

Aircraft Performance Based Mechanisms

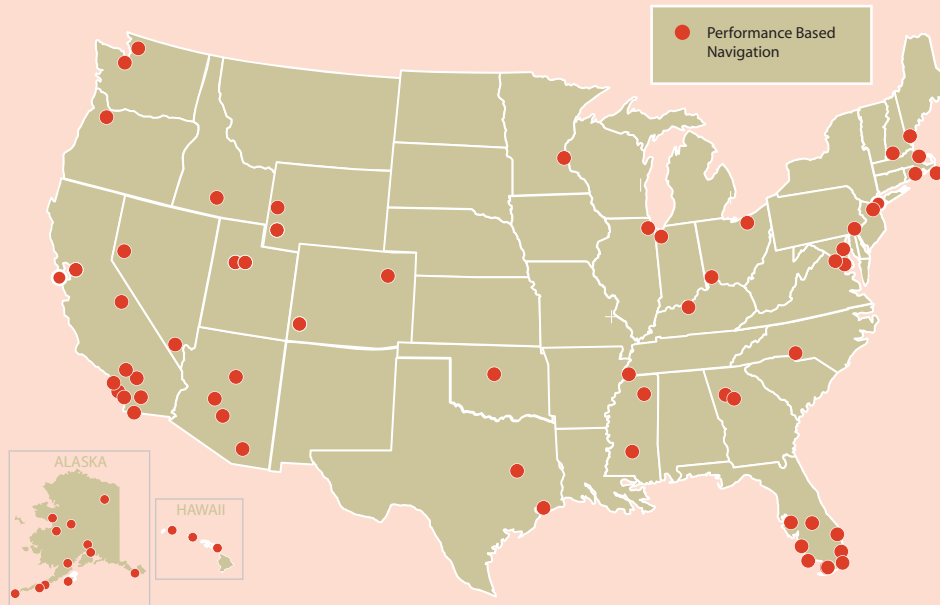
Area Navigation (RNAV) & Required Navigation Performance (RNP).

RNAV moves us towards a framework in which an aircraft must comply with specified operational performance requirements in order to fly more cost-effective automated trajectories. RNP introduces the requirement for onboard performance monitoring and alerting. Aircraft and controller performance increases are being realized, for example in Atlanta 20-30% ATC productivity increases have resulted in up to 10 additional departures per hour, and Delta has estimated \$36M savings annually at that location.

- Introduced 64 published routes and procedures.
- Accelerated implementation at four high priority airports, Dallas-Ft.Worth, Chicago O'Hare, Houston's Bush Intercontinental, and New York's John F. Kennedy.

Wide Area Augmentation System (WAAS) Localizer Performance with Vertical Guidance (LPV) approaches gives equipped aircraft a lower cost space-based, ILS-like approach option to runways with published LPV minimums.

- Integrated nine international reference stations.
- Deployed two new geostationary satellites.



- Published over 325 LPV approaches.
- Aug 08 – the number of LPV approaches expected to surpass the number of ILS approaches.

Optimized Profile Descent (OPD). These arrivals (also known as Continuous Descent Arrivals--CDAs') provide the operator the ability to fly the aircraft's optimal vertical profile with a continuous descent. The FAA is currently designing, modeling, evaluating, and demonstrating procedures that accommodate OPD at several facilities in an effort to reduce noise and emissions, as well as increase fuel efficiency (estimated to be 100M gallons annually if implemented nationwide) .

- Implemented one Standard Terminal Arrival Procedure (STAR) at Los Angeles that accommodates OPD (used by 25% of LAX traffic). Expected to implement two more STARs in July 2008 that will increase OPD availability to 50% of LAX traffic.
- Designed one STAR OPD procedure for San Diego, expected to be published in Nov 2008, that will handle 50% of the traffic.
- RNAV STAR procedures designed for optimum profiles available at six OEP airports.
- ODP demonstrations and evaluations at seven airports.

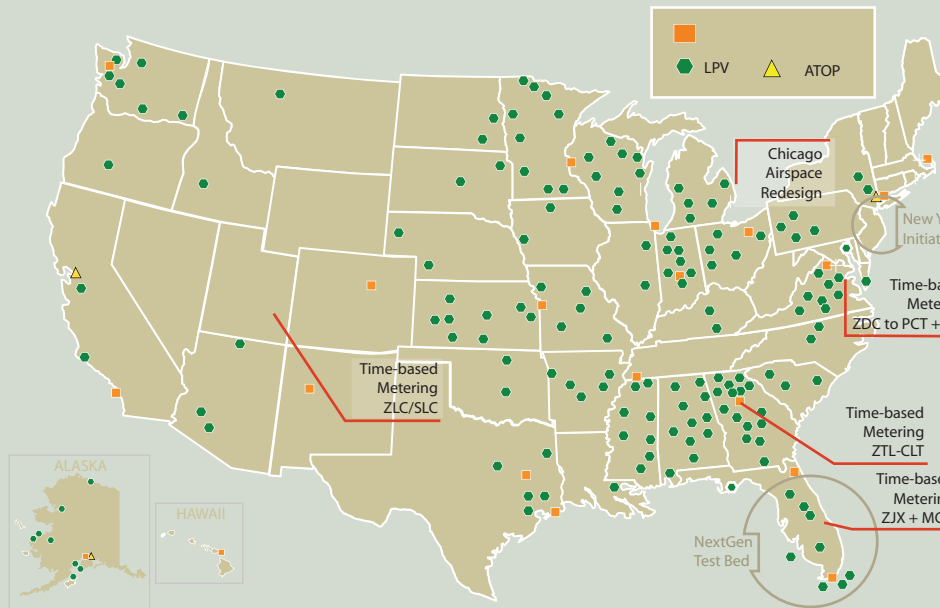
Airspace Capacity

Airspace Design and Improvement. Refining airspace design and procedures that increase our use of air traffic management automation are part of our efforts to enhance system capacity, user efficiency and safety.

