International Civil Aviation Organization

EIGHTEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION AND SURVEILLANCE SUG-GROUP (CNS SG/18) OF APANPIRG

Asia and Pacific Regional Sub-Office, Beijing, China
(21 – 25 July 2014)

Agenda Item 9.2 Review and updates

9.2) Review development of eANP and GANP

AD HOC WORKING GROUP ON CNS RELATED PARTS OF eANP

(Presented by Secretariat)

SUMMARY

This paper considers the forming of an ad hoc working group under CNS Sub Group to deliver a draft eANP on CNS aspects to CNS SG/19.

1. INTRODUCTION

1.1 Following the approval by the Council of the new regional air navigation plan (ANP) template, procedures for amendment to the new Regional ANPs and the action plan for its electronic availability and maintenance online, the templates for ANP Volumes I, II and III are available (WP14 refers).

1.2 With the approval by the Council of the ANP Template, the development/approval of the new ANP/eANP would be in accordance with the following action plan as recommended by the ICAO ANP Working Group:

ANP Volume	eANP activity/task	Responsible	Date
Vol I, II & III	Population of new ANPs/eANPs with existing data completed	Regional Offices	September 2014
Vol I, II & III	Agreement on the content of new ANPs/eANPs	PIRGs/States	Mid 2015
Vol I	Approval of Volume I of new ANPs/eANPs by the Council	Regional Offices/ANB	End 2015
Vol II	Approval of Volume II of new ANPs/eANPs by regional agreement involving the relevant PIRG	Regional Offices/PIRGs	End 2015
Vol III	Development and approval of Part II of Volume III by PIRG. Inclusion of Volume III on web-based platform.	Regional Offices/ PIRGs/ANB	End 2015

Consequential amendments	Amendments to existing ICAO documentation related to ANPs to ensure harmonization including the Regional Office Manual, and review of the applicability of the Uniform Methodology for the identification, assessment and reporting of air navigation deficiencies to the new ANP.	ANB	Mid 2015

1.3 The approval of the ANP template by Council includes the new procedure of amendment of the eANP. The approval of the eANP for each region, based on the approved ANP template, would be accomplished with the transfer of the corresponding information from current volumes Basic and FASID to the new Volumes I and II in accordance with the procedure for amendment.

2. DISCUSSION

2.1 It is proposed therefore that a small working group under CNS Sub-group be formed to:

1) conduct a gap analysis between current RANP provisions and future eANP expected provisions,

2) based on the outcome, populate the template eANP in the CNS fields; and

3) develop proposals for amendments (PfAs) as deemed necessary for submission to the CNS SG 19 for consideration.

2.2) As an initial input to task 1, a gap analysis prepared by the Secretariat is provided at **Attachment A**.

2.3) Concerning Volume III specifically, a table for inclusion in Part I of Volume III to define a set of implementation indicator(s), based on the SMART criteria (specific, measurable, achievable, relevant and time bound), for each of the 18 ASBU Block 0 modules and to include other information as deemed necessary, for use in all regions. The details related to the monitoring of the ASBU modules, including the design of supporting enablers (tables/databases) would be left to the regions/PIRGs.

2.4) As an intial input to task 2 and for Volume III, an initial draft of the Main Planning Table for APAC, is provided at **Attachment B**. This table needs to be developed as part of Part II of Volume III, based on the template available in the Part I. ANRF attached to WP16 would be other inputs to the Volume III, Part II.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) consider forming a working group on eANP CNS matters to deliver outcomes as per para 2.1 with the view to reach Agreement on the CNS content of new ANPs/eANPs by Mid. 2015 (CNS SG19); and

c) discuss any relevant matters as appropriate.

