

# CM Labs Smart Training Technology: Real-World Operator Experience for Next Gen Equipment Training



## Situation

Terri Olson, a civil construction business owner, launched Next Gen Equipment Training with the goal of building the premier training resource for heavy equipment operators. Reaching these objectives would hinge on providing the most effective solution for a variety of training goals, experience levels, equipment, and applications.

## Why CM Labs

Extensive research, along with recommendations from the Colorado Contractors Association (CCA), led to CM Labs and the industry's most detailed, realistic, and versatile training simulators. The Smart Training Technology behind CM Labs' simulators closely replicates physical equipment behavior, response, and interaction to provide the industry's most realistic operator experience.

## Solution

CM Labs delivered a 3 screen Vortex Advantage simulator equipped with a full fleet of earthmoving training packs. Training is further enhanced through the CM Labs Instructor Operator Station (IOS) which allows training to be managed through the instructor's console. Trainers can initiate sessions, monitor operations, and challenge students with a variety of tasks, scenarios, and job site conditions – all directed remotely.

## Benefits

Benefits include personalized instruction that is faster, less costly, and more effective than field training as well as engaging and realistic. The simulator is also configurable to a variety of equipment and scenarios.

## Profile

Golden, Colorado is home to the Coors Brewery, Lookout Mountain, wild west museums; and, if Terri Olson has anything to say about it, the region's most effective heavy equipment operator training. As a civil construction business owner, Olson experienced the challenges of hiring, developing, and maintaining a skilled workforce. Driven to advance training through personalized, customer-oriented, instruction she launched Next Gen Equipment Training in the latter stages of 2019.

The company offers a variety of vehicle training options including - hydraulic excavators, wheel and backhoe loaders, heavy construction dozers, motor graders, and articulated trucks. Although classroom and field instruction are provided, there is growing emphasis on simulation-based training.

Retaining qualified operators is a concern for all construction business owners. The key lies not only in competitive wages; but providing opportunity, solid training, and a clear career path. This holds true for seasoned operators as well as young laborers aspiring to take the controls.

Because equipment operators come with a wide variety of experience, skills, and requirements, training centers must have the flexibility to tailor instruction to the needs of each trainee. Attempting this in a field setting is costly, time-consuming, and often weather dependent. For a growing number of equipment trainers, including Next Gen, virtually replicating this environment is the answer.

Next Gen realized that its success could ultimately come down to the simulator they were about to choose. A system would have to represent a true hands-on field experience, adapt to a wide variety of equipment type, usage, and scenarios; and fulfill the unique requirements of students at all levels. With so much on the line, Next Gen began a thorough research of the market.

## The Solution: Smart Training Technology

Olson, along with instructor and colleague, Gary James, kicked the tires and explored all options. Eventually, their research led to CM Labs. About that same time, during a meeting with the Colorado Contractors Association (CCA), CM Labs simulators again received a ringing endorsement.

Olson explained, "I was told, 'your next simulator needs to be CM Labs and let us tell you why'. CCA had done a lot of research, just as we had; and we reached the

same conclusion. We liked the architecture and the back-end engineering looked like we would have fewer technical problems than with other simulators. But even more, with CM Labs, it seemed much easier to switch training from one type of equipment to another. Versatility was absolutely a big point for us; and we recognized that our simulator would have to fulfill a wide range of training requirements."

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Ready for a trial, a CM Labs simulator was shipped to Colorado. Unfortunately, the company had opened its doors just prior to the COVID pandemic. With travel restricted, an on-site supervised demonstration would not be possible. Undaunted, Olson and James set up the system, took it for a test run, and became instantly hooked.

"We were quickly up and running without any help; and that in itself speaks volumes," said James. "Almost immediately the quality of the graphics jumped out at us. Terri and I have spent more years than we can count on equipment; and we were blown away by the realism."

