Air Navigation Monitoring and Reporting ANRF, Dashboard and Annual Report

ICAO NACC Regional Office

The Safety and AN *System*
A Better Way for the Future?

GLOBAL PLANS

Pending Council Approval

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

Feedback loop for continuous improvement

GLOBAL PERFORMANCE REPORTS

2013 Safety Report — **Available**

2014 Air Navigation Report — **April 2014**

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

REGIONAL PERFORMANCE DASHBOARDS

Africa – Aug 2013

All Regions - Mar 2014

PIRG-RASG agreed to establish by certain dates:

Safety
(As soon as possible)

Air Navigation
(May 2014)

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

Air Navigation Reporting Process

- PIRGs are progressing with planning and implementation of ASBUs

- The next step calls for an air navigation performance measurement, monitoring and reporting strategy.

- Methodology for reporting
  - States to send data to RO through Air Navigation Report Form (ANRF) or equivalent form/on ongoing basis
  - RO will consolidate data from all States and publish through Regional Performance Dashboard /on ongoing basis
  - HQ will consolidate data from all ROs and publish Global Air Navigation Report/annually

Air Navigation Reporting
What is ANRF?

- The current Performance Framework Form (PFF) has been redesigned and aligned   with ASBU framework and called the Air Navigation Report Form (ANRF)
- ANRF will be the basis for performance reporting of the ASBU implementation
- The ANRF templates for all the 18 Modules of ASBU Block 0 will be available in the upcoming Regional eANP.

PFF re-designated as ANRF

REGION/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

Elements	Implementation Area			
	Ground Implementation	**Air Implementation**	**Procedures Availability**	**Operational Approvals**
1. CDO				
2. PBN STARs				

PFF re-designated as 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

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 is introducing "Regional 'Performance Dashboard' - the homepages for every public website of the ICAO Regional Offices.

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

Regional Performance Dashboard Definition

- The Dashboard will show targeted performance at the regional level and will, initially, contain graphics and maps with a planned expansion to include the Aviation System Block upgrades (ASBU) Block 0 Modules.

- This new interactive online system will be in place in August 2013 for AFI region and March 2014 for the remaining regions and will be updated at regular intervals.

- Dashboard will be user friendly and able to deliver the message at glance.

Regional Performance Dashboard
Proposed Format – Home page of ICAO RO website

GENERAL FORMAT

Regional Directors responsible for the **selected UN Region**

For Safety:
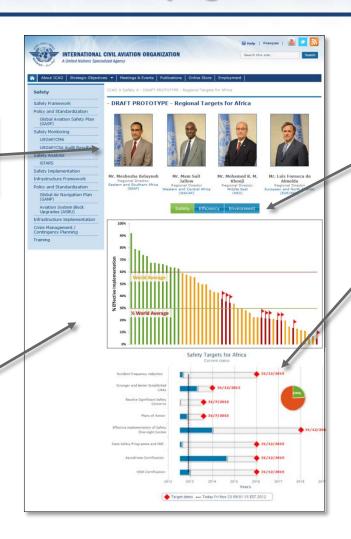**Effective Implementation**
(No State names)
For Efficiency:
Air Navigation Implementation
(by State)
For Environment:
Fuel savings and CO2 reduction
(by State)

Regional Performance by **Strategic Objective**

Regional Performance Indicators

Message:

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

Regional Performance Dashboard Indicators/metrics for Safety

SAFETY

Metrics

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

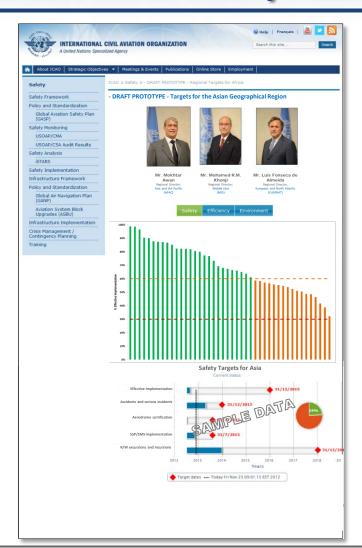2. **Accidents and serious incidents**
   Number of accidents per million departures

