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AIM Status Update

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Mexico City, 29 to 31 October 2018



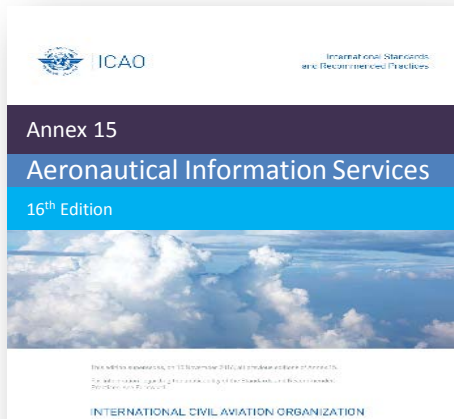
Outline

- Status-quo:
 - ICAO AIM provisions
- Next steps:
 - Leading the way to implementation
 - Future AIM developments

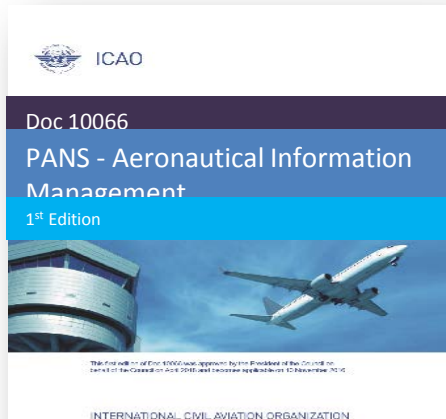




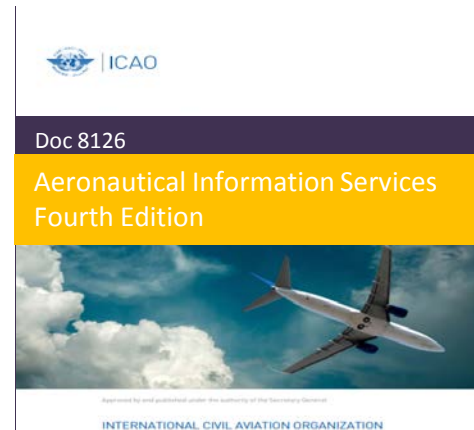
ICAO AIM framework of documents



- Adopted by ICAO Council (Feb 2018)
- State Letter (April 2018)
- App. Date Nov 2018



- Approved by ICAO Council
- State Letter (Aug 2018)
- App. Date Nov 2018



- Under work
- Ready by the end of the year (united version)



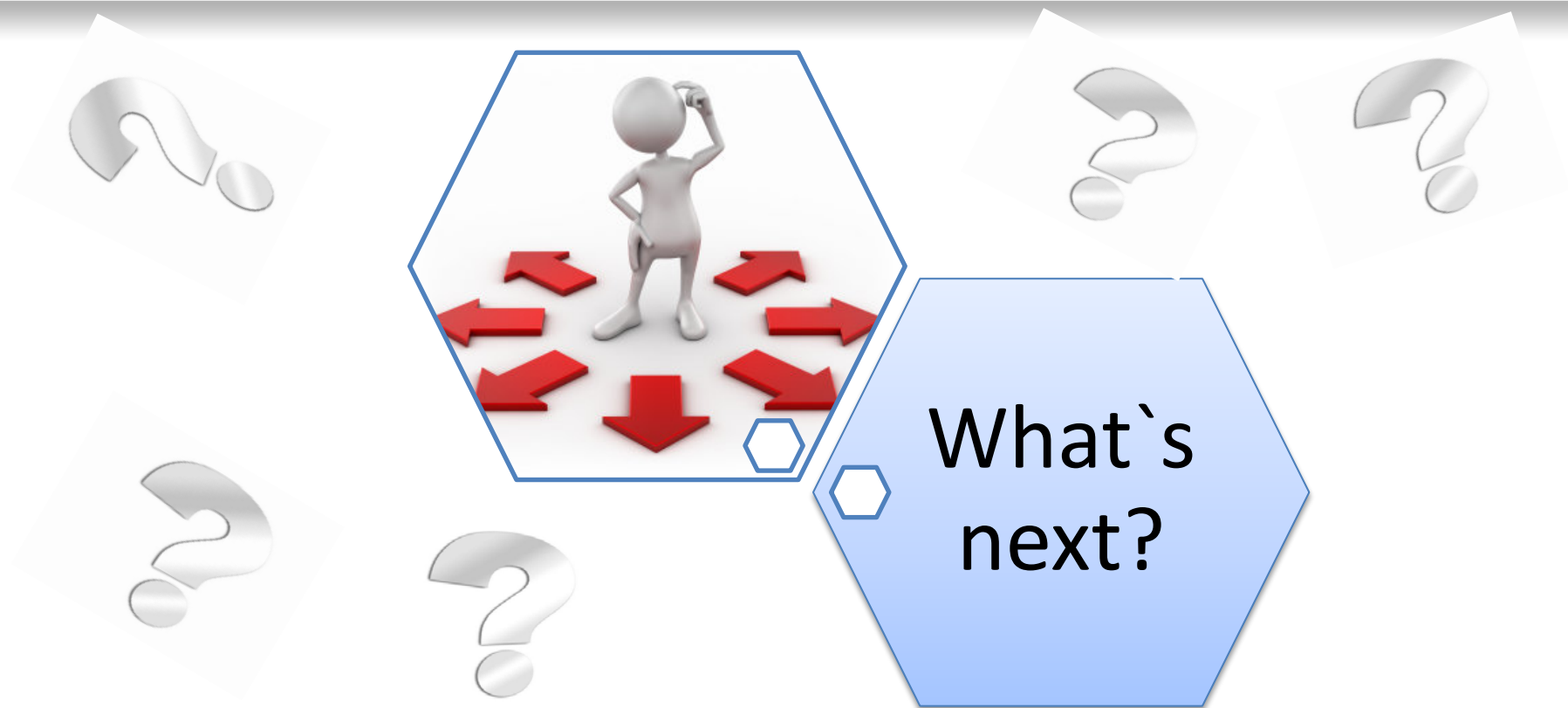
Volume 1 – Organisational Development
(Delivered- Secretariat Review)

