

TITLE

DP-9

QMS for AIS/MAP Service Implementation Workshop



AIS to AIM transitions: The AFI challenges

- The global evolution from AIS to AIM capability is considered an essential and over-arching objective guiding global and Regional developments related to ICAO's Efficiency and Safety Strategic Objectives.
- The Roadmap for the transition from AIS to AIM proposed as Guidance material to assist States in planning the scope and prioritizing projects and actions for the transition to AIM.

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OVERVIEW

- The 2003 11th ICAO Air Navigation Conference (AN-Conf/11) established that aeronautical information would be required to be managed efficiently and shared on a system-wide basis, making it available to any participant in the ATM environment whenever and wherever it was required.
- AN-Conf/11 called upon ICAO to define requirements for safe and efficient global Aeronautical Information Management (AIM), adopt a common Aeronautical Information Exchange (AIXM) model, and develop new specifications for ICAO Annex 4—*Aeronautical Charts* and Annex 15—*Aeronautical Information Services* (AIS) that would govern the future availability of aeronautical information and charts.

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AFI transition from AIS to AIM

- ICAO recognized that not all States or Regions could make the transition immediately to AIM, and that implementation would be evolutionary based on Regional needs and capabilities. The Organization accounted for transition requirements in its Global Air Navigation Plan, and worked to ensure that the plans of all States and Regions would be coordinated to ensure, to the greatest extent possible, that solutions will be internationally harmonized and integrated.
- ICAO Annex 4, Annex 15 and associated guidance material will also require further amendment to support new digital requirements and the standardized presentation of aeronautical information to the end-user. This will include provisions for electronic Aeronautical Information Publications (eAIPs) and charts. The development of these requirements will need to take into account that, though the transition from a product-centric (current AIS) to a data-centric (AIM) service is essential. The provision of traditional AIS products during the transition phase will also be required.
- Notwithstanding this caveat, the quality, consistency, and timeliness of data within the AIM framework must meet stringent new digital requirements, substantially exceeding those currently considered acceptable.

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AFI-CAD database initiative

- Noting the adoption of the framework and guidance material for development of an AFI Centralized AIS Database (AFI-CAD) by the APIRG/16 meeting in 2007, the ICAO Regional Offices in Dakar and Nairobi, in collaboration with ICAO HQ, organized the third AFI-CAD Study Group meeting in Dakar, Senegal in October 2008.
- The main objective of the 2008 AFI-CAD event was to initiate and steer the process of developing the AFI-CAD business/financial model and associated User Requirements (URS).
- AFI-CAD will eventually comprise the AFI Region AIS Data Base System and the AFI Region AIS Data Operations and network provision. It will function as a single repository for aeronautical information and IAIP elements of participating States; provide data questioning enhancement through multilevel consistent data checking processes (including cross border data verification); act as a secure channel/vehicle for timely and efficient electronic distribution of aeronautical information and IAIP elements; and finally ensure harmonization and interoperability through a standardized system interface and data exchange model (AIXM) as well as a static data model (AICM).
- Eventual clients of the AFI-CAD system will enjoy support to edit and provide (to the system) aeronautical information, electronic access to and delivery of aeronautical information, browsing and downloading of participating States' aeronautical information; and finally a report generating function. Access will be provided via dedicated Client Interface Terminals (CITs) and a web-based interface as determined by a given client's Service level Agreement (SLA).

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ICAO Global Operational ATM

- The “glue” that binds ATM components together is the management, utilisation, and transmission of data and information : **“information management”**.
- A function called **“information services”** is also defined to include:
 - Information management;
 - Aeronautical information;
 - Meteorological information;
 - Other essential services (MIL, S&R, accident investigation, ...).

