

GLOBAL SHOP SOLUTIONS CASE STUDY

University Machine Services

A nonprofit ancillary service for Western University, *University Machine Services (UMS)* serves internal university and commercial industry customers through the design and manufacture of specialized components and equipment. Its services include prototyping of tools, equipment and mechanisms, high-end machining, full-service design, welding repairs, fabrication, and product sourcing of hard-to-find products, tools and components.



Part of the University Machine Services shop.



Team members are building a 16-foot full aero elastic bridge model. This bridge was constructed in Spain.

What's a high-tech machine shop doing on a university campus? If you're UMS at Western University in Ontario, Canada, almost anything your customers ask you to do.

Although a nonprofit, UMS still needs to provide products at competitive prices while covering its operational expenses – no easy task when creating prototype products from scratch. Since acquiring Global Shop Solutions ERP software, UMS more efficiently manages its production process to keep costs in line while offering competitive pricing to its customers.

Building a One-of-A-Kind Product

According to UMS Manager Clayton Cook, if a customer wants something that hasn't been done before, UMS will find a way to do it.

For example, UMS recently completed the floor of the new Windeee Dome Facility, a 50-foot hexagonal shaped, state-of-the-art wind tunnel designed to simulate downbursts, tornadoes and other high-force wind conditions. The only one of its kind, the Windeee Dome took several years to build and presented numerous production challenges, starting with [job costing](#).

"We had to bring in temporary contractors to help manufacture some of the wind tunnel floor parts," notes Cook. "Global Shop Solutions made it easy to separate the costs of the contractors from in-house labor and also helped segregate our design time from assembly time in order to get a true picture of the project's costs."

Global Shop Solutions ERP software also helped with billing, usually a complex and difficult task with long-term projects.

"We did monthly billing on the Windeee Dome project," adds Cook, "and the price scheduling reports in Global Shop Solutions greatly simplified this task. When we print work orders, the software allows us to put notes on every invoice regarding what has been billed to date and what's outstanding on the total purchase of the unit. We know at a glance what has been paid and what hasn't, and so does the customer."

Simplified Purchasing

Another challenge with long-term projects involves purchasing raw materials and getting them there on time – especially when striving to increase just-in-time ordering. Here again, Global Shop Solutions ERP software simplifies this important process with its [auto purchasing feature](#).

“For a project of this size and scope, we have a lot of purchase requisitions,” says Cook. “As materials come in, Global Shop Solutions automatically assigns them to the job. Everyone knows when it gets here, how much of it, and where it goes next.”

Auto purchasing also helps with the engineering stores department, which maintains higher inventory levels to meet the needs of internal university and walk-in customers. When inventory levels fall below a certain level, auto purchasing automatically orders more. This speeds production by eliminating the wait for parts to be delivered. Plus, designers know they will have the materials in stock and can proceed with a job once the sales order gets approved.

“Global Shop Solutions enables us to be more proactive because we know we’re not going to run out of materials,” explains Cook. “As people log in goods against jobs, it encumbers the materials so that they don’t end up getting assigned to the wrong job.”

Going Global with ERP Software

Where it used to work primarily with North American clients, UMS is now working on projects for clients in Saudi Arabia, Botswana and China. Cook credits Global Shop Solutions ERP software with helping the company compete more effectively – both domestically and overseas.

For example, Cook can look at a variety of [Dashboards](#) to assess the current status of all jobs moving through the shop floor. He can track how many hours the machines are running, ensuring proper maintenance and preventing breakdowns in the middle of a job. When UMS gets a new job that is similar to an old one, Global Shop Solutions ERP software quickly shows all the detail from the previous job, saving time on estimating and routing.

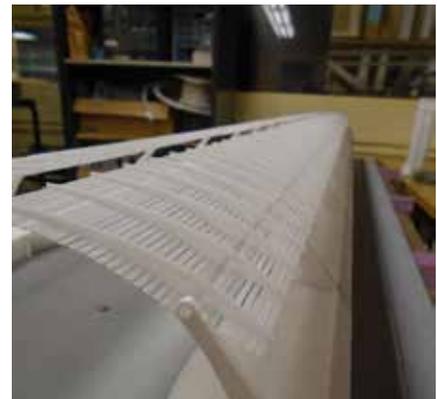
“I also like the [CRM application](#),” says Cook. “From one screen I can see all the jobs we’ve had from a customer within a certain timeframe. If we haven’t heard from them in a while, I can review their last few projects and contact them to make sure they were happy.”

Total Shop Floor Control

The powerful [Project Management application](#) makes it easy to manage multiple sales and work orders under one project.

It enables UMS to link directly to its many internal and external affiliates in order to perform inter-company transactions. It can assign the cost of materials ahead of the invoice being received. And when customer changes to a job require extensive materials changes, workers can see all the costs associated with the job and avoid huge cost overruns for the customer and for UMS.

“The interconnectivity of Global Shop Solutions ERP software is phenomenal,” says Cook. “At any time we can review closed work order details and linked documents. We can call up a sales order history, look at what we quoted the customer and what we invoiced, and then link directly back to the work order for the job. All this information is available in a matter of seconds, with just a few clicks of the mouse. For total control of your shop floor, it doesn’t get any better than Global Shop Solutions.”



An Air Foil scale designed from architectural drawing files and manufactured for the Boundary Layered Wind Tunnel.