



Charlotte Douglas International Airport Transforms Passenger Experience with **Crowning Digital Art Achievement**

As the primary air travel hub for the Carolinas and gateway to much of the American Southeast, Charlotte Douglas International Airport services millions of travelers every year. To bolster its ability to offer premiere air travel services, the city of Charlotte enacted a \$2.5 billion renovation project entitled “Destination CLT,” which will revamp several elements of the airport and its facilities by 2025. This dramatic overhaul focuses primarily on large-scale physical expansions, including the construction of new gates, a new runway, expanded roadways and curbsfronts, and a new air traffic control tower. Though impressive, these renovations didn’t exactly bring a “wow” factor that the airport hoped to inject into their passengers’ overall experience. For that objective, they turned towards finding a futuristic digital art feature that could serve as a defining symbol for the airport and the city as a whole.

The Challenges

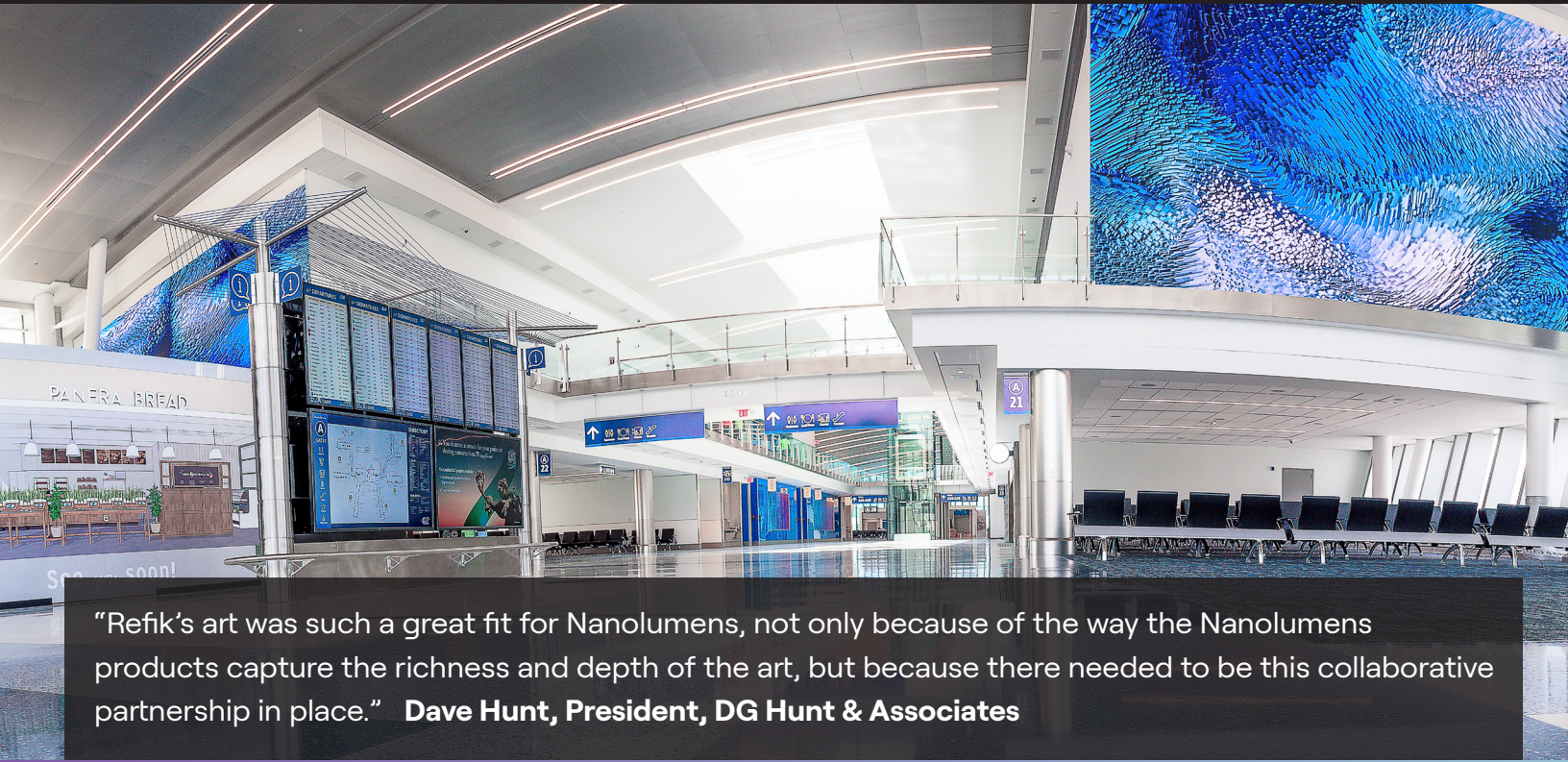
Charlotte is one of the fastest growing cities in the country and it relies on its airport to facilitate this growth. The Destination CLT project was launched to bolster the ability of Charlotte Douglas International to service the millions of travelers flying to and from the burgeoning Metrolina region, but the physical construction elements only addressed the population growth of the area. The evolving cultural and technological influence of the area was also something the city hoped to represent through the airport and the Charlotte Arts and Science Council sought a digital art feature for Concourse A that fused technology, art, and design. The challenges of creating and integrating a large digital art feature of this nature into an airport in the middle of a renovation were stark. Not only did any physical elements of the feature need to be specified, designed, and integrated amidst the concourse-wide construction efforts, but this solution also needed to measure up in the face of powerful ambient light flooding through the concourse's many windows. The artwork itself posed another obstacle, as the airport wanted something both completely original and fully connected to the region. To show this digital artwork, the airport also set the high bar of peerless image quality across an uninterrupted and seamlessly embedded digital surface.

