
IFP PROVISION AND SAFETY
OVERSIGHT WORKSHOP
(Amman, Jordan, 7–9 December 2025)

Instrument Flight Procedure Design Principle

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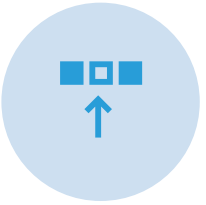
IFP Design Principles

SAFETY

CONSISTENCY

OBSTACLE CLEARANCE



OPERATIONAL USABILITY

ICAO Reference for IFP Design

Overview of ICAO documents supporting Instrument Flight Procedure design.

Core IFP Design Document

Volume I — Flight Procedures

Volume II — Construction of Instrument Flight Procedures

Volume III — Aircraft Operating Procedures

Quality Assurance & Process

Vol 1: QM System

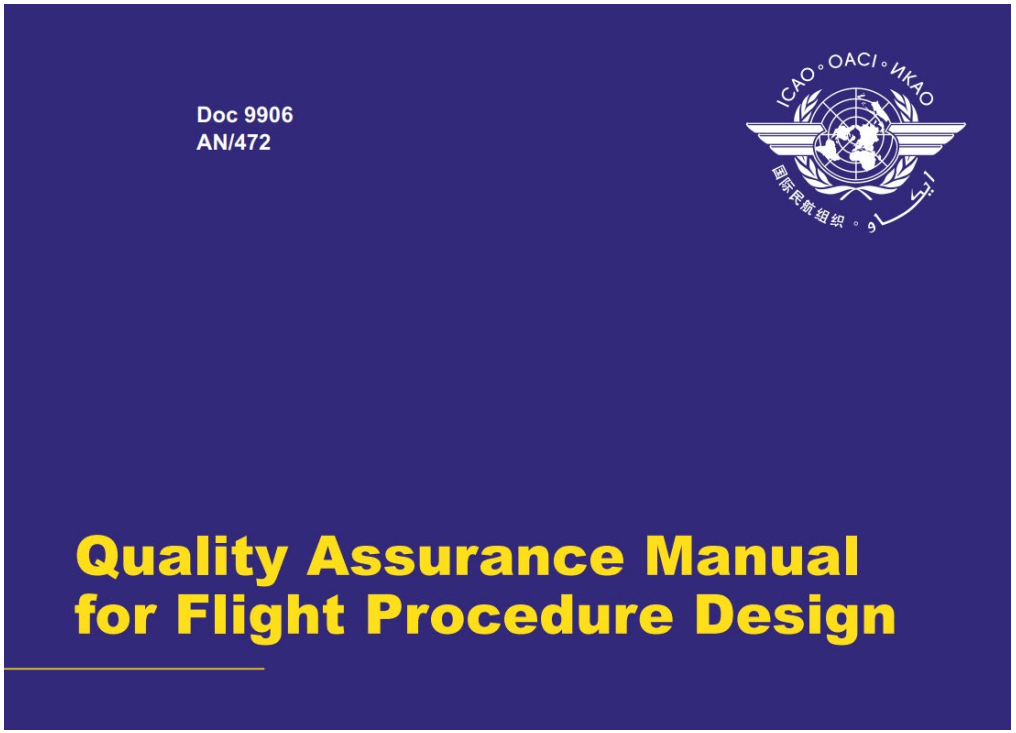
Vol 2: Designer Training

Vol 3: Software Validation

Vol 4: Procedure Design Guidance

Vol 5: Validation of Instrument Flight Procedures

Vol 6: Flight Validation Pilot Training and Evaluation



PBN & Navigation Specifications

- Doc 9613 — PBN Manual
- RNAV & RNP NavSpecs
- Functional and operational requirements

RNP AR Procedures

Doc 9905 — RNP AR Manual

Advanced guidance beyond PANS-OPS

RNP AR procedures provide significant operational and safety advantages over other RNP procedures.

