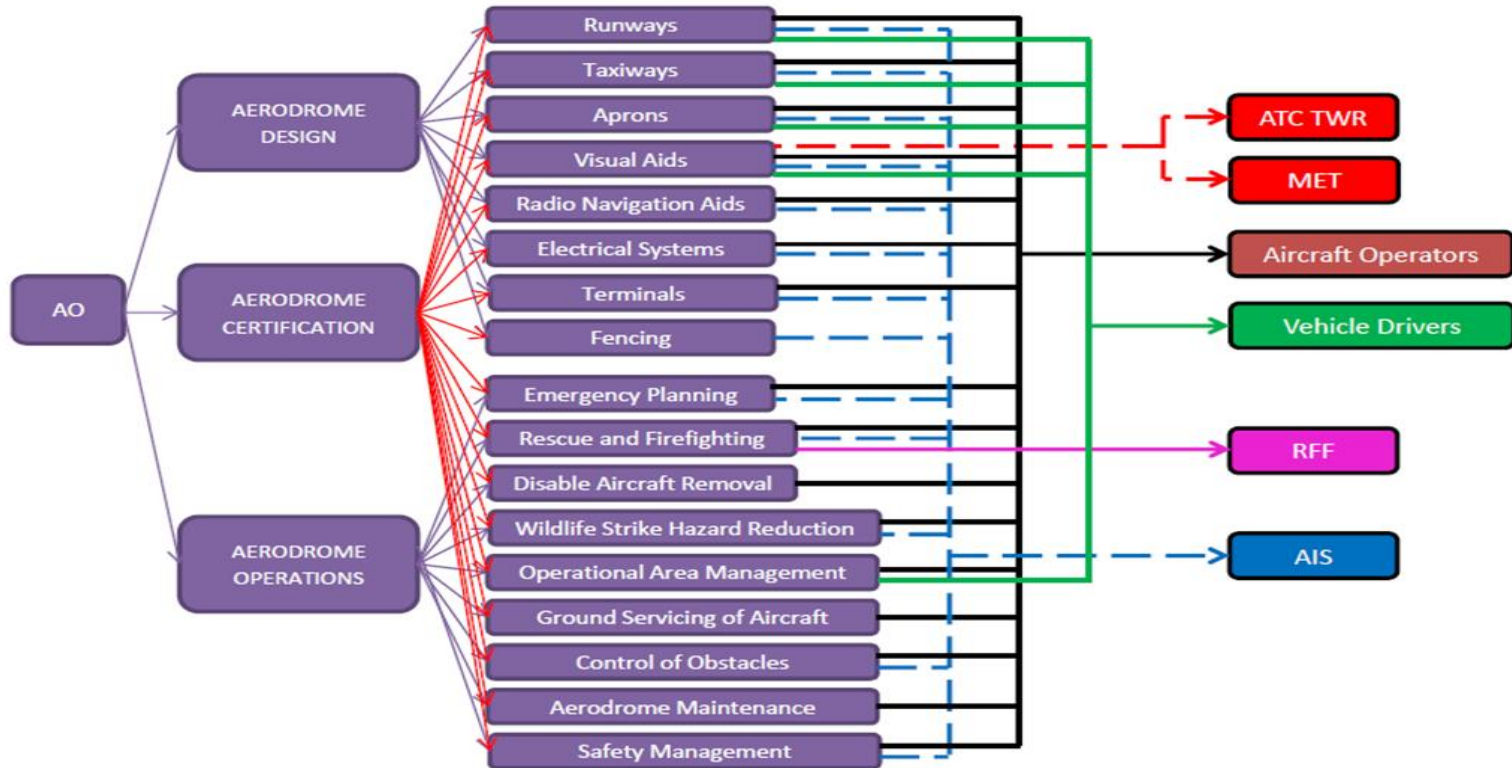
BBB Framework:

- METEOROLOGICAL INFORMATION
- AERONAUTICAL INFORMATION
- SEARCH AND RESCUE
- AIR TRAFFIC MANAGEMENT
- AERODROMES/AERODROMES OPERATIONS SERVICES

