International Civil Aviation Organization

DP-2

First Working Group Meeting on the Implementation of AN-Conf/12 Rec,3/8 (c), (Dakar, Senegal , 13-14 October 2014)

Agenda Item 2 a): **Introduction of the centralized ASECNA AIS Database and South African AIS Database in a harmonized manner and to using digital data exchange as key enablers within the AFI Region transition processes from AIS to AIM**

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AFI REGION AIM Challenges and Opportunities

Introduction

- 20 years ago we couldn't imagine the current picture of AIM.
- Our concern is how will AIM progress in the next 20 years?

What are the main challenges in AIM in the AFI Region?

- Data will be the soul of AIM and it will be used in most public Activities.
- The challenges faced by countries in the AFI Region will be similar to most other countries all over the world.
- They might need deep investigations and surveys

What are the main challenges in AIM in the AFI Region?

- Some Few States are slow in keeping up with the rate of change, including transitioning to AIM, which creates constraints to the overall performance of the region.
- AIM is not considered as a priority compared to CNS, ATM, aerodromes, etc and accordingly, necessary resources (financial and human) are not allocated to AIM.

What are the main challenges in AIM in the AFI Region?

- The Roadmap and other guidance materials have to be taken seriously and used for the development and implementation of the national plans for the transition to AIM.
- The opportunity:_____
- Buying new systems are part of the solution.
- But, it is all about the way of working, thinking, and a new approach to dealing with Information Management.

What are the main challenges in AIM in the AFI Region?

- The future vision of AIM and the benefits of contributing and sharing an Aeronautical Information Data Centric System is not clear for the authorities and decision makers.

- The opportunity:_____

- As part of the world, States in the AFI Region need to contribute and share an Aeronautical Information Centric System.

What are the main challenges in AIM in the AFI Region?

- Understanding of AIM Transition by Management levels (both middle/top management)
  - – for the top management it's all about commitments and budgets.
  - – but when it comes to middle management there may be some obstacles to change if they cannot see any benefit.
- The opportunity:_____
  - Is to convince States and Management of the new vision of AIM
  - The implementation methodology and the direct and indirect benefits of this new vision.

THE DIRECT CHALLENGES OF STATES

- 1. AIM Funding and Revenue
- 2. AIM HR
- 3. AIM Quality/SWIM
- 4. AIM Training and Education
- 5. AIM Certification
- 6. Transition Assessment and Measurement
- 7. Merging all Data providers in one
- AIM umbrella

AIM Funding and Revenue

- Investments in developing systems are costly and most countries place a higher priority on other projects usually directly related to ATC and Navigation equipment.
- The opportunity:_____
- The opportunity here is to know that investment in AIM, as a facilitator for PBN, CDM, SWIM, etc, will reduce the requirement for expensive equipments and at the same time will improve the service to the customers in the AFI Region.

AIM HR

- The need to assist in creating new criteria for the recruitment of AIM personnel in the future.
- The opportunity:
- Since the new AIM world depends very much on data collection, processing and storage,
- IT and computer Science should be part of a training package to assist States in the developing countries through fellowship awards to assist in the transition level of the countries that are slow in the Global transition process to AIM which is an International link chain.

AIM Training and Education

- There are big challenges in the Consolidation Phase of the Roadmap.
- Since training is the most important issue in the transition period, we have to focus on new training requirements and agree on a uniform system of Qualifications.
- There is a need for plans to support AIM Institutions/Organizations engaged in the transition from AIS to AIM within the AFI region.

AIM Training and Education

- By making better use of forums ,symposiums, workshops, meetings, help desk information's centers and other activities to support collaboration and harmonization of best practices and technology.
- The opportunity:_____
- Providing offers of package training to current AIM staff to develop and advance their skills in order to collaborate and lead the change in their countries.

Quality of AIM

- In the AFI Region, there is a need to provide solutions for improving the services in achieving SWIM through the Integration with the following other services
- REGIONAL AIM Data Bases (Implementation of the AFI-CAD Concept as per *Rec,3/8 (c) of the 12th ANC*)
- MET integration
- Automation and WAC Charts
- Airports Operations Information
- Airlines Operators Information
- SAR Information
- Liaison and overflying permissions information Transition

Transition
Assessment and Measurements

- As mentioned in the first slide, challenges faced by States in the AFI Region might need deep investigations and surveys.

