



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

WKSP/ASBU/NAIROBI/2013-PPT/08

Approche de mise en œuvre Processus et check-list

Bureau de la navigation aérienne

**ATELIER SUR LE CADRE DE L'ASBU : ALIGNEMENT DES PLANS DE PERFORMANCE, DE LA PLANIFICATION, DE LA MISE EN
OEUVRE, DU SUIVI ET DES RAPPORTS AU PLAN REGIONAL ET NATIONAL**

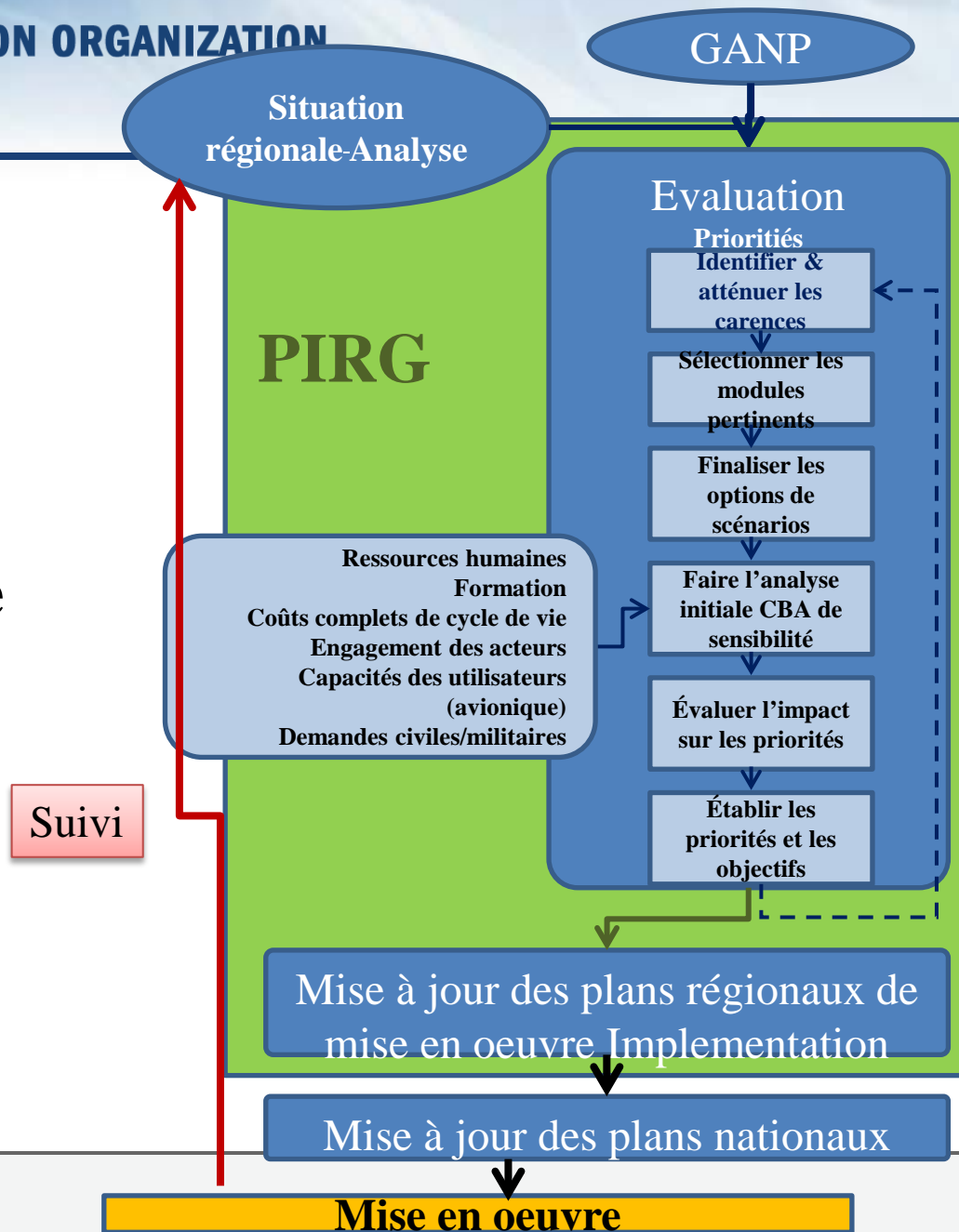
(NAIROBI, KENYA, 21-25 OCTOBRE 2013)