While detail and graphics may have caught the client's attention, it would be the simulator's ability to deliver a true real-world experience that would seal the deal. As the only simulator incorporating Smart Training Technology, CM Labs delivers the most realistic operator environment and transferable skills anywhere outside of actual equipment. Training is further enriched through the Instructor Operator Station (IOS). This gives trainers control to direct training remotely, initiate sessions, monitor operations, and test students with a variety of tasks, and job site scenarios and conditions.

Simulated equipment operation is highly successful when it comes to engaging students at their level of comfort; and personalizing sessions is shown to make instruction even more effective. Not surprisingly, however, the biggest challenge lies in changing mindsets of those who cut their teeth on traditional training methods.

"I go back and forth with the older generation who claim that it's just not the same. My question to them is 'When are you going to try it?'. Once they become engaged, once they take the controls, see the detail, experience the sounds, and feel the movement of the machine under them - well, we have a hard time tearing them away."

In addition to serving its construction business customers, Next Gen opens its doors to future equipment operators through local schools, trade organizations, and foundations.

"This younger generation grew up with, and is comfortable with, technology. They are not intimidated by the digital world nor are they impressed with low-end game-quality simulations. Our CM Labs simulator really captures their attention. Their eagerness to learn and the way they embrace the simulator is incredible and speaks well to the future of the industry."

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## Simulated Training – Real Results

When factoring equipment rental, set-up, fuel cost, and scenario limitations, virtual training offers measurable benefits. According to Olson, the rewards to both the customer and operator speak for themselves. "Simulation is shown to be as much as 70% faster at less than half the cost of traditional training. But the real proof is in its effectiveness. Studies show that training based on simulators boosts productivity up to 40% in most cases. And that's more than significant."

Availability, says Olson, is another big selling point. "In my construction company I track days we can't work because of weather issues. On average we're probably shut down about 25 days a year. The simulator never closes; in fact, we sometimes simulate rain, high wind, and snow conditions for the operator."

A twenty-year industry veteran and experienced operator, James understands how unreliable and costly field training can be – regardless of location.

"Florida has about the best weather you could get, and still it rains every single afternoon. If I had students lined up for training and it started to rain what are we going to do? I hate seeing someone try to learn under those conditions. Learning in a controlled setting is reliable and

extremely versatile. If you're green, I can teach control familiarization; or tips and tricks if you're experienced. And we can do all of this without being stressed out by the superintendent, worrying about the weather and who's working on the jobsite, or what might be hidden underground."

One of the biggest challenges for an owner or field staff manager is to quickly assess the qualifications of a new hire. Next Gen is subsequently seeing a surge in operator screening requests. Here again, the CM Labs simulator is answering the call.

"When a guy shows up and says 'yeah, I've been operating a loader for five years', one doesn't know what he is really capable of. Sending people to a job site without knowing what they can or can't do is very risky. What if something is damaged, what if he injures himself or someone else? More and more, we're asked to screen operators on the simulator to provide an assessment report. This quickly lets the customer know the operator's performance, if he really can move dirt, the accuracy, and so on."

## Positioned for Success

Driven to provide diverse, cutting-edge training – and supported by CM Labs Smart Training Technology – Next Gen Equipment Training is poised to make a difference in heavy equipment operator recruitment, training, and retention.

"I've seen what can happen when people don't have proper training or a path; and not enough young people are coming into our industry. Many are like 'I'd like to run heavy equipment, but how do I get started?' You tell them 'You're going to have to be on the ground for a while', and in most cases you've got older folks supervising these sites who won't give them a shot. Thanks to CM Labs, we're able to offer efficient, personalized training that results in opportunity and skilled operators who are better prepared for the job site."

And, if they had it all to do again, would Next Gen make the same purchase? The answer is a resounding Yes.

"Believe me," concluded James. "from the user's experience to versatility, the control it gives trainers, customer service, and more – everything about CM Labs stands out. If I were to be putting this training room together in my next life, I would fill it only with CM Labs."



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