



Charlotte Douglas Int'l Improves Wayfinding to Enhance the Travel Experience

BY PAUL NOLAN

FACTS&FIGURES

Project: Wayfinding & Signage Improvements

Location: Charlotte Douglas (NC) Int'l Airport

Master Plan Consultant: Gresham Smith

Component of: \$2.5 billion-\$3.1 billion capital improvement plan

Flight Information Displays: Infax

Special Systems Design: Arora Engineers

Customer Survey Support: Phoenix Marketing Int'l

Primary Objectives: Enhance the passenger experience; create consistency & clear messaging; help convey Southern hospitality, Charlotte-style.



Frequent flyers take great pride in their ability to overcome travel hurdles. They have finely honed strategies for moving efficiently through security, managing tight connections and scrambling to book other flights when theirs are delayed or canceled. It's almost a science.

Apps that provide wait times for security checkpoints and automatic text alerts about flight changes help a lot. However, there is a true science that kept travelers on course

and on time long before smartphones existed, and it continues to be the backbone of successful airport navigation. Wayfinding systems use signage and other graphic communication, architectural cues, audible communication and tactile elements to help visitors navigate to and through airports.

But the science faces two stubborn challenges: airport campuses are often sprawling and complicated; and many visitors using it are late, over-stimulated and/or already travel-weary.



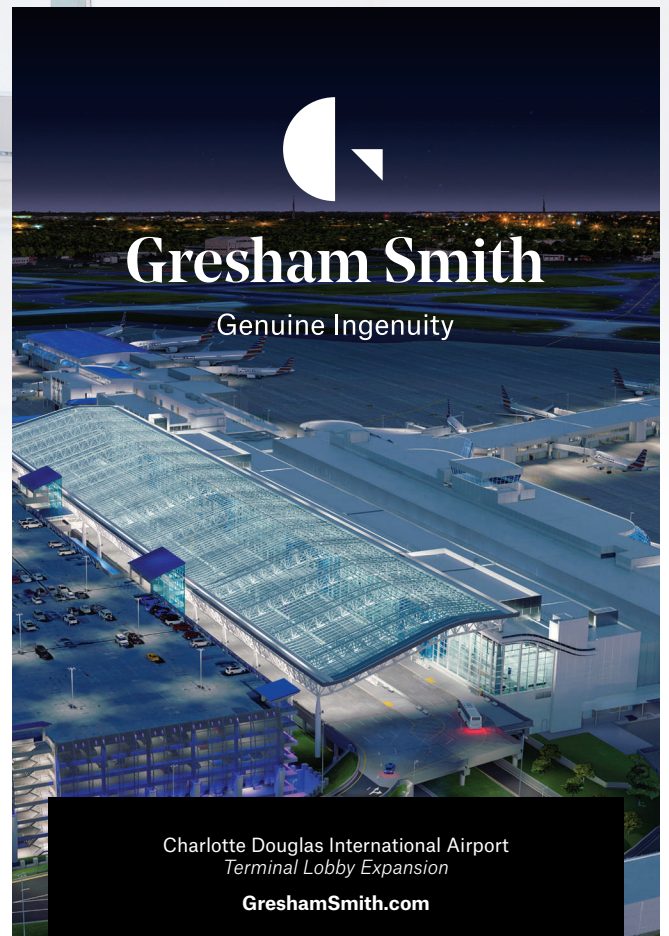
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LAirA, a partnership of European municipalities and other travel-related organizations, described the challenges this way in a 2019 report: “Airports are large and complex facilities, where operators need to communicate a vast amount of information to users. They need to provide this information in a clear, timely and relevant way to users who are often disoriented, in a hurry or distracted.”

Wayfinding During Construction

Communicating effectively with an inherently diverse population of visitors is a challenge for any airport. But a steady stream of major expansion and remodeling projects has made the task even more complicated for Charlotte Douglas International (CLT) in North Carolina.

In 2016, the airport launched Destination CLT, a multibillion-dollar capital improvement initiative. By the time the program is completed in 2025, it will have altered virtually every part of the airport. Projects include airfield improvements; expanding or renovating (in some cases both) all the concourses; constructing an elevated roadway and terminal curb front; and expanding the terminal lobby.





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As each project is tackled, updating CLT's wayfinding system has been a key factor. The process has been guided by a wayfinding and signage master plan developed by Gresham Smith. In addition to enlisting help from the outside architecture, engineering and design firm in 2016, the airport also hired Regina Czerr, its first-ever wayfinding and signage manager in 2017. Czerr, who graduated from North Carolina State University in industrial design, worked for 13 years at an urban design firm before coming to CLT.



