

## **Adapting a manufacturing company for new opportunities and growth**

By Mike Collins

There is a line in Charles Darwin's Origin of Species that says, "It's not the strongest who survive, nor the most intelligent, but the ones most responsive to change. Like evolution, manufacturing has gone through many environmental changes that can lead to the extinction of some species and the success of others. We are in another period of great economic change where manufacturers must adapt their companies to the new demands of the new economy to survive. But many simply do not know how to adapt. Here is some history of a manufacturer that has adapted successfully many times in the last hundred years. The most recent adaptation is very useful, because it reveals strategies that can be used by many other American manufacturers to survive. Minster Machine is headquartered in the west central Ohio village of Minster at the same location where the company began 100 years ago 1896.

In 1926, Minster Machine built its first mechanical power press, a 45-ton open back inclinable. By 1930 the company was offering a complete line of power presses in a variety of sizes and capacities. Minster weathered the Great Depression with a decade of innovations and a solid commitment to quality. In the 1930s Minster was the first press company to use a separate friction clutch and brake on the same shaft, built the world's first transfer press, offered the first box crown and press construction, and began use of the patented air operated friction clutch and brake unit. Minster expanded its facilities in the 1950s, and it continued to stay one step ahead in productivity and technology with continued investment in new products. They introduced the P2 Piece-Maker press, quick die change Die-Namic Process in 1965 and the world's first totally automated stamping center in 1970.

In the 1950s there were approximately 20 American companies manufacturing presses in the U.S. and the U.S. was still the world leader in machine tools. Then in the 1960s and 1970s things began to change, and countries like Germany and Japan began marketing their machine tools here. American machine tool + manufacturers lost 50 percent of the North American machine tool market in the 1970s. The big recession of the early 1980s resulted in even more American machine tool manufacturers going out of business in a variety of different industries. The shakeout continued in machine press products and eventually Minster was the only significant U.S. owned stamping press manufacturer remaining.

## **GLOBALIZATION**

Then in the 90's, another big economic change began to seriously affect Minster Machine's customers. The change was called globalization and Minster's customers had to reengineer themselves to compete in the global metal forming markets. They wanted improved quality, better performance, more customization, and more value for their money

As the decade progressed the customers began to demand more price concessions from their suppliers. No longer was it possible to pass on cost increases to the customers every year. In fact, there was constant pressure to discount prices, which finally led management to the conclusion that they were going to have to find a way to reduce internal costs. By the late 90's, Minster Machine was still number one in market share of large presses and was doing well in both Europe and Asia. To combat the growing need for lower prices they launched a Lean Manufacturing strategy to reduce costs and eliminate waste.

## **GLOBALIZATION IN THE 21<sup>ST</sup> CENTURY**

As Minster Machine entered the new century they began to realize that cost reduction was a necessary strategy, but they also knew that cost reduction and other internal strategies would not by themselves, lead to long term growth. In fact, even though Minster Machine is the number one manufacturer of presses and the material handling equipment for the metal forming markets in North America, they realized that those markets may not be enough to achieve the long term growth goals of the company. It was going to take finding new customers and markets, developing new products and services and changing the organization to compete.

The following story describes the changes and new organization they used to adapt the company to the new demands in the economy. The following is a description of the strategies they chose to propel future growth.

## **FINDING NEW CUSTOMERS AND MARKETS**

**Machine Press Markets** -In the machine press markets, Minster has continued to find new industries and market niches including: Contract stamping and OEM customers include automotive, appliance, hardware, agriculture, furniture and construction industries. The contract stamping markets are industries that can be broken down by application into even more individual market niches. For instance, appliances can be washing machine stampings. Electrical/electronic customers include those that produce rotors and stators, motor laminations, lead frames, terminal connectors and integrated circuitry. Metal packaging customers include food and beverage cans, easy open ends, oil filter cases, gas canisters and battery cases

**International Markets** - As part of their efforts to find new markets, Minster has been very aggressive in making their products more globally desired and acceptable. As their North American customer base shifts operations to lower

cost countries, Minster's more recent products are designed more for international needs in regards to metric units, fasteners, controls, language, etc. Minster has also created partnerships with Bihler in Germany and Amada in Japan.

