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New International Arrivals Facility Will Enhance Customer Experience at Seattle–Tacoma International Airport

In 2017, when leadership at Seattle–Tacoma International Airport (Sea-Tac) decided to build a new International Arrivals Facility (IAF), they knew they had to leverage airport resources in a cost-effective manner to enhance customer experience. At nearly 50 years old, the existing facility could no longer accommodate Sea-Tac's demand for international travel, which grew 107 percent from 2007 to 2017.

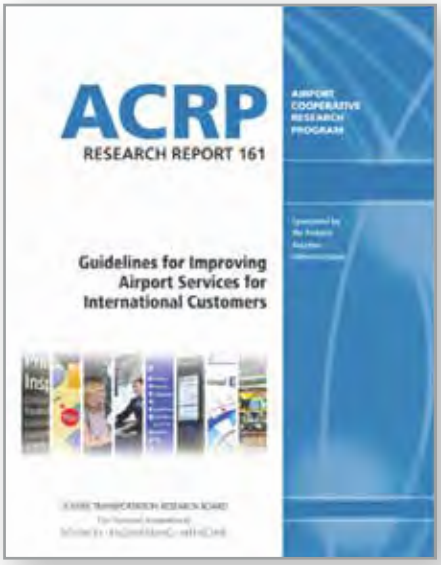
From the onset, Sea-Tac decision makers envisioned an IAF that would significantly improve the arrival process for international passengers. But, before construction could begin, an independent review panel had to approve the project. To strengthen the new IAF design, Innovations and Systems Manager Todd VanGerpen, a contributing member of Sea-Tac's design team, turned to *ACRP Research Report 161: Guidelines for Improving Airport Services for International Customers* and *ACRP Research Report 175: Improving Intelligibility of Airport Terminal Public Address Systems*.

An international airplane prepares to depart Sea-Tac (Source: Port of Seattle).

Prioritizing the Passenger Experience

Because this large project presented unique challenges, VanGerpen introduced *ACRP Research Report 161* and *ACRP Research Report 175* to members of the design team and used the reports to support their work. When the team reached the 30 percent design review stage, they lined up their concept with *ACRP Research Report 161's* recommendations and used the report to bolster the design comments.

ACRP Research Report 161 details departure and arrival processes, passenger services, and wayfinding techniques for international travelers navigating through U.S. airports. The report also provides step-by-step guidance for processing international passengers from origin to ultimate destination and identifies special customer service considerations.



Of the new IAF's many design elements, VanGerpen and the team saw positive guest experience as a top priority. To maintain this focus across the design plans, Sea-Tac

> **"By quoting ACRP studies in the business plan, we were able to give the architects and project managers a reference point."**
>
> — *Todd VanGerpen*

continued on page 2

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staff referenced *ACRP Research Report 161*, which analyzes responses to a customer-experience survey administered at 12 airports around the world. In addition to identifying key communication barriers and signage best practices for international arrivals, the report integrates the survey results across every detail of the international customer experience and provides graphics and diagrams that helped Sea-Tac design the IAF with customer needs in mind.

Enhancing Wayfinding Through Improved Intelligibility

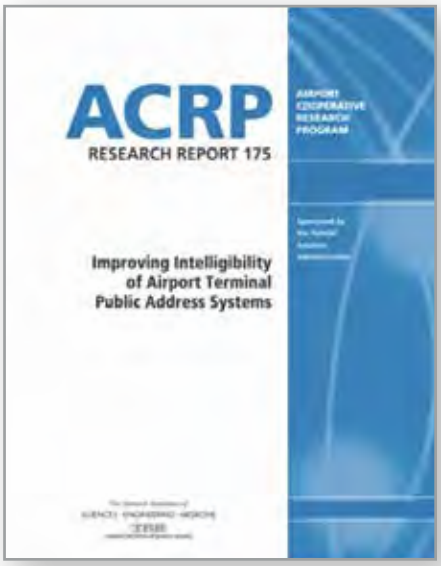
As the IAF design process continued, the design team also incorporated lessons learned from *ACRP Research Report 175: Improving Intelligibility of Airport Terminal Public Address Systems*. The report's design guidelines summarize data on public address systems, terminal finishes and background noise, and acoustical shortcomings. The report provides options for enhancing intelligibility in existing airport terminals, as well as for ensuring intelligibility in new terminal designs.

Construction begins on the new IAF in 2018 (Source: Port of Seattle).

The grand arrivals hall is the main feature of the new IAF, where travelers entering the United States go through Customs and Border Protection processing and baggage claim. The grand arrivals hall's environment and design requires special attention to speech intelligibility, and VanGerpen wanted to set the bar high for quality audio within the new IAF. VanGerpen requested acoustical modeling for the facility and added an above-minimum speech intelligibility requirement into the design plans, based on *ACRP Research Report 175* guidance suggesting that all travelers benefit from a higher level of speech intelligibility.

From Plan to Action

Using information from *ACRP Research Reports 161* and *175*, the design team was able to create a streamlined design with a focus on



positive passenger experience. Key design elements include

- A 450,000-square-feet grand hall for customs processing and baggage claim and
- An 85-feet-high aerial walkway directly connecting passengers from the South Satellite to the IAF.

The new IAF is expected to double passenger capacity to 2,600 passengers per hour and reduce minimum passenger connection time from 90 to 75 minutes. When the independent review panel convened to deliberate the project, they ultimately determined the price and construction to be both reasonable and achievable. Construction on the new terminal is currently under way, and Sea-Tac expects to open it to the public in late 2020.

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