Aeronautical Information Management

ANNEX 15 — AERONAUTICAL INFORMATION SERVICES

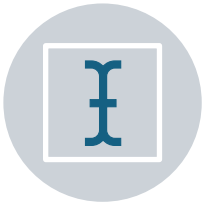
DOC 10066 — PANS-AIM

DATA INTEGRITY, EXCHANGE, AND PUBLICATION STANDARDS

Charting Requirements

ANNEX 4 — AERONAUTICAL CHARTS

CHART TYPES

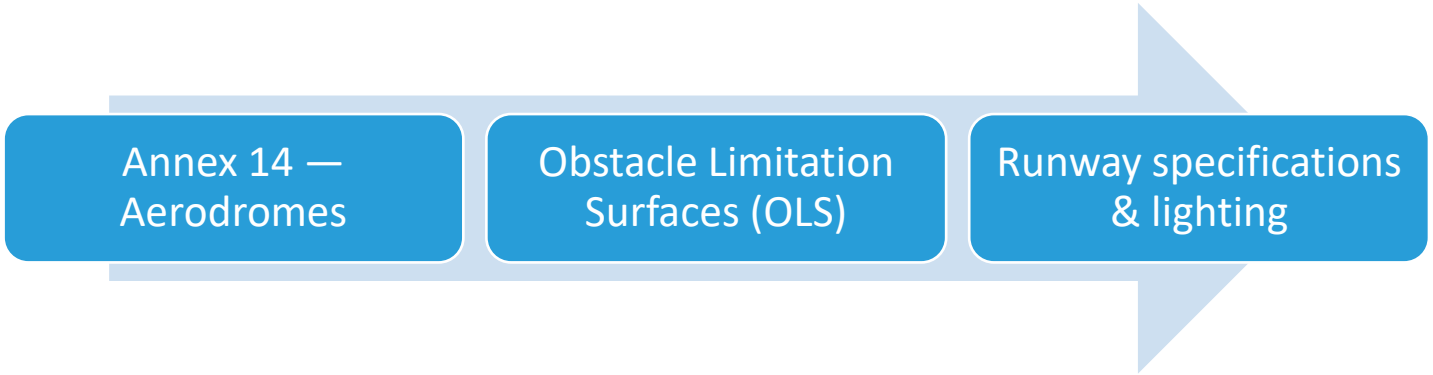