- The opportunity:_____

- The objective is to find an effective way to measure the Transformation process in each phase of ICAO Roadmap.

AIM Data Base

- Having different Databases systems in the same State or even in same organization is inefficient.
- A Regional AIS Database cannot be successfully achieved without good cooperation between States.

❑ The opportunity:

- Assistance to develop Regional/Sub-Regional AIM Databases as per Recommendation 3/8 (c) of the 12th ANC as an enabler for the transition process to AIM and SWIM which can be used by all concerned in the SWIM Process.

AIM Certification-Challenges

- AIM Officers must be Certified, Y/N ?
- AIM personnel are not covered in ICAO Annex 1 (Personnel)
- But What is the urgency for having AIM certification?
- Some of AIS/AIM experts do not see the urgency to establish certifications, as we already have our rating and regular examination procedures.
- Other AIS/AIM Experts say that:
- "States shall commence to take the procedures for granting certifications to AIM staff in order to follow the Procedures and rules in their daily work ".

AIM Certification-Challenges

- Some states have already started to grant AIM staff certifications like Austria and Iran.

The opportunity:_____

- AIM Certification, however, would improve the services provided and pave the way for the transition from AIS to AIM.
- What is needed is for common International stand to take the lead in issuing a common International Standard regarding AIM Certifications.

Merging all Data providers in AIM

- Staff dealing with the Aeronautical Information/data should be processing data covering Briefing, Flight data, CNS, ATM, Meteorology, SAR, Airport Operations, Facilitation and Air transport operations under a single AIM Umbrella
- The opportunity:
- We have to seriously consider the need to increase the activities and responsibilities of AIM by restructuring in order to merge all Aeronautical Information and Data under one umbrella.

OUR OPPORTUNITIES IN BRIEF

- Better management for the data available
- Sharing data to do many different tasks
- Reaching out to new communities of users
- Future benefits cost
- Fully digital environment
- Improved safety and efficiency
- The possibility to bring environmental benefits

AIS-AIM ACHIEVEMENTS IN THE AFI REGION

- ASECNA CENTRALIZED DATABASE
- **Main challenges**
  - Implementation of a **centralized** aeronautical **database** able to ensure the *reliability, the integrity and the availability of timely data*;
  - **Compatibility and easy exchange of data** with other databases and **contribution to AFI-CAD implementation** ;
  - **Coherent automation** of the main functions for the production of the different elements of the integrated aeronautical information package ; and
  - Make effective **interoperability with meteorological** products with AIM and the flight plan management system.

ASECNA CENTRALIZED DATA BASE (2)

ASECNA DATA BASE SYSTEM

- Description:
  - Full AIM solution includes : AIXM+ / eAIP / Charting / AIS
- Specificities:
  - **Distributed Architecture on multiple sites**
    - 2 Servers for static data base (acting and back up) ;
    - 2 servers for dynamic data base (acting and back up);
    - Real time replication mechanisms;
    - AIS Terminals (linked with dynamic database) are installed in 17 countries for AIS aerodrome units and NOTAM Offices (3 NOF);
    - 1 training server at EAMAC in Niamey (ASECNA training center);
  - **Interoperability of AIXM data-base with IAC design application « GEOTITAN » for IAC charts production;**
  - **Edition of national AIP for the 17 members states**;
  - AIP Display on web server;
  - Dynamic data base is compliant with New FPL 2012 format.
- 2013 : static data migration has began with progressive operation;
- 2014 : static data will be in full operation.

AUTOMATION BASED ON DATA BASE

AUTOMATION OF AIM ACTIVITIES

- AIP activities: AIP Amendment and eAIP production;
- Charting activities: chart elaboration and production with an GIS application;
- NOF activities: NOTAM validation and publication, NOTAM check list edition;
- AIS/ARO activities: NOTAM proposal edition, PIB edition, FPL and ATS messages validation and transmission.

COMPLIANCE WITH ROADMAP STEPS

- ASECNA Centralized Data Base gives satisfaction to the four steps of AIS AIM road map:
- - **P07** : Unique identifier;
- - **P08** : Aeronautical Information Conceptual Model;
- - **P06** : Integrated Aeronautical Information Data base;
- - **P11**: Electronic AIP.

