

Driving Toward the Future:

NEC Display Technologies Bring 4K to Life in Innovative Volvo Trucks Customer Center

The Challenge:

- Integrate multiple types of 4K digital display technologies into a custom-built facility to showcase Volvo Trucks products to current and prospective customers and dealers

Solution:

- 36 [55-inch UN551S displays](#) in a 6x6 video wall configuration, plus 5 spares;
- 3 [98-inch X981UHD-2 displays](#);
- 6 [65-inch X651UHD-2 displays](#);
- 4 [84-inch X841UHD displays](#);
- 2 [NP-PH1202HL1](#) 12,000 lumen 4K laser projectors;
- 2 [NP-9LS12ZM](#) 1.28-1.83 lenses.

Result:

- The Volvo Trucks Customer Center, a 36,000-square-foot-facility that includes a product showroom, two exhibit rooms, two pilot review rooms, and a 290-seat theater-in-the-round at the center of the building – all equipped with 4K display technologies



Since entering the North American market in 1981, Volvo Trucks has manufactured an extensive line of on-highway and vocational Class 8 (commercial tractor trailer) vehicles, with its North American headquarters in North Carolina and manufacturing facility in New River Valley (NRV), Dublin, Virginia.

In September 2015, Volvo broke ground on a new addition to the NRV property: the Volvo Trucks Customer Center, intended to showcase Volvo products and innovations in a dynamic way to engage visitors – including technologies that amplify the wow factor.

The Project

“It had long been our ambition to create this space to host customers, dealers and other visitors,” said Magnus Koeck, vice president of marketing and brand management for Volvo Trucks North America. “We wanted to have a test track at the plant and build the center around the track, so that’s how it started.”

After debating five different designs, the Volvo team selected the final concept for both functionality and aesthetics: The building was planned in a circular shape as an homage to the Volvo Trucks iron mark, with a roadway built around it as the test track. The inside had to stand up to the impressive external structure, including from an AV perspective.

“The design, video and audio systems all had to show the Volvo focus on innovation, wow the customer and be completely different from their expectations,” said Seth Gruber, director of the Volvo Trucks Customer Center. “We have a premium product, so we want to create a premium experience while debuting our flagship North American products.”

One of the functions of the Customer Center was to show presentations and high-definition videos to prospective customers, dealers, employees and other visitors, and the Volvo team knew a video wall would be a high-impact way to accomplish this. The vision was a round room at the center of the building functioning as the main gathering area, with a video wall catching visitors’ eyes as soon as they entered.

The Volvo team made some inquiries with manufacturers to find an integrator who would be able to create this experience. In December 2015, they engaged Video Visions, a systems integrator specializing in video wall, multi-image and large-screen installations.

Video Visions hosted Volvo at its facility in Trevese, Pennsylvania, and introduced the team to three different manufacturers that demonstrated three mini video walls to show how their individual capabilities could help Volvo.

The Technology Selection

Volvo was looking for some specific qualities in a manufacturer, most particularly the ability to display 4K video.

"At the time, a lot of display technology was still 1080p, but we were shooting a lot of our videos in 4K, so all the display technology in our center had to be 100 percent 4K," Koeck said. "At the demo, we played some of our 4K video to products."

This made the decision a simple one.

"NEC Display Solutions was the only company at the time that could do 4K video panels, and that made them stand out from other manufacturers," said Mary Ellen Milanese-Distasio, president of Video Visions. "NEC also had the 4K laser projectors Volvo wanted for other rooms in the facility."

Additionally, NEC's wide product portfolio ensured Volvo would have options that could fit into every space in their building, no matter the size of the room.

"Some of our rooms are very large, and you can't put a 55-inch screen on large walls," Gruber said. "We needed 98-inch displays, and NEC had the portfolio for everything we needed, not just one application."

Another important factor was user-friendliness, according to Gruber: "Video Visions talked up the ease of installation, ease of use and reliability you get with NEC."

"Flexibility was also key," Koeck added. "We planned to have lots of AV equipment all over the center, all of which would be connected, so we needed everything to work well together. NEC married a lot of requirements for what we needed to do."

With the technology decided, Volvo hired Video Visions as the consultant to spec the model numbers and install the technology. The installation was not without its challenges, however.