REGINA CZERR

"Survey results indicate just how important signage is to our customer experience, and consistency is a key part of effective signage," says Czerr. "Changes to one area of the facility reach far outside of that project boundary. You have to understand the potential impact that one small change can have on the rest of the airport both in terms of the physical signage as well as virtual touchpoints with our customers."

The wayfinding and signage master plan contains signage design standards for the terminal, curbside, parking and roadway to ensure that the language, symbols and colors on signs are standard throughout the airport property.

"Establishing visual cohesion for our customers has been one of my primary goals—from the time they look at our website on their phone, or they download our app, to when they actually look at the architecture or signs. There needs to be visual continuity," Czerr explains. "It may be the color palette, typefaces or imagery... but by the time they walk into the building, there should already be a comfort level and familiarity with what they're seeing. That builds trust and helps people feel at ease in what can be a stressful environment."

This emphasis on cohesion is demonstrated through the strategic renaming of key areas inside and outside the terminal in a pending change from letter identification to numbers. The change will affect curbside pickup zones, front doors at the drop-off and pickup levels, and TSA checkpoints. The airport has already color-coded the curbside zones to assist wayfinding for pedestrians and vehicles.

Identifying Priorities

Before the airport had a wayfinding and signage master plan, signage for each renovation or expansion project was addressed on a per-project basis. "When we got to the point where they were ready to pull the trigger on the capital improvement plan, [airport executives] recognized we were ideally positioned to step back and think about how we could handle the signage systematically and holistically," Czerr explains.

Quarterly customer surveys by Phoenix Marketing International indicate that the terminal facility experience is one of the top three drivers of overall customer satisfaction at CLT. Travelers identify the effectiveness of signs in the terminal and the availability of dynamic flight information displays as two of three top drivers for their satisfaction or dissatisfaction.

Currently, CLT has five security checkpoints that are identified with letters A through E. Moreover, it has five concourses that are also identified with letters A through E. Customer surveys indicated that 25% of passengers incorrectly believed they had to use the checkpoint that corresponded to the same-lettered concourse. That led to unnecessary congestion at some checkpoints and underutilization of others. The first step was to clarify that all gates and concourses are accessible from any checkpoint and are clearly labeled with "All Gates" signage.

The switch from letter identification to numeric will occur toward the end of the terminal lobby expansion project, which is scheduled to wrap up in 2025. This project also includes plans to downsize from five checkpoints to three higher-capacity checkpoints, finally breaking the association between the checkpoints and concourses.

The Voice of the Customer

One of the first steps Gresham Smith took when developing CLT's wayfinding master plan was to walk the entire airport to experience it from the traveler's perspective. The team also studied surveys of more than 2,000 passengers

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Rendering Courtesy of Gresham Smith

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Sign, Sign, Everywhere A Sign

Standards for new signage at Charlotte Douglas International (CLT) went through a multistage review process before they were approved by airport officials. The approved standards contain guidance for five key areas: airport entries/gateways, roadways, surface parking and decks, curbside areas and the terminal.

As a whole, the signage program is designed to simplify wayfinding for customers. More specifically, it strives to:

- convey “Southern hospitality, Charlotte-style” in a sophisticated and authentic manner;
- reduce visual clutter and limit information on individual signs to essentials, based on specific location and viewing audience;
- establish priorities for placement of signs, graphics and other visual communication;
- create uniform graphic standards with specific guidelines for sign formats, layout, typefaces, arrows, symbols and colors;
- establish consistent message nomenclature and hierarchy of information;
- incorporate dynamic messaging where appropriate and upgrade existing static directories to digital platforms; and
- coordinate signage, graphics and architectural features for a comprehensive wayfinding approach.



JIM HARDING

who use the airport. Jim Harding, director of experiential design and wayfinding at the firm, calls this the “look, listen and learn approach.”

“We work in a lot of airports across the country, and each of them has its own dynamic,” Harding comments. “One thing we’ve learned is we can glean a lot just by walking around and seeing what we see. We talk to the airport stakeholders, because they know their airport better than anybody. But until you talk to the customers and learn what’s important to them, there’s a piece of that puzzle that’s always going to be missing.”

Because CLT has a high percentage of connecting passengers, its wayfinding system is particularly important. In 2018, the airport established a new record by serving 46.4 million travelers—and more than three-fourths were connecting passengers. CLT is the second-largest U.S. hub for American Airlines.



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The 3 Cs, 3 Vs of Wayfinding

The Wayfinding and Signage Master Plan for Charlotte Douglas International (CLT) calls for wayfinding elements to support a logical decision-making process for users. In order to do this successfully, signage is designed with three guiding principles in mind:

- **Continuity** – In order to navigate the facility, guests must make choices in direction or mode of travel (for example, walk or ride). It's crucial to provide the right information at the right time and place to guide various user groups to their destinations.
- **Connectivity** – Successful wayfinding design requires an understanding of the physical space, user groups and destinations, plus analysis to determine the best way to move people safely and efficiently. After optimal routes and modes are identified, signage plays a key role in communicating this information to airport visitors. In some cases, physical barriers may require people to follow a nonlinear or nonintuitive pathway—backtracking to

take a shuttle, for instance. An effective wayfinding program provides good routes and reassurance to help them along.

