



Using Cloud ERP on the Fast Track to Commercialization

As it moved from R&D to product commercialization, SWIR Vision Systems implemented NetSuite and works with CEBA Solutions to support its innovative business model.

A pioneer in the development of quantum-dot based infrared image sensors, SWIR Vision Systems' products are used in applications like silicon inspection, laser beam profiling, hyperspectral imaging, chemical and plastics sensing, machine vision imaging, agricultural sensing, surveillance systems, and medical imaging.

Founded in 2018 and based in Durham, N.C., SWIR Vision Systems also develops mobile phone facial recognition sensors and those used for autonomous vehicles imaging in obscured environments (e.g., snow, rain, etc.). With its namesake being short wavelength infrared (SWIR) band, the company's disruptive sensor technology has delivered the first instances of full, high-definition infrared sensing to the industrial imaging market.

For example, the company's patented CMOS-based CQD™ technology can scale

down the cost of infrared sensors—and approach the cost of today’s silicon-based CMOS sensors—effectively unlocking multiple large-scale and high growth market applications. New imaging technologies in the SWIR band are also becoming a critical need for advanced industrial cameras, 3D mobile phones sensors, and future autonomous vehicle systems.

“We needed NetSuite to be able to keep track of quotes, sales orders, billing, and invoicing as we processed these orders.”

Greg Hames, Senior Staff Engineer

From Manual to Cloud ERP

SWIR Vision Systems’ roots trace back to a multiyear, corporate-funded R&D program supported by parent company RTI International. Together for more than 10 years—and with funding support from DARPA—the company’s core CQD development team steadily advanced the technology toward commercialization. Today, SWIR Vision Systems has 12 employees and ships its novel Acuros CQD SWIR cameras to a worldwide customer base.

Once its technology reached the point of commercialization, SWIR Vision Systems needed a way to track and process its sales orders. Coming from an environment where it was processing just one or two orders per month and is now focused on selling to a broader audience, the company’s manual systems weren’t going to cut it.

“Previously, it wasn’t a big deal to keep track of those orders manually, without any infrastructure,” said Greg Hames, Senior Staff Engineer. “However, we knew we’d rapidly lose control of things if we didn’t have some type of infrastructure in place as we grew.”

Support for Growing Order Volumes

SWIR Vision Systems’ customers use its cameras in industrial applications, to identify art forgeries, and to inspect lumber (among other applications). The company currently builds and sells anywhere from 50-100 cameras per year, but is on track to grow steadily over the next few years.

“Our order volume is growing rapidly, and as those orders start to pile on top of each other, they become more and more difficult to track,” said Hames. “We needed NetSuite to be able to keep track of quotes, sales orders, billing, and invoicing as we processed these orders.”

“We’ve used NetSuite for some of its other functionalities,” he continued, “but that workflow that goes from quote to invoicing is our main function.”

Working with its accounting group, SWIR Vision Systems identified NetSuite Cloud ERP as the application that would best meet its needs and was also introduced to CEBA Solutions as a potential implementation partner. After initially attempting the implementation it on its own, the company turned to CEBA for help.

A Strong NetSuite Partner

Hames said CEBA provided setup help plus multiple training sessions on NetSuite usage, the latter of which ensured that the

SWIR Vision Systems team understood how to get the most value from its ERP investment. “The training and the setup both were useful,” said Hames.

CEBA also developed a number of customizations tailored to SWIR Vision Systems’ needs. Hames said this was important due to the company’s dual role as both a technology development company and a commercial manufacturer.

For example, he said the company uses a workflow that starts with the initial contact with a prospect. That contact is then turned into a quote that’s used to generate a sales order. From there, the order is fulfilled, shipped, and invoiced.

“Thanks to the integration of that whole process flow on our NetSuite ERP,” said Hames, “we’re now doing a better job of keeping track of our orders and also tracking the history behind those orders. That’s been probably the biggest benefit of using NetSuite.”

Supporting Future Growth

Looking ahead, Hames expects SWIR Vision Systems to expand its NetSuite ERP functionality to include other capabilities. Based on the company’s current size, some of the platform’s built-in functionalities haven’t been needed yet. However, that may change as SWIR Vision Systems continues to introduce its innovative technology to the broader marketplace.

“We went into this knowing we weren't going to be able to fully use all of the functionality that's in NetSuite; we just don't have the resources to set them all up,” Hames said. “That said, if we continue to grow as planned, I would anticipate bringing on some more of that functionality in the future.”