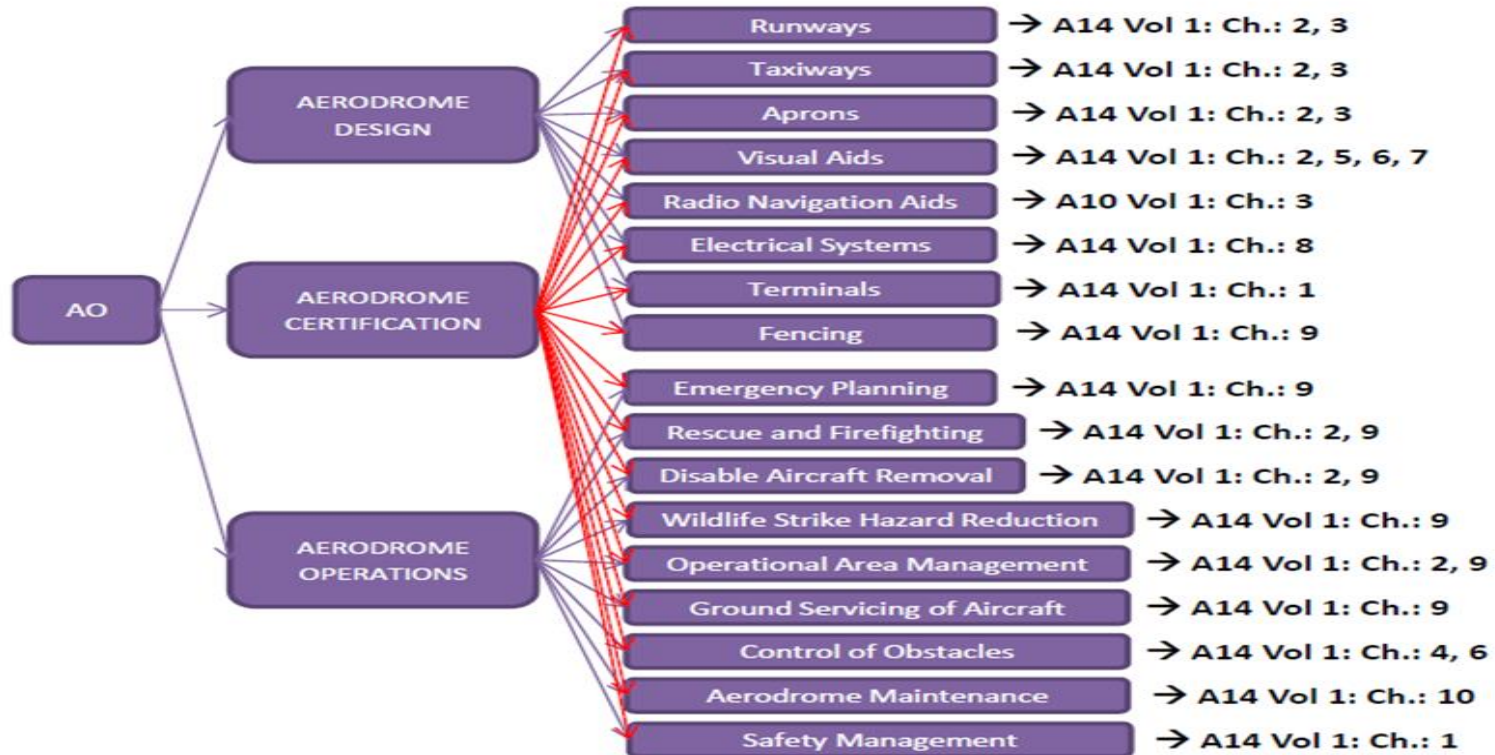
AO BASIC MODULES AND ELEMENTS



AO SUPPORT & FND USERS



AO BASIC ELEMENTS/REFERENCES ICAO SARPs



AO BASIC ELEMENTS/REFERENCES ICAO

Guidance & Procedures





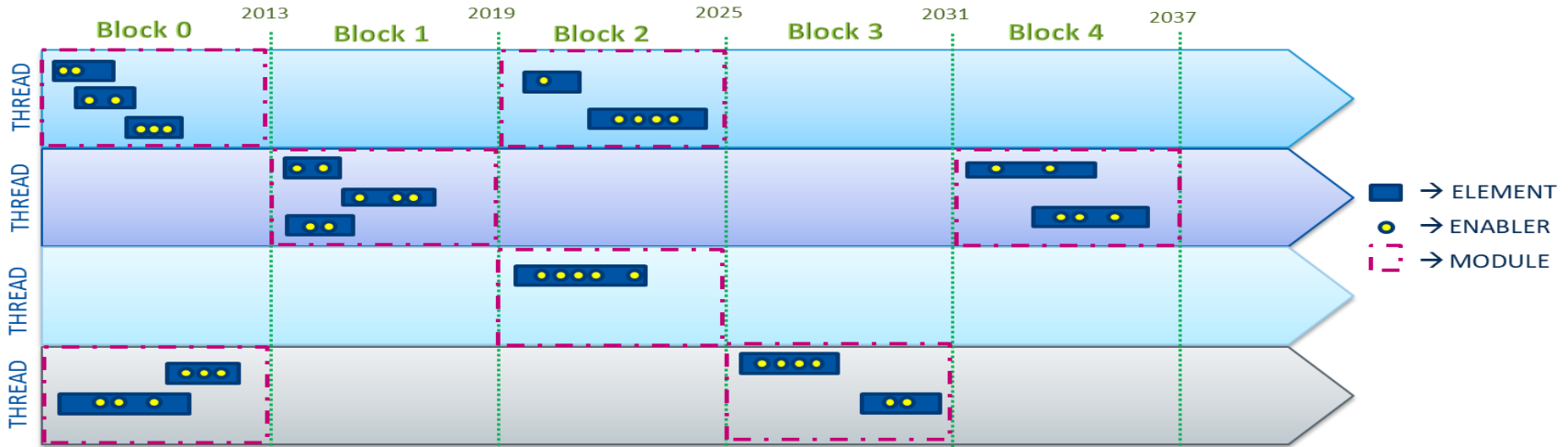
AO References

- Annex 14: Aerodromes Volume I — Aerodrome Design and Operations
- Annex 10: Aeronautical Telecommunications Volume I — Radio Navigation Aids
- Doc 9157: Aerodromes Design Manual
- Doc 9184: Airport Planning Manual
- Doc 9137: Airport Services Manual
- Doc 9476: Manual of Surface Movement Guidance and Control Systems (SMGCS)
- Doc 9830: Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual
- Doc 9870: Manual on the Prevention of Runway Incursions
- Doc 8071: Manual on Testing of Radio Navigation Aids
- Doc 9774: Manual on Certification of Aerodromes
- PANS-Aerodromes(Doc 9981): Aerodromes