- **Consistency** – To the greatest extent possible, signs should be uniform in appearance, messaging and placement. Visual consistency helps guests quickly recognize, understand and use the information provided.

The master plan also outlines three primary ways wayfinding information can be communicated:

- **Visually** – This includes all static signage, graphics, art, branding and architectural cues that help users navigate.

- **Virtually** – This rapidly evolving category encompasses anything in the digital realm such as websites, dynamic displays, interactive directories, art, car count parking systems, smartphone apps, etc.
- **Verbally** – Verbal communication includes interactions with information desk staff and other airport employees, who are often able to provide additional layers of information not easily conveyed on static signage. Customer surveys conducted during the first phase of CLT's research revealed that 21% of customers asked for verbal assistance at the airport. With about 55 million annual passengers, that means roughly 11.6 million customers seek verbal assistance at CLT each year.

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Harding notes that connecting passengers can often choose where they fly through. “If travelers consistently have a poor experience at a connecting airport, it won’t take long for them to choose other airports to connect through,” he explains. “That part of the customer experience—what it takes to get from gate to gate—becomes a really important issue.”

Customer surveys also revealed that passengers often overestimated how long it takes to walk from one point to another, which is a key piece of information for those catching connecting flights. As a result, CLT incorporated estimated walk times into all of its backlit overhead directional signs. “What happens if you can equip that traveler with knowledge that sets forth expectations? They feel they have more control over their journey,” says Harding.

Czerr boils it down to the basics: giving passengers information so they know if they have time to use the bathroom or get something to eat. “You’ve helped put them at ease and make more deliberate decisions, and you’ve opened up more possibilities for businesses in the airport,” she remarks.

Currently, the airport is working to add estimated walk times to flight information displays and digital directories throughout the terminal. The team is also exploring opportunities to integrate walk times into the interactive map on the airport website and smartphone app.

Reducing Visual Clutter

The master plan also helps CLT determine where signage should *not* be placed. “We want to reduce the visual clutter and save signage for the most important things travelers need to see,” says Czerr.

It was a huge advantage to address this issue at the same time architects were drawing up plans for remodeling and expansion projects. “Gresham Smith helped us understand how to organize all of the elements that are in the space: how we designate specific areas for signage; for advertising and art to be placed where they actually complement each other versus creating crazy visual clutter that makes it confusing,” says Czerr. “It’s a big deal not to think about signage as an afterthought, but actually make sure we are working with the architect at the beginning to optimize the use of signage.”

Uniform graphic standards provide specific guidelines for sign formats, layout, typefaces, color, etc.



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Early collaboration also created more opportunities for the architecture to support intuitive wayfinding, by using visual and physical clues that help pull visitors through the facility without the need for intensive signage. Features such as patterns in the floor and ceiling can help reduce the need for and number of signs.

“The design of the space becomes an iterative process, where the architecture informs the wayfinding and the wayfinding informs the architecture,” Czerr explains. “Practically and technically speaking, it helps reduce conflicts with lighting, cameras, sprinklers and other building fixtures.”

Wayfinding As A Marketing Tool

Another important reason to help passengers navigate is that research by Phoenix Marketing International shows happy travelers spend up to 40% more at airports than grumpy ones. Toward that end, Harding points out that a wayfinding plan should focus on more than just directional signage. Art, advertising and airport marketing needs to co-exist with informational signage. “We want to establish a visual harmony where these different elements work together to create a better customer experience,” he explains.

From a marketing angle, CLT executives wanted the new signage to communicate “Southern hospitality, Charlotte-style.” Czerr says the project team challenged itself to think of signage as more than a means of providing information. “We wanted to celebrate who we are and create a sense of place that is specific to Charlotte,” she relates. “The typeface and symbols we chose have a personality to them. They’re friendly, and we hope they communicate our warm and welcoming culture in a subconscious way.”

Just as the voice of the customer helped guide planning for wayfinding improvements, it is also confirming results of changes for airport officials. Response on social media as well as in quarterly focus groups and other surveys has been favorable. One passenger even posted a picture of CLT’s new wayfinding signage at the rebuilt lower-level parking/curbside pickup area and tweeted, “I’m more excited about this than I should be!”

“Thinking about this from the customer experience perspective has been our focus from the start,” says Czerr. “Getting that validation just makes me giddy.” ✈️

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Gresham Smith helped the airport integrate signage with other elements such as art and existing architecture.

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