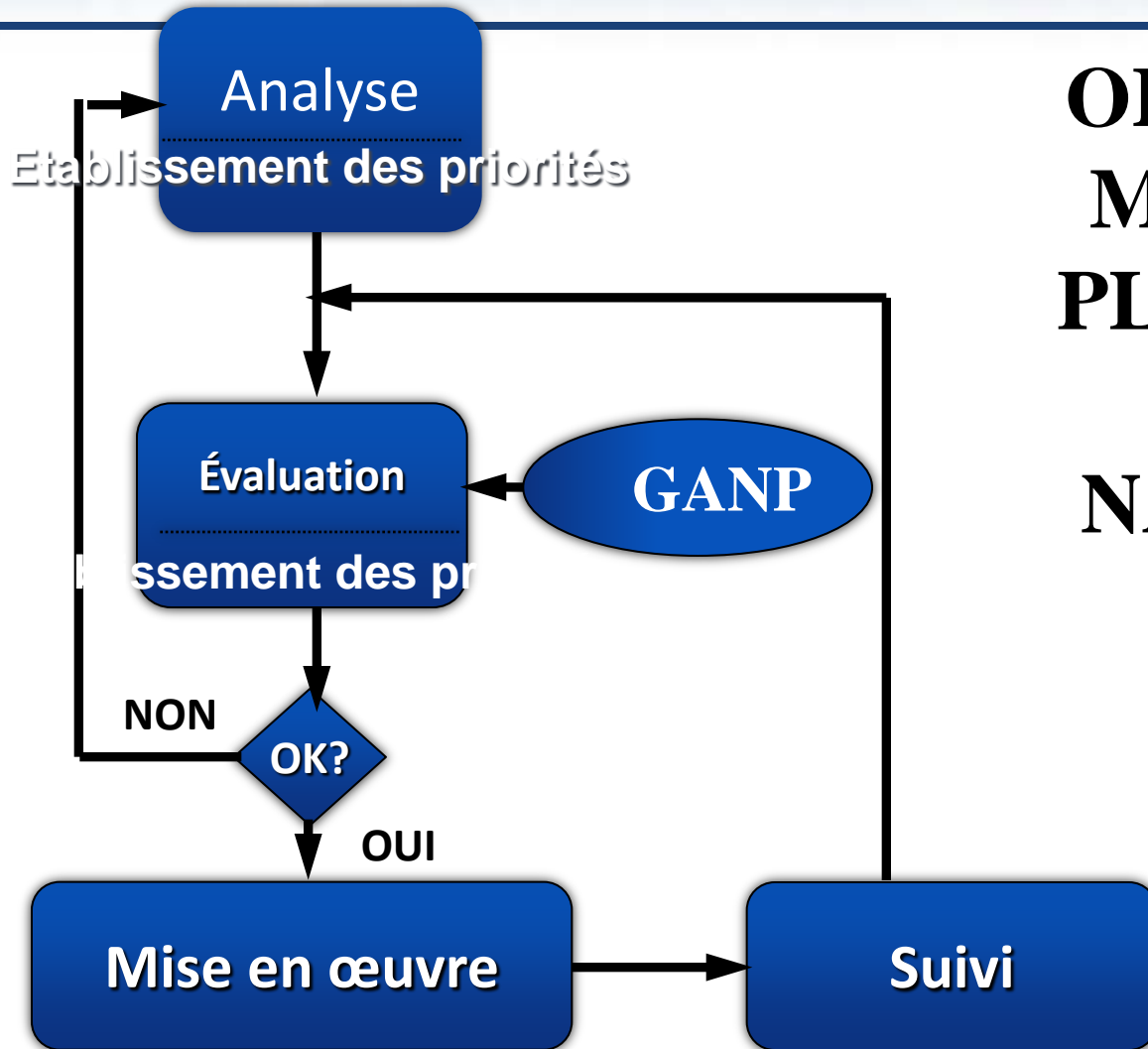
INTERNATIONAL CIVIL AVIATION ORGANIZATION

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Du GANP à la planification régionale