- Time-based Metering Procedures – four En Route centers.
- Initial Traffic Flow Management – Modernization (TFM-M).
- Airspace Redesign – Chicago.
- Airspace Redesign – New York New Jersey.
- Airspace Redesign – Houston.
- Adaptive Compression tool for the Airspace Flow Program (AFP).
- Advanced Technologies and Oceanic Procedures (ATOP) for the West Atlantic Route System, the Atlantic portion of Miami Oceanic, and the San Juan flight information region.

New York Initiatives. The FAA instituted a special office to focus attention on the airspace around New York. Partnering with industry, the FAA convened an Aviation Rulemaking Committee (ARC) that resulted in more than 70 recommended initiatives aimed at reducing delays here.

- De-conflict Newark arrivals over SHAFF intersection.



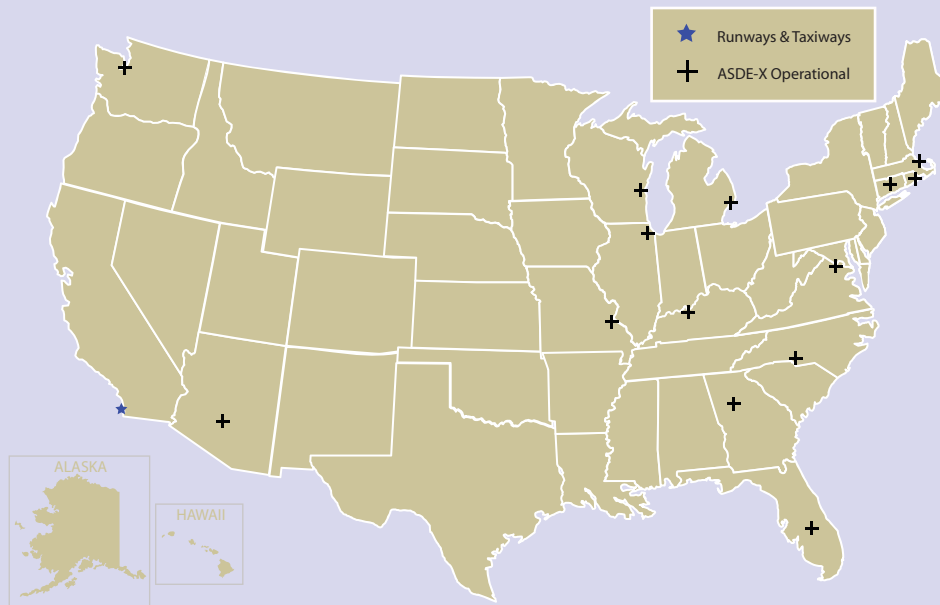
- Simultaneous Visual Approaches to Runway 4L/R at Newark.
- Enhanced procedures for Caribbean arrivals.
- New procedures to allow arrivals to Runway 29, while landing Runway 4R at Newark.
- Simultaneous Approaches to Runways 31L/R at JFK.
- Accessing J134/J149 from ELIOT Intersection.

Improved ILS Runway Visual Range (RVR) Landing Capabilities. Due to advances in aircraft equipage and improvements in ILS ground system performance, the FAA was able to safely reduce landing visibility minimums, enhancing capacity and reducing the number of aircraft diversions.

- Reduced the required approach RVR from 2400 to 1800 feet for properly equipped aircraft (271 approaches at 190 airports).
- Authorized Category (CAT) II approach minimums to runways with CAT I ILSs that meet CAT II ILS performance criteria for properly equipped aircraft (three complete and 37 in progress).
- Reduced the minimum RVR required for takeoff on runways without centerline lighting from 1600 to 1000 feet (370 runways at 99 airports).
- Harmonized FAA takeoff minimums with European Joint Aviation Authority standards, reducing the RVR minimums required for takeoff from 600 to 500 feet

Airport Capacity

The largest capacity improvements for airports, building new runways and taxiways, require significant lead time (10-15 years) and substantial investment. NextGen technologies will allow greater design flexibility with closer simultaneous landing separations. Surface automation technology will improve situational awareness for all operators as well as lead to greater surface movement efficiencies. Advances in aircraft systems allowed for revision of runway visibility takeoff minimums that reduced ground delays and increased capacity. The enhanced surface surveillance provided by the 12 currently deployed ASDE-X systems has reduced airport delays by one million minutes nationwide.



- New Center Taxiway at Los Angeles.
- Airport Surface Detection Equipment – Model X (ASDE-X) declared operational at four sites (12 total) to date.
- Reduced runway visual range (RVR) minimums from 600 to 500 feet to harmonize the FAA takeoff minimums with the European Joint Aviation Authority and reduced the minimum RVR required on runways without centerline lighting from 1600 ft. to 1000 ft.. (370 runways at 99 airports).