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Change from AIS to AIM

- **Glue of the future ATM Network**

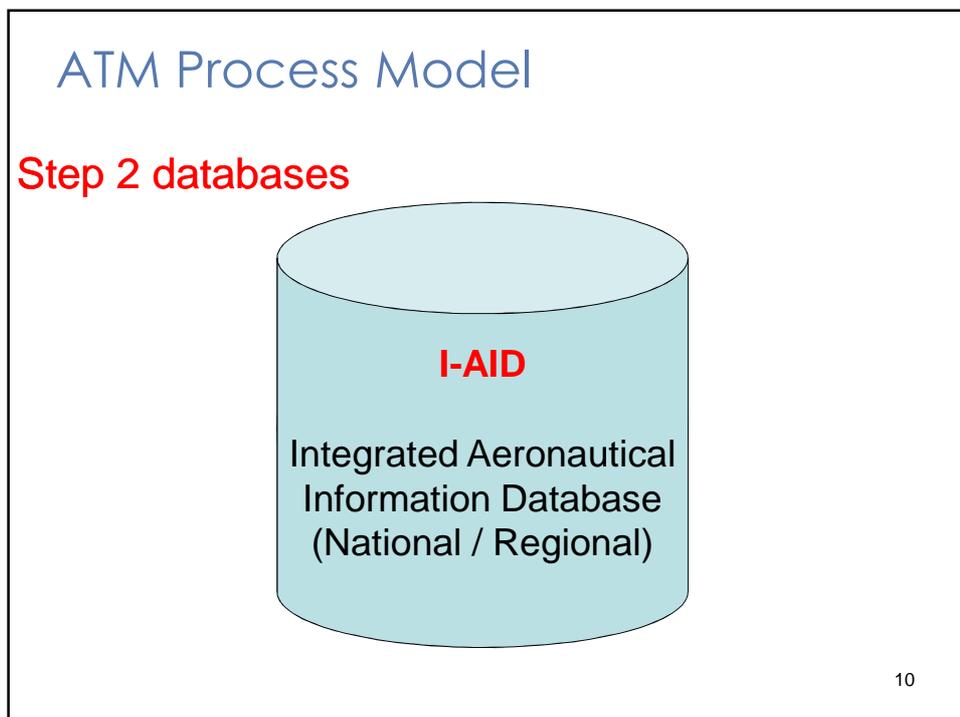
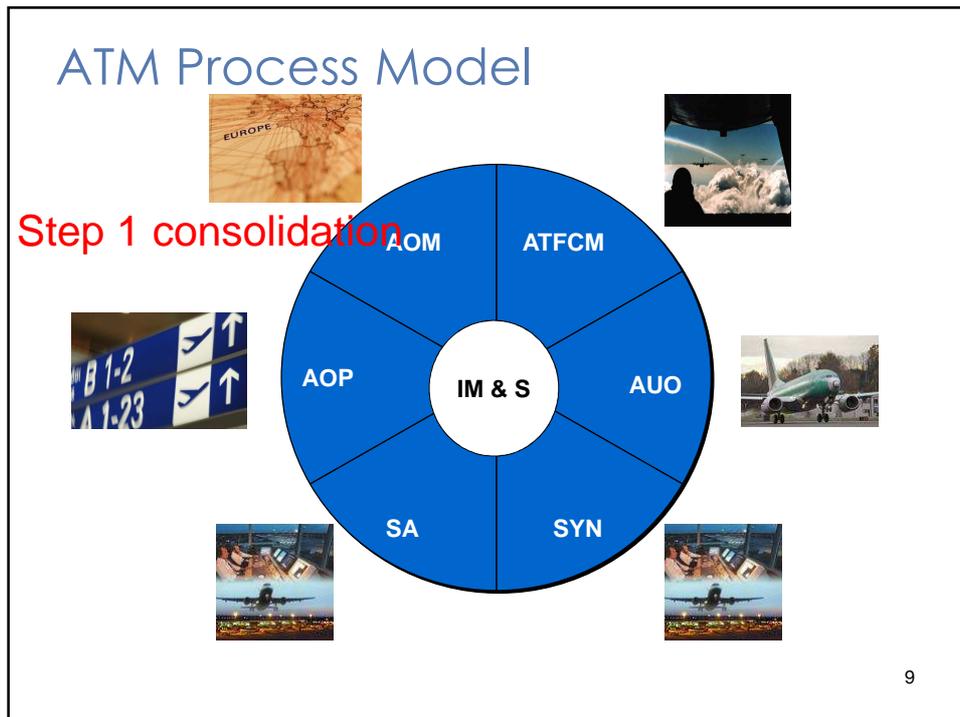
- The AIS-AIM Transition Roadmap document is a plan, to manage and facilitate the global transition from AIS to AIM.