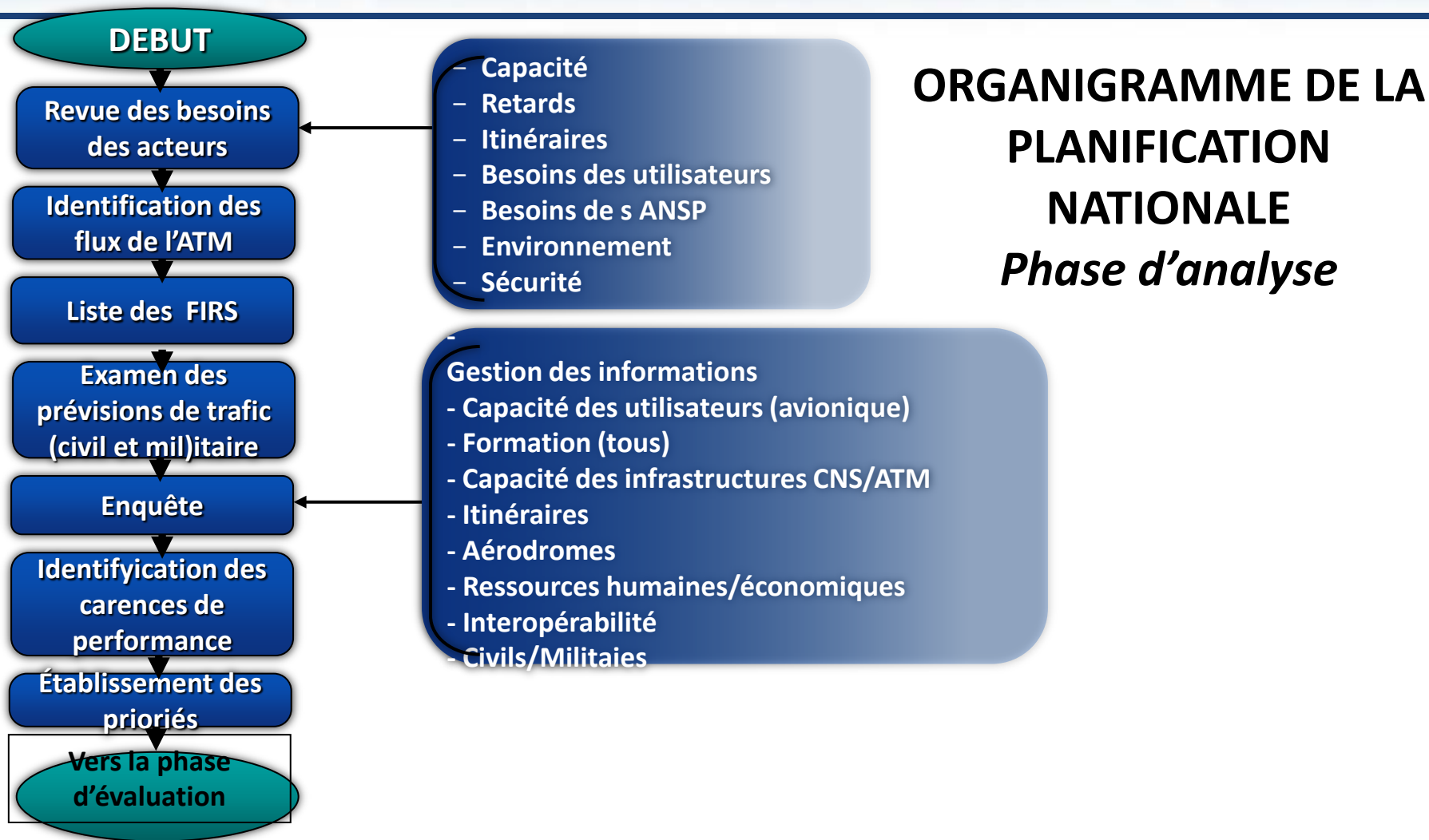


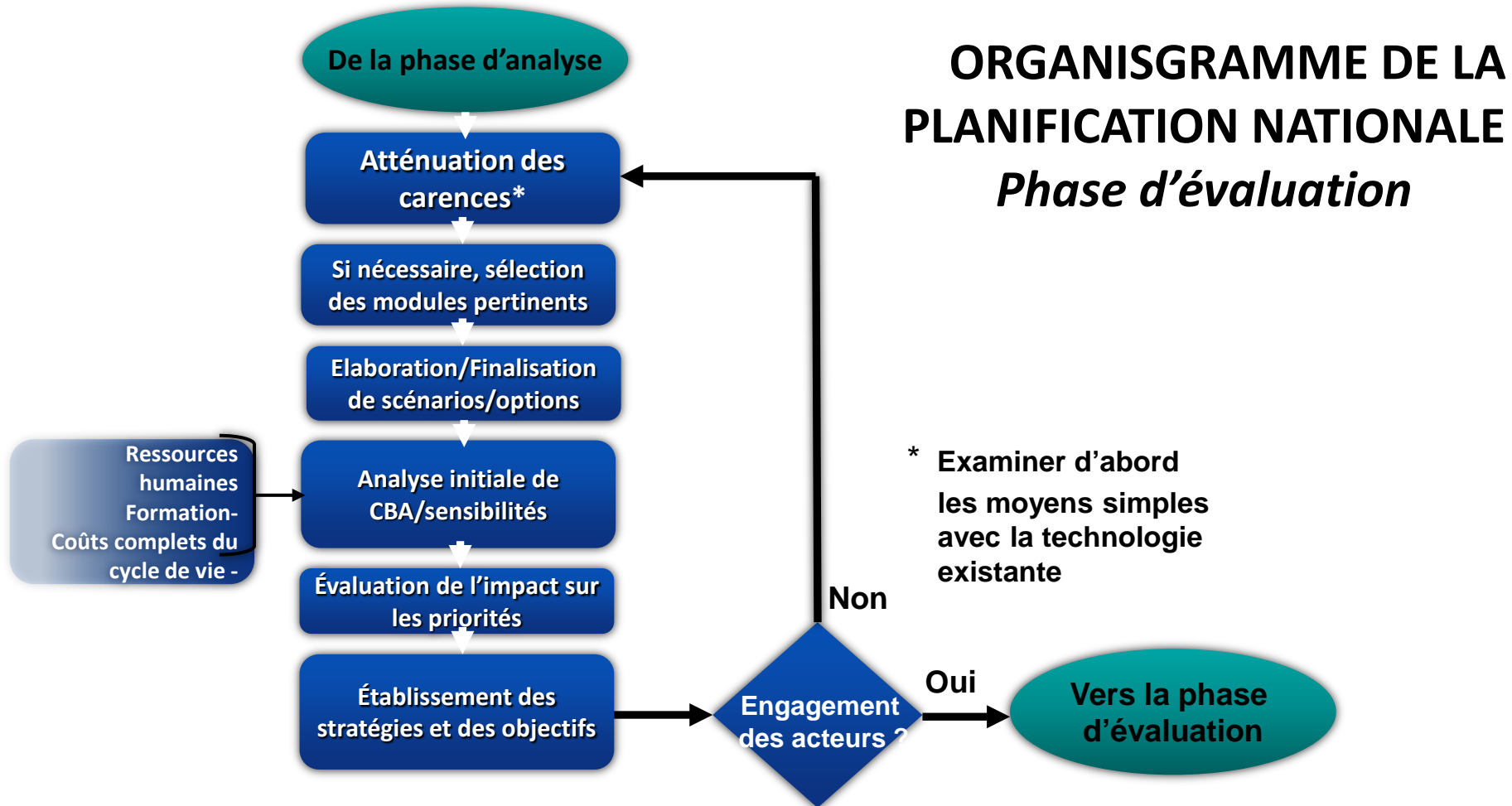
ASBU – mise en oeuvre



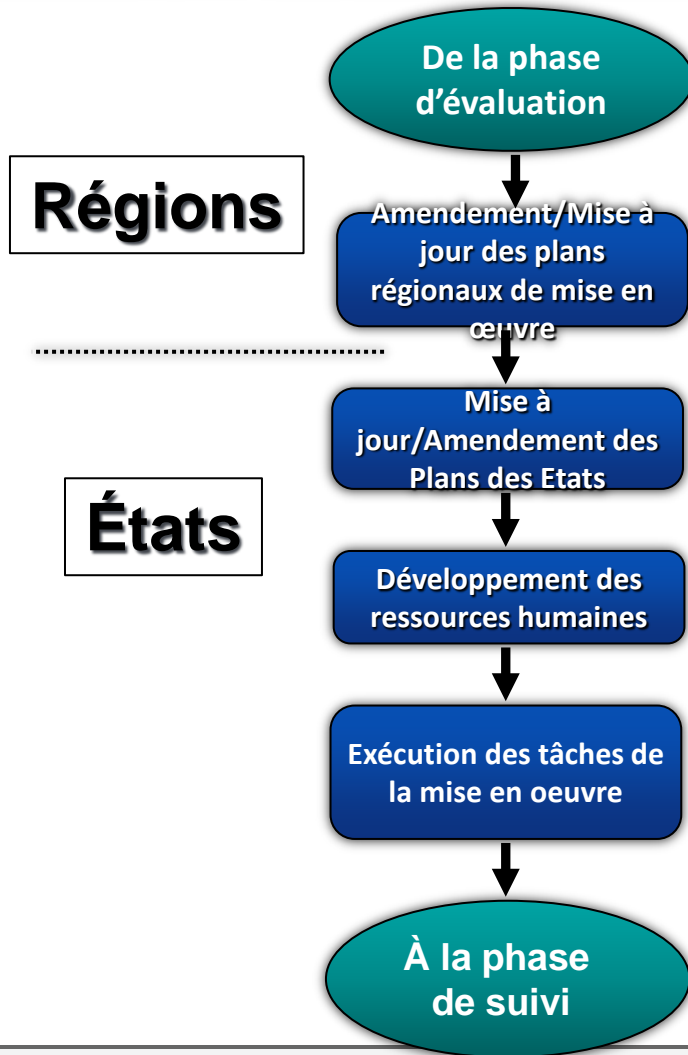
ORGANIGRAMME DE LA PLANIFICATION NATIONALE

ASBU – Mise en œuvre





ASBU – Mise en oeuvre



ORGANIGRAMME DE LA PLANIFICATION NATIONALE

Phase de mise en oeuvre

ASBU – Mise en oeuvre



De la phase de mise en oeuvre

États

Rapport sur les progrès et la performance par l'ANRF

Régions

Revue, validation et suivi

Rapport au Siège de l'OACI

Consolidation par le Siège de l'OACI

ORGANIGRAMME DE LA PLANIFICATION NATIONALE

Phase de suivi

Retours d'informations aux régions

Sortie du rapport mondial sur la navigation aérienne

ASBU – Check-list



Performance Improvement Area 1: Airport Operations

Title of the Module: B0-APTA: Optimization of Approach Procedures Including Vertical Guidance						
Elements: 1. APV with Baro VNAV 2. APV with SBAS 3. APV with GBAS		Equipage/Air - Basic IFR GNSS avionics integrated with Baro VNAV functionality - SBAS avionics - GBAS avionics		Equipage/Ground - SBAS (reference stations, master stations, GEO satellites) - GBAS		
Implementation monitoring and intended performance impact						
Implementation progress		Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of international aerodromes having instrument runways provided with APV on the basis of Baro VNAV/SBAS/GBAS</i>		KPA-Access/Equity Increased aerodrome accessibility	KPA-Capacity Increased runway capacity	KPA-Efficiency Reduced fuel burn due to lower minima, fewer diversions, cancellations, delays	KPA-Environment Reduced emissions due to reduced fuel burn.	KPA-Safety Increased safety through stabilized approach paths.