eANP provisions	Current RANP provisions	Early analysis by APAC RO Secretariat	Recommendation of Ad Hoc working Group to CNS SG/19
VOLUME I	**Basic Air Navigation Plan**		
Part I — General planning aspects (GEN)		Not in the scope of CNS SG	
Table GEN I-1 — List of Flight Information Regions (FIR)/Upper Information Regions		Not in the scope of CNS SG	
(UIR) in the Region [New]		Not in the scope of CNS SG	
Part II — Aerodromes / Aerodrome Operations (AOP)		Not in the scope of CNS SG	
Table AOP I-1 — International aerodromes required in the Region		Not in the scope of CNS SG	
Part IV — Air traffic management (ATM)		Not in the scope of CNS SG	
Table ATM I-1 — Flight Information Regions (FIR)/Upper Flight Information Regions		Not in the scope of CNS SG	
(UIR) of the Region [New]		Not in the scope of CNS SG	
Chart ATM I-1 — Flight Information Regions (FIR) of the Region		Not in the scope of CNS SG	
Chart ATM I-2 — Upper Flight Information Regions (UIR) of the Region		Not in the scope of CNS SG	
Part V — Meteorology (MET)		Not in the scope of CNS SG	
Table MET I-1 — State Volcano Observatories [former MET 3C]		Not in the scope of CNS SG	
Part VI — Search and rescue services (SAR)		Not in the scope of CNS SG	
Table SAR I-1 — Search and Rescue Regions (SRR) of the Region [New]		Not in the scope of CNS SG	
Chart SAR I-1 — Search and Rescue Regions		Not in the scope of CNS SG	
VOLUME II	**FASID**		
Part I — General planning aspects (GEN)		Not in the scope of CNS SG	
Table GEN II-1 — Homogeneous areas and major traffic flows identified in the Region		Not in the scope of CNS SG	
Part II — Aerodromes / Aerodrome Operations (AOP)		Not in the scope of CNS SG	
Table AOP II-1 - Requirements and capacity assessment in international aerodromes in the Region		Not in the scope of CNS SG	
Part III — Communications, Navigation and Surveillance (CNS)			
Textual provisions	Current textual provisions	Note eANP textual provisions	
Table CNS II-1 — AFTN Plan [former 1A]	CNS 1A AFTN PLAN	GAP - format changed	
Table CNS II-2 — Required ATN Infrastructure Routing Plan [former 1B]	CNS 1B ATN ROUTER PLAN	SLIGHT GAP - format slightly changed	
Table CNS II-3 — ATS Direct Speech Circuits Plan [former 1C]	CNS 1D ATS DIRECT SPEECH CIRCUITS PLAN	NO GAP	
Table CNS II-4 — HF Network designators applicable for the Region [former page 2-25 to 2-28]		GAP: required by eANP mandatory requirements and relevant information appended to existing Table CNS 2	
	CNS 1C AMHS routing plan	GAP: Not required by eANP template provisions - May be a specific regional requirement or not	
	CNS 1E AIDC IMPLEMENTATION PLAN	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
Part III- SPECIFIC REGIONAL REQUIREMENTS			
Textual provisions	Current textual provisions	eANP provisions should be complemented by specific regional provisions as necessary	
Table CNS 2A - VHF Aeronautical Mobile Service and AMSS	CNS 2 AERONAUTICAL MOBILE SERVICE AND AERONAUTICAL MOBILE SATELLITE SERVICE	NO GAP	
Table CNS 3 radio navigation aids and GNSS in support of the PBN implementation	CNS 3 RADIO NAVIGATION AIDS	NO GAP	
	CNS 4A SURVEILLANCE SYSTEMS	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	CNS 4B ATS AUTOMATION SYSTEMS	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Associated charts of PartIV of the FASID		
	Att A - LANDLINE TELETYPEWRITER CIRCUIT PERFORMANCE CHART	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Att B - AFTN CIRCUIT LOADING STATISTICS	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Att C - HARMFUL INTERFERENCE REPORT FORM	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Chart CNS 1A - AFTN /DATA circuit for APAC REGION	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Chart CNS 1D - ATS Direct Cicuits plan	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Chart CNS 2 - HF En-route Netork	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Chart CNS 3A - En-route Navigatoin Aids	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Chart CNS 3B - Aids to final approach and landing	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Regular publications		