Volume 2 – Processing Aeronautical Data
(90% Delivered – Secretariat Review)

Volume 3 – Aeronautical Information in a
Standardized Presentation
(Delivered – Secretariat Review)

Volume 4 – Digital Products and Services
(Cooperation with EUROCONTROL)

- guidance for the organizational development of AIS including the transition to AIM
- **Management bodies: ANSP, Regulators**
- guidance for processing aeronautical data and information in a data centric environment
- **Operational personnel**
- guidance for the provision of aeronautical information in a standardized presentation
- **Operational personnel**
- guidance for providing digital products and services
- **Operational personnel, AIM SW manufacturers**





Lead the way to implementation...

Support the implementation of AIM requirements (Annex 15, 16th edition and PANS-AIM):

- Revise and/or enhance existing requirements (e.g. in response to State Letter 2017/22);
- development of guidance material for AIM;
- development of web-based guidance;
- identification of specific training needs;
- direct assistance to States to transition to AIM;
- any other AIM implementation support, as required.



Look into the future...

Develop new aeronautical information management requirements. This task may encompass:

- develop an operational concept and corresponding provisions for the establishment of an information service that serves as a replacement for the information currently provided by NOTAMs;
- facilitate the migration of existing paper-based aeronautical charting products into the digital environment and identify requirements for the graphical representation of aeronautical information in a SWIM environment;
- facilitate the provision of digital datasets through SWIM services;
- identify and analyze aeronautical information requirements specific to UAS traffic management (UTM);
- Any other requirements, as needed.



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Actions & Outcome

- ✈ AIM Brainstorming Session (ICAO HQ, Montreal, 1-3 November 2017)
- ✈ AIM Steering Group Meeting (ICAO HQ, Montreal, 16 to 20 April 2018)
- ✈ 12 Projects defined by the experts (end July 2018)
- ✈ Coordination with the Information Management Panel (September 2018)
- ✈ ICAO internal peer review: **5 AIM Job-Cards** (September 2018)
- ✈ Consultation with the Air Navigation Commission for approval of the AIM job-cards and assignment to a new AIM-WG of the IMP (30th Oct – 8th Nov 2018)



