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Bending to biotech

Industrial manufacturers, adapting to survive, strive to fill the needs of life sciences companies



Hector Carmona welds a basket prototype at Marlin Steel that will then be mass-produced by robotic fabricating equipment.
(Sun photo by Glenn Fawcett / September 5, 2007)

By Tricia Bishop | sun reporter
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It's hard to hear Drew Greenblatt over the steady - and deafening - ka-chink, ka-chunk of machines snipping steel wire at his factory in Southwest Baltimore. So he turns it up a notch.

"That's for Baxter," he hollers, pointing to a giant box full of special-ordered wire baskets ready to be shipped to the drugmaker. Nearby, an employee welds wire for biotech bigwig Amgen Inc. as Greenblatt ticks off a Who's Who list of his other pharmaceutical customers: Pfizer, Roche, Novartis.

It is a client roster that is nothing like the one he had when he bought the business - Marlin Steel Wire Products - in 1998 and focused on selling metal baskets to bagel shops for displaying their products. He soon realized, however, that foreign competition and changing consumer habits meant he needed to find new customers quickly.

"It's just a different world now," Greenblatt said. "We had to transform ourselves or else we were going to die."

As the economy keeps speeding away from a labor-intensive manufacturing base to one rooted in knowledge and science, Maryland's factory owners find themselves switching gears again. This time, they hope to capitalize on the state's and the nation's biotechnology boom, either by turning drugmakers into customers as Greenblatt did, or by adopting their scientific methods.

Recently discovered microbes, found in Yellowstone Park's hot springs, have been modified to make enzymes that cut manufacturing costs and reduce pollution. Substances called proteases, which remove protein impurities such as grass stains, are now routinely added to laundry detergents, and other bio materials are used to degrease cowhides in the leather industry.

Even Domino Foods Inc. has a specialty ingredients division at its Baltimore plant, which now churns out pharmaceutical-grade sugar sold to drugmakers for easily dissolvable - and better-tasting - medications.

"It's a growing industry," said David Poust, sales manager of Domino Specialty Ingredients.

On a recent weeknight evening, members of the Regional Manufacturing Institute of Maryland met with representatives from the Johns Hopkins University to talk about ways in which such science might keep long-established manufacturing businesses alive. It was the first in a series of such meetings planned for the coming year.

"Biotech was never intended to come in and replace our industry," Ryan Burnette told the gathering. This year, he joined his father's firm, Alliance Engineering Inc., which helps solve design problems for the country's manufacturers. "I'd like to introduce the notion of biotech almost being a supplement to our industries."

Burnette has a doctoral degree in biochemistry and molecular biology, and his plan is to help traditional manufacturers learn how to adapt their businesses through life science means. He left the Vanderbilt University School of Medicine, where he was doing research on juvenile diabetes, to create a consulting division at Alliance that would do just that. The Richmond, Va.-based company has offices in Baltimore.

"Everybody is interested in pursuing how to go about merging these two fields," Burnette said in an interview. "There are some new and promising potential solutions that could come out of it."

Years ago, manufacturing was to Maryland what fashion is to Milan: a staple industry that drives the economy and defines the regional culture. The world's first typesetting machine was made here, the first umbrella company set up shop in Baltimore, and the Sparrows Point steel mill was once the largest in the world.

But today, the Johns Hopkins institutions are Maryland's largest private employer, a title once held by the former Bethlehem Steel Corp. And economic development officials who once focused on factories now call on biotechnology businesses and their ilk to shore up the state's financial future.

Two biotechnology business parks are under simultaneous development just in Baltimore, and the number of bioscience-focused businesses statewide has risen 60 percent since 1999, to about 370.

Some of those have focused on biotechnology manufacturing, making the cutting-edge drugs that companies create. Still, the manufacturing industry overall has steadily - and predictably - shrunk during the past 40 years as people are

replaced by automation or biological processes.

In 1967, the state's manufacturing employment peaked at 283,000 jobs, with 1 in 4 working Marylanders employed in the industry. Now, there are about 136,000 people working for state manufacturers, according to the Bureau of Labor Statistics - or one out of every 18 employed Marylanders.

"We've lost a lot if the measurement is jobs, there's no question about it," said Mike Galiazzo, executive director of the Regional Manufacturing Institute in Hunt Valley. "The number of jobs in manufacturing has dropped dramatically, and they're not going to come back."

But Galiazzo draws the line at claiming his industry is dead, or even dying.

"What we're dealing with is the transformation of American manufacturing," he said.

Greenblatt said his business would have died if he had not reinvented it.

When he bought Marlin Steel Wire Products, its chief products were baskets that held up chafing dishes and the baskets that cafes use to display bagels. That was 1998 and bagel shops were all the rage, opening at a rate that Greenblatt thought would last forever.

"When I first bought the company, I did all these fancy Excel spreadsheets and thought we're just going to grow to the moon this way. Everybody needs lots of bagel baskets ... bagel shops were opening all over the place," Greenblatt said.

Then the Atkins diet came along. Then China figured out how to make baskets cheaper and quicker. Then Greenblatt panicked: He was losing money and sales were slipping.

"I had to figure out something. Either we were going to become insolvent, or we had to transform ourselves," he said.

He chose transformation, spending \$1.2 million on robots to do the work that employees once did by hand, hiring engineers and changing his focus. Some of Marlin's biggest customers are now Toyota Motor Corp., which uses Marlin baskets to move parts along its factory conveyor belts, and Pfizer Inc., which needs specialized baskets for a sterile drug-making environment.

Revenue is on track to reach about \$3.5 million this year, up from about \$800,000 a decade ago, and the year is sure to be profitable, Greenblatt said. He has added a few jobs to keep up with the increased demand. He employs 22 people, up from about 16 in 1998.

"It feels so good," Greenblatt said. "Hopefully, people will look back on this and say, 'He's brilliant.' This year, we've done really well, and I'm optimistic about next year."

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