Problem:
On January 29, 2010 the FAA implemented a GDP for LGA for wind/runway configuration. The data used to develop the GDP plan was not adequate to make an accurate assessment of the demand or the capacity for the forecasted weather conditions. As a result, multiple traffic management initiatives (TMIs) were imposed, resulting in significant delays for all aircraft operating to or from LGA. A ground stop, a ground delay program (GDP) and a revision to the GDP were used to manage a perceived imbalance between arrival demand and capacity.

Implications:
The operational tempo of all the airlines using LGA was disrupted, thousands of passengers were delayed from their scheduled arrivals, and valuable airline resources such as crew time, fuel and aircraft operating time were wasted.

- The average delay associated with the 32-rate GDP was 50 minutes per aircraft for 346 aircraft. That represents 17,300* minutes of delay; at $74/operating minute this represents a cost of $1.28MM.
- The revised GDP (35-rate) still imposed a substantial penalty, with average delays of 24 minutes for 312 aircraft; at $74/operating minute, this represents a cost of $554,112.
- The ground stop “pushed” demand into the GDP, which added to the number of aircraft delayed and increased the total delay costs.

Solution:
ATC Portal provided an easy to understand “snapshot” of the LGA demand/capacity relationship for an 8 hour segment into the future. The predictions on the software clearly showed that the average demand for LGA between 1200 and 2300 (local times) and the capacity at LGA for the weather that was forecast were NOT out of balance. The picture presented in ATC Portal for LGA showed that the normal arrival demand for Fridays over the past three months of operation does not exceed 34 an hour except for the 1300hr (37 rate) and the 1800hr (38 rate). This means that a GDP was not necessary for LGA on January 29, 2010.

Results:
ATC Portal correctly predicted that there was no imbalance between the capacity at LGA under the forecasted weather conditions and the normal arrival demand on Fridays. The actual rate on January 29 for LGA between 1200 and 1300 was 34 arrivals and 32 departures, and there was no holding in the LGA terminal area. As such, none of the traffic management initiatives taken for LGA were required, and none benefitted the operational tempo of the airport. This validates ATC Portal’s 8-hour predictive analysis showing no GDP was required at any time during that period.

Summary:
The FAA implemented a GDP for LGA at a 32/hr rate (the rate was later revised to a 35/hr rate). Using PASSUR airspace management solutions, PASSUR was able to demonstrate that the GDP was unnecessary, and that normal arrival demand could have been accommodated throughout the duration of the GDP. This validated PASSUR predictive analytics, and sets up airlines to negotiate a more appropriate rate under similar circumstances in the future – or prevent the imposition of a GDP altogether.

*Assumes an average delay of 50 minutes was issued to each aircraft.
** $74.10 is current operating cost per minute listed by the Air Transport Association (includes taxi plus airborne).