PROGRESS ACHIEVED IN THE DEVELOPMENT OF THE e-ANP

The progress achieved in the development of the new Regional Air Navigation Plan Template and the Action Plan for the development of the e-ANP.

1. INTRODUCTION

1.1 The 12th Air Navigation Conference (AN-Conf/12) agreed to Recommendation 6/1 [Regional performance framework - planning methodologies and tools] regarding the alignment of regional air navigation plans (ANP) with the Fourth Edition of the Global Air Navigation Plan (GANP) (Doc 9750).

2. DISCUSSION

2.1 The Secretariat established a Working Group (e-ANP WG), composed of a representative from each Regional Office and ICAO Headquarters, to make proposals for changes to the Regional Air Navigation Plans (ANP) which included the development of a new structure, format and content of the ANP.

2.3 The Secretariat WG recalled the limitations of the current regional ANPs and agreed that they were no longer achieving the expected results and accordingly, there was an urgent need to reshape them to keep pace with the new developments, including the outcome of the Twelfth Air Navigation Conference (AN-Conf/12).

2.4 The Secretariat WG recognized that regional ANPs were needed and represented the bridge between, from one side, the global provisions in the ICAO Standards and Recommended Practices (SARPs) and the Global Air Navigation Plan (GANP), and from the other side, the States' National Plans and real implementation. In this regard the e-ANP WG considered the following:

- The ANPs have so far been developed to set forth, in detail, the facilities, services and procedures required for international air navigation within a specified area. They also contained planning and guidance material. It was noted that based on a Council decision (Eighth Meeting of its 131st Session refers), the monitoring of the implementation status of air navigation facilities and services was not part of the scope and objectives of the current ANP.

- Based on Recommendation 1/2 of the AN-Conf/12, and taking into consideration the new developments related to the performance based approach, the aviation system block upgrades (ASBU) methodology, etc., it was agreed that the new ANP/e-ANP should also include elements related to the monitoring of the status of implementation, at least related to the ASBU modules.

- A clear separation between the mandatory requirements and the optional/selective or preferable implementation scenarios based on the ASBU methodology should be included in the ANP.

- The need to identify the elements included in the current ANPs which were no longer required.

2.5 Based on the above, the Secretariat WG agreed that the ANP should contain provisions related to:

1) assignment of responsibilities;
2) mandatory requirements subject to regional agreement;
3) additional requirement specific to the region which are not covered in SARPs; and
4) elements related to the implementation of certain air navigation systems based mainly on the ASBU modules endorsed at regional or sub-regional level.

2.6 The Secretariat WG recognized that the regional ANPs would continue to be used by States for planning purposes and as a legal basis for air navigation services charges and accordingly, it might be needed, in a limited number of cases, that the ANPs include the list of required air navigation facilities and services. However, this would not be necessary, if the list of required air navigation facilities and services are clearly specified/defined in the SARPs.

2.7 The Secretariat WG had two face-to-face meetings (Paris, France, 4-8 February 2013; and Montreal, Canada, 18-22 November 2013), six (6) Teleconferences of its Steering Committee (SC) (25 March, 3 June, 27 August and 31 October 2013, 26 March and 16 April 2014) and one Teleconference of the whole WG members (5 September 2013). Most of the work has been conducted through emails among the Secretariat WG Members.

Objective and purpose of Regional Air Navigation Plans (ANP)

2.8 The Secretariat WG agreed on the objective and purpose of the Regional ANP as follows:

a) The ANPs provide for the planning and implementation of air navigation systems within a specified area, in accordance with the agreed global and regional planning framework. They are developed to meet those needs of specific areas not covered in the worldwide provisions. The development and maintenance of the ANPs is undertaken by ICAO PIRGs with the assistance of the ICAO Secretariat.

a) The ANPs are used as a repository Document for the assignment of responsibilities to States for the provision of air navigation facilities and services within a specified area in accordance with Article 28 of the Convention on International Civil Aviation (Doc 7300).

b) The ANPs contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements. The procedural parts of ANPs are published in the ICAO Regional Supplementary Procedures (SUPPs) (Doc 7030).

c) The ANPs contain provisions that States can follow in programming the provision of their air navigation facilities and services, with the assurance that facilities and services furnished in accordance with the plan will form with those of other States an integrated system adequate for the foreseeable future.

d) The ANPs may serve as a legal basis for air navigation services charges which are levied for services provided or made available to users, in accordance with ICAO's Policies on Charges for Airports and Air Navigation Services (Doc 9082) and ICAO Manual on Air Navigation Services Economics (Doc 9161).

e) It supports the performance-based approach to planning adopted by ICAO to measure the efforts made by States in implementing the agreed requirements.

Format and Table of Contents of the e-ANP

2.9 The Secretariat WG agreed that the ANP data related to the air navigation facilities and services could be classified as: stable, dynamic or flexible. In this regard, it was agreed that the new ANP should be composed of three volumes:

a) Volume I should contain stable plan elements whose amendment necessitated approval by the Council and these elements be related to:

- assignment of responsibilities;
- mandatory requirements subject to regional agreement; and/or
- additional requirements specific to the region which are not covered in SARPs. Note.

The following is a non-exhaustive list of such elements:

Flight Information Regions (FIR) boundaries (Table and Charts); Search and Rescue Regions (SRR) boundaries (Table and Charts); Volcanic Ash Advisory Centres (VAAC); Tropical Cyclone Advisory Centres (TCAC); Volcano Observatories (VO).

b) Volume II should contain dynamic plan elements whose amendment did not necessitate approval by the Council and these elements be related to:

- assignment of responsibilities;
- mandatory requirements subject to regional agreement; and/or
- additional requirements specific to the region which are not covered in SARPs.

Note.- The following is a non-exhaustive list of such elements:

Major traffic flows; ATS route network; Meteorological Watch Offices (MWO); Secondary Surveillance Radar (SSR) codes; Five-letter name-codes; VOLMET Broadcasts.

c) Volume III should contain dynamic/flexible plan elements providing implementation planning guidance for air navigation systems and their modernization taking into consideration emerging programmes such as the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP) (Doc 9750). The ANP Volume III would also include appropriate additional guidance, particularly with regard to implementation, to complement the material contained in the ANP Volumes I and II. The elements in ANP Volume III are thus not subject to the issuance of ICAO Planning and Implementation Regional Groups (PIRGs) deficiencies. The amendment of these elements does not require approval by the Council.

