



AFCAC/ICAO Joint Workshop
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**NEEDS, ISSUES AND
CONCERNS**

Proper integration of all aspects of PBN required

“ Ranging from airspace organization and management, airspace design, ATM, procedure design, etc..

“ Also including regulator and users

“ *Process 1* covers project planning and airspace design, effectively outlining steps for a State or region to determine whether the strategic and operational requirements for the development of an airspace concept in order to implement PBN are met

“ Fleet equipage and CNS/ATM infrastructure in the State or region will be assessed

“ Navigation functional requirements will be identified

“ Appropriate navigation specification selected

PBN plan development

- “ Who leads the PBN implementation plan definition ? Task sharing between State and ANSP?

- “ Who is in charge of approving the PBN implementation plan ?

- “ Which stakeholders should participate to the PBN implementation plan working group ?

- “ Which stakeholders are involved in PBN implementation and what is their level of expertise in PBN?
 - “ At regulator level : airworthiness, operations, ANSõ
 - “ At ANSP level
 - “ Airspace users : militaries, general aviation, airline operators

PBN plan development

- “ Approval for GNSS use
- “ GPS monitoring and predictions : how to do it ? Responsibilities ?
- “ Strategy vs. contingency/back-up means in case GPS does not work
- “ What about isolated airports with no ground infrastructure ? Can PBN be used as primary means ?
- “ How to transition from conventional to PBN operations ?

PBN plan development

- ” Fleet capability assessment

- ” How to accommodate legacy aircraft? Should a mandate be used ?

- ” Status and development plan for:
 - ” Navaids infrastructure
 - ” Communication
 - ” Surveillance
 - ” Link with AFI regional plan, national CNS/ATM plan

How to start implementing?

- “ Regulatory Framework
 - “ Rules development
 - “ ATS / AIS / IFP Design
 - “ Operations and Airworthiness

- “ Clear lines of responsibilities for
 - “ Procedure validation and approval
 - “ Operator approval

- “ Role of the State and responsibilities sharing with ANSP

- “ Who leads the implementation ? How to coordinate between State and ANSP ?

How to start implementing?

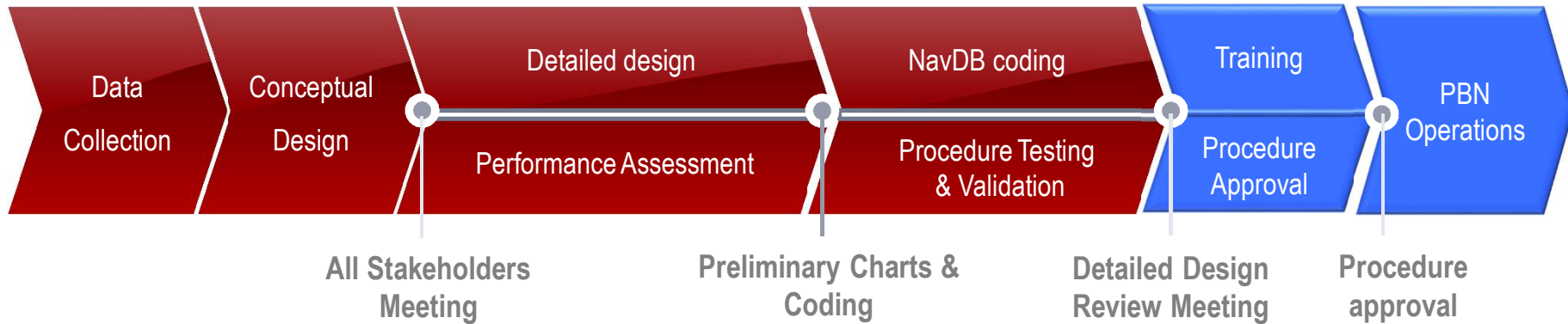
- “ WGS84 data, data control and responsibilities vs. potential changes in obstacle data depending on timeline

- “ Procedure design : in-house or outsourced

- “ Procedure designer training

- “ Best practices for design of
 - “ En route
 - “ Terminal SID/STARs and approaches

Methodology is key



Including training for :

- “ Data surveyors and procedure designers
- “ Flight inspectors
- “ Air Traffic Controllers
- “ Dispatchers and flight crews

How to start implementing?

“ Who is responsible for procedure validation?

- ✓ If the regulator does the validation, how long does this take?
- ✓ Is it a requirement to contain Primary/Secondary protection areas in controlled airspace?
- ✓ What revisionary measures do you have for GNSS (Back up)?

“ Flight validation / flight inspection

“ Capacity building for inspectors to approve procedures

PERFORMANCE-BASED NAVIGATION PLANS

- “ WHAT ARE YOUR ISSUES?
 - “ KNOWLEDGE / TRAINING
 - “ RESOURCES
 - “ COMMUNICATION
 - “ APPROVAL PROCESS

PERFORMANCE-BASED NAVIGATION PLANS

” SUMMARY OF ISSUES.