Inventory control blossoms at ProFlowers with small MRP system

When a $300 million company with distribution channels nationwide uses a small MRP system costing less than $10,000 to control its purchasing and inventory, manufacturing companies large and small take notice.

ProFlowers, founded in 1998, has become the Internet's number one provider of grower-direct fresh flowers in the country. Now with about 80 suppliers and 60 domestic distribution centers, the San Diego-based firm isn't a manufacturing company in the traditional sense.

But purchasing and inventory requirements still need to be forecast and planned.

So after outgrowing simple systems like spreadsheets and a home-grown database, the company turned to E-Z-MRP, a Material Requirements Planning system designed for small businesses.

"When I got here, they were still pretty much in a start-up mode, and we were doing a lot of things on spreadsheets," said Brett Clare, ProFlowers' Senior Operations Analyst who joined the company in 2002. "While we weren't a manufacturing company, I knew that MRP could possibly help us organize the purchasing of all our componentry."

Clare, who worked before in more traditional manufacturing environments like Proctor and Gamble and Estee Lauder, brought his background and expertise in Material Requirements Planning systems to bear after observing simple systems like spreadsheets being used at ProFlowers.

"When you get a box of flowers, we send you a box – you have labels, there are vases, there's chocolates, there's teddy bears – all that stuff," he said. "We were buying it using spreadsheets and were distributing across 60 locations." Clare said they were finding that their distribution centers would inevitably have too much of one thing and not enough of another.

"As we continued to grow, it just got too complex," he said.

Because Clare had a strong manufacturing background and was one of the few employees in the firm who had that expertise, he built an Access database using pivot tables as a way to begin organizing the data and replace the spreadsheets.

"But I'm not a real programmer," he said. "I put that thing together which just kind of stopped the bleeding for a while."

After a few years, Clare began to recognize the need for something more structured and powerful.

An on-line search uncovered E-Z-MRP, a small, inexpensive Material Requirements Planning system developed by Del Mar-based Beach Access Software and president Rocky Smolin.

E-Z-MRP was the next step, said Clare, who found the price right, the capabilities powerful and adaptable enough for his needs, and the location of Beach Access Software just 10 minutes from ProFlowers headquarters fortuitous.

The close location, he said, “was just a bonus.”

Clare said the attraction to E-Z-MRP was that, while the program was compiled and not modifiable, the database was completely open and could be modified or enhanced by the user.

“While [E-Z-MRP] wasn’t set up for multiple distribution centers, I knew that I could modify the database to allow that,” he explained. “So I have access to manipulate the database behind Rocky’s program, and then Rocky manages the program part.”

Clare said he looked at other systems, but they weren’t as impressive.

“Some of the other programs ... handled distribution centers but didn’t handle something else, or they were too much for what we needed,” he said. “Rocky’s was the perfect balance of simplicity and function.”

Cost, too, was an important factor. Besides providing capabilities that suited the needs of ProFlowers, it turned out that E-Z-MRP was significantly less expensive, Clare said.

Each distribution center has its own Bill of Materials

ProFlowers pioneered the direct-from-the-grower model of selling flowers, many of which are brought in from Colombia and shipped directly to the company’s extensive domestic network of about 60 distribution centers.

Under E-Z-MRP, each of these centers is treated as if it were a “product” with its own Bill of Material. Clare developed this ingenious way to adapt E-Z-MRP to his needs, by manipulating the database to suit his purposes.

“That’s the only way I could make it work,” said Clare, who works with 15 to 20 people in the planning and logistics department.

“I was quite impressed with how effective Brett's solution was,” said Beach Access Software president and E-Z-MRP developer Smolin. “He had both a distribution problem and a material planning problem. His response was to adapt the standard features of E-Z-MRP to craft an elegant solution.

“Modeling each distribution center as a product with a unique Bill of Material that reflected the precise quantity of each stock item required by that distribution center, satisfied all of his requirements for material planning and distribution information.”

Clare said E-Z-MRP is not used for the flowers, just for the components, which ProFlowers calls the “hard goods,” all of which are purchased from the San Diego offices. Those are the vases, chocolates, bears, books and other items that are included with each flower order.

“We have a separate program that I wrote that helps with the managing of the flowers,” Clare said. “In a manufacturing environment you have, let’s say, a finished good that would have a bouquet of flowers in it. Then it would have a Bill of Material attached to it.

“Our merchandising people are always creating different part numbers for an item that’s on the Web site. So it was too dynamic to try to use a Bill of Material for each flower.”

So Clare built a Bill of Material for each distribution center of all the components that ship out of that distribution center.

Clare gave an example, using his Miami supplier, to illustrate how the system works.

“For each unit we ship out of Miami, we ship 1.001 box for example, or .35 vases or .4 bears,” he said. “That’s how we do our requirements. The only input to the MRP is the date, the location and the number of units that are going to leave the door that day.

“We have two box suppliers, for example – one on the east coast and one on the west coast. So we’ll place a purchase order here, and then the box suppliers will deliver to each of the [60 distribution center] locations.”

Clare said this is not a traditional use of MRP. Rather, he needed an MRP system that could be modified to plan and control the inventory at multiple distribution centers, and E-Z-MRP was ideal for his purposes.