Description of the contents of the e-ANP

2.10 The general structure of the technical Parts of Volume I and II (AOP, CNS, ATM, MET, SAR and AIM) would consist of:

- Introduction;
- General Regional Requirements; and
- Specific Regional Requirements.

2.11 It is to be noted that the Section "General Regional Requirements" would be harmonized for all Regions. Accordingly, an amendment of the provisions (text and table templates) in "General Regional Requirements" would lead to amendment of the e-ANP of all Regions.

2.12 The information contained in Volume III would be related to implementation monitoring, planning and/or guidance. The structure of Volume III would be kept simple, consisting of:

- Part 0 - Introduction;
- Part I - General Planning Aspects (GEN); and
- Part II - Air Navigation System Implementation.

2.13 A Table for inclusion in Part I of Volume III to define a minimum set of High-Level Implementation Indicator(s), based on the SMART criteria (Specific, Measurable, Achievable, Relevant and Time bound), for each of the 18 ASBU Block 0 Modules and to include other

information as deemed necessary, for use by all ICAO Regions. The details related to the monitoring of the ASBU Modules, including the design of supporting enablers (tables/databases) would be left to the Regions/PIRGs.

Procedure for amendment of the e-ANP

2.14 The Secretariat is proposing a revised procedure for amendment of the e-ANP which described the process of maintenance of the e-ANP using a web based platform. It is to be noted that the current Council-approved procedure for amendment of the Basic ANP (with minor changes) would be applicable to the new Volume I and the current amendment procedure of the FASID (with minor changes) would be applicable to Volume II. The management and amendment of Volume III would be under the responsibility of the PIRGs. Nevertheless the amendment of Parts 0 and I of Volume III should go through an inter-regional coordination mechanism.

2.15 It's to be noted that the endorsement of the ANP Template, which includes the new procedure of amendment of the e-ANP, is the most important milestone in this process. The approval of the e-ANP of each Region, based on the approved ANP Template, would be accomplished in accordance with the procedures for amendment.

Development of the e-ANP on a web based platform

2.16 Considering the agreed format of the e-ANP, it is considered that the current ANP application under SPACE could be used as the basis for the development of the e-ANP web-based platform.

2.17 The public would be given read-only access to the e-ANPs of all Regions and focal points designated by States and International Organizations would be given access to develop and submit proposals for amendments to the relevant e-ANP of the Regions concerned.

2.18 It's to be noted that access to the e-ANP through the web based platform would facilitate the consultation of the air navigation plans of all regions, thus providing a global view of air navigation planning. The new approach in Volumes II and III of the e-ANP would allow significant flexibility for States to plan while increasing the possibility to enhance coordination, particularly for States in the interface area with adjacent Regions.

Action plan for further development/approval of the e-ANP

2.19 It's to be noted that the endorsement of the ANP Template, which includes the new procedure of amendment of the e-ANP, is the most important milestone in the process. It is expected that the ANP Template package would be presented to the Council in June 2014 for approval. The approval of the e-ANP of each Region, based on the approved ANP Template, would be accomplished in accordance with the procedure for amendment.

2.20 Subject to approval by the Council of the new ANP Templates, the development/approval of the e-ANP would be in accordance with the following Action Plan:

Vol I, II & III	Population of e-ANP	Regional Offices	September 2014
Vol I, II & III	Endorsement of the e-ANP	PIRGs/States	Mid 2015
Vol I	Submission of PfAs for approval of Volume I of e-ANP by the Council	Regional Offices/ANB	End 2015
Vol II	Circulate PfAs of Volume II	Regional Offices	End 2015

(NAME) AIR NAVIGATION PLAN

DRAFT

VOLUME I

(NAME) ANP, VOLUME I

PART VII - AERONAUTICAL INFORMATION MANAGEMENT (AIM)

1. INTRODUCTION

1.1 This part of the (NAME) ANP constitutes the agreed regional requirements considered to be the minimum necessary for effective planning and implementation of aeronautical information services (AIS) and aeronautical information management (AIM) facilities and services in the (NAME) region(s) and complements the provisions of ICAO Standards, Recommended Practices and Procedures (SARPs) related to AIS/AIM. It contains stable plan elements related to the assignment of responsibilities to States for the provision of AIS/AIM facilities and services within the ICAO (NAME) Region(s) in accordance with Article 28 of the Convention on International Civil Aviation (Doc 7300); and mandatory requirements related to the AIS/AIM facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.2 The dynamic plan elements related to the assignment of responsibilities to States for the provision of AIS/AIM facilities and services and the mandatory requirements based on regional air navigation agreements related to the AIS/AIM facilities and services are contained in the (NAME) ANP Volume II, Part VII - AIM.

1.3 The (NAME) ANP Volume III contains dynamic/flexible plan elements related to the implementation of air navigation systems and their modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) methodology and associated technology roadmaps described in the Global Air Navigation Plan. The Aviation System Block Upgrades (ASBU) modules are aimed at increasing capacity and improving efficiency of the aviation system whilst maintaining or enhancing safety level, and achieving the necessary harmonization and interoperability at regional and global level. This includes the regionally agreed ASBU modules applicable to the specified ICAO region/sub-region and associated elements/enablers necessary for the monitoring of the status of implementation of these ASBU modules, which include service improvement through digital aeronautical information management and interoperability and data through globally interoperable system wide information management (SWIM).

Standards, Recommended Practices and Procedures

1.4 The Standards, Recommended Practices and Procedures (SARPs) and related guidance material applicable to the provision of AIS, and ultimately AIM, are contained in :

a) Annex 4 - Aeronautical Charts;

b) Annex 15 - Aeronautical Information Services;

c) Regional Supplementary Procedures (Doc 7030);

d) Aeronautical Information Services Provided by States (Doc 7383);

e) Location Indicators (Doc 7910);

f) Aeronautical Information Services Manual (Doc 8126);

g) Procedures for Air Navigation Services - Aircraft Operations - Construction of Visual and Instrument Flight Procedures (PANS-OPS, Volume I and Volume II) (Doc 8168);

h) ICAO Abbreviations and Codes (PANS-ABC) (Doc 8168);

i) Aeronautical Charts Manual (Doc 8697);

j) Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377);

k) World Geodetic System (1984) Manual (Doc 9674);

l) Guidelines on the Use of the Public Internet for Aeronautical Applications (Doc 9855);

m) Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information (Doc 9881);

n) Flight Procedure Design Quality Assurance System, Volume I (Doc 9906);

o) "AIM QMS Manual" (Doc 9839) (Draft); and

p) "Training Manual for AIM" (Doc 9991) (Draft).

