



International Civil Aviation Organization

ICAO

Eighteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/18)

Bangkok, Thailand, 19 – 23 June 2023

Agenda Item 5: Regional AIM Guidance and Planning

PRELIMINARY REVIEW OF GUIDANCE MANUAL FOR AERONAUTICAL INFORMATION SERVICES IN THE ASIA/PACIFIC REGION

(Presented by IFAIMA, in collaboration with the Secretariat)

SUMMARY

This paper presents preliminary review on Guidance manual for Aeronautical Information Services in the Asia/Pacific Region.

1. INTRODUCTION

1.1 The *Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region* was developed by the Eighth Meeting of the AIS Automation Task Force (AATF/8) in 2001, and agreed by the Twelfth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/12) in the same year under **Conclusion 12/7 – Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region**. The First Edition of the Manual was subsequently published in 2002 after incorporation of the *Common Operating Procedures for the Asia/Pacific Automated AIS Systems*.

1.2 The guidance materials contained in the Manual were developed to assist States in the Asia/Pacific Region in the development and implementation of Quality Systems and Training Guidelines for Aeronautical Information Services as well as the aforementioned common operating procedures for automated AIS systems.

1.3 The Manual includes the following contents:

- a) Introduction;
- b) Chapter 1 - AIS Quality Systems;
- c) Chapter 2 - Selection and Training Guidelines for AIS;
- d) Chapter 3 - Common Operating Procedures for Automated AIS System;
- e) Chapter 4 - Use of the Internet for Information Transfer (to be developed); and
- f) Appendix A - Interim AIM Transition Guidance.

1.4 The manual was last updated by AAITF in 2016.

2. DISCUSSION

Review on Chapter 1 - AIS Quality Systems

2.1 ICAO Standards requiring implementation of a quality system were incorporated into Annex 15 *Aeronautical Information Services* in its 10th Edition in July 1997. Subsequently, the following recommendation was incorporated in Annex 15:

Recommendation. – *The quality system established in accordance with 3.2.1 should be conformity with the International Organization for Standardization (ISO) 9000 series of quality assurance standards, and certified by an approved organization.*

2.2 The standards that made-up the ISO 9000 series were previously called:

- a) ISO 9001:1994 – Manufacturing with Design & Development;
- b) ISO 9002:1994 – Production and Installation (No Design)
- c) ISO 9003:1994 – Final inspection and test

2.3 In 2000, they were merged into a single standard and named as “ISO 9001:2000 Quality management systems — Requirements”. Then ISO 9001:2000 was replaced by ISO 9001:2008 and ISO 9001:2015 (current version).

2.4 Chapter 1 of the regional guidance manual – *AIS Quality Systems* – was developed to provide information for States on the implementation of a **quality system** (not quality management system) for their aeronautical information service (AIS) with following contents:

- Introduction;
- What is in these Guidelines?
- The Way Ahead;
- A Quality System;
- General Requirements;
- Management Responsibility;
- Administration;
- Resource Management;
- Product Development and Realization;
- Design and/or Development Planning;
- Purchasing;
- Customer Satisfaction;
- Steps towards Implementation a Quality System;
- What does Certification and Registration Mean;
- Appendix 1 - Support Planning; and
- Appendix 2 – Sample Cover of Quality Manual.

2.5 The naming and content of Chapter 1 indicate that this guidance manual was developed in accordance with ISO 9001:1994, which is outdated. Differences between ISO 9001:1994 and ISO 9001:2015 are shown in **Table 1**.

ISO 9001:1994	ISO 9001:2015
1 Scope	1 Scope
2 Normative references	2 Normative references
3 Definitions	3 Terms and definitions
4 Quality system requirements	4 Context of the organization
4.1 Management responsibility	4.1 Understanding the organization and its context
4.2 Quality system	4.2 Understanding the needs and expectations of interested parties
4.3 Contract review	4.3 Determining the scope of the quality management system
4.4 Design control	4.4 Quality management system and its processes
4.5 Document and data control	5. Leadership
4.6 Purchasing	5.1 Leadership and commitment
4.7 Control of customer-supplied product	5.2 Policy
4.8 Product identification and traceability	5.3 Organizational roles, responsibilities and authorities
4.9 Process control	6. Planning
4.10 Inspection and testing	6.1 Actions to address risks and opportunities
4.11 Control of inspection, measuring and test equipment	6.2 Quality objectives and planning to achieve them
4.12 Inspection and test status	6.3 Planning of changes
4.13 Control of nonconforming product	7. Support
4.14 Corrective and preventive action	7.1 Resources
4.15 Handling, storage, packaging, preservation and delivery	7.2 Competence
4.16 Control of quality records	7.3 Awareness
4.17 Internal quality audits	7.4 Communication
4.18 Training	7.5 Documented information
4.19 Servicing	8 Operation
4.20 Statistical techniques	8.1 Operational planning and control
	8.2 Requirements for products and services
	8.3 Design and development of products and services
	8.4 Control of externally provided processes, products and services
	8.5 Production and service provision
	8.6 Release of products and services
	8.7 Control of nonconforming outputs
	9. Performance evaluation
	9.1 Monitoring, measurement, analysis and evaluation
	9.2 Internal audit
	9.3 Management review
	10 Improvement
	10.1 General
	10.2 Nonconformity and corrective action
	10.3 Continual improvement

Table 1: Differences between ISO 9001:1994 and ISO 9001:2015

2.6 ICAO released the first edition of Doc 9839 *Manual on the Quality Management System for Aeronautical Information Services* in 2022. This document was developed in accordance with ISO 9001:2015, and contains excellent, up-to-date guidance materials. In addition, reference to ICAO Doc 9839 has been incorporated AIS/AIM related publications such as Annex 15 and ICAO Doc 10066 *Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM)*.

2.7 Considering that the APAC regional guidance is now outdated, and taking into account the release of ICAO Doc 9839, Chapter 1 of the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region should be retired.

Review on Chapter 2 - Selection and Training Guidelines for Aeronautical Information Services (AIS)

2.8 Chapter 2 of the Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region was developed to provide States with guidance material for the selection and training of AIS personnel with following contents:

- Introduction;
- Selection Principles;
- The First Step;
- The Selection Process;
- Training and Training Courses;
 - Stage 1 – Core Training;
 - Stage 2 – Training Assessment;
 - Stage 3 – Task Specific Training;
 - Stage 4 – Performance Assessment;
 - Stage 5 – Career Development;
- Appendix 1 – Sample Performance Appraisal;
- Appendix 2 – Sample Training Checklists;
- Appendix 3 – Sample Trainee Assessment Debrief Form;
- Appendix 4 – Competency Areas: Sample Grading Criteria;
- Appendix 5 – Sample Performance Appraisal.

2.9 ICAO released the first edition of Doc 9991 *Manual on Aeronautical Information Services Training* in 2023. This manual provides:

- a) a step-by-step process for analysing local training needs and designing an adapted competency-based training and assessment (CBTA) model that is based on the ICAO competency framework for AIS technical personnel;
- b) competency-based elements that are fundamental to the development, conduct and evaluation of AIS training; and
- c) information on issues and elements that are specific to each training phase

2.10 The contents of Doc 9991 include:

- Chapter 1. Introduction;
- Chapter 2. Developing competency-based training;
- Chapter 3. Design of aeronautical information services competency-based training and assessment;
- Chapter 4. Aeronautical information services training phases;
- Appendix A. Example training specification;
- Appendix B. Example aeronautical information services adapted competency model;
- Appendix C. Example evidence guide;
- Appendix D. Example competency checklist;

- Appendix E. Example competency assessment form;
- Appendix F. Sample Syllabus;

2.11 Most of the contents of Chapter 2 of the regional guidance manual *Selection and Training Guidelines for Aeronautical Information Services (AIS)* – have been incorporated into ICAO Doc 9991 in an updated/improved form. Only *Selection Principles* and *The Selection Process* have not been incorporated in the ICAO Doc 9991.

2.12 The significant material covered under *Training and Training Courses* of the regional guidance manual has been incorporated into Doc 9991 under “Chapter 4. *Aeronautical information services training phases*.”

2.13 With the release of Doc 9991, Chapter 2 of the regional guidance manual should also be retired, except *Selection Principles* and *The Selection Process* part of Chapter 2, which should be considered for relocation to other regional documents such as the *Asia/Pacific Regional Plan for Collaborative AIM*.

Review of Chapter 3 - Operating Procedures for AIS Dynamic Data (OPADD Edition 4.0)

2.14 The Asia/Pacific Region Operating Procedures for AIS Dynamic Data, providing guidance and regionally harmonized procedures for NOTAM, were until version 4.0 adapted from the EUROCONTROL OPADD. Japan historically provided AAITF with a periodic OPADD update in response to EUROCONTROL OPADD updates.

2.15 The EUROCONTROL OPADD Edition 4.1 resulted from changed ICAO provisions relating to the Global Reporting Format (GRF) for runway surface conditions and the associated revision of SNOWTAM format. Noting that EUROCONTROL is no longer willing to provide a MS Word version of their OPADD updates, and does not agree to amendments for any local adaptation, the ATM/SG/9 meeting (2021) adopted the following Conclusion drafted by AAITF/16:

Conclusion ATM/SG/9-5: Update Asia/Pacific OPADD

That,

1. *the EUROCONTROL Operating Procedures for AIS Dynamic Data (OPADD) Edition 4.1 at ATM/SG/9 WP/34 Attachment C be adopted as the OPADD for the Asia/Pacific Region and uploaded to the Asia/Pacific Regional Office website;*
2. *the Asia/Pacific OPADD Edition 4.0 in Chapter 3 of the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region be replaced by an updated preface and a hyperlink to the uploaded document; and*
3. *States utilize the EUROCONTROL OPADD Edition 4.1 referenced in Chapter 3 of the Guidance Manual to update NOTAM systems and procedures.*

2.16 It is proposed that the EUROCONTROL OPADD Edition 4.1 be retained as a stand-alone guidance document for the Asia/Pacific Region, and that the preface referenced in Conclusion ATM/SG/9-4 paragraph 2 be relocated from the regional AIS guidance document, together with a new cover page, to the EUROCONTROL OPADD Edition 4.1. document. A brief summary of the history of the Asia/Pacific OPADD and its current status/location should be included in the Regional Plan for Collaborative AIM.

Review of Appendix A – Interim Guidance for the Transition from AIS to AIM

2.17 The AAITF/9 meeting (Pattaya, Thailand, 24 – 27 June 2014), recognized that the lack of AIM transition guidance material was a matter of significant concern to APAC Administrations. AAITF/9 noted that any independently developed regional guidance material could risk encouraging

States to implement AIM in ways that may be divergent from anticipated global guidance. However, also noting that delays in the production of global ICAO guidance documents (Doc 8126 *AIS Manual* update, Doc 9839 and Doc 9991), the Task Force agreed to continue work on Regional AIM transition guidance material for key AIM transition steps from the ICAO Roadmap for Transition from AIS to AIM (P-17 – Quality; P-16 – Training; P-18 – Agreements with data originators; P-11 – Electronic AIP). Contributions provided by Australia, India, Japan, Malaysia, Singapore and Thailand were reviewed and agreed by AAITF/10, and subsequently agreed by APANPIRG/26.

2.18 Since AAITF/10 the following AIS/AIM related documents containing SARPs, procedures and global guidance have been developed and/or amended:

- Annex 15 – *Aeronautical Information Services (Amendments 39, 40, 41, 42)*
- Doc 10066 - *Procedures for Air Navigation Services – Aeronautical Information Management (new)*;
- Doc 8126 – *AIS Manual (7th Edition)*;
- Doc 9839 – *Manual on the Quality Management System for Aeronautical Information Services (new)*; and
- Doc 9991 – *Manual on Aeronautical Information Services Training (new)*;

2.19 The Interim Guidance for the Transition from AIS to AIM is no longer needed due to the release of the related, long-awaited ICAO Annex, PANS and global guidance materials, and should therefore be retired.

Asia/Pacific Plan for Collaborative Aeronautical Information Management

2.20 The Asia/Pacific Plan for Collaborative AIM was developed to guide and assist Asia/Pacific Administrations in meeting the challenges of transitioning from legacy paper-based AIPs to the digital world of AIM, as envisioned in the *Global Air Navigation Plan (GANP)* and in the *ICAO Roadmap for Transition from AIS to AIM*. This plan was proposed by AAITF/13 and adopted by ATM/SG/6 in 2018.

2.21 During AAITF/12, it was proposed that, apart from the OPADD, the information in the existing Guidance Manual should be updated and transferred into the Asia/Pacific Plan for Collaborative Aeronautical Information Management to remove any duplication and ensure alignment of regional guidance with the global direction.

2.22 This review of the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region indicates that most of its guidance materials have been incorporated latest AIS/AIM-related ICAO documents. The Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region is no longer needed, apart from the guidance on selection principles and selection processes, which may be transferred into the Asia/Pacific Plan for Collaborative Aeronautical Information Management, and the OPADD, which should be retained as a stand-alone document.

