International Civil Aviation Organization

Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) of APANPIRG

Video Teleconference, 17 – 21 October 2022

Agenda Item 3: **Performance Frameworks and Metrics**

UPDATING THE ASIA/PACIFIC SEAMLESS ANS PLAN

(Presented by Secretariat)

SUMMARY

This paper presents a proposal for the update of the Asia/Pacific Seamless ANS Plan for ATM/SG comment.

1.   INTRODUCTION

1.1   The update cycle of the Asia/Pacific Seamless ANS Plan was based on the intention that APANPIRG and its contributory bodies conduct a complete review every three years to align with the review cycle of the Global Air Navigation Plan (GANP).   The last review of the Seamless Plan was conducted in 2019, in the same year as the last major update of the GANP

1.2   Phase III performance expectations of the Seamless Plan are expected to be implemented by 03 November 2022, and Phase IV by 25 November 2025.

1.3   The Asia/Pacific Air Navigation Plan Volume III is intended to incorporate regional planning objectives, priorities and targets, implementation monitoring and reporting, and other regional guidance material, under the management of APANPIRG.

2.   DISCUSSION

Seamless ANS Plan Update Cycle

2.1   The Seamless ANS Plan states:

Plan Review

1.1   The Plan needs to be updated to take into account ASBU Block 1, 2 and 3 modules, when these modules and their associated technology become mature.

1.2   Periodic updates to the Plan are also required in respect of the economic information contained therein.

1.3   As an iterative process, the Plan requires regular updating to keep current with aviation system changes. It is intended that APANPIRG and its contributory bodies conduct a complete review every three years (or a shorter period determined by APANPIRG) of the Plan to align with the review cycle of the GANP. The Plan and its subsequent revisions should be endorsed by APANPIRG.

*1.4	Review of the Navigation and Surveillance strategies needs to result in the update to the Seamless ANS Plan to ensure consistency.*

*1.5	The review of the Plan during 2019 deletes reference Phase I as Phase II commenced in November 2019, although the uncompleted elements from Phase I were moved to Phase II. The implementation dates of Phase II PARS and PASL items align with the GANP Block 1 implementation, whereas Phase III is a mid-Block update scheduled for 2022.*

*1.6	The 2019 update of the Plan introduces new ASBU Block 1 modules. Phase III and Phase IV of the PARS and PASL implementation framework will also be referenced.*

2.2	The current Seamless Plan update cycle coincides with the three-year update cycle of the GANP, which undergoes a major update each six years. The 2019 update of the Seamless Plan was aligned with the most recent major update of the GANP, as approved by the 40th Session of the ICAO Assembly, held in the same year. The next major update of the GANP is expected in 2025.

2.3	The scheduling of Seamless ANS Plan updates to coincide with the GANP cycle and the approval of the GANP update by Assembly presents a significant challenge to the Asia/Pacific Region in terms of fully analyzing and comprehending GANP changes which may be still under final development quite late in the cycle, and then identifying and prioritizing GANP elements for regional implementation while developing any proposed regional planning elements in parallel. The 2019 update of the Seamless Plan included consideration of the major GANP update which was still being finalized during that year and had not yet been approved by the ICAO Assembly.

2.4	The 2019 meetings of the APANPIRG technical Sub-Groups where the Seamless ANS Plan update was expected to be reviewed were all held prior to the formal approval of the GANP update by the 40th Session of the Assembly in 2019:

Meteorology Sub-Group (MET/SG/23) – 17 to 20 June 2019;

Aerodromes Operations and Planning Sub-Group (AOP/SG/3) – 24 to 28 June 2019;

Air Traffic Management Sub-Group (ATM/SG/7) – 05 to 09 August 2019;

Communications, Navigation and Surveillance Sub-Group (CNS SG/23) – 02 to 06 September 2019;

Assembly 40th Session – 24 September to 04 October 2019

APANPIRG/30 – 04 to 06 November 2019;

2.5	It should also be noted that in previous Assembly years APANPIRG has also been held before the Assembly Session.

Seamless ANS Plan Implementation Phase IV

2.6	Phase IV of the Seamless ANS Plan (implementation by 25 November 2025) includes two *Preferred Aerodrome/Airspace and Route Specifications* (PARS) implementation elements and no *Preferred ANS Service Levels* (PASL) elements.

