Performance-based Navigation (PBN) Symposium and Workshops
16–19 October 2012
ICAO Headquarters, Montréal
www.icao.int/Meetings/PBN-Symposium

# DRAFT PROGRAMME
As of 14 May, 2012

*(Click on a session below for further details)*

- **Day 1: Tuesday, 16th October 2012**
  - **Plenary — PBN Implementation – Where Are We Now?**
  - **Session 1 – PBN: The Big Picture**
  - **Session 2 – Benefits and Challenges for PBN: What are we getting from PBN and can we hope for more?**
  - **Session3 – PBN Implementation: Who is doing what with PBN implementation?**

- **Day 2: Wednesday, 17th October 2012**
  - **Session 4: PBN Implementation stakeholder readiness: Are we ready to go?**
  - **Workshop A – Air Traffic Management: ATM Requirements Forum**
  - **Workshop B – Operations Approval: Flight Operations Requirements Forum**

- **Day 3: Thursday, 18th October 2012**
  - **Workshop A (Cont'd): Air Traffic Management:**
    - **Regulatory and Certification Forum**
    - **Technical Requirements Forum**
    - **Training Forum**
  - **Workshop B (Cont'd) – Operations Approval**
    - **Regulatory and Certification Forum**
    - **Technical Requirements Forum**
    - **Training Forum**

- **Day 4: Friday, 19 October 2012**
  - **Plenary — Back to the Future**
  - **Closing Speech**
  - **FAREWELL**

**Workshop, Tuesday, 16th October 2012**

| | |
|---|---|
| **PLENARY – PBN IMPLEMENTATION** | |
| **WHERE ARE WE NOW?** | |
| 09:00 – 09:10 | Symposium Opening:<br><br>✈ **Nancy Graham**, Director, Air Navigation Bureau, ICAO |
| 09:10 – 09:15 | Administrative details |
| | **Session 1: PBN**<br>**THE BIG PICTURE** |
| 09:20 – 09:40 | ✈ **Keynote address**<br>✈ **Call for Action!**<br><br>*Why PBN and why now? What we should be doing and how we can improve the situation.* |
| 09:40 – 10:00 | ✈ **ICAO's Global Air Navigation Plan (GANP) and the Aviation System Block Upgrades (ASBU's)**<br>✈ **How does PBN fit in? PBN as an enabler.**<br><br>*This will outline very briefly the ASBU approach and then explain PBN as a major enabler for them taking the block upgrade approach.* |
| 10:00 – 10:20 | ✈ **PBN Business Case. Do we really need PBN?**<br>*A high level presentation of business case requirements but not details of cost/benefits.* |
| 10:20 – 10:40 | ✈ **What's new from ICAO?**<br><br>*A basic review of what documents are available and what will soon be online.* |
| 10:40 – 10:50 | **Questions** |
| 10:50 – 11:15 | **Coffee Break** |

## SESSION 2: BENEFITS AND CHALLENGES FOR PBN

### WHAT ARE WE GETTING FROM PBN AND CAN WE HOPE FOR MORE?

**Panel presentations /Discussion**

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|---|---|
| 11:20 – 11:40 | ✈ **Gains for the airline operators** |
| | *A high level presentation of overall benefits to an airline when implementing PBN, fuel, track length, safety, accessibility etc.* |
| 11:40 – 12:00 | ✈ **What can we do with the airspace?** |
| | *A high level approach to the benefits of PBN for airspace design, segregated routes, CDO's, capacity etc* |
| 12:00 – 12:20 | ✈ **Impact upon Air Navigation Service Providers** |
| | *A high level approach to benefits as seen from an ATC perspective, flexible routes, reduced vectoring, CDA's etc.* |
| 12:20 – 12:40 | ✈ **Regulatory and Approval requirements** |
| | ✈ **What do we need to do to gain the benefits?** |
| | *A high level identification of what steps are needed to implement PBN from a regulation/standards perspective.* |
| 12:40 – 13:00 | ✈ **Airframe manufacturer gains** |
| | *A high level approach to benefits as seen from an aircraft manufacturers view, accurate navigation, predictable routing etc* |
| 13:00 – 13:15 | ✈ **Panel discussion and questions** |
| | *Panel member will consist of presenters (or alternates) from the presentations above (industry, regulator and service provider). The aim is to discuss issues pertinent to the presentations given and to make placeholders for further detailed discussion in the workshops.* |
| 13:15 – 14:15 | **Lunch Break** |

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## SESSION 3: PBN IMPLEMENTATION

