

Using Quick Response Manufacturing (QRM) U.S. Manufacturing Companies Show Amazing Results

It's About Time!

Pioneered by Professor Rajan Suri at the University of Wisconsin's Center for Quick Response Manufacturing, the QRM strategy has been implemented by dozens of industry partners who have demonstrated amazing results over the past few years.

QRM is a companywide strategy for reducing lead times throughout an enterprise and its supply chain. The development of QRM techniques has been targeted particularly at **companies making low-volume, high-variety or customized products**, which represent the future of manufacturing in advanced nations such as the United States and European countries.

While everyone knows that time is money, **QRM implementations have demonstrated that *time is actually a lot more money than most managers realize!*** Long lead times add layer upon layer of overhead and indirect costs, much more than managers anticipate. Industry implementations of QRM have shown that reducing lead times results not only in quick response, but also in significantly lower costs. Using QRM methods, companies have slashed their lead times by 80-90%, while also reducing their costs by 15-20%. **Implementing QRM has enabled U.S. companies to compete against low-cost countries, and to not only keep, but to grow manufacturing jobs in the USA.**

Many North American and European firms struggle to compete with low-cost countries in Asia. *However, witness these results from companies that implemented QRM:*

Nicolet Plastics (Mountain, Wis.) In 2009, Nicolet realized that customers were increasingly sourcing their high-volume plastic parts offshore to reduce costs. The company also observed that although the high-volume business was leaving, the low-volume business was not. Management began looking for a manufacturing strategy that supported the needs of short-run, complex-part customers, and decided that QRM fit their goals perfectly. The results, in just three years, have been nothing short of amazing. According to Joyce Warnacut, Chief Financial Officer, "We initiated our QRM effort in 2010 and the most impressive impact of QRM has been on Nicolet Plastics' earnings before interest and taxes (EBIT). *The EBIT for 2012 alone was roughly equal to the EBIT for the 10-year period from 2000 through 2009 combined!*"



Alexandria Extrusion Company (AEC) in Alexandria, Minn. provides custom aluminum extrusions. In 2002 the President, Tom Schabel, decided to implement QRM as AEC's competitive strategy. By 2012, AEC had reduced its lead time for extrusions by 83%, **from six weeks to five days**, and realized a 58% increase in revenue per square foot. "QRM gives us a definite edge over our competition," says Schabel. "Even during the economic downturn in 2008/09, AEC was able to grow. Without a doubt, QRM was the significant driver behind our success." Starting at a sales level of around \$40 million in 2002, AEC (now called Alexandria Industries) recorded sales of over \$100 million in 2012.



Phoenix Products Company, Milwaukee, Wis. manufactures industrial lighting for applications that include lighting of mines, shipyards and monuments. Ten years ago Phoenix was struggling with long lead times, late deliveries, and rising costs, all of which provided opportunities for competitors from low-cost countries. In 2004, Scott Fredrick, CEO decided to adopt QRM as the company strategy. By 2013, lead times across all product lines had been reduced by 50% along with impressive improvements in metrics: compared with 2004, by 2013 Phoenix had achieved a **70% increase in revenue per labor hour, and a 30% reduction in overhead**. During the same period Phoenix gained substantial market share: its sales grew at an average annual rate of 12.4%, versus 2% for the industry as a whole.

RenewAire, Madison, Wis. makes customized Energy Recovery Ventilation Systems. Chuck Gates, President, decided to implement QRM in 2003, and with his team he reduced their product lead times by over 80%. As a result, this tiny company competing with industry giants **increased its market share by 42%**. Specifically, RenewAire multiplied its revenue by 2.4 from 2003 to 2008. At the same time, the company significantly improved its productivity, requiring only a 73% growth in total employees for this big increase in sales.

At the other end of the spectrum from RenewAire, which makes small systems in a facility with fewer than 100 people, is **National Oilwell Varco (NOV)** headquartered in Houston, Texas, which makes huge equipment used in offshore and land-based oil drilling, with annual sales of \$20 billion. By implementing QRM at a factory in Orange, Calif., NOV reduced the lead time of a customized product line **from 75 days to 4 days**. A year later, when the full impact of the QRM project was evaluated, management found that **the cost of that product line had also been slashed by 30%!** The results of this project were so impressive that NOV is implementing QRM in dozens of factories worldwide.

For more information:

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