	Frequency list 1 List of facilities in the band 190 - 526.5 kHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Frequency list 2 List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Frequency list 3 List of facilities in the band 117.975 - 137.000 MHz	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	List of SSR II codes	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	ASIA/PAC Catalogue of Flight Inspection Units	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	Online tools		
	AFTN routing chart	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	ATN routing chart	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
	ATN doc tree	GAP: Not required by eANP template provisions - May be kept (or not) as a specific regional requirement	
Part IV — Air Traffic Management (ATM)		Not in the scope of CNS SG	
Only if required by the Region under "Specific Regional Requirements":		Not in the scope of CNS SG	
Table ATM II-X — ATS Routes agreed through regional air navigation agreement but not implemented		Not in the scope of CNS SG	
		Not in the scope of CNS SG	
Chart ATM II-X — ATS Routes agreed through regional air navigation agreement but not implemented		Not in the scope of CNS SG	
Table ATM II-X — SSR Code Allocation Plan of the Region		Not in the scope of CNS SG	
Part V — Meteorology (MET)		Not in the scope of CNS SG	
Table MET II-1 — Meteorological watch offices [former 1B]		Not in the scope of CNS SG	
Table MET II-2 — Aerodrome meteorological offices [former 1A]		Not in the scope of CNS SG	
Table MET II-3 — VHF VOLMET broadcast [former Table ATS 2]		Not in the scope of CNS SG	
Only if required by the Region under "Specific Regional Requirements":		Not in the scope of CNS SG	
Table MET II-X — Offshore structures [former 1C]		Not in the scope of CNS SG	
Part VI — Search and Rescue Services (SAR)		Not in the scope of CNS SG	
Table SAR II-1 — Rescue Coordination Centres (RCCs) and Rescue Sub-centres (RSCs) in the Region		Not in the scope of CNS SG	
Part VII — Aeronautical Information Management (AIM)		Not in the scope of CNS SG	
Table AIM II-1 - Responsibility for the provision of AIS/AIM Facilities and Services in the Region		Not in the scope of CNS SG	
Table AIM II-2 - Production responsibility for sheets of the World Aeronautical Chart — ICAO 1: 1 000 000 or Aeronautical Chart — ICAO 1: 500 000		Not in the scope of CNS SG	
VOLUME III			
PART 0 — Introduction			
Textual provisions		eANP provisions should be developed/complemented as necessary	
PART I — General Planning Aspects (GEN)			
Textual provisions		eANP provisions should be developed/complemented as necessary	
Table GEN III-1 – Implementation Indicator(s) for each ASBU Block 0 Module			
Appendix A – Sample Template for Air Navigation Report Form (ANRF)			
Appendix B – Main Planning Table Template			
PART II — Air Navigation System Implementation			
Textual provisions		eANP provisions should be developed/complemented as necessary	
Main Planning Table		eANP Main Planning Table should be developed/complemented as necessary (draft developed)	
ANRF		ANRF should be attached (draft developed)	
Supplementary Tables templates, as needed		eANP tables templates for collecting data should be placed here (should not be redundant with Seamless data collected)	
Supplementary Tables populated, as needed		eANP tables populated withj collecting data should be placed here	
	Online tools		
	Seamless ATM online reporting process	URL and guidance should be provided	
	Regional Performance Dashboard	URL and guidance should be provided	
	Regional Picture (project)	URL and guidance should be provided	