### WHO IS DOING WHAT WITH PBN IMPLEMENTATION?

Panel presentations /Discussion

| | |
|---|---|
| 14:20 –14:40 | ✈ **PBN Global Implementation Situation** |
| | *A focus on the big picture overview of the implementation status on a global basis.* |
| 14:40 – 15:00 | ✈ **View from the flight deck " PBN, what's in it for me"** |
| | *A pilots perspective of implementation, the issues and the challenges to come.* |
| 15:00 – 15:30 | **Coffee Break** |
| 15:30 –15:50 | ✈ **Air Traffic Control "why do we need to change"** |
| | *ATC perspective of the change and why we need it.* |
| 15:50 – 16:10 | ✈ **Practical implementation – Efficiency, fuel saving and track mileage reduction** |
| | *A presentation of implementation of PBN, the issues arising and benefits being gained.* |
| 16:10 – 16:30 | ✈ **Practical Implementation – Safety and accessibility** |
| | *A presentation of implementation of PBN in a low density area the issues including social impact* |

## SESSION 3: PBN IMPLEMENTATION

### WHO IS DOING WHAT WITH PBN IMPLEMENTATION?

### (CONT'D)

**Panel presentations /Discussion**

| | |
|---|---|
| 16:30 – 16:50 | ✈ **Practical Implementation – Capacity gains in a complex area**<br><br>*A presentation of implementation of PBN in the USA the issues arising together with improvements in capacity* |
| 16:50 – 17:10 | ✈ **Practical Implementation – Environment requirements**<br><br>*A presentation including implementation of PBN in Europe the issues arising together with improved environmental impact.* |
| 17:10 – 17:30 | ✈ **Panel discussion and questions**<br>✈ *Wrap up* |
| 17:45 | **WELCOME RECEPTION** |

**Workshop, Wednesday, 17th  October 2012**

## PLENARY — SESSION 4: PBN IMPLEMENTATION STAKEHOLDER READINESS

### ARE WE READY TO GO?

**Panel presentations /Discussion**

| | |
|---|---|
| 08:45 – 08:50 | ✈ **Opening and Administration** |
| 08:50 – 09:10 | ✈ **Long haul  Airbus/Boeing fleet** |
| 09:10 – 09:30 | ✈ **Short haul regional fleet** |
| 09:30 – 09:50 | ✈ **PBN utilisation - General Aviation perspective** |
| 09:50 – 10:10 | ✈ **Any issue for the military?** |
| 10:10 – 10:30 | ✈ **Systems in the air– Avionics development and certification** |
| 10:30 – 10:50 | ✈ **Systems on the ground – ATC system development and certification** |
| 10:50 – 11:05 | ✈ *Panel discussion and questions* |
| 11:05 – 11:30 | **Coffee Break** |
| 11:30 – 13:00 | Regional Office forum |
| | **"Where the rubber meets the road"** |
| | *A forum discussion of ICAO Regional offices and invited guests to look at issues arising from stakeholder implementation in their regions and the implications of what has already been presented.* |
| | *Wrap up and conclusions to bring forward to the Work shops* |
| 13:00 – 14:00 | **Lunch Break** |

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# WORKSHOP A – AIR TRAFFIC MANAGEMENT

## Moderator David Maynard

Panel presentations / discussion

| 14:00 – 17:15 | ATM REQUIREMENTS FORUM |
|---|---|
| 14:00 - 14:25 | ✈ **Airspace Design** |
| 14:25- 14:50 | ✈ **Instrument procedure design** |
| 14:50- 15:15 | ✈ **Air Traffic Control operating procedures** |
| 15:15 – 15:45 | **Coffee Break** |
| 15:45 – 16:10 | ✈ **Charting** |
| 16:10 - 16:35 | ✈ **Aeronautical Information Management** |
| 16:35 - 17:15 | ✈ *Requirements issue capture and panel discussion* |

## WORKSHOP B – OPERATIONS APPROVAL

Panel presentations / discussion

*(These groups of issues will be by panel discussion with one of the panel taking the lead for each subject possibly with a short presentation 2/3 slides max)*

| 14:00 – 17:15 | FLIGHT OPERATIONS REQUIREMENTS FORUM |
|---|---|
| 14:00 - 14:25 | ✈ **Approach Classification** |
| 14:25- 14:50 | ✈ **Data quality & navigation database** |
| 14:50- 15:15 | ✈ **Flight Crew Procedures** |
| 15:15 – 15:45 | **Coffee Break** |
| 15:45 – 16:10 | ✈ **Instrument procedure charting** |
| 16:10 - 16:35 | ✈ **RNP requirements** |
| 16:35 - 17:15 | ✈ *Requirements issue capture and panel discussion* |

