



APIRG/17 – WP/33

AGENDA ITEM: 3.4

IATA POSITION ON PBN



APIRG/17

Ouagadougou, Burkina Faso

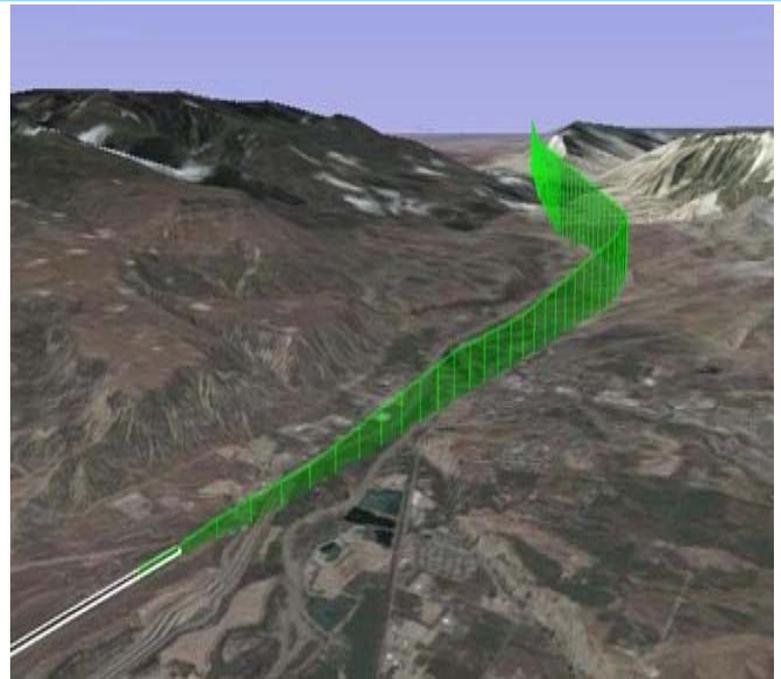
2-6 August 2010

Agenda Item 3.4

(WP/33)

