APIRG AND ITS SUBSIDIARY BODIES REPORTING MECHANISMS

ANRF & DASHBOARD

Prosper Zo'o Minto'o, ICAO Regional Director, Western And Central Africa

Workshop on GANP/6

THE SAFETY AND AN SYSTEM

GLOBAL PLANS

GLOBAL PERFORMANCE REPORTS

Feedback loop for continuous improvement

Outline Global Priorities and Targets
Reviewed by ANC; Approved by Council Endorsed by Assembly

REGIONAL PERFORMANCE DASHBOARDS

Africa – Aug 2013

All Regions - Mar 2014

Reporting against Global Priorities
Global Reports (online) Annually Special Version (print) for Assembly

PIRG-RASG *agreed to establish* ***Safety*** *and*

Air Navigation *Priorities and Targets*
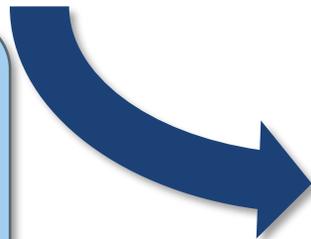
Adopts Global Priorities, sets additional as needed
Used by PIRGs and RASGs to Measure Performance
Regional Office Updates Dashboard (online) semiannually

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AIR NAVIGATION REPORTING PROCESS

- PIRGs have developed regional ASBU Implementation Plans

- Need for an Air Navigation performance measurement, monitoring and reporting strategy.

- Methodology for reporting

  - States to send data to ROs through Air Navigation Report Form   (ANRF) or equivalent form/on ongoing basis

  - ROs consolidate data from all States and publish through Regional Performance Dashboard /on ongoing basis

  - HQ consolidates data from all ROs and publish Global Air Navigation Report/annually

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AIR NAVIGATION REPORTING
WHAT IS ANRF?

- The Air Navigation Report Form (ANRF) is the basis for performance reporting of the ASBU implementation

- The ANRF templates for all the 18 Modules of ASBU Block 0 is available in the Regional eANP.

ANRF

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE – B0-CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO) Performance Improvement Area 4: Efficient Flight Path – Through Trajectory-based Operations				
ASBU B0-CDO: Impact on Main Key Performance Areas (KPA)				
	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	N	N	Y	Y	Y
ASBUB0- CDO: Implementation Progress				
Elements		Implementation Status (Ground and Air)		
1. CDO				
2. PBN STARs				
ASBU B0-CDO: Implementation Roadblocks/Issues				
	Implementation Area			
Elements	Ground Implementation	Air Implementation	Procedures Availability	Operational Approvals
1. CDO				
2. PBN STARs				

ANRF

ASBU B0-CDO: Performance Monitoring and Measurement (Benefits)	
Key Performance Areas	**Performance Metrics**
Access & Equity	Not applicable
Capacity	Not applicable
Efficiency	Kilograms of fuel saved per flight
Environment	Kilograms of CO_2 emissions reduced per flight (= KGs fuel saved per flight x 3.157)
Safety	Number of controlled flight into terrain (CFIT) incidents/accidents
ASBU B0-CDO: Performance Monitoring and Measurement (Implementation)	
Elements	**Implementation Indicators/Metrics**
1. CDO	Percentage of international aerodromes/TMAs with CDO implemented
2. PBN STARs	Percentage of international aerodromes/TMAs with PBN STARs implemented

AFI ANS PERFORMANCE INDICATORS/METRICS

Targets	Linkage with ASBU	ANS Performance Indicators/Metrics	Qualitative performance benefits associated with Safety key performance area	Remarks
Implement Performance Based Navigation (PBN)	ASBU Module B0-APTA	Number of PBN routes Number of International Aerodromes/TMAs with PBN SIDs implemented Number of International Aerodromes/TMAs with PBN STARs implemented Number of International Aerodromes with Approach Procedures with vertical guidance (APV) Number of International Aerodromes with Approach Procedures with lateral guidance (LNAV)	Increased safety through stabilized approach paths Reduced runway safety related accidents/incidents and CFIT Increased safety through optimization of airspace use in the vertical and horizontal planes.	Reflected on the AN Dashboard Safety key performance area (KPA) related ASBU Module identified by APIRG/19

