



Agenda Item 7: Other business

Verification of basic building blocks (BBBs)

(Presented by the Secretariat)

SUMMARY	
This working paper presents a summary of the virtual missions undertaken by the Secretariat in 2021 and planned for 2022.	
References:	
<ul style="list-style-type: none">• Annex 15 – Aeronautical Information Services• Doc 10066 – PANS AIM• Doc 9750 – Global Air Navigation Plan (GANP)	
ICAO strategic objectives:	<i>A – Safety</i> <i>B – Capacity and efficiency</i>

1. Introduction

1.1 ICAO Annex 15 provides the frame of reference for the provision of aeronautical information services.

1.2 Doc 10066, PANS-AIM, contains technical guidelines on the implementation of the requirements contained in Annex 15.

1.3 The fifth edition of the GANP introduced the concept of basic building blocks (BBBs) as minimum requirements to be implemented by States for the provision of air navigation services.

2. Discussion

2.1 The Basic Building Block (BBB) framework describes the basis of any robust air navigation system. It consists of identifying the essential services to be provided to international civil aviation in accordance with ICAO standards.

2.2 These essential services are defined for the areas of aerodromes, air traffic management, search and rescue, meteorology and information management. In addition to essential services, the BBB framework identifies the end users of these services, as well as the assets (communication, navigation and surveillance (CNS) infrastructure) needed to provide them.

2.3 ICAO implements regional air navigation plans as a tool for planning and implementing the necessary improvements in air navigation areas to increase capacity and efficiency.

2.4 In 2014, the ICAO Council approved a new template for regional air navigation plans (ANPs) to better align global and regional planning. This template consists of three volumes. Volumes I and II list regional facilities, as well as general and specific requirements of regional services required for international civil aviation operations in accordance with regional air navigation agreements, in the areas of aerodrome operations, communications, navigation and surveillance, air traffic management, meteorology, search and rescue and aeronautical information management.

2.5 Considering the above, ICAO has decided to carry out a Global Campaign on NOTAM Improvement, divided into two parts, namely:

2.6 In order to establish a baseline for the system envisaged in the GANP and to ensure a sound basis for the global air navigation system, an effective process must be established to verify, in accordance with Article 37 of the Chicago Convention, that the essential air navigation services identified in the BBB framework are provided.

2.7 To establish a baseline for the system envisaged in the GANP and to ensure a solid base for the global air navigation system, an effective process must be established to verify, in accordance with Article 37 of the Chicago Convention, identified essential services of air navigation that are provided, in the BBB framework.

2.8 It is important to highlight that this process should focus on verifying the implementation of the essential air navigation services described in the BBB framework, since the capacity of States to supervise these services is covered by the ICAO USOAP. To avoid duplication and align global and regional planning, the process of verifying the implementation of these essential services should be integrated into the methodology for identifying deficiencies in regional air navigation plans.

2.9 It is important to note that this process should focus on verifying the implementation of the essential air navigation services described in the BBB framework, as the capacity of States to oversee these services is covered by the ICAO USOAP. To avoid duplication and to align global and regional planning, the process of verifying the implementation of these essential services must be integrated into the methodology for the identification of deficiencies in regional air navigation plans.

2.10 In order to carry out this verification, the Secretariat has planned to conduct "virtual missions" for the verification of BBBs in the AIM area. In 2021, the Secretariat conducted the following virtual missions:

- a) Bolivia
- b) Colombia
- c) Ecuador
- d) The virtual mission to Venezuela is planned for 28-29 September 2021.

2.11 These virtual missions are carried out with the support of a Checklist, prepared by the Secretariat, based on the BBBs of the GANP, sixth edition. The checklist is shown in the appendix to this working paper.

2.12 The Secretariat plans to continue conducting virtual missions during 2022.

3. **Conclusion**

3.1 Virtual missions help to verify compliance with the implementation of the basic building blocks for the AIM area.

3.2 Virtual missions also provide recommendations on opportunities for improvement and collect good practices from States.

4. **Suggested action**

4.1 The Meeting is invited to:

- a) take note of the information presented in this working paper;
- b) review the checklist presented in Appendix A, and suggest opportunities for improvement; and
- c) consider any other action it may deem necessary.

APPENDIX

AIM/MAP Checklist

Aeronautical Information Publication Service

- Is aeronautical information provided in the form of aeronautical information products (*) and related services?
- If aeronautical data and information are provided in multiple formats, are processes in place to ensure that data and information are uniform across all formats?
- What are the formats that include the standard presentation of aeronautical information provided by the State?
- In what format are the AIP, the AIP Amendment, the AIP Supplement, and the AIC provided?
- Does the AIP publication include the following?
 - a) a statement from the appropriate authority responsible for the air navigation facilities, services or procedures covered by the AIP;
 - b) the general conditions under which the services or facilities may be used internationally;
 - c) a list of significant differences between the State's national regulations and the corresponding ICAO standards, recommended practices and procedures, in such a way as to enable the user to readily distinguish between the State's requirements and the relevant ICAO provisions;
 - d) the choice made by a State in each significant case where ICAO standards, recommended practices and procedures provide for an option.
- Is a checklist of AIP supplements provided on a regular basis?
- Are AICs used for providing the following?
 - a) a long-term forecast of major changes in legislation, regulation, procedures or facilities; or
 - b) information of a purely explanatory or advisory nature which may affect flight safety; or
 - c) information or notifications of an explanatory or advisory nature on technical, regulatory or purely administrative matters.
- Is there a procedure in place to verify that AICs do not provide information that correspond in the AIP or a NOTAM?
- Are procedures in place to review the validity of current AICs at least once a year?
- Is a summary list of valid AICs provided on a regular basis?
- Has the AIS service prepared Data Catalogues as set out in Doc 10066 PANS-AIM?
- When the State publishes aeronautical data as "Digital Data Sets (DDS)", can it be verified that the five DDS stipulated in Annex 15, Chapter 5, 5.3.1.1, are published and that they meet the

requirements, formats and means of publication stipulated in Annex 15, Chapter 5, 5.3.2 through 5.3.5.?

