

Key Findings









The Passenger Experience Study

Daylight comfort drives airport satisfaction

Executive Summary

Designing for comfort designs for satisfaction. As major airports invest in upgrading facilities to provide travelers with a more pleasant travel experience, prioritizing features that most impact passenger satisfaction is crucial. Current thinking is that amenities such as electrical outlets and concessions are the key driver of traveler satisfaction, but new research suggests that daylight comfort plays an important role in how passengers rate their overall gate experience.

Key Findings

Optimized daylight and views in an airport resulted a more comfortable physical environment for passengers, a benefit that drove their overall satisfaction.

- **15°F** cooler surface temperatures
- **68%** more likely to be very satisfied
- **3.3x** more likely to report being 'very satisfied' if they found daylight conditions to be 'very comfortable'.

Research Methods

To better understand the impact of daylight and views in the airport setting on passenger comfort and satisfaction, Dr. Alan Hedge of Cornell University conducted a comparative study of 573 passengers in Charlotte Douglas International (CLT) Airport, half of whom were surveyed from a concourse with conventional windows and half of whom were surveyed from a concourse with electrochromic glass, which intelligently optimizes daylight and views to the outdoors.

Results

Passenger comfort. Passengers in the concourse with electrochromic glass reported significantly greater comfort with daylight conditions and with performing a variety of activities: reading, using a personal device, and eating at their seat. The gates with electrochromic glass were also measured to have 15°F cooler surface temperatures, indicating a more comfortable thermal environment.

Passenger satisfaction. The study revealed that passengers in the concourse with electrochromic glass were 68% more likely to be very satisfied with their overall gate experience. Furthermore, daylight comfort was found to be a key driver of this improvement in satisfaction: passengers were 3.3 times more likely to report being very satisfied if they were very comfortable with their daylight conditions.

Conclusions

Improving the physical airport environment by enhancing daylight and thermal conditions drives an increase in passenger overall satisfaction. By investing in design features that optimizes these conditions, airports have the opportunity to positively impact the travel experience of the millions of passengers they greet every year.



Cornell University

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Methods

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Passenger comfort

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Cooler temperatures

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Passenger Satisfaction

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Conclusions

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