SYMBOLS

PRESENTATION STANDARDS

Doc 8697 Aeronautical Chart Manual

Aerodrome & Obstacle Data

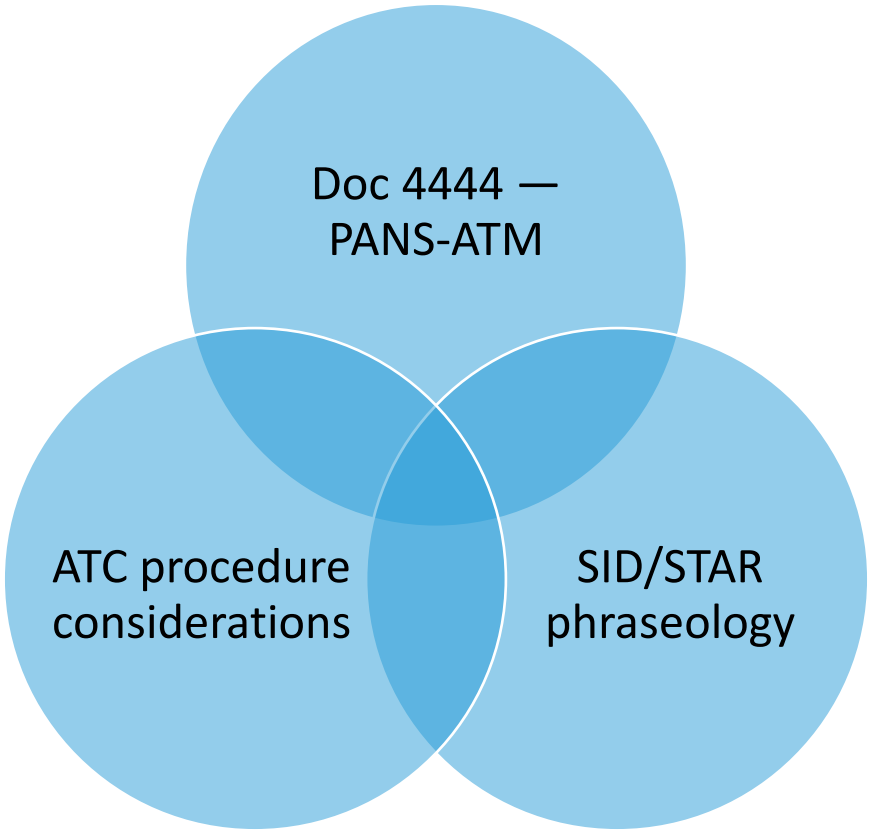


Flight Validation & Oversight

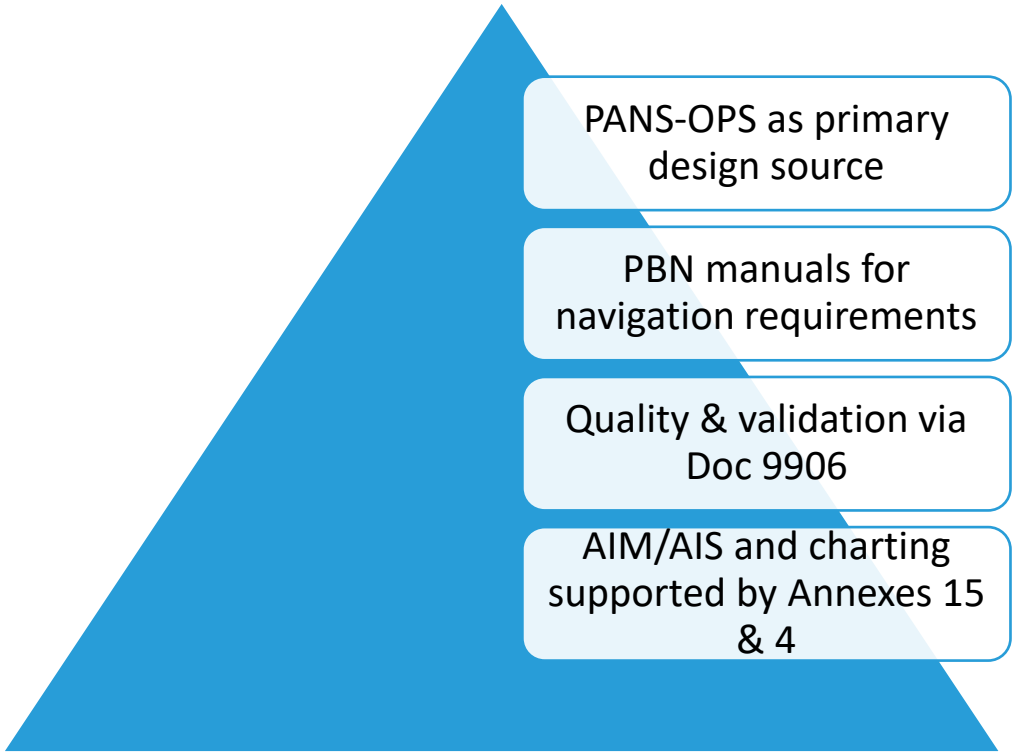
Doc 9906 Volume 6

Annex 6 — Operation of Aircraft