AIM Job-Cards

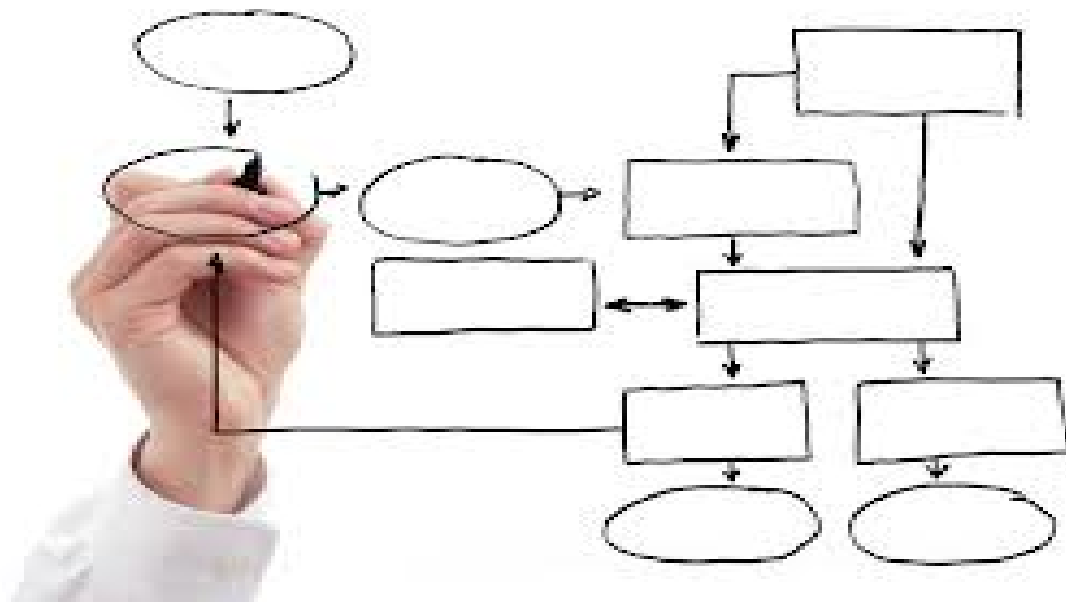
AIM Job-cards

- 1) AIM Global Implementation Support
- 2) WGS-84
- 3) NOTAM
- 4) Aeronautical Charts
- 5) Digital Data sets



Project Management Approach

Lead the way to implementation...





AIM Global Implementation Support

Problem statement:

- Non-effective implementations of ICAO SARPs and Procedures for the aeronautical information domain exist today
- Inefficiencies in the State`s provision of quality-assured aeronautical data and information

Impact:

- Safety and efficiency of flight operations
- Global priorities: PBN, A-CDM, ATFM, SWIM

Action Plan:

- **Guidance material**
- **AIM Roadmap**
- Regional seminars/workshops
- Direct assistance to States (“Go-Teams”)
- Training programmes for AIM

Metrics:

Measure implementation, for instance:

- N. States AIM Reg. Frameworks
- N. States QMS Implementation
- N. State AISP formalized AIM training prog.
- Etc.

Measure actions, for instance:

- N. ICAO AIS/AIM related workshops



WGS-84

Problem statement:

- There is no evidence of a harmonized implementation of WGS-84/EGM-96 globally.
- The use of coordinates which are declared as WGS-84 but refer to a “WGS-84-alike” coordinate system can be a safety hazard.
- Furthermore the ICAO provisions and guidance material are outdated

Impact:

Implementation of PBN

Action Plan:

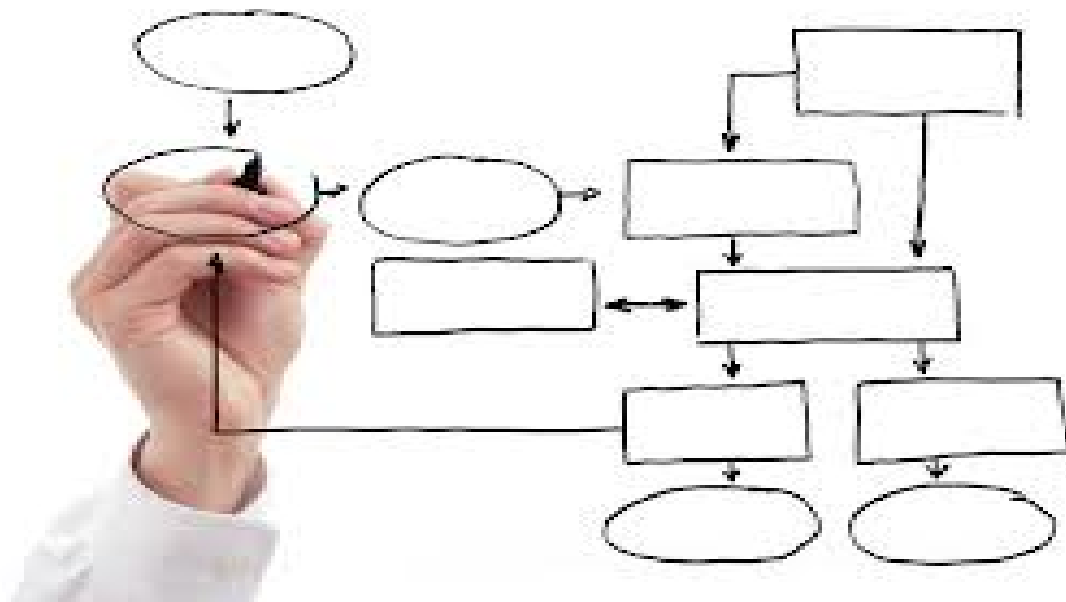
- **Gather information concerning the actual status of implementation of WGS-84/EGM-96**
- **Update ICAO SARPs and Procedures (Annex 15/PANS-AIM)**
- **Revise WGS-84 manual**

