

Virtual reality training solution for Parkland fuels

Using virtual reality (VR) for training delivers an immersive experience that puts the trainee in a 360-degree environment where they can complete tasks and manipulate tools. VR training solutions improve retention through practicing doing tasks, shortens the time-to-competency for trainees, and does it all much cheaper and safer than relying on live training alone.

The challenge

Parkland is the largest independent supplier and marketer of fuel and petroleum products in Canada and the Caribbean. Parkland employs delivery drivers to supply retail outlets with fuel and to supply industrial and commercial customers with fleet and heavy equipment requirements. Parkland required an immersive solution to represent the refuelling process as accurately as possible, emphasizing the detailed steps throughout the job. Conducting a safe fuel delivery starts with collecting fuel, defining the route, arriving at the destination and transferring the right amount of fuel.

Parkland was interested in a VR solution as a training tool, allowing trainees to continuously run through the process of delivering fuel while capturing data and observing safety protocols. Parkland's goal was to improve their training program and improve delivery performance to reduce fuel wastage and to reduce risk to delivery drivers and the public at large.



The project

Calian developed a VR training solution for fuel delivery drivers to safely execute the delivery process. Working directly with Parkland training and delivery leaders, we developed detailed models of every step of the task of delivering fuel—including driving, delivery and moving to the next delivery site. Each step of the process has many sub-steps, so it was vital that we work with Parkland to get all the details of the process right. The VR scenario processes have the same colouring, shapes and proportion as the real scene.

Calian developed all elements of a real-life delivery, from selecting the right personal protective equipment (PPE) to vehicle safety, to initiating fuel pumping. Drivers select the appropriate personal protective equipment (PPE) and use a calculator to determine how much fuel to deliver. The driver conducts vehicle safety checks before departure and upon arrival to ensure the vehicle is safe throughout the delivery process, including chocking the wheels to prevent vehicle movement and grounding the vehicle to prevent any static electricity discharge.

As the training scenario continues, the driver interacts with safety gauges and valves, and interacts with equipment, hoses and tools to conduct the fuel delivery. The driver captures the volume of fuel delivered to inform the reporting and documentation process.



The results

The training scenario included all the components of the fuel delivery process to fulfill Parkland's requirements. The trainer was effective in accurately recreating the 360-degree immersive experience for fuel delivery. Practicing complex, multi-step processes in an immersive environment is much cheaper than delivering training using live simulation alone and carries much lower risk than having trainees interact with real trucks, fuel tanks and hoses.

The VR training solution significantly reduces risk, while building the confidence of trainees. Built-in fail conditions notify the trainee when they have made a mistake in the standard process and notify them for any safety violation.

This repetition and emphasis on learning and practicing the correct procedures improves the knowledge retention of trainees, while monitoring progress on learning objectives highlights areas for improvement.

What's next?

Calian successfully delivered the VR training solution for Parkland. We also developed a mobile-device based application for training convenience franchisees working in Parkland's On the Run retail stores to improve product placement in-store. Using iOS or Android, the mobile application guides the franchisee through product placement through 360-degree images.

Calian's immersive learning team delivered two very different solutions for Parkland: a VR solution focused on worker and public safety for fuel delivery, and a mobile application for retail product placement.

Whatever the training need, Calian can develop an immersive solution for you.



Calian® helps people communicate, innovate, learn and lead safe and healthy lives. Every day, our team embodies our core principles of unwavering customer commitment, integrity, innovation, respect and teamwork, to engineer reliable solutions that solve complex problems. That's Confidence. Engineered.

We are a growing company headquartered in Ottawa with offices and projects spanning North American, European and international markets with a focus on innovative healthcare, communications, learning and cybersecurity solutions.