



Denver International Airport

DIA Creates a Seamless Customer Journey from the Moment Passengers Arrive to Park at the Airport

Serving more than 50 million passengers per year, Denver International Airport is the fifth-busiest airport in the United States and the 15th-busiest in the world. Known for its extensive collection of world-renowned art – and the digital experience that surrounds it – DIA is a popular air travel hub that serves destinations throughout the world.¹

With such a large number of travelers flowing through the airport each day, a smooth-running parking operation is critically important. Over time, the existing DIA signs and software systems managing its traffic flow started to display a number of critical shortcomings.

DIA's overall strategic plan calls for a “finely-tuned facility, providing a well-choreographed and seamless journey for airlines and passengers.” Recognizing that the customer’s “journey” often starts when they arrive at the airport to park, DIA made the decision to overhaul its existing parking management system to foster an experience that was both seamless and efficient for its customers.

¹ From <https://www.flydenver.com/about>

Critical Shortcomings

1. The existing sign system had become plagued by frequent malfunctions and inoperable signs.
2. The aging signs had become technically obsolete, making maintenance inefficient and costly, while procuring replacement parts became nearly impossible.
3. The static mount signs offered no flexibility in its messaging and no adaptability to changing circumstances. DIA could only post “OPEN” and “CLOSED” messages, with no way to modify the displays or messages.
4. DIA didn't have critical feedback or diagnostic capabilities with their current signs. This meant that each posted message had to be visually verified, diagnosing a malfunctioning sign had to be done at the sign itself, and signs could fail without any advance warning.





Robust, Advanced Engineering

Engineered to Endure

Since DIA was dealing with signs that had become obsolete, inefficient, and costly, it was critical to the parking operations team that the new system offered longevity. Skyline utilizes only the highest quality manufacturing components and processes, ensuring that the new highly-legible, full-color signs withstand the harshest conditions and operate reliably for years. Furthermore, the new full-matrix signs can display any variety of unique messages should the fundamentals of the airport's parking strategy change in the future.

Moreover, Skyline's unique software provides DIA the freedom to create unlimited messages - such as emergency notifications or construction alerts - and will support future messaging needs such as open space counts and more.

Feedback and Diagnostics

With thousands of passengers traveling to and from the airport every single day, remote assurance that the signs are operating as desired is critical. Skyline's new EnvoyDMS software module provides robust, remote feedback capabilities to DIA - giving staff the confidence that messages sent to the signs are posted accurately. Additionally, Skyline's true message display verification feedback software measures the current flowing through each LED string and reports any errors to the DIA staff in an easy-to-see visual representation. This eliminates the need for staff to drive to each sign and visually verify that the correct messages are posted and that the signs are functioning properly.

If a sign does experience a failure, the DIA staff now has the ability to remotely diagnose the sign so the maintenance team can prepare to fix the problem even before they get to the malfunctioning sign. The system will even notify staff of a possible failure - giving staff time to provide required maintenance before a failure occurs and impacts DIA's desired customer experience.



This mission-critical information is aggregated and presented to DIA staff in a single, easy-to-use interface. All confirmations, feedback, and diagnostic capabilities are delivered to DIA staff within the Skyline EnvoyDMS software module.

Building a True Partnership

Partners in Success

Skyline partnered with Denver-based electrical contractor, LEI Companies, to install the signage and software solution. Having done business in the Denver area for more than a decade with a variety of manufacturers, it was paramount that LEI collaborated with a partner that could meet an aggressive timetable.

"From the beginning of this project, it was critically important that we found a true partner - one that could deliver a high quality product, and one that we could count on to ensure on-time deliveries ahead of DIA's busy holiday travel season," said Lenee M. Koch, Vice President of LEI Companies, "Skyline Products delivered on this promise and more."



Harnessing the power of DMS hardware and software customization

Custom Engineering

The process of overhauling the parking signage system began with selecting a sign and software systems provider. With so many unique and specific needs, DIA preferred to find a manufacturer that could build a fully custom system rather than use an off-the-shelf set of signs. By using Skyline's design-build process, DIA and its partners had the freedom to tightly specify unique needs and requirements for the project. Skyline was then able to design, engineer, and build a tailored solution which completely addressed DIA's needs and requests.

Software Provides Control and Confidence

Utilizing a single software solution was paramount to DIA. The new parking system needed to seamlessly integrate into Skyline EnvoyDMS – which DIA uses to run existing traffic management signs. Since no existing software solutions met DIA's specific requirements, Skyline developed a custom module for Skyline EnvoyDMS. With the new module, DIA can now designate several levels of user rights for their employees – providing control and confidence that the right people could post the right message and the right time. In addition to enhanced software control, all message signs located on the property are now run from a single, all-inclusive software system.