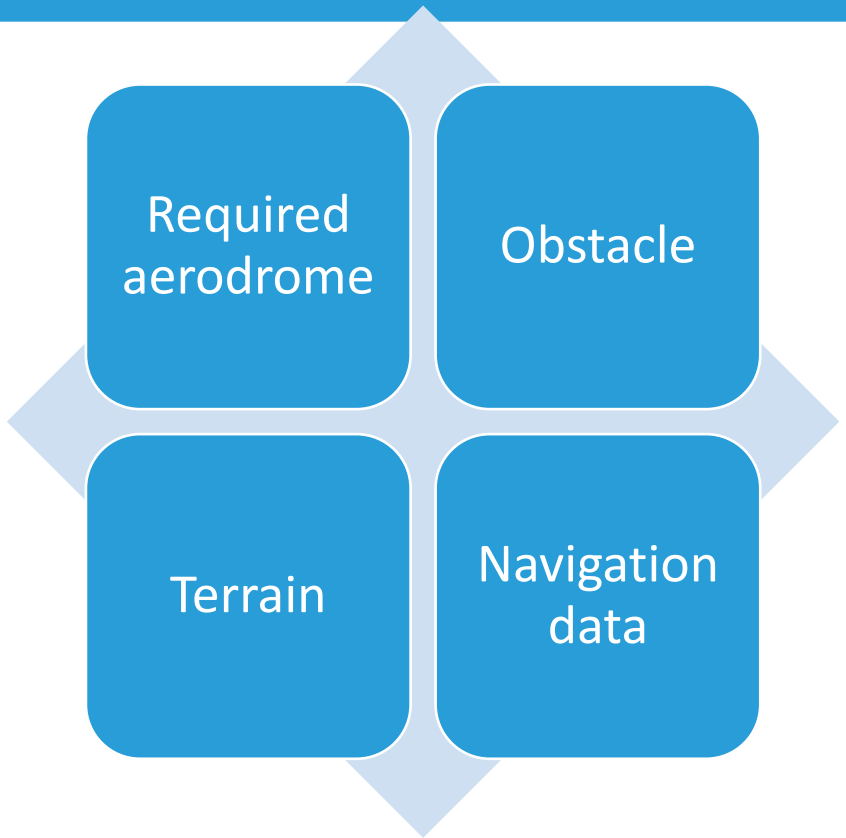
ATC Integration & Phraseology



Summary of Reference Tree



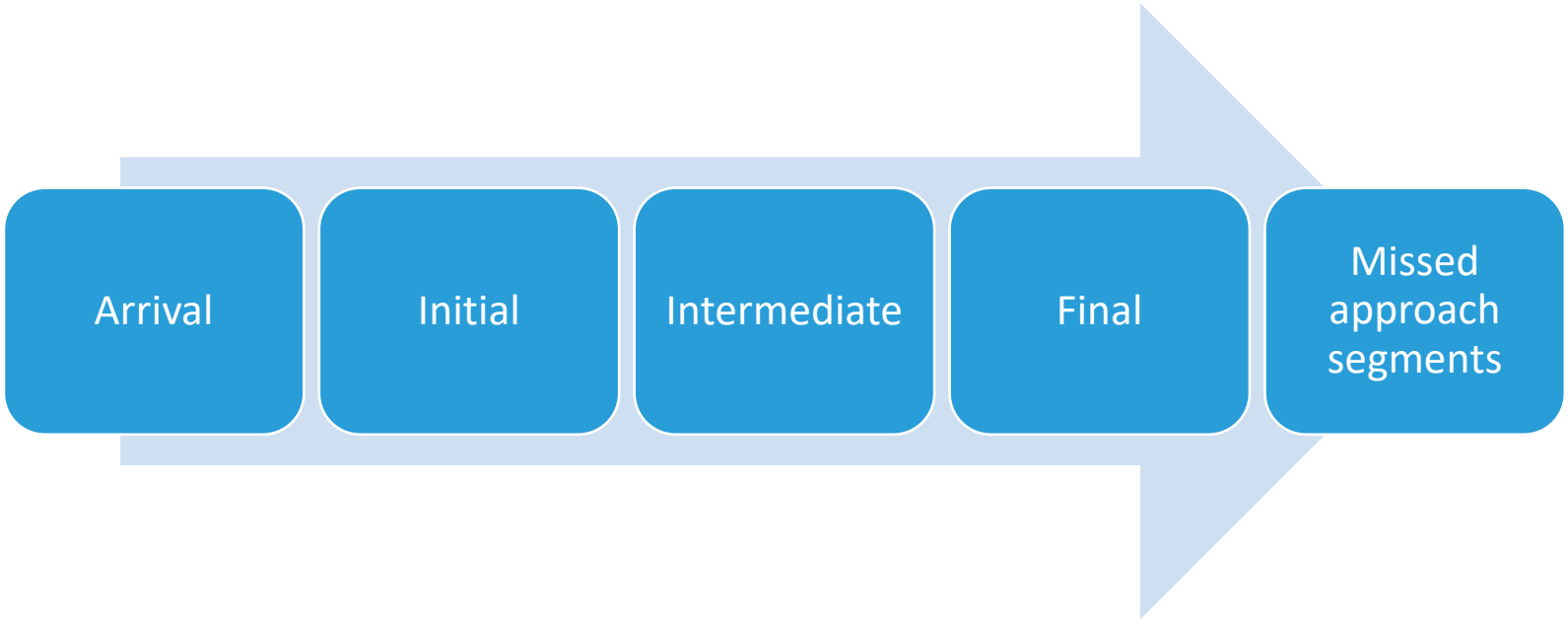
IFP Design Documentation & Data Requirements



Obstacle Evaluation – Core Concept

Ensuring minimum obstacle clearance (MOC) and safety buffers.

