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M A G A Z I N E

IMPROVING MANUFACTURING PROCESS

Q 2012
Quality Plant
OF THE YEAR

MBX SYSTEMS p.42

SHOULD LASER TRACKERS BE IN YOUR ARSENAL OF METROLOGICAL TOOLS? p. 32

GET A GRIP ON SHAFT MEASUREMENT p. 36 | SEEING VALUE IN DATA p. 40

INSIDE THIS ISSUE
HOW TO GUIDE
LOCATED AFTER P. 16
vision & sensors
LOCATED AFTER
P. 48



Growing Success at MBX

The 2012 Quality Plant of the Year has been profitable—and growing—for every one of its 16 years in business.

BY MICHELLE BANGERT, EDITOR

When monsoon flooding in Thailand threatened to disrupt the global supply of hard drives, some companies reacted quickly to the problems they knew were coming.

The damage in Thailand, a region rife with hard drive manufacturing, disrupted business far from Southeast Asia. Len Petty, chief financial officer at Chicago-based MBX Systems, says that he saw prices for some components increasing almost daily. But MBX, a

manufacturer of computer server appliances, handled the problem well. "It's almost like you have to be aware of not

only what vendors are doing but where they're doing it," Petty says. "The world isn't as big as it used to be." By talking to its vendors and suppliers, the company was able to jump ahead of the crisis and warn customers.

Randy Caldejon of nPulse Technologies was one of those customers. With 36 hard drives in each unit he sells, Caldejon needs hard drives. So he still remembers when MBX called to warn him of the expected price increase and asked him to predict how many he would need so they could allocate supply.

This fast response is just one reason MBX Systems earned the title of 2012 Quality Plant of the Year.

MBX SYSTEMS AT A GLANCE

- » Headquarters: Wauconda, IL
- » Designs and Manufactures Optimized Server Appliances
- » 80 Employees
- » ISO:9001 2008 certification

- 4 Pick tickets served up to iPads with Bluetooth barcode scanning prevents picking mistakes. Source: MBX Systems

"They certainly deserve it," says Caldejon.

MEET MBX SYSTEMS

Thirty-seven miles northwest of Chicago in a town once known for its apple orchard, Wauconda, IL, now hosts businesses that use another kind of Apple.

MBX Systems designs and manufactures server appliances. It sells to software companies who want to store their product in an appliance instead of in the cloud. And business is good. In fact, according to *Information Week*, server appliances were the top technology story of 2010.

That year was a good one for MBX on several levels. Despite the recession, MBX achieved 116% year-over-year revenue growth between 2009 and 2010, as well as a 233% increase in net profits between 2009 and 2010. This financial growth has led to physical



Visual build documents displayed at the relevant work center assure assembly accuracy. Source: MBX Systems



Visual inspection work centers are dedicated to performing physical assembly inspections for every build. Source: MBX Systems

growth. In 2009, the company doubled its physical size and tripled production capacity. Two years later, it physically doubled in size again.

Also in 2011, Chief Executive Officer Tom Crowley won Executive of the Year in the computer hardware division for the Stevie Awards American

Business Awards. The 2010 winner in that division was Steve Jobs.

Crowley, who once opened for the Beach Boys in 1984 as a member of the band Idle Tears, now leads 80 employees with a mission to grow in the OEM appliance market. When you compete against Dell, HP and

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Quality control technicians conduct routine and custom functionality testing after physical inspection. Source: MBX Systems

Sun Microsystems as well as offshore component manufacturers, you have to find your place in the market. It competes on quality.

"In our world, in our market, you can't have growth unless you're focused on quality," says Chris Schmidt, director of sales and marketing.

The company assembles appliances, brands them, adds software components, then customizes packaging and sends out the system. While offering software on an appliance does have its detractors, this format allows for preconfigured, easy-to-install updates without any effort from the customer. Customers' customers can have an "out-of-the-box experience," where they open a shiny new product that works right away.

As the computer industry has changed, so has the company. Crowley started by selling hard drives under the name Drive Express in 1995, then expanded to sell components for PCs as Motherboard Express the following year. The business officially changed to MBX Systems in 2000.