2. GENERAL REGIONAL REQUIREMENTS

2.1 States should ensure that the provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of air traffic services, in accordance with Charts ATM I-1 and ATM I-2.

2.2 States are responsible for the aeronautical information/data published by its aeronautical information service or by another State or a non-governmental agency on its behalf.

2.3 Aeronautical information published for and on behalf of a State should clearly indicate that it is published under the authority of that State.

2.4 The responsibility for the provision of AIS/AIM facilities and services in the (NAME) Region(s) is reflected in the Volume II.

3. SPECIFIC REGIONAL REQUIREMENTS

3.1 TBD (if necessary)

(NAME) AIR NAVIGATION PLAN

DRAFT

VOLUME II

(NAME) ANP, VOLUME II

PART VII - AERONAUTICAL INFORMATION MANAGEMENT (AIM)

1. INTRODUCTION

1.1 This part of the (NAME) ANP, Volume II, complements the provisions in ICAO Standards, Recommended Practices and Procedures (SARPs) related to AIS/AIM and aeronautical charts (MAP). It contains dynamic plan elements related to the assignment of responsibilities to States for the provision of AIS/AIM facilities and services within a specified area in accordance with Article 28 of the Convention on International Civil Aviation (Doc 7300); and mandatory requirements related to the AIS/AIM facilities and services to be implemented by States in accordance with regional air navigation agreements. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified.

2. GENERAL REGIONAL REQUIREMENTS

2.1 The responsibility for the provision of AIS/AIM facilities and services in the (NAME) Region(s), is reflected in the (NAME) Table AIM II-1, which shows the list of designated international NOTAM Office (NOF), designated State for AIP production, designated State for aeronautical charts (MAP) production, designated State for the provision of the authoritative Integrated Aeronautical Information Database (IAID) and designated State for the provision of the pre-flight information services.

2.2 States should designate and implement an authoritative Integrated Aeronautical Information Database (IAID) where data sets are integrated and used to produce current and future AIS/AIM products and services, which is a fundamental step in the transition to AIM. The designation of authoritative databases should be clearly stated in the Aeronautical Information Package AIP.

2.3 The national plans for the transition from AIS to AIM identifying clearly the timelines for the implementation of the different elements of the ICAO Roadmap for the transition from AIS to AIM should be submitted by States to the ICAO (NAME) Regional Office(s). States should also inform the ICAO (NAME) Regional Office(s) of any update.

2.4 States should take necessary measures to ensure that aeronautical information and data they provide meet the regulatory Aeronautical Data quality requirements.

2.5 The Quality Management System (QMS) in AIS/AIM should define procedures to meet the safety and security objectives associated with the management of aeronautical data and information.

2.6 Recognizing the need to maintain or enhance existing safety levels of operations, States should ensure that any change to the existing systems or the introduction of new systems used for processing aeronautical data and/or information are preceded by a safety assessment.

2.7 Technical services responsible for origination of the raw aeronautical information should be acquainted with the requirements for promulgation and advance notification of changes that are operationally significant as established in Annexes 11 and 14 and other relevant ICAO documentation. They should take due account of the time needed by AIS/AIM for the preparation, production and issue of the relevant material, including the compliance with the AIRAC procedures.

2.8 AIS/AIM personnel should be involved in the air navigation planning processes. This should ensure the timely preparation of appropriate AIS documentation and that the effective dates for changes to

the air navigation system and procedures are satisfied.

2.9 States should produce relevant aeronautical charts required for civil air operations employing visual air navigation independently or in support of other forms of air navigation. The production responsibility for sheets of the World Aeronautical Chart (WAC) — ICAO 1: 1 000 000 or Aeronautical Chart — ICAO 1: 500 000 (as an alternative to the World Aeronautical Chart — ICAO 1:1 000 000) is set out in Table AIM II-2.

3. SPECIFIC REGIONAL REQUIREMENTS

3.1 TBD (e.g. EAD for Europe, AIS/AIM Certification for EUR and MID, etc)

TABLE AIM II-1 - RESPONSIBILITY FOR THE PROVISION OF AIS/AIM FACILITIES AND SERVICES

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory

2 Designated international NOTAM Office (NOF)

3 Designated State for AIP production

4 Designated State for aeronautical charts (MAP) production

5 Designated State for the provision of the authoritative Integrated Aeronautical Information Database (IAID)

6 Designated State for the provision of pre-flight information services

7 Remarks — additional information, as appropriate.

State	NOF	AIP	MAP	IAID	Pre-flight briefing	Remarks
1	2	3	4	5	6	7

TABLE AIM II-2 - PRODUCTION RESPONSIBILITY FOR SHEETS OF THE WORLD AERONAUTICAL CHART - ICAO 1:1 000 000 OR AERONAUTICAL CHART — ICAO 1: 500 000

EXPLANATION OF THE TABLE

Column:

1 Name of the State accepting production responsibility.

2 World Aeronautical Chart — ICAO 1:1 000 000/Aeronautical Chart — 1: 500 000 sheet number(s) for which production responsibility is accepted.

3 Remarks.

Note — In those instances where the production responsibility for certain sheets has been accepted by more than one State, these States by mutual agreement should define limits of responsibility for those sheets. This should be reflected in the Remarks column

State	Sheet number(s)	Remarks
1	2	3

(NAME) AIR NAVIGATION PLAN

VOLUME III

TABLE OF CONTENTS

PART 0 — Introduction ... .

PART I — General Planning Aspects (GEN) .....

Table GEN III-1 - High-Level Implementation Indicator(s) for each ASBU Block 0 Module

Appendix A - Sample Template for Air Navigation Report Form (ANRF)

Appendix B - Main Planning Table Template

PART II — Air Navigation System Implementation ... .

(NAME) ANP, VOLUME III

PART 0 - INTRODUCTION

1. INTRODUCTION

1.1 The background to the publication of ANPs in three volumes is explained in the Introduction in Volume I. The procedure for amendment of Volume III is also described in Volume I. Volume III contains dynamic/flexible plan elements related to the implementation of the air navigation system and its modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP).