AUTOMATION BASED ON DATA BASE

AUTOMATION OF AIM ACTIVITIES

- AIP activities: AIP Amendment and eAIP production;
- Charting activities: chart elaboration and production with an GIS application;
- NOF activities: NOTAM validation and publication, NOTAM check list edition;
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Challenges of ATNS on AIM Capability towards SWIM

- Introduction

ATNS is taking a stance on the African Continent and transforming Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM) to Information Management (IM) applying the System Wide Information Management (SWIM) principles by deploying and using leading technologies to the benefit of the ATM Community. Establishing the ATNS Centralized Aeronautical Database (CAD) will proactively contribute towards Global AIM by providing the right quality assumed digital aeronautical information to the right place at the right time and in correct format to support all phases of flight.

Challenges of ATNS on AIM Capability towards SWIM

- **GENERAL**
  - **System**
    - **ATNS has started the process of acquiring the ATNS CAD that addresses the South African ATM Community requirements;**
    - **The solution contemplated by ATNS provides for the Single National/Regional aeronautical database, with Global interconnectivity, supporting the following applications:**
      - **AIXM 4.5 and 5.1 compatible database;**
      - **Electronic IAIP;**
      - **Published IAIP management tool;**
      - **Charting Tool;**
      - **Procedure Design interconnectivity;**
      - **Static Data Operations (Input and Output) including Remote data input operations;**
      - **Geospatial Information Visualization;**
      - **Internet Services allowing external users to view Static data.**