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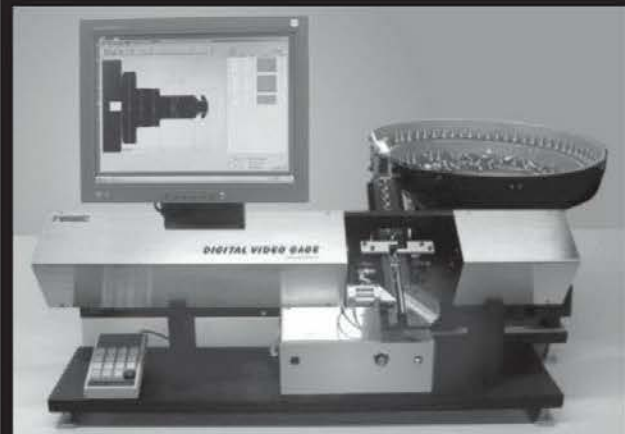


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HOW IT WORKS

Well-run organizations often have a lot in common: layouts designed to speed workflow, minimize errors and create a quality product. MBX has all of these things, but they do some things differently. For one, it invested in new software during the downturn. It created an in-house software called Signal, which allows it to adapt to customer requests almost instantly.

Once, while meeting a customer in Toronto, one of the employees heard a request for a software change. The group drove to lunch in separate cars, which allowed him to call the information officer to make the change. When the group got back from lunch, MBX was able to present the change. Seeing their request made in under an hour delighted the customer.

But it's not just about adapting—the product must be good to begin with. At MBX, each product is inspected at least five times. All of this inspection ensures that the right products are sent to the right customers. For example, in a 500-unit shipment, the company might have 300 different configurations. The challenge is the variety of products and the infinite options for customization. As President and Chief Operating Officer Jill Bellak wrote in Assembly magazine, "Imagine assembling Samsung, Sony, Sharp and Toshiba televisions in the same plant at the same time—each with different flat panels, components and features, from built-in WiFi to 3-D displays—and you'll have some idea of the challenges."

Even though the company is doing well, the staff is still modest enough to see what they could learn from others. Several of them recently visited vendors in the Bay Area to tour their facilities and see how they operate. Though they came to learn, Carl Nothnagel, director of manufacturing, said it became a "validation tour" when they saw how the processes overlapped. Still, the company would like to expand their automation—and its whole operation. Plans are in place to move to a larger facility that will give the company six times more space for production.

THE RIGHT PEOPLE

These successes require the right people. The hiring process includes

interviews, but it also includes a paid day or two on the job—for the company, as well as the candidate. Then, when they are on the job, new employees spend several weeks learning about the different components of the company. MBX wants people to understand how they fit into the business.

RECOMMENDED READING AT MBX

- » "Raving Fans" By Kenneth H. Blanchard and Sheldon M. Bowles
- » "Open Book Management" By John Case
- » "The Question Behind the Question" By John G. Miller

And once the company finds the right people, it wants to reward them for their hard work. That's one reason the company throws a holiday party at upscale hotels in downtown Chicago, complete with overnight stays for staff.



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Foreground (L) Page Kadhodaian, Manufacturing Manager and (R) Carl Nothnagel, Director of Operations, in the MBX configuration department. Source: MBX Systems

Past events have had Blues Brothers impersonators, dinner, a DJ and a \$50,000 budget, according to a report in the *Chicago Tribune*. But parties are not the only reward. With the company's profit-sharing plan, it's in everyone's best interest to do well.

"This business is like no other I've been in," says Petty, who has been with the company seven years. "I think the culture here is outstanding."

MBX also offers an employee appreciation week, with events such as Down on the Farm Day, and employees also give back to the community. They created a cookbook to raise money for a food pantry and organized a coat drive for the Salvation Army and local public schools.

And people like working there. They've had re-hires in the past. People go to another workplace and quickly realize what they are missing after leaving MBX.

The company encourages a balance of work and home life, though for some these may overlap. (One employee was so interested in computers that he had

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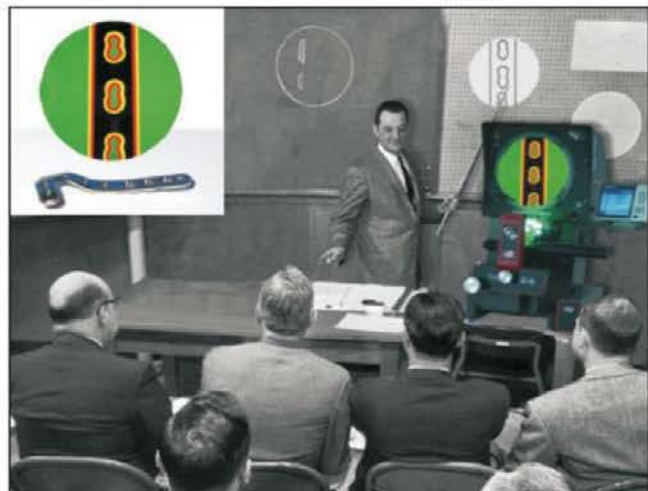


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a larger storage network at home than at the office.) They also promote fun, including a trip to Las Vegas, but not too much. Although they use iPads on the shop floor to improve production and quality, the company makes sure not to allow for any additional software to be added. That means no AngryBirds, and hopefully, no AngryCustomers.