ASBU – Check-list



Performance Improvement Area 1: Airport Operations

Title of the Module: B0-WAKE: Increased Runway Throughput through optimized Wake Turbulence Separation					
Elements 1.Revision of current ICAO wake separation minima 2.Increasing International aerodrome Arrival Operational Capacity 3.Increasing International aerodrome Departure Operational Capacity		Equipage/Air - Nil		Equipage/Ground - A support tool to aid in the application of the new set of 6 categories of ICAO wakes separation. - Wind sensors and automation support is needed for element 3	
Implementation monitoring and intended performance impact					
Implementation progress		Qualitative performance benefits associated with five main KPAs only			
1. Indicator: <i>Percentage of international aerodromes applying the 6 categories of wake vortex separation.</i>		<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Aerodrome capacity and departure/arrival rates will increase as the wake categories are increased from 3 to 6	<u>KPA-Efficiency</u> Not Applicable	<u>KPA-Environment</u> Not Applicable
					<u>KPA-Safety</u> Not Applicable

ASBU – Check-list



Performance Improvement Area 1: Airport Operations

Title of the Module: B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)					
Elements 1. Surveillance 2. Alerting systems 3. (Not included in the Module but added here as they are closely linked to this Module) Visual aids for navigation and Wild life strike hazard reduction		Equipage/Air - ADS-B / SSR transponder system		Equipage/Ground - SMR/SSR Mode S/ ADS B/ Multilateration - Surveillance display with alerting functionalities in the tower. - A cooperative transponder system for vehicles - Visual aids for navigation	
Implementation monitoring and intended performance impact					
Implementation progress		Qualitative performance benefits associated with five main KPAs only			
1. Indicator: <i>Percentage of international aerodromes with SMR/ SSR Mode S/ ADS-B Multilateration</i>	<u>KPA-Access/Equity</u> Improves KPA-Access/Equity to portions of the manoeuvring area obscured from view of the control tower for vehicles and aircraft. Ensures equity in ATC handling of surface traffic regardless of the traffic's position on the international aerodrome.	<u>KPA-Capacity</u> Sustained level of aerodrome capacity during periods of reduced visibility	<u>KPA-Efficiency</u> Reduced taxi times through diminished requirements for intermediate holdings based on reliance on visual surveillance only. Reduced fuel burn.	<u>KPA-Environment</u> Reduced emissions due to reduced fuel burn	<u>KPA-Safety</u> Reduced runway incursions. Improved response to unsafe situations. Improved situational awareness leading to reduced ATC workload.
2. Indicator: <i>Percentage of international aerodromes with a cooperative transponder systems on vehicles</i>					
3. Indicator: <i>Percentage of international aerodromes complying with visual aid requirements as per Annex 14</i>					

ASBU – Check-list



Performance Improvement Area 1: Airport Operations

Title of the Module: B0-ACDM; Improved Airport Operations through Airport-CDM					
Elements: 1. Airport –CDM 2. (Not included in the Module but added here as they are closely linked to this Module) Aerodrome certification, Aerodrome emergency planning, Airport planning and Heliport operations		Equipage/Air - Nil		Equipage/Ground - Interconnection of ground systems of different partners for Airport-CDM - Rescue and Fire Fighting (RFF) Equipment as per Annexe 14	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>percentage of international aerodromes with Airport-CDM</i> 2. Indicator: <i>Percentage of certified international aerodromes</i> 3. Indicator: <i>Percentage of international aerodromes with RFF equipment as per Annex 14</i>	KPA-Access/Equity Enhances equity on the use of aerodrome facilities.	KPA-Capacity Enhanced use of existing gate and stands (unlock latent capacity). Reduced workload, better organization of the activities to manage flights.	KPA-Efficiency Improved operational efficiency (fleet management); and reduced delay. Reduced fuel burn due to reduced taxi time and lower aircraft engine run time.	KPA-Environment Reduced emissions due to reduced fuel burn	KPA-Safety Not Applicable

ASBU – Check-list



Performance Improvement Area 1: Airport Operations

Title of the Module: B0-RSEQ: Improve Traffic Flow Through Runway Sequencing (AMAN/DMAN)					
Elements: 1.AMAN 2.DMAN		Equipage/Air - Nil		Equipage/Ground - Automation support	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of international aerodromes with AMAN/DMAN</i>	KPA-Access/Equity Not Applicable	KPA-Capacity Time-based metering will optimize usage of terminal airspace and runway capacity.	KPA-Efficiency Efficiency is positively impacted as reflected by increased runway throughput and arrival rates.	KPA-Environment Not Applicable	KPA-Safety Not Applicable

ASBU – Check-list



Performance Improvement Area 2: Globally Interoperable Systems and Data – Through Globally Interoperable System Wide Information Management

Title of the Module:					
B0-FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration					
Elements:		Equipage/Air		Equipage/Ground	
1. AIDC 2. (Not included in the Module but added here as they are closely linked to this Module) AMHS/IPS		- Nil		- A set of AIDC messages in FDPS - AFTN (AMHS/IPS)	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of ATS units with AIDC</i>	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Reduced controller workload and increased data integrity supporting reduced separations translating directly to cross sector or boundary capacity flow increases.	<u>KPA-Efficiency</u> The reduced separation can also be used to more frequently offer aircraft flight levels closer to the optimum; in certain cases, this also translates into reduced en-route holding.	<u>KPA-Environment</u> Not Applicable	<u>KPA-Safety</u> Better knowledge of more accurate flight plan information.
2. Indicator: <i>States implementing AMHS/IPS</i>					

