Zentech Manufacturing, Inc.
Made2Manage® ERP

Made2Manage Helps Zentech Manufacturing Best the Competition

ZENTECH

ROI at a Glance:

Zentech Manufacturing, Inc., a Baltimore, MD-based electronics contract manufacturer, saw these benefits after using the Made2Manage® Enterprise Business System:

- 150 percent annual revenue growth over the past six years.
- Fewer non-production staff than many of its competitors.
- Jobs readied for purchasing and scheduling faster than before, reducing lead times by two weeks per job.
- Accurate costing information ensuring the profitability of nearly every job.
- No in-house IT personnel.
- Common user interface allowing employees to cross over and do one another's jobs.

An enterprise business system that integrates all aspects of its operations helps a printed circuit board (PCB) manufacturer maintain its non-production staff at a level substantially lower than competitors of a similar size.

Despite the presence of heavy overseas competition, Zentech Manufacturing, Inc., headquartered in Baltimore, MD, has succeeded in PCB manufacturing to the point that the company recently made Inc. Magazine's list of the 500 fastest growing companies in the U.S. "We compete against contract manufacturers around the world by being more flexible and faster to market," said Brad LaPray, president of Zentech. "One of the most important reasons for our success is that, soon after we started, we selected a personal computer-based enterprise resource planning (ERP) system that integrates our entire business model onto a single, highly efficient and easy-to-use platform. Because we only have to enter information once and because the software automates many tasks that would otherwise be manual operations, we are able to move faster than and operate with a much lower overhead than many of our competitors."

Zentech is a contract manufacturer offering high-speed, precision assembly of all types of PCBs including surface mount technology (SMT), ball grid array (BGA), micro BGA, and flip chip. The company provides a full range of PCB testing services, including engineering and design, design for manufacturing and test, quick turn prototyping, product final assembly, inventory procurement and management, automatic optical inspection, X-ray inspection, in-circuit testing and functional testing, and component preparation.

The company primarily serves the defense, medical equipment, industrial controls, computing, telecommunications, and aerospace industries. It has about 100 employees and a 42,000 square foot plant. "We work with smaller companies throughout the design process to help them get new products to market at the right cost and on time," LaPray said. "For larger customers, we usually act as their manufacturing arm for complex parts."

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Competing Against Global Contract Manufacturers

LaPray noted that the company's global competitors have the advantage of labor costs that are a fraction of its own. "We compete against them by being able to deliver a higher quality product in a shorter period of time," he said. "We take advantage of the fact that it takes four to six weeks to ship product here from China and that our manufacturing and testing methods are more advanced in most cases. For a company bringing a new product to market, time is money. It's not unusual for us to get a request to build a few prototype pieces in 24 to 48 hours, or to move into volume productions in a time span of two to three weeks. Our flexibility to turn an assembled product around in a very short time period while maintaining the world-class levels of quality is what keeps our customers coming back time and time again."

LaPray started the company in 1998 and began operating on a small scale using an entry-level financial accounting system and managing scheduling and job costing on spreadsheets. "I had a lot of experience with ERP systems, having implemented systems such as Baan, ManMan, BPICS and QAD in Fortune 100 companies," he said. "So I knew what we were missing by managing our manufacturing operations on a spreadsheet. But I also knew that we couldn't afford the initial investment and maintenance costs and the IT staff required to operate a host-based ERP system. I looked at several PC-based solutions and the Made2Manage Enterprise Business System stood out. First of all, like the best host-based systems, it integrates every aspect of a manufacturing operation from generating quotes to producing financial statements. Second, it is far less expensive than host-based systems and is so simple to maintain and use that we are able to run it without any dedicated information technology staff."

LaPray continued, "We also can get new users up and running without any formal training. Another key point is that the Made2Manage system provides a very high level of integration with the Microsoft Office applications that our people already use. This has made it possible for them to improve productivity by moving information quickly back and forth between the two environments."

High Level of Integration Improves Efficiency

The Made2Manage Enterprise Business System helps Zentech manage nearly every aspect of the company's operations. The high level of integration offered by the system means each area of the company is able to access and use data that was already entered by other functions, saving nearly everyone a considerable amount of time and preventing errors. When a sales representative first discusses a new project with a customer, he or she enters the basic parameters of the job into the quoting module. Later, a manufacturing engineer scopes out the materials and operations that are required to complete the job. The software keeps track of the rates for each operation and the most recent cost of common materials so it can automatically price out the job once the engineer has entered the basic parameters.

The quotation can be converted into an order just by checking off a box. "Once we enter the order into the system, we hit the MRP button and the software immediately explodes the bill of materials and determines exactly what we need to make the part," LaPray said. "It checks the requirements against what's on hand and determines what we need to buy. It combines all the items that we need in a purchasing queue, which enables us to maximize quantity discounts."

Automating the Scheduling Process

Zentech also uses M2M Advanced Scheduling, which provides a graphical representation of all the jobs in the factory that looks somewhat like a traditional scheduling board. The module automatically calculates schedules for every resource based on due dates and operation times that were entered when the job was created and when materials are expected to be received.

The scheduler automatically highlights jobs that will be late under current assumptions. Scheduling problems become obvious right at the moment when a job is created, rather than just before it is supposed to ship. This provides plenty of time to evaluate different options, such as adding capacity or shifting capacity from one resource to another. Users can drill down on jobs to see why they will be late, such as because of a delay in receiving parts from a vendor or a resource being overbooked. They can change priorities simply by dragging and dropping items to a new position.

As the production staff begins to work on the job, they mark the amount of time they have spent on each operation on the traveler. When materials are checked out of the stockroom, they are also recorded against the job. The result is that the software is able to track the cost of each individual operation as well as the entire job.

LaPray is considering taking advantage of the ability of Made2Manage to accept information from a bar code scanner, which will immediately update job status and cost information. "Having accurate costing information at our fingertips on every job makes it easy to determine the profitability of every job," LaPray said. "This information allows us to frequently adjust our prices, either upward or downward, to remain as competitive as possible while ensuring that we meet our profitability objectives. The costing information can also be easily accessed by our program managers for reference."

Operating With Much Less Overhead Than Competitors

LaPray said that integrating the company's complete manufacturing operations within a single environment has substantially increased the productivity of the non-production workforce. "Our people very quickly learn the interface and how to determine the status of sales orders, purchase orders, and work orders. From that point on, their efficiency dramatically improves. They only have to enter data once and it becomes immediately available for use wherever it is needed. The commonality of the interface means that any person can operate any module so that they don't have to rely on others for information."

LaPray continued, "The efficiency of this new software can best be illustrated by the fact that we operate with a very lean non-production staff—including engineering, accounting, production scheduling, sales, etcetera. We have a competitor near us that is approximately our size that requires many more people to do the same jobs. We have also taken two weeks off the top of our lead times by reducing the time from when sales orders are received to when materials are ordered and scheduling is completed from approximately two weeks to a matter of hours. Overall, the Made2Manage system has helped us achieve the flexibility, speed and efficiency to not only compete against global contract manufacturers, but also to achieve an average of 150 percent annual revenue growth over the past six years."