IATA/Airline Perspective on PBN
Operations

Presented by IATA

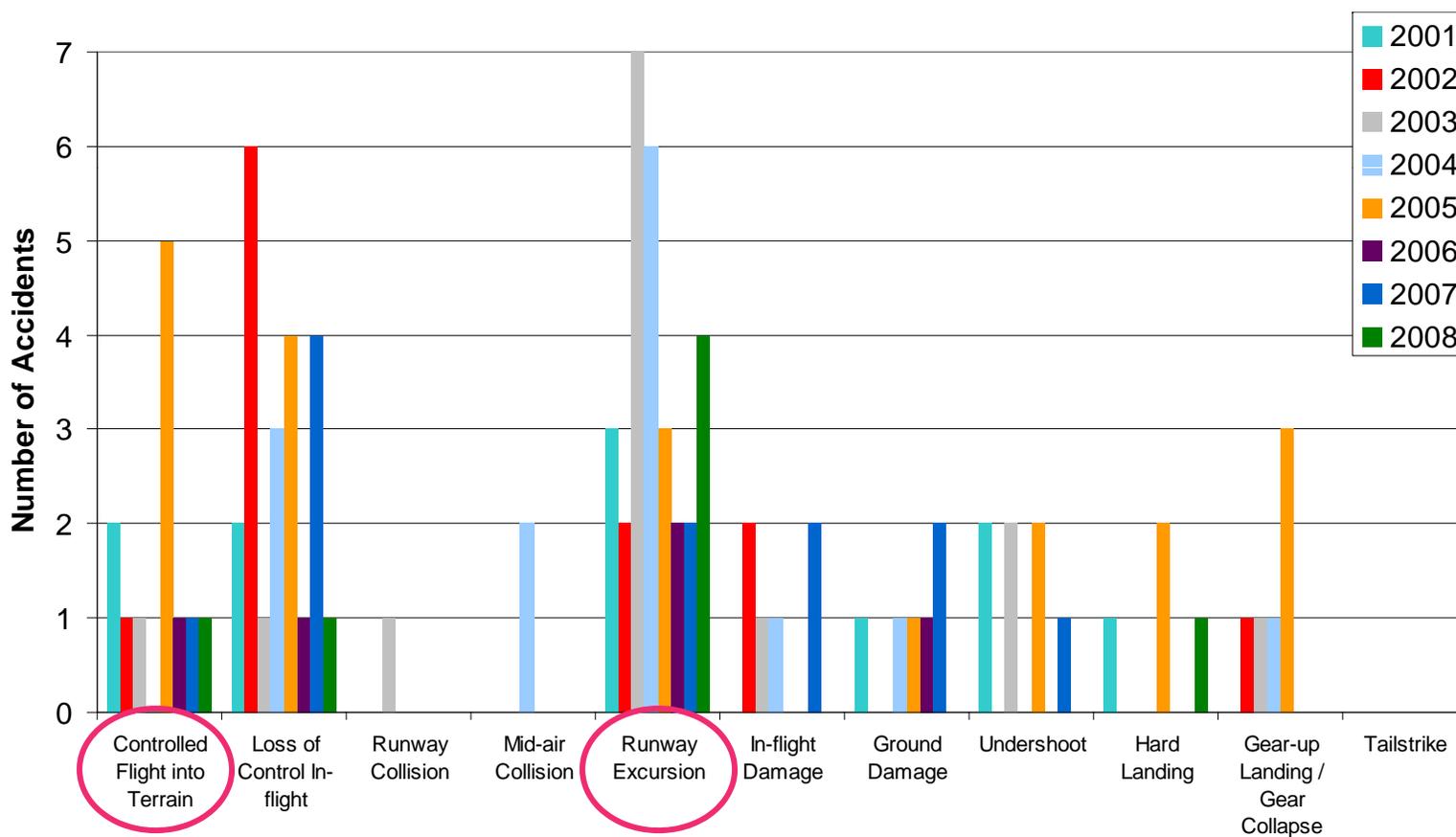




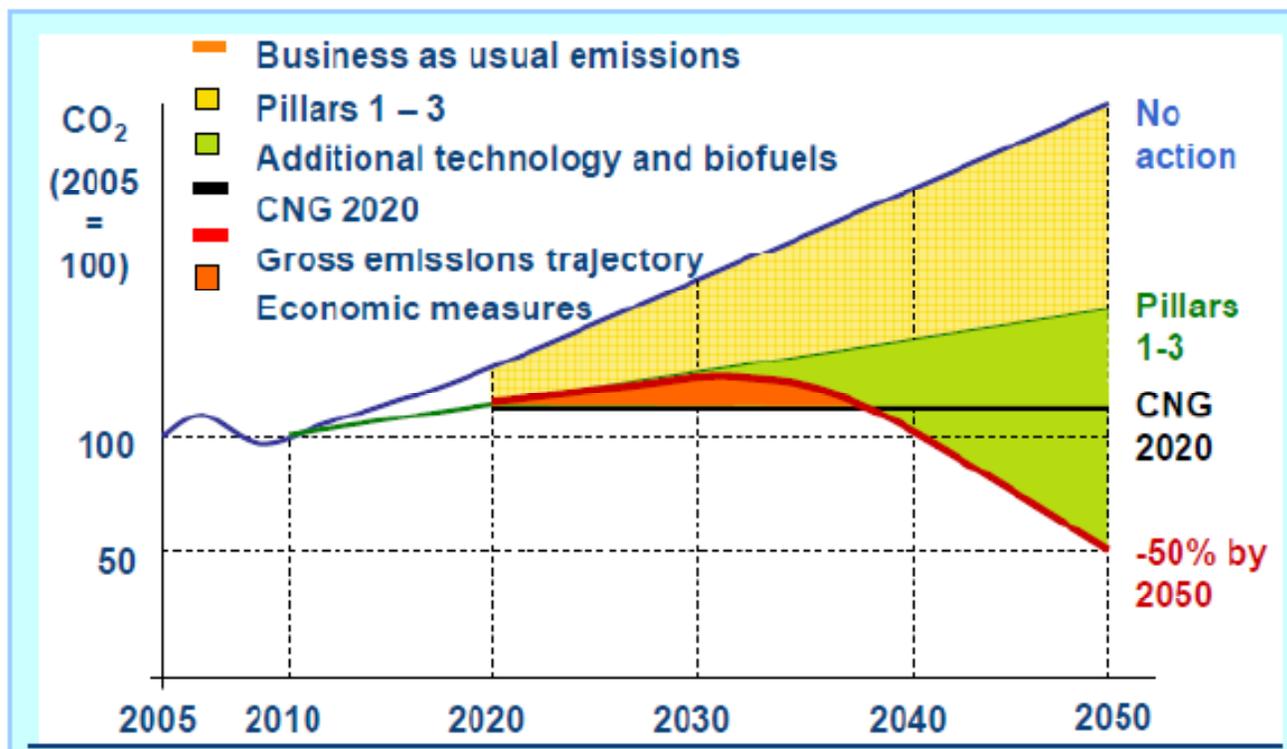
IATA Position on PBN

- 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



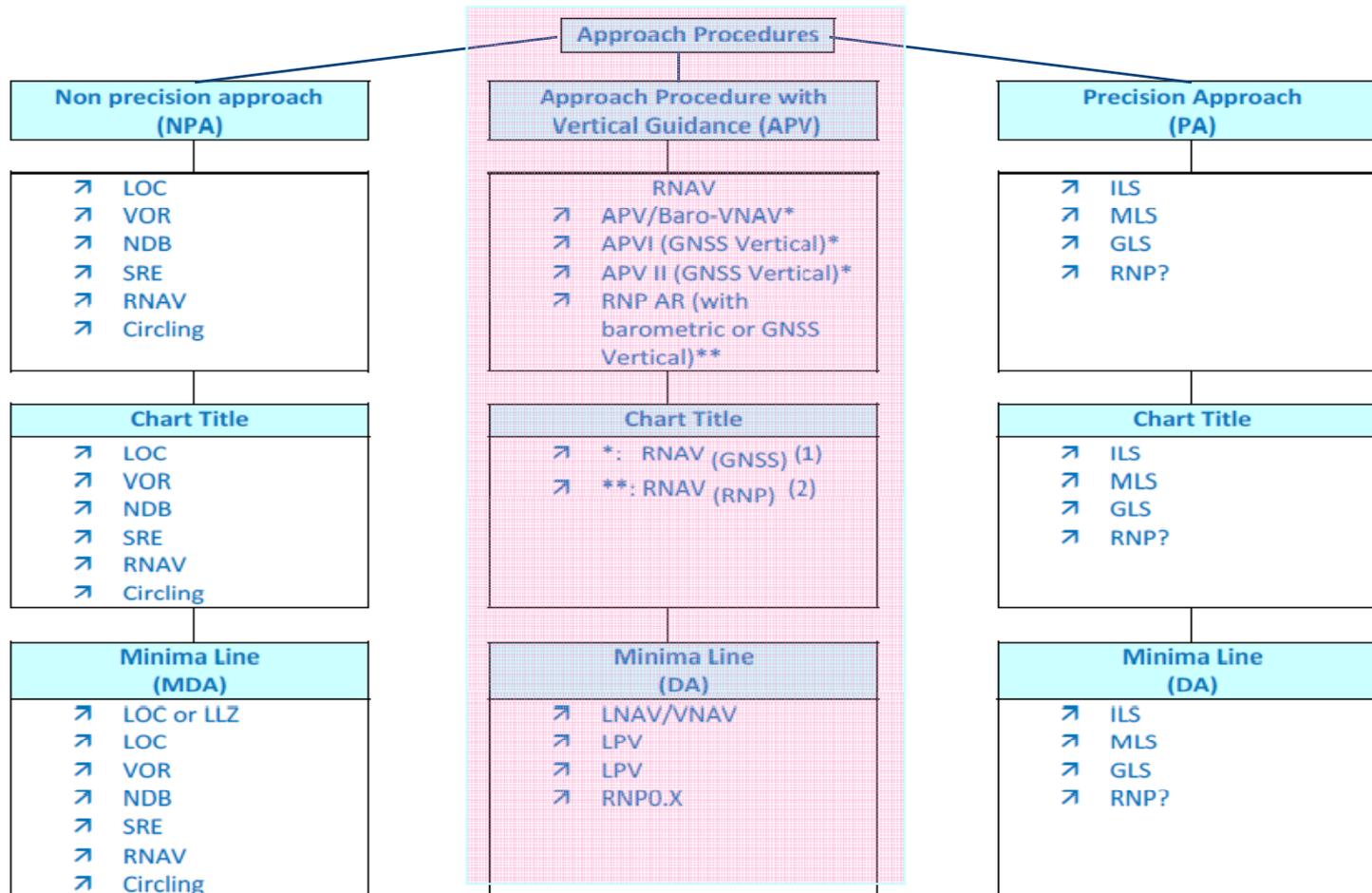
Environment: CO2 Emission Reduction (ICAO Assembly Framework for aviation emissions)





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



1: Annotation GNSS indicates that the approach procedure has been designed according to GNSS obstacle clearance criteria. DME/DME update is not allowed.

2: Under deliberation by IFPP

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)





IATA Position on APV/Baro-VNAV

- **Stabilized approaches** are more in favor than lower minima
- Do not wait for RNP, 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 Nav aids are not available



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



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



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 through APIRG.**

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