2.7		**Attachment 1** provides an initial summary of considerations for the update of the Seamless ANS Plan. The meeting is also invited to note the proposal in WP/15 to this meeting – *Main Outcomes of CNS SG/26* - that System Wide Information Management (SWIM) regional implementation be achieved in the 2024 to 2030 timeframe, and the ***Draft Conclusion CNS SG/26/06*** proposing SWIM elements be included in the next edition of the Seamless ANS Plan.

2.8		As detailed in Attachment 1, and taking into consideration the GANP update cycle considerations mentioned above, it is proposed that the Seamless ANS Plan be updated during 2022/2023, and presented to APANPIRG Sub-Groups in 2023 before then being presented for the approval of APANPIRG/34 in 2023.

		ANP Volume III

2.9		The migration of the Seamless ANS Plan and other regional plans and guidance material into ANP Volume III will be a major project potentially requiring a significant restructure of the Seamless Plan. The following APANPIRG Conclusion also refers:

Conclusion APANPIRG/30-6: ICAO HQ Support for Regional ANS Implementation

ICAO HQ is invited to:

1.	*given the greatly increased number and complexity of Aviation System Block Upgrade (ASBU) elements in the draft 6th Edition of the Global Aviation Navigation Plan (GANP), the redefinition of ASBU Block 0 elements that were expected to be completed by 2019, and the need for more detailed and comprehensive guidance provided on the ASBU Portal for each element than is currently provided, consider:*

	i.	*the consequences for States of different capabilities to ensure that the No Country Left Behind (NCLB) policy is fully considered; and*

	ii.	*the extra resources, tools and training required to enable States to be able to understand, review, determine priorities and costs/benefits, and implement the applicable ASBU elements; and*

2.	*ensure that the redevelopment of the Regional Air Navigation Plan Volume III templates allow the Asia/Pacific Seamless Air Navigation Service (ANS) Plan to be fully incorporated into Vol. III without amendment; and*

3.	*ensure an urgent upgrade of the electronic regional ANS Monitoring and Reporting Scheme to:*

	i.	*allow States to electronically submit data related to the Seamless ANS Plan and its subsidiary plans; and*

	ii.	*ensure the ICAO Regional Office can amend online elements, metrics and priorities, consistent with APANPIRG endorsements.*

2.10		It is therefore proposed that the migration of the Seamless ANS Plan, together with other subsidiary regional plans and guidance material, be planned under a separate project to be developed under APANPIRG.

Further Coordination

2.11   The proposed change to the Seamless ANS Plan update cycle was presented to the 26th Meeting of the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS SG/26, 05 to 09 September 2022), which noted the proposal without comment. It is also being further coordinated with the Aerodromes Operations and Planning Sub-Group (AOP/SG) and Meteorology Sub-Group (MET SG) through the Secretariat, before being presented for consideration by APANPIRG/33.

2.12   The meeting is also invited to note that the unavailability of the Seamless ANS reporting portal, which was requested in 2019, has been the subject of intensive coordination between the CNS Section of ICAO APAC Office and ICAO Headquarters, over a considerable period of time. A further delay in the development of a new reporting interface was delayed by licensing issues.   However, a new reporting interface has now been made available for internal ICAO review and testing before proceeding to final stages of development.

APANPIRG/33 Consideration

2.13   The proposal will be presented to APANPIRG/33 for discussion. APAC Administrations will be invited to provide the details of a single Point of Contact for participation in the review activity.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a)   note the information in this paper;

b)   provide any comment on the proposal; and

c)   discuss any relevant matters as appropriate.

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ATTACHMENT 1: INITIAL CONSIDERATIONS FOR UPDATE OF ASIA/PACIFIC SEAMLESS ANS PLAN (Current Version 3.0)

Need for Update of APSAP

GANP Update, Revising Performance Expectations, KPI

The COVID-19 crisis has proven to be a challenge for the safety and resilience of the aviation system. Furthermore, the economic impact of the COVID-19 pandemic on the aviation industry had forced the re-evaluation of priorities at regional and national levels that may risk the achievement of the GANP vision. Hence a comprehensive review of APSAP implementation, milestones and priorities should be taken up.

GANP and GASP have been updated in 2022. Additional KPIs have been included to link safety with GANP.

Review of Scope of Plan (1.1 to 1.8)

Clear linkage between APSAP and RANP Vol III to be brought out.

Review of Update Cycle (1.9-1.14)

The ICAO Assembly, at its 39th Session, agreed on the expansion of the GANP lifecycle through three-year minor and six-year major updates, as relevant, in order to provide for stability. While the sixth edition of the GANP, endorsed by the Assembly at its 40th Session, constituted a major update, a seventh edition, containing minor updates, is being proposed for endorsement in the 41st Assembly.