2.23 A proposed update of the Plan is provided in Attachment A. The update includes:

Multiple throughout: Replacement of reference to the *Asia/Pacific Seamless ATM Plan* with *Asia/Pacific Seamless ANS Plan*;

Paragraph 1.1 - Removal of reference to the Guidance Manual, and insertion of reference to the Asia/Pacific Regional Plan for Collaborative AIM;

Paragraph 1.6 – added a new paragraph between paragraphs 1.6 and 1.7 highlighting the future revision of the information in 1.6 after processing of an amendment to ANP Vol II. See also proposed change to paragraph 7.7.

Paragraph 1.8 – a note (for Secretariat action) regarding the likely replacement of reference to the Beijing Declaration with reference to an updated Declaration arising from the APAC Ministerial Conference in September 2023, which will precede the presentation of the revised AIM Plan to ATM/SG/11 for approval;

Paragraphs 1.11 and 1.12– replacement of *AIM Study Group* (AIM SG) with *AIM Working Group of the Information Management Panel* (IMP/WG-A);

Paragraphs 1.20, 1.21 and new paragraph – revised information on regular update of the Plan, together with information on the relationship between the update cycles of the Global Air Navigation Plan and Asia/Pacific Seamless ANS Plan;

Paragraph 2.3 – Removal of reference to the Guidance Manual, and inclusion of reference to Annex 4 *Aeronautical Charts*;

Paragraphs 3.5 and 3.7 – editorial corrections;

Paragraphs 5.6, 5.7 and 5.8 – deleted (information on Interim AIM Transition Guidance);

Paragraph 5.9 – deleted reference to AIM Information Sharing Website. Very few Administrations provided Points of Contact or shared any AIS/AIM related information. Overall usage was low. The website was designed to share implementation status of the now redundant ICAO Roadmap for Transition from AIS to AIM, which is no longer tracked or referenced by AAITF.

Paragraph 5.10 – editorial amendment reflecting the availability of Doc 9839, and deleting reference to the Guidance Manual;

Paragraph 5.13

Paragraph 5.14 and 14 new paragraphs – Selection and Training Guidelines information on selection principles and selection process relocated from the Guidance Manual;

Paragraph 5.15 and four new paragraphs – revised background information on OPADD and SNOWTAM guidance (both stand-alone regional guidance documents);

Paragraphs in Section 5 after 5.27 – renumbering (editorial correction);

Paragraph 6.1 – note (for Secretariat action) for update of implementation status data after AAITF/18 meeting);

Paragraph 7.7 – updated Doc 8126 reference (7th Edition); and

Paragraph 7.13 – added note to include reference to *Conclusion ATM/SG/10-9: Revalidation of Coordinate Data* (no change to the actual performance expectation).

2.24 The meeting is invited to consider the following Draft Conclusion:

Draft Conclusion AAITF/18-X: Consolidation of Regional AIM Guidance Material

That,

1. noting the availability of updated SARPS and PANS in Annex 15 and Doc 10066, and global guidance material in ICAO Docs 8126, 9839 and 9991; and
2. subject to incorporation in the Asia/Pacific Plan for Collaborative Aeronautical Information Management of regional guidance on selection principles and selection processes for AIS personnel extracted from the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region:

The Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region be withdrawn, and the Asia/Pacific Plan for Collaborative Aeronautical Information Management Version 3.0 at **Attachment A** be uploaded to the Asia/Pacific Regional Office website.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss the preliminary review and agree to withdraw the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region
- c) agree to transfer valid guidance materials into the Asia/Pacific Plan for Collaborative Aeronautical Information Management;
- d) Agree to the revised Asia/Pacific Plan for Collaborative Aeronautical Information Management in **Attachment A**, and to the associated Draft Conclusion for consideration by ATM/SG/11; and
- e) discuss any relevant matters as appropriate.

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Draft Conclusion/Decision AAITF/18-X: Consolidation of Regional AIM Guidance Material	
<p>What: That,</p> <ol style="list-style-type: none"> 1. noting the availability of updated SARPS and PANS in Annex 15 and Doc 10066, and global guidance material in ICAO Docs 8126, 9839 and 9991; and 2. subject to incorporation in the Asia/Pacific Plan for Collaborative Aeronautical Information Management of regional guidance on selection principles and selection processes for AIS personnel extracted from the Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region: <p>The Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region be withdrawn, and the Asia/Pacific Plan for Collaborative Aeronautical Information Management Version 3.0 at Attachment A be uploaded to the Asia/Pacific Regional Office website.</p>	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical

Why: To retire redundant regional guidance and consolidate, to the extent practicable, AIM guidance in the Asia/Pacific Regional Plan for Collaborative AIM	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 6-Oct-23	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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**ASIA/PACIFIC REGIONAL PLAN
FOR
COLLABORATIVE AERONAUTICAL INFORMATION MANAGEMENT**

Version 2.2, June 2023

This Plan was developed by the Asia/Pacific AIS-AIM Implementation Task Force (AAITF)

Approved by the ATM Sub-Group of APANPIRG (ATM/SG/11) and published by the ICAO Asia and Pacific Office, Bangkok

Asia/Pacific Plan for Collaborative AIM

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Asia/Pacific Plan for Collaborative AIM

SCOPE OF THE PLAN

Asia/Pacific Regional AIM Planning and Guidance

1.1 Asia/Pacific (APAC) Regional requirements and existing guidance material for aeronautical information management (AIM) are found in the following documents:

- *Asia/Pacific Air Navigation Plan*, (APAC ANP) providing agreed regional requirements considered to be the minimum necessary for effective planning and implementation of Aeronautical Information Services (AIS) and AIM.
- *Asia/Pacific Seamless ATM ANS Plan*, providing background information, analyses and performance objectives to facilitate seamless ATM ANS operations in the APAC Region; and
- ~~*Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region, providing guidance on AIS quality management systems, AIS Training and Competency, guidance for priority AIM transition steps, and the Asia/Pacific Region Operating Procedures for Aeronautical Dynamic Data (OPADD).*~~ This document, the *Asia/Pacific Regional Plan for Collaborative AIM*.

Note: The APAC ANP, Seamless ATM ANS Plan and ~~Guidance Manual for AIS in the Asia/Pacific Region~~ Asia/Pacific Regional Plan for Collaborative AIM are available on the ICAO APAC Regional Office eDocuments web-page at <https://www.icao.int/APAC/Pages/eDocs.aspx>.

Asia/Pacific Air Navigation Plan

1.2 The Asia/Pacific Air Navigation Plan (APAC ANP) provides for the planning and implementation of air navigation systems, 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 ANP is undertaken by the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) with the assistance of the ICAO Secretariat.

1.3 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), and contain requirements related to the facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.4 The APAC ANP Volume 1 includes general regional requirements for States relating to the provision of aeronautical data and aeronautical information within their territory and those areas over the high seas for which it is responsible for the provision of air traffic services.

1.5 APAC ANP Volume II includes dynamic plan elements related to the assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services, and mandatory requirements related to aerodrome and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements.

1.6 APAC ANP Volume II Part VII assigns responsibility for the provision of AIS/AIM facilities and services in the Asia/Pacific Region, and for the production of sheets of the World Aeronautical Chart or Aeronautical Chart. It also includes the following specific regional requirements, proposed by AAITF, agreed by APANPIRG and formalized by regional air navigation agreement:

Asia/Pacific Plan for Collaborative AIM

Volume II Part VII Section 3.

3.1 The priority regional requirements for AIM implementation are:

- a) Establishment of AIS either as a separate entity within or, ideally, separated from the civil aviation administration in accordance with the guidance provided in ICAO Doc 8126 – *AIS Manual* Chapter 3.
- b) Implementation of Quality Management Systems for aeronautical information;
- c) Establishment of formal agreements between AIS providers and aeronautical data originators specifying the content, quality, maintenance and timing of provision of aeronautical data that is required to be promulgated in AIP, and the quality management process that shall be applied.
- d) Implementation of internet-accessible electronic AIP generated from a digital database of aeronautical information.

Note: some existing aeronautical information products may not be suitable for migration into digital datasets.

- e) The taking of all necessary measures to develop and implement AIM training programs for AIS personnel, including training in digital data management, and end-to-end quality management processes.
- f) Provision of full access to the relevant ICAO Annexes and Documents to all personnel having responsibility for the origination, reception, management and/or distribution of aeronautical information and aeronautical data.

x.xx *Note: The reference to ANP Vol II Part IV Section 3 paragraph 3.1, above, will be updated to refer to the latest relevant Doc 8126 (7th Edition) guidance after formal processing of the related Proposal for Amendment (PfA) to the ANP.*

1.7 The APAC ANP is available on the ICAO Asia/Pacific Regional Office eDocuments web-page.

Beijing Declaration

[may be considered for revision after the APAC Ministerial Conference in New Delhi in September 2023, which will precede ATM/SG/11 and is expected to produce the *New Delhi Declaration*, updating/superseding the Beijing Declaration].

1.8 The *Declaration of the Asia/Pacific Ministerial Conference on Civil Aviation* (Beijing Declaration, Beijing, China, 31 January to 01 February 2018), included the following items indicating the direction agreed by the Ministers responsible for civil aviation in the Asia/Pacific Region in relation to AIM planning and implementation:

2.0 Air Navigation Services

2.1 Commit to implementation by 2022 of the Asia/Pacific Seamless Air Traffic Management (ATM) Plan to enhance ATM capacity and harmonization in the Region,

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including a focus on:

(a) *Transitioning from Aeronautical Information Service (AIS) to Aeronautical Information Management;*

(g) *Air navigation in national planning frameworks such as National Development Plans (NDPs) supported by National Air Navigation Plans*

4.0 Human Resource Development

4.1 *In line with the ICAO initiative on “Next Generation of Aviation Professionals” (NGAP), accord priority to professionals to support the Region’s growing needs, including where appropriate:*

(a) *Establish access to quality training; and*

(b) *Encourage sharing of resources bilaterally and/or multi-laterally, as well as with industry partners*

1.9 The commitments agreed in the Beijing Declaration are supported by performance expectations in Section 7 of this document.

Asia/Pacific Plan for Collaborative AIM

1.10 The 11th Meeting of the Asia/Pacific Region AIS-AIM Implementation Task Force (AAITF/11, Bangkok, Thailand 05 to 09 June 2017), identified a near term objective to review and update the quality management guidance and sample quality manual provided in the *Guidance Manual for AIS in the Asia/Pacific Region*. It was noted that while the current information provided in the Guidance Manual remained relevant and valuable to the region, there was a need for the information to be updated to take into account the transition to AIM.

1.11 Following AAITF/11, ICAO established the Aeronautical Information Management Steering Group (AIM SG), to support global implementation of AIM and to accelerate the development and finalization of guidance material including *inter alia* the new quality management manual and AIM training manual. AIM SG has since been established as the AIM Working Group of the Information Management Panel (IMP/WG-A).

1.12 This document, the Asia/Pacific Plan for Collaborative AIM (the AIM Plan), is intended to provide information, guidance and regional performance objectives supporting improvement of AIS and the transition to AIM. The document is not intended to duplicate or pre-empt global guidance ~~that will become available~~ in documents developed by AIM SG IMP/WG-A or other relevant technical panels of the ICAO Air Navigation Commission.

AIM Plan Structure

1.13 The AIM Plan forms part of a suite of global and regional air navigation planning documents relevant to the Asia/Pacific Region.

1.14 Global vision and strategy perspectives are provided by the *Global ATM Operational Concept* (Doc 9854), *Global Air Navigation Plan (GANP, Doc 9750)*, and *Global Aviation Safety Plan (GASP, Doc 10004)*. The GANP includes the Aviation System Block Upgrade (ASBU) framework, its Modules and its associated technology Roadmaps.

Asia/Pacific Plan for Collaborative AIM

1.15 Beneath this level is regional planning primarily provided by the *Asia/Pacific Basic Air Navigation Plan* and the *Asia/Pacific Seamless ATM ANS Plan* which, together with its contributory documents, including this Plan, define goals and the means of meeting State planning objectives.

1.16 The AIM Plan includes background information and general guidance, analysis of the current status of AIS and AIM implementation in the Asia/Pacific Region, and a performance improvement plan. The plan also provides a central repository for information and procedures relating to items of aeronautical information coordinated between States and ICAO, including Proposals for Amendment (PfAs) to the Regional Air Navigation Plan, allocation and implementation of ATS routes that form part of the regional network of ATS routes, registration of 5-letter name codes identifying significant points, ICAO location indicators, and 3-letter and radiotelephony designators for aircraft operating agencies.