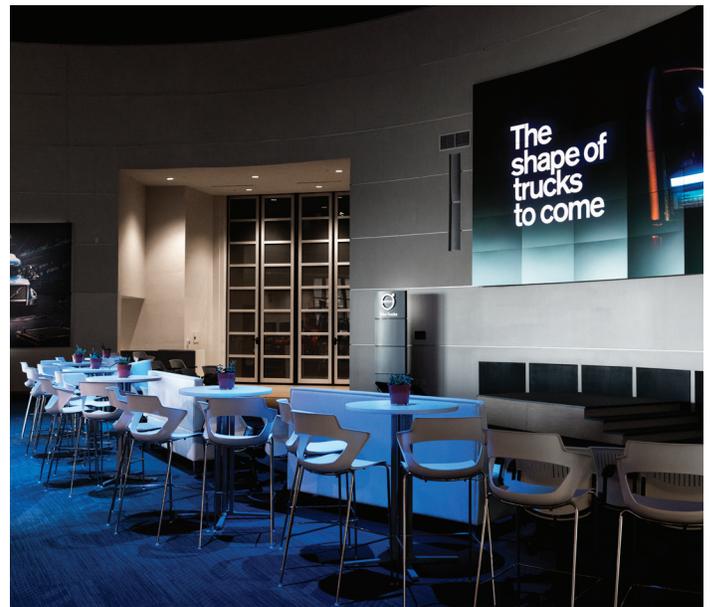


The Installation

Video Visions was involved in the center "from the ground up," said Video Visions Director of Sales Ted Manahan, from design, specification, product procurements and the AV installation.

"I went in when the center was just a slab and metal studs, to help determine how much power the building would need to support the AV and operate video," he said. "After that, we were awarded the contract for AV."

During AV installation, the shape of the "theater-in-the-round" in the center of the building created the most significant challenge, according to Vincent Distasio, vice president of Video Visions.



"The round building meant there were not a lot of corners, so all the cable has to run around the entire dome of the building and drop down into the AV room," he said. "We pulled thousands of feet of cable – probably 50,000 to 100,000 feet of cable for every display, speaker, touch panel, and so on. Plus, it was challenging to mount the NEC video panels on the curved wall, so inside the dome, the 6x6 video wall sits on about a seven-degree curve."

After procuring all of the products, Video Visions began installation in February 2017 and had to finish in June 2017. The tight timeline meant it was all hands on deck for a number of contractors and trades, making for crowded working conditions, Manahan said.

Another challenge came from having too much time, not too little: Between the time Video Visions quoted the technology specifications and the time the installation started, NEC updated its products, and the specified video wall display panels then were not the most recent models.

"NEC realized the timeline of the project meant the model numbers changed," Milanese-Distasio said. "They gave Volvo the latest and greatest at no extra cost, so that Volvo had the most current models of equipment for the long haul, and weren't already behind prior to installation."

In addition to a number of digital displays, projectors and the video wall, Video Visions added hardware support such as a Crestron system to control the AV, and offsite access so the team can log in and operate or monitor equipment remotely.

The Customer Center

Almost two years after breaking ground, the Volvo Trucks Customer Center officially opened in July 2017 – part of a \$38.1 million investment in the NRV facility. The 36,000-square-foot custom-designed building includes a product showroom, two exhibit rooms, two pilot review rooms, and a 290-seat theater-in-the-round at the center of the building.

An observation area allows customers to view the trucks traveling around the 1.1-mile Customer Experience Track, where trucks can get up to highway speeds. Numerous surfaces and grades let drivers experience difficult road conditions in a designated off-highway area. The track is used to test-drive customer purchases as well as trucks coming off the line at the neighboring plant.

Because the building is intended to be a showcase building in addition to being used for sales, training and tours, Volvo can drive its massive trucks straight into the building and onto a turntable in the theater.



"You can come in with a full tractor trailer and rotate it on the turntable, like an old train station wheelhouse," Koeck said. "I haven't seen anything like it in another facility like ours."

The 6x6 video wall with Internet connectivity is situated behind the turntable, with theater-quality sound from 40 microphones throughout the room. Two 84-inch NEC displays greet visitors in the lobby, and breakout rooms off the theater house a mixture of NEC large-format displays and laser projectors. The Crestron system distributes all video and audio throughout the building, delivering 4k to every display.

"We aim for quality in everything we do, and we need high-end equipment to show it," Koeck said. "The center gives the full 360-degree experience of what we stand for in our process and values."

Volvo uses the facility for multiple applications on a daily basis, and customers have been wowed by the center.

"They're more than impressed with the size and scope," Gruber said.

The NEC equipment has been functioning perfectly since installation, according to Video Visions.

"The Volvo team absolutely loves all the equipment, and they're especially happy with the quality and resolution of the NEC products," Distasio said.



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