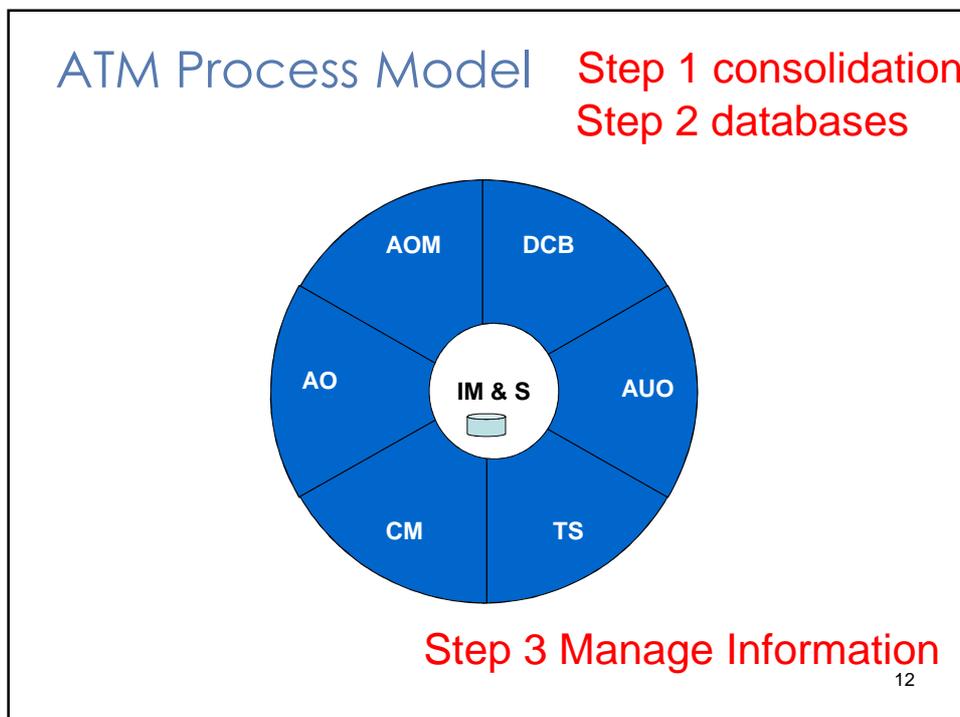
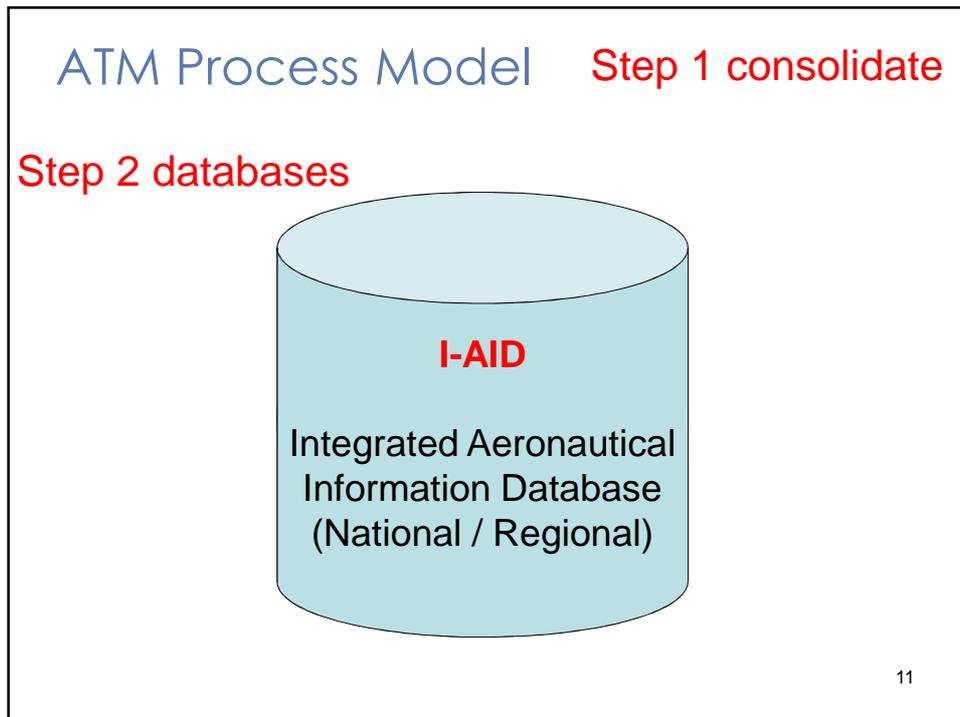
- Evolution, no revolution