Metrics:

Measure implementation, for instance:

- N. of States compliant with WGS-84/EGM/96 (or new updated vertical reference system)

New AIM requirements





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Notice to Airmen (NOTAM)

Problem statement:

- For pilots and flight planning units it is difficult to filter the NOTAM properly
- The total number of NOTAM issued per year has increased by 2.4 times worldwide
- Quality of NOTAM information is not always adequate
- The filtering criteria are not sufficient to cope with modern operations (TBO).

Impact:

- High impact on flight safety and efficiency
- Global priorities: PBN, A-CDM, ATFM, SWIM

Action Plan:

- **Looking into long-term solutions: develop a new concept for an Information Service (SWIM)**
- **Coordination with communities of interest**
- **Develop ICAO provisions**
- Global/Regional roll-out implementation activities
- Direct assistance to States ("Go-Teams")

Metrics:

- End-user satisfaction with regard to new proposed system
- N. of State AIS providing updates to A.I through a SWIM information service



Digital Data-Sets

Problem statement:

- States do not provide consistent or complete aeronautical digital data sets, resulting in a proliferation of different ways of providing aeronautical information with the risk of jeopardizing interoperability of exchanges.

Impact:

- Impact on the vision of an interoperable global ATM system for all users.

Action Plan:

- **Guidance material (AIS and e-TOD manuals)**
- **Define set of requirements for SWIM information services for aeronautical information**
- Global/Regional roll-out implementation activities
- Direct assistance to States (“Go-Teams”)

Metrics:

Measure Implementation:

- Number of State AIS providing digital data sets through an information service compliant with the ICAO SARPs



Aeronautical Charts

Problem statement:

- Annex 4 does not support a data-centric and digital environment, causes a high risk of proliferation of initiatives and may jeopardize the vision of a global interoperable ATM system for all users.

Impact:

- Impact on the vision of an interoperable global ATM system for all users.

Action Plan:

- **Gather information about Aeronautical Charts users' requirements through the support of relevant expert groups**
- **Revise Annex 4 provisions**
- **Develop Guidance material**
- Global/Regional roll-out implementation activities
- Direct assistance to States ("Go-Teams")

Metrics:

- Number of State AIS providing digital data sets (charts) through an information service compliant with the ICAO SARPs



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ICAO IMP AIM -WG

- ✈ Proposed establishment of an **AIM Working Group of the Information Management Panel**
- ✈ The AIM job-cards assigned to the AIM-WG



AIM Go-Teams

- **Creating a Framework for the Go-Teams**
- **Objective:** to assist States and ANSPs in removing roadblocks to implementation
- **Important!** The AIM Go-Teams do not have direct control over the implementation process within a State; decisions relating to the implementation of Aeronautical Information Services enhancements rests with the State and its designated ANSP.
- **Process:**
 - Selection of the candidate State
 - Data Collection
 - Coordination
 - On-site Visit
 - Follow-up
- **Terms of Reference (Drafted)**
- **Looking for Steady Partners**



AIM Training Programmes

✈ Preparing a Business Plan to fund the following training programmes:

✈ AIM Online Trainings:

- ✈ *How to develop an effective strategy for a successful implementation of AIM (for managers)*
- ✈ *How to effectively implement quality management systems (QMS) as applied to Aeronautical Information Management (AIM) processes*
- ✈ *How to effectively manage digital data from origination to distribution to the users*

✈ AIM Classroom Trainings:

- ✈ *Competency-based Training for AIM Officers*
- ✈ *Competency-based Training for AIM Managers (State CAAs and ANSPs)*





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