"This install isn't merely about displaying content, it's about changing the entire passenger experience at Charlotte Douglas International Airport."

**Frank Milesky, Southeast Area
Director, Cenero**

The Solutions

Addressing the challenges in front of them, the Charlotte Arts and Science Council brought on experts the project management group DG Hunt & Associates. Prior to settling on a particular technology option for the eventual artwork, the team opted to first select an artist. The team turned to renowned digital sculptor Refik Anadol, who agreed with the goal of seamlessly integrating digital artwork that reflects the movement and traffic of the airport. Anadol quickly voiced his preference for one particular solution ideally suited to his creations. "Once we picked Refik as the artist to do this project we presented the Nanolumens solutions to him and he immediately knew their displays would be perfect for this project and for his artwork," says Marcus Mitchell, the Program Director for the Charlotte Arts & Science Council. Originally intending to go with projection technology, the team changed course after consulting Anadol and realizing projectors couldn't possibly compete with the concourse's ambient light levels. Eventually the decision was made to install three separate Nanolumens LED displays, one an Engage Series with a 2.5 mm pixel pitch, and two from the Performance Series with 4.7 mm pixel pitches. These displays were then integrated with the help of the experts from the integration firm Cenero.



"Refik's art was such a great fit for Nanolumens, not only because of the way the Nanolumens products capture the richness and depth of the art, but because there needed to be this collaborative partnership in place." **Dave Hunt, President, DG Hunt & Associates**

The Results

Today, Anadol's digital sculpture Interconnected runs 24 hours a day in Concourse A on the three Nanolumens displays, constantly regenerating mesmeric waves of visuals influenced by airport data like arrivals, departures, and other passenger details. To hear Anadol say it, "the artwork being displayed is constantly changing and evolving as it responds to the ever changing flow of data, creating a living snapshot of the invisible patterns that surround us as we travel." The primary Engage Series display is 10 feet tall and extends 140 feet along the length of an exterior stunning visuals.

The Technology

The Nanolumens Engage Series display is 140-feet wide by 8-feet tall with a 2.5mm pixel pitch. One Performance Series display is 36-feet wide by 18.5 feet tall, while the other is 28 feet wide by 14 feet tall. Both use a 4mm pixel pitch. These displays are optimized for flat installations and high brightness. Each of these displays are approximately 79mm deep, are front serviceable, and run 24-hours a day.

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About Nanolumens

Nanolumens is a US-Based LED design and manufacturer headquartered in Atlanta, Georgia. Nanolumens offers world-class displays across multiple market segments adding wonder to physical spaces. Nanolumens is a pioneer of the true curve technology and are committed to being better. With a bold and visionary team of experts Nanolumens will take your project, in all shapes and sizes, from concept to reality. Nanolumens brings your creative visions to life, leaving a first and lasting impression. We are LED! For more information, visit www.nanolumens.com

About Cenero

Cenero is a service-focused audio visual, unified communications and IT solutions provider dedicated to the intelligent integration of products and services to create high-value solutions for their clients that improve communication and efficiency. By focusing on all elements of the meeting experience – from integrating with calendars for meeting scheduling to launching video calls and providing service and support – they offer end-to-end collaborative solutions that promote usage and adoption throughout your organization. There is more to an audio visual system than specifications, features, and technology for technology's sake. Service processes, program interfaces, applications development and migration strategies all need to be considered when designing an effective audio visual or unified communications infrastructure. We make sure to create a solution that is based on everyday business applications and focuses on the intelligent integration of easy-to-use technology.

About Charlotte Douglas International Airport

Charlotte Chamber CEO Bob Morgan touts the airport as “the No. 1 economic asset” in the region and stresses the importance of keeping the facilities up-to-date. In this pursuit, destination CLT is a massive \$2.5 billion airport overhaul set to be complete by 2025. The project involves the integration of three giant LED displays, construction of a new runway, the expansion of multiple concourses and the addition of nine new gates, an expanded roadway and terminal curbside, renovations to existing terminals, and the construction of a new air traffic control tower, among other objectives. Smaller developments within each of these objectives include the installation of electrochromic windows and hundreds of new charging ports for electronic devices..