Performance Improvement Plan

1.17 The performance objectives of the Plan are expected to be implemented in phases aligned, where practicable, with those of the Seamless ATM ANS Plan. Having considered a range of performance expectations including those relating ICAO Standards and Recommended Practices (SARPS) (that have been applicable for many years) and Procedures for Air Navigation Services (PANS), Regional AIM Capability is expected to be implemented in the following phases:

- Phase I, expected to be implemented immediately;
- Phase II, expected to be implemented by 7 November 2019, and
- Phase III, expected to be implemented by 27 November 2025.

1.18 Except where required under State obligations to implement SARPS and relevant regional requirements communicated in the ANP, the phases and performance expectations are not binding any State, but should be considered as a planning framework. The Plan itself is therefore guidance material. Where any performance expectation has been included to emphasize the obligation of States to implement ICAO SARPS and PANS, reference is made to the relevant sections of Annex 15 or PANS-AIM.

1.19 It is important to note that the AIM Plan's commencement dates are planning targets, and should not be treated as 'hard' implementation dates. However, States should consider the impact of not achieving target implementation dates on the required improvement in the safety and efficiency of international aviation in the region.

Review

1.20 ~~AAITF noted the adoption by the Council of ICAO of Amendment 40 to Annex 15—Aeronautical Information Services, the approval of Doc 10066—PANS-AIM and the expected approval of the revised Doc 8126 AIS Manual, all applicable from 08 November 2018, and the work plan of the AIM SG for development and updating of global guidance material. It was determined that in this fluid environment the Plan would require regular updating to keep current with aviation system changes.~~

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1.21 Noting that the Asia/Pacific Seamless ANS Plan undergoes its routine review each three years including 2019, and that the Global Air Navigation Plan (GANP), together with its Aviation System Block Upgrades (ASBUs) is also reviewed each three years including 2019, it is therefore intended that AAITF conducts a complete review of the Plan in 2020, and thence every three years, in alignment with the update cycle of the Seamless ATM Plan and GANP. The Global Air Navigation Plan review cycle has been updated to include the facility for frequent minor updates, and a major update coinciding with every second meeting of the ICAO Assembly commencing in 2019. APANPIRG/34, to be held in December 2023, was expected to approve a revised update schedule for the Asia/Pacific Seamless ANS Plan, to be conducted in the year immediately following the year of each meeting of the Assembly. The Tenth Meeting of the ATM Sub-Group of APANPIRG (ATM/SG/10, 17 – 21 October 2022) agreed that ATM-related documents including this Plan would then be reviewed in the year following the update of the Seamless ANS Plan (Figure x). Reviews should include examination of relevant new or amended ICAO Annexes, PANS and guidance material to ensure the minimization of duplication, and alignment with global direction.

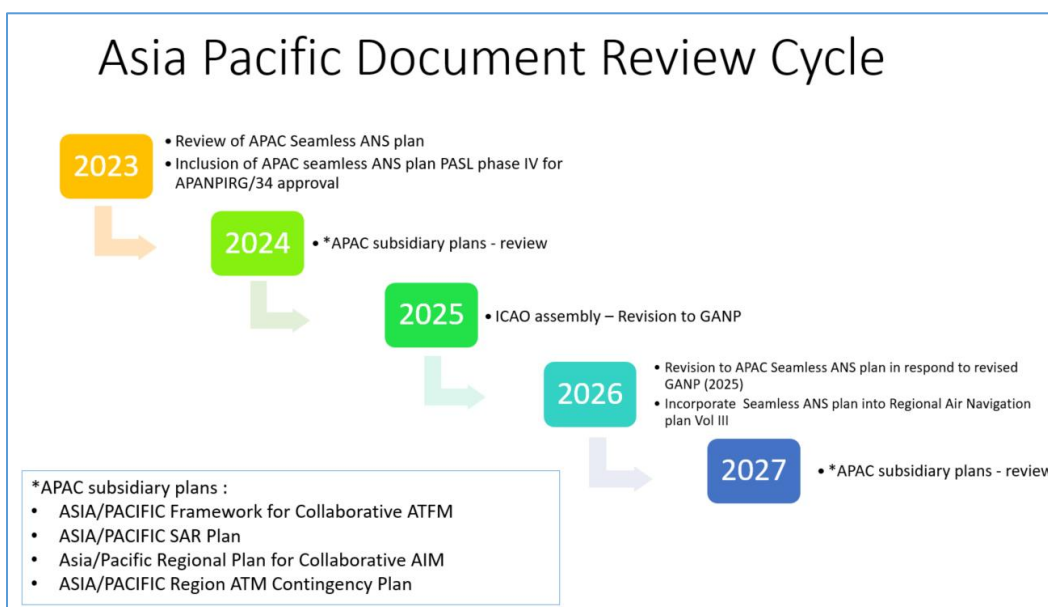


Figure 2: Proposed ATM-Related Document Review Cycle

x.xx The next scheduled update of this Plan is in 2027. Ad hoc updates may be considered in response to significant changes affecting AIS in the Asia/Pacific Region.

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PLAN OBJECTIVES

Objective of the Plan

2.1 The objective of the Plan is to facilitate the improvement and harmonization of AIS in the APAC Region, and the harmonized implementation of interoperable AIM systems.

2.2 The Plan provides a framework for a transition to a collaborative regional AIM environment, in order to meet current and future global and regional performance requirements.

Guidance for the Plan

2.3 The Plan is neither isolated from, nor in conflict with, other global and regional plans or strategies. It takes the availability of the following into account:

Global and Regional Framework

- Doc 9750 - Global Air Navigation Plan
- Doc 10004 - Global Aviation Safety Plan
- Asia/Pacific Regional Air Navigation Plan
- Asia/Pacific Seamless ATM ANS Plan (Version 2.0 3.0, September 2016 2019)
- ~~Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region (endorsed by APANPIRG, First Edition 2002)~~

Air Navigation Services

- **Annex 4 Aeronautical Charts**
- Annex 10 *Aeronautical Telecommunications*
- Annex 11 *Air Traffic Services* (particularly Chapter 2 [2.1 and 2.30], and Attachment C)
- Annex 15 *Aeronautical Information Services*
- Doc 4444 *Procedures for Air Navigation Services Air Traffic Management (PANS ATM)*
- Doc 10066 – *Procedures for Air Navigation Services – Aeronautical Information Management (PANS-AIM)*

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EXECUTIVE SUMMARY

3.1 The Asia and Pacific Region has become the world's largest aviation market in terms of available seat-kilometres (30% of ASK in 2015) and generates the world's second largest share of international revenue passenger-kilometres (28% of international RPK as of 2015).

3.2 Underpinning safe, efficient air transport is the Aeronautical Information Service (AIS) of each State, which collates, maintains and publishes aeronautical information of lasting character essential to air navigation, including details of regulations, procedures and other information pertinent to the operation of aircraft within the area of responsibility of the State.

The Need for a Regional Collaborative Plan for AIM

3.3 The AIS of each State, and its transition to the AIM environment, is a key enabler of all current and future air navigation activities. To satisfy new requirements for air navigation in a collaborative decision-making (CDM) environment the transition to AIM will provide aeronautical data and information in a digital format that facilitates graphical display, complies with international standards and agreed, common exchange formats and is accessible system-wide by all stakeholders in real-time.

3.4 This plan, the *Asia/Pacific Plan for Collaborative Aeronautical Information Management*, was developed to guide and assist Asia/Pacific Administrations in meeting the challenges of transitioning to from legacy paper-based AIPs to the digital world of AIM, as envisioned in the GANP and in the *ICAO Roadmap for Transition from AIS to AIM*.

3.5 While noting the need for revision and restructure of the ~~(then) existing~~ Regional AIS guidance manual, this Plan was developed to avoid divergence from, or duplication of, ICAO global guidance material that ~~will~~ ~~was expected~~ be provided in the near to medium term. Such global guidance material ~~is expected to include~~ ~~included~~ the updated Doc 8126, and new quality management and AIM training manuals.

3.6 The plan is also the repository for information and guidance on procedures for Asia/Pacific Administrations relating to Regional aeronautical data managed by the ICAO Regional Office, including:

- Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services (ICAO Doc 8585);
- Location Indicators (ICAO Doc 7910); and
- International Codes and Routes Designators (ICARD).

3.7 Quality-managed, timely aeronautical information is fundamental in supporting current and future aviation systems, supported by collaboration between States to improve the harmonization and interoperability of all processes and systems supporting air navigation. Collaboration in the provision of aeronautical information and data will benefit States facing resource challenges, and ~~benefit~~ the broader Asia/Pacific Region through the overall improvement in the availability, timeliness and quality of aeronautical information. Future development of this document may include Regional planning for multi-State or sub-Regional AIP ~~and~~, shared aeronautical information databases, and collaborative efforts in AIM training.

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Performance Improvement Plan

3.8 A key feature of the Plan is the Performance Improvement Plan which was initially, in version 1.0 of the Plan, aligned with Phases 1 and 2 of the ICAO Roadmap for Transition from AIS to AIM, supporting States in the transition to digital databases of aeronautical information and the implementation of electronic AIP (eAIP). The Performance Improvement Plan is arranged in Regional AIM Capability Phases I, II and III, listing fundamental AIS performance elements expected to be implemented either immediately (Phase I), in the case of elements that have been reflected ICAO SARPs for many years, or by 7 November 2019 (Phase II), or 27 November 2025 (Phase III).

Global AIM Implementation Dashboards

3.9 ICAO Headquarters is developing a scheme of dashboards to monitor and report global, regional and State progress in AIM implementation. The dashboards will include the implementation status of:

1. Quality Management Systems;
2. World Geodetic System – 1984 (WGS-84);
3. Earth Gravitational Model – 1996 (EGM-96); and
4. Terrain and Obstacle Datasets.

3.10 The Performance Improvement Plan in Section 7 of this document includes performance expectations in each of these areas.

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ABBREVIATIONS AND ACRONYMS

To facilitate readability, abbreviations have been largely omitted throughout the document. Most abbreviations were defined when introduced. The following provides an alphabetic listing of all abbreviations.

AAITF	AIS-AIM Implementation Task Force
AATIP	ASEAN Air Transport Integration Project
A-CDM	Airport Collaborative Decision Making
ADS-B	Automatic Dependent Surveillance - Broadcast
AFTN	Aeronautical Fixed Telecommunication Network
AI	Aeronautical Information
AIC	Aeronautical Information Circular
AICM	Aeronautical Information Conceptual Model
AIM	Aeronautical Information Management
AIMSG	Aeronautical Information Management Sub-Group
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical Information Service
AIXM	Aeronautical Information eXchange Model
AMDB	Aeronautical Mapping Database
ANSP	Air Navigation Service Provider
AOC	Airline Operations Centre
APANPIRG	Asia Pacific Air Navigation Planning and Implementation Regional Group
ASBU	Aviation system Block Upgrades
ASEAN	Association of Southeast Asian Nations
ATFM	Air Traffic Flow Management
ATC	Air Traffic Control
ATM	Air Traffic Management
ATMRPP	Air Traffic Management Requirements and Performance Panel

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ATSA-SURF	Enhanced Traffic Situational Awareness on the Airport Surface
CANSO	Civil Air Navigation Services Organization
CARATS	Collaborative Action for Renovation of Air Transport Systems
CCO	Continuous Climb Operations
CDM	Collaborative Decision Making
CDO	Continuous Descent Operations
CMA	Continuous Monitoring Approach
CNS	Communication, Navigation, Surveillance
CRC	Cyclic redundancy check
DBMS	Database Management System
DSS	Decision Support System
eAIP	Electronic Aeronautical Information Publication
EFF	Electronic Flight Folder
EFOD	Electronic Filing of Differences
ERAM	En-Route Automation Modernization
eTOD	Electronic Terrain and Obstacle Data
EUROCAE	European Council of Aerospace Engineering
FMS	Flight Management System
GANP	Global Air Navigation Plan
GASP	Global Aviation Safety Plan
IATA	International Air Transportation Association
ICAO	International Civil Aviation Organization
ICARD	ICAO Five-Letter Name Code and Route Designator
IFATCA	International Federation of Air Traffic Control Association
IFAIMA	International Federation of AIM Associations
IFR	Instrument Flight Rules
IM	Information Management

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IP	Internet Protocol
ISO	International Standards Organization
JAP	Joint Acceptance Plan
KPI	Key Performance Indicator
MET	Meteorological Services
METAR	Aerodrome Routine Meteorological Report
NAS	National Airspace System
NCLB	No Country Left Behind
NOTAM	Notice To Airmen
PAIMS	Preferred Aeronautical Information Management Specifications
PIB	Pre-flight Information Bulletin
PQ	Protocol Questions
QA	Quality Assurance
QMS	Quality Management System
SARP	Standards And Recommended Practices
SESAR	Single European Sky Air Traffic Management Research
SIGMET	Significant meteorological weather phenomena
SWIM	System Wide Information Management
TIS-B	Traffic Information Services – Broadcast
TBO	Trajectory Based Operations
USOAP	Universal Safety Oversight and Audit Programme
WXXM	Weather eXchange Model
XML	eXtensible Markup Language
5LNC	5 Letter Name Code

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BACKGROUND INFORMATION

Principles

5.1 This Plan considers four major categories of AIM principles:

Legislation, Policy and Regulation;

Human Performance;

Quality Management;

AIM Systems and Processes;

5.2 AIM principles form the basis for the provision of background guidance information, development of guidance material and identification of performance improvement objectives. The APAC Regional AIM Principles are provided in **Appendix A**.