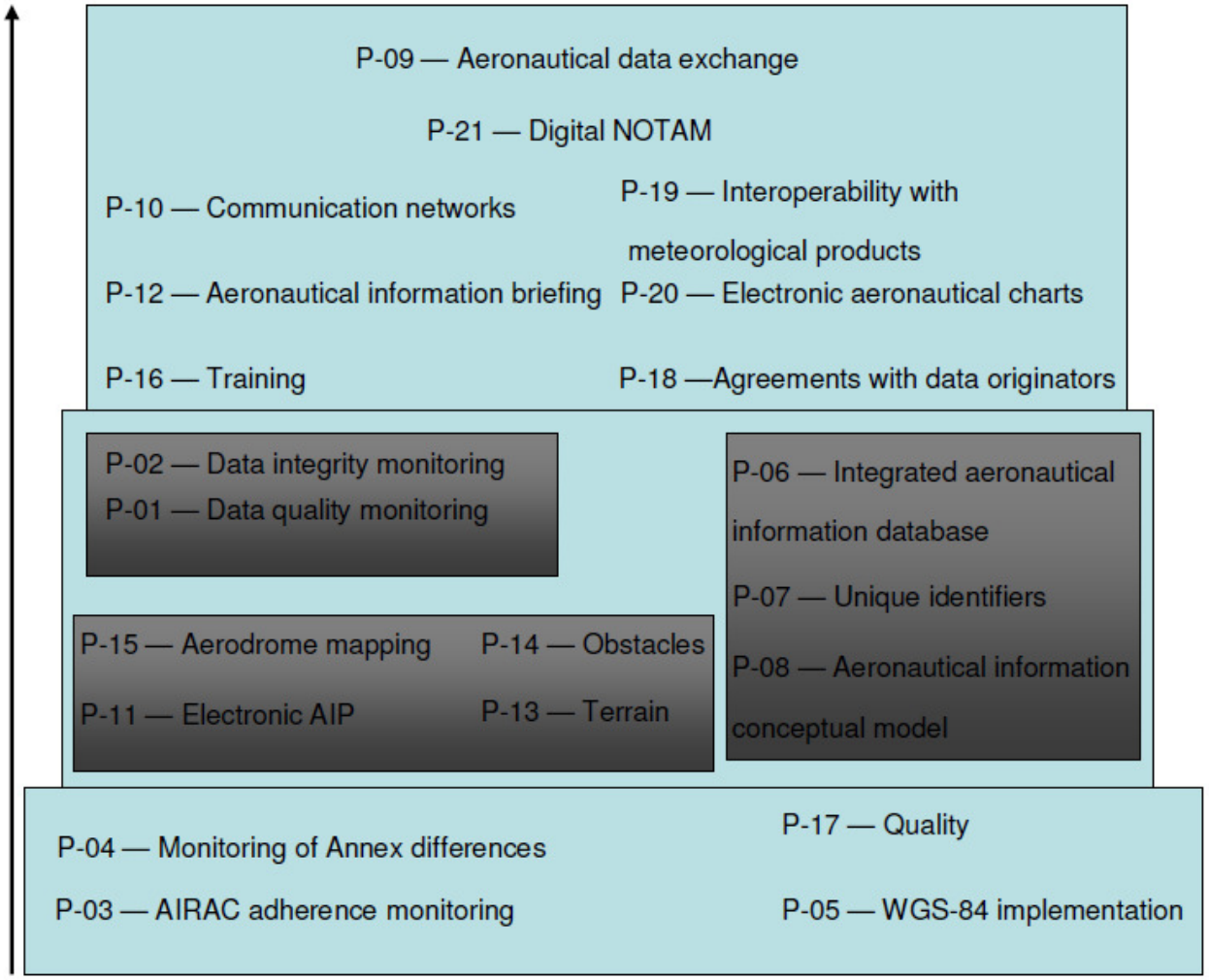
AIS/AIM Systems in South Africa

- **AIS/AIM System in South Africa (ATNS)**
  - **Description:**
    - **Dynamic Component comprises of**
      I. **Flight Planning and Management**
      II. **NOTAM Management (Creation, PIB, etc)**
      III. **Internet Briefing and Flight Planning**
      IV. **AMHS**
    - **Static Component comprises of**
      I. **SmartDM (SDO, GV, PAMS, IFS, LRI, etc)**
      II. **SmartAIP (AIP production tool)**
      III. **SmartCharting (Chart Production Tool)**
      IV. **Workflow Management (AST for Externel sources to provide data via web-interfaces)**
  - **Specificities:**
    - **Integration with ATC and ATFM (Flow Management)**
    - **Advanced AIS and Internet Briefing component**
    - **Integration to Frequentis NOTAM and Flight Plan Management components**
    - **Integration to any other AIXM databases**
    - **Synchronisation to EAD (Access to Worldwide data)**
  - **Dynamic Component - operational since 2001 (FPL, NOTAM & Briefing Component)**
  - **Static Component - SAT accepted Dec 2012 (Currently populating database with full Dataset)**

Challenges of ATNS on AIM Capability towards SWIM

- The system identified by ATNS is identical to the European Aeronautical Database(EAD) currently used by EUROCONTROL and the European ATM Community, which will enable the ATNS CAD to synchronize with the European Aeronautical Database, thereby aligning South Africa to comply and contribute towards Global AIM. This database will align with all the Global initiatives in aligning the continent with projects to the like of AIXM, EAD and others.

Reminder of AIS to AIM transition steps



Phase 3 : Information management

Phase 2 : Going Digital

Phase 1 : Consolidation

Implementation of phase 1 (Consolidation) and noted challenges of States in Africa

Step	Step objective	Required status	Means of compliance and required assistance
P-03	AIRAC adherence monitoring	Compliant	Indicator is established to monitor the compliance of all publication (amendment-NOTAM-Supplement and AIC) *iAIP are adhering ICAO requirements Standard and AIRAC Cycle publications are being monitored accordingly*
P-04	P-04 — Monitoring of Annex differences	Compliant	Mostly The findings are indicated in AIP, General 1: onwards
P-05	WGS-84 implementation	Compliant	Tanzania and Ghana-Waypoints need to be converted Tanzania -Survey the remained aerodromes DRC-Need of ICAO assistance. Only 10 airports since +- 10 years Botswana-Routine Maintenance has not been carried out due to financial constraints.
P-17	Quality	Compliant	ASECNA-Automation with THALES system ANAIS and AIXM+ Need for Training of staff on QMS Implementation Module to conduct Gap Analysis in the processes of Implementation. Audit assistance to get certified with ISO 9001:2008

Implementation of phase 2 (Going Digital) and noted challenges of States in the AFI

Step	Step objective	Required status	Means of compliance
P-01	Data quality monitoring	Compliant	ASECNA-Closer and permanent collaboration and coordination between ASECNA and CAA for national data collection.
P-02	Data integrity monitoring	Compliant	ASECNA-Post-checks are done in order to correct timely any mistakes in publication
P-11	Electronic AIP	Compliant	ASECNA- AIP available in digital format (PDF) on CD and on the web
P-13	Terrain	Compliant	ASECNA-Planned for 2014/2015
P-14	Obstacles	Compliant	ASECNA-Planned for 2014/2015Planned for 2014/2015
P-15	Aerodrome mapping	Compliant	ASECNA- Planed for structured format in 2015 South Africa-Establishment of aerodrome Mapping Database. Assembling and storage of aerodrome data systematically