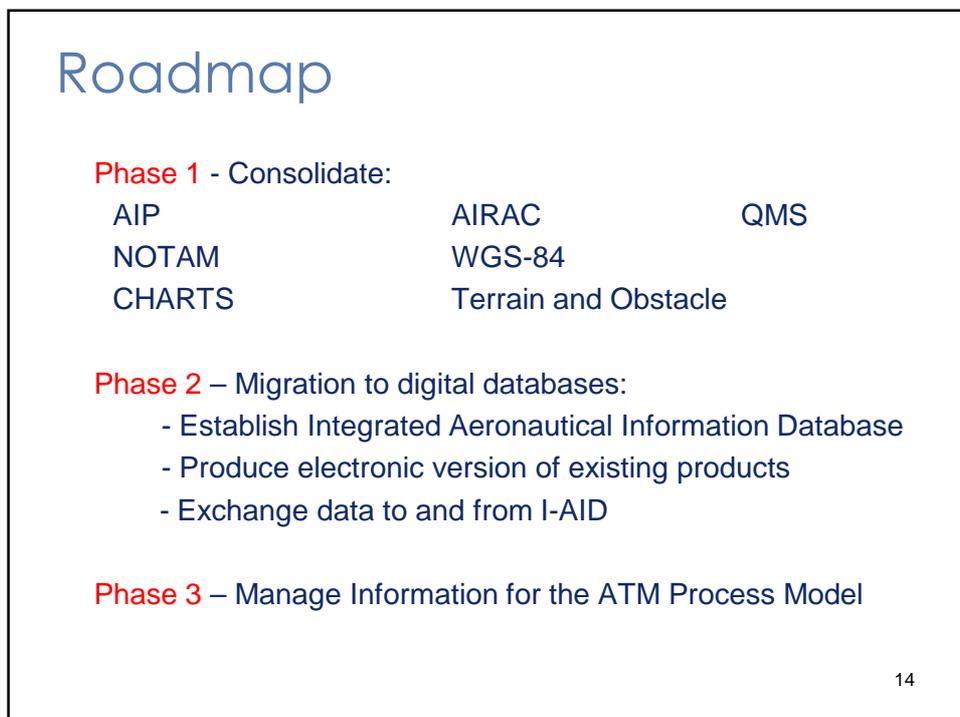
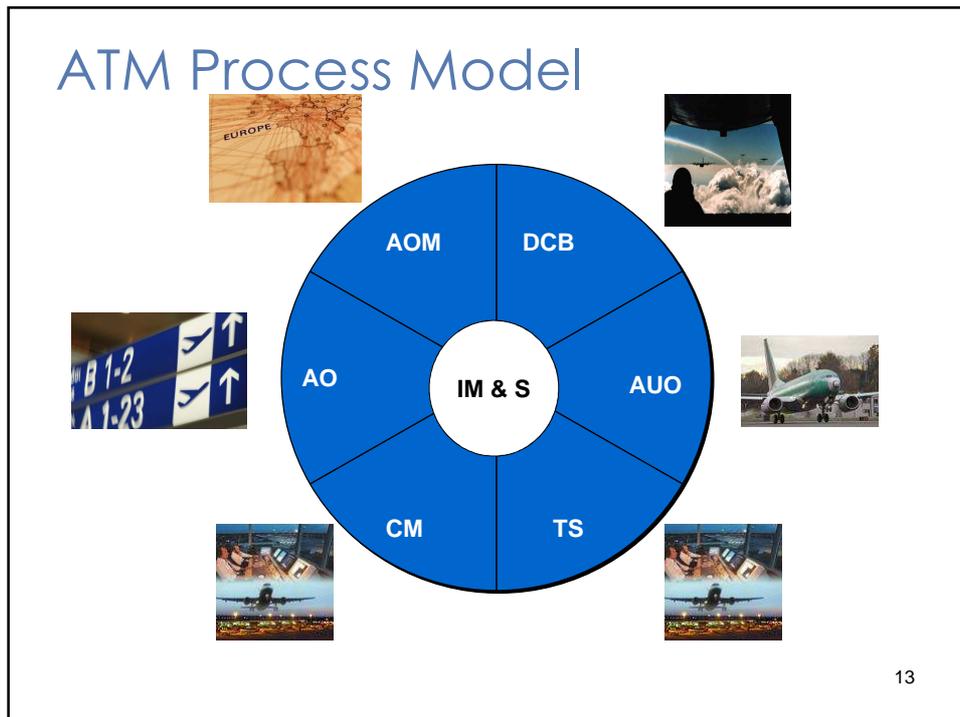
- **Step 1 consolidation,**
- **Step 2 databases,**
- **Step 3 information management.**

