

Multicircuits, Inc.

Cimnet Systems™ ERP

Multicircuits Excels with Cimnet Systems ERP Solutions



Islands of Data

Multicircuits Inc. is an Oshkosh, Wis.-based electronics and electrical manufacturing company. Founded in 1990, Multicircuits employs 120 staff members and serves more than 300 customers across the globe in the telecommunications, industrial, medical, avionics, and computer industries. The company also serves other electronics original equipment manufacturers and contract manufacturers. Some of Multicircuits' major clients look to Multicircuits for everything from prototyping to full production runs of double-sided to multi-layer printed circuit boards (PCBs).

A few years ago, the Multicircuits team was managing its business on at least a half dozen disparate applications. The collection of programs, mostly homegrown in Microsoft® Excel by Technology Officer Michael Thiel, kept employees at Multicircuits struggling with islands of information.

"We were keeping the same data in multiple locations, and we were spending a great deal of time making tedious updates in order to keep consistent data out there on the floor," recalled Thiel. "In PCB manufacturing, engineering processes are continuously changing, and it was becoming increasingly difficult to conduct mass updates to travelers on more than 10,000 jobs at a time."

One illustration Thiel offered was the company's former method for managing customer shipping documentation requirements. The company stored a Microsoft Excel template detailing the specifications of each customer. "Every time a requirement changed we had to adjust every template in the system," said Thiel.



ROI at a Glance:

Multicircuits Inc., an Oshkosh, Wis.-based electronics and electrical manufacturing company, realized the following benefits upon implementation of various Cimnet Systems ERP solutions:

- Significant time savings in engineering change management processes, cutting daily activities from hours to minutes.
- Improved customer satisfaction through more consistent, productive engineering processes.
- Better employee decision making due to increased business-wide data visibility.
- Increased engineering bandwidth through outsourcing of entire CAM process.
- Improved cost and margin analysis, allowing more intelligent purchasing decisions and more profitable pricing strategies and product mixes.

Another problem Thiel often encountered was continuously second guessing the homegrown macros he had written into various spreadsheets to help manage some of the updates. "Writing code for mass changes often inadvertently affected other data in the various systems," he said. "We were spending a significant amount of time re-keying data, updating information, and correcting mistakes."

Sparking Up a Software Search

Thiel quickly pulled together a cross-functional team and hired a consultant to lead Multicircuits through an enterprise resource planning (ERP) selection process. Over the next 12 weeks, the team evaluated several software packages, ranging from out-of-the-box ERP systems designed for general manufacturing to industry-specific systems. After viewing software demonstrations, it didn't take long for the selection team to zero in on a collection of solutions from Cimnet Systems, a Consona ERP solution.

Specifically, Multicircuits selected Cimnet Systems' Engenix®, and Paradigm® software solutions, as well as its comprehensive business process outsourcing (BPO) services, to more effectively manage its mounds of data from order initiation through completion.

"While the other packages were capable, they were really intended for general manufacturers," said Thiel. "Every package, except Cimnet Systems' set of tools, was extremely light on the engineering side."

Seamless Integration

With the decision made, Multicircuits embarked on a 10-week implementation process that finished ahead of schedule and under budget. "We had a very positive experience because the people at Consona knew our industry," said Thiel. "There was a short learning curve in terms of their understanding of the way we wanted the system to operate in our specific environment."

Over the 10-week period, Cimnet Systems' product experts led the Multicircuits team through a simple three-step implementation process. The first step included training and education for the end users of the system. Once users had a grasp of the system, Consona reps worked with Multicircuits to map out and fine tune process flows and procedures. Finally, Cimnet Systems' product experts went to work on the software, writing rules and populating the database that would fit the new and improved engineering operations.

Soup-to-Nuts Solution

The Engenix portion of the Cimnet solution, a pre-production engineering application designed specifically for PCB manufacturers, was the deal-sealer for the Multicircuits selection team. "Our business is so process and engineering heavy that we required an industry-specific package that would complement the way we do business," said Thiel. Specifically, the following features, as well as the general extensibility of Engenix, have allowed Multicircuits to achieve tremendous results in a short period of time:

- **Engineering Rules**—The built-in engineering rules of Engenix significantly impacted Multicircuits' engineering throughput and accounted for significant time savings. The engineering change management processes that once took hours to accomplish now occur in a matter of minutes.
- **Stack-Up Generation**—Multicircuits engineers are able to easily generate stack-ups for their lamination operations without having to access an additional software application or transfer data back into the ERP back office.

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Technology Officer
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- **Attribute and Custom Table Capabilities**—Multicircuits has been able to generate several tables, including drilling and routing stack heights, to custom fit their operations.
- **Reporting**—Because Cimnet Systems' Engenix solution is built on a solid technology platform and connects to a Microsoft SQL Server on the back end, Multicircuits uses the built-in report writer to generate custom reports from the SQL Server database, such as engineering job status lists and a stack-up generation reports.

With Engenix, Thiel believes Multicircuits has gained a significant advantage over its competitors because of a single benefit: consistency. "Zero defect output is a difficult thing to manage," Thiel said. "The rules-based automation of Engenix puts us far ahead of the competition because we're able to implement complex rules, apply them to complex circuit boards, and get it right every time for the customer."

With its decision to select a set of ERP solutions, Multicircuits also opted to utilize Cimnet Systems' BPO services. Multicircuits began to aggressively expand its business in 2005, and with this change came a stronger need for greater engineering bandwidth. Rather than spend excessive time and resources recruiting talent, Multicircuits decided to free themselves from the computer aided manufacturing (CAM) process and allow the experts at Consona create the engineering output.

Because of its location in Bangalore, India, Cimnet Systems development center is able to receive requests at the beginning of their workday and turn most of them around by the time Multicircuits' staff arrives the next morning. In the end, Multicircuits has successfully reduced its engineering costs, obtained much needed redundancy for critical processes, and gained infinite engineering capacity.

Eventually, all the orders are fed into Paradigm, Cimnet Systems' core ERP/manufacturing execution system, which replaces Multicircuits' previous homegrown system and provides a complete toolset for the management of sales, materials, pre-production engineering, production, and finance.

With Paradigm's sophisticated scheduling module, Multicircuits can now capably plan their jobs based around real-time data on department capacity and material requirements and availability, keeping their supply balanced with the changing demand from customers.

Additionally, Multicircuits has dramatically revamped communication across its shop-floor. The company was one of the first to implement touch-screen devices throughout its facility. Through this advanced functionality, Multicircuits' workforce can now instantly access data that is modified the moment that changes occur. No longer must staff members print changes in, for example, job priorities or changes in job specifications and then manually share them with each impacted department. Through this virtually paperless set-up, Multicircuits now more effectively manages its significant number of daily customer change requests and minimizes the potential for mistakes.

Paradigm also helped Multicircuits remain highly competitive. Now, as jobs move through the production cycle, Paradigm's job costing module perpetually accumulates costs against each of these jobs. With this continually updated data, Multicircuits better analyzes its costs and margins, helping it to determine more profitable pricing strategies and product mixes. The company also makes more intelligent purchasing decisions through Paradigm's Material Management capability, which controls inventory levels and allows Multicircuits to obtain more just-in-time deliveries and make less just-in-case purchases.

About Consona ERP

Consona Corporation is a worldwide leader in providing customer relationship management (CRM) and enterprise resource planning (ERP) software and services for companies of all sizes. Consona serves more than 4,500 customers worldwide and across a variety of industries.

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