In order to keep the APSAP current, it is proposed to conduct a complete review every three years (or a shorter period determined by APANPIRG) of the Plan to align with the review cycle of the GANP. Hence it is proposed to undertake the review in 2022-2023 and submit for approval of APANPIRG/34 in 2023.

The next review will be undertaken in 2025-26 and put up for approval of APANPIRG in 2026.

Review of Executive Summary

Update the sections 3.1 to 3.17

Review of Background info and linkage to ASBU (5.2 to 5.8)

APAC ASBU Block 0 and Block 1 implementation, priorities need to be reviewed by each concerned section.

Considering that the next review of APSAP will be in 2026, we also need to review the Priorities within each ASBU element. Not all modules of a particular element within a Block may be equally desirable or applicable.

Review of Regional Elements (5.9 to 5.10)

There are 20 regional Elements described across Operational and Technology. These need to be reviewed.

Review of prioritization for APAC (5.11)

There are 16 Priority 1 elements including the Regional Elements. This also need a review.

Review of Human Performance section (5.12 to 5.22)

There is a large section focusing on Human Performance. With the publication of PANS TRG in 2020 a large part of this section is superfluous. Needs to be reviewed.

Also the AOP has published guidance on CBT for Airport Operations Personnel.

Review of CMC (5.23 to 5.33)

Publication of Doc 10088 has largely provided guidance to States on CMC and FUA. This section needs to be updated including the 10 CMC elements.

Review of UAS (para 5.35 – 5.38)

Inline with regional guidance and latest HQ publications.

Review of Current Situation (6.1 – 6.41)

To be updated

Review of Performance Improvement Plan (7.1 to 7.56)

Review of PARS Phases – Review Phase II, III and develop Phase IV

Review of PSAL Phases – Review Phase II, III and develop Phase IV

Review of Milestones, Priorities and Actions (9.1 to 9.14)

Section 9.1 to 9.14 – Reference to NANP and actions

Review of Appendices

Appendix B: Review 12th ANC Recommendations for relevance

Appendix C: Seamless ANS Principles

The 37 principles of APSAP which include People, Facilities and Technology will need to be reviewed

Appendix D: Review of Capacity expectations – why this is needed?

Mapping of ASBU B0, B1 and B2 elements, priorities and responsible ICAO RO section

Functional Category	Element	Description	Priority	Responsibility for Review and Monitoring
Information	AMET B0/1-4	Meteorological observations, forecast, warning, climatological and historical products, and dissemination (PASL 7.41)	1	RO (MET)
	AMET – B1/1-4	Meteorological products supported by automated decision systems or aids using IWXXM (PASL 7.56)	2	
	DAIM-B1/1 – 6:	Provision of quality-assured digital aeronautical data and information, including AIP, terrain and obstacle, aerodrome and instrument flight procedure data sets (PASL 7.40)	1	RO(ATM-AIM)
	DAIM-B1/7	Provision of digital NOTAM improvements (PASL 7.55)	2	
	FICE-B0/1:	Automated basic AIDC (PASL 7.26)	1	RO (CNS)
Operational	ACDM-B0/1-2:	ACIS (PARS 7.3)	1	RO (ATM-ATFM)
	ACDM-B1/1 – 2:	Airport CDM Integration with ATM Network, AOP and APOC (PARS 7.18)	2	RO (AGA) / RO (ATM-ATFM)
	APTA-B0/1 – 2:	Basic PBN SID and STAR procedures, PBN non-precision approaches (PARS 7.4, 7.5, 7.10, 7.13, 7.14, 7.21)	1	RO (CNS) / RO (PBN)
	APTA-B0/3 and 6	SBAS/GBAS CAT I precision approach procedures, and PBN Helicopter PinS Operations (PARS 7.5, 7.6, 7.10, 7.14, 7.21)	3	
	APTA-B0/4 – 5, 7 – 8:	CDO (Basic) and CCO (Basic), and performance-based aerodrome operating minima for advanced/basic aircraft (PARS 7.14, 7.19, 7.21)	2	
	APTA-B1/1 – 5:	advanced capability PBN approaches, PBN SID and STAR procedures and performance-based aerodrome operating minima for	3	