**Thursday, 18th October 2012**

| WORKSHOP A – AIR TRAFFIC MANAGEMENT | |
|---|---|
| **Moderator: David Maynard** | |
| Panel presentations / discussion | |
| **09:00 – 12:45** | **REGULATORY AND CERTIFICATION FORUM** |
| 09:00 – 09:25 | ✈ **Airspace and ATFM regulation** |
| 09:25 – 09:50 | ✈ **Certification for Instrument Approach Procedure design** |
| 09:50 - 10:15 | ✈ **Air Traffic System support certification** |
| 10:15 – 10:40 | ✈ **AIM quality assurance** |
| 10:40 – 11:15 | **Coffee Break** |
| 11:15 – 11:40 | ✈ **Environmental regulation issues** |
| 11:40 – 12:05 | ✈ **Business and safety case** |
| 12:05 – 12:45 | ✈ *Requirements issue capture and panel discussion* |
| 12:45 – 13:45 | **Lunch Break** |
| **13:45 – 15:00** | **TECHNICAL REQUIREMENTS FORUM** |
| 13:45 – 14:00 | ✈ **RNP AR and RNP** |
| 14:00 – 14:15 | ✈ **Air Traffic System requirements** |
| 14:15 – 14:35 | ✈ **Flight planning TBD** |
| 14:35 – 15:00 | ✈ *Requirements issue capture and panel discussion* |

**Thursday, 18th October 2012**

**(CONT'D)**

| | | |
|---|---|---|
| 15:00 – 15:30 | **Coffee Break** | |
| 15:30 - 17:15 | **TRAINING FORUM** | |
| 15:30 – 15:55 | ✈ **Air Traffic Control** | |
| 15:55 – 16:20 | ✈ **Regulatory / procedure design** | |
| 16:20 – 16:45 | ✈ **Regional training initiative** | |
| 16:45 – 17:15 | ✈ *Requirements issue capture and panel discussion* | |

## WORKSHOP B – OPERATIONS APPROVAL

Panel presentations / discussion

*(These groups of issues will be by panel discussion with one of the panel taking the lead for each subject possibly with a short presentation 2/3 slides max)*

| 09:00 – 12:45 | **REGULATORY AND CERTIFICATION FORUM** |
|---|---|
| **09:00 – 09:25** | ✈ **Operations approval process** |
| **09:25 – 09:50** | ✈ **Aircraft eligibility** |
| **09:50  - 10:15** | ✈ **LAM ACs – present and planned** |
| 10:15 – 10:40 | ✈ **FAA ACs present and planned** |
| **10:40 – 11:15** | **Coffee Break** |
| 11:15 – 11:40 | ✈ **EASA CSs – present and planned** |
| 11:40 – 12:05 | ✈ **Business and safety case** |
| 12:05  – 12:45 | ✈ *Requirements issue capture and panel discussion* |
| **12:45 – 13:45** | **Lunch Break** |
| **13:45 – 15:00** | **TECHNICAL REQUIREMENTS FORUM** |
| **13:45 – 14:00** | ✈ **RNP AR Eligibility** |
| **14:00 – 14:15** | ✈ **FMS operations** |
| **14:15 – 14:35** | ✈ **Flight planning** |
| **14:35 – 15:00** | ✈ *Requirements issue capture and panel discussion* |

| | 15:00 – 15:30 | Coffee Break |
|---|---|---|

| 15:30 - 17:15 | TRAINING FORUM |
|---|---|

| 15:30 – 15:55 | ✈ **Flight crew CEA simulators** |
|---|---|
| 15:55 – 16:20 | ✈ *Regulatory* |
| 16:20 – 16:45 | ✈ *Flight planning* |
| 16:45 – 17:15 | ✈ *Requirements issue capture and panel discussion* |

**Workshop, Friday, 19th October 2012**

| Plenary — BACK TO THE FUTURE | |
|---|---|
| 09:00 – 09:15 | ✈ **Recall of objectives** |
| 09:15 – 09:45 | ✈ **The issues and next steps** |
| | ✈ **ATM stream** |
| 09:45 – 10:15 | ✈ **The issues and next steps** |
| | ✈ **Flight Operations stream** |
| 10:15 – 10:55 | ✈ **The challenge - Panel discussion & questions** |
| 10:55 – 11:20 | Coffee Break |
| 11:20 – 11:50 | ✈ **The issues and next steps consolidated** |
| 11:50 – 12:00 | ✈ **Closing speech** – *Nancy Graham, Director,  Air Navigation Bureau, ICAO* |
| 12:00 | **FAREWELL** |

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**Invited speakers *inter alia* from the following organisations:**

**ICAO  FAA   EUROCONTROL   IATA  CANSO        IFALPA        IFATCA**

**SESAR S-JU    EASA     Boeing    Airbus    Bombardier    Embraer**

**DGAC France        Rockwell Collins    Universal    Thales        Emirates**

**South African Airlines      Air Services Australia**