ASBU – Check-list



Performance Improvement Area 2: Globally Interoperable Systems and Data – Through Globally Interoperable System Wide Information Management

Title of the Module: B0-DATM; Service Improvement through Digital Aeronautical Information Management					
Elements: 1.AIXM 2.eAIP 3.Digital NOTAM 4.(Not included in the Module but added here as they are closely linked to this Module) WGS-84; eTOD; and QMS for AIM		Equipage/Air - Nil		Equipage/Ground AIXM; eAIP and Digital NOTAM WGS-84; eTOD; QMS for AIM The aeronautical information is made available to external users via either a subscription to an electronic access or physical delivery; The electronic access can be based on Internet protocol services.	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>States implementing AIXM; eAIP, Digital NOTAM WGS-84; eTOD; QMS for AIM</i>	KPA-Access/Equity Not Applicable	KPA-Capacity Not Applicable	KPA-Efficiency Not Applicable	KPA-Environment Reduced amount of paper for promulgation of information	KPA-Safety Reduction in the number of possible inconsistencies

ASBU – Check-list



Performance Improvement Area 2: Globally Interoperable Systems and Data – Through Globally Interoperable System Wide Information Management

Title of the Module:					
B0-AMET: Meteorological information supporting enhanced operational efficiency and safety					
<u>Elements:</u> 1. WAFS-IAVW-TCW 2. Aerodrome warning, wind shear warning and alerts 3. SIGMET information		<u>Equipage/Air</u> - Nil		<u>Equipage/Ground</u> - Connection to the AFS satellite and public Internet distribution systems - Connection to the AFTN - Local arrangements for reception of aerodrome warning ,wind shear warning and alerts	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>	<u>Qualitative performance benefits associated with five main KPAs only</u>				
1 Indicator: <i>States implementation of SADIS 2G satellite broadcast and/or Secure SADIS FTP service.</i>	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Optimized usage of airspace and aerodrome capacity due to MET support	<u>KPA-Efficiency</u> Reduced arrival/departure holding time, thus reduced fuel burn due to MET support	<u>KPA-Environment</u> Reduced emissions due to reduced fuel burn due to MET support	<u>KPA-Safety</u> Reduced incidents/accidents in flight and at international aerodromes due to MET support.
2. Indicator: <i>States implementation of WAFS Internet File Service (WIFS)</i>					

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

Title of the Module:					
B0-FRTO: Improved Operations through Enhanced En-Route Trajectories					
<u>Elements:</u> 1. Airspace planning 2. Flexible Use of airspace 3. Flexible Routing		<u>Equipage/Air</u> - FANS 1/A and ACARS		<u>Equipage/Ground</u> - CDM through Internet portal	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>	<u>Qualitative performance benefits associated with five main KPAs only</u>				
1. Indicator: <i>Percentage of time segregated airspaces are available for civil operations in the State</i>	<u>KPA-Access/Equity</u> Better access to airspace by a reduction of the permanently segregated volumes of airspace.	<u>KPA-Capacity</u> Flexible routing reduces potential congestion on trunk routes and at busy crossing points. The flexible use of airspace gives greater possibilities to separate flights horizontally. PBN helps to reduce route spacing and aircraft separations.	<u>KPA-Efficiency</u> In particular the module will reduce flight length and related fuel burn and emissions. The module will reduce the number of flight diversions and cancellations. It will also better allow avoiding noise sensitive areas.	<u>KPA-Environment</u> Fuel burn and emissions will be reduced.	<u>KPA-Safety</u> Not Applicable
2. Indicator: <i>Percentage of PBN routes implemented</i>					

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

<u>Title of the Module:</u> B0-NOPS: Improved Flow Performance through Planning based on a Network-Wide view					
<u>Elements:</u> Air Traffic Flow Management		<u>Equipage/Air</u> - Nil		<u>Equipage/Ground</u> - System software for ATFM	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of ATS units using ATFM services.</i>	<u>KPA-Access/Equity</u> Improved Access and equity in the use of airspace or aerodrome by avoiding disruption of air traffic. ATFM processes take care of equitable distribution of delays.	<u>KPA-Capacity</u> Better utilization of available capacity, ability to anticipate difficult situations and mitigate them in advance.	<u>KPA-Efficiency</u> Reduced fuel burn due to better anticipation of flow issues; Reduced block times and times with engines on.	<u>KPA-Environment</u> Reduced fuel burn as delays are absorbed on the ground, with shut engines; or at optimum flight levels through speed or route management.	<u>KPA-Safety</u> Reduced occurrences of undesired sector overloads

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

Title of the Module:					
B0-ASUR: Initial capability for ground surveillance					
Elements: 1.ADS-B 2.Multilateration		Equipage/Air - ADS-B OUT. - Mode S radar transponders for Multilateration		Equipage/Ground - FDPS and SDPS - ADS-B - Multilateration	
Implementation monitoring and intended performance impact					
Implementation progress 1. Indicator: <i>Percentage of international aerodromes with ADS-B/MLAT</i>	Qualitative performance benefits associated with five main KPAs only				
	KPA-Access/Equity Not Applicable	KPA-Capacity Typical separation minima are 3 NM or 5 NM enabling an increase in traffic density compared to procedural minima. TMA surveillance performance improvements are achieved through high accuracy, better velocity vector and improved coverage.	KPA-Efficiency Not Applicable	KPA-Environment Not Applicable	KPA-Safety Reduction of the number of major incidents. Support to search and rescue.

