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Pat Corcoran, Solar Plastics' IS Manager



## Solar Plastics

### Getting With the Times

By the mid-1990s, software solutions had gained a foothold among successful manufacturers seeking to stretch their competitive advantage, cut costs and improve profit margins. Worldwide availability of products and services has also dramatically increased the pressure on all manufacturers to deliver the right products at the right time for the best possible prices.

Mid- and niche-market manufacturers were forced to pay attention, and many of these market leaders also became converts of enterprise business systems.

Solar Plastics, Inc. is a privately owned manufacturer of rotationally molded plastic products in Minneapolis, MN. In 1996, Solar Plastics' management team realized the company had to start identifying its reporting processes better in order to continue growing successfully.

Solar Plastics had also realized that its legacy system was not able to keep up with the demands and problems that have spawned from rapid growth within the marketplace, which according to a report from *Plastics News*, recorded more than \$1.28B in sales in 1998.

Since 1964, the company has been a worldwide leader in rotational molding custom-engineered parts. Solar Plastics' manufacturing plants in Minneapolis, MN, Delano, MN, Davenport, IA, and Sioux City, IA employ more than 225 people in total and generate custom rotational molded plastic products for clients covering 20 major markets.

Rotational molding is a plastic manufacturing process used to produce hollow and seamless parts that are partially or totally enclosed. Solar Plastics produces molded parts in various sizes and configurations, ranging from the size of a baseball to complex parts as large as 15 feet in diameter. Annual part orders from customers can range from 100 to 35,000.

### Develop a Strategy, Follow the Plan

The company began developing an IT strategy that would be incorporated into its overall customer strategy. This stemmed from Solar Plastic's four plants outgrowing the existing batch system that managed each one's accounting, job costing, order entry, labor reporting, and shipping functions.

This old system also lacked many features the company needed in order to remain competitive, such as real-time job costing and multilevel Bills of Material (BOM) capability. In addition, very little

Quad Cities rotational molding machine and work cell



historical information was retained by this system. Data entry was duplicated in a number of areas, while the ability to extract information from this system was difficult for most users.

By June 1996, Solar Plastics began its search for a new enterprise business solution. With minimal internal IT resources, the company quickly determined that it needed a flexible solution that was easy to implement and easy to use. Solar Plastics' selection team included employees from accounting, engineering, manufacturing, information systems and sales departments. This team sought a vendor that could ultimately be viewed as a business partner, one that would provide a solution to help position the company for future success and grow with the company.



Post mold parts trimming on Five Axis CNC Router

At this time, it was also evident that all businesses were moving to Windows-based products and networked PCs, and staying with these products would likely lead to some economies of scale and scope for Solar Plastics. Current and new employees to Solar would likely know Microsoft products, so an enterprise software package that had the touch and feel of Microsoft would be easier to learn.

“We concluded that the platform that made sense for us was a PC network,” said Jeff Nelson, Solar Plastics' director of finance. “Compatibility with commonly used spreadsheets, word processors, and database software would be easier. Plus our experience taught us that maintaining mini-computers could be cost prohibitive.”

“Among the specifics we sought was a system to support P&L statements, and one that would support all departments,” said Pat Corcoran, Solar Plastics' IS Manager. “We believe we found this functionality in the Made2Manage Enterprise Business System.”

Made2Manage Systems, Inc., the Indianapolis-based enterprise solutions provider, offered a packaged solution to Solar Plastics that needed minimal customization and had the ability to extend the Solar Plastics' inventory and sales databases throughout the entire organization. Another attractive feature of the Made2Manage business system, according to Corcoran, was a short training cycle for users and IT staff.

### Quick Implementation = Quick Time to Value

In February 1997, thirty days after purchasing the Made2Manage business system, Solar Plastics held a kick-off meeting to begin developing the implementation plan and review the project's scope. The planning stage would take three months, during which time several other technology upgrades were scheduled before Solar Plastics could implement the Made2Manage business system.

For example, the company upgraded its desktops from 486 models to Pentiums, replaced its Windows 3.1 operating system with Windows 95, and added Office95.

Solar Plastics and Minneapolis-based systems integrator ADS Information Systems would begin implementing the Enterprise Business System from Made2Manage at the company's Minneapolis headquarters in April 1997. ADS Information Systems is a long-time Made2Manage business system reseller.

By July 1998, all four Solar Plastics plants had been converted to the Made2Manage business system. The average time to conduct an



Custom molded sand blasting helmet

implementation was three months. This involved about two months of planning and data conversion, then about one month of testing before going live.

Throughout the implementation, ADS Information Systems attended Solar Plastics' weekly meetings to monitor progress against the plan. ADS also trained new users at each Solar Plastics location throughout the installation period.

Different issues arose during the implementations at each plant. During the first conversion, the team had Made2Manage business system running alongside the old system for three weeks before going live. This was to ensure that when data was inputted into both systems, the output was the same.

