

Hydro Ottawa achieves consistency and efficiency with virtual reality training solution from Calian

Immersive training helps workers achieve competence quickly in a safe, controlled environment

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

The challenge

Hydro Ottawa delivers electricity to 3.3 million homes in Ottawa and the National Capital Region and employs a workforce of technicians to connect homes to the grid to ensure a safe and reliable supply of power. Hydro Ottawa was seeking a technology solution for its training program for hydro technicians, to improve the quality training and bring greater consistency to training across the organization. Immersive learning solutions build knowledge of processes and safety protocols before confirming skills in a live training environment. Live training is essential to confirm the skills of technicians-in-training.

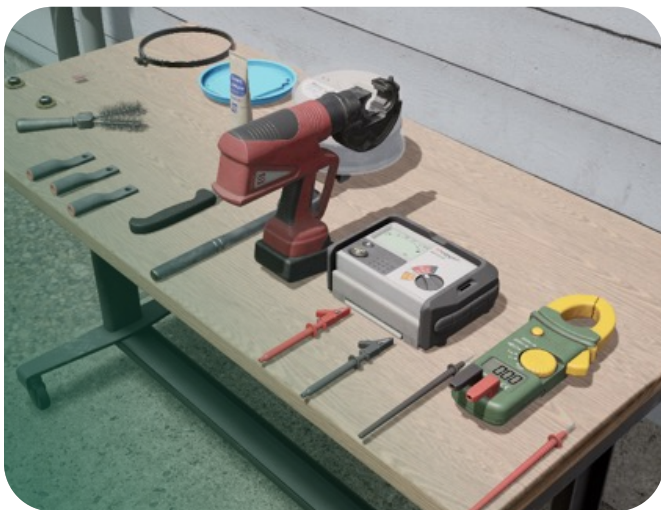
Immersive training solutions provide a high-value alternative throughout training, including learning processes, procedures and safety protocols, and how to use and manipulate tools to complete job tasks. Immersive solutions allow the trainee to practice processes and skills in a low-risk environment where they can confirm skills, make mistakes and learn from them. Observing performance and progress during training during training allows for additional training to be focused on specific areas of knowledge and practice where a trainee needs more help.



The project

Calian worked directly with Hydro Ottawa's technical and training experts and leaders to develop a training solution to meet their needs. Working with Hydro Ottawa's experts, we developed a detailed understanding of the hydro technician job roles and safety protocols and learned the step-by-step processes. The Calian approach emphasizes working directly with the end-user to make the immersive training experience as realistic and detailed as possible.

Calian delivered a training scenario for connecting residential houses to the Hydro Ottawa energy grid, including the meggering sequence. The scenario recreated the hydro infrastructure and control boxes that technicians interact with by modelling the real devices. We did the same for the tools that technicians use to connect houses to the grid. This created a realistic look and feel for the tools and equipment trainees use to prepare for the job site.



The results

The training solution Calian delivered provided the immersive experience that Hydro Ottawa was expecting. The VR environment and headset provided the realism and degree of detail that was required for training hydro technicians. The infrastructure, tools and procedural elements in the training environment delivered the realistic experience necessary for effective training.



The training solution also provided progress tracking for each trainee, allowing experienced instructors to coach trainees and recommend additional training in areas needing further development. Calian's proprietary *Telemetry Core* technology tracked the performance of each student as they performed tasks. By tracking performance throughout the task, instructors could pinpoint the areas where a trainee needed help.

Telemetry Core allows the instructor to focus on specific areas for improvement instead of providing general "re-training" that lacks focus and provides training in spaces where the trainee is already performing. *Telemetry Core* allows the instructor to assign specific training where the trainee needs help, maximizing efficiency.

The immersive training experience also reduced the cost of live training. By practicing in a virtual environment there are clear cost savings on equipment, transportation, tools and instructor supervision. *Telemetry Core* requires less instructor input, allowing either fewer instructors to deliver existing training modules or allowing the same number of instructors to work with more trainees at the same time.

Crucially, the immersive training solution also reduces the risk of real-life accidents. The virtual reality trainer is programmed with fail conditions that notify the trainee and instructor when there is a safety violation. This emphasis on the importance of safety throughout the training process establishes good job site habits early in the training process. This builds safe work habits and sustains a safety-minded culture.

What's next?

The immersive trainer for Hydro Ottawa focused on one set of clear tasks. Our flexible architecture and consistent approach to developing training allows additional job roles and tasks to be developed. Through our collaborative approach, the Calian team can develop training for any job role.

A broader training suite can also be developed. Using a learning management system (LMS), we can support an enterprise-wide training program that delivers the appropriate training modules for each job role and provides leaders with enterprise-wide status reports. Dashboards are available to show enterprise-wide training status and allow individual trainees to track their training progress. Our LMS allows the trainee to view the training they must complete, monitor progress, focus on areas of individual improvement and do self-guided training.

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.