

Aerospace and Defense Boom Powered by ERP

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Working in the aerospace and defense (A&D) industries can be a tough business. For defense manufacturers, it's all about compliance, cost control, and short lead times as well as rigorous government-mandated requirements for material tracing, documentation and reporting. Aerospace companies face these same challenges plus the added pressure to innovate new parts and products that make aircraft faster, more efficient and safer. Companies that can't meet customer expectations and government requirements don't get a seat at the table when it's time to bid on contracts.

And yet, despite uncertain economies, disrupted supply chains, and political instability, the A&D industries are booming. Powered by ERP that can be tailored to their unique needs, Global Shop Solutions' A&D customers consistently achieve results that produce solid growth and profitability. Drawing upon case studies from some of our most successful A&D customers, here are the backstories about how these companies use ERP to overcome the challenges in their industries and stay ahead of the competition.

Fullerton Tool Company: Precision Scheduling Yields Competitive Edge

[Fullerton Tool Company](#) designs and produces solid carbide cutting tools for a variety of industries, including aerospace. With a bustling shop floor that can have up to 2,500 active work orders at any given time, jobs must be scheduled with precision. This vital task becomes more difficult when inserting jobs that require tools to go through multiple machines not configured in work cells.

Fullerton Tool also offers several finishing services that can take anywhere from 24 hours to four weeks to complete. Some jobs require all these services before they can be shipped to the customer.

Despite these complexities, scheduling has become a competitive advantage for Fullerton Tool rather than a problem. Its ERP scheduling software, [Advanced Planning & Scheduling](#) (APS), automatically schedules each job and each machine so the work gets done on time. When several multiple machine jobs are active,

APS prioritizes them to ensure machinists work on them in the right order. APS also helps control labor costs by improving machine utilization efficiency and using labor time appropriately. Its finite/infinite and “what if” planning features make it easy to reschedule or reroute jobs to meet customer deadlines.

APS even helps prevent bottlenecks by identifying in advance when and where the workflow will be light in some areas and heavy in others. Many of Fullerton Tool’s skilled machinists are qualified to run different machines. When APS projects a bottleneck, it identifies when and where moving people to different machines would balance the workloads and ease congestion.

Bottom line – Fullerton Tool’s highly efficient production sequencing gives them an edge by facilitating the production of quality parts at the lowest cost in the least amount of time.

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MaTech Solutions: Controlling Costs, Managing Compliance

Precise inventory management plays a critical role in controlling manufacturing costs. It plays an equally important role for companies that must comply with strict government and/or industry traceability standards. [MaTech Solutions](#) manages these rigorous requirements without stress or strain through its ERP system.

A leading fabricator of precision parts and assemblies for the defense industry, MaTech's extensive traceability requirements involve documenting what happens to all raw materials, from receiving to shipping and everything in between. The firm must also control inventory on the accounting side, and many of their regulated parts require serialization to facilitate the data tracking.

Searching for specific part serial numbers on an Excel spreadsheet used to be a slow and inefficient process for MaTech. Now, compliance personnel can locate serial numbers in just a few keystrokes using their ERP's in-process serialization features. When a work order requires serialization, ERP applies it to every document that goes through the shop, from initial work order to final invoice. It also provides instant access to every transaction that used the product.

To ensure everything is accounted for, MaTech regularly gets audited on their inventory control processes. Using manual procedures to gather and coordinate all the data used to consume inordinate amounts of time. Performing monthly cycle counts through its ERP system, MaTech now averages [near-perfect inventory counts](#) and costs while eliminating the need for time-consuming physical inventories.

On the compliance side, ERP allows customers to specify the specific bells and whistles they need, such as traceability SPC, automated parameter measurement and mil spec screening, when placing an order. This ensures customers can meet their regulatory needs while helping MaTech get jobs to the shop floor quicker. ERP also reduces part rejects and rework by automatically inactivating part numbers with an engineering change number (ECN). Nobody can make purchase orders or create a work order until the engineering changes are resolved and approved.

High quality parts and accurate compliance documentation keep MaTech customers happy. Controlling costs enables MaTech to provide accurate lead times, offer competitive pricing, and win many jobs they couldn't win in the past.

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Corsair Electrical Connectors: Better Decisions with ERP