		advanced aircraft with SVGS, CDO and CCO (Advanced) (PARS 7.14, 7.21, 7.22, 7.23)		
	CSEP-B1/1 – 4:	basic airborne situational awareness AIRB and VSA, and performance-based horizontal separations (PARS 7.20)	2	?????
	FRTO-B0/1 – 4:	Direct routing, Airspace Planning and FUA, Flexible Routings, and basic conflict detection and conformance monitoring (PASL 7.29, 7.31, 7.36)	1	RO (ATM) / RO (ATM-AOM) / RO (ATM-CMC)
	FRTO-B1/1 – 7:	Free Route Airspace, RNP routes, Advanced FUA and Airspace Management (ASM), Dynamic Sectorisation, Enhanced Conflict Detection Tools and Conformance Monitoring, and Multi-Sector Planner Function (PASL 7.29, 7.51)	2	
	NOPS-B0/1 – 5:	Initial integration of ASM with ATFM, Collaborative Network Flight Updates, Basic Network Operation Planning and Initial Airport/ATFM slots, A-CDM Network Interface and Dynamic Slot Allocation (PASL 7.38)	1	RO (ATM-ATFM)
	NOPS-B1/1 – 10:	Short Term ATFM measures, Enhanced NOPS Planning, Enhanced integration of airport operations and NOPS planning, Enhanced Traffic Complexity Management, Full integration of ASM with ATFM, Initial Dynamic Airspace configurations, Enhanced ATFM slot swapping, Extended Arrival Management, ATFM Target Times and Collaborative Trajectory Options Programme (PASL 7.52)	2	
	OPFL-B0/1:	ITP	3	RO (ATM) / RO (AOM)
	OPFL-B1/1:	CDP	3	????

	RATS-B1/1	Remotely Operated Aerodrome Air Traffic Services	3	RO (AGA) / RO (CNS) / RO (ATM)
	RSEQ-B0/1 – 2:	Arrival and Departure Management (PASL 7.32)	1	RO (ATM) / RO (AGA)
	RSEQ-B0/3 –	Point merge	3	RO (ATM) / RO (AOM)/ RO (PBN)
	RSEQ-B1/1 –	Extended arrival metering (PASL 7.46)	2	RO (ATM) / RO (ATFM)
	SNET-B0/1 – 4	STCA, MSAW, APW, APM (PASL 7.31)	1	RO (ATM) / RO (CNS)
	SNET-B1/1 – 2:	Enhanced STCA with aircraft parameters and in complex TMAs (PASL 7.50)	2	
	SURF-B0/1 – 3:	Basic ATC surface operations tools, comprehensive situational awareness, situational awareness, alerting service (PASL 7.47)	2	
	SURF-B1/1 – 5:	Advanced surface traffic management visual aids, pilot comprehensive awareness and runway alerting, enhanced ATC alerting, routing service to support ATC and EVS for taxiing (PASL 7.48)	2	
	TBO-B0/1:	Introduction of time-based management within a flow centric approach (PASL 7.52)	2	RO (ATM) / RO (AOM) / RO (ATFM) / RO (CNS)
	TBO-B1/1 –	Initial Integration of time-based decision making processes (PASL 7.52)	2	
CNS Technology and Services	ASUR-B0/1 – 3:	ADS-B, MLAT, SSR-DAPS (PARS 7.8, 7.11, PASL 7.26, 7.28, 7.30)	1	RO (CNS)
	ASUR-B1/1 –	Reception of aircraft ADS-B signals from space (SB ADS-B) (PASL 7.54)	2	
	COMI-B0/1 – 2, 4 – 6:	ACARS, ATN/OSI, VDL Mode 2 Basic, SATCOM Class C Data, HFDL (PASL 7.54)	2	
	COMI-B0/3, 7:	VDL Mode O/A, AMHS (PASL 7.25)	1	
	COMI-B1/1 – 4:	VDL Mode 2 Multi-Frequency, SATCOM Class B (SB-S) Voice and Data, ATN/IPS and AeroMACS Ground-Ground (PASL 7.53)	2	RO (CNS)

	COMS-B0/1 – 2:	CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace and ADS-C (FANS 1/A) for procedural airspace (PARS 7.14, PASL 7.29, 7.53)	2	
	COMS-B1/1 – 3	: PBCS approved CPDLC (FANS 1/A+), ADS-C and SATVOICE for domestic and procedural airspace (PARS 7.14, PASL 7.53)	2	
	NAVS-B0/1 – 4:	SBAS, GBAS, ABAS, MON (PARS 7.7)	2	
	NAVS-B1/1:	Extended GBAS	3	