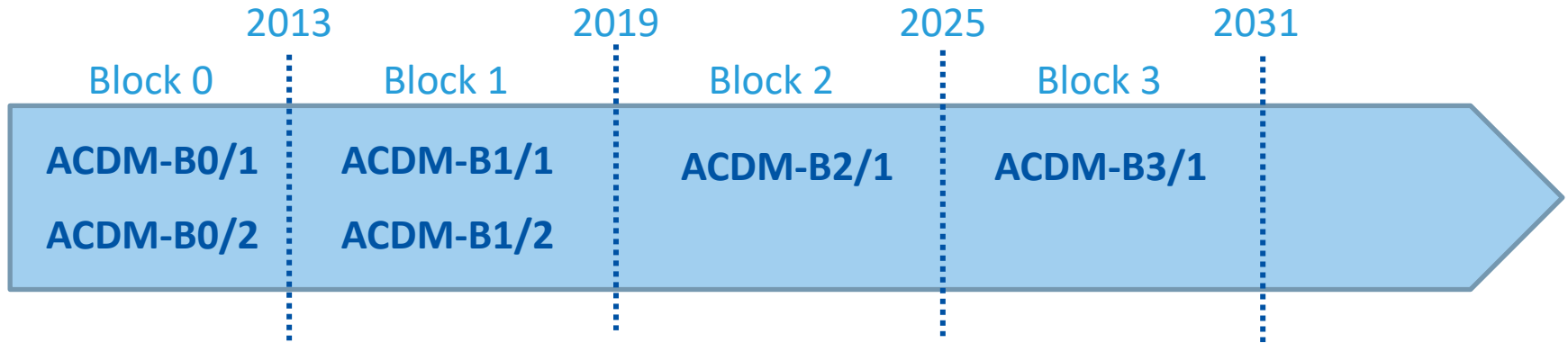


Aviation System Block Upgrades (ASBU) Framework

Aviation System Block Upgrades (ASBU) Framework



Operational thread – ACDM



ASBU Elements:

- ACDM-B0/1 Airport CDM Information Sharing (ACIS)
- ACDM-B0/2 Integration with ATM Network function
- ACDM-B1/1 Airport Operations Plan (AOP)
- ACDM-B1/2 Airport Operations Centre (APOC)
- ACDM-B2/1 Total Airport Management (TAM)
- ACDM-B3/1 Full integration of ACDM and TAM in TBO

ACDM-B0/1 Airport CDM Information Sharing (ACIS) Operational

- Main Purpose: To generate common situational awareness, which will foster improved decision making within aerodromes,
- New Capabilities: Stakeholders will be able to collaborate and take actions towards the achievement of a set of defined milestones
- Description This element represents the first collaboration step among stakeholders involved in aerodrome operations.

ACDM-B0/2 Integration with ATM Network function Operational

- Main Purpose: A-CDM operations will be enriched by enhanced arrival information from the ATM network and network operations will benefit from more accurate departure information from CDM airports.
- New Capabilities: To connect airport operations to the ATM network.
- Description: This element consists in feeding arrival information from the network into A-CDM and, at the same time, coordinate specific departure milestones.

ACDM-B1/1 Airport Operations Plan (AOP)

- **Main Purpose:** To enhance the planning and management of airport operations and allow their fully integration in the ATM network.
- **New Capabilities:** Airport stakeholders will be able to better communicate and coordinate among themselves to develop and maintain dynamically joint plans and to execute those in their respective area of responsibility.
- **Description:** This element consists of a collaborative airport operations plan (AOP) which encompasses “local” airport information and shared information with the ATM network.

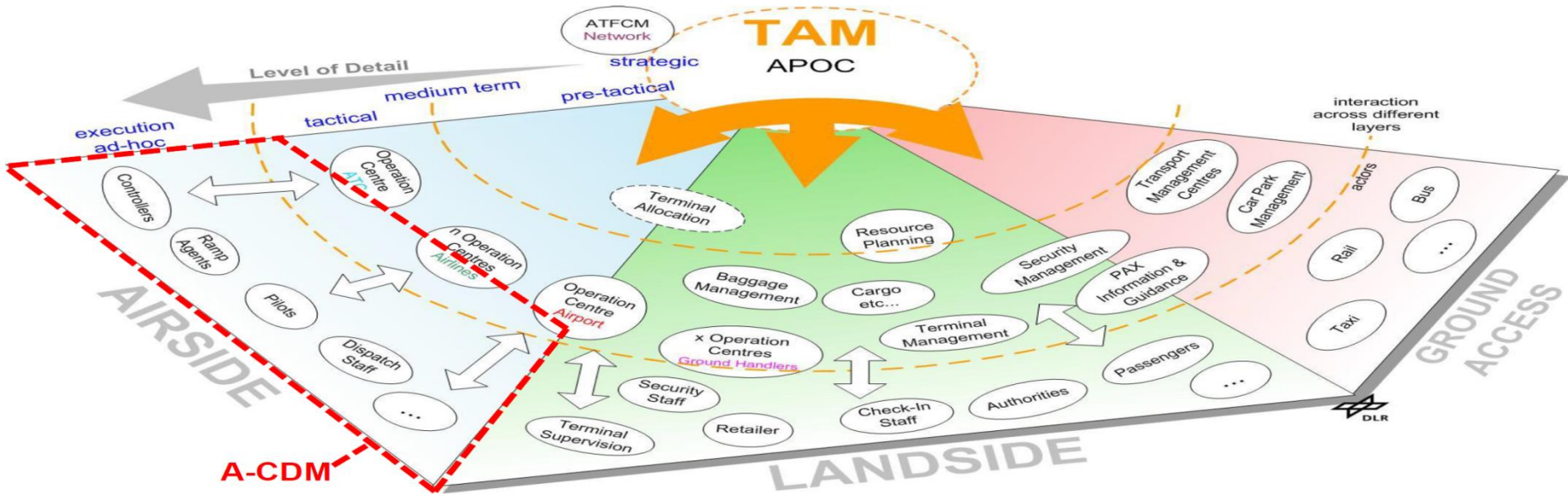
ACDM-B1/2 Airport Operations Centre (APOC)