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AFI ANS PERFORMANCE INDICATORS/METRICS

Targets	Linkage with ASBU	ANS Performance Indicators/Metrics	Qualitative performance benefits associated with Safety key performance area	Remarks
Implement Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO)	ASBU Modules B0-CDO and CCO	Number of International Aerodromes/TMA with CDO implemented Number of International Aerodromes/TMAs with CCO implemented Annual environmental benefits attained (reduced fuel consumption/GHG emissions)	More consistent flight paths and stabilized approach paths.	Safety key performance area (KPA) related ASBU Module identified by APIRG/19
Reduce Aircraft Proximity incidents (AIRPROX) due to ANS deficiencies by 50%		Number of Aircraft Proximity incidents (AIRPROX) due to ANS Number of ACAS Resolution Advisory (RA) events due to ATS deficiencies Number of States with training programmes for ANS personnel implemented on yearly basis.	Increased safety through application of standard separation minima between aircraft and improved recurrent ATC training.	Safety key performance area (KPA) related ASBU Module identified by APIRG/19

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AFI ANS PERFORMANCE INDICATORS/METRICS

Targets	Linkage with ASBU	Proposed ANS Performance Indicators/Metrics	Qualitative performance benefits associated with Safety key performance area	Remarks
Reduce risk of accidents related to ATM safety		Number of accidents related to ATM safety	ACAS, SLOP, TIBA and IATA IFBP to increase safety in the case of breakdown of separation.	
Implement Digital ATS Coordination /Transfer	ASBU Module B0-FICE	Number of FIRs within which all applicable ACCs have implemented at least one interface to use ATS Inter-facility Data Communications (AIDC) with neighboring ACCs Number of reported incidents related to lack of coordination between ACCs	Improved coordination between ATS units.	Reflected on the AN Dashboard

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AFI ANS PERFORMANCE INDICATORS/METRICS

Targets	Linkage with ASBU	Proposed ANS Performance Indicators/Metrics	Qualitative performance benefits associated with Safety key performance area	Remarks
Establish effective and operational SAR Organization.		Number of States with SAR Organization Number of States with SAR Plans Number of States with SAR Agreements	Better capacity to provide SAR services over own territory and regionally Improved response for near-border events	
Implement En-Route Data Link Applications	ASBU Module B0-TBO	Number of FIRs having implemented Data Link (ADS-C/CPDLC, ADS-B) for en-route operations	ADS-C and ADS-B based safety nets support cleared level adherence monitoring, route adherence monitoring, danger area infringement warning and improved search and rescue. CPDLC to reduce occurrences of misunderstandings between air traffic controllers and pilots Solution to stuck microphone situations	Safety key performance area (KPA) related to ASBU Module identified by APIRG/19

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AFI ANS PERFORMANCE INDICATORS/METRICS

Targets	Linkage with ASBU	ANS Performance Indicators/Metrics	Qualitative performance benefits associated with Safety key performance area	Remarks
Implement Aeronautical Information Management (AIM) Quality Management System (QMS)	ASBU Module B0-DATM	Number of States with AIM QMS implemented	Reduction in the number of data inconsistencies and inaccuracies	Reflected on the AN Dashboard Safety key performance area (KPA) related to ASBU Module identified by APIRG/19
Implement Aeronautical Meteorology (MET) Quality Management System (QMS)	ASBU Module B0-AMET	Number of States with MET QMS implemented Number of incidents/accidents with MET conditions as a sole or contributory factor	Reduced MET related incidents/accidents in flight and at international aerodromes	Safety key performance area (KPA) related to ASBU Module identified by APIRG/19

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REGIONAL REPORTING
REGIONAL PERFORMANCE DASHBOARD

- Transparency and sharing of information are fundamental to a safe and efficient global air transportation system.

- Consistent with this principle, the Organization introduced "Regional 'Performance Dashboard' - the homepages for every public website of the ICAO Regional Offices.

- These dashboards illustrate the regional implementation status relating to the strategic objectives on Safety and Air Navigation Capacity and Efficiency.