Implementation of phase 2 (Going Digital) and noted challenges of States in the AFI

Step	Step objective	Required status	Means of compliance
P-06	Integrated aeronautical information database	Compliant	ASECNA- Implementation with THALES solution Static data base : ANAIS Dynamic data base : NOPIA ROBERTS FIR- Implementation with COMSOFT's or ATALIS solutions
P-07	Unique identifiers	Compliant	ASECNA- Static data base named "AIMANT" is compliant with the specifications of AIXM/AICM
P-08	Aeronautical information conceptual model	Compliant	

IMPLEMENTATION OF PHASE 3 (INFORMATION MANAGEMENT) "ASECNA-*We believe that the foreseen implementation time frame of Phase 3 is too ambitious and think that 2015-2020 would be a more realistic time frame*"

Step	Step objective	Required status	Means of compliance
P-09	Aeronautical data exchange	Compliant	AIXM interface from/to the central aeronautical database (refer to P-06) is available.
P-10	Communication networks	Compliant	ASECNA- AFTN and INTERNET are use *ASECNA-Migration to AMHS is planned for 2013-2014* *Internet width path is be improved for 2013-2014 IP network planned for 2014/2015*An
P-12	Aeronautical information briefing	Compliant	Integrated briefing is planned for 2013 (NOTAM-MET-FPL With THALES solution ANAIS
P-16	Training	Compliant	A new ab-initial training program will be available to update subject to AIM evolution
P-18	Agreements with data originators	Compliant	A national AIM coordinator is appointed by CAA to work closer with ASECNA
P-19	Interoperability with meteorological products	Compliant	Next step (fully integrated briefing) will be implemented after the design and implementation of the appropriate data exchange technology is finished (WXXM – Weather Exchange Model).
P-20	P-20 — Electronic aeronautical charts	Compliant	More detailed specification are required; Annex 4, Chapter 20 Electronic Aeronautical Chart Display is too general.

REQUIRED ASSISTANCE

- Complete, mature and innovative AIM solution
- Already fully compliant with Phase1/Phase 2 and Phase 3 AIS to AIM transition steps
- Fully SOA solution implementing technologies proposed by Eurocontrol and OGC and selected by SESAR and NextGen research programs

STATUS REPORT AGAINST THE 21 STEPS OF THE ICAO ROADMAP FOR THE TRANSITION FROM AIS TO AIM

	Phase 1 Consolidation				Phase 2 Going Digital									Phase 3 Information Management							
	P~03	P~04	P~05	P~17	P~01	P~02	P~06	P~07	P~08	P~11	P~13	P~14	P~15	P~09	P~10	P~12	P~16	P~18	P~19	P~20	P~21
Angola																					
Benin	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Burkina Faso	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Botswana	X	X	X	X	N	P	X				N	P	P	P	N	X	N	N	N	P	N
Burundi																					
Cameroon	X	X	X	X	X	X		X	X	X	P	P	P	P	X	X	X	P	P	P	N
Cape Verde							X														
Central African Republic	X	X	X	X	X	X		X	X	X	P	P	P	P	X	X	X	P	P	P	N
Chad	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Comoros	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Congo	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Cote d'Ivoire	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Democratic Republic of Congo																					
Djibouti																					
Egypt	X	X	X	X	X	X	X	X	X	X											
Equatorial Guinea	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Eritrea	X																				
Ethiopia	X		X	X																	
Gabon	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Gambia	X	X	X	P		P	X	N		X	N	P	N		X	X		N	N	P	N
Ghana	X	X	X	P		P	P			P											
Guinea	X	X	X	P	P	P	X	X	X	P	P	P	N	P	X	N	P	P	P	P	N
Guinea Bissau	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Kenya	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	P	N
Lesotho																					
Liberia	X	X	X	P	P	P	X	X	X	P	P	P	N	P	X	N	P	P	P	P	N
Madagascar	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N