Objectives							Priorities and targets					Reference
Block	ASBU modules and elements and enablers	Performance Improvement Area	Applicable or not in APAC (yes/no)	Regional planning elements		Enablers	Priority allocated in APAC	Target(s) in APAC		Indicator(s) / Metric(s)		Supporting document (ANRF, other)
								Nov. 2015 (Phase 1)	Nov. 2018 (Phase 2)	Nov. 2015 (Phase 1)	Nov. 2018 (Phase 2)	
0	Regional	1- Airport Operations	Yes	10	Apron Management		**3**	All high density international aerodromes (100,000 scheduled movements per annum or more) should provide an appropriate apron management service in order to regulate entry of aircraft into and coordinate exit of aircraft from the apron;	Nil	% of high density international aerodromes (100,000 scheduled movements per annum or more) providing an appropriate apron management service	Nil	Seamless Plan V1R0
0	Regional	1- Airport Operations	Yes	20	ATM-Aerodrome Coordination		**3**	All high density international aerodromes (100,000 scheduled movements per annum or more) should have appropriate ATM coordination on airport development and maintenance planning; coordination with local authorities regarding environmental, noise abatement, and obstacles; and ATM/PBN procedures for the aerodrome	Nil	% of high density international aerodromes having appropriate ATM coordination in accordance with the Seamless ATM Plan	Nil	Seamless Plan V1R0
0	Regional	1- Airport Operations	Yes	30	Aerodrome capacity		**3**	All high density international aerodromes (100,000 scheduled movements per annum or more) should have a declared airport terminal and runway capacity	All high density aerodromes should have a declared airport terminal and runway capacity	% of high density international aerodromes having declared capacity in accordance with the Seamless ATM Plan Phase 1	% of high density aerodromes having declared capacity in accordance with the Seamless ATM Plan Phase 2	Seamless Plan V1R0
0	B0-SURF	1- Airport Operations	Yes	40	Safety and Efficiency of Surface Operations		**3**	All high density international aerodromes (100,000 scheduled movements per annum or more) should have provide electronic surface movement guidance and control.	Nil	% of applicable international aerodromes having implemented A-SMGCS Level 2	Nil	ANRF B0-SURF
0	B0-RSEQ	1- Airport Operations	Yes	50	Arrival Manager/Departure Management (AMAN/DMAN)		**2**	All high density aerodromes should have AMAN/DMAN facilities	All AMAN systems should take into account airport gates for runway selection and other aircraft departures from adjacent gates that may affect arriving aircraft	% of applicable international aerodromes having implemented AMAN / DMAN (applicable = high density)	% of applicable international aerodromes having implemented AMAN / DMAN (applicable = high density)	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	60	ATC Sector Capacity		**2**		All enroute ATC sectors and terminal ATC Sectors should have a nominal aircraft capacity figure based on a scientific capacity study and safety assessment, to ensure safe and efficient aircraft operations.	Nil	% of ATC sectors with capacity figures in accordance with Seamless ATM Phase 2	Seamless Plan V1R0
0	B0-ACDM	1- Airport Operations	Yes	70	Airport Collaborative Decision-Making (ACDM)		**2**	Airport CDM at all high density aerodromes.	Nil	% of applicable international aerodromes having implemented improved airport operations through airport-CDM (applicable=high density)	Nil	ANRF B0-CDM
0	B0-NOPS	3- Optimum Capacity and Flexible Flights	Yes	80	Air Traffic Flow Management/Collaborative Decision-Making (ATFM/CDM)		**1**	All high density FIRs supporting the busiest Asia/Pacific traffic flows and high density aerodromes should implement ATFM incorporating CDM using operational ATFM platform/s.	All FIRs supporting Major Traffic Flows should implement ATFM incorporating CDM to enhance capacity, using bi-lateral and multi-lateral agreements	% of FIRs within which all ACCs utilize ATFM systems	% of FIRs within which all ACCs utilize ATFM systems	ANRF B0-NOPS
0	B0-CDO	4- Efficient Flight Path	Yes	90	Continuous Descent Operations (CDO)		**2**	All high density international aerodromes implement CCO and CDO operations where States have assessed it applicable	Nil	% of international aerodromes/TMA where CDO is implemented	Nil	ANRF B0-APTA - CCO - CDO
0	B0-CCO	4- Efficient Flight Path	Yes	100	Continuous Climb Operations (CCO)		**2**	All high density international aerodromes implement CCO and CDO operations where States have assessed it applicable	Nil	% of international aerodromes/TMA where CCO is implemented	Nil	ANRF B0-APTA - CCO - CDO
0	B0-APTA	1- Airport Operations	Yes	110	Performance-based Navigation (PBN) Approach		**1**	Where practicable, all high density aerodromes with instrument runways serving aeroplanes should have precision approaches or APV or LNAV	Where practicable, all aerodromes with instrument runways serving aeroplanes should have precision approaches or APV or LNAV	% of international aerodromes having at least one runway end provided with APV Baro-VNAV or LPV procedures *Measured through the Regional Performance Dashboard*	% of international aerodromes having at least one runway end provided with APV Baro-VNAV or LPV procedures *Measured through the Regional Performance Dashboard*	ANRF B0-APTA - CCO - CDO
0	B0-CCO B0-CDO	1- Airport Operations	Yes	120	Standard Instrument Departures/Standard Terminal Arrivals (SID/STAR)		**2**	All international high density aerodromes should have RNAV 1 (ATS surveillance environment) or RNP 1 (ATS surveillance and non-ATS surveillance environments) SID/STAR	All international aerodromes should have RNAV 1 (ATS surveillance environment) or RNP 1 (ATS surveillance and non-ATS surveillance environments) SID/STAR	% of international aerodromes / TMAs with PBN STAR implemented	% of international aerodromes / TMAs with PBN SID implemented	ANRF B0-APTA - CCO - CDO