He explained how he did it: “You’ve got the part master table. I had to manipulate the database to have a part number, a hyphen and then each location. So instead of processing 1,600 part numbers, we’re processing roughly 1,600 by 60

distribution centers. MRP crunches that. If a part isn't used in a particular location, the user doesn't have to see it. … That noise doesn't show up to the buyer."

When ProFlowers purchased E-Z-MRP three years ago, there were about 500 components rather than 1,600, Clare said.

Now with 1,600 unique components managed in MRP and about 60 distribution centers, that would mean potentially 96,000 parts in the Part Master. But not all part numbers are used at all locations, he said.

Fast implementation

Implementation was speedy, Clare said. "I'd say it was up in about eight weeks," he said. "And most of it wasn't so much teaching folks how MRP worked. It was more me figuring out the customization to allow for more than one distribution center. I had a concept in my head but I had to execute it. That was on my own."

Once Clare completed his work on the database side of the system – changes he said were invisible to the program side – then E-Z-MRP was up and running quickly. E-Z-MRP was very intuitive, Clare said, and people in the department "picked up the program really fast."

Clare encountered little resistance within his department, because people knew it was time for a system with better controls. But it was a different story with the company's Information Technology department.

"Internally in our department everybody was all for it," he said. "IT on the other hand was just being kind of parochial. I got a lot of resistance from IT."

But Clare and E-Z-MRP's Smolin had been working together on the project for some time, and it was almost ready – whereas IT said a system would be available for Clare in three to four years. "I was so far down the road that they couldn't say no," he said.

Problems have been minimal, said Clare, who attributed most of the issues to the extensive customization he did on the system's database side.

"We had to relieve inventory too," he said. "So the customization we did on the database requires a lot of sequencing. I'd run some queries in our database, we'd run some reports, we'd walk through this weekly close process."

Before running E-Z-MRP, Clare said there is "a whole process we have to go through to close out our week, relieve inventory, pull the [new?] part numbers, sync them up to the new distribution centers, add part numbers – all that kind of maintenance."

“So the only problems we encounter are when we have some bad data and we have to start from scratch,” he said. “But typically it’s on our end.”

There are two users who run E-Z-MRP on ordinary desktop computers, with about one gigabyte of RAM and a 3.2 gigahertz processor. They have about 7,000 Part Master records and close to 5,000 Product Structure records in about 60 Bills of Material. And there are about 1,300 to 1,400 individual Demand records when MRP is run.

The MRP calculations are run weekly and take between 25 and 35 minutes, Clare said. “We do a ‘weekly close’ where we deduct sales from inventory (automated) as well as add new part numbers, suppliers, Bills of Material, etc.”

Product satisfaction

Once a publicly traded company, ProFlowers was acquired several years ago and is now owned by Liberty Media. It employs about 500 people. Although a private company with undisclosed financial information, ProFlowers spokespersons said the rate of growth over the years has been sizable.

In 2003, the company shipped 380,000 bouquets for Mother’s Day, and over one million bouquets were shipped in 2008. Mother’s Day and Valentine’s Day are its two busiest days of the year.

As the company has grown, Clare said “we’re starting to stretch some limits” with E-Z-MRP’s capacity. But after three years, going on four, Clare said he’s satisfied he’s gotten more than his money’s worth.

“It’s been great,” he said. “We have 100 percent satisfaction.”

E-Z-MRP [www.ezmrp.com] was designed by Smolin in the mid-1980s when personal computers first became popular. He identified a need for an MRP system to address what he called “the bottom 90 percent of the market” – all small manufacturers who needed MRP but were unable to afford the price or cope with the complexity of the standard offerings. Smolin’s product was at the forefront of an industry revolutionized by the power of personal computers.

Over the years, hundreds of small companies worldwide have been able to get the same advantages of automated inventory and production planning as their larger competitors by using the E-Z-MRP system.

The system, originally developed in C-BASIC and DOS, was completely rewritten using Microsoft Access – a component of Microsoft’s Office system – and is available in French, Spanish, and both traditional and simplified Chinese.

“Using Microsoft Access has the additional advantage of making the data readily available to a wide variety of third-party products, as well as allowing our users to write their own queries and custom reports,” Smolin said.

Clare said E-Z-MRP’s flexibility, and the way it allowed him to work with the database side, was unique and key to his success.

In addition, E-Z-MRP’s simplicity and speed were mentioned by Clare as highly beneficial features.

“I didn’t need an IT department,” he said. “I came from a planning background. I know a bit about databases, enough that basically I could bring the thing up. I didn’t need an army, I didn’t need a consultant. Rocky came in once or twice. It was straight-forward enough that I could bring it up quickly.”

And he particularly liked the service Smolin provides.

“We’re a seasonal business,” Clare said. “Valentine’s Day and Mother’s Day are huge to us. So when IT asked me if I really needed a service contract, I forwarded the email I got from Rocky [at work] at 7:30 on a Saturday night, the week before Valentine’s Day. So, yeah, the service has been great.”

The issue, Clare said, turned out to be a technical problem, but he and the IT department were impressed that Smolin was on it and responded to the problem on a weekend evening.

“I would recommend [E-Z-MRP] to any small company, any small company that is doing it on spreadsheets,” Clare said. “And there are a lot of companies that are $200, $300 million that could really use something like this because it doesn’t really require IT.”