

ICAO WACAF Workshop

1st – 4th September 2015

**Quality Assurance
DOC 9906 Vol 1**

**Step 5&6: Apply Criteria
& Document and Store**

Steps 5 & 6



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Apply Criteria

Document and Store

Conclusion

Apply Criteria



Apply Criteria



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- Once the relevant data have been collected and the draft IFP has been approved, the design activity can commence. An individual designer should be nominated as the responsible designer. Continued coordination with interested/affected stakeholders should be maintained throughout the design phase.
- International procedure design criteria are detailed in:
 - PANS-OPS (Doc 8168),
 - RNP AR Procedure Design Manual (Doc 9905).
- ICAO regularly reviews and amends these criteria.

Apply Criteria



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The technical report includes:

- Applicable design criteria;
- Data sources and set of input data used for the design (airport, terrain, obstacles);
- All calculations including transformation parameters used;
- All design parameters used (speeds, bank angles, wind velocity, temperature, descent / climb gradients, height loss, obstacle assessment surface (OAS), etc.);
- Any deviation from selected criteria including justification and link to validation as required;
- Full design rationale, construction details;
- Design assumptions and constraints;
- Document version and date;
- Draft elements for publication including chart and coding table as applicable;
- Any other pertinent points of interest resulting from the FPD process, e.g. software tools used for the design, advantages and drawbacks of the assessed scenarios.

Apply Criteria



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To enhance the integrity throughout the design process, the use of automated or semi-automated tools is recommended.

All software tools should be validated. Guidance on the validation of software tools is provided in Volume 3 — *Flight Procedure Design Software Validation*.

The documentation should include a clear statement of compliance with the State-approved criteria together with detailed notes on any deviations and evidence of approval for each deviation. There should also be a record of each design review and sign-off.

Document and Store



Document and Store



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- Traceability is the key element in the design of a new IFP. All assumptions made and methods used in the implementation of a new or modified FPD should be documented in a uniform manner and kept available at least during the lifetime of the IFP.
- Provide documented details
- Integrity of data
- Digital archiving is better but not always simple. Each state to establish a method and process.
- As far as applicable, the archived data should remain available in a state permitting a repetition or validation of the process in a later stage.

Conclusion



Conclusion



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- Tasks and content of those two steps are clearly identified in the DOC 9906
- Detailed design output must be accessible, complete and properly documented and stored as they are inputs to the safety assessment and validation steps.

Also necessary for maintenance of IFP.

- Role of state is limited to :
 - Providing information for designer request
 - Providing list of requirements and any specificities for the documentation and storage (already at Project specification stage)

Any Questions?

