

Mont-Laurier Vocational School Saves a Week of Training with Vortex Simulators



Situation

As one of six educational institutions offering forestry training in Quebec (Canada), Mont-Laurier strives to set itself apart by building a reputation as the region's leading provider of safe and skilled heavy equipment operators.

Solution

For years Mont-Laurier has leveraged simulation-based training in its forestry curriculum, but as their current solution became dated and no longer met the needs of the market, the school set out to find a suitable replacement. That's when it discovered CM Labs.

Why CM Labs

After issuing a public tender and evaluating different options, Mont-Laurier concluded that CM Labs offered the most comprehensive solution with respect to realism, curriculum, affordability, and support.

Benefits

Vortex simulators reduced the learning curve by up to a week compared to previous instructional methods. With a firm understanding of the equipment behavior and controls, Mont-Laurier students move to field training with more hours to focus on technique. The results are accelerated learning and more confident and better prepared operators.

Profile

As one of Quebec, Canada's six forestry training centers, the Mont-Laurier Vocational School helps prepare a new generation of heavy equipment operators. The non-profit center collaborates with the region's timber companies to provide students with practical hands-on experience including three months of field training alongside instructors in working logging camps. With a wide variety of equipment at its disposal, (harvesters, loaders, service trucks, simulators, and more) the school offers comprehensive instruction ranging from tree-felling to the operation and maintenance of harvest, loading, transport, and road construction equipment.

Operating heavy equipment within the confines of a timber harvest worksite involves a great deal of danger, responsibility, and stress. According to a report from the Bureau of Labor Statistics, and similar studies, forestry sits atop the list of the most dangerous industries. It's therefore no surprise that the industry is facing a severe skilled labor shortage. In addition, too many novice workers lack the experience, training, and confidence to safely operate heavy equipment on an active worksite.

With proficient operators in short supply, and because field training is costly and dangerous, logging companies look to training centers to help fill the void. In response, Mont-Laurier has redoubled its commitment to provide the industry with some of the most skilled and best prepared foresters.

Training to Meet Industry Needs

In the past, learning to run heavy equipment was generally an on-the-job mentoring process handed down from one generation of operator to the next. But even under the most experienced supervision, learning to control sophisticated equipment in the field is often intimidating and ineffective, and always dangerous. What's more, with a labor shortage and the high cost invested in an operator, companies find it increasingly difficult to justify pulling a productive worker off the job for training purposes. Consequently, training schools are being asked to provide the next wave of well-trained new operators.

"It's a physical and tough job with long hours and today's youth are not always up for that," explained Mont-Laurier Assistant Director, Mario Leduc. "Our mandate here at the

training center is to provide the industry with students who are prepared and autonomous. This is best accomplished with instruction that closely resembles the environment and working conditions encountered on an actual forestry jobsite."

Despite the ongoing call for new recruits, enrollment remains low. And because many who enter the program are from urban settings and unfamiliar with the forestry environment, anxiety can take its toll. In fact, schools report losing multiple students each semester due to stressful learning conditions. This makes the retention of new students even more critical.

The answer lies in removing the fear and danger associated with putting trainees too quickly behind the controls on a jobsite. An instrumental part of the solution, heavy equipment simulators allow students to learn in a stress-free and safe environment while bridging the gap from the classroom to the field.

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Investing in New Technology for Training

Having accumulated an arsenal of simulators over the years, Mont-Laurier had long recognized their value. However, because most were antiquated and no longer reflected the advanced controls, automation, or dynamics of today's forestry equipment, the center set out to upgrade its training equipment.

"Simulators provide a foundation to familiarize students with machine controls and basic operating skills before moving on to actual equipment where they can then focus on technique, skills refinement, and acclimatizing to the environment," said Leduc.

To better quantify the impact of simulators, Leduc initiated a series of field tests using CM Labs Vortex Simulators. The results further validated his commitment to simulation-based instruction.

"Through our tests, we found that a dozen hours on a Vortex simulator is roughly equivalent to a week of basic training on equipment. Participants agreed that the simulators helped enormously," he added. "This is because students were not intimidated by the machine or afraid of the consequences. Graders and dozers are large, and students are always concerned. However, simulators remove the element of danger so they can focus on learning the fundamentals of operation. In about 12 hours they master the basic maneuvers so when they get behind the controls of the actual equipment, they're better prepared, more relaxed, and ready."

Leduc estimates that a week of simulation training equates to \$16,000 in fuel savings. But beyond a monetary return, Leduc highlighted the measurable impact of new simulators on the quality of training and the school's long-term success.

"Students get on the simulator and don't want to leave the room."

"At the end of the day our mission is to provide the industry with well-trained operators. And the goal is to establish Mont-Laurier as Quebec's premier training center. This will ultimately benefit our students, the industry, and our business."

Simulator Selection

When the center sought to upgrade its training equipment, Leduc recognized that training simulators ran the full range in terms of sophistication and quality and selecting just the right simulator would be key. Among other things, the system's curriculum would be non-negotiable. The solution would have to be a true training solution providing the most realistic and accurate operator experience.

"I was approached in the past by someone who wanted to sell me simulators; but the machines were little more than video game quality lacking detail and realism. This was

of no interest because the students would learn nothing. The dangers encountered in a forest environment require advanced simulation; and we weren't going to invest in simulators that we couldn't apply on an educational level."

After assessing the candidates, Leduc purchased CM Labs' earthmoving training pack for roadbuilding and maintenance. Today the center boasts twenty-three CM Labs machines including twenty Vortex Edge Plus portable simulators and two Vortex Advantage fully immersive simulators. In addition, an Instructor Operating Station (IOS) allows trainers to monitor, assess, and engage students from a single remote workstation.

The detail and realism of the new CM Labs simulators is clearly helping to engage and retain future equipment operators.

"Students get on the simulator and don't want to leave the room," said Leduc. "When I pass by the classroom, I have to step in just to give the teachers a break. We've had simulators in the past; but I've never seen anything like this before. It's amazing."

According to Leduc, while it took some time for the instructors to get used to the technology, the time was well spent. "Everyone, all of our technicians and teachers unanimously agree that the simulators help enormously."

Advancing the Curriculum

Heavy equipment training simulators must continually evolve toward capturing the most realistic operator experience. Through its collaboration with Mont-Laurier, and similar forestry training institutions, CM Labs has developed a product line designed to meet the demands of the forestry and logging market.

"Simulation is here to stay, and every training school should have them," concluded Leduc. "Remember, the goal of any training center or school is to help the student become employable. Better training produces more qualified and successful students. This will in turn benefit the industry as well as our schools."



645 Wellington Street,
Suite 301
Montreal, Quebec,
Canada H3C 1T2

info@cm-labs.com
cm-labs.com
T +1 514 287 1166



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