

Client Case Study: ZHD Stevedores

ZHD Stevedores' Alain Bornet likes to tell a story about some of the more unusual "experiments" his company is willing to conduct for customers.



The story ends with an emphatic "and that's why their wood pellets don't catch fire anymore." But the real punch line is that ZHD now holds a major share of the Rotterdam wood pellet stevedoring & storage market, versus other competitors. Bornet, who heads ZHD's business development, has a track record of exploring new ideas and implementing them for competitive advantage. However, ZHD is not immune to the training challenges faced by port terminal operators all over the world. "As a stevedoring company you need skilled crane drivers," says Bornet. "But in order to get a crane driver you need a crane. And you can't practice on a crane if the product is too difficult or there's no ships. The amount of hours you can spend training people in reality is too limited."

As he mulled over the challenge of finding and training skilled operators, Bornet happened to try a crane simulator at another stevedoring company. "If you see what kind of money is spent on training crane drivers on real cranes, the budget is just insane. The simulator opened my eyes," he says. "I thought, this is the way to start training people."

"Our crane drivers told us 'this is a good solution.'" Bornet launched a search for a training simulator that would match ZHD's requirements. His first requirement was for a simulator that was available off the shelf, as opposed to an enormously costly custom-engineered solution. He was also looking for highly realistic instrument interfaces and controls.

The Company

ZHD Stevedores is an independent, family-run company operating port terminals in Dordrecht, Moerdijk, and Rotterdam (The Netherlands).

The Situation

ZHD was looking for a reliable way to train new crane operators.

The Solution

The Vortex VxMaster|5 — a fully immersive 5-screen simulator featuring harbor mobile crane controls and joysticks, surround visual and audio systems, and more.

The Results

ZHD saw an improvement in training efficiency almost immediately.

Anticipating potential resistance from his crane operators, Bornet also placed a high priority on the realism of the graphics: "For people to accept a simulator within a company, you should come up with something more than a Nintendo." As Bornet started researching simulators from all over the world, he quickly noticed that not all simulators are created equal. Of one solution, he says "the price they would charge us for that simulator was almost the same amount as a real crane, so for us it was like, yeah, why would I go on the simulator if it's the same price as using the real crane, that doesn't make sense." Another solution had particularly unrealistic graphics, notably when it came to crane cables. "They looked like sticks," says Bornet.

Then Bornet asked CM Labs Simulations, a company he'd discovered through a web search, to provide a demonstration of the Vortex Crane Simulator. "I asked my crane drivers, please try it out and tell me what you think of it. Our crane drivers who are sitting in cranes every day told us 'this is a good solution'. They were surprised, because most of the time people are skeptical about these things," says Bornet. "You could definitely see that Vortex was more realistic."



The realism of Vortex crane simulators is powered by CM Labs' Vortex Dynamics simulation software. This software simulates the real behavior of cranes, rigging, cables, and loads, validated extensively against empirical and engineering data. Impressed with the Vortex solution, ZHD Stevedores purchased a Vortex VxMaster|5—a fully immersive 5-screen simulator featuring a harbor mobile crane controls and joysticks, surround visual and audio systems, lifelike worksites and exercises, and an instructor's station. The VxMaster|5's 3-degree-of-freedom motion platform precisely replicates the acceleration and vibration experienced while traveling and lifting a load.

"Now," says Bornet, "you can actually see how people are developing their skills. You can let them train as much as possible, in order to keep the training on the real crane as short as possible." "I've already saved 10 hours of horrible crane abuse." Although the Vortex Simulator is a newcomer to the ZHD arsenal of training equipment, Bornet is already seeing an improvement in training efficiency. "I notice that people come in, and their increase in production on simulator is quite rapid. They come in at 40 minutes to an hour for 550 tonnes [of bulk material moved], and after a couple of sessions they're already in the 20 to 30 minute range. I can see that the skills are improving. We'll have to see how this affects our production on the real crane, but for each trainee I've already saved 10 hours of horrible crane abuse." Vortex Simulators also track and log objective training metrics, such as the amount of time elapsed in a training exercise, the amount of fuel used, pendulums, collisions, and more. These metrics allow ZHD to hire operators who are truly the most qualified.

"In the past, people became crane drivers based on if people liked them or not," Bornet says. "Now, we can focus purely on skills instead of the person." "You also can tell people, I'm sorry, you don't really have the skills. Let's try something else." "I don't believe you can train someone in a simulator and then give them the keys to the real thing, but it shortens the training so incredibly much that it will have a good effect. Plus, it's a product that can be placed in the company office, so any time someone wants to use it, they can." As someone who goes to great lengths to assure customer loyalty, Alain Bornet has a final word to say about CM Labs. "What I'm amazed about, if I send an e-mail to Canada within working hours, I always get a response within very short notice. Customer service is something the Vortex team does very well, even situated halfway around the globe."



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