DGCA/4 – WP/11

AGENDA ITEM: 4.2
IATA POSITION ON PBN

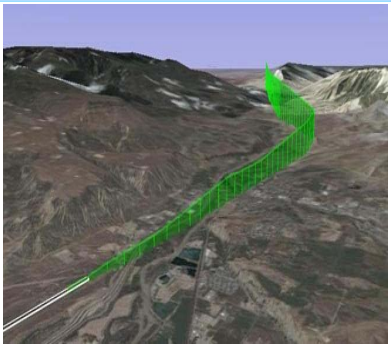
DGCA/4

Fourth Meeting of AFI Region Directors General of Civil Aviation (DGCA/4) (Matsapha, Manzini, Swaziland, 8-9 November 2010)

Agenda Item 4.2 (WP/11)

IATA/Airline Perspective on PBN Operations

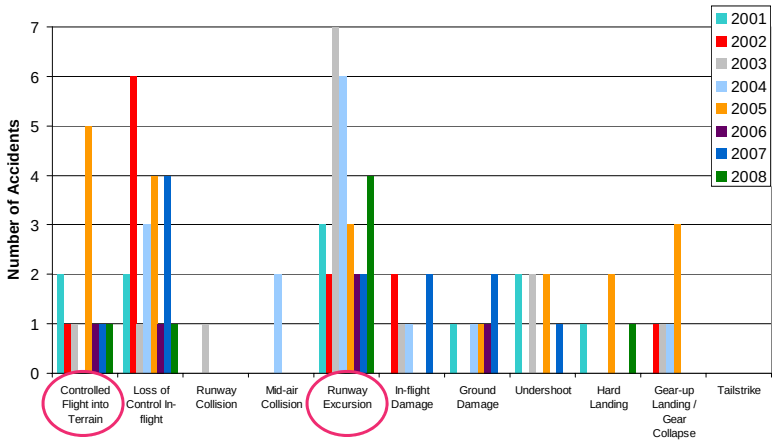
Presented by IATA



IATA Position on PBN

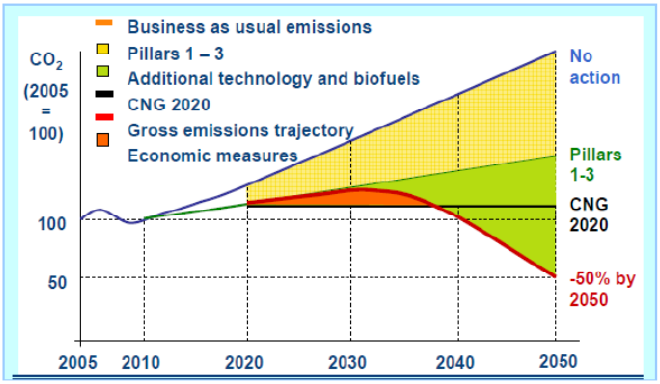
- IATA support global implementation of the concept of Performance Based Navigation (PBN) developed by ICAO
- PBN creates a seamless environment that allows standard aircrew procedures while allowing the most efficient operations