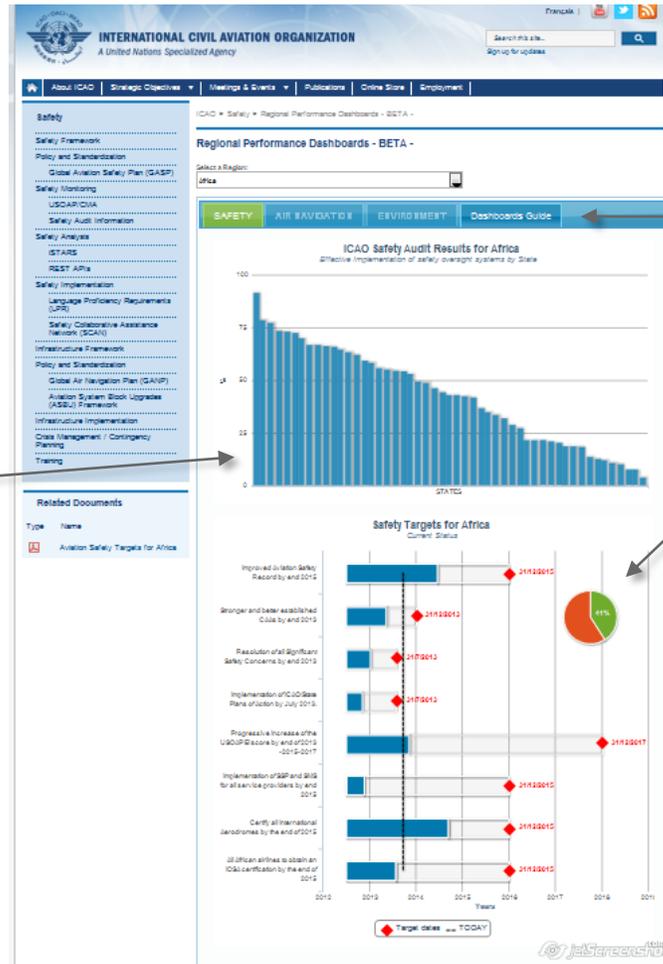# REGIONAL PERFORMANCE DASHBOARD DEFINITION

- The Dashboard shows targeted performance at the regional level and contain graphics and maps with a planned expansion to include the Aviation System Block upgrades (ASBU) Block elements.

- This interactive online system was developed for all ICAO Regions in 2013/2014 and was expected to be updated at regular intervals.

- The Dashboard is user friendly and able to deliver the message at a glance.

REGIONAL PERFORMANCE DASHBOARD FORMAT – HOME PAGE OF ICAO RO WEBSITE

GENERAL FORMAT

For Safety:
Effective Implementation

For Efficiency:
Air Navigation Implementation

Regional Performance by **Strategic Objective**

Regional Performance Indicators

Message:

*Provide the status of* ***Safety and Efficiency*** *for the Region*

REGIONAL PERFORMANCE DASHBOARD INDICATORS/METRICS FOR SAFETY

SAFETY

Metrics

1. **Safety Oversight**
   Effective Implementation by State

2. **Accidents and serious incidents**
   Number of accidents per million departures

3. **Runway Excursions and Incursions**
   Runway excursion and incursion accidents as a percentage of all accidents