Aviation System Block Upgrades (ASBU)

5.3 At the Global level the ASBU initiative was included in Doc 9750 – *Global Air Navigation Plan* as a programme framework that developed a set of aviation system solutions or upgrades intended to exploit current aircraft equipage, establish a transition plan and enable global interoperability. The ASBU framework is heavily dependent on AIM, which is a critical prerequisite for the implementation of any current or future ATM or air navigation concept that relies on the accuracy, integrity and timeliness of aeronautical data.

5.4 In the AIM field, the main ASBU blocks which are relevant for Seamless ~~ATM~~ **ANS** are as follows:

- B0-DATM Service Improvement through Digital Aeronautical Information Management (AIM);
- B1-DATM Service Improvement through Integration of all Digital AIM Information (2019-2025)
- B1-SWIM Performance Improvement through the application of SWIM applications and infrastructure (2019-2025); and
- B2-SWIM Enabling Airborne Participation in Collaborative ATM through SWIM (2025-2031).

5.5 The ASBU are undergoing a major re-structure, which will be presented for approval at the 40th Triennial ICAO Assembly, to be held in Montreal, Canada, from 24 September to 04 October 2019. Future amendment of this document will include relevant ASBU references, and any related regional priorities and performance expectations.

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Interim AIM Transition Guidance

5.6 The Ninth Meeting of the Asia/Pacific Region AIS — AIM Implementation Task Force (AAITF/9, Pattaya, Thailand, 24–27 June 2014), recognized that the lack of AIM transition guidance material was a matter of significant concern to Administrations the Region. There had been delays in the production of global ICAO guidance documents, those of most immediate significance being the updated Doc 8126 AIS Manual, the new Doc 9839 Quality Manual and Doc 9991 AIS Training Manual. AAITF/9 agreed to continue to work on Regional AIM transition guidance material for key AIM transition steps from the ICAO Roadmap for Transition from AIS to AIM.

5.7 AAITF/10 updated the *Guidance Manual for AIS in the Asia/Pacific Region* by adding a new appendix, *Interim AIM Transition Guidance*, which emphasizes four priority steps from AIM transition roadmap, they are:

- P 17 — Quality,
- P 16 — Training,
- P 18 — Agreements with data originators, and
- P 11 — Electronic AIP.

5.8 *Interim AIM Transition Guidance* is provided in the *Guidance Manual for Aeronautical AIS in the Asia/Pacific Region*.

AIM Information Sharing Website

5.9 The Asia/Pacific AIM Information Sharing Website was established to share information on the current status and challenges being faced by Asia/Pacific Administrations implementing, or planning to implement, AIM. The website is available at <http://aim-tracking.org/>.

Quality Management Guidance

5.10 Global guidance for the quality management of aeronautical information will be is provided in ICAO Doc 9839 ~~Quality Manual~~ *Manual on the Quality Management System for Aeronautical Information Services*, being developed by the AIM-SG and available on the ICAO Secure Portal at <https://portal.icao.int/icao-net/Pages/Documents.aspx>. Interim guidance for quality management may be found in the *Guidance Manual for AIS in the Asia/Pacific Region*.

5.11 A key component of any quality management process for aeronautical information is the establishment of formal agreements between the originators of aeronautical data and the AIS. Such agreements specify the content, quality, maintenance and timing of the provision of aeronautical information or data that is required to be promulgated in AIP, and the quality management processes that shall be applied.

5.12 Originators of aeronautical data may include State regulatory authorities, airport operators, geospatial information agencies, air traffic services units, flight procedure design authorities, military authorities, police or other public safety or emergency service organizations.

5.13 A template for the establishment of formal agreements between originators of aeronautical data and the AIS is provided in **Appendix B**. A sample Data Provision Agreement is provided in Doc 8126 Chapter 2 Appendix, containing information introductory elements of such agreements, data provision service, procedural provisions, and additional considerations on aeronautical data and aeronautical information to be provided including timeliness requirements, metadata requirements, and data distribution

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and data exchange format, [note: Plan appendices to be renumbered accordingly]

Selection and Training Guidelines for AIS

5.14 Global guidance for AIM training will be is provided in ICAO Doc 9991 *AIS Training Manual Manual on Aeronautical Information Services Training*, being developed by the AIM SG also available on the ICAO Secure Portal.

x.xx The following additional guidance for AIS staff selection principles and processes is drawn from the former regional guidance document, the *Guidance Manual for Aeronautical Information Services in the Asia/Pacific Region*:

Selection Principles

x.xx Recruitment and selection of staff for the AIS should be made based on merit and relative efficiency, the requirements of the position, in fair and open competition to ensure that the best qualified applicant gets the job.

x.xx In assessing the relative efficiency of candidates consideration should be given to the abilities, qualifications, experience, standard of work performance and personal qualities of each applicant, to the extent that those matters are relevant to the efficient performance or potential to efficiently perform the duties.

The First Step

x.xx A number of documents must be in place before the Selection Process can commence to clearly identify the work to be done. Normally these would consist of:

- a) Position Description;
- b) Duty Statement; and
- c) Selection Criteria against which applicants will be assessed.

x.xx The Position Description and the Duty Statement set the scene about what the position is required to do, what the reporting arrangements are, and how the position fits in with the other work areas.

x.xx The Selection Criteria is the part that sets out how the applicants will be measured for the job of work to be done.

The Selection Process

x.xx A Selection Committee will usually be established with a minimum of two people to determine the most suitable applicant.

x.xx When necessary, a shortlist of applicants most suitable for further consideration may be made by the committee based on claims against the selection criteria and/or on referee comment.

x.xx When there is only one applicant for the position the applicant may be recommended for direct promotion or employment without the establishment of a Selection Committee.

x.xx The Selection Committee should decide the procedures to be followed and the sources of information to be used in assessing applicants against the selection criteria. Sources of information may include:

- a) application;

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- b) interview;
- c) referee reports;
- d) work samples; and/or
- e) performance tests.

x.xx The Selection Committee is responsible to ensure that the field of applicants is of sufficient calibre for assessment to proceed. The procedures that the Selection Committee follows will enable a thorough investigation of the claims and merits of the applicants to be assessed against the selection criteria.

x.xx The selection report will provide an accurate account of the Committee's assessment of applicants and enough information for the decision-maker to make a decision. The report will be used as the basis for counselling unsuccessful employees and for review requests arising from the selection decision.

x.xx An appropriate delegate will usually formally approve the Selection Committee's recommendation.

x.xx All unsuccessful applicants interviewed for the job should be notified in writing of the outcome and should be given the opportunity to obtain verbal feedback on their performance if they so desire. Applicants not listed for interview should be advised accordingly.

Operating Procedures for AIS Dynamic Data (OPADD)

5.15 ~~The OPADD, based on the EUROCONTROL OPADD and updated periodically by AAITF, provides regional guidance for common procedures for NOTAM. The OPADD for the Asia/Pacific Region May be found in the Guidance Manual for AIS in the Asia/Pacific Region.~~ The *Operating Procedures for AIS Dynamic Data* (OPADD) provides regional guidance for common procedures for NOTAM. The Asia/Pacific OPADD had, until 2021, been adapted from the EUROCONTROL OPADD at each update of that document, usually on a four-year cycle, and incorporated in an update of the former *Guidance Manual for AIS in the Asia/Pacific Region*. AAITF/16 (07 to 11 June 2021) was informed that, for the purpose of maintaining the integrity of the document and their intellectual property, EUROCONTROL agreed to permit the Asia/Pacific Region to utilize their OPADD document but would no longer permit any modification. The use of the EUROCONTROL OPADD in the Asia/Pacific Region was supported by the Ninth Meeting of the Air Traffic Management Sub-Group of APANPIRG (ATM/SG/9, 01 to 05 November 2021) under ***Conclusion ATM/SG/9-5: Update Asia/Pacific OPADD.***

x.xx The OPADD is maintained as a separate document on the ICAO Asia/Pacific eDocuments web-page in order to facilitate its update without the need to also update this Plan.

SNOWTAM Guidance

x.xx Amendment 39B to Annex 15, applicable from 04 November 2021, introduced the new SNOWTAM format based on the recommendations of the Friction Task Force of the Aerodrome Design and Operations Panel (ADOP) relating to the use of the global reporting format (GRF) for assessing and reporting runway surface conditions. The SNOWTAM Provisions and format were later moved to PANS-AIM.

x.xx The ICAO EUR/NAT Office, in collaboration with EUROCONTROL, prepared the Guidance on the Issuance of SNOWTAM to provide explanation and examples for issuing SNOWTAM in the new format. The use of this guidance in the Asia/Pacific Region was initially supported by ***Conclusion AAITF/15-1: Guidance on the Issuance of SNOWTAM*** (as empowered by ***Conclusion APANPIRG/29/28***).

x.xx The Guidance on the Issuance of SNOWTAM is maintained as a separate document on the ICAO Asia/Pacific eDocuments web-page in order to facilitate its update without the need to also update

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this Plan.

Note: SNOWTAM is the applicable aeronautical information product for promulgating information on runway surface conditions under the NOTAM system. For example, AAITF/15 (June 2020) noted that standing water of greater than 3mm depth on a runway would be reported by SNOWTAM regardless of whether it was associated with snow/ice or not. This was a significant change for many Asia/Pacific Administrations, introducing the use of SNOWTAM in locations where snow and ice conditions did not normally exist.

Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services

[Re-number subsequent paragraphs]

5.16 ICAO Doc 8585 – *Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services* contains the ICAO-approved three-letter designators intended for use on the international aeronautical telecommunications service, and which form part of the Aeronautical Fixed Service (AFS, formerly AFTN) address for connected agencies, authorities and services.

5.17 The allocation, amendment and withdrawal of these designators and the updating of Doc 8585 is managed by ICAO Headquarters through the ICAO 3LD website. This arrangement was communicated to States in State Letter AN 2/16. 1014/72.

5.18 The ICAO 3LD website is located at <https://www4.icao.int/3ld>. A copy of the State Letter may be obtained from the ICAO Asia/Pacific Regional Office.

ICAO Location Indicators

5.19 ICAO Doc 7910 – *Location Indicators* lists four-letter location indicators, which are assigned by States and checked by ICAO for conformity with the procedures relating to the formulation and assignment of location indicators, as set out in that document. The following process is used to assign location indicators:

1. The State formulates the new four letter location indicator for the location/airport;
2. The State writes to the ICAO Asia/Pacific Regional Director, requesting registration of the location indicator;

The ICAO Regional Office coordinates with ICAO Headquarters.

3. The following information is required to be included in the State's request:

- a. location/Airport Name;

Only provide the airport name if relevant, or if different from the location name, e.g. BANGKOK/DON MUEANG INTL AIRPORT, BRISBANE/BRISBANE INTL, BRISBANE/ARCHERFIELD

- b. requested Location Indicator (e.g. NTKU);

- c. IATA location identifier code, if any; and

- d. Indication of whether the location is, or is intended to be, connected to the AFS.

5.20 ICAO Regional Office will formally notify the State when the location indicator has been registered for inclusion in Doc 7910.

International Codes and Routes Designators

5.21 Annex 11 – *Air Traffic Services* defines a significant point as a specified geographical location

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used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes. It further states that significant points shall be established and identified in accordance with the principles set forth in Annex 11 Appendix 2. Where a significant point is required at a position not marked by the site of a radio navigation, and is used for ATC purposes, it shall be designated by a unique five-letter pronounceable name-code. This name-code designator then serves as the name as well as the coded designator of the significant point.

Rules ensuring the uniqueness of five-letter name-codes (5LNC) are provided in Annex 11 Appendix 2

5.22 States' requirements for unique five-letter pronounceable name-code designators shall be notified to the Regional Offices of ICAO for coordination.

5.23 The International Codes and Routes Designators (ICARD) application, administered by ICAO and accessible through the ICAO Secure Portal (<https://portallogin.icao.int/>) is the sole repository of 5LNCs ensuring global uniqueness, and is the only means by which the requirements of Annex 11 Appendix 2 paragraph 3.5 may be met.

The ICARD application is being adapted for the future management of the assignment of ATS Route Designators

5.24 All States and Administrations with any responsibility for, or involvement in, the design, implementation and/or regulation of ATS routes and instrument flight procedures must have suitable employees registered in ICARD. In all cases where any personnel of a State Regulator or Air Navigation Service Provider are responsible for the allocation of 5LNC for ATS routes, Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARs) or Instrument Approach and Landing (IAL, including RNAV/RNP approaches), at least one person, and preferably two or more, must be registered as an ICARD_5LNC_PLANNER.

