



Globalization: A Catalyst for Supply Chain Re-Engineering

by Steve Abbott, excerpted from SME's Lean Manufacturing Yearbook



Steve is a global operations expert focused on supply chain performance improvement and organizational transformation.

As a young engineer starting my first job 27 years ago, I was struck by the massive size of operations that were involved in manufacturing vehicles and automotive parts. In the complex I hired into, there were 12 facilities operating 24 hours a day, seven days a week with 22,000 people involved in engineering, quality control, manufacturing, materials management, finance, human resources and purchasing. However, I was shocked by the lack of sophistication among management. I had just joined one of the largest companies in the world, and everyone was working very hard, yet the company appeared to be stuck 30 years in the past.

The concepts of Lean manufacturing, continuous improvement, empowered workforce, self-managed teams, the 5S method, and cross-training were yet to be adopted. Eventually, I learned that this factory, and others like it, was so busy "keeping the wheels turning" that management often did not have the time to learn and apply new methods of operations. I learned that the competitive environment and economic forces are always changing. Thus, a management team unable to adapt to these changes will deliver operational performance that lags far behind more competitive companies.

A Catalyst for Change

For the last two decades, the major catalyst for change has been the globalization of market-based economies. Smart companies have to move rapidly to redefine their business models,

update their processes, and hire experienced leadership in an effort to improve delivery performance with world-class efficiency. American industries, particularly the automotive industry, are feeling the repercussions of their inability to adapt to globalization.

At the beginning of the 20th century, Frederick Taylor wrote *The Principles of Scientific Management*. Taylor's principles made a major, long-lasting impact on work design, work measurement, production control, and operations management. These principles encompassed the development of science for measuring elements of work, scientific selection and the development of workers, and cooperation between workers and managers.

The use of these techniques resulted in new departmental functions and business practices including industrial engineering, plant maintenance, quality control and personnel. His principles pioneered applications in major industrial operations. However, few firms in the United States had embraced the practices he outlined. The threat of the nation becoming involved in World War II was the impetus that started a widespread adoption of these practices. Those companies that responded prior to this time were well positioned to grow during and after this global conflict. Meanwhile, automotive companies that were slow to adapt to scientific management processes were not around long after the war ended. Even as Taylor's book spawned a host of new ideas, the American industry was slow to respond and often was unable to implement concepts with a sense of urgency that promoted cultural change.

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ANNOUNCEMENTS

BBK is proud to announce the following team additions:

Roger Han, Manager
Shanghai

Angela Jackson, A/P Clerk
Detroit

Raphael Macioce, Manager
Detroit

James Weinberg, Director
Detroit

Fannie Xie, Director
Shanghai

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For more information on any of the articles shown here, please contact marketing@e-bbk.com.

CASE STUDY

Increasing Throughput: Impacting the Bottom Line

BBK was engaged to develop and implement a performance improvement plan for a leading battery supplier.

Engagement Challenges

- Inexperienced leadership
- Poor relations with corporate engineering, purchasing and supplier quality activities
- Poor communications within the plant
- No existing, functioning production system
- Weak quality and material systems

BBK's Approach + Strategy

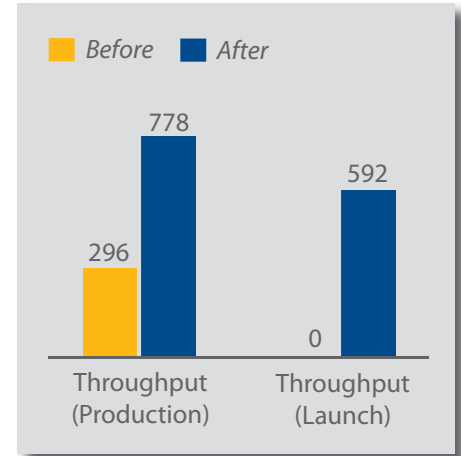
- Developed and implemented Lean material flow and scheduling production systems to create stability
- Developed and implemented production tracking systems designed to identify process constraints

- Introduced daily accountability and shift transition meetings
- Implemented data-driven problem solving processes aimed at process constraints to improve throughput
- Employed technical problem solving techniques to improve battery yield

Results

- Attained 100 percent on-time delivery in 2008
- Increased throughput from 296 to 778 in the production process and from 0 to 592 in the launch process
- Improved scrap rate from 44 percent to 20 percent
- Satisfied recall campaign shipments six weeks ahead of schedule

- Removed Company from being the volume constraint in OEM hybrid vehicle manufacturing
- Accomplished results in a five month time period



VIEW FROM CHINA

BBK China Continues to Grow

With a continuously growing team and client base, BBK China has relocated its office to Lippo Plaza. BBK China's Managing Director, Duane Bolinger, has kept the team moving forward with not only a new office, but by delivering stellar results with a talented team of professionals.



Duane Bolinger and Min She, Senior Director, in the lobby at BBK China's new office.