And when problems arise, the company deals with them. Bruce Hodes, a consultant who has worked with the company for more than a decade, recalled the story of sales and engineering working with customers a few years ago. The sales side would bring in a customer and then hand them off to the engineering side of the business, which would create the prototype. This process could lead to confusion for the customer. The staff examined this and considered what the job was. Then the groups came together as one sales and engineering staff. Mistakes went down, and the partnership worked better for customers.

A defect review team works to eliminate problems. This provides a more engaging environment. Instead of being told, "You're doing it wrong," staff look for ways to improve the process. During the monthly company-wide meetings, department leaders talk about their facet of the business and anyone can ask questions.

All of this planning prevents growing pains for the young company. "I see planning as going to the health club," says Hodes. "Exercise allows you to have a healthy body. Planning for a company that's growing allows you to have a healthy company."

With a customer retention rate of 98.9% and more leads than the staff is able to manage right now, the company is in good shape.

ONE OF THE 98.9%

Caldejon first started working with MBX in 2005 at a previous job. When he left that company to start nPulse Technologies (Charlottesville, VA) in 2006, he decided to rely on MBX again, and has been with them ever since—though it's not for lack of options. Occasionally, other contract manufacturers have approached nPulse to try to lure its business away. nPulse works with the Department of Defense,

the federal government and the financial services industry, and as with any company, it is sensitive to price. As the chief technology officer, Caldejon has had the occasional longer discussions with other companies to compare offers. But, Caldejon says, it was not worth it: "We've never made

the change because it's hard to compare with MBX."

NEW QUALITY TECHNOLOGIES

- » 57% increase in appliances manufactured without increasing plant footprint
- » 70% booked-to-actual work time in 2010, up from 64% in 2009
- » 42% decrease in system and workmanship defects for shipped products
- » 30% reduction in order picking time, saving 30 minutes a day per assembly technician

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MANAGEMENT

The difference was visible from his first visit to Chicago. Caldejon visited three separate facilities to scope out who to work with, and "MBX just stood out," he says. When his team went to the MBX facility, it was immediately apparent how well the staff got along, from the front office to the manufacturing floor. The next day, MBX sent some t-shirts, thanked them for their visit, and said they would be interested in working for them. The other two companies did not.

MBX got the job. In addition to its camaraderie and customer service,



Warehouse associates' move to iPad-based order picking reduced picking time by 30%. Source: MBX Systems

has worked with other contract manufacturers in the past, per customer

The difference was visible from his first visit to Chicago. Caldejon visited three separate facilities to scope out who to work with, and "MBX just stood out," he says.

the company was able to handle any size order, including low-volumes, as a just-in-time manufacturer. Caldejon

request. The other company used a brand of equipment he was not familiar with, and when he called with ques-

tions, employees would not return phone calls until the next day, or did not call him back at all. When his work requires solutions in hours instead of days, this arrangement didn't work. "That didn't last too long," he says. "Honestly, that's how we could tell how good we had it with MBX." **Q**

Michelle Bangert is the editor of Quality Magazine. Gillian Campbell contributed reporting. For more information, visit www.qualitymag.com to read more about MBX in "Off-Topic Quality: Customizing the Manufacturing Process."

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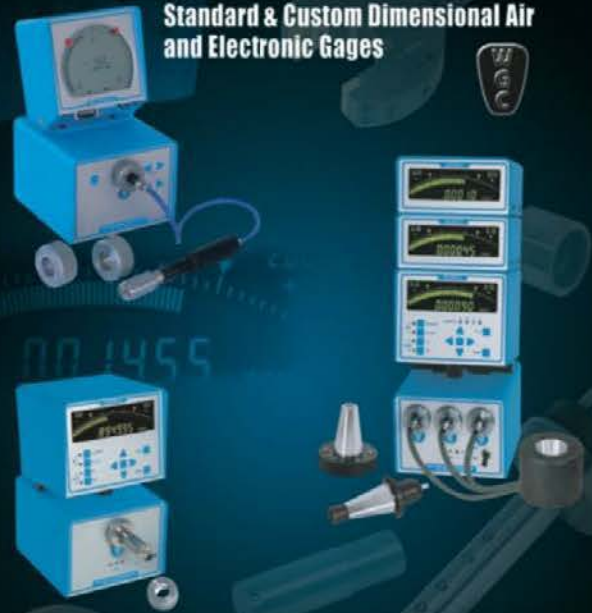


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