5.25 ICARD procedures are provided in the *ICARD 5LNC Guidelines*, available on request from the ICAO Asia/Pacific Regional Office. The process for registering as an ICARD_5LNC_PLANNER, and a flow-chart of the ICARD process, is provided in **Appendix C**.

5.26 An ICAO-coordinated global project has been established to register all AIP-published 5LNC in ICARD, and to eliminate all duplicated 5LNCs. The details of the project, and the rules applicable to duplicate resolution, were promulgated in State Letter AN 11/45.5-17/101. A copy of the State Letter is available on request from Regional Office.

Implementation Status Monitoring

5.27 The Asia/Pacific Regional Plan for Collaborative AIM is one of several important plans that are subsidiary to the Seamless ~~Air Traffic Management (ATM)~~ Air Navigation Services (ANS) Plan, namely:

- Asia/Pacific Search and Rescue (SAR) Plan;
- Asia/Pacific Region ATM Contingency Plan; and
- Asia/Pacific Regional Framework for Collaborative ATFM;

~~5.1~~ 5.xx States report implementation of the performance expectations of the Seamless ~~ATM~~ ANS Plan using an online reporting form. Monitoring and reporting schemes for subsidiary plans enhance the current Seamless ~~ATM~~ ANS monitoring and reporting scheme.

~~5.2~~ 5.xx The monitoring and reporting scheme for Regional collaborative AIM implementation

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measures State implementation of the performance expectations specified in Section 7 of this document.

5.3 5.xx Asia/Pacific Administrations should report their implementation status to the ICAO Asia/Pacific Regional Office at least once annually, by no later than ~~30 April~~ 28 February each year. Reported implementation status will be examined each year by the AAITF, or other appropriate Regional body designated by APANPIRG, to measure, report and advance Regional implementation progress, and to recommend priority AIM elements to be added to the Seamless ATM ANS monitoring and reporting scheme.

5.4 5.xx It is expected that the relevant AIM expert/s in each Administration will be responsible for the detailed reporting in the Regional AIM Monitoring and Reporting form, and that these experts will then liaise closely with their Administration's Seamless ATM ANS reporting point of contact to ensure the accuracy of the higher level reporting and consistency between the separate reporting levels.

5.5 5.xx The Regional AIM Monitoring and Reporting Form is provided at **Appendix D**, and is available on the ICAO Asia/Pacific Regional Office eDocuments web-page at:

<http://www.icao.int/APAC/Pages/edocs.aspx>.

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CURRENT SITUATION

Current Status of Transition from AIS to AIM

[To be updated with implementation status data from AAITF/18]

6.1 The performance objectives of the Asia/Pacific Seamless ATM ANS Plan included the expectation that Phases 1 and 2 of the Roadmap for Transition from AIS – AIM would be completed by November 2015. As on 05 June 2018, regional implementation of Phase 1- Consolidation of the Roadmap is summarized as follows: 18 Administrations (43%) had completed implementation, 20 Administrations (≈ 48%) had partly implemented, 6 Administrations (≈ 14%) had not implemented any Phase 1 step, overall regional implementation of Phase 1 ≈ 72%. Regional implementation of Phase 1 and 2 is summarized as follows: 18 Administrations (43%) have completed more than 50%, 16 Administrations (≈ 38%) have implemented less than 50%, 6 Administrations (14%) have not completed any Phase 1 and 2 step.

6.2 **Figure 1** below indicates that many States are lagging in their implementation for transition from AIS to AIM. (Date last amended on 05 June 2018.)

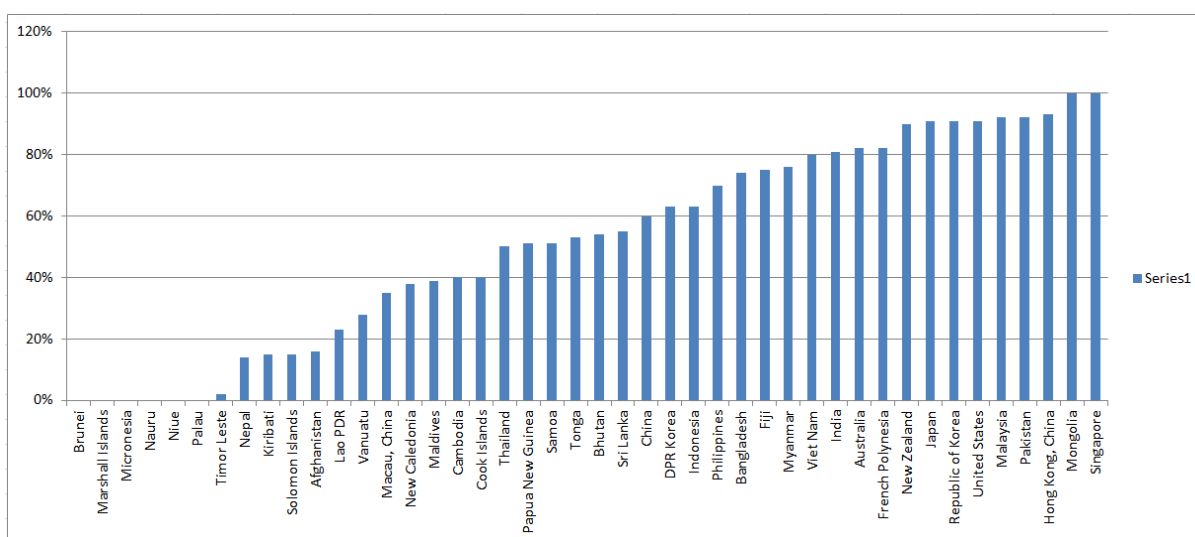


Figure 1: Regional AIM Implementation Status - Phase 1 and 2 Implementation Progress

Asia/Pacific AIM Compliance Analysis – USOAP Audit

6.3 Protocol Questions (PQs) are the primary tool used in the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) for assessing the effective implementation of ICAO Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and ICAO guidance material.

6.4 According to the assessment of Effective Implementation (EI) of AIS-related PQs in May 2018 in APAC Region, an overall EI was **62%**. After analyzing, the EI for 10 AIS-related PQs was **below 50%** (**Figure 2** refers):

- 37% - Cartographic inspector periodic training plan established;
- 40% - Effective State oversight of service provision (charts);
- 43% - AIS data quality and resolution - Annexes 15 and 4 (AIS);
Cartographic inspector’s formal training programme developed and Implemented;

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- 46% - States adoption of International Standards and Procedures ;
AIS inspector periodic training plan established;
AIS inspector formal training programme implemented;
Mechanism for deficiency review and elimination;
Effective State oversight of service provision (AIS); and
- 49% - AIS data quality and resolution (Annex 15 and 4) (Charts).

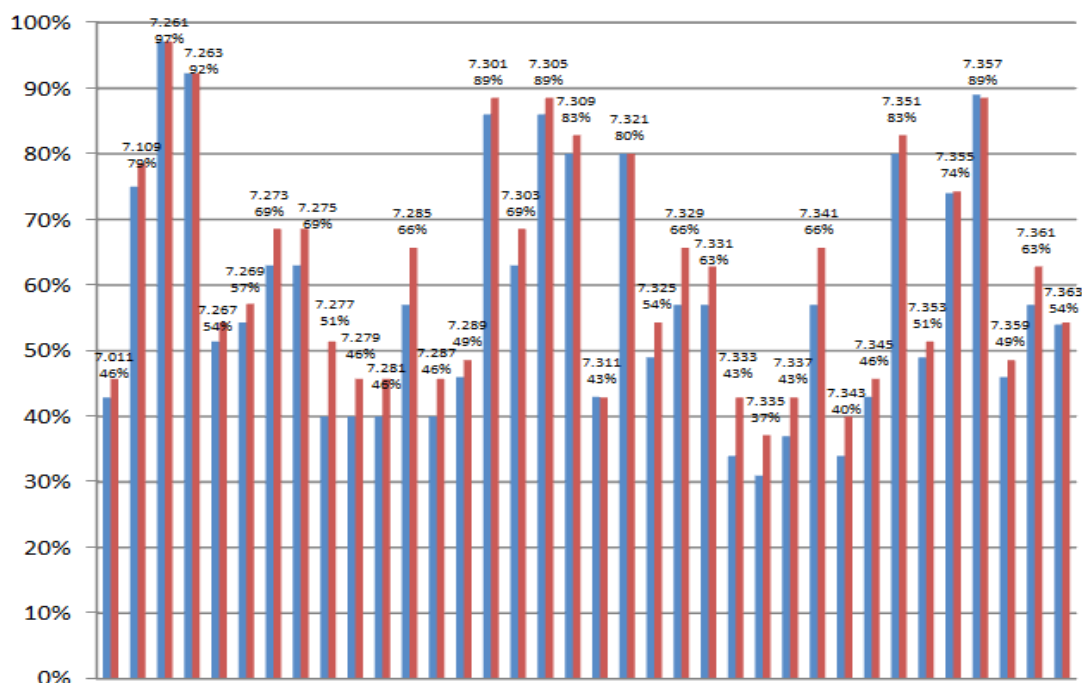


Figure 2: APAC USOAP CMA ANS PQ Compliance (2017 and 2018 Comparison)

6.5 The following summarizes the Asia/Pacific Regional implementation performance in the four priority areas of AIRAC adherence, monitoring of States’ differences to Annex 4 and Annex 15, WGS-84 implementation, and quality management:

PQ 7.309: Does the State ensure that the Aeronautical Information Regulation and Control (AIRAC) system is used to notify the establishment, withdraw and premeditated significant changes of circumstances listed in accordance with Chapter 6 and Appendix 4 Part 2 of Annex 15?

- Average Effective Implementation (EI) of PQ 7.309 for APAC region was **83%**.

PQ 7.011: Has the State implemented procedures for amending its ANS specific regulations as well as for identifying and notifying differences, taking into consideration ICAO provisions and their amendments?

- Average Effective Implementation (EI) of PQ 7.011 for APAC region was **46%**.

PQ 7.109: If the State has initiated the implementation of performance-based navigation (PBN), are the prescribed navigation specifications appropriate to the level of communication, navigation and air traffic services? (Where applicable, review documented evidences that the safety of the system is assured with WGS-84 implementation)

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- Average Effective Implementation (EI) of PQ 7.109 for APAC region was **79%**.

PQ 7.311: Has the State established a mechanism to ensure that aeronautical data quality requirements related to publication resolution and data integrity are in accordance with the provisions of Annex 15, Appendix 7, Tables A7-1 to A7-5?

PQ 7.359: Has the State established a mechanism to ensure that aeronautical data quality requirements related to the data integrity and charting resolution are in accordance with the provisions of Tables 1 to 6 in Appendix 6 of Annex 4? (CE-5)

PQ 7.267: Does the State ensure that a properly organized quality management system in the AIS has been established? (CE-7)

- Average Effective Implementation (EI) of PQ 7.311 for APAC region was **43%**.
- Average Effective Implementation (EI) of PQ 7.359 for APAC region was **49%**.
- Average Effective Implementation (EI) of PQ 7.267 for APAC region was **54%**.

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Asia/Pacific Plan for Collaborative AIM

PERFORMANCE IMPROVEMENT PLAN

Structure of the Performance Improvement Plan

7.1 Regional collaborative AIM performance objectives are arranged in *Regional AIM Capability* phases aligned, where practicable, with the implementation phases of the Seamless ATM ANS Plan:

- Regional AIM Capability Phase I, expected to be implemented immediately;
- Regional AIM Capability Phase II, expected to be implemented by 7 November 2019, and
- Regional AIM Capability Phase III, expected to be implemented by 3 November 2022 (to be developed).

7.2 Performance expectations are presented under the following general structure for each Regional AIM Capability phase, where relevant:

- Legislation, Policy and Regulation;
- Human Performance;
- Quality Management;
- AIM Systems and Processes;

Asia/Pacific Seamless ATM ANS Plan – Performance Expectations

7.3 The Seamless ATM ANS Plan includes the following performance expectations in the field of AIS/AIM:

Preferred ATM Service Levels (PASL) Phase I (expected implementation by 12 November 2015)

7.46 *ATM systems should be supported by digitally-based AIM systems through implementation of Phase 1 and 2 of the AIS-AIM Roadmap in adherence with ICAO and regional AIM planning and guidance material.*

PASL Phase II (expected implementation by 07 November 2019)

7.61 *ATM systems should be supported by complete implementation of AIM Phase 3 (using at a minimum, version AIXM 5.1).*

Structure of the Performance Improvement Plan

7.4 The performance improvement Plan includes performance expectations based on relevant implementation steps from the ICAO Roadmap for Transition from AIS to AIM.