"We continue to be committed to our new and existing client base by offering unmatched expertise," said Bolinger. "The experience, knowledge and dedication our professionals have is what brings BBK China success and continuous opportunities."

In a recent visit to the Shanghai office, William G. Diehl, President and CEO, was able to meet with new hires, visit BBK's new office, and meet with the media.

Diehl and Bolinger met with journalists to discuss BBK's global economic point of view and the impact on China. The feedback was positive and directly in line with BBK's goal to achieving more credibility and brand awareness in China.

"Our team in China delivers unrivaled standards for quality and results in both supply risk and supply chain management," said Diehl. "With an increasing track record, they have made tremendous progress in further establishing BBK's presence in China."



Duane Bolinger and William G. Diehl meeting with the media in Shanghai.

BBK OPERATIONS

Lean Manufacturing: Your Ace in the Hole

by Guy Morgan, Managing Director, excerpted from Actionline Magazine



Guy is BBK's NA Operations Advisory Group Lead and expert in operational improvement processes.

Don't be overly concerned with external things that are beyond your control. In fact, you hold a stronger hand than you think — both proactively and reactively. Lean manufacturing can be your ace in the hole.

Cost-reduction strategies from the Lean toolbox eliminate waste and safeguard a company's interests while fortifying its operations in the face of internal or external market changes. Without cost shedding strategies, your company is increasingly vulnerable, putting everything you've worked for at risk.

Several years back, I met the owner of a plastics company; let's call him Jack. He was not your typical business owner. Jack was an entrepreneur and an engineer. Hard work, dedication and market conditions had been on his side for more than 30 years. When he retired at age 65, he assumed that steady growth would continue as he transitioned ownership of the family business to his children. Unfortunately, that wasn't the case. As Jack's Plastics grew into a mid-sized company, signs of deficits in management expertise were apparent.

If It Ain't Broke... You Still May Need to Fix It

Jack left retirement and resumed the position of management at his business. As he re-immersed himself in the company, Jack quickly realized how lucky he had been that things hadn't gone south sooner. Hard working as he was, Jack's first love was engineering – not business management. He provided customers with outstanding quality and never thought about incorporating proactive tools into his company's culture. Jack's lack of focus on the management of his business left a crack of vulnerability. Unexpected business growth, combined with shifts in the market, yielded

operational and commercial problems including poor scheduling, material flow, uptime and shipment compliance in addition to a decline in prices and volumes, and higher material cost and taxes. That crack quickly became a crater.

Previously unable to adapt to changing market conditions, Jack now realized that he needed to aggressively adopt newly available processes and implement business practices such as quality management, Lean manufacturing, and supply chain management.

Solutions for Your Lean Toolbox

Assessment Process. A plant assessment provides fresh perspective and allows for the identification of improvement areas throughout the facility. In Jack's case, key areas of waste included the lack of an operating system, untracked standard performance metrics, excessive scrap and overtime, the lack of a continuous improvement process and technical problem solving.

It is critical for any organization to be focused on building a foundation for continuous improvement, while ensuring that all employees understand their current operational performance and become active in the change process. Based on the information obtained from Jack's company during the assessment phase, the majority of the improvement needed to be focused in the molding area (bottleneck), creating the foundation for an operating system involving all employees that improved material scheduling and availability. Some key improvement initiatives included:

- Establishing a process to involve the entire organization in the development and implementation of improvement initiatives
- Establishing a sufficiency plan to capture those initiatives
- Assigning ownership and timing
- Setting up key metrics for the plant to track and to measure against



Implementing a Plan. In developing a Lean toolbox that will yield long-term results, implementation must be developed and executed in the main problem areas. In Jack's case, those areas were the operating system, quality assurance, material scheduling and availability and molding.

Production System. For a production system to function at an optimal level, management must make sure that performance metrics are established with reporting guidelines and ownership by company leaders. To regain control of his company, Jack needed to implement the following initiatives to guarantee improved performance:

- A monthly financial review to discuss previous month's performance and improvement actions
- Use of the Kaizen process targeting Top 5 problems in the plant
- Visual management tools throughout the facility
- Daily quality walks to improve plant performance and drive conformance to rules

Quality Assurance. The role of quality assurance is to prevent defects. A proactive process audit is essential to drive quality into the manufacturing process. Use of the following strategies can help ensure compliance:

- A "Fast Response" quality structure
- Improved operator training with plant-wide boundary samples
- Installation of both internal and external customer focus

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Globalization

Today, America is faced with the next manufacturing phenomenon – globalization – a great opportunity for small and mid-sized companies to mobilize resources to redesign their business processes and streamline their management teams. Companies need to aggressively adopt newly available processes and pursue the best available talent to implement business practices such as quality management, Lean manufacturing, supply chain management, and end-to-end process integration. This is an opportunity for companies to look beyond their four walls and into the entire supply chain for significant improvement in operations and cost shedding.

In a recent survey by the Aberdeen Group, 90 percent of companies are looking to redesign their domestic supply chains, while 80 percent are looking to redesign their international supply chains. For many companies, such a move can't come soon enough.