1.2 The information contained in Volume III is related mainly to:

- Planning: objectives set, priorities and targets planned at regional or sub-regional levels;
- Implementation monitoring and reporting: monitoring of the progress of implementation towards targets planned. This information should be used as the basis for reporting purposes (i.e.: global and regional air navigation reports and performance dashboards); and/or
- Guidance: providing regional guidance material for the implementation of specific system/procedures in a harmonized manner.

1.3 The management of Volume III is the responsibility of the [name of PIRG].

1.4 Volume III should be used as a tool for monitoring and reporting the status of implementation of the elements planned here above, through the use of tables/databases and/or references to online monitoring tools, as endorsed by [name of PIRG]. The status of implementation is updated on a regular basis as endorsed by [name of PIRG].

2. AVIATION SYSTEM BLOCK UPGRADES (ASBUS), MODULES AND ROADMAPS

2.1. The ASBU Modules and Roadmaps form a key component to the GANP, noting that they will continue to evolve as more work is done on refining and updating their content and in subsequent development of related provisions, support material and training.

2.2. Although the GANP has a worldwide perspective, it is not intended that all Block Upgrade Modules are required to be applied in every State, sub-region and/or region. Many of the Block Upgrade Modules contained in the GANP are specialized packages that should be applied only where the specific operational requirement exists or corresponding benefits can be realistically projected. Accordingly, the Block Upgrade methodology establishes an important flexibility in the implementation of its various Modules depending on a region, sub-region and/or State's specific operational requirements. Guided by the GANP, ICAO [Region-name] regional, sub-regional and State planning should identify Modules which best provide the needed operational improvements.

(NAME) ANP, VOLUME III

PART I - GENERAL PLANNING ASPECTS (GEN)

1. PLANNING METHODOLOGY

1.1 Guided by the GANP, the regional planning process starts by identifying the homogeneous ATM areas, major traffic flows and international aerodromes. An analysis of this data leads to the identification of opportunities for performance improvement. Modules from the Aviation System Block Upgrades (ASBUs) are evaluated to identify which of those modules best provide the needed operational improvements. Depending on the complexity of the module, additional planning steps may need to be undertaken including financing and training needs. Finally, regional plans would be developed for the deployment of modules by drawing on supporting technology requirements. This is an iterative planning process which may require repeating several steps until a final plan with specific regional targets is in place. This planning methodology requires full involvement of States, service providers, airspace users and other stakeholders, thus ensuring commitment by all for implementation.

1.2 Block 0 features Modules characterized by technologies and capabilities which have already been developed and implemented in many parts of the world today. It therefore features a near-term availability milestone, or Initial Operating Capability (IOC), of 2013 for high density based on regional, sub-regional and State operational need. Blocks 1 through 3 are characterized by both existing and projected performance area solutions, with availability milestones beginning in 2018, 2023 and 2028 respectively.

2. REVIEW AND EVALUATION OF AIR NAVIGATION PLANNING

2.1. The progress and effectiveness against the priorities set out in the regional air navigation plans should be annually reported, using a consistent reporting format, to ICAO.

2.2. Performance monitoring requires a measurement strategy. Data collection, processing, storage and reporting activities supporting the identified global/regional performance metrics are fundamental to the success of performance-based approaches.

2.3. The air navigation planning and implementation performance framework prescribes reporting, monitoring, analysis and review activities being conducted on a cyclical, annual basis. An Air Navigation Reporting Form (ANRF) reflecting selected key performance areas as defined in the Manual on Global Performance of the Air Navigation System (ICAO Doc 9883) has been developed for each ASBU Module. The ANRF is a customized tool which is recommended for the application of setting planning targets, monitoring implementation, and identifying challenges, measuring implementation/performance and reporting. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in the ANRF template. A sample of the ANRF is provided in Appendix A. A sample Template of a planning table which may be used to show the elements planned in an ICAO region is provided in Appendix B.

3. REPORTING AND MONITORING RESULTS

3.1 Reporting and monitoring results will be analyzed by the PIRGs, States and ICAO Secretariat to steer the air navigation improvements, take corrective actions and review the allocated objectives, priorities and targets if needed. The results will also be used by ICAO and aviation partner stakeholders to develop the annual Global Air Navigation Report. The report results will provide an opportunity for the international civil aviation community to compare progress across different ICAO regions in the establishment of air navigation infrastructure and performance-based procedures.

3.2 The reports will also provide the ICAO Council with detailed annual results on the basis of which tactical adjustments will be made to the performance framework work programme, as well as triennial policy adjustments to the GANP and the Block Upgrade Modules.

3.3 Table GEN III-1 contains a minimum set of High-Level Implementation Indicator(s) for each of the eighteen ASBU Block 0 Modules necessary for the monitoring of these Modules (if identified as a priority for implementation at regional or sub-regional level). These high-level indicators are intended to enable comparison between ICAO Regions with respect to ASBU Block 0 Modules and will apply only to commonly selected ASBU Modules. All regions/PIRGs reserve the right to select the ASBU Modules relevant to their needs and to endorse additional indicators, as deemed necessary. No reporting is required for ASBU Block 0 Modules that have not been selected.

Note: The priority for implementation as well as the applicability area of each selected ASBU Block 0 Module is to be defined by the [name of PIRG]. This should be reflected in Part II - Air Navigation System Implementation.

TABLE GEN III-1 - HIGH-LEVEL IMPLEMENTATION INDICATOR(S) FOR EACH ASBU BLOCK 0 MODULE

Explanation of the Table

1 Block 0 Module Code
2 Block 0 Module Title
3 High level Implementation Indicator
4 Remarks Additional information as deemed necessary.