0	Regional	4- Efficient Flight Path	Yes	130	Performance-based Navigation (PBN) Visual Departure and Arrival Procedures		**3**		PBN procedures that overlay visual arrival and departure procedures should be established where this provided an operational advantage	Nil	% of high density aerodromes with PBN procedures that overlay visual arrival and departure procedures	Seamless Plan V1R0
0	B0-FRTO	4- Efficient Flight Path	Yes	140	Performance-based Navigation (PBN) Routes		**2**	All ATS routes should be designated with a navigation performance specification for category R airspace RNP 4 or RNP 10 (RNAV 10) or RNP 2 oceanic; and for Category S airspace RNAV 2 or RNP 2	All ATS routes should be designated with a navigation performance specification RNP 2	% of ATS routes designated as PBN routes in accordance with Seamless ATM Phase 1	% of ATS routes designated as PBN routes in accordance with Seamless ATM Phase 2	ANRF to be developed
0	Regional	4- Efficient Flight Path	Yes	150	Performance-based Navigation (PBN) Airspace		**2**	All Category R and S upper controlled airspace, and Category T airspace supporting high density aerodromes should be designated as non-exclusive or exclusive PBN airspace as appropriate.	Nil	% of States/Administrations having all Category R and S upper controlled airspace, and Category T airspace supporting high density aerodromes designated as non-exclusive or exclusive PBN airspace as appropriate	Nil	Seamless Plan V1R0
0	B0-SNET	3- Optimum Capacity and Flexible Flights	Yes	160	Safety Nets		**2**		ATM systems providing services within Category R airspace should enable appropriate ATC capabilities including CPAR, which is a key enabler for UPR and DARP operations	% of States/Administrations implementing ground-based safety-nets (STCA, APW, MSAW, etc.)	% of ACCs using CPAR in R airspace in accordance with Seamless ATM Phase 2	ANRF B0-SNET
0	B0-ACAS	3- Optimum Capacity and Flexible Flights	Yes	170	Airborne Safety Systems		**2**	All Category R and S upper controlled airspace, and Category T airspace supporting high density aerodromes should require the carriage of ACAS and Terrain Awareness Warning Systems (TAWS), unless approved by ATC	All Category R and S upper controlled airspace, and Category T airspace should, unless approved by the State, require the carriage of an operable ACAS and TAWS	% of States/Administrations requiring the carriage of ACAS (with TCAS 7.1 evolution)	% of States/Administrations requiring th the carriage of TAWS	ANRF B0-ACAS
0	B0-ASUR	3- Optimum Capacity and Flexible Flights	Yes	180	ATS Surveillance		**1**	All Category S upper controlled airspace and Category T airspace supporting high density aerodromes should be designated as non-exclusive or exclusive as appropriate ADS-B airspace requiring operation of ADS-B	All Category S upper controlled airspace and Category T airspace should be designated as non-exclusive or exclusive as appropriate ADS-B airspace requiring operation of ADS-B using 1090ES with DO-260/260A and 260B capability. In areas where ADS-B based separation service is provided, the mandatory carriage of ADS-B OUT using 1090ES with DO260/60A and 260B should be prescribed	% of FIRs with ATS surveillance using ADS-B or SSR or MLAT where ATS surveillance is possible	% of FIRs with ATS surveillance using ADS-B or SSR or MLAT where ATS surveillance is possible	ANRF B0-ASUR
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	190	Airspace classification		**2**	Harmonization of upper airspace classification should be as follows: a) Category R controlled airspace– Class A; and b) Category S controlled airspace– Class A, or if there are high level general aviation or military VFR operations: Class B or C.	Nil	% of States/Administrations having harmonized the upper airspace classification as follows: a) Category R controlled airspace– Class A; and b) Category S controlled airspace– Class A, or if there are high level general aviation or military VFR operations: Class B or C.? (1- yes, 0-no)	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	200	Flight Level Orientation Schemes (FLOS)		**2**	The ICAO Table of Cruising Levels based on feet as contained in Appendix 3a to Annex 2 should be used.	Nil	% of States/Administrations using the ICAO Table of Cruising Levels based on feet as contained in Appendix 3a to Annex 2	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	210	Flight Level Allocation Schemes (FLAS)		**2**	Priority for FLAS level allocations should be given to higher density ATS routes over lower density ATS routes. Any aircraft that does not meet specified equipage requirements should	Nil	% of States/Administrations having their Operations Manual giving priority for FLAS level allocations to higher density ATS routes over lower density ATS routes, and a lower priority to any aircraft that does not meet	Nil	Seamless Plan V1R0
0	B0-FICE	2- Globally Interoperable Systems & Data	Yes	220	ATS Inter-facility Data-link Communications (AIDC)		**1**	ATM systems should enable AIDC between ATC units where transfers of control are conducted. As far as practicable, the AIDC messages types ABI, EST, ACP, TOC, AOC should be implemented.	Implement full AIDC messaging, or alternate communication standard.	% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC / OLDI with neighbouring ACCs	% of FIRs within which all applicable ACCs have implemented full AIDC messaging, or alternate communication standard	ANRF B0-FICE