STATUS REPORT AGAINST THE 21 STEPS OF THE ICAO ROADMAP FOR THE TRANSITION FROM AIS TO AIM

	Phase 1 Consolidation				Phase 2 Going Digital									Phase 3 Information Management							
	P-03	P-04	P-05	P-17	P-01	P-02	P-06	P-07	P-08	P-11	P-13	P-14	P-15	P0-9	P-10	P-12	P-16	P-18	P-19	P-20	P-21
Malawi																					
Mali	X	X	X	X	X	X	X	X		X	P	P	P	P	X	X	X	P	P	P	N
Mauritanie	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Mauritius	X	X	X		P	X	N	N	N	X	X	X	N	P	X	P	P	P	N	P	N
Mozambique			X																		
Namibia	X																				
Niger	X		X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Nigeria	X	N	X	X		X		N	N	X	N	N	P	N	X	X	N	N	P	N	N
Rwanda																					
Sao Tome and Principe																					
Senegal	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Seychelles	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	P
Sierra Leone	X	X	X	P	P	P	X	X	X	P	P	P	N	P	X	N	P	P	P	P	N
Somalia	X	N	X	X	N	N	N	N		N	N	N	N	N	N	N	N	N	N	N	N
South Africa	X	X	X	X	X	X	X	X	X	X	X	X	P	X	X	X	X	P	P	P	N
Sudan	X	X	X	X	N	N	X	N	N	N	P	P	N	P	X	X	X	X	P	P	N
South Sudan	X																				
Swaziland			X																		
Togo	X	X	X	X	X	X	X	X	X	X	P	P	P	P	X	X	X	P	P	P	N
Tunisia	X	X	X	X	X	X	X	N	N	X	P	P	P	P	X	X	X	X	P	P	N
Uganda	X	X	X	X	N	N	N	P	N	P	P	P	P	P	X	P	X	X	P		N
United Republic of Tanzania	X	X	X	X	P	X		X	X	X			P	P	X	P	X	X	P		N
Zambia			X																		
Zimbabwe	X	P	X	P	P	P	P	P	P	X	P	P	P	P	P	P	P	P	P	P	P

X= Implemented
N= Non Implemented
P= Plan Implementation

A SUMMARY OF AIS-AIM RELATED DEFICIENCIES ANTICIPATED AFTER 14 NOVEMBER 2013 BASED ON IMPLEMENTATION OF ROADMAP STEPS

	Phase 1 Consolidation (Amendment 36 Nov.2010)				Phase 2 Going Digital (Amendment 37 November 2013)									Phase 3 Information Management (Amendment 38 November 2016)							
	AIRAC Adherence Monitoring	Monitoring Annex 4 and Annex 15 differences	WGS-84 Implementation	Quality	Data Quality Monitoring	Data Integrity Monitoring	Integrated Aeronautical Information Database	Unique Identifiers	Aeronautical Information Conceptual Model	Electronic AIP	Terrain	Obstacles	Aerodrome Mapping	Aeronautical Data Exchange	Communication Networks	Aeronautical Information Briefing	Training	Agreements with Data Originators	Interoperability with meteorological Products	Electronic Aeronautical Charts	Digital NOTAM
	P-03	P-04	P-05	P-17	P-01	P-02	P-06	P-07	P-08	P-11	P-13	P-14	P-15	P-09	P-10	P-12	P-16	P-18	P-19	P-20	P-21
Angola	B	B	B	N	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N	N
Benin	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Burkina Faso	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Botswana	C	C	C	B	B	B	O	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Burundi	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Cameroon	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Cape Verde	B	B	C	B	B	B	B	B	B	B	B	B	B	N	N	N	O	O	O	O	N
Central African Republic	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Chad	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Comoros	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Congo	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Cote d'Ivoire	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Democratic Republic of Congo	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Djibouti	B	B	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Egypt	C	C	C	B	O	O	O	O	O	O	B	B	B	O	O	O	O	O	O	O	N
Equatorial Guinea	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Eritrea	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ethiopia	C	B	C	N	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N
Gabon	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Gambia	C	C	C	B	B	B	B	B	B	O	B	B	B	N	N	N	N	N	N	N	N
Ghana	B	B	B	B	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N
Guinea	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Guinea Bissau	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Kenya	C	C	C	C	O	O	O	O	O	C	O	O	O	O	O	O	O	O	O	O	N
Lesotho	N	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Liberia	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Madagascar	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N

