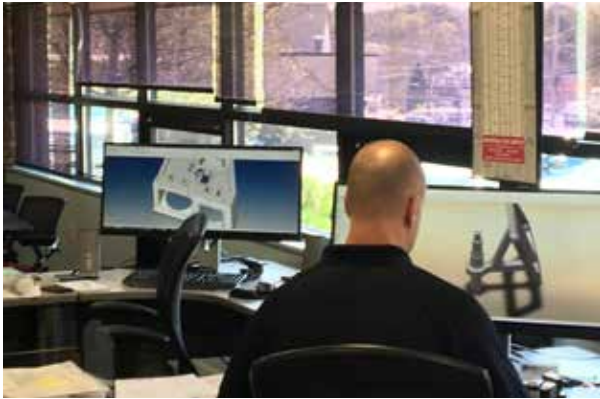


GLOBAL SHOP SOLUTIONS CASE STUDY

Evans Industries

Founded in 1965, *Evans Industries* is a family-owned machine shop that provides precision machining services and mechanical assemblies to the semiconductor industry. Its customers include some of the leading companies in the semiconductor equipment, printing press, semiconductor wafer processing and packaging equipment, automatic test equipment and precision electromagnet industries.



Evans Industries' head engineer using a customer-supplied model to quote and plan out a new job.



An operator is taking off a part mid-production to check for flatness before continuing to machine.

Located in Topsfield, Massachusetts, Evans Industries' capabilities including milling, with a maximum travel of 100" x 69"; 5-axis machining, with a top travel of 108" x 43"; and wire electrical discharge (EDM) machining. With its 5-axis machines, Evans Industries can machine different complex shapes all in one setup, thereby exceeding standard high-speed milling in terms of improved productivity, shorter setup times and reduced job costs.

When Evans Industries' old ERP software could no longer keep up with the constantly evolving manufacturing environment, management had to choose between upgrading their current system or investing in a new one. Based on a recommendation from a colleague, the company's owners opted for Global Shop Solutions [ERP software](#).

"Our old system would have been difficult and costly to upgrade," says Evans Industries Engineer and IT Manager Daniel Golomb. "The folks at Global Shop Solutions gave us an on-site demo and we liked what we saw. The software is easy to use and has a best-of-breed scheduling module. It also offered a lot of options for customizing things to the way we do business, and had many areas where we could expand into over time."

Precise Labor Tracking

For years, Evans Industries lacked the controls to accurately capture time and attendance data for shop floor personnel. Machinists would manually clock onto a job, and if they didn't have a job number, they sometimes made it up. On occasion, the lack of controls also led to machinists accidentally clocking in and sometimes even out for someone else.

After going live with Global Shop Solutions ERP software, management eventually switched to a barcode scanning process, which yielded immediate improvements upon implementation. As a result, logins are simpler, faster and more accurate.

“Now, machinists simply scan their barcoded badges into the [Shop Floor Data Collection stations](#) on the shop floor and the system automatically captures the data,” says Golomb. “The system allows us to set security levels so employees can only update their own data, and they can now find the correct job in seconds as opposed to minutes.”

“Global Shop Solutions has also simplified the daily balancing process by ensuring all downtime gets allocated to an indirect work order,” continues Golomb. “This gives us a clearer picture of how much time people are actually spending on the machines.”

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Going “Paper-Less”

The Shop Floor Data Collection stations offer other benefits as well. Using the [Document Control application](#), employees can link travelers, setup sheets, 3D model diagrams and other job-related information directly to each job. Instead of having to sort through reams of paper, machinists can access the documents directly from the stations.

The ability to electronically link documents to jobs is especially valuable when producing recurring parts. With the data for those jobs already in the system, machinists don’t have to venture too far from their workcenters to see the model or double-check how they previously made the part. This reduces the number of setup steps and ensures accuracy of the data. It also supports the company’s goal of using less paper.

“Some of our program docs can have up to 500 pages,” notes Golomb. “Machinists often like to have some or all of the pages in front of them, so we have a printer at each station for people who feel more comfortable having that paper in their hands.”

“Even so, we’ve cut way back on the amount of paper on the shop floor,” says Golomb. “My manager used to print out three copies of documents for each job. Now we have one, maybe two if the job requires an outside vendor.”

A Unique Approach to Costing

At Evans Industries, ownership prefers to build all job costs into a fixed overhead, an approach that makes costing more difficult but also allows for more effective deployment of machines and labor.