- When the State publishes aeronautical data as "Digital Data Sets (DDS)", will it provide, on a periodic basis, a checklist of valid data sets?
- Is there a distribution list of aeronautical data and aeronautical information products? Is there a procedure to periodically review and update it according to user requests?
- Where aeronautical data and aeronautical information are provided in multiple formats, are procedures implemented to ensure that the data and information are uniform across the various formats?
- Has the AIS provider established a duly organised management system in AIS/AIM processes?
- If yes, does the implemented system have a certification?
- If not, how do you ensure that the aeronautical information and aeronautical data you provide are of the required quality?
- Are validation and verification procedures established to ensure that, upon receipt of aeronautical data and aeronautical information, quality requirements are met?
- Do you have an automated system to ensure the quality, efficiency, and profitability of aeronautical information services?
- Do AIS personnel meet the required profiles, training and competence to carry out their duties?
- Has the AIS established a service level agreement (SLA) with data and information providers?

Cartography Service

- Are the aeronautical charts listed below available for designated international airports/heliports?
 - a) ATC surveillance minimum altitude chart — ICAO: Yes
 - b) Instrument approach chart — ICAO: Yes
 - c) Visual approach chart — ICAO: Not available at the moment
 - d) Area chart — ICAO: Yes
 - e) Standard arrival chart — instrument (STAR) — ICAO: Yes
 - f) Standard departure chart — instrument (SID) — ICAO: Yes
 - g) Precision approach terrain chart — ICAO: Yes for Quito
 - h) Aerodrome/heliport chart — ICAO: Yes
 - i) Aerodrome ground movement chart — ICAO: Yes
 - j) Aircraft parking/docking chart — ICAO: Yes
 - k) Aerodrome obstacle chart — ICAO, Type A: Yes
 - l) Aerodrome obstacle chart — ICAO, Type B (if available); and
 - m) Aerodrome terrain and obstacle chart — ICAO (electronic)
- Where these charts are available, are they contained in the AIPs or will they be supplied separately to AIP recipients?

- Are en-route navigation charts prepared as stipulated in ICAO Annex 4, Chapter 7, and are they distributed in accordance with ICAO Annex 4, Chapter 1, 1.3.2.1 et seq.?
- If these charts are available, will they be part of the AIPs or will they be provided separately to AIP recipients?
- Are the charts listed below supplied as aeronautical information products?
 - a) Aeronautical chart — ICAO 1:500 000;
 - b) World aeronautical chart — ICAO 1:1 000 000;
 - c) Aeronautical navigation chart — ICAO, small scale;
 - d) Position chart — ICAO.
- Are there procedures to verify that the degree of resolution of aeronautical data on charts is as specified for each particular chart?

NOTAM Service

- Does the air navigation provider issue a "trigger NOTAM" when an AIP Amendment or AIP Supplement is published in accordance with AIRAC procedures?
- Does the air navigation provider issue a NOTAM with the NIL notification no later than one cycle before the date of entry into force of the AIRAC concerned, when no information has been submitted by the AIRAC date?
- Does the air navigation provider issue NOTAM messages in accordance with Annex 15, Chapter 6, 6.3.2.2, 6.3.2.3, 6.3.2.3, 6.2.3.4 and Doc 10066 PANS-AIM, Chapter 6?
- Does the air navigation provider issue a checklist of valid NOTAMs?

Pre-flight Information Service

- At aerodromes/heliports used for international air operations, is aeronautical information concerning route segments departing from the aerodrome/heliport provided to flight operations personnel, including flight crews and pre-flight information services?
- Is operationally relevant information from aeronautical information product elements included in the aeronautical information provided for pre-flight planning?

Post-flight service

- Has a procedure been established for flight crews using aerodromes/heliports of air navigation providers to report information regarding the condition and operating status of air navigation facilities or services?
- Has a procedure been established for information provided by flight crews regarding the condition and operating status of air navigation facilities or services to be made available to the AIS for distribution to users as appropriate?

- Has it been established at aerodromes/heliports normally used for International air operations that information be received from flight crews operating at such aerodromes/heliports regarding wildlife hazards observed by them?
- Have procedures been established to ensure that information on the presence of wildlife observed by flight crews is made available to the AIS for distribution to users, as appropriate?

References:

- a) **Aeronautical Information Publication Service:**
 - Annex 15, Ch. 5;
 - Doc 10066 - PANS-AIM: Ch.5 , App.2;
 - PANS-OPS: Part III, Sec.5;
 - Doc 8126: Ch. 5 and Appendix, Specimen AIP
- b) **Cartography Service:**
 - Annex 15, Ch. 5;
 - Annex 4: the entire Annex
 - Doc 10066 PANS-AIM: Ch.5, App.2;
 - PANS-OPS: Part I, Ch.9;
 - Doc 8126: Specimen AIP; and
 - Doc 8697: the entire document
- c) **NOTAM Service:**
 - Annex 15, Ch. 6;
 - Doc 10066 - PANS-AIM: Ch.:6, App. 3,4,5,7;
 - Doc 8126: Ch. 6 and its App. A,B,C, Ch. 9 and its App. A
- d) **Pre-flight Information Service:**
 - Annex 15, Ch. 5; P
 - Doc 10066 - ANS-AIM: Ch.5;
 - Doc 8126: Ch. 8
- e) **Post flight Service:**
 - Annex 15, Ch. 5;
 - Doc 8126: Ch. 8