

CASE STUDY

United Airlines: Newark Liberty International Airport

Queue Management and Passenger Flow

United Airlines partners with Lavi Industries to improve passenger satisfaction at Newark Liberty International Airport.



 Lavi Industries

 Lavi Industries

Highlights



Organized, well-marked queues and published wait times create a streamlined process that reduces passenger stress and confusion.



Electronic queuing systems provide order and structure to security screening, decreasing wait times and reducing passengers perceived wait.



Queue monitoring and analytics provide real time data and alerts to help optimize resource allocation and agent productivity.

The Challenge

“The number of passengers using the aviation system is expected to increase from 700 million passengers today to 1 billion in another 10 to 15 years. Airports need to respond to these potential capacity strains by building facilities which will ensure comfortable, safe, secure and environmentally compliant facilities for air travelers.”

— AIRPORTS COUNCIL INTERNATIONAL

A [2018 study](#) by Upgraded Points that looked at TSA-Checkpoint wait times at 25 airports across the United States ranked Newark Liberty International (EWR) as having the worst (longest) average TSA Security wait time, logging in at an average of 23.1 minutes. United Airlines was experiencing the effects of these long queues first hand, and passengers were making their displeasure known.

Determined to improve their passenger satisfaction ratings at EWR by decreasing wait times and improving passenger flow, United approached Lavi Industries with the following challenge:

- ✓ Reduce passenger stress at security checkpoints
- ✓ Decrease both actual and perceived wait times in the security area
- ✓ Optimize resource utilization and agent productivity
- ✓ Improve the entire passenger journey

The Solution

Reduce passenger stress

To create a clear path to the TSA precheck, clear, premier and economy lines, we installed Beltrac magnetic-base stanchions to form individual lanes. Using powerful magnets to keep posts firmly in place, Beltrac magnetic-base stanchions helped create a uniform and consistent look which would not fluctuate over time—even when removed and placed back after nightly floor cleanings. The magnetic-base stanchions allowed United to standardize queues, providing an optimized, efficient layout for the terminal. Additional digital signage and static, post-mounted signage helped clearly direct passengers to appropriate entrance points.

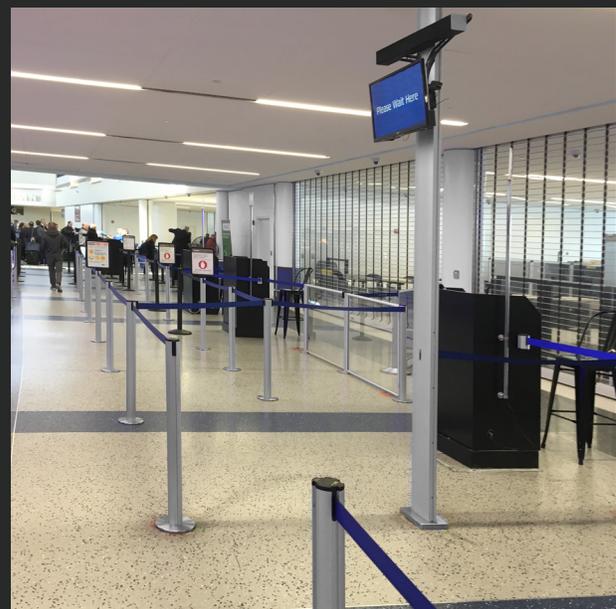
Decrease actual and perceived wait times

In the TSA queue, we installed Qtrac CF, Lavi's call-forward, electronic queuing solution to help optimize passenger flow. This allowed each TSA officer to efficiently call the next waiting passenger utilizing a digital signage display mounted at the head of the line. Clear visual and audible hailing reduced passenger confusion and TSA agent frustration creating an efficient, streamlined queuing experience.

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In Action



The Solution (continued)

Optimize resource utilization and agent productivity

Finally, Qtrac iQ, Lavi's intelligent queue analytics solution, was installed to detect passengers going through the queue, differentiating them from baggage and other objects. By installing sensors at the entry, midpoints, and exit of the queue, Qtrac iQ accurately detects passengers using depth imaging, so privacy is never compromised as with camera or wifi beacon systems.

Using Qtrac iQ to monitor the queue, Qtrac iQ publishes accurate wait times via digital signage screens throughout the terminal. A continued roll-out adds wait time displays to United's app and the Port Authority website to allow passengers to monitor wait times from the comfort of their home or business lounge or even in transit to the airport .

Additionally, staff can monitor queue activity through dashboards and real-time alerts, allowing efficient resource allocation and optimized utilization. This proactive behavior, coupled with published wait times helps to ease passenger stress and increase agent productivity.

The Results

United Airlines is constantly striving to improve the passenger experience, and as such tracks passenger satisfaction at all of its Terminal operations throughout North America using passenger surveys. United then uses year-over-year and month-to-month changes in customer satisfaction levels to assess program success.

After implementing the changes to Newark's security area, United saw marked improvement in customer satisfaction levels. On-time passengers reported a 6% increase in satisfaction with Newark Liberty's security area while delayed passengers reported an almost 11% increase in satisfaction.

“ These results are about 3x better than the rest of the system (with EWR included in the system so actually even better than that). Your team should be proud to be making such a big difference at EWR. ”

-United Airlines

Passenger/ Flight Type	% Satisfaction Levels (January YOY)
On-Time	6.00 % Increase
Delayed	10.93 % Increase