Specifically, ownership puts all excess charges that might go to overhead into a fixed overhead. That way, Evans Industries can track machine run times over multiple runs of the same part to determine which employee should be running a particular job. By identifying which employees run the different machines more efficiently than others, they can assign the best employees to certain machines and achieve a better cost.

“This approach is all about getting the best players in the right position,” says Golomb, “and Global Shop Solutions provides the data we need to do that. The [Job Costing Accounting application](#) also allows us to see outside costs versus inside costs, setup costs and more. If jobs take too long or go over budget, we can quickly identify the reasons and take appropriate action.”

Efficient Scheduling of Kanban Orders

Like many manufacturers, Evans Industries accepts kanban orders from some of their bigger customers – in part to provide good customer service, but also to eliminate the time and effort of recreating the routers with every order. Their challenge? Keeping sufficient stock on hand without over-purchasing materials or over-producing product.



“Our main kanban customer provides a fairly good projection and updates it every month, if not more frequently,” says Golomb. “Using his past knowledge of the customer, our owner sets an amount to produce that’s a little more than we need, and we set up different jobs to account for the amount of pulls the customer takes.”

“We’re currently working on getting all of the owner’s knowledge into Global Shop Solutions, but we’re not there yet,” continues Golomb. “In the meantime, the **Advanced Planning & Scheduling (APS) application** helps us plan ahead by identifying where we have open capacity so we can fit some of the kanban work into those slots.”

Evans Industries is also in the process of setting up the software’s tool crib interface to do a better job of assigning tool costs directly to each job. When completed, managers will be able to run a custom report that assigns the job, price and description to each tool checked out for a specific job, thereby improving costing accuracy while eliminating several steps.

A Culture of Improvement and Cooperation

As the IT and Global Shop Solutions ERP software “go to” guy, Golomb appreciates the software’s intuitive user interface and the ability to find answers in the system. When someone comes to him with a problem or question, he usually finds the answer through the help screens. If not, he can rely on tech support to resolve the issue.

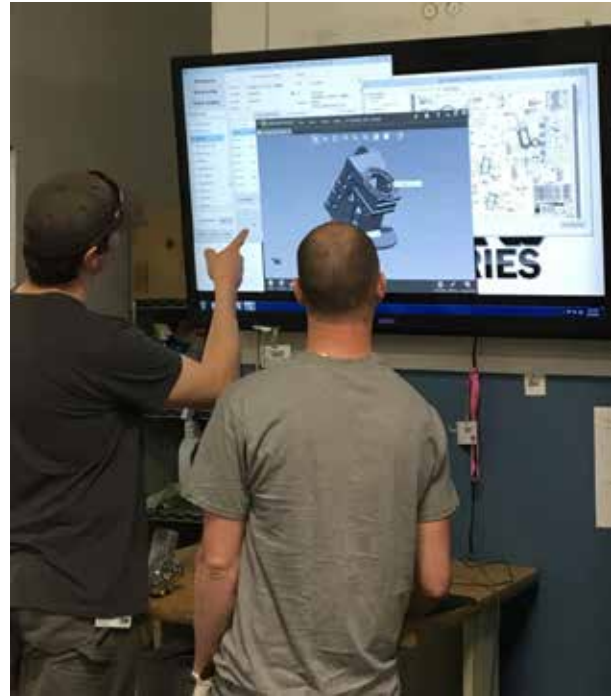
Global Shop Solutions ERP software has also made the company more competitive by improving the quoting process.

“With Global Shop Solutions, we can see that one vendor might be more cost effective when buying 100 parts while another is better when buying 500 parts,” says Golomb. “Having that data as we build quotes allows us to quote faster and save money by making smart purchasing decisions.”

In addition to many cost-cutting and productivity, Golomb has also noticed a change in the company’s culture.

“Getting Global Shop Solutions has forced us, as individuals and as a company, to get better at using technology to run our company,” says Golomb. “As we continue to use more of the system, work goes faster because everyone knows what they’re supposed to be doing. People no longer waste time searching for jobs or job data because it’s all there with a few clicks of the mouse.”

“We’re always looking to pull time out of jobs,” continues Golomb. “If we can’t reduce time because of a program, the system will often tell us how we can do it elsewhere. The ability to track jobs with precision enables us to pinpoint the cause of problems. So instead of management blaming employees or vice versa, we can all work together to resolve them.”



Two employees using Global Shop Solutions Document Control software on the shop floor to examine a model attached to the current run job.