A SUMMARY OF AIS-AIM RELATED DEFICIENCIES ANTICIPATED AFTER 14 NOVEMBER 2013 BASED ON IMPLEMENTATION OF ROADMAP STEPS

	Phase 1 Consolidation (Amendment 36 Nov.2010)				Phase 2 Going Digital (Amendment 37 November 2013)									Phase 3 Information Management (Amendment 38 November 2016)							
	AIRAC Adherence Monitoring	Monitoring Annex 4 and Annex 15 differences	WGS-84 Implementation	Quality	Data Quality Monitoring	Data Integrity Monitoring	Integrated Aeronautical Information Database	Unique Identifiers	Aeronautical Information Conceptual Model	Electronic AIP	Terrain	Obstacles	Aerodrome Mapping	Aeronautical Data Exchange	Communication Networks	Aeronautical Information Briefing	Training	Agreements with Data Originators	Interoperability with meteorological Products	Electronic Aeronautical Charts	Digital NOTAM
	P-03	P-04	P-05	P-17	P-01	P-02	P-06	P-07	P-08	P-11	P-13	P-14	P-15	P-09	P-10	P-12	P-16	P-18	P-19	P-20	P-21
Angola	B	B	B	N	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N	N
Benin	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Burkina Faso	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Botswana	C	C	C	B	B	B	O	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Burundi	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Cameroon	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Cape Verde	B	B	C	B	B	B	B	B	B	B	B	B	B	N	N	N	O	O	O	O	N
Central African Republic	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Chad	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Comoros	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Congo	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Cote d'Ivoire	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Democratic Republic of Congo	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Djibouti	B	B	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Egypt	C	C	C	B	O	O	O	O	O	O	B	B	B	O	O	O	O	O	O	O	N
Equatorial Guinea	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Eritrea	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Ethiopia	C	B	C	N	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N
Gabon	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Gambia	C	C	C	B	B	B	B	B	B	O	B	B	B	N	N	N	N	N	N	N	N
Ghana	B	B	B	B	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N
Guinea	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Guinea Bissau	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Kenya	C	C	C	C	O	O	O	O	O	C	O	O	O	O	O	O	O	O	O	O	N
Lesotho	N	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Liberia	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Madagascar	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Malawi	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Mali	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Mauritanie	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Mauritius	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Mozambique	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Namibia	C	B	B	B	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	N
Niger	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Nigeria	C	B	C	B	B	B	B	B	B	B	B	B	B	N	O	O	O	O	O	O	N
Rwanda	N	N	B	N	N	N	N	N	N	N	N	N	N	N	O	O	O	O	O	O	N
Sao Tome and Principe	B	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Senegal	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Seychelles	C	B	C	B	B	B	B	B	B	B	B	B	B	N	N	N	N	N	N	N	O
Sierra Leone	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
Somalia	C	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
South Africa	C	C	C	C	C	C	C	C	C	C	O	O	O	C	O	C	O	O	O	O	N
Sudan	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
South Sudan	B	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Swaziland	N	N	B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Togo	C	C	C	B	O	O	O	O	O	C	B	B	B	O	O	O	O	O	O	O	N
Tunisia	C	C	C	C	C	C	C	C	C	C	B	B	B	O	O	O	O	O	O	O	N
Uganda	C	C	C	B	B	B	B	B	B	B	B	B	B	O	O	O	O	O	O	O	N
United Republic of Tanzania	C	C	C	C	O	O	O	O	O	B	B	B	B	O	O	O	O	O	O	O	N
Zambia	C	B	C	B	B	B	B	B	B	B	B	B	B	N	O	O	O	O	O	O	N
Zimbabwe	C	B	B	B	B	B	B	B	B	B	B	B	B	N	O	O	O	O	O	O	N

A SUMMARY OF AIS-AIM RELATED DEFICIENCIES ANTICIPATED AFTER 14 NOVEMBER 2013 BASED ON IMPLEMENTATION OF ROADMAP STEPS

- C= Completed
- O= On Schedule
- B= Behind Schedule
- N=No Plan to implement
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3. Recommendations :

3.1 The meeting is invited to :

a) urge concerned States to take appropriate follow-up action to address the deficiencies discussed in the PPT. Presentation as a matter of priority .

b) encourage AFI States to accelerate transition from AIS to AIM by implementing a fully automated digital aeronautical data chain.

c) encourage intra-regional and interregional cooperation for an expeditious transition from AIS to AIM in a harmonized manner and digital data exchange.

d) establish a common understanding of the intentions of the 12th ANC Rec, 3/8 (c) and the ICAO AIS/AIM Transition Roadmap with regard to an expeditious transition from AIS to AIM;

e) invite AFI States to consider joining the established Sub regional /Regional database an enabler from AIS to AIM.