NextGen Washington Dulles International Airport

Washington Dulles International Airport (IAD) is the 24th busiest airport in North America in terms of passenger traffic, which decreased by 2.8 percent in 2013 to 21.8 million. During this time the number of operations (landings and take-offs) also decreased by 1.4 percent to 307,748. In 2013, IAD was the 20th busiest airport in terms of cargo volume; 252,483 metric tons (277,731 U.S. tons) of freight and mail passed through its facilities.

United Airlines (including its regional affiliates) operate the majority of the average daily domestic flights from IAD. In addition to adding a new runway, several NextGen capabilities and enabling improvements have been implemented at IAD. These improvements include Airport Surface Detection Equipment — Model X (ASDE-X), External Surface Data Release, Adjacent Center Metering (ACM), Performance Based Navigation (PBN) procedures, basic rerouting, and Time Based Flow Management (TBFM).

All airport information shown above is reported by Calendar Year (CY); results in the table below are reported by Fiscal Year (FY), October 1 — September 30.

Scorecard

Efficiency
Capacity

Efficiency Performance Indicators

Performance Indicator (FY)	2009	2010	2011	2012	2013	2014
Average Gate Arrival Delay *Minutes per Flight* **During reportable hours, the yearly average of the difference between the Actual Gate-In Time and the Scheduled Gate-In Time for flights to the selected airport from any of the ASPM airports. The delay for each FY is calculated based on the 0.5th — 99.5th percentile of the distributions for the year. Flights may depart outside reportable hours, but must arrive during them. The reportable hours vary by airport.**	0.9	0.0	3.0	2.0	3.5	4.6
Average Number of Level-offs per Flight *Counts per Flight* **The count of level-offs as flights descend from cruise altitudes to the arrival airport, averaged for the fiscal year.**	[1]	[1]	3.6	3.5	3.4	3.4
Distance in Level Flight from Top of Descent to Runway Threshold *Nautical Miles per Flight* **The distance flown during level-off segments as flights descend from cruise altitudes to the arrival airport, averaged for the fiscal year.**	[1]	[1]	53.8	51.9	49.8	49.0

Effective Gate-to-Gate Time *Minutes per Flight* **During reportable hours, the difference between the Actual Gate-In Time at the destination (selected) airport and the Scheduled Gate-Out Time at the origin airport. Flights may depart outside reportable hours, but must arrive during them. The reportable hours vary by airport and the results are reported by FY.**	140.8	139.0	139.1	143.6	145.4	151.5
Taxi-In Time *Minutes per Flight* **During reportable hours, the yearly average of the difference between Wheels-On Time and Gate-In Time for flights arriving at the selected airport from any of the Aviation System Performance Metrics (ASPM) airports. Flights may depart outside reportable hours, but must arrive during them. The reportable hours vary by airport.**	6.9	7.1	7.1	6.9	6.7	7.0
Taxi-Out Time *Minutes per Flight* **During reportable hours, the yearly average of the difference between Gate-Out Time and Wheels-Off Time for flights from the selected airport to any of the ASPM airports. Flights must depart during reportable hours, but may arrive outside them. The reportable hours vary by airport.**	18.6	17.9	17.6	16.7	17.6	17.6

[1] **Consistent data for the time period prior to FY 2011 are not available.**

As described by ICAO, *efficiency addresses the operational and economic cost-effectiveness of gate-to-gate flight operations from a single-flight perspective. In all phases of flight, airspace users want to depart and arrive at the times they select and fly the trajectory they determine to be optimum.*

Capacity Performance Indicator

Performance Indicator (FY)	2009	2010	2011	2012	2013	2014
Average Daily Capacity *Number of Operations* **During reportable hours, the average daily sum of the Airport Departure Rate (ADR) and Airport Arrival Rate (AAR) reported by FY. The reportable hours vary by airport.**	2,103	2,080	2,037	2,168	2,164	2,163

Average Hourly Capacity During Instrument Meteorological Conditions (IMC) *Number of Operations* **The average hourly capacity reported during IMC weather conditions (as defined by ASPM). Capacity is defined as the sum of Airport Departure Rate (ADR) and Airport Arrival Rate (AAR). It is calculated based on the reportable hours at the destination airport. The reportable hours vary by airport.**	121	116	114	119	119	116

As described by ICAO: *The global Air Traffic Management (ATM) system should exploit the inherent capacity to meet airspace user demands at peak times and locations while minimizing restrictions on traffic flow. ICAO also notes: The ATM system must be resilient to service disruption and the resulting temporary loss of capacity.*

Collaborative Air Traffic Management (CATM)

Involves NAS operators and FAA traffic managers, along with advanced automation, in managing daily airspace and airport capacity issues such as congestion, special activity airspace and weather. Updated automation will deliver routine information digitally.

Improved Approaches and Low-Visibility Operations (IALVO)

Outlines ways to increase access and flexibility for approach operations through a combination of procedural changes, improved aircraft capabilities and improved precision approach guidance.

Improved Multiple Runway Operations (IMRO)

Improves runway access through the use of improved technology, updated standards, safety analysis and modifications to air traffic monitoring tools and operating procedures that will enable more arrival and departure operations.

Improved Surface Operations

Focuses on improved airport surveillance information, automation to support airport configuration management and runway assignments and enhanced cockpit displays to provide increased situational awareness for controllers and pilots; a key step is sharing airport surface information with authorized stakeholders.

On-Demand NAS Information (ODNASI)

Ensures that airspace and aeronautical information is consistent across applications and locations, and available to authorized subscribers and equipped aircraft.

Performance Based Navigation (PBN)

Addresses ways to leverage emerging technologies, such as satellite-based Area Navigation and Required Navigation Performance, to improve access and flexibility for point-to-point operations.

Separation Management

Provides controllers with tools to manage aircraft in a mixed environment of varying navigation equipment and wake performance capabilities.

Time Based Flow Management (TBFM)

Enhances system efficiency and improves traffic flow by leveraging the capabilities of the Traffic Management Advisor decision-support tool, a system that is already deployed to all contiguous U.S. Air Route Traffic Control Centers.

NextGen Implementation Plan

View City Pairs Data

Reportable Hours for IAD
07:00 - 22:59 local time