

GLOBAL SHOP SOLUTIONS CASE STUDY

Masaba, Inc.

Founded in 1962, *Masaba, Inc.* manufactures a wide range of industrial material handling and conveying equipment for companies in the mining, aggregate, agriculture, industrial, power plant, pulp and paper, wood chips and other *industries*. Their products range from portable and stationary crushers, screening, and wash plants to a complete line of conveyors, surge bins, feeder hoppers, sand screws, and custom equipment – all designed and manufactured to endure in the most demanding environments.



Masaba's 36x130 foot Magnum HD machine.



Masaba's equipment in action.

Headquartered in Vermillion, South Dakota, Masaba operates out of 210,000 square feet of production space specifically designed for efficient plant and conveyor production as well as custom engineering and fabrication. The company's unique skill sets include specialty machine design, engineering services, and in-field support, allowing them to *manufacture to stock*, *manufacture to order*, and custom-design projects to suit each customer's specific needs. Tough, durable and built to last, Masaba equipment can be found in large quarries around the globe, including in sub-zero temperatures above the Arctic Circle.

When Purchasing Manager Justin Sievers first joined Masaba, Global Shop Solutions ERP software was already in place. However, it was being woefully underused due to resistance from employees and a lack of support from senior management. When new management came on board shortly thereafter, Sievers spearheaded an initiative to start taking advantage of the software's ability to lean operations and manage the entire business more efficiently.

"We're now using Global Shop Solutions for everything from sourcing and *inventory management* through production and shipping/receiving," says Sievers. "Everyone is on board with using the software, and we're starting to see the results management expected when they purchased it. We still have many areas we can improve upon, but we're headed in the right direction and seeing positive results."

\$400K Reduction In Inventory Levels

One of the first areas Sievers tackled was inventory management, starting with switching from purchasing raw materials to the job to purchasing directly to inventory.

When materials were purchased to the job, they didn't get accounted for in inventory. As a result, managers often didn't know the part number or what they had in stock at the moment, which often inflated project costs. Now, Sievers operates with a first-in, first-out inventory system, completely managed within Global Shop Solutions ERP software, that has greatly reduced Masaba's purchasing requirements, inventory stock levels and carrying costs.

"I don't like buying directly to a work order because our customers are constantly making changes to jobs in progress," he explains. "In the past, when we purchased directly to the job we didn't issue any inventory to the job. If we got a design change that required a different hydraulic motor or cylinder, the new parts were received to the work order, which means we couldn't track the parts being replaced after the fact. As a result, the project ended up with material and component costs that weren't part of the finished machine."

"With Global Shop Solutions, all raw materials we buy get issued to an inventory location," continues Sievers. "When a design change occurs, we can easily see the components we have in inventory that are no longer in demand. We can then determine if we have upcoming projects that will consume them, or else return them to the vendor for credit. That way, we're not sitting on materials we don't need."

The result: a \$400,000 reduction in inventory levels and the ability to more accurately forecast on-hand requirements and hold inventory based on predicted usages. Plus, managers no longer have to go to the floor and start pulling pallets to make sure they have something on hand when they need it.

Better Inventory = Better Job Costing

Tightening inventory management has led to more accurate [job costing](#) as well.

Previously, material costs were calculated using an Excel spreadsheet. With many different people manually entering data regarding the price of raw materials, how much they had in stock, and what they used, costing was a hit-or-miss (usually miss) process. Now that purchase items are automatically received into stock at the current price and then issued to the project, managers know the real costs of components and consumables for each job.

"When we did rework in the past, the shop floor manager would usually just push the parts through the system," says Sievers, "so we were never accurately capturing the costs of a project. With Global Shop Solutions, we can track rework costs, as well as engineering time and raw materials, for a much more accurate accounting of job costing in real time."

Tracking direct labor costs has also improved by leaps and bounds. Instead of hand-written time cards, operators now log into the system by scanning their badges into the [Shop Floor Data Collection](#) screens of the shop floor. When working on multiple projects at the same time, operators would often be clocked into all three at the same time. Now, they log onto each work order as a group to more accurately allocate their time to each project.

"Global Shop Solutions allows us to more accurately capture all our actual costs," adds Sievers. "We can do a better job of [quoting](#) similar projects in our market, and we can be more competitive in our pricing knowing what an actual project yielded in terms of profit or loss."

Building Huge BOMs in Less Time

As Masaba employees continue to gain experience using Global Shop Solutions ERP software, the software is producing significant time and cost savings throughout the business.

For example, Masaba projects often require a bill of materials (BOM) containing upwards of 12,000 individual components. To simplify this previously manual process, Masaba uses a [custom interface](#) to build their BOMs and import them into Global Shop Solutions ERP software, saving hours of manual data entry. It also simplifies the process of creating work orders for each job, saving even more time.



One of several Masaba production trucks.

The ability to create custom Crystal reports in Global Shop Solutions ERP software helps provide a check-and-balance process when building these huge BOMs. The report runs a list of the components that need to be purchased for large projects, based on the BOM requirements indicated in the custom interface. Managers then compare the report to the BOM and the work order in Global Shop Solutions ERP software to ensure the accuracy of the information.

Sievers also uses the software's built-in reporting features to get a big picture view of work passing through the shop floor. For example, each morning he reviews the Open Purchase Order report to get a quick update on the status of each one. Once a month, he reviews the Open Work Order report to see whether there are any open work orders that should have been closed. Meanwhile, the Auto Purchasing report displays minimum/maximum inventory levels for a quick snapshot of any items that need restocking in inventory.

Intuitive, Easy to Use

As someone tasked with getting buy-in from people who were initially reluctant to use the system, Sievers found the software's consistency and ease of use to be a real advantage.

Sievers first used Global Shop Solutions ERP software at a different manufacturing company more than a decade ago. When he joined Masaba, he noticed the basic platform had stayed the same but had grown tremendously through upgrades and new features.

"Over the years, Global Shop Solutions has stayed consistent with how it operates while continually evolving to keep up with the ever-changing manufacturing environment," says Sievers. "They work hard to keep their customers continuously improving in their manufacturing environments."

"The software offers robust features and capabilities, yet it's very user-friendly," continues Sievers. "The navigation is easy and intuitive. All the modules are well integrated, so you can get amazing amounts of information without having to jump from one screen to another. And if you have any issues, you can count on getting good technical support. Of the five different ERP systems I have used in a production environment, Global Shop Solutions ERP software is by far the best."



Masaba's headquarters in Vermillion, South Dakota.