Asia/Pacific Plan for Collaborative AIM

REGIONAL AIM CAPABILITY PHASE I

Expected to be implemented immediately

Legislation, Policy and Regulations

7.5 States should develop policy, and enact primary legislation and supporting regulations for Annex 4 and Annex 15 SARPS and PANS-AIM Procedures including:

- i. Establishment of an organizational structure for the safety oversight of aeronautical information service providers;
- ii. Requirements for monitoring of differences from Annex 4 and Annex 15 SARPS;
- iii. Requirements for aeronautical information/data originators;
- iv. Requirement for AIS quality management systems and processes to be established by all entities in the end-to-end AIS data chain.

7.6 National Air Navigation Plans developed in accordance with the Beijing Declaration, and the provisions of the Asia/Pacific Seamless ATM ANS Plan, should include the implementation planning for each of the performance expectations of the Regional Plan for Collaborative AIM.

7.7 AIS should be established either as a separate entity within or, ideally, separated from the civil aviation administration in accordance with the guidance provided in ICAO Doc 8126 – AIS Manual Chapter 2 (2.4.1.2 and 2.4.1.3).

Human Performance

7.8 Competency requirements for AIS personnel should be developed, including English language proficiency requirements, supported by a program of regular performance assessment.

7.9 Regular programs of engagement with all stakeholders should be established, including education on:

- i. State, organization and individual obligations under the Chicago Convention;
- ii. State Legislation and State Regulations;
- iii. AIM-related ICAO Annexes to the Chicago Convention, Procedures for Air Navigation Services and guidance material.

Quality Management

7.10 Quality management processes for aeronautical information services, as are required to be established under the SARPS in Annex 15¹, should include processes for:

- i. Data quality monitoring;

¹ Annex 15 Aeronautical Information Services Section 3.6

Asia/Pacific Plan for Collaborative AIM

- ii. AIRAC adherence monitoring; and
- iii. Quality checking

7.11 Formal agreements, as required to be established between AIS providers and aeronautical data originators under the relevant SARPS in Annex 15², should specify the content, quality, maintenance and timing of the provision of aeronautical data that is required to be promulgated in AIP, and the quality management process that shall be applied.

AIM Systems

7.12 Full access to relevant ICAO Annexes and Documents should be provided to all personnel having responsibility for the origination, reception, management, publication and/or distribution of aeronautical information and aeronautical data.

7.13 States should ensure full compliance of all aeronautical information products³ with the following common reference systems in accordance with the relevant SARPS and procedures in Annex 15 and PANS-AIM⁴:

- i. Horizontal reference system – *World Geodetic System 1984* (WGS-84);
- ii. Vertical reference system – Mean Sea Level (MSL) datum and Earth Gravitational Model – 1996 (EGM-96);
- iii. Temporal reference system – UTC.

*Note: **Conclusion ATM/SG/10-9: Revalidation of Coordinate Data** urged States to ensure that all surveyed and calculated coordinate data published in AIP or used in Instrument Flight Procedure Design be revalidated:*

1. Each five years; or

2. After a major natural event such as an earthquake or volcanic eruption; or

3. Following construction of critical airport elements;

whichever is the sooner, by ground survey, Light Detection and Ranging (LIDAR) survey, or imagery collection.

² Annex 15 Section 2.15

³ Annex 15 defines *Aeronautical Information Products* as aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media, including AIP (including Amendments and Supplements), AIC, aeronautical charts, NOTAM and digital data sets.

⁴ Annex 15 Section 1.2, and Doc 10066 *Procedures for Air Navigation Services – Aeronautical Information Management* (PANS-AIM) Section 2.1

Asia/Pacific Plan for Collaborative AIM

REGIONAL AIM CAPABILITY PHASE II

Expected to be implemented by 7 November 2019

Legislation, Policy and Regulations

7.14 Policy, primary legislation and supporting regulations for Annex 4, Annex 15 SARPS and PANS AIM should be adapted as necessary to support transition to AIM, including:

- i. Requirements for the implementation of digital databases of aeronautical information, from which digital data sets may be generated;
- ii. Requirements for production of electronic AIP and other Aeronautical Information Products⁵ derived from digital databases of aeronautical information.

Human Performance

7.15 Training, competency development and performance assessment of AIS personnel should be adapted as necessary to the needs of transition to AIM, including the establishment and maintenance of digital databases and generation of data sets of aeronautical information, quality management systems, and electronic AIP

Quality Management

7.16 Quality management systems should be implemented and maintained encompassing all functions of an aeronautical information service.

AIM Systems

7.17 All Administrations should establish and maintain digital databases of aeronautical information as specified in PANS-AIM Appendix 1 Aeronautical Data Catalogue Tables A1-1 to A1-10, where applicable.

7.18 Terrain, Obstacle and Aerodrome Mapping Data should be managed through the establishment of:

- i. A terrain database, from which terrain data sets conforming with Annex 15 Section 5.3.3.3 may be generated;
- ii. An obstacle database, from which obstacle data sets conforming with Annex 15 Section 5.3.3.4 may be generated; and
- iii. An aerodrome mapping database, from which aerodrome mapping data sets conforming with Annex 15 Section 5.3.4 may be generated.

⁵ Annex 15 defines *Aeronautical Information Products* as aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media, including AIP (including Amendments and Supplements), AIC, aeronautical charts, NOTAM and digital data sets.

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7.18 All Administrations should implement internet-accessible electronic AIP generated from a digital database of aeronautical information

REGIONAL AIM CAPABILITY PHASE III

Expected to be implemented by 27 November 2025

Legislation, Policy and Regulations

7.19 Policy, primary legislation and supporting regulations for Annex 4 and Annex 15 SARPS, and PANS AIM procedures, should be adapted as necessary to support the automated exchange of aeronautical data in a SWIM environment, including requirements for:

- i. Interoperability with meteorological products;
- ii. Communications networks for the exchange of aeronautical data; and
- iii. Electronic aeronautical charts.

Human Performance

7.20 Training, competency development and performance assessment of AIS personnel should be adapted as necessary to support the automated exchange of aeronautical data in a SWIM environment, and the generation of electronic aeronautical charts.

AIM Systems and Processes

7.21 All Administrations should

- i. exchange digital data sets of aeronautical information in a SWIM environment, aligned with ASBU DAIM-B2/1.
- ii. provide Aeronautical Information briefing with integrated meteorological information; and
- iii. provide Electronic aeronautical charts.

Note 1: The Asia/Pacific Seamless ATM ANS Plan PASL Phase III includes the expectation that ATM systems should be supported by digitally-based NOTAM aligned with ASBU DAIM-B1/7, replacing paper product-based NOTAM with digital NOTAM.

Note 2: Aeronautical briefing with integrated meteorological information, and electronic charts, are subject to the review of the ICAO Roadmap for Transition from AIS to AIM.

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APPENDIX A - REGIONAL COLLABORATIVE AIM PLANNING PRINCIPLES

People: Cultural and Political Background

1. High-level political support (including development of educational information for decision-makers) to support Seamless ATM ANS initiatives, including military cooperation and AIM.

Source: Asia/Pacific Seamless ATM ANS Plan - Principles

Technology and Information: Aeronautical Data

2. Early implementation of AIM, including cooperative development of aeronautical databases and SWIM to support interoperable operations.

Source: Asia/Pacific Seamless ATM ANS Plan - Principles

Legislation, Policy and Regulation

3. Legislation supporting the signatory State obligations under the Chicago Convention provides the legal basis and compulsion for engagement of all stakeholders in the AIS.
4. Regulations establish requirements for all stakeholders in the AIS including information and data originators, the AIS and its users
5. The role of an AIS regulator (AIS & Charts inspectorate) is not to check and approve every item of aeronautical information promulgated by the AIS.
6. The role of an AIS regulator (AIS & Charts inspectorate) is to oversight the processes of AIS, such as quality management and safety management.

Human Performance

7. Clear accountabilities for the quality and timeliness of aeronautical information should be established.
8. English language proficiency requirements for quality-managed AIS translation of information and data received from originators.
9. Standardization where practicable of English language expressions used in aeronautical information
10. Establishment of competency criteria for information/data originators and AIS personnel, supported by regular performance assessment.
11. Contextual understanding of aeronautical information or data received by AIS, brought about through an appropriate mixture of knowledge, experience and skills among AIS personnel.
12. IT capability to ensure AIM capability.

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13. Relationships between all stakeholders are built through consultation, inclusion, and cooperative education activities.

14. Human factors considerations include training, competency assessment, human-machine interfaces and environment.

Quality Management

15. Quality management applies to the entire aeronautical information/data chain

16. Quality management of aeronautical data requires the establishment of formal agreements between originators of aeronautical information/data and the AIS.

AIM Systems and Processes

17. Maintenance regulations and procedures ensure the regular updating, correction and, when redundant, removal of aeronautical information.

18. The use of contemporary technology to improve the quality and timeliness of aeronautical information, and the efficiency of its publication.

19. Migration of aeronautical information into digital databases requires the establishment of a project team and the application of quality and safety management processes.

20. Integration of safety management and quality management systems

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~~APPENDIX B – TEMPLATE~~
~~SERVICE LEVEL AGREEMENT~~

~~BETWEEN~~

~~{AIS PROVIDER}~~

~~AND~~

~~{DATA ORIGINATOR}~~

~~ON THE SUPPLY OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION FOR
THE PROVISION OF AERONAUTICAL INFORMATION SERVICES~~

Effective Date : _____ ~~{Date of Inception}~~

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~~1. General Overview~~

~~1.1 Objectives~~

~~1.1.1. This Service Level Agreement (Agreement) between **{AIS Providers}** and **{Data Originator}** aims to achieve the following objectives:~~

- ~~i. **Strengthen the coordination** on the supply, maintenance and publication of aerodrome aeronautical data and aeronautical information pertaining to the facilities, services and navigation aids provided within **{Name of State}**;~~
- ~~ii. **Give assurance** on the accuracy, integrity, traceability and timeliness of aerodrome aeronautical data and aeronautical information, in accordance to ICAO Annex 4, Annex 14 and Annex 15 requirements, originating from **{Data Originator}** for publication in the **{Name of State}** aeronautical publications;~~
- ~~iii. **Establish a framework** for key operational Service Standards and Performance Measurements to meet user's needs;~~
- ~~iv. **Deliver consistent levels of service** for the provision of aerodrome aeronautical data and aeronautical information; and~~
- ~~v. **Establish clear roles and responsibility** of the parties in the provision and dissemination of aerodrome aeronautical data and aeronautical information.~~

~~1.2 Scope~~

~~1.2.1 This Agreement documents the agreed provision of service for the supply of aerodrome aeronautical data and aeronautical information by **{Data Originator}** (“Originator”) to the **{AIS Provider}** and the agreed standards to which the said information shall be published by the **{AIS Provider}**.~~

~~1.2.2 This Agreement shall be in line with the requirements set forth in ICAO Annex 15 paragraph 2.1.5, which states that:~~

~~*“Each Contracting State shall ensure that formal arrangements are established between originators of aeronautical data and aeronautical information service in relation to the timely and complete provision of aeronautical data and aeronautical information.”*~~

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~~1.2.3 This Agreement shall be in line with the requirements set forth in ICAO Annex 14 Volume 1 paragraph 2.13.1, which states that:~~

~~*“To ensure that aeronautical information services units obtain information to enable them to provide up-to-date pre flight information and to meet the need for in flight information, arrangements shall be made between aeronautical information services and aerodrome authorities responsible for aerodrome services to report to the responsible aeronautical information services unit, with a minimum of delay.”*~~

~~1.3 Reference Documents~~

~~1.3.1 This Agreement, including the definition of the terms used, is established to fulfil the other relevant requirements in the following ICAO Standards and Recommended Practices (SARPs), manuals and national regulations:~~

- ~~i. ICAO Annex 15 Aeronautical Information Services~~
- ~~ii. ICAO Annex 4 Aeronautical Charts~~
- ~~iii. ICAO Annex 14 Aerodromes~~
- ~~iv. ICAO Doc 8126 Manual on Aeronautical Information Services~~
- ~~v. ICAO Doc 9674 World Geodetic System 1984 (WGS 84) Manual~~

~~{States may include additional reference documents for the purpose of this SLA}~~

~~1.4 Validity Period~~

~~1.4.1 This Agreement shall be effective from {Date} and shall continue to be valid until such time when either party initiates to terminate the Agreement.~~

~~1.4.2 This Agreement shall be reviewed every {Validity Period} years to ensure compliance to ICAO SARPs and international best practices.~~

~~1.4.3 Updates or changes to this Agreement, if required before the periodic review, could be initiated by either party.~~

~~1.4.4 The {Name of the governing, regulatory body or approving authority} shall be the authority to approve updates, changes and review to this Agreement.~~

~~{States to determine the validity period and the governing, regulatory body or approving authority of this SLA}~~

~~2. Quality Management~~

~~2.1 Overview~~

~~2.1.1 Quality management gives the assurance that the aeronautical data and aeronautical information supplied by the Originator provides the confidence that quality requirements will be fulfilled. This includes establishing the data quality attributes and service standards of the parties to this Agreement.~~