"That was probably the worst point of our start-up, because we were demanding that everyone do their jobs twice," Corcoran said. "We were pulling data from our Sys/36 and our DataFlex system. If you did an invoice in the old system, you had to do an invoice in the Made2Manage system. That took a lot out of people, but we learned a lot, and it gave us a good feel for where we needed to do some polishing before we went live."

On August 1, 1997, the Solar Plastics headquarters in Minneapolis went live with the Made2Manage Enterprise Business System. Three months later, after achieving a level of comfort with the new system, converting the second plant became a priority.

Going from the "mother ship" to the company's three remote locations left Solar Plastics and ADS with the additional challenge of providing remote access to the headquarters.

And the fourth plant, in Quad Cities, IL, needed to be converted mid-month without shutting down operations, according to Nelson.

"This was probably the worst time and conditions for a conversion imaginable," Nelson said, referring to the Quad Cities implementation. "Fortunately, the experience gained from the prior plant conversions allowed us to accomplish the task with confidence."

And, only a few customizations to the new system were necessary, such as an enhancement that allowed Solar to develop detailed sales reports on demand. But this change helped make Solar Plastics' president, Chuck Carlsen, an instant fan of the new system.

"With our older system, we were always working with sales and gross margin data that was at least two months old (the time it took for sales data to be processed and get back into the manufacturing team's hands)," Carlsen said. "So we feel like we have a lot more accurate and timely job cost information."



The Made2Manage business system offers a centralized data storage system, but Solar Plastics also needed this customized so data storage systems could operate independently at each plant. The ADS Information Systems staff was charged with customizing this part of the Made2Manage Enterprise Business System.

"Each of the plants have a stand-alone Made2Manage system in place," Corcoran said. "We used the Citrix Metaframe to have centralized departments run as virtual users on their system. Most users of our database come from the plant side, so it made sense to put the balance of database power on the plant side."

## Building Momentum

"I would describe our implementation process as good to excellent," Corcoran said. "We started out slowly, but just like a freight train, we picked up momentum and speed as we went along."

More than just a single platform capable of supporting each department at Solar Plastics, the Made2Manage business system was the feature-rich solution Solar Plastics desired when first making a wish list for a new enterprise management system.

For instance, with the Made2Manage system, Solar Plastics' engineering department got access to multilevel, integrated BOMs. The engineering department also enjoyed receiving real-time job status and costing information that gives instant access to data, such as total parts manufactured, total parts scrapped, cost-to-date for materials and labor and overhead against projections.

Another popular benefit – job quote accuracy has climbed dramatically, now that sales quotes are produced from the same system that manages data for the manufacturing shop floor.

Also, during the selection process, Solar mentioned that it sought an engineering change control feature. While this wasn't available at the time of the initial purchase, Made2Manage Systems indicated they were working on adding this feature to the system. And only a short time after, Solar was able to upgrade its system with this feature.

"That helped support our goal of finding a strategic partner that would grow with us and not just a vendor," Corcoran said.

As the company's director of finance, Nelson was worried about giving up some accounting functions with the new system. Instead, he quickly recognized the benefit of the Made2Manage business system's database solution – which enabled each department to gain access to sales data that is updated daily, and no more waiting for monthly reports.

"We had a lot of sub-systems before moving to the Made2Manage solution, and wanted to integrate our inventory information from these various systems," Corcoran said. "The Made2Manage system was able to give us tools to develop and modify things as we saw fit."

Nelson recalls that it used to take up to two weeks to close out the production division's portion of the month-end cycle. With the new system's accounting features, this task is now accomplished in six hours or less.

Financial statements were being issued in the two to three week period. Solar's goal is to publish these in 10 days and, with the Made2Manage Enterprise Business System, it is now consistently beating that goal.

In addition, Solar Plastics has recorded an overall five percent reduction in inventory held in days of sales while improving on-time delivery. Those facilities that have been on the Made2Manage system longer have seen significant inventory reductions, according to Nelson. For instance, the Minneapolis site has experienced a reduction of more than 41 percent in days of inventory held.

"If your inventory is reduced to the point that product cannot be delivered on time, it negates the value of reducing inventory," Nelson said. "Fortunately, this has improved as well. Making sure that customer requirements are being met is very important."

The chief benefit of the Made2Manage business system for Solar Plastics, according to Corcoran, is that the company is able to achieve much more with its integrated manufacturing and financial systems with the same number of staff.

Nelson feels the real value of the Made2Manage Enterprise Business System comes from the historical information retained by the system.

"This is not easily quantifiable, but I analyze historical data almost daily," he said. "Not having it would now be missed. We have just started to tap the power of the system. Month-to-month we see how our knowledge of the system increases, our accuracy increases and the information to make decisions grows."

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