“Supply chains will need to be more reliable with less variability, while reducing aging inventory and waste.”

These companies are troubled because they have not successfully adopted best practices over the last 40 years. They need to revisit lessons from the 1970s, 80s and 90s, and adapt lessons from today as well (see chart below).

To successfully globalize, many companies will look to experienced leaders, enlisted to fill interim executive roles, while shedding non-core functions in the process. These interim leaders will lead the transformation and mentor younger leaders in quality, Lean, and supply chain management as a means of rapid innovation and change management.

Yet, the difficulty is that many of the leaders best suited to this role already have transitioned into retirement, or second careers.

Supply Chain Opportunities

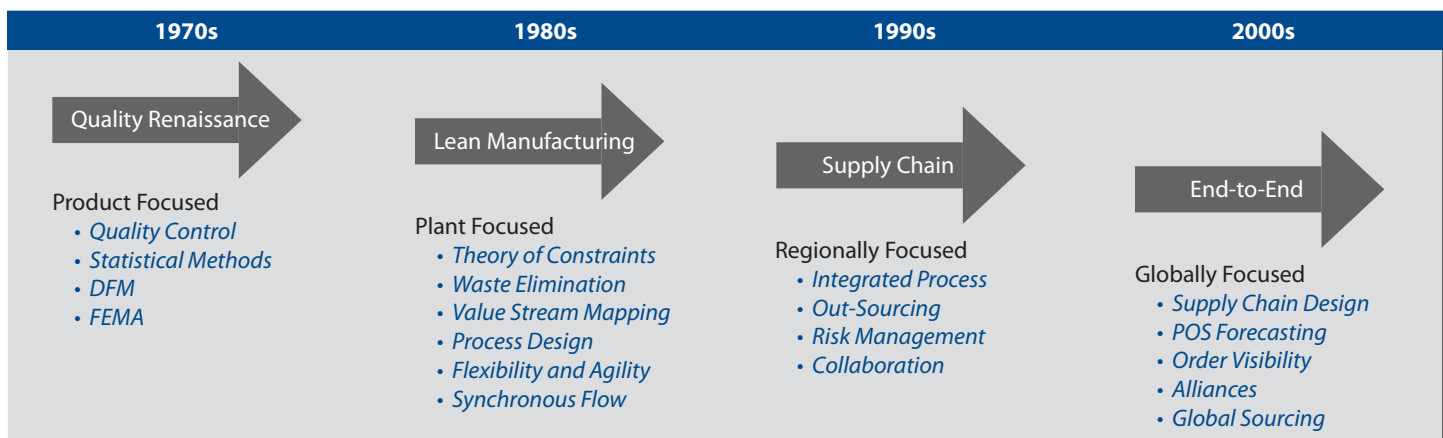
In most industries, the supply chain comprises 60-67 percent of total costs. For a company with a 20 percent gross margin, a one percent improvement in operating cost can be the equivalent of a five percent increase in sales. A pipeline, if poorly designed and managed, can be filled with inventory, obsolescence and waste. Supply chains will need to be more reliable with less variability, while reducing aging inventory and waste. They need to partner with suppliers and service carriers that are best in class. The price for premium service may be higher, but the value of reliable service and lower risk of supply chain disruptions is priceless.

To consistently realize opportunities, companies must focus on continuous improvement. Performance metrics (including lead-time, delivery reliability, and total landed costs) can be applied to all elements of the supply chain. A continuous improvement philosophy will allow leadership, and the company, to focus more on the customer. Further, the metrics will drive leadership to search for supply chain waste and develop the means to eliminate waste. The result will be improved performance and another step towards competing in the global economy.

Conclusion

As the global economy creates a catalyst for change, the leadership of small and mid-sized companies must respond. Leadership cannot simply “keep the wheels turning”. They must seek personnel that can rapidly apply Lean principles to the entire supply chain and mentor younger leaders in business restructuring, process redesign, and cross-functional collaboration with best-in-class partners. Leadership must embrace a passion for continuous improvement by eliminating waste and inefficiency throughout the pipeline. And finally, leadership must ensure that every person in the organization and every entity in the supply chain is driven by a common objective – to meet clearly defined goals on a daily basis in order to achieve and maintain global competitiveness. ■

Decades of Supply Chain Best Practices





LETTER FROM BBK

Healthcare: The Next Financial Tsunami?

Recent events in the financial markets and the high cost of oil have largely dominated the current news cycle and raised significant concerns with many people. Lurking just below the surface of our collective consciousness, lays another growing economic issue: healthcare. A report published in 2006 by the Employee Benefits Research Institute (EBRI) indicates U.S. national spending on healthcare has increased at an average of 10 percent per year from 1960–2006. Healthcare spending growth is forecasted to continue at an even greater rate through 2017. Healthcare costs as a percentage of Gross Domestic Product (GDP), have grown from 5 percent in 1960 to 15 percent in 2006 and