- **Main Purpose:** The integration of all stakeholders, both landside and airside, into a coherent decision making entity/process (and team), using the shared information and capabilities provided through the AOP.
- **New Capabilities:** The APOC is an additional but important means by which the efficiency of the overall airport operations will be further enhanced.
- **Description:** The APOC will bring stakeholders together in a physical entity (team) enabling them to better communicate and coordinate, to develop and dynamically maintain joint plans which are executed in their respective areas of responsibility at the airport.
- Its main information source is the Airport Operations Plan.

ACDM-B2/1 Total Airport Management (TAM)

- **Main Purpose:** Total Airport Management (TAM) is an approach that takes a holistic view of airport performance management, integrating all stakeholders into a coherent planning and collaborative decision-making process using shared information and capabilities.
- **New Capabilities:** TAM is an enhancement of the APOC with integration of the landside management aspects to support further improvement of the efficiency of the overall airport operation including passenger management.
- **Description** TAM will bring stakeholders together as physical entity (team) enabling them to better communicate and coordinate, to develop and dynamically maintain joint plans which are executed in their respective areas of responsibility at an airport.

TAM - Top-level Operations



ACDM-B3/1

Full integration of ACDM and TAM in TBO

- **Main Purpose:** To use the integration of ACDM in the overall synchronization of the ATM network, to contribute to end-to-end stable, consistent and robust trajectory-based operations providing the adequate level of performance.
- **New Capabilities:** ACDM is fully synchronized with TBO.
- **Description:** All stakeholders are fully connected. Aerodrome operations are considering the en-route to en-route view with the turnaround process, agree on, and subsequently manage the flights on the surface, to deliver expected surface event times with known impacts to the ATM system, and to ensure that the agreed trajectory is consistent with the Airport Operations Plan.

What is A-CDM

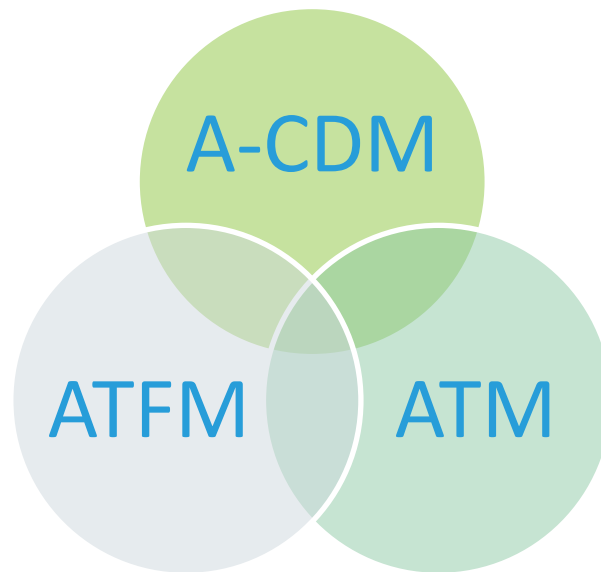


- Collaborative decision-making (CDM) is defined as a process focused on how to decide on a course of action articulated between two or more community members. Through this process, ATM community members share information related to that decision and agree on and apply the decision-making approach and 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