0	Regional	3- Optimum Capacity and Flexible Flights	Yes	230	Automated Transfer of Control		**2**	Where practicable, all ATC Sectors within the same ATC unit with ATS surveillance capability should have automated hand-off procedures that allow the TOC of aircraft without the necessity for voice communications, unless an aircraft requires special handling	Where practicable, all ATC Sectors with adjacent ATC Centres using ATS surveillance capability should have automated hand-off procedures that allow the TOC of aircraft without the necessity for voice communications, unless an aircraft requires special handling	% of ATC sectors with automated hand-off procedures in accordance with Seamless ATM Plan Phase 1	% of ATC sectors with automated hand-off procedures in accordance with Seamless ATM Plan Phase 2	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	240	ATS Surveillance data sharing		**2**	Subject to appropriate filtering, ATS surveillance data, particularly from ADS-B, should be shared with neighbouring ATC units within high density FIRs	Subject to appropriate filtering, ATS surveillance data, particularly from ADS-B, should be shared with all neighbouring ATC units	% of ACCs within high density FIRs (as per the Seamless ATM Plan) sharing ATS surveillance data	% of ACCs sharing ATS surveillance data	Seamless Plan V1R0
0	B0-APTA	3- Optimum Capacity and Flexible Flights	Yes	250	ATM systems enabling optimal PBN/ATC operations		**2**	ATM systems, including communication and ATS surveillance systems and the performance of those systems, should support the capabilities of PBN navigation specifications and ATC separation standards applicable within the airspace concerned	ATM system design should be planned and implemented to support optimal aerodrome capacity expectations for the runway(s) concerned. Electronic flight progress strips should be utilised wherever practicable.	% of ATC units with ATM systems enabling optimal PBN operations	% of ATC units with ATM systems supporting optimal aerodrome capacity and using electronic fight progress strips	ANRF B0-APTA - CCO - CDO
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	260	ATC Horizontal separation		**2**	All ATC units should authorise the use of the horizontal separation minima stated in ICAO Doc 4444 (PANS ATM), or as close to the separation minima as practicable	Nil	% of States/Administrations having their AIP authorising the use of the horizontal separation minima stated in ICAO Doc 4444 (PANS ATM), or as close to the separation minima as practicable	Nil	Seamless Plan V1R0
0	B0-ASUR	3- Optimum Capacity and Flexible Flights	Yes	270	ATS surveillance with data integrated		**1**	ADS-B or MLAT or radar surveillance systems should be used to provide coverage of all Category S-capable airspace as far as practicable, with data integrated into operational ATC aircraft situation displays	Nil	% of ACCs with ATS Surveillance using ADS-B, MLAT or radar where ATS surveillance is possible and having data integrated into the ATC system situation display	Nil	ANRF B0-ASUR
0	B0-TBO	4- Efficient Flight Path	Yes	280	ADS-C and CPDLC		**1**	Within Category R airspace (remote en-route airspace within ATS communications and surveillance coverage dependent on a third-party CSP), ADS-C surveillance and CPDLC should be enabled to support PBN-based separations	Nil	% of FIRs utilising data link en-route in applicable airspace	Nil	ANRF B0-TBO
0	B0-FRTO	4- Efficient Flight Path	Yes	290	UPR and DARP		**3**	Within Category R airspace, UPR and DARP should be enabled to support PBN-based separations	Nil	% of FIRs using UPR and DARP within R airspace	Nil	ANRF B0-FRTO
0	B0-DATM	2- Globally Interoperable Systems & Data	Yes	300	Aeronautical Information Management		**1**	ATM systems should be supported by digitally-based AIM systems through implementation of Phase 1 and 2 of the AIS-AIM Roadmap	ATM systems should be supported by digitally-based AIM systems through implementation of Phase 3 of the AIS-AIM Roadmap	% of Phase 1 and 2 AIS-AIM elements completed	% of Phase 3 AIS-AIM elements completed	ANRF B0-DATM
0	B0-AMET	2- Globally Interoperable Systems & Data	Yes	310	Meteorological Information		**2**	All high density aerodromes should provide meteorological forecasts, aerodrome warnings and alerts that support efficient terminal operations. ATM systems should be supported by implementation of appropriate meteorological information	Nil	% of high density aerodromes providing meteorological forecasts, aerodrome warnings and alerts	Nil	ANRF to be developed