4. **Aerodrome certification**
   Number of certified international aerodromes

5. **SSP/SMS Implementation**
   Implement Phase 1 of SSP and ensure that all Service Providers implement SMS
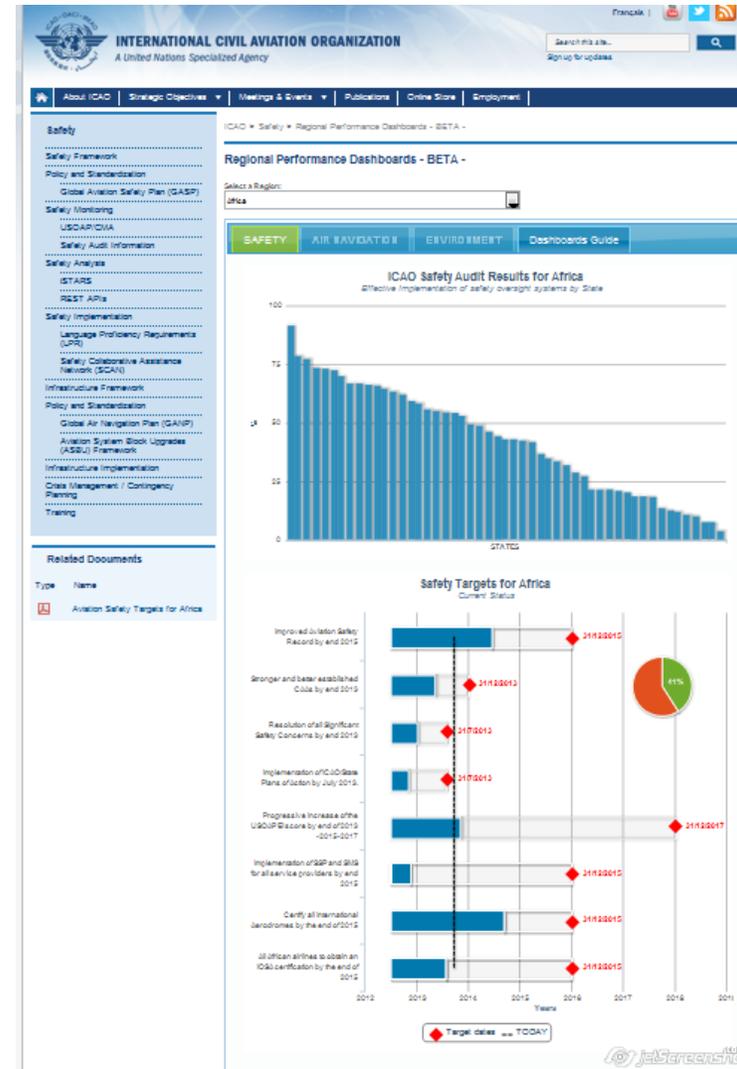
REGIONAL PERFORMANCE DASHBOARD INDICATORS/METRICS FOR AIR NAVIGATION

AIR NAVIGATION

Metrics

1. **PBN TERMINAL**
   % of international aerodromes with APV

2. **PBN ENROUTE**
   % of PBN routes/airspaces

3. **CDO**
   % of international aerodromes/TMAs with CDO

4. **CCO**
   % of international aerodromes/TMAs with CCO

5. **Estimated Fuel Savings/ C02 Emissions Reduction Based on IFSET**

6. **ATFM**
   % of ATS Units/international aerodromes providing ATFM service

7. **AIM**
   % of needed elements (from AIS to AIM Roadmap) facilitating the transition from AIS to AIM that have been implemented – PHASE I

REGIONAL PERFORMANCE DASHBOARD
ROLL-OUT PLAN

Step 1: identified a set of indicators for safety, efficiency and environment

- Initial set of indicators was agreed by PIRG-RASG Chairs in a coordination meeting held in Montreal on 19 March 2013.

Step 2: endorsement by the 38th Session of ICAO Assembly in September 2013

Initial version of the Dashboard was launched in August 2013 for the AFI region and March 2014 for the remaining regions

REGIONAL PERFORMANCE DASHBOARD

Regional Performance Dashboard aims to provide a glance of both Safety and Air Navigation Capacity and Efficiency strategic objectives, using a set of indicators and targets based on the regional implementation of the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP)..

As of January 2016, the Dashboard has evolved to the integrated Safety Trend Analysis and Reporting System iSTARS Regional Safety Briefing.

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ANNUAL REPORT TO COUNCIL

In accordance with Council-approved terms of reference:

- APIRG & RASG-AFI report outcomes to the ICAO Council through the Air Navigation Commission (ANC) as facilitated by the ICAO Secretariat.

- PIRG meeting reports should be provided in a standardized format to the governing bodies of ICAO to identify regional and emerging challenges

CONCLUSIONS

Based on the GANP, and associated KPIs and tools

- APIRG and its auxiliary bodies shall
  - report on the status of implementation of air navigation goals, targets and indicators, including the priorities set by the AFI Region in the eANP
  - explore the use of regional dashboards to facilitate monitoring regional progress being made.

- Requirement for Annual Report to Council being implemented

- Requirement for APIRG Annual Air Navigation Report not implemented

- HQ support to Ros, APIRG and Sub-groups needed to establish effective data-driven reporting mechanisms.

THANK YOU!

Regional Focus: System Wide Information Management