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 State Safety Programmes (SSP) and ensure that all Service Providers implement a Safety Management System (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
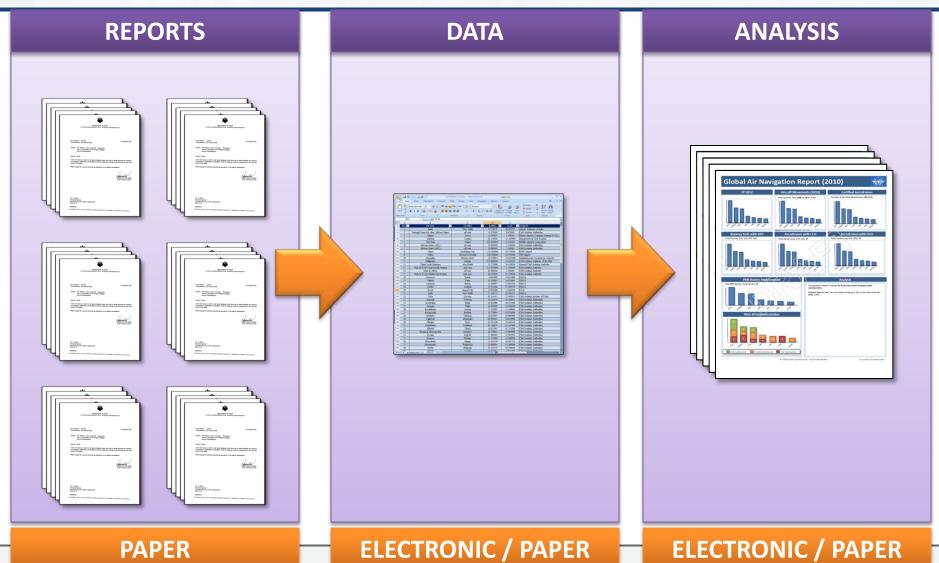
Regional Performance Dashboard Roll-out plan

- **Step 1: identify 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: Seek endorsement from the 38th Session of ICAO Assembly in September 2013**

- **Launch initial version of the Dashboard in August 2013 for AFI region and March 2014 for the remaining regions**
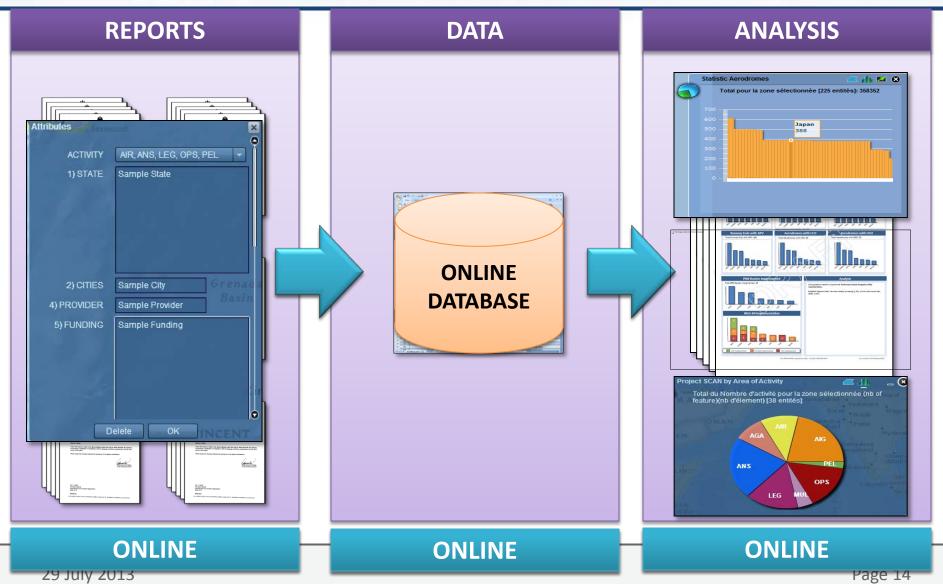
Air Navigation Reporting Current

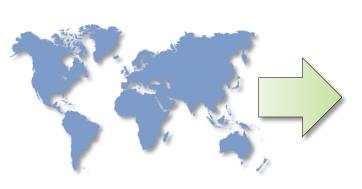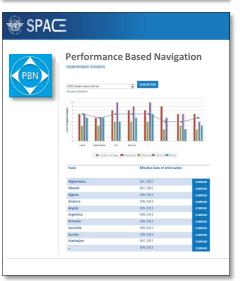| REPORTS	DATA	ANALYSIS
PAPER	ELECTRONIC / PAPER	ELECTRONIC / PAPER

Air Navigation Reporting Future

REPORTS

DATA

ANALYSIS

ONLINE DATABASE

ONLINE

ONLINE

ONLINE

Measuring Against the Global Plans
Reporting Mechanism and Tools

Regional Bodies	Web Portal	Report

- **Visualize** the status of implementation through dynamic and interactive charts
- Provide **feedback** on the data (qualification of the data)
- Perform **self-assessments**, generate ad-hoc **reports** and **export** data
- Provide a venue for data collection towards the **Annual Reports**

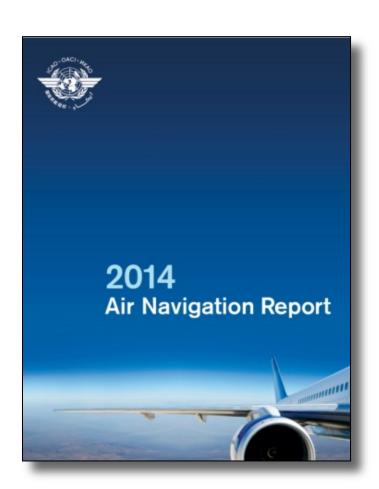# Annual Global Air Navigation Report Purpose

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

- Consistent with this principle and much like the existing annual Safety Report, the proposed annual Global Air Navigation Report will assist PIRGs and States in understanding which areas require special attention to effectively improve air navigation performance worldwide . First Report in April 2014

- Help propagate information on implementation success stories.