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	320	ATM Managers' Performance		**2**	Human performance training for all ANSP managers, including management of risks related to human capabilities and limitations; effective participation in a team and team management, effective safety reporting systems, human	Prevention of fatigue systems should be established to support human performance in the delivery of a Seamless ATM service	% of States/Administrations having their Operations Manual requiring the human performance training for all ANSP managers	% of States/Administrations having prevention of fatigue systems established to support human performance in the delivery of your ATM services	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	330	ATC simulators performance		**2**	Enhancement and improved application of ATC simulators should be established to support human performance in the delivery of a Seamless ATM service	Nil	% of States/Administrations having a programme for enhancement and improved application of ATC simulators	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	340	Safety assessment of changes		**2**	Safety teams comprising multidisciplinary operational staff and managers which review safety performance and assess significant proposals for change to ATM systems should be established to support human performance in the delivery of a Seamless ATM service	Nil	% of States/Administrations having safety teams comprising multidisciplinary operational staff and managers which review safety performance and assess significant proposals for change to ATM systems	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	350	ATM Operators' performance		**2**	Human performance-based training and procedures for staff providing ATS should be established to support human performance in the delivery of a Seamless ATM service	Nil	% of States/Administrations having human performance-based training and procedures for staff providing ATS	Nil	Seamless Plan V1R0
0	B0-FRTO	3- Optimum Capacity and Flexible Flights	Yes	360	Civil Military use of SUA		**1**	All States should ensure that SUA are regularly reviewed by the appropriate Airspace Authority to assess the effect on civil air traffic and the activities affecting the airspace	Nil	% of FIRs in which FUA is implemented	Nil	ANRF B0-FRTO
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	370	Strategic Civil Military coordination		**1**	All States should ensure that a national civil/military body coordinating strategic civil-military activities is established	Nil	% of FIRs within which all ACCs utilise FUA techniques for operation of SUA with strategic civil/military liaison capability	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	380	Tactical Civil Military coordination		**1**	All States should ensure that formal civil-military liaison for tactical responses is established	Nil	% of FIRs within which all ACCs utilise FUA techniques for operation of SUA with tactical civil/military liaison capability	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	390	Civil Military system integration		**2**	Civil and military ATM systems integrated using joint procurement, and sharing of ATS surveillance data (especially from ADS-B systems) should be provided as far as practicable	Nil	% of States/Administrations having civil ATS and military systems integrated	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	400	Civil Military navaids joint provision		**2**	Joint provision of civil/military navigation aids should be encouraged;	Nil	% of States/Administrations having joint civil and military navigation aids	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	410	Civil Military common training		**2**	Common training should be conducted between civil and military ATM units in areas of common interest;	Nil	% of States/Administrations having Civil Military common training conducted in areas of common interest	Nil	Seamless Plan V1R0
0	Regional	3- Optimum Capacity and Flexible Flights	Yes	420	Civil Military common procedures		**2**	Civil and military ATM units should utilize common procedures as far as practicable	Nil	% of States/Administrations having common procedures for Civil Military operations where appropriate	Nil	Seamless Plan V1R0
0	B0-ASEP	3- Optimum Capacity and Flexible Flights	No	Nil	Air traffic situational awareness		**2**		Nil		% of States/Administrations implementing air traffic situational awareness	Nil
0	B0-WAKE	1- Airport Operations	No	Nil	Optimized wake turbulence separation		**3**		Nil		% of applicable international aerodromes having implemented increased runway throughput through optimized wake turbulence separation	Nil
0	B0-OPFL	3- Optimum Capacity and Flexible Flights	No	Nil	In-trail procedures		**3**		Nil		% of FIRs having implemented in-trail procedures	Nil