**Market Diversification** –Despite Minster's dominance in domestic and international markets with press products, management decided that to grow in the 21<sup>st</sup> century the company must also diversify into other markets and other products besides presses. Joe Kumpf who has changed his role from operations manager to V.P of midwest divisions has played a leading role in market diversification

- First, Minster changed their captive foundry to a division that could go after markets outside of Minster's normal business. The casting business is now serving compression, oil, wind, robotics and many other industries.
- The machine and fabrication shops are also serving wind, compression, and internal combustion equipment companies with many other opportunities being pursued.
- They have expanded their machine relocation business to a more industrial set of customers instead of limiting their work to the relocation of Minster Presses.
- The services division now rebuilds presses other than Minster's equipment and is pursuing parts and field service opportunities for other types of industrial equipment.
- Minster no longer has a stamping press organization, but now has a machinery division. This group is seeking and developing both stamping press and non-stamping press machinery to serve existing and alternative industries. The automation division has the responsibility for finding and serving customers for automation products beyond the traditional Minster press products
- Minster has also created a wind division and is pursuing opportunities to provide complete wind turbine products to satisfy the future need for renewable and clean energy.

## **CHANGING THE ORGANIZATION**

Minster, like most American manufacturers, used the traditional manufacturing organization known as a functional or defender organization because all business units are centralized into one big organization that is usually a pyramid structure.

The defender model worked pretty well when the markets were stable and the same product lines could service most customers. It also worked well when there was a sufficient demand to keep the organization's utilization at high levels. It makes money when it's heavy investment in capital equipment and technologies are totally utilized.

But, it doesn't work so well for stagnant or declining markets or when low price competition enters the market. To the extent that the world of tomorrow is similar to that of yesterday, the defender organization is ideally suited for its environment. The biggest problem with the defender model is its inability to

recognize and exploit new market opportunities and to respond in a way that allows commercial exploitation.

Customers, particularly new customers in new markets, want quicker response, more customization, new products, new services, and more flexibility and all at a greater value.

Kumpf explained that Minster changed to a new type of organization that works well in a dynamic environment and in new markets. In a book called Saving American Manufacturing, the author calls this new organization a prospector organization. Prospector organizations are flat, have many business units or divisions, and are decentralized. The new organization uses commercially focused, multi-functional groups with the ability to find and exploit new product and market opportunities.

- **Multiple markets** –Unlike the defender organization, whose success comes primarily from efficiently servicing a stable, primary market, Minster's new capability is that of finding and exploiting new product and market opportunities.
- **Market intelligence** - Minster's organizations have the ability to gather the information necessary to evaluate new customers and markets on a continuous basis.
- **Product organization** - In focusing on new products and new markets, the logical extension of this approach is the product organization where all resources needed to research, develop, produce, market, and sell related products are placed in self contained organizational divisions. Minster has now organized itself into seven divisions with their own profit and loss responsibility. These are: Minster Machinery, Minster Automation, Minster Services, Midwest Industrial Castings, Midwest Machining & Fabrication, Midwest Assembly & Logistics, and Minster Wind. This decentralized organizational structure is a flat organization with multiple focused teams tasked with commercial goals.
- **Decentralized command and control** -Control is decentralized because the information needed to assess current performance and to take the appropriate corrective action is located in the operating divisions themselves, not in the upper echelons of management.
- **Decentralized decision making and communication** – When there is a customer problem or when a deviation in unit performance is detected, this information is not channeled to higher management for action, but rather it's fed directly back to the organizational division for immediate correction. This is truly an example of pushing responsibility and authority down to the people who do the work. This type of organization gives Minster Machine the ability to quickly respond to customer demands.
- **Centralized support functions** – To maintain low overhead costs, some corporate functions are maintained to provide support and service to all of the divisions. This includes human resources, accounting, and information systems. These corporate entities treat the divisions as customers and themselves as cost-effective, high-quality service providers.

While these characteristics are useful in explaining organizational change, there is no correct model. In fact there are many variations of the prospector organization in a wide range of industries and sizes. Succeeding in the new global economy will require an organization that is some variation of what is called the prospector organization.

**Monitoring Customers** - For most manufacturers, monitoring customers is a bit difficult at first. Listening to customers and monitoring their needs is not natural ability. This must be systematically developed. But it is one of the most immediately productive ways to increase business intelligence. In his book *Confronting Reality*, Larry Bossidy offers a good answer to the question of monitoring customers. He says, "Of all of the external information you can gather, knowledge of the customer is the most specific and valuable in assessing your business model and strategies."