Module Code	Module Title	High level Implementation Indicator	Remarks
1	2	3	4
B0-APTA	Optimization of Approach Procedures including vertical guidance	% of international aerodromes having at least one runway end provided with APV Baro-VNAV or LPV procedures	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	% of applicable international aerodromes having implemented increased runway throughput through optimized wake turbulence separation	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	% of applicable international aerodromes having implemented AMAN / DMAN	1. Not to be considered for the first reporting cycles due to lack of maturity. 2. List of ADs to be established through regional air navigation agreement.
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	% of applicable international aerodromes having implemented A-SMGCS Level 2	List of ADs to be established through regional air navigation agreement.
B0-ACDM	Improved Airport Operations through Airport-CDM	% of applicable international aerodromes having implemented improved airport operations through airport-CDM	List of ADs to be established through regional air navigation agreement.
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC / OLDI with neighbouring ACCs	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	- % of States having implemented an AIXM based AIS database - % of States having implemented QMS	

Module Code	Module Title	High level Implementation Indicator	Remarks
1	2	3	4
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	- % of States having implemented SADIS / WIFS - % of States having implemented QMS	
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	% of FIRs in which FUA is implemented	
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	% of FIRs within which all ACCs utilize ATFM systems	
B0-ASUR	Initial capability for ground surveillance	% of FIRs where ADS-B OUT and/or MLAT are implemented for the provision of surveillance services in identified areas.	1. Not to be considered for the first reporting cycles due to lack of maturity.
B0-ASEP	Air Traffic Situational Awareness (ATSA)	% of States having implemented air traffic situational awareness	1. Not to be considered for the first reporting cycles due to lack of maturity.
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	% of FIRs having implemented in-trail procedures	1. Not to be considered for the first reporting cycles due to lack of maturity.
B0-ACAS	ACAS Improvements	% of States requiring carriage of ACAS (with TCAS 7.1 evolution)	
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	% of States having implemented ground-based safety-nets (STCA, APW, MSAW, etc.)	
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	- % of international aerodromes / TMAs with PBN STAR implemented - % of international aerodromes/TMA where CDO is implemented	
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	% of FIRs utilising data link en-route in applicable airspace	
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	- % of international aerodromes / TMAs with PBN SID implemented - % of international aerodromes/TMA where CCO is implemented	

Appendix A

SAMPLE TEMPLATE

1. AIR NAVIGATION REPORT FORM (ANRF)

(This template demonstrates how ANRF to be used.
The data inserted here refers to ASBU B0-05/CDO as an example only)

Regional and National planning for ASBU Modules

2. REGIONAL/NATIONAL PERFORMANCE OBJECTIVE - B0-05/CDO:
Improved Flexibility and Efficiency in Descent Profiles

Performance Improvement Area 4:
Efficient Flight Path - Through Trajectory-based Operations

3. ASBU B0-05/CDO: Impact on Main Key Performance Areas (KPA)

	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	N	N	Y	Y	Y

4. ASBU B0-05/CDO: Planning Targets and Implementation Progress

5. Elements	6. Targets and implementation progress (Ground and Air)
1. CDO	
2. PBN STARs	

7. ASBU B0-05/CDO: Implementation Challenges

Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. CDO				
2. PBN STARs				

8. Performance Monitoring and Measurement 8A. ASBU B0-05/CDO: Implementation Monitoring	
Elements	Performance Indicators/Supporting Metrics
1. CDO	Indicator: Percentage of international aerodromes/TMAs with CDO implemented Supporting metric: Number of international aerodromes/TMAs with CDO implemented
2. PBN STARs	Indicator: Percentage of international aerodromes/TMAs with PBN STARs implemented Supporting metric: Number of international aerodromes/TMAs with PBN STARs implemented

8. Performance Monitoring and Measurement 8 B. ASBU B0-05/CDO: Performance Monitoring	
Key Performance Areas (Out of eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF)	Where applicable, indicate qualitative Benefits,
Access & Equity	Not applicable
Capacity	Not applicable
Efficiency	Cost savings through reduced fuel burn. Reduction in the number of required radio transmissions.
Environment	Reduced emissions as a result of reduced fuel burn
Safety	More consistent flight paths and stabilized approach paths. Reduction in the incidence of controlled flight into terrain (CFIT).
9. Identification of performance metrics: It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)' implementation benefits, without trying to apportion these benefits between module, have been identified on page 5. For the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 5. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.	

AIR NAVIGATION REPORT FORM
HOW TO USE - EXPLANATORY NOTES

1. Air Navigation Report Form (ANRF): This form is nothing but the revised version of Performance Framework Form that was being used by Planning and Implementation Regional Groups (PIRGs)/States until now. The ANRF is a customized tool for Aviation System Block Upgrades (ASBU) Modules which is recommended for application for setting planning targets, monitoring implementation, identifying challenges, measuring implementation/performance and reporting. Also, the PIRGs and States could use this report format for any other air navigation improvement programmes such as Search and Rescue. If necessary, other reporting formats that provide more details may be used but should contain as a minimum the elements described in this ANRF template. The results will be analysed by ICAO and aviation partners and utilized in developing the Regional Performance Dashboard and the Annual Global Air Navigation Report. The conclusions from the Global Air Navigation Report will serve as the basis for future policy adjustments, aiding safety practicality, affordability and global harmonization, amongst other concerns.

2. Regional/National Performance objective: In the ASBU methodology, the performance objective will be the title of the ASBU module itself. Furthermore, indicate alongside corresponding Performance Improvement area (PIA).

3. Impact on Main Key Performance Areas: Key to the achievement of a globally interoperable ATM system is a clear statement of the expectations/benefits to the ATM community. The expectations/benefits are referred to eleven Key Performance Areas (KPAs) and are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. The KPAs applicable to respective ASBU module are to be identified by marking Y (Yes) or N (No). The impact assessment could be extended to more than five KPAs mentioned above if maturity of the national system allows and the process is available within the State to collect the data.

4. Planning Targets and Implementation Progress: This section indicates planning targets and status of progress in the implementation of different elements of the ASBU Module for both air and ground segments.

5. Elements related to ASBU module: Under this section list elements that are needed to implement the respective ASBU Module. Furthermore, should there be elements that are not reflected in the ASBU Module (example: In ASBU B0-80/ACDM, Aerodrome certification and data link applications D-VOLMET, D-ATIS, D-FIS are not included; Similarly in ASBU B0-30/DAIM, note that WGS-84 and eTOD are not included) but at the same time if they are closely linked to the module, ANRF should specify those elements. As a part of guidance to PIRGs/States, every Regional ANP will have the complete list of all 18 Modules of ASBU Block 0 along with corresponding elements, equipage required on the ground and in the air as well as metrics specific to both implementation and performance (benefits).

6. Targets and implementation progress (Ground and Air): Planned implementation date (month/year) and the current status/responsibility for each element are to be reported in this section. Please provide as much details as possible and should cover both avionics and ground systems. This ANRF being high level document, develop necessary detailed action plan separately for each element/equipage.