~~{States to incorporate any other quality management adherence deemed fit for this SLA}~~

~~2.2 Data Quality Attributes~~

~~2.2.1 The integrity of the aeronautical data shall be maintained throughout the data chain from the Originator to AIS and subsequently to the end users.~~

~~2.2.2 Data integrity classifications used within this Agreement are based on ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.~~

~~2.2.3 The validation and verification procedures shall be based on the applicable integrity classifications as follows:~~

- ~~i. Routine data: avoid corruption throughout the processing of the data. The permitted maximum error rate is 1 in 1000, providing an integrity level of 1×10^{-3} (ICAO Doc 9674).~~
- ~~ii. Essential data: assure corruption does not occur at any stage of the entire process and include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level. The permitted maximum error rate is 1 in 100,000, providing an integrity level of 1×10^{-5} (ICAO Doc 9674).~~
- ~~iii. Critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance processes to fully mitigate the effects of faults identified by thorough analysis of the overall system architecture as potential data integrity risks. The permitted maximum error rate is 1 in 100,000,000, providing an integrity level of 1×10^{-8} (ICAO Doc 9674).~~

~~{States to incorporate any other data quality attributes deemed necessary for this SLA}~~

~~2.3 Service Standards of Originator~~

~~2.3.1 The established service standards aim to outline the responsibilities of the originator as part of the quality management process of the aeronautical information data chain. **{Name of Originator}**, as the Originator shall:~~

Asia/Pacific Plan for Collaborative AIM – Appendix B

- ~~i. Supply, maintain and update **{AIS Provider}** with aerodrome aeronautical data and aeronautical information pertaining to the facilities, services and navigation aids provided within **{Name of Aerodromes}** for which **{Data Originator}** is responsible.~~
- ~~ii. Provide **{AIS Provider}** with a list of aerodrome aeronautical data and aeronautical information originators within **{Data Originator}** who are authorized to supply, maintain and update the aerodrome aeronautical data and aeronautical information published in the **{Name of State}** aeronautical publications (that is, NOTAMs, AIP Supplements (AIP SUP), AIP Amendments (AMDT), AIP **{Name of State}** and Aeronautical Information Circulars (AIC)).~~
- ~~iii. Maintain and update the list of subject owners for the aerodrome aeronautical data and aeronautical information to be published and to inform **{Name of AIS Provider}**, for accountability purpose, whenever there is a change.~~
- ~~iv. Ensure that regular surveys are conducted by qualified and certified surveyors to determine and / or verify the accuracy and integrity of the aerodrome aeronautical and obstacle / terrain data published in AIP **{Name of State}**. The surveyed aerodrome aeronautical and obstacle / terrain data, including the WGS 84 coordinates, sent to **{Name of AIS Provider}** shall comply with the aeronautical data publication resolution and integrity classification stipulated in ICAO Annexes 4, 14 and 15.~~
- ~~v. Ensure that accurate, updated and complete aerodrome aeronautical data and aeronautical information is provided to **{Name of AIS Provider}** in sufficient time which comply with the AIRAC cycle cut off date, where necessary, for timely publication and dissemination to users.~~
- ~~vi. Ensure that all aerodrome aeronautical data and aeronautical information submitted to **{Name of AIS Provider}** for publication of AMDT, AIP SUP and AIC must include the name {s} of the originator {s} or subject owner {s} who have vetted and verified the submission, and a declaration that the aerodrome aeronautical data and aeronautical information submitted is accurate, updated and complete.~~
- ~~vii. Ensure that the submission of draft NOTAM{s} for promulgation to **{Name of AIS Provider}** includes the name {s} of person who issues, checks and approves, indicating that the information submitted is vetted and verified, and a declaration that the information submitted is accurate, updated and complete.~~
- ~~viii. Be responsible and accountable for the accuracy and integrity of the aerodrome aeronautical data provided to **{Name of AIS Provider}**. The aerodrome aeronautical data provided shall be in accordance to the data integrity classification for aeronautical data specified in ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.~~
- ~~ix. Conduct a yearly review of the AIP **{Name of State}** sections under their purview and update **{Name of AIS Provider}** accordingly and to provide a ‘Nil’ return to **{Name of AIS Provider}** after each review if no updates were required.~~

- x. ~~Check for permanent information that needs to be incorporated into AIP {Name of State} from the AIP SUP and NOTAMs submitted to {Name of AIS Provider}.~~
- xi. ~~Ensure that personnel performing the role of Data Originator and checker are appropriately trained and equipped with the requisite knowledge, skills and abilities to prepare the draft aeronautical publications and submit NOTAM proposals to {Name of AIS Provider} for promulgation within the context of the established quality management system.~~

~~{States to incorporate any other service standards for the Data Originators deemed necessary for this SLA}~~

2.4 ~~Service Standards of AIS Provider~~

2.4.1 ~~{Name of AIS Provider} is the entity responsible for the provision of aeronautical information services within the {Name of State} Flight Information Region {FIR} and areas where air traffic services are provided. The timely availability of accurate, updated and complete aeronautical data and aeronautical information is necessary to ensure the safety, regularity and efficiency of air navigation. {Name of AIS Provider} shall:~~

- i. ~~Publish updates and changes to aerodrome aeronautical data and aeronautical information through the most appropriate means (that is, AMDT, AIP SUP, AIC or NOTAM) taking into consideration the accuracy and timeliness of aerodrome aeronautical data and aeronautical information submitted by {Data Originator}.~~
- ii. ~~Publish permanent changes to AIP {Name of State} in accordance to the schedule of AMDT publication dates published in AIP {Name of State} and AIC.~~
- iii. ~~Check the submission date of the aerodrome aeronautical data and aeronautical information against the AMDT publication schedule on receipt of the aerodrome aeronautical data and aeronautical information from {Data Originator}. If the aerodrome aeronautical data and aeronautical information is received before the “Latest date for information to reach AIS”, the aerodrome aeronautical data and aeronautical information received will be checked for completeness and compliance with the aerodrome aeronautical data and aeronautical information quality requirements for publication resolution, integrity and data classification stipulated in ICAO Annex 15, Appendix 7, Tables A7-1 to A7-5.~~
- iv. ~~Check the submission date of the aerodrome aeronautical charts against the AMDT publication schedule on receipt of the aerodrome aeronautical charts from {Data Originator}. If the aerodrome aeronautical charts are received before the “Latest date for information to reach AIS”, the charts received will be checked for compliance with the aerodrome aeronautical chart specifications specified in ICAO Annex 4 and the aerodrome aeronautical data quality requirements for chart resolution of geographical coordinates, integrity and data classification stipulated in ICAO Annex 4, Appendix 6, Tables A6-1 to A6-6.~~
- v. ~~Track the aerodrome aeronautical data and aeronautical information submitted by {Data Originator} for errors and non-adherence to the specified timeline. Results of the tracking will be shared through a formal dialogue with {Data Originator} for compliance and to improve subsequent data submissions to {Name of AIS Provider}.~~

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- vi. Review, develop and implement work processes which includes ICAO Annex 15 requirements with **{Data Originator}** on the submissions of aerodrome aeronautical data and aeronautical information for publication.
- vii. Assess the “Requests for NOTAM promulgation” to ensure that they are unambiguous and complete before the NOTAMs are promulgated.

{States to include any other services provided or requirements of the AIS Provider}

2.5 Service Level Indicators

2.5.1 In order to fulfil the requirements for quality management, **{Name of AIS Provider}** shall be tracking errors detected / observed before and after publication of the aerodrome aeronautical data and aeronautical information provided by **{Data Originator}**. These errors shall be communicated to **{Data Originator}** for follow up remedial actions.

2.5.2 The **{Name of the governing, regulatory body or approving authority}**, as the authority to monitor the effectiveness of coordination between **{Data Originator}** and **{Name of AIS Provider}**, shall oversee the relevant compliance targets on timeliness and accuracy:

AERONAUTICAL PUBLICATIONS	COMPLIANCE TARGET
NOTAM	
Aeronautical Data and Aeronautical Information from Originator to NOTAM Office	100%
Aeronautical Data and Aeronautical Information from NOTAM Office to End Users	100%
AMDT/ AIP SUP/ AIP / AIC	
Aeronautical Data and Aeronautical Information from Originator to AIS Provider	100%
Aeronautical Data and Aeronautical Information from AIS Provider to End Users	100%

{States to indicate any other compliance targets expected by the Data Originators to comply}

3. Amendments and Mediation

3.1 Amendments

~~3.1.2~~ Either party can propose amendments and modifications to this Agreement through formal notification to the ~~{Name of the governing, regulatory body or approving authority}~~.

~~3.1.3~~ The ~~{Name of the governing, regulatory body or approving authority}~~, shall be the approving authority of such amendments and modifications to this Agreement.

~~3.2~~ — ~~Dispute Management~~

~~3.2.1~~ Disputes between the parties relating to this Agreement and its interpretation shall be arbitrated by the ~~{Name of the governing, regulatory body or approving authority}~~.

~~3.3~~ — ~~Point Of Contact~~

~~3.3.1~~ ~~{Data Originator}~~ and ~~{Name of AIS Provider}~~ shall each appoint a point of contact to manage issues pertaining to the provisions in this Agreement.

~~3.3.2~~ All communications relating to this Agreement shall be jointly coordinated by the appointed point of contact.

~~3.3.3~~ The details of the appointed point of contact is in ~~Annex A~~ of this Agreement. Both parties agree to ensure that the point of contact details are updated. Amendments to the details of the point of contact do not require the review of the overall Agreement.

~~4.~~ — ~~Agreement~~

~~4.1~~ This Agreement is concluded on ~~{DD MMM of YYYY}~~ by the following signatories:

~~Name:~~

~~Name:~~

~~Designation:~~

~~Designation:~~

~~Organisation:~~

~~Organisation:~~

~~Date:~~

~~Date:~~

~~{States and Data Originators to indicate the most appropriate officers to be the signatories of this SLA}~~

ANNEX A

SERVICE LEVEL AGREEMENT

BETWEEN

~~{STATE AUTHORITY}~~

AND

~~{DATA ORIGINATOR}~~

**~~ON THE SUPPLY OF AERONAUTICAL DATA AND AERONAUTICAL INFORMATION FOR
THE PROVISION OF AERONAUTICAL INFORMATION SERVICES~~**

Effective from ~~{DD MMM of YYYY}~~

Clause 3.2.3. The details of the appointed point of contact are as follows:

Organisation	Primary Contact	Secondary Contact
The AIS provider, {State Authority}	Name: Designation: Email: Tel:	Name: Designation: Email: Tel:
The Originator, {Data Originator}	Name: Designation: Email: Tel:	Name: Designation: Email: Tel:

~~{States may indicate details of the Points of Contact in an Annex to eliminate the need to sign again the Service Level Agreement if there changes to the Point of Contact from both parties to this Agreement.~~