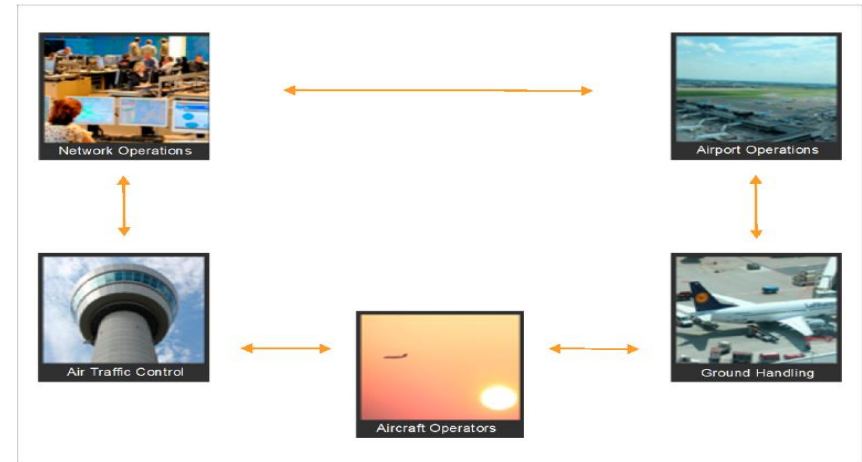
Integration

- 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



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.



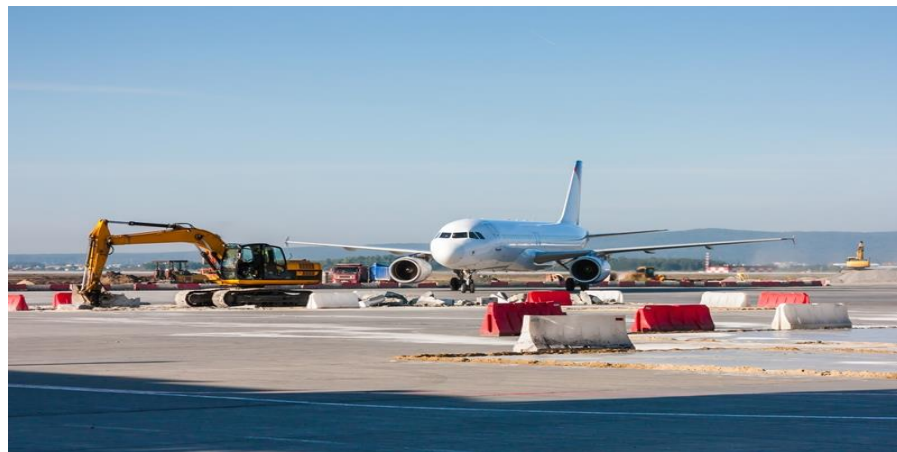
Objectives of A-CDM

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



Regular and irregular operational activities

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



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

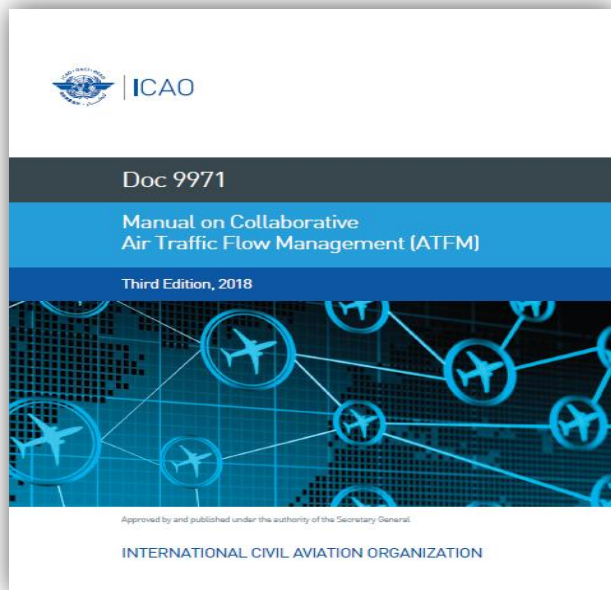
Reduced taxi time; reduced fuel and carbon emission; and lower aircraft engine run time.



Capacity

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

ICAO 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?



ICAO

SAFETY

NO COUNTRY LEFT BEHIND



THANK YOU!