7. Implementation challenges: Any challenges/problems that are foreseen for the implementation of elements of the Module are to be reported in this section. The purpose of the section is to identify in advance any issues that will delay the implementation and if so, corrective action is to be initiated by the concerned person/entity. The four areas, under which implementation issues, if any, for the ASBU Module to be identified, are as follows:

- Ground System Implementation:
- Avionics Implementation:
- Procedures Availability:
- Operational Approvals:

Should be there no challenges to be resolved for the implementation of ASBU Module, indicate as "NIL".

8. Performance Monitoring and Measurement: Performance monitoring and measurement is done through the collection of data for the supporting metrics. In other words, metrics are quantitative measure of system performance - how well the system is functioning. The metrics fulfil three functions. They form a basis for assessing and monitoring the provision of ATM services, they define what ATM services user value and they can provide common criteria for cost benefit analysis for air navigation systems development. The Metrics are of two types:

A. Implementation Monitoring: Under this section, the indicator supported by the data collected for the metric reflects the status of implementation of elements of the Module. For example- Percentage of international aerodromes with CDO implemented. This indicator requires data for the metric "number of international aerodromes with CDO".

B. Performance Monitoring: The metric in this section allows to asses benefits accrued as a result of implementation of the module. The benefits or expectations, also known as Key Performance Areas (KPAs), are interrelated and cannot be considered in isolation since all are necessary for the achievement of the objectives established for the system as a whole. It should be noted that while safety is the highest priority, the eleven KPAs shown below are in alphabetical order as they would appear in English. They are access/equity; capacity; cost effectiveness; efficiency; environment; flexibility; global interoperability; participation of ATM community; predictability; safety; and security. However, out of these eleven KPAs, for the present until experienced gained, only five have been selected for reporting through ANRF, which are Access & Equity, Capacity, Efficiency, Environment and Safety. Where applicable, mention qualitative benefits under this section.

9. Identification of performance metrics: It is not necessary that every module contributes to all of the five KPAs. Consequently, a limited number of metrics per type of KPA, serving as an example to measure the module(s)' implementation benefits, without trying to apportion these benefits between module, have been identified on page 6. For the family of ASBU modules selected for air navigation implementation, States/Region to choose the applicable performance (benefit) metrics from the list available on page 6. This approach would facilitate States in collecting data for the chosen performance metrics. States/Region, however, could add new metrics for different KPAs based on maturity of the system and ability to collect relevant data.

Appendix B - Main Planning Table Template

	Objectives					Priorities and targets			Reference
Block	ASBU modules and elements Enablers	Performance Improvement Area	Applicable or not in [Region] (Yes/No)	Regional planning elements	Enablers	Priority allocated in [Region]	Target(s) in [Region]	Indicator(s) / Metric(s)	Supporting Planning Document (ANRF, other)

SAMPLE

(NAME) ANP, VOLUME III

PART II - AIR NAVIGATION SYSTEM IMPLEMENTATION

1. INTRODUCTION

1.1 The planning and implementation of the ICAO Aviation System Block Upgrades (ASBUs) should be undertaken within the framework of the [name of PIRG] with the participation and support of all stakeholders, including regulatory personnel.

1.2 The ASBU Blocks and Modules adopted by the [region, sub-region name] should be followed in accordance with the specific ASBU requirements to ensure global interoperability and harmonization of air traffic management. The [name of PIRG] should determine the ASBU Block Upgrade Modules, which best provide the needed operational improvements in the ICAO [Region-name].

2. ICAO [REGION-NAME] AIR NAVIGATION OBJECTIVES, PRIORITIES AND TARGETS

2.1 In accordance with Recommendation 6/1 of the Twelfth Air Navigation Conference (AN-Conf/12), PIRGs are requested to establish priorities and targets for air navigation, in line with the ASBU methodology.

2.2 The achievement of the intended benefits along each routing or within each area of affinity is entirely dependent on the coordinated implementation of the required elements by all provider and user stakeholders concerned.

2.3 Considering that some of the block upgrade modules contained in the GANP are specialized packages that may be applied where specific operational requirements or corresponding benefits exist, States and PIRGs should clarify how each Block Upgrade module would fit into the national and regional plans.

2.4 As Block 0 modules in many cases provide the foundation for future development, all Block 0 modules should be assessed, as appropriate, for early implementation by States in accordance with their operational needs.

2.5 In establishing and updating the [region-name] air navigation plan, the [name of PIRG] and States should give due consideration to the safety priorities set out in the Global Aviation Safety Plan (GASP) and [region-name] safety strategy.

2.6 States in the [region-name] through the [name of PIRG] should establish their own air navigation objectives, priorities and targets to meet their individual needs and circumstances in line with the global and regional air navigation objectives, priorities and targets.

3. MONITORING OF ASBU MODULES IMPLEMENTATION

3.1 The monitoring of air navigation performance and its enhancement should be carried out through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets.

3.2 The monitoring of the regional implementation progress and performance metrics/indicators should be done for all elements planned by [name of PIRG]. The monitoring should allow global correlation of status and expectations, appreciation of benefits achieved for the airspace users, as well as corrective actions to be taken by the PIRG on implementation plans.

3.3 The [name of PIRG] should determine appropriate mechanisms and tools for the monitoring and the collection of necessary data at national and regional levels.

APPENDIX - ASBU BLOCK 0 MODULES APPLICABLE IN THE (NAME) REGION(S)

TO BE DEVELOPED

B0 - DATM: Service Improvement through Digital Aeronautical Information Management

Description and purpose

The initial introduction of digital processing and management of information, through aeronautical information service (AIS)/aeronautical information management (AIM) implementation, use of aeronautical information exchange model (AIXM), migration to electronic aeronautical information publication (AIP) and better quality and availability of data.

Applicability

Applicable at State level, to all States

Scope

The Global Air Traffic Management Operational Concept presented in ICAO Doc 9854 depends upon a System Wide Information Management (SWIM). The management, utilization and transmission of data and information are vital to the proper functioning of the ATM system and are at the core of air navigation services.

As part of SWIM, AIM is required to support evolving requirements for, inter alia, collaborative decision making (CDM), performance-based navigation (PBN), ATM system interoperability, network-centred information exchange, and to take advantage of improved aircraft capabilities.