**APPENDIX C - ICARD REGISTRATION PROCEDURE – AUTHORIZED USERS
- ICARD PROCESS FLOW CHART**

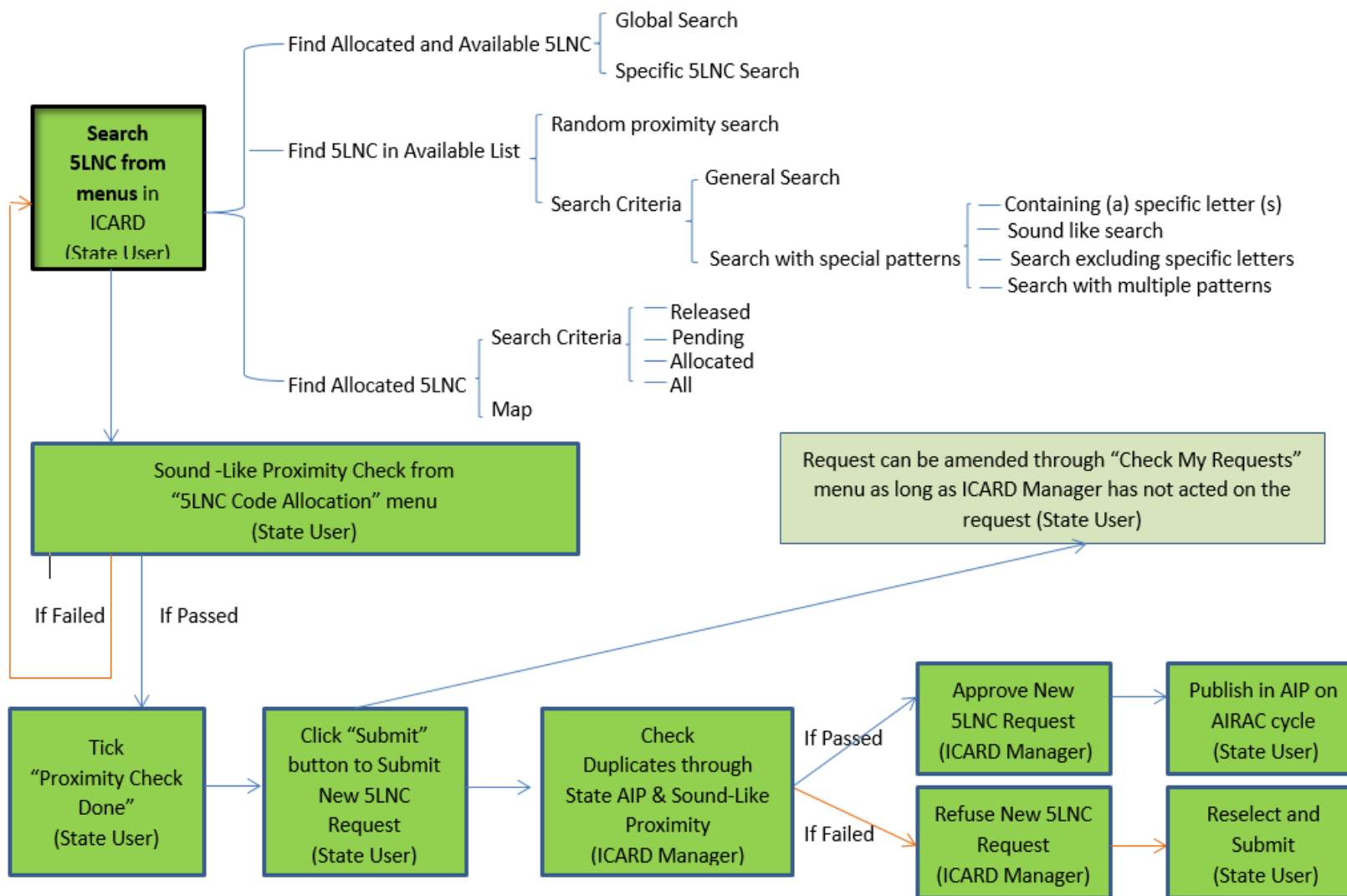
ICARD REGISTRATION PROCESS

There are **three** steps to registration as an ICARD 5LNC Planner.

- If you do not yet have user access to the ICAO Secure Portal, complete all three steps.
 - If you already have access to the ICAO Secure Portal but not to ICARD, go to Step 2.
 - If you already have access to ICARD, but are not registered as an ICARD_5LNC_PLANNER, go to Step 3.
1. Register for access to the ICAO Secure Portal (you may already have this access. If so, proceed directly to step 2.)
 - i. Go to <http://portal.icao.int/>
 - ii. Click on **Request an account**
 - iii. Follow the instructions. You will be notified when your registration for access to the ICAO Secure Portal is approved.
 2. Log in to the ICAO Secure Portal <http://portal.icao.int> with your secure login credentials, then register for ICARD as follows:
 - i. Click on the **PROFILE** link in your Secure Portal home page
 - ii. A new window will open. In the menu on the left of the new window, click on the **GROUP SUBSCRIBE/UNSUSCRIBE** link.
 - iii. Enter the group name **ICARD** in the **SUBSCRIBE TO** field, and add the justification for your request in the **JUSTIFICATION** field.
 - iv. Click the **SUBMIT CHANGES** button.
 3. Register for ICARD_5LNC_PLANNER in the same manner as described in step 2: Log in to the ICAO Secure Portal <http://portal.icao.int> with your secure login credentials, then register for ICARD_5LNC_PLANNER as follows:
 - i. Click on the **PROFILE** link in your Secure Portal home page
 - ii. A new window will open. In the menu on the left of the new window, click on the **GROUP SUBSCRIBE/UNSUSCRIBE** link.
 - iii. Enter the group name **ICARD_5LNC_PLANNER** in the **SUBSCRIBE TO** field, and add the justification for your request in the **JUSTIFICATION** field.
 - iv. Click the **SUBMIT CHANGES** button.

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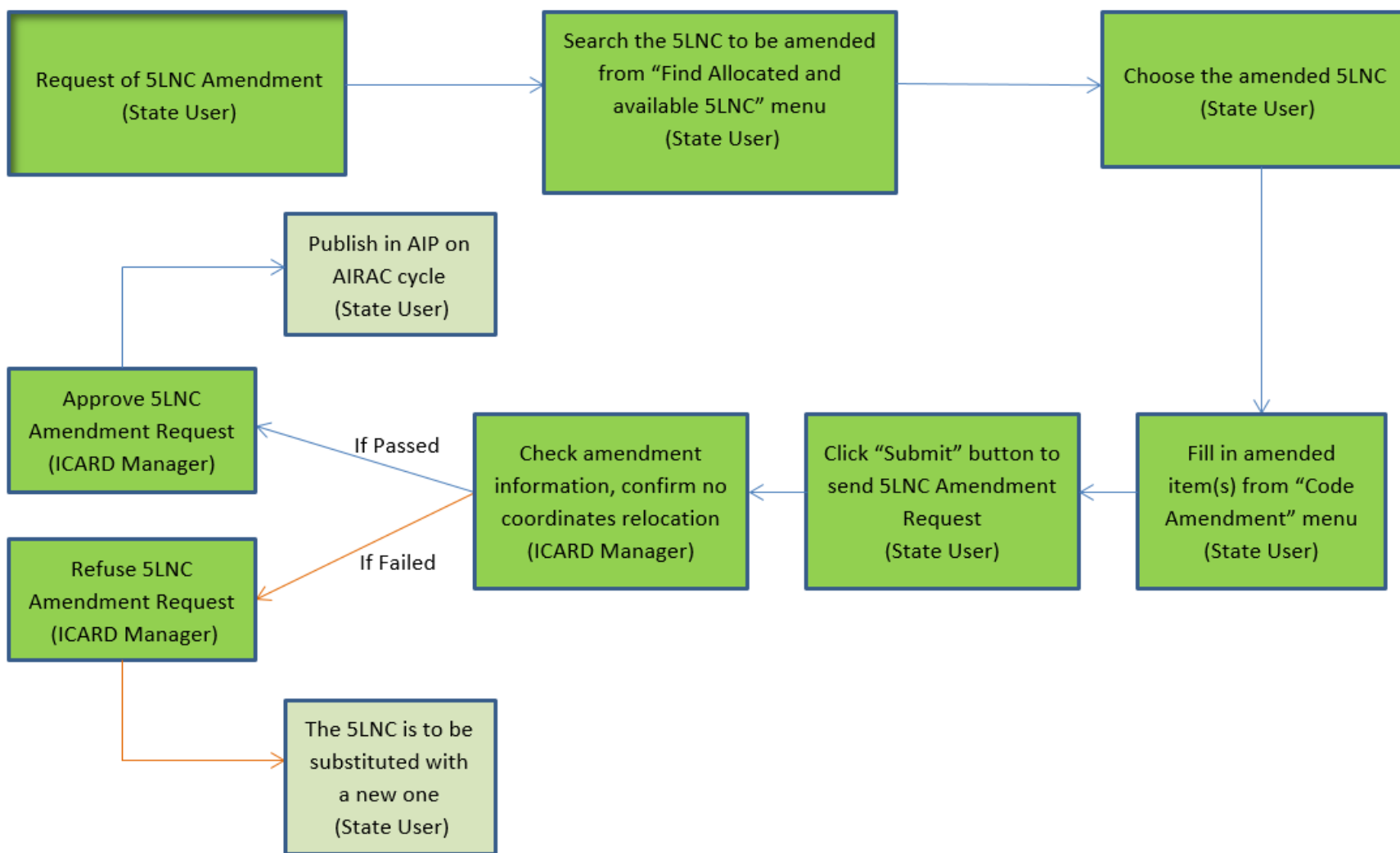


Flow Chart for New 5LNC Request

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Notes:

- ❖ In all cases, the coordinates of the requested new 5LNC must be within the territory or any FIR of the requesting State. If this is not the case, the request will be refused.
- ❖ For 5LNCs on FIR boundaries, the requesting State has to coordinate with all State(s) concerned before the new 5LNCs are requested, implemented and published in relevant AIPs, in accordance with the AIRAC cycle and prior notification requirement of Annex 15.
- ❖ After the submission of new 5LNC request, State User's request has been successfully recorded BUT NOT YET approved by ICARD Regional Data Manager. States must wait for Notification of approval by the ICARD Regional Data Manager before proceeding to publication in AIP. If requests are urgent, ICARD Users should inform the ICARD Regional Data Manager by e-mail to expedite processing.

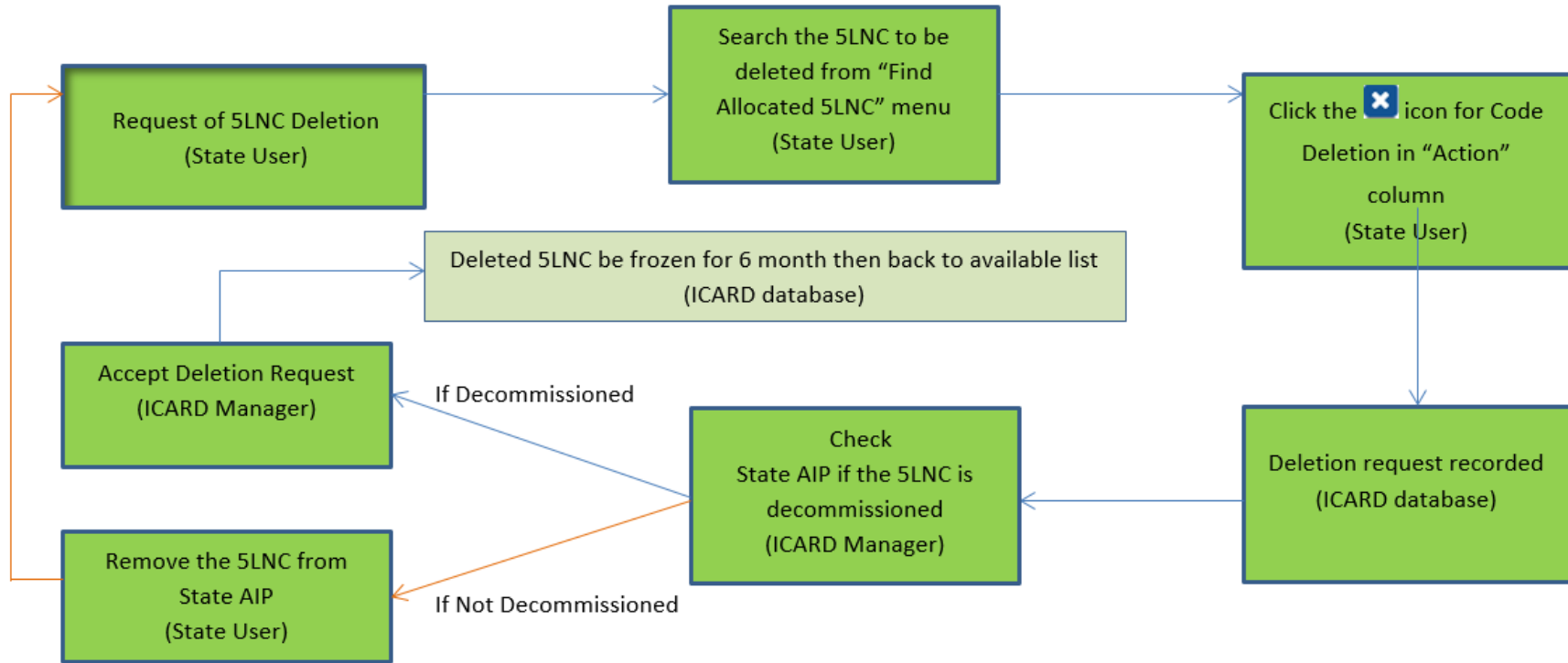


Flow Chart for 5LNC Amendment

Notes:

- ❖ There are many types of amendments requested by State users, eg. changes of coordinates, comments, purpose, addition or deletion of coordinating States, etc. It is advised to add reason and purpose of the amendment in the “comment box”.
- ❖ If the request is the change of coordinates not published yet in States AIP, after proximity checking, if the result is fine, the request can be approved.
- ❖ For an implemented 5LNC is to be relocated, it must be substituted with a new 5LNC drawn from ICARD (Annex 11 Appendix 2 paragraph 3.4); and
- ❖ For 5LNCs on FIR boundaries, the State/Administration requesting State must coordinate with the State(s) concerned before the submission of amendment request.

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Flow Chart for 5LNC Deletion

Note:

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- ❖ Before the submission of a 5LNC deletion request, the 5LNC must be deleted from relevant State AIP(s):
- ❖ For the 5LNC deletion which is at FIR boundary, make sure it has been coordinated between all States concerned and removed from all State AIPs involved; and
- ❖ Deleted 5LNC will remain frozen for a period of 6 months. After that time, it will automatically return to the reserve list of the ICARD database of the same ICAO Region.

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