- Provide an opportunity for the civil aviation community to evaluate progress across different ICAO regions.

- Facilitate more effective interregional harmonization planning

- The outcomes of the Report could also help to identify annual tactical adjustment priorities for regional work programmes, as well as informing longer-term policy adjustments.

Annual Global Air Navigation Report
Proposed contents
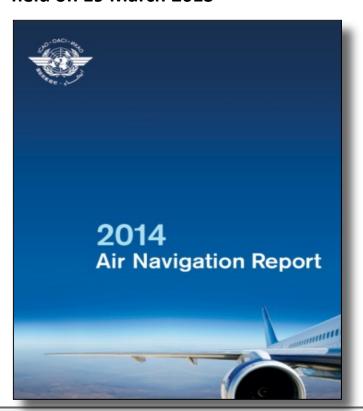

2014
Air Navigation Report

- global air navigation challenges;
- measuring against those challenges;
- status of operational measures for performance improvement;
- implementation progress of selected priority ASBU Block 0 Modules.
- sharing of successful initiatives and key demonstrations

Annual Global Air Navigation Report
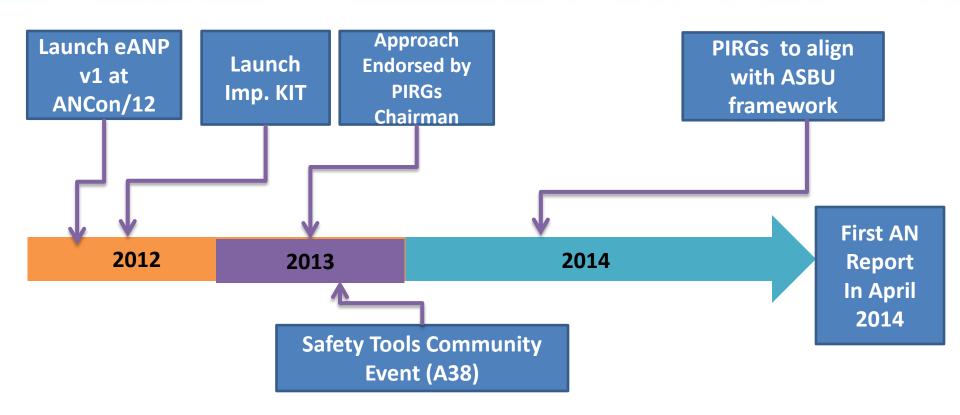# An initial dataset

This initial dataset for both Regional Performance Dashboard and the Global Air Navigation Report was recently agreed by the PIRG Chairs in a coordination meeting held on 19 March 2013

2014
Air Navigation Report

1. **Performance Based Navigation (PBN) - Terminal**
   % of international aerodromes with APV

2. **Performance Based Navigation (PBN) - Enroute**
   % of PBN routes/airspaces

3. **Continuous Descent Operations (CDO)**
   % of international aerodromes/TMAs with CDO

4. **Continuous Climb Operations (CCO)**
   % of international aerodromes/TMAs with CCO

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

6. **Air Traffic Flow Management (ATFM)**
   % of ATS Units/international aerodromes providing ATFM service

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

Annual Global Air Navigation Report
Initial tasks and Roll Out

Launch eANP v1 at ANCon/12

Launch Imp. KIT

Approach Endorsed by PIRGs Chairman

PIRGs to align with ASBU framework

2012 **2013** **2014**

Safety Tools Community Event (A38)

First AN Report In April 2014

PIRG-RASG Global Coordination Meeting Objective

- A Planning and Implementation Regional Groups (PIRGs) and Regional Aviation Safety Groups (RASGs) Global Coordination Meeting (GCM) was held in Montreal on 19 March 2013 under the Chairmanship of the President of the ICAO Council.

- The main objective of the meeting was to exchange views on the readiness and ability of the PIRGs and RASGs to set priorities and targets in line with the new versions of the GANP and the Global Aviation Safety Plan (GASP).

- A secondary objective was to share successful initiatives of each of the PIRGs and RASGs to ensure the best possible synergy. The outcome of the meeting includes

PIRG-RASG Global Coordination Meeting Outcome

- Establishing regional priorities and targets for air navigation by May 2014 consistent with the GANP/ASBU framework;
- Need to measure performance improvements to help demonstrate their positive impact on the environment;
- Endorsed regional performance dashboard prototype and determination of an initial set of indicators and metrics for air navigation;
- Confirmation of the need for a coordination mechanism in each region between the RASG and
- PIRG to ensure consistency of action and avoid overlap;
- Encouragement of the sharing of successful initiatives among each other;
- Identification of the need for training to determine priorities for the aviation system block upgrades; and
- agreement on utilizing specific interface groups where required for addressing the harmonization of air navigation plans in adjacent areas of PIRGs.

It was decided to convene the PIRG-RASG global coordination meeting in this format once every two years with the next one planned for spring 2015.

Thank You