Accidents by Category



Environment: CO2 Emission Reduction

ICAO Assembly Framework for aviation emissions

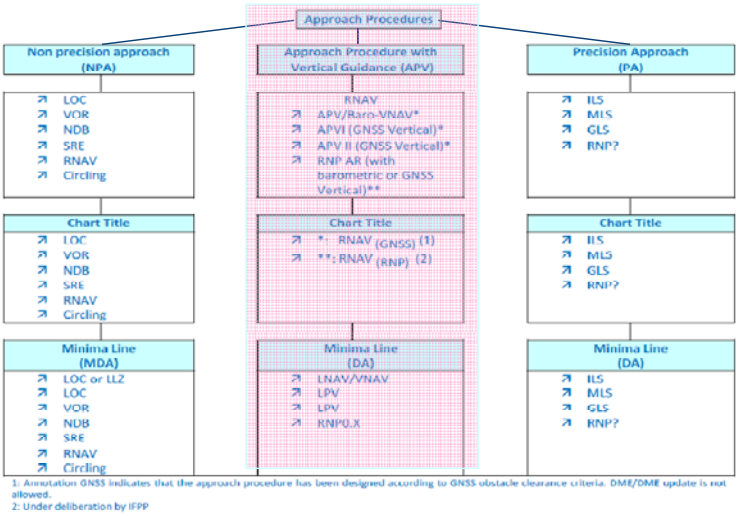


5

ICAO PBN Targets APV Implementation

- Spotlight on costs and efficiency in TMAs
- Approaches with Vertical Guidance (APV) to replace Non-Precision Approaches (NPA)
  - 30 % to be achieved in 2010 and
  - 70 % in 2014,
  - with full coverage in 2016
- IATA identified 100+ airports where RNAV SIDs STARs and approach procedures can be improved using PBN

6



7

IATA Position on APV/Baro-VNAV

- **Stabilized approaches** are more in favor than lower minima
- Use what is available
- **Use APV Baro VNAV** as a transitional step
- **APV BaroVNAV provides** also for
  - Improved operational efficiency in terminal airspace
  - Reduces operating costs for aircraft navigation systems and ANSPs
  - Fallback for when conventional Navaids are not available

8

IATA Position on APV/Baro-VNAV

- **The prime driver for implementation is safety**
  - NPA: largest CFIT threat (due to lack of vertical guidance)
  - BaroVNAV provides solution to this safety threat
- **Most aircraft support APV Baro-VNAV procedures**
  - Procedures are available today
  - Provides vertical guidance on Navigation Display (ND)/Primary Flight Display (PFD) (Airbus)
  - Coupling to Autopilot/Flight Director provides “near precision” capability
  - Tried and tested with many years of operation
  - Standardisation of cockpit procedures
  - Preferred mode of RNAV approach operation from origin equipment manufacturers (OEMs)

9

IATA Airline Position on APV / SBAS

- **SBAS not yet global solution and does not provide suitable operational benefit**
  - Large commercial aircraft are equipped with precision inertial systems
  - SBAS investments cannot be justified (approx. 100.000 USD/tail)
- **Major transport airlines not collectively willing to pay for SBAS services**
  - SBAS related costs shall not be allocated to airspace users not equipped with SBAS
  - Other means of funding should be found to support this technology including current users
- **IATA requires**
  - that whenever States are providing SBAS guidance at a certain airport, such procedures must be complemented by BaroVNAV procedures

10

Reference Material on APV/Baro-VNAV Implementation

- **EASA AMC 20-27**
  - Airworthiness Approval and Operational Criteria for RNP APPROACH (RNP APCH) Operations Including APV BARO-VNAV Operations
- **EASA AMC 20-26**
  - Airworthiness Approval and Operational Criteria for RNP Authorization Required (RNP AR) Operations
- **Germany AIF IFR 3**
  - Implementation of Approach Procedures with Vertical Guidance (APV) by means of Barometric Navigation (Baro-VNAV) in German airspace
- **USA FAA AC 90-15**
  - Approval Guidance for RNP Operations and Barometric Vertical Navigation (Baro-VNAV) in the U.S. National Airspace System
- **USA FAA AC 90-101**
  - Approval Guidance for RNP procedures with SAAAR

11

Conclusion

- **APV Baro-VNAV is recognized as a mature navigation function**
- Airlines express urgent **need for AFI States and ANSPs to**:
  - Widely **implement APV Baro VNAV procedures** without delay
  - **Approve APV capable operators**
  - **Coordinate implementation of harmonized APV BaroVNAV procedures**.

12

Tanja Grobotek
Assistant Regional Director
Safety, Operations & Infrastructure
Africa & Indian Ocean
(AFI)