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

Title of the Module: B0-ASEP: Air Traffic Situational Awareness(ATSA)					
Elements: 1.ATSA-AIRB 2.ATSA-VSA		Equipage/Air - ADS-B OUT - ADS-B IN - Traffic display		Equipage/Ground - Nil	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: Percentage of aircraft with ADS-B OUT	KPA-Access/Equity Not Applicable	KPA-Capacity Not Applicable	KPA-Efficiency Improved situational awareness in identifying level change opportunities with current separation minima (AIRB) and improved visual acquisition (VSA).	KPA-Environment Not Applicable	KPA-Safety Improved situational awareness and reduced likelihood of wake turbulence encounters and missed approaches.
2. Indicator: Percentage of aircraft with ADS-B IN					

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

<u>Title of the Module:</u> B0-OPFL: Improved KPA-Access/Equity to Optimum Flight Levels through Climb/Descent Procedures using ADS-B					
<u>Elements:</u> ITP using ADS-B		<u>Equipage/Air</u> - ADS-B IN - ADS-B OUT		<u>Equipage/Ground</u> - Conflict probe logics	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>	Qualitative performance benefits associated with five main KPAs only				
<i>1. Indicator: Percentage of aircraft used ITP</i>	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Improvement in capacity on a given air route.	<u>KPA-Efficiency</u> Increased efficiency on oceanic and potentially continental en-route	<u>KPA-Environment</u> Reduced emissions	<u>KPA-Safety</u> A reduction of possible injuries for cabin crew and passengers.

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

Title of the Module: B0-ACAS: ACAS Improvements					
Elements: ACAS II (TCAS version 7.1)		Equipage/Air - TCAS V7.1		Equipage/Ground Nil	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of aircraft with ACAS, logic Version 7.1</i>	KPA-Access/Equity Not Applicable	KPA-Capacity Not Applicable	KPA-Efficiency ACAS improvement will reduce unnecessary resolution advisory (RA) and then reduce trajectory deviations.	KPA-Environment Not Applicable	KPA-Safety ACAS increases safety in the case of breakdown of separation.

ASBU – Check-list



Performance Improvement Area 3: Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

<u>Title of the Module:</u> B0-SNET: Increased Effectiveness of Ground-Based Safety Nets					
<u>Elements:</u> 1.Short Term Conflict Alert (STCA) 2.Area Proximity Warning (APW) 3.Minimum Safe Altitude Warning (MSAW)		<u>Equipage/Air</u> - SSR Mode C/S transponder - ADS-B OUT		<u>Equipage/Ground</u> - Short Term Conflict Alert, - Area Proximity Warnings and - Minimum Safe Altitude Warnings	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>		Qualitative performance benefits associated with five main KPAs only			
1. Indicator: <i>Percentage of ATS units with ground based safety nets</i>		<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Not Applicable	<u>KPA-Efficiency</u> Not Applicable	<u>KPA-Environment</u> Not Applicable
					<u>KPA-Safety</u> Significant reduction of the number of major incidents

ASBU – Check-list



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

Title of the Module:					
B0-CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)					
<u>Elements:</u>		<u>Equipage/Air</u>		<u>Equipage/Ground</u>	
1. CDO 2. PBN STARs		- Nil		- Nil	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u>	<u>Qualitative performance benefits associated with five main KPAs only</u>				
1. Indicator: <i>Percentage of international aerodromes with CDO implemented</i>	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Not Applicable	<u>KPA-Efficiency</u> Cost savings through reduced fuel burn. Reduction in the number of required radio transmissions.	<u>KPA-Environment</u> Reduced emissions as a result of reduced fuel burn	<u>KPA-safety</u> More consistent flight paths and stabilized approach paths. Reduction in the incidence of controlled flight into terrain (CFIT).
2. Indicator: <i>Percentage of international aerodromes/TMAs with PBN STARs implemented</i>					

ASBU – Check-list



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

<u>Title of the Module:</u> B0-TBO: Improved Safety and Efficiency through the initial application of Data Link En-Route					
<u>Elements:</u> 1.ADS-C over oceanic and remote areas 2.Continental CPDLC		<u>Equipage/Air</u> - FANS 1/A; ATN B1		<u>Equipage/Ground</u> - ADS-C - VDL Mode 2/Continental CPDLC	
Implementation monitoring and intended performance impact					
<u>Implementation progress</u> 1. Indicator: <i>Number of ADS-C /CPDLC procedures available over oceanic and remote Areas</i>	Qualitative performance benefits associated with five main KPAs only				
	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> A better localization of traffic and reduced separation allow increased capacity. Reduced communication workload and better organization of controller tasks allowing increasing sector capacity.	<u>KPA-Efficiency</u> Routes/tracks and flights can be separated by reduced minima, allowing to apply flexible routings and vertical profiles closer to the user-preferred ones.	<u>KPA-Environment</u> Reduced emissions as a result of reduced fuel burn.	<u>KPA-safety</u> ADS-C based safety nets supports cleared level adherence monitoring, route adherence monitoring, danger area infringement warning and improved search and rescue. Reduced occurrences of misunderstandings; solution to stuck microphone situations.

