



OPERATIONAL PERFORMANCE

Required Navigation Performance



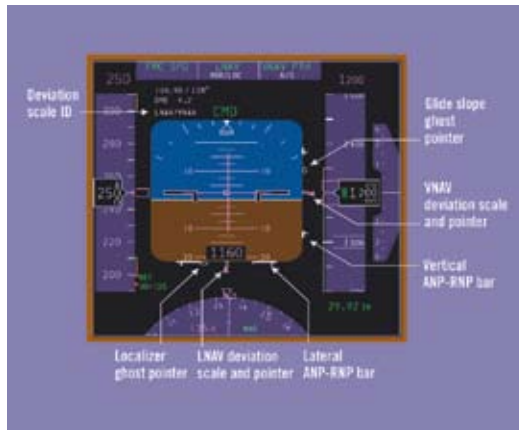
LIFECYCLE
SOLUTIONS



OPERATIONAL IMPLEMENTATION SOLUTIONS

Boeing LIFECYCLE SOLUTIONS

are focused on improving your operational performance through fleet enhancements and upgrades. This includes the most optimal, flexible, and efficient use of airspace.



ENHANCED FLIGHT SAFETY AND IMPROVED OPERATION EFFICIENCY

Boeing can help you chart the most economical course to implement Required Navigation Performance (RNP) operations. We'll provide a complete turnkey program to manage implementation of RNP operations,

including flight procedure design that takes maximum advantage of your Boeing airplane capabilities, and analysis of your fleet missions and route structure to map RNP implementation strategy.



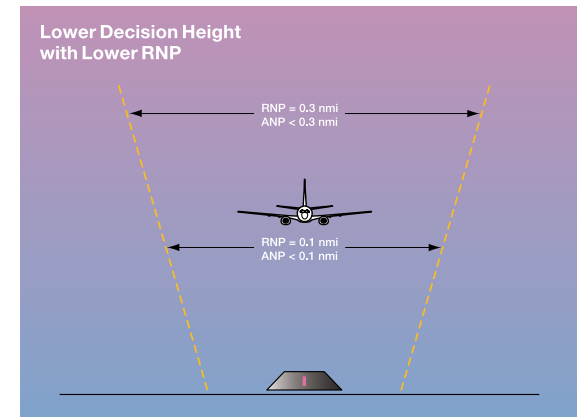
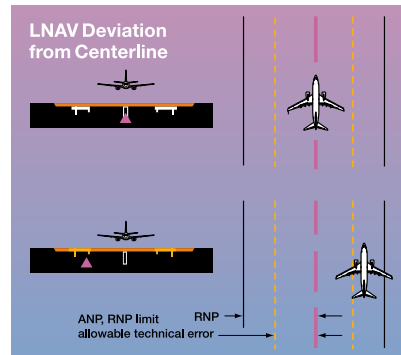
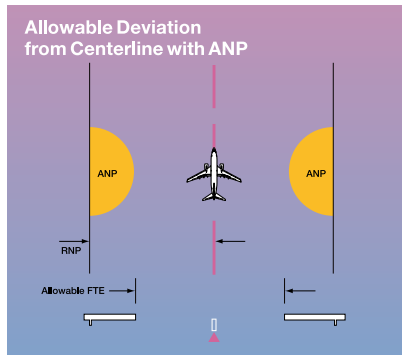
Safety, access, capacity, predictability, schedule reliability, efficiency, and environmental impacts.

RNP operations will

- Enhance safety through precise approach, departure, and missed approach.
- Promote design and use of environmentally beneficial arrival and departure procedures.

- Improve airport and airspace access in all weather conditions and provide the ability to meet special environmental and terrain obstacle clearance constraints.
- Enhance reliability, repeatability, and predictability of operations, leading to increased throughput.
- Increase schedule reliability through more consistent access and throughput in all weather conditions.

- Reduce delays at airports and in certain dense airspace through the application of new parallel routes and terminal area airspace redesign.
- Increase efficiency through less circuitous routes and optimize airspace utilization.
- Enable flexible routes such as wind-optimal and great circle routes when beneficial.



Single point of contact for developing an RNP solution to maximize airplane capabilities.

Boeing and its family of companies provide an integrated RNP implementation program. We'll work with you to identify the markets and airplanes in your fleet that will provide the greatest return on your RNP capability investment. We'll develop an implementation project plan that will produce the quickest operational improvement while ensuring optimum revenue service from your fleet throughout the project. We'll manage all phases of the implementation project.

- Design and validate RNP procedures.
- Develop operational specifications and manual revision, as required by airline.
- Identify and manage suppliers and contractor services.
- Develop avionics configuration recommendations to support fleet RNP capabilities and provide modification kit if required.
- Provide flight crew training if required.
- Provide support to airlines for gaining RNP operations regulatory approval.

Aircraft performance enhancements.

At your request, Boeing Services will help you obtain aircraft performance enhancements to take full advantage of RNP operations.

- Engine thrust rating increase for applicable aircraft/engine combinations.
- Increased time at takeoff thrust for some aircraft/engine combinations.
- AFM-DPI and Topaz takeoff performance calculation program.
- Tailored airport analysis on request.





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