ATM Process Model

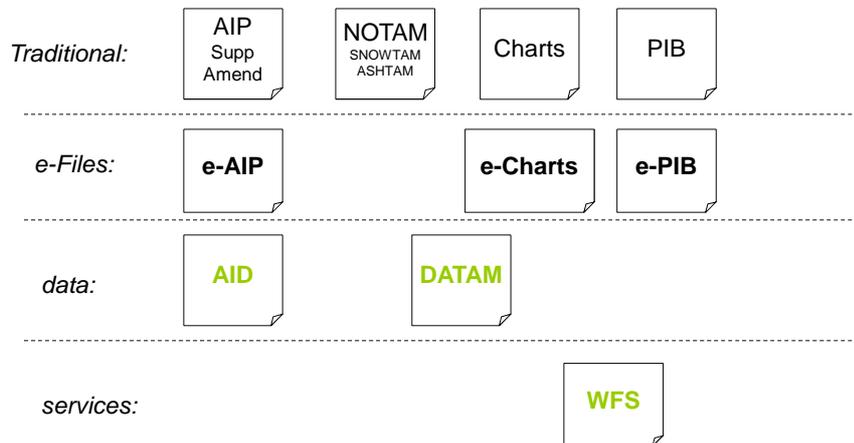








New Products and Services



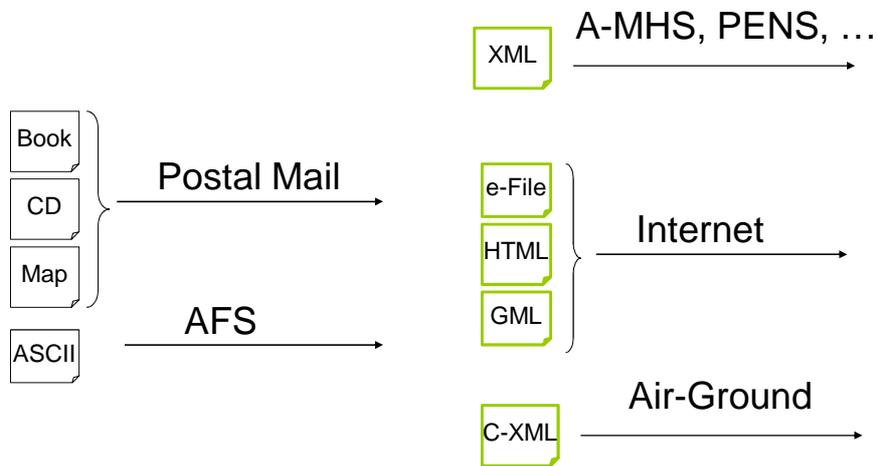
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New Standards & Guidance

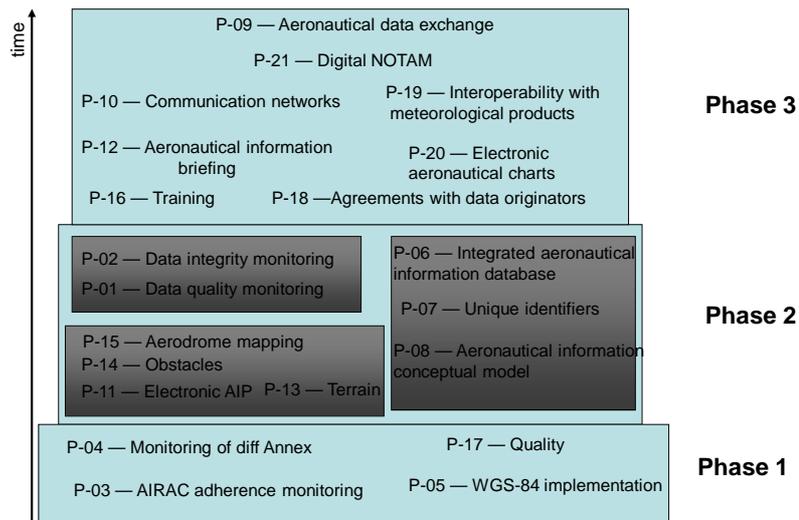
- **Phase 1**
 - eAIP
 - Update of Doc 8126
 - References to automation more precise
 - Terrain and obstacles
- **Phase 2**
 - Conceptual Model (based on AICM), ...
 - Aerodrome Mapping
- **Phase 3**
 - Data Exchange model (based on AIXM)
 - Functions and responsibilities (Staff Competencies)
 - Quality and Training Manual (SLAs), ...

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Communication Media



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Conclusions

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- Re-enforcing the value of current products by going digital will provide more functionality for current users and better availability of the information;
- Towards a common Information Reference Model for ATM with quality procedures for the management of the information flow between systems.

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Roadmap Timeline

- **December 2008** **Phase 1 — Consolidation**
- **November 2009** **Phase 2 – Going digital** will begin by the development of new guidance material related (electronic AIP, aeronautical information conceptual model, training, quality)
- **November 2010** Amendment 36 of Annex 15 and Amendment 56 of Annex 4 would become applicable.
- **October 2011** **Phase 3 — Information management**, will begin with the fourth meeting of the AIS-AIMSG.
- **November 2013** Amendment 37 to Annex 15 and Amendment 57 to Annex 4 would become applicable, Possible divisional-type meeting in order to finalize the transition to AIM.
- **November 2016** **Amendment 38** to Annex 15 and **Amendment 58** to Annex 4 would become applicable.

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THE END

- THANK YOU !
- MERCI !

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