

Crane Industry Services Reduces Training Costs and Accelerates Learning with Vortex Simulators



Situation

When Crane Industry Services, LLC (CIS) began exploring ways to enhance training it set out to quantify the benefits and impact of simulation-based instruction. The findings concluded that simulators were not only more cost-effective than field training, but also offered measurable advantages in terms of accelerated learning and operator performance.

Why CM Labs

Senior CIS management had been introduced to CM Labs years earlier and had watched the company's simulation training solutions evolve. Powered by Smart Training Technology™, CM Labs Vortex simulators provide unmatched detail and realism to deliver the ultimate machine experience.

Solution

With a better understanding of the advantages of simulation-based training, CIS began incorporating CM Labs Vortex simulators into its curriculum. Leveraging this superior technology allowed CIS to continue to provide the most thorough and cutting-edge training solutions to which its customers had become accustomed.

Benefits

Through its partnership with CM Labs, CIS is providing more thorough and efficient operator training that is faster, safer and more cost-effective.

Profile

As its name suggests, Crane Industry Services, LLC provides a wide variety of solutions to utilities, contractors, manufacturers, government and military, owner-operators, and others throughout the crane, and heavy equipment industries. The company also offers training, qualifications, inspections, consulting and strategic planning for work and projects that depend on skilled trades.

Much of the success of CIS is attributed to – and will continue to rely on – its ability to provide customized, thorough, and effective training for equipment operation and safety. Instruction to operators at all levels (novice, experienced, and everything in between) is conducted through the company's Georgia-based facility or on customer sites. From the classroom to the simulator to the field, students receive some of the most complete and thorough training available anywhere. Serving dozens of students each month, operator instruction remains key to the company's growth strategy.

Faster More Cost-Effective Training

Heavy equipment simulators offer numerous advantages on all fronts. They expose students to realistic real-world situations (such as operating heavy equipment in tight urban settings) in a safe, virtual environment, while providing training organizations with a platform for teaching complex or costly scenarios that cannot be easily replicated in the field.

"A swinging load can be extremely dangerous for any crane operator," noted Inspector and Trainer, Greg Brown. "Simulators allow us to safely prepare students for such situations in a controlled environment. What's more, we can challenge them with a wide variety of tasks, distractions, and difficult conditions such as high winds, rain, and so on without creating danger in or around the job site. But these simulators aren't just for beginners. Their flexibility allows us to teach customized and advanced operations to even the most experienced operators. We can even practice complex, two-crane lifts with realistic configurations and set up."

"Simulators bring the classroom to life and provide a comfort level for students and trainers alike," explained

the company's CEO, Debbie Dickinson. "They provide the inexperienced with a sense of 'OK, I've seen this before' familiarity when sitting behind the controls of the actual equipment. And when you consider the expenses associated with hands-on equipment training in the yard, equipment rental, fuel, the hourly rate of a certified instructor, maintenance, and so on – the cost of training can be astronomical. We recognized that simulation-based training offered advantages; but before making the investment, we wanted to quantify what, if anything, a student would learn on a simulator, faster, better, easier than sitting in the seat of a crane."

In 2014, CIS collaborated with CM Labs to help determine the impact of simulators on training. And the results were nothing short of eye-opening.

"We learned that, depending on the operator's skill level, one hour on the simulator was equivalent to up to four hours on a crane," Dickinson reported. "This accelerated training time and improved effectiveness immeasurably. The key rests in the ability to repeat an exercise as much as needed. Repetition builds confidence and muscle memory to instinctively determine and control load movements. And CM Labs' Vortex simulators are the most effective at helping operators develop skills that transfer to real equipment, making them an efficient and objective method for training and qualifying operators."

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The Most Thorough & Engaging Training

Following the assessment, CIS began incorporating CM Labs' Vortex simulators into its training curriculum. The company employs simulators to not only teach new operators but to allow experienced operators to upskill, prepare for re-certification, and practice complex lifts.

"You can only hold one's interest with PowerPoint for so long," explained Crane and Rigging Inspector and Trainer, Noel Welchel. "Because they mirror the actual crane, the pedals, controls, joystick, and levers, all feel like actual

hydraulic controls, Vortex simulators are as close to the real thing as you can get. We make them available to students during class, at breaks, and after class. Rarely do our simulators sit empty, it seems like someone is always at the controls."

And user feedback further validates their effectiveness. "Regardless of their experience level, students are generally excited and impressed by the realism of our Vortex simulators. Even veteran operators agree that it's a good experience and most wish they had access to this technology when first learning. We recently had a new major utility company state that our program was the best equipment training they've ever had."

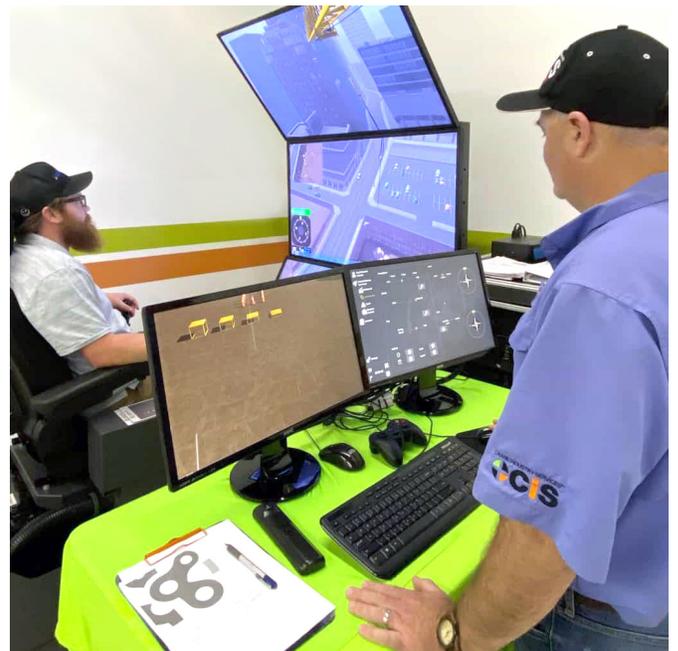
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What's more, simulation-based training is easily adapted to the unique and specific needs of the operator or employer. And with the highest fidelity graphics, and true to life operator experience - CM Labs' Vortex simulators are unmatched in the industry. As the only simulator incorporating Smart Training Technology™, CM Labs' Vortex simulators replicate real machine behavior from the backlash of the crane's boom to cable slapping. The result is the most transferable skills anywhere outside of actual equipment. Training is further enriched through the simulator's Instructor Operator Station (IOS) which allows instructors to manage the training right from their seat. With a real-time 3D view of the virtual work site from any vantage point, trainers can initiate exercises, monitor operations, and challenge students with a variety of job site scenarios. They even have the ability to change weather conditions.

"I was a big believer from the beginning because I could see the realism of the simulations, the true response of the equipment and controls, along with the value and benefit," said Dickinson. "We have integrated simulation training into operator qualification and certification programs. CIS subject matter experts quickly recognized that simulations add great value when part of a well-planned, disciplined, integrated training system. Vortex simulators have the added benefit of enabling advanced crew training exercises for team learning. This might include a scenario with multiple crane operators for tandem lifts, signal person and crane operator communications, or excavator and articulated dump truck scenarios where operators of both pieces of equipment must work together."

A Promising Future

CIS is living up to its reputation for providing some of the industry's most skilled and safety-conscious operators. "We have been training operators for decades and have it down as a science - so why reinvent the wheel?" said Dickinson. "Between CIS and CM Labs we have the unique blend of technology and hands-on industry experience to keep pace with today's tech savvy students and provide the best training solutions around."



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