ASBU – Check-list



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

Title of the Module:					
B0-CCO: Improved Flexibility and Efficiency in Departure Profiles (CCO)					
Elements: 1.CCO 2.PBN SIDs		Equipage/Air - Nil		Equipage/Ground - Nil	
Implementation monitoring and intended performance impact					
Implementation progress	Qualitative performance benefits associated with five main KPAs only				
1. Indicator: <i>Percentage of international aerodromes with CCO implemented</i>	<u>KPA-Access/Equity</u> Not Applicable	<u>KPA-Capacity</u> Not Applicable	<u>KPA-Efficiency</u> Cost savings through reduced fuel burn and efficient aircraft operating profiles. Reduction in the number of required radio transmissions.	<u>KPA-Environment</u> Authorization of operations where noise limitations would otherwise result in operations being curtailed or restricted. Environmental benefits through reduced emissions.	<u>KPA-Safety</u> More consistent flight paths. Reduction in the number of required radio transmissions. Lower pilot and air traffic control workload
2. Indicator: <i>Percentage of international aerodromes with PBN SIDs implemented</i>					

MESURE DES AVANTAGES DE LA PLANIFICATION REGIONALE DE LA NAVIGATION AERIENNE - EXEMPLES



KPA	Mesures connexes de la performance
1. Accès & Equité	<ul style="list-style-type: none"> 1. KPA/Accès : Nombre d'aérodromes internationaux dotés d'APV 2. KPA/Accès : Pourcentage de temps d'espace aérien à statut spécial (SUA) disponible pour les opérations civiles 3. KPA/Accès : Pourcentage du niveau de vols demandés par rapport au niveau de vols autorisés 4. KPA/Accès : Nombre de refus d'accès dus à une panne de matériel 5. KPA/Equité : Pourcentage d'exploitants d'aéronefs par classe quand l'équité est réalisée 6. KPA/Equité : Pourcentage de différents types d'aéronefs opérant dans un espace aérien particulier ou dans un aérodrome international particulier.
2. Capacité	<ul style="list-style-type: none"> 1. Nombre d'opérations (arrivées+départs) par aérodrome international par jour 2. Retard ATFM moyen par vol dans un aérodrome international 3. Nombre d'atterrissages avant et après APV par aérodrome international 4. Retard ATFM moyen en route produit par volume d'espace aérien 5. Nombre d'aéronefs dans un volume défini d'espace aérien pendant une période donnée
3. Rentabilité	<ul style="list-style-type: none"> 1. Circulation par heure d'ATCO/OCCA en service 2. Vols IFR (en-route) par heure d'ATCO en service
4. Efficacité	<ul style="list-style-type: none"> 1. Kilogrammes de carburant économisés par vol 2. Retard ATFM moyen par vol sur l'aéroport international 3. Pourcentage d'itinéraires PBN
5. Environnement	<ul style="list-style-type: none"> 1. Émissions de kilogrammes de CO₂ réduites par vol (= KGs de carburant économisé par vol)

MESURE DES AVANTAGES DE LA PLANIFICATION REGIONALE DE LA NAVIGATION AERIENNE - EXEMPLES



KPA	Mesures connexes de performance
6. Flexibilité	<ol style="list-style-type: none"> 1. Nombre de systèmes de secours disponibles en cas d'urgence 2. Nombre de changement de plan de vol approuvés 3. Nombre de solutions alternatives accordées
7. Interopérabilité mondiale	<ol style="list-style-type: none"> 1. Nombre de systèmes ATC automatisés interconnectés
8. Participation de la communauté de l' ATM	<ol style="list-style-type: none"> 1. Niveau de participation aux réunions 2. Niveau de réponses aux activités de planification
9. Prévisibilité	<ol style="list-style-type: none"> 1. Retard des arrivées/départs (in minutes) à l'aéroport international
10. Sécurité	<ol style="list-style-type: none"> 1. Nombre d'incursions sur les pistes par aérodrome international par an 2. Nombre d'incidents/accidents pour lesquels les conditions METéorologiques ont été un facteur contributif 3. Nombre d'événements ACAS RA 4. Nombre d'accidents CFIT 5. Nombre d'approches manquées évitées grâce à l'utilisation des opérations en descente continue (CDO)
11. Sûreté	Non applicable



North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montreal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Office
Bangkok

Thank You

A world map is shown in a light blue color. Eight colored dots are placed on the map, each connected by a thin line to a text label describing an ICAO office. The dots are: a blue dot in North America (Mexico City), a blue dot in South America (Lima), an orange dot in North America (Montreal), a blue dot in West Africa (Dakar), a blue dot in Europe (Paris), a blue dot in the Middle East (Cairo), a blue dot in East Africa (Nairobi), and a blue dot in Southeast Asia (Bangkok). The Montreal dot is highlighted with an orange color, matching the text label.