

GLOBAL SHOP SOLUTIONS CASE STUDY

Allied Power Group

Headquartered in Houston, Texas, *Allied Power Group (APG)* specializes in the repair of industrial gas turbine engines and their components. Its team of engineers and expert technicians offer troubleshooting and recommendations for engine repairs and upgrades, as well as customized repair and engineering solutions to meet specific customer needs. Operating out of an 85,000 square foot facility with 135 employees, APG has earned a reputation for fast turnaround times and high-quality workmanship that lengthens the life of the repaired parts and reduces long-term operating costs for their customers.



APG headquarters in Houston, Texas.



APG employee preparing parts for a customer.

It takes big equipment to generate the power required to run large utilities and petrochemical plants. Specifically, it takes large industrial turbine gas engines that can withstand tremendous amounts of heat and pressure for long periods of time. When those engines break down, it takes a world-class repair shop like APG to get them up and running again.

Due to the size and physical makeup of industrial gas turbine engines, repairing them requires a high degree of specialized expertise. The turbines run very hot, often up to several thousand degrees. Most of the parts are made with high-tech metal alloys, and many are thermal barrier-coated in order to withstand the heat. In addition, part tolerances are extremely tight, making the machining of such parts especially daunting.

To meet these challenges, APG has developed proprietary repair criteria that enable them to repair parts that other companies don't have the capability to handle. They also use another proprietary product to gain a competitive advantage in the marketplace – [Global Shop Solutions ERP software](#).

A Different Job Every Time

Because no two jobs are exactly alike for APG, [managing direct labor costs](#) and scheduling workflow present significant challenges.

"Gas turbine engines are like car engines," explains CFO Bernhard Rudolph. "They're made with the same parts, but different things go wrong with them, so we never get the exact same problem twice. We can't schedule a job until we know what's wrong with an engine, so first we have to identify what needs to be fixed. Then we have to estimate how much labor it will involve."

Before Global Shop Solutions, APG used hand-written vouchers to track direct labor. Now shop floor workers use [Shop Floor Data Collection stations](#) to log on and off jobs and sequences. This enables job schedulers to tighten up the routers and use the historical data in Global Shop Solutions ERP software to get closer to their goal of estimating labor hours within plus or minus 10%.

APG also receives a lot of last-minute rush jobs, as customers can't always predict when an engine will require repair. Rudolph anticipates that Global Shop Solutions' **Advanced Planning and Scheduling (APS)** application, which they are currently in the process of implementing, will significantly improve their ability to schedule both regular and "hot" jobs.

"Rescheduling jobs requires reassigning priorities and figuring out what we have to do to still make the customer due date with the job in progress," he says. "Currently, our planners do that manually, a slow and inefficient process. Once we get APS up and running, Global Shop Solutions ERP software will do it in a matter of minutes."

Keeping An Eye on Gross Margins

As CFO, Rudolph likes to keep a close watch on gross margins and profitability, both actual and projected. He uses Global Shop Solutions' **custom reports** to create a variety of reports to track and forecast these key financial metrics.

"Suppose we have \$3 million in work scheduled for September, and I want to know how much gross margin we'll make on those jobs," he suggests. "Before Global Shop Solutions, I had to manually track down the paper and go through every single open job for that month. Now I just push a button and Global Shop Solutions lists all the jobs scheduled for September and where we stand in terms of actual versus estimate. This not only tells me how we're doing on each job, but where adjustments need to be made."

Rudolph also uses a **WIP** (work in progress) report to help balance on a daily basis, and an **inventory report** to track tool room inventory and on-the-shelf inventory used during the repair process.

One of his favorites is a work order report that compares what shop floor personnel thought they would do on the job with what they actually did. This report gets reviewed and signed off on at the end of every job, with any large variances requiring a written explanation by the shop manager.

As much as he appreciates the custom reports, ask Rudolph to identify the #1 benefit of Global Shop Solutions ERP software and he doesn't hesitate – the seamless flow of information it produces throughout the company.

"If you want to manage your business well and improve margins, Global Shop Solutions gives you the tools to do it," he asserts. "The only caveat is that it takes a lot of up-front planning to set up the software to fit your business. We spent close to a year planning and testing to make sure the system would do what we needed it to do, and it really paid off."



APG employee repairing industrial gas turbine engine.