In the short- to medium-term, the focus is on the continuing transition of the services provided by aeronautical information services (AIS) from a product-centred, paper-based and manually transacted focus to a digitally-enabled, network-centred and service-oriented aeronautical information management (AIM) focus. AIM envisages a migration to a data centric environment where aeronautical data will be provided in a digital form and in a managed way. This can be regarded as the first step of SWIM implementation, which is based on common data models and data exchange formats. The next (long-term) SWIM step implies the re-thinking of the data services in terms of a "network" perspective.
The transition to AIM requires that all aeronautical information, including that currently held in AIP be stored as individual digital standardized data sets to be accessed by user applications. The distribution of these data sets will both enhance the quality of output and ultimately provide a platform for new applications. This will constitute the future integrated aeronautical information package that will contain the minimum regulatory requirement to ensure the flow of information necessary for the safety, regularity and efficiency of international air navigation.

The transition from AIS to AIM will have to, inter-alia:

a) support or facilitate the generation and distribution of aeronautical information which serves to improve the safe and cost-effective accessibility of air traffic services in the world;
b) provide a foundation for measuring performance and outcomes linked to the distribution of quality assured aeronautical information and a better understanding of the determinants of ATM, safety and effectiveness not related to the distribution of the information; and
c) ensure, to the greatest extent possible, that solutions are internationally harmonized and integrated and do not unnecessarily impose multiple equipment carriage requirements for aircraft or multiple systems on the ground.

AIM requires all aeronautical information to be stored as datasets that can be accessed by user applications. The establishment and maintenance of an Integrated Aeronautical Information Database where datasets are integrated and used to produce current and future AIS/AIM products and services is a fundamental step in the transition to AIM.

Expected performance benefits

Access/Equity : N/A

Capacity : N/A

Efficiency : Reduced costs in terms of data inputs and checks, paper and post, especially when considering the overall data chain, from originators, through AIS to the end users

Environment : Reducing the time necessary to promulgate information concerning airspace status will allow for more effective airspace utilization and allow improvements in trajectory management

Safety: Reduction in the number of possible inconsistencies. Module allows reducing the number of manual entries and ensures consistency among data through automatic data checking based on commonly agreed business rules.

B0-DATM Implementation Roadblocks/Issues/Challenges

- Lack of electronic Database.
- Lack of electronic access based on Internet protocol services.
- Lack of procedures to allow airlines provide digital AIS data to on-board devices, in particular electronic flight bags (EFBs).
- Lack of training for AIS/AIM personnel

(List from ASBU Document, to be reviewed/customized by the Regions)

B0-DATM Elements/KPIs/Metrics

B0 - DATM: Service Improvement through Digital Aeronautical Information Management		
Element	Key Performance Indicators	Supporting Metrics
1-AIXM	% of States that have implemented an AIXM-based Integrated Aeronautical Information Database (IAID)	Number of States that have implemented an AIXM-based Integrated Aeronautical Information Database (IAID)
2-eAIP	% of States that have implemented an IAID driven AIP Production (eAIP)	Number of States that have implemented an IAID driven AIP Production (eAIP)
3-QMS	% of States that have implemented QMS for AIS/AIM	Number of States that have implemented QMS for AIS/AIM
4-WGS-84	% of States that have implemented WGS-84 as horizontal reference system	Number of States that have implemented WGS-84 as horizontal reference system

	% of States that have published the WGS-84 Geoid Undulation, in accordance with Annex 4 and Annex 15 provisions	Number of States that have published the WGS-84 Geoid Undulation, in accordance with Annex 4 and Annex 15 provisions
5-eTOD	% of States that have implemented required Terrain datasets	Number of States that have implemented required Terrain datasets
	% of States that have implemented required Obstacle datasets	Number of States that have implemented required Obstacle datasets
6-Digital NOTAM*	Plan for the implementation of Digital NOTAM	

B0-DATM Enablers/Tables

In order to assist States in the planning for the transition from AIS to AIM in an expeditious manner, the following Tables, which provide more details than the standard ANRF, should be used:

1- Table B0-DATM 3-1 sets out the requirements for the Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID). It reflects the transition from the current product centric AIS to data centric AIM. For the future digital environment it is important that the authoritative databases are clearly designated and such designation must be published for the users. This is achieved with the concept of the Integrated Aeronautical Information Database (IAID), a single access point for one or more authoritative databases (AIS, Terrain, Obstacles, AMDB, etc) for which the State is responsible. This Table will be used for the monitoring of the Key Performance Indicators (KPIs) related to elements Nr. 1 and 2 of the Module B0-DATM.

2- Table B0-DATM 3-2 sets out the requirements for aeronautical data quality. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 3 of the Module B0-DATM.

3- Table B0-DATM 3-3 sets out the requirements for the implementation of the World Geodetic System - 1984 (WGS-84).The requirement to use a common geodetic system remains essential to facilitate the exchange of data between different systems. The expression of all coordinates in the AIP and charts using WGS-84 is an important first step for the transition to AIM. This Table will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 4 of the Module B0-DATM.

4- Table B0-DATM 3-4-1 sets out the requirements for the provision of Terrain and Obstacle data sets for Area 1 and Area 4. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

5- Table B0-DATM 3-4-2 sets out the requirements for the provision of Terrain and Obstacle data sets for Area 2. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

6- Table B0-DATM 3-4-3 sets out the requirements for the provision of Terrain and Obstacle data sets for Area 3 and implementation of Airport Mapping Databases (AMDB). It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

Table B0-DATM 3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which the provision of AIS/AIM products and services based on the IAID is required.

2 Requirement for the implementation and designation of the authoritative IAID, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented

Note 1 — The IAID of a State is a single access point for one or more databases (AIS, Terrain, Obstacles, AMDB, etc). The minimum set of databases which should be integrated is defined in Annex 15.

Note 2 — Information providing detail of "PI" should be given in the Remarks column (the implemented components of the IAID).