Instrument Approach Segments Overview



Departure Procedure Design Principles

Design of conventional and RNAV/RNP SIDs

Gradient requirements.

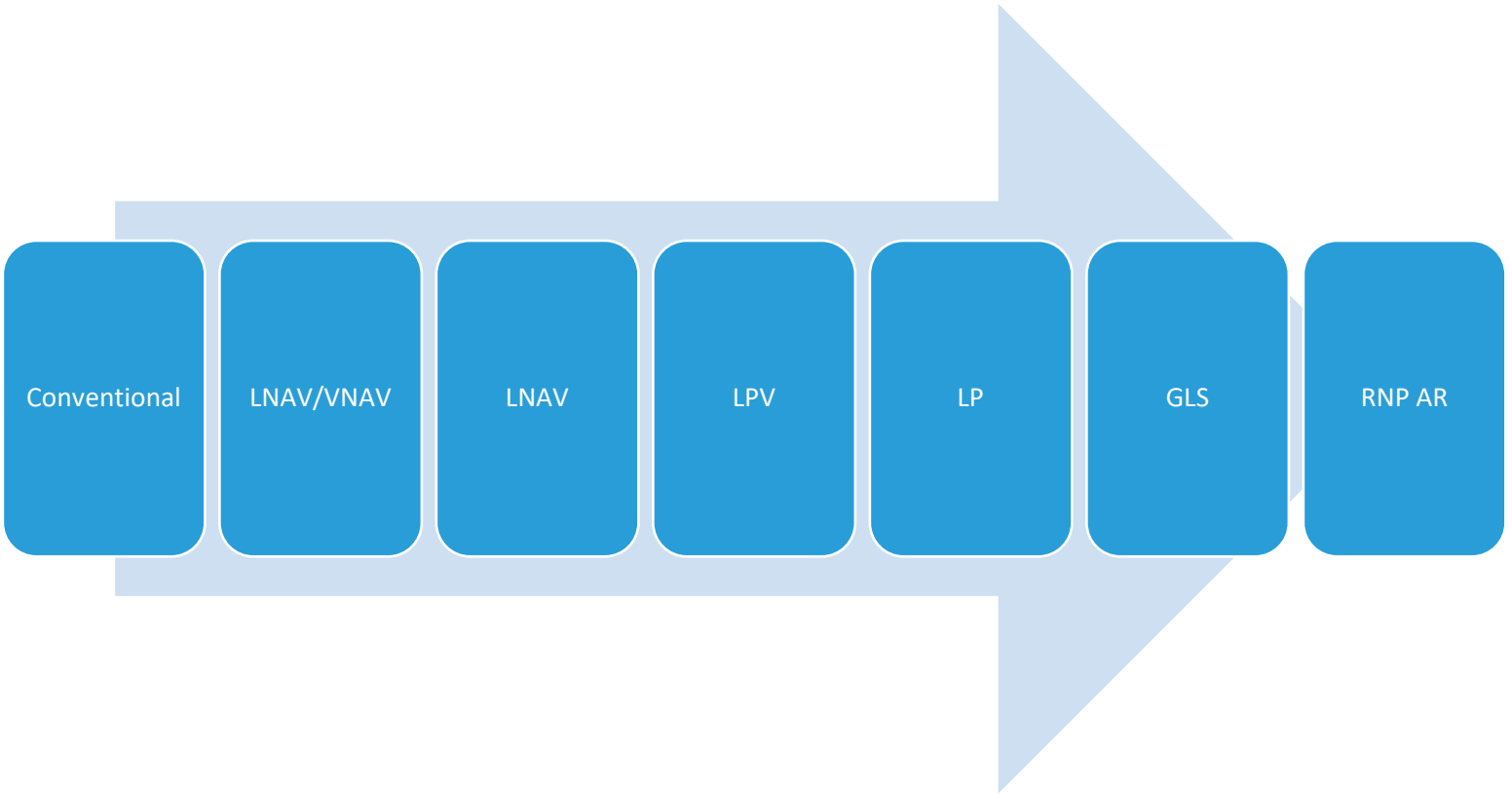
Arrival Procedure Design Principles

STAR design

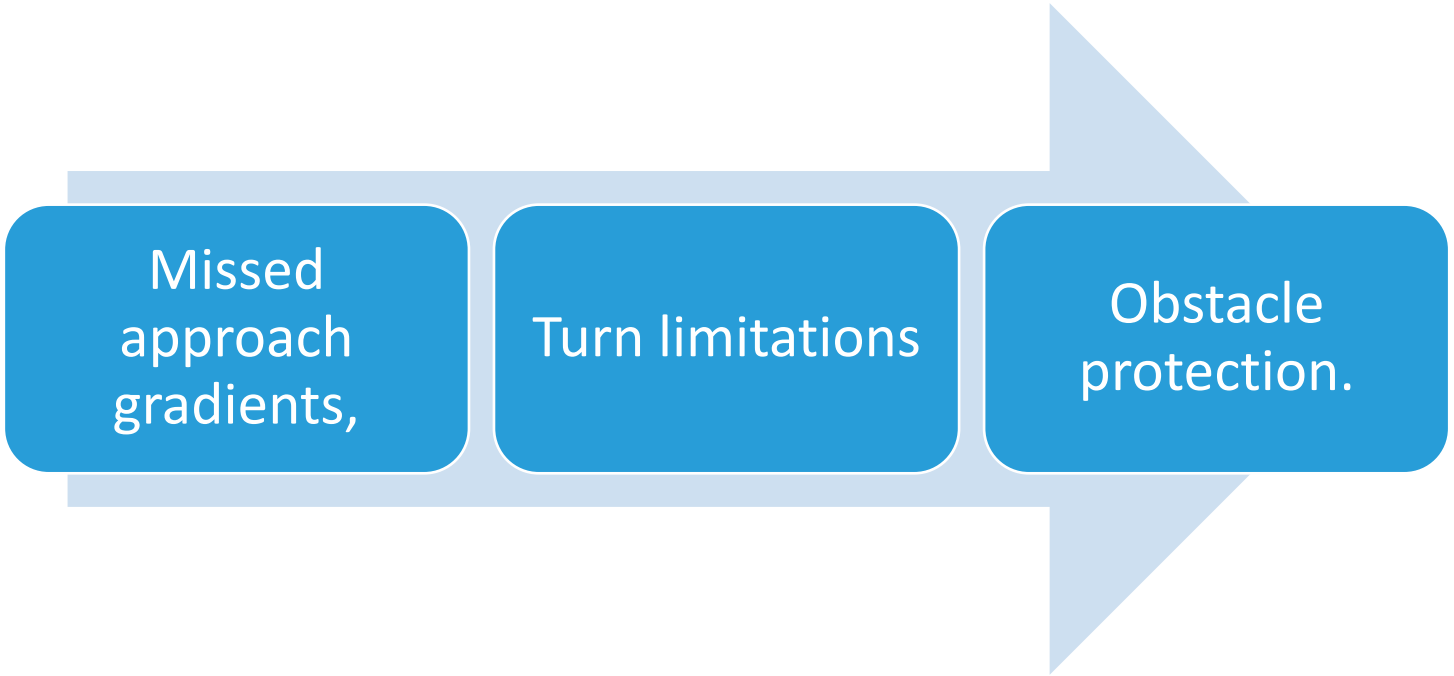
Sequencing

Speed/altitude constraints.

Approach Procedure Design Principles



Missed Approach Design Fundamentals



Safety Assessment & Criteria

Assessment methodology and regulatory compliance it should be a group task with stakeholders

Quality Assurance & Periodic Review

Need for evaluations, maintenance, and periodic reviews. It should be continuous process.

Conclusion – Harmonization & Global Best Practices

Importance of standardized procedures and global interoperability.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&
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Thank You!

ICAO