

GLOBAL SHOP SOLUTIONS CASE STUDY

TMCO, Inc.

TMCO, Inc. is a custom job shop that has specialized in one-stop, concept-to-completion metal manufacturing services since 1974. With a wide range of metal fabrication services that includes machining, sheet metal and tube fabrication, water jet cutting, welding, powder coating, and assembly, TMCO can finish a product from any stage of the design, fabrication, paint, or assembly process. Headquartered in Lincoln, Nebraska, TMCO is ISO 9001:2008 certified.



Fully automated machining center, the blanks go on one belt and the finish parts come out on the other.



TMCO is a one stop shop. This project included tubes, sheets, welding and powder coating work.

In addition to its custom fabrication services, TMCO also operates three subsidiaries that produce a diverse array of **make-to-stock** metal products. These include Metal + Art, a full service design and fabrication studio serving the architectural industry; National Manufacturing, which makes ovens, mixers and other equipment for cereal chemistry and technology laboratories; and National Walking Sprinkler, which makes self-propelled lawn sprinklers for home and commercial use.

For years, TMCO managed production with a basic ERP system and a separate accounting software package. The lack of data integration between the two led to ongoing problems in inventory management, scheduling, purchasing and accounting.

“Our old system was easy to use but had very few controls,” recalls Rafed Rida, IT and Purchasing Manager for TMCO. “This allowed each department to operate independently rather than working together as a whole, and led to a lot of duplicate data entry, which wasn’t very reliable. We acquired Global Shop Solutions to bring everything under one umbrella and get control over our shop floor.”

Centralizing Data Input

Centralizing all data entry in Global Shop Solutions ERP software allowed TMCO to operate as a unified company rather than a collection of competing departments.

For example, order entry used to be a random process. Now, when customers send in an RFQ one person creates the inventory part number, router and BOM in Global Shop Solutions ERP software and sends them to each department to move forward with their part of the production process. As a result, new order entry is performed the same way every time, saving time and eliminating manual errors.

“When we consolidated everything in Global Shop Solutions, we met with some resistance at first because each department was used to doing it their own way,” says Rida. “But once people saw how much work it took off their plates, they quickly got on board. The beauty of centralizing all data input is that when a process is right or wrong, it’s consistently right or wrong, which makes it easy to identify and correct problems when they occur.”

Getting a Handle On Inventory

With tighter controls over data input, TMCO next tackled the issue of **inventory management** – starting with cutting down on excess material purchases.

TMCO does a lot of **nesting**, with often results in extra material left over at the end of a job. With Global Shop Solutions ERP software, the purchasing personnel use the materials requirement report in the Auto Purchasing feature to identify which materials they will cut a purchase order for. Then they send the information to people on the floor to verify or change the quantities based on the amount of leftover materials. That way, purchasing can adjust inventory in the moment and avoid buying materials they don’t need.

On the finished goods side, Global Shop Solutions ERP software’s online updates enable personnel to catch inventory problems right away. For example, if the error log indicates that a material did not issue to a particular job, Rida sends an email to the department with the job number so the supervisor can take appropriate action.

“Most of our problems come from employees forgetting to WIP a part or component to finished goods to weld it,” says Rida. “With Global Shop Solutions, we can catch these problems in real time, giving us much more control over inventory.”

Complete Traceability

Many of TMCO’s customers require 100% traceability for their parts. Global Shop Solutions ERP software’s lot-to-lot traceability options help to simplify this process.

When creating work orders, the ERP software provides the option to indicate when a part requires lot-to-lot traceability. When the option is selected, the system automatically creates a lot based on the job number, and then adds a unique suffix for that particular part. At any point in the production process workers can instantly identify which work order the part was run on and what materials were used.

“Global Shop Solutions also helps with producing the certificate of conformance that confirms we did everything based on the purchase order,” says Rida. “We keep all the data organized around the work order, so when a customer asks for a full audit all we have to do is print the documentation. It’s fast, easy and accurate.”



TMCO assemble the parts after fabrication.

Accurate Purchasing and Scheduling

Centralizing the purchasing process in Global Shop Solutions ERP software has enabled TMCO to restrict access for tighter purchase order and **accounts payable controls**.

“We used to have a problem with people paying vendors without looking at the purchase orders,” says Rida. “Now, all purchase orders are issued by a single department, so we don’t have to worry about unauthorized purchasing. Department managers can still cut and approve requisition forms, using an internal tracking number. But Global Shop Solutions gives us a consistent confirmation process for every vendor in the system. Our purchasing department has never been more effective or efficient.”

Meanwhile, TMCO has made great strides in scheduling efficiency.

Using the [Advanced Planning & Scheduling \(APS\)](#) application, planners regularly monitor and analyze the schedule to prevent capacity overloads of personnel and workcenters. APS also makes it easy to determine proper lead times to ensure materials are ordered in time for each job.

Company-Wide Improvements

Global Shop Solutions ERP software's ability to simplify operations in every area of the business gives TMCO the improved efficiencies it needs to compete more effectively in today's global markets.

Financials are more accurate, with all costs, profits, payroll and other operating expenses tracked in one integrated program. Constantly reviewing work orders to issue or reverse-issue material and edit work order details has created a smoother workflow with far fewer hiccups.

The [Customer Relationship Management](#) application enables sales reps to provide faster service by instantly accessing all information about a job or customer from one screen. Even the quoting process has become more efficient with the ability to analyze different price breaks and gross profit percentages to identify margins that will satisfy the customer and the company.



TMCO added a new 70,000 sq. ft. building to manufacture larger parts and trailers, and this includes a fully automated blast and wash booth, paint (wet and powder) and oven booths, welding and assembly capabilities.

Total Shop Floor Control with Supply & Demand

When it comes to improving shop floor control, Rida gives much of the credit to Global Shop Solutions ever-popular Supply & Demand screen in the Inventory application.

"Supply & Demand is awesome!" he exclaims. "All you have to do is enter the part number and it provides everything you need. You can see all the open purchase orders, which jobs will use those materials, and the due dates. From there you can drill down to see the real-time status of each job, including where it's at and who's working on it."

"If it's a raw material, I can enter a sort code and see all the related part numbers," he says. "If it's a manufactured part, I can see all the customer sales orders with all the jobs and their due dates. And I can do all this without going back and forth between different modules or screens."

Supply & Demand even helps with the quoting process, allowing Rida to quickly access [sales](#), inventory, and PO history for a part to see when and how much prices fluctuate. This helps to avoid getting underbid on jobs by ensuring that all pricing is accurate and up-to-date.

"In today's markets, you have to be fast, efficient and accurate," concludes Rida, "and that requires having reliable data you can trust. With Global Shop Solutions, we can track every step of the process from order entry to purchasing to the invoicing of product. As long as we enter the data correctly, we know we can trust it."