Developing a systematic way of monitoring customers is where a company will find many ideas for new products and services. Monitoring customers is almost always the key to success in increasing sales and finding market opportunities. The primary way Minster monitors their customers is through its salespeople. The company believes salespeople should spend as much time with customers as possible.

A second method for gathering customer information is through the service department. Minster has 75 people in service and they get back detailed service reports on every customer problem. Service also does follow-up calls to special customers or on specific applications.

They can also get customer feedback when customers visit their offices and plants. Minster encourages people within their offices and plants to spend as much time with customers as possible. Their management group talks a lot to customers and they go on sales calls with their sales reps.

They also measure customer satisfaction with formal customer surveys sent to customers that have recently done business with them or have purchased parts and/or service. In addition all service men write up reports from service calls and every new customer gets a formal satisfaction survey

The general purpose of customer monitoring is to find customers who want to be partners. Minster does this by monitoring customers and their business problems very carefully and offering creative solutions to their problems that they won't get from any competitor. In addition, Minster avoids customer relationships that are adversarial or one way and customers who don't appreciate their products and services and only care about price reductions.

### **Innovation and new products**

Over the years Minster has invested heavily and steadily in new products. It has designed a wide range of presses and the material handling equipment that

makes up the complete press system. It has released three new press product lines and three new material handling product lines in the last 10 years.

Minster's continuous efforts at innovation also include what could be called line extension new products. Line extensions are new designs of existing products, by adding new features or new parts. Minster utilizes many engineered options to solve many special applications. This could be labeled as customization except that many of these line extension designs can lead to significant volumes and new market niches.

Because they have been in business so long and have shipped over 30,000 presses, they spend a significant amount of engineering time on opportunities for upgrading older models to new features, controls, etc. or simply just bringing them back to new equipment specifications.

Minster's new product strategy is now to invest and introduce new products, in new markets and not just depend on press products.

### **Customization and short runs**

Customization is one of the key strategies that Minster offers its customers besides new products. They say, "Frankly, we don't build many products that are exactly repetitive or alike. Almost everything we sell and ship has some form of customization. This can be from very minor to rather extensive customization. Our metal packaging market segment products are the closest thing we come to standardization."

Minster's strategy is to be a one-stop solution for its customers by manufacturing an entire metal stamping production line including controls, infeed and outfeed systems. They offer customers turn-key responsibility on all equipment in the line even if a section is purchased.

### **CREATIVE NEW SERVICES**

Minster also offers a wide variety of services including 24 hour seven days a week field service, repair parts in 24 hours, factory training schools, and machine rebuilds, custom training, production monitoring and more. They are always looking for new opportunities to offer creative new services for their customers. To offer all of these services requires a service group that consists of approximately 75 direct people. These efforts are also supported by other functional areas of the company. About 35 of these service people are in the field and are located geographically near clusters of customers so they can drive to the customers and offer courtesy calls and machine inspections. Minster's customer service organization is dedicated to rapid response and customer satisfaction with service personnel dispatched from the U.S., Europe and Asia. More than 80 percent of repair stocked parts orders are filled within 24 hours. And Minster is able to provide a serviceman to the customer on the date requested 90 percent of the time.

Focusing on all the services customers need to keep your products performing and always looking for new services is one of the strategies used by the most progressive manufacturers in America. Creative new services are often ignored by many manufacturers and are just seen as a cost. But providing all of the services customers need is one of the primary methods for gaining competitive advantage over foreign competitors.

### **Conclusion**

Minster Machine is a great example of one of the new stars of manufacturing in the U.S. They prove that America can compete against foreign competitors and manufacture products in the U.S. by adapting to the changes and requirements of their customers and the new global economy. Minster presses and material handling equipment are exported to over 70 countries around the world. But the most impressive part of the Minster story is that they realized they had to find new markets and new customers and they totally changed their organization to do it. The Minster Machine story is not only instructive in its lessons, it contains many of the elements that manufacturers in a variety of industries should emulate to compete in the global economy.

Perhaps the most important lesson is that improving quality and internal efficiencies that allow the company to make the best equipment in the world is not enough to allow it to grow in the new century. Growth also requires an organization that can find and capitalize on new opportunities emerging in the marketplace.

In the twentieth century Minster Machine survived a depression, two World Wars, seven recessions, the invasion of foreign competitors and has continued to grow despite globalization and the revolutionary changes in manufacturing. It appears that their ability to adapt to economic changes will allow them to continue to grow in the 21<sup>st</sup> century.