Note 3 — The information related to the designation of the authoritative IAID should be published in the AIP (GEN 3.1)

3 Requirement for an IAID driven AIP production, shown by:
- FC - Fully compliant (eAIP: Text, Tables and Charts) PC - Partially compliant
- NC - Not compliant

Note 4 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements

4 Requirement for an IAID driven NOTAM production, shown by:
- FC - Fully Compliant
- NC - Not compliant

5 Requirement for an IAID driven SNOWTAM production, shown by:
- FC - Fully Compliant
- NC - Not compliant

6 Requirement for an IAID driven PIB production, shown by:
- FC - Fully compliant
- NC - Not compliant

7 Requirement for Charting systems to be interoperable with the IAID, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

8 Requirement for Procedure design systems to be interoperable with the IAID, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented

Note 5 — full implementation includes the use of the IAID for the design of the procedures and for the storage of the encoded procedures in the IAID

9 Requirement for ATS systems to be interoperable with the IAID, shown by:

FI - Fully Implemented

PI - Partially Implemented

NI - Not Implemented

10 Action Plan — short description of the State's Action Plan with regard to the provision of AIM products and services based on the IAID, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

11 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE B0-DATM-3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Charting	Procedure design	ATS	Action Plan	Remarks
1	2	3	4	5	6	7	8	9	10	11

Table B0-DATM-3-2

Aeronautical Data Quality

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory.

2 Compliance with the requirement for implementation of QMS for Aeronautical Information Services including safety and security objectives, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

3 Compliance with the requirement for the establishment of formal arrangements with approved data originators concerning aeronautical data quality, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

4 Implementation of digital data exchange with originators, shown by:
- FI - Implemented
- PI - Partially Implemented
- NI - Not implemented

Note 1 — Information providing detail of "PI" and "NI" should be given in the Remarks column (percentage of implementation).

5 Compliance with the requirement for metadata, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

6 Compliance with the requirements related to aeronautical data quality monitoring (accuracy, resolution, timeliness, completeness), shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

7 Compliance with the requirements related to aeronautical data integrity monitoring, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

8 Compliance with the requirements related to the AIRAC adherence, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

9 Action Plan — short description of the State's Action Plan with regard to aeronautical data quality requirements implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

10 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE B0-DATM-3-2
Aeronautical Data Quality

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence	Action Plan	Remarks
1	2	3	4	5	6	7	8	9	10

Table B0-DATM-3-3

World Geodetic System-1984 (WGS-84)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which implementation of WGS-84 is required.

2 Compliance with the requirements for implementation of WGS-84 for FIR and Enroute points, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

3 Compliance with the requirements for implementation of WGS-84 for Terminal Areas (arrival, departure and instrument approach procedures), shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

4 Compliance with the requirements for implementation of WGS-84 for Aerodrome, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

5 Compliance with the requirements for implementation of Geoid Undulation, shown by:
- FC - Fully compliant
- PC - Partially compliant
- NC - Not compliant

6 Action Plan — short description of the State's Action Plan with regard to WGS-84 implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

7 Remarks — additional information, including detail of "PC" and "NC", as appropriate.

TABLE B0-DATM-3-3
World Geodetic System-1984 (WGS-84)

State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
1	2	3	4	5	6	7

Table B0-DATM-3-4-1
Provision of Terrain and Obstacle data sets for Areas 1 and 4

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Areas 1 and 4 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 1, shown by:
FC - Fully Compliant
PC - Partially Compliant
NC - Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 4, shown by:
FC - Fully Compliant
PC - Partially Compliant
NC - Not Compliant

4 Compliance with requirement for the provision of Obstacle data sets for Area 1, shown by:
FC - Fully Compliant
PC - Partially Compliant
NC - Not Compliant

5 Compliance with requirement for the provision of Obstacle data sets for Area 4, shown by:
FC - Fully Compliant
PC - Partially Compliant
NC - Not Compliant

6 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Areas 1 and 4, especially for items with a "PC" or "NC" status, including planned date(s) of full compliance, as appropriate.

7 Remarks— additional information, including detail of "PC" and "NC", as appropriate.

TABLE B0-DATM-3-4-1

Provision of Terrain and Obstacle data sets for Areas 1 and 4

State	Terrain data sets		Obstacle data sets		Action Plan	Remarks
	Area 1	Area 4	Area 1	Area 4		
1	2	3	4	5	6	7

Table B0-DATM-3-4-2
Provision of Terrain and Obstacle data sets for Area 2

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 2 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 2a, shown by:
- FC - Fully Compliant
- PC - Partially Compliant
- NC - Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 2b, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not implemented
- N/A - Not Applicable

4 Compliance with requirement for the provision of Terrain data sets for Area 2c, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented
- N/A - Not Applicable

5 Compliance with requirement for the provision of Terrain data sets for Area 2d, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented
- N/A - Not Applicable

6 Compliance with requirement for the provision of Obstacle data sets for Area 2a, shown by:
- FC - Fully Compliant
- PC - Partially Compliant
- NC - Not Compliant

7 Compliance with requirement for the provision of Obstacle data sets for Area 2b, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not implemented
- N/A - Not Applicable

8 Compliance with requirement for the provision of Obstacle data sets for Area 2c, shown by:
- FI - Fully Implemented

PI - Partially Implemented
NI - Not Implemented
N/A - Not Applicable

9 Compliance with requirement for the provision of Obstacle data sets for Area 2d, shown by:

FI - Fully Implemented
PI - Partially Implemented
NI - Not Implemented
N/A - Not Applicable

10 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 2, especially for items with a "PC", "PI", "NC" or "NI" status.

11 Remarks— additional information, including detail of "PC", "PI" and "NC", "NI", as appropriate.

TABLE B0-DATM-3-4-2

Provision of Terrain and Obstacle data sets for Area 2

State	Terrain data sets				Obstacle data sets				Action Plan	Remarks
	Area 2a	Area 2b	Area 2c	Area 2d	Area 2a	Area 2b	Area 2c	Area 2d		
1	2	3	4	5	6	7	8	9	10	11

Table B0-DATM-3-4-3
Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 3 and AMDB are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 3, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented
- N/A - Not Applicable

3 Compliance with requirement for the provision of Obstacle data sets for Area 3, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented
- N/A - Not Applicable

4 Implementation of AMDB, shown by:
- FI - Fully Implemented
- PI - Partially Implemented
- NI - Not Implemented
- N/A - Not Applicable

5 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 3 and AMDB implementation, especially for items with a "PC", "PI", "NC" or "NI" status.

6 Remarks— additional information, including detail of "PI" and "NI", as appropriate.

TABLE B0-DATM-3-4

Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

State	Terrain data sets (Area 3)	Obstacle data sets (Area 3)	AMDB	Action Plan	Remarks
1	2	3	4	5	6

- END -