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PBN Performance Based Navigation

- Review of Day 1 -

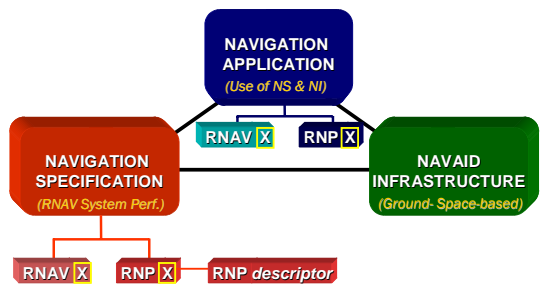



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PBN Concept Summary





NAVIGATION APPLICATION
(Use of NS & NI)

NAVIGATION SPECIFICATION
(RNAV System Perf.)

NAV AID INFRASTRUCTURE
(Ground- Space-based)

RNAV X RNP X

RNAV X RNP X RNP descriptor

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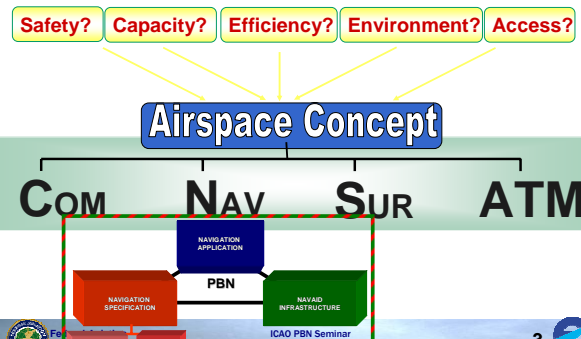
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Airspace Concept Summary

Safety? Capacity? Efficiency? Environment? Access?

Airspace Concept



COM NAV SUR ATM



NAVIGATION SPECIFICATION
RNAV RNP

NAV AID INFRASTRUCTURE

NAVIGATION APPLICATION
PBN

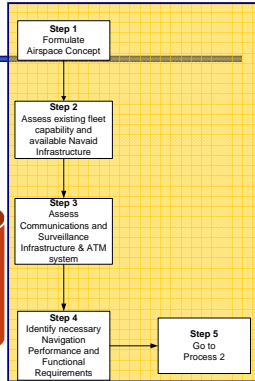
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Volume 1 Part B, Chapter 2: A Snapshot of Process #1

DETERMINE REQUIREMENTS (NAVIGATION FUNCTIONALITIES)





Step 1 Formulate Airspace Concept

Step 2 Assess existing fleet capability and available Navaid Infrastructure

Step 3 Assess Communications and Surveillance Infrastructure & ATM system

Step 4 Identify necessary Navigation Performance and Functional Requirements

Step 5 Go to Process 2

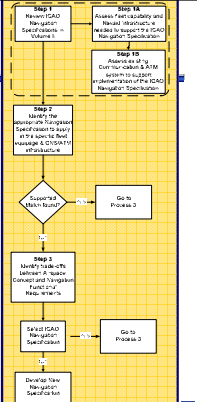
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Volume 1 Part B, Chapter 3: A Snapshot of Process #2

IDENTIFY AN ICAO NAV SPEC FOR IMPLEMENTATION





Step 1 Review ICAO Navigation Specifications in Volume 1

Step 2 Identify the navigation specification that best meets the user's needs

Step 3 Assess the navigation specification for implementation

Step 4 Identify the navigation specification for implementation

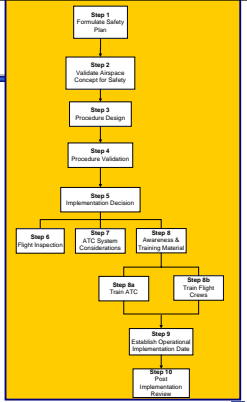
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Volume 1 Part B, Chapter 4: A Snapshot of Process #3

PLANNING AND IMPLEMENTATION



Step 1 Formulate Safety Plan

Step 2 Validate Airspace Concept for Safety

Step 3 Procedure Design

Step 4 Procedure Validation

Step 5 Implementation Decision

Step 6 Flight Inspection



Step 7 ATC System Considerations

Step 8 Awareness & Training Material

Step 9 Train Flight Crew

Step 10 Establish Operational Implementation Date

Step 11 Pilot Implementation Review

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Case Study

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Next – Day 2....

- Overview of Navigation Specifications
- Oceanic and Remote Continental Specs
(RNAV 10, RNP 4)
- En Route Continental Specs
(RNAV 5, 2)
- Terminal Specs
(RNAV 1, Basic RNP-1)

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