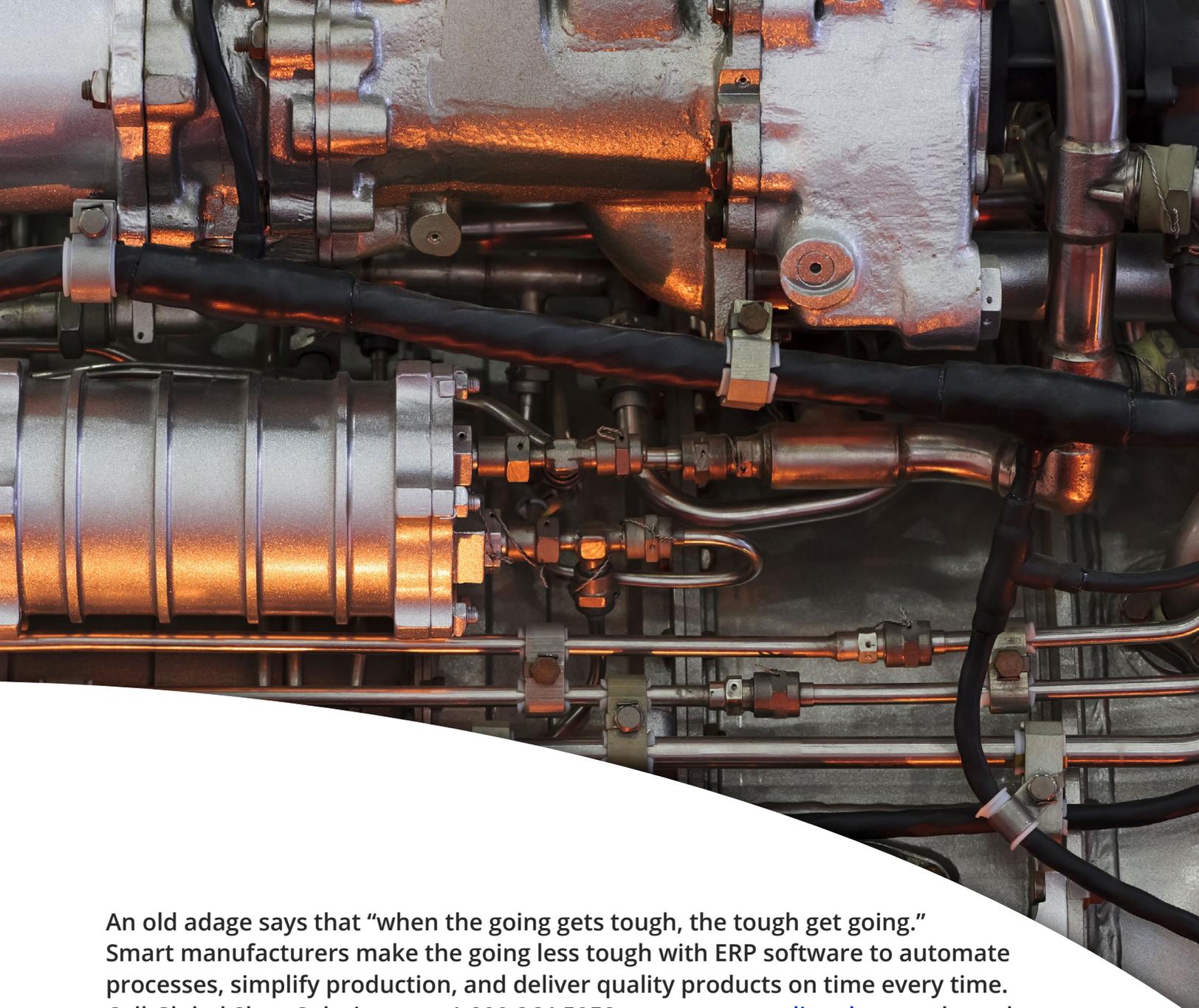
In the aerospace industry, most connector manufacturers build their parts (which serve as junctions for electrical cables and wiring in aircraft) to stock. [Corsair Electrical Connectors](#), a contract manufacturer that produces 30,000 different connector parts, makes theirs to order. Given the fast response times demanded by aerospace customers, this can lead to significant challenges around scheduling, inventory management, and lead times. Corsair manages them with ease because their ERP system is designed to simplify the unique processes involved in make-to-order jobs.

Depending on the part, Corsair's jobs can take anywhere from three days to two months to complete, with up to 700 work orders moving through the shop floor at any given time. Prior to ERP, ensuring the correct type and amount of materials were on hand for each job proved an elusive task. The company often had parts sitting in inventory for months while other parts for the same job had yet to be ordered. With ERP, Corsair can combine purchase orders and schedule them in advance for better pricing, improved purchasing efficiency, and no waiting for parts that should have been ordered.

All of Corsair's parts are unique, but most of them have common components. With so many different jobs in production at the same time, tracking costing data used to present problems. Using ERP, Corsair simply combines the common parts into lower levels on the [BOM](#), allowing production personnel to group and batch part numbers quicker and more efficiently. They can also combine all the requirements for in-house manufacturing on every purchase, thereby providing a true picture of the company's backlog and customer demand. With this information at hand, Corsair can make better decisions about what to buy and when, manage inventory with greater precision, and minimize past-due jobs to produce high on-time delivery rates.

ERP has greatly improved the company's risk assessment by automatically handling inventory and traceability. Before taking on a contract, Corsair first verifies they have the staff capable of completing the job and can meet required customer certifications. ERP tracks and stores this data, making it easy to collate the evidence needed to qualify for contracts and industry certifications.

With ERP providing real-time visibility of everything happening on the shop floor and supporting make-to-order production processes, Corsair makes smart decisions to simplify production and meet their customers' requirements.



An old adage says that “when the going gets tough, the tough get going.” Smart manufacturers make the going less tough with ERP software to automate processes, simplify production, and deliver quality products on time every time. Call Global Shop Solutions at +1.800.364.5958 or [set up an online demo](#) to learn how we can help you get ahead even in the tough times and tough industries.

ABOUT THE AUTHOR

Trent Maynard is the Director of Product & Engineering at Global Shop Solutions and has a bachelor’s degree of Engineering Technology: Mechanical and Manufacturing from Texas A&M University. Maynard leads all aspects of the R&D department including people, innovation, strategy, and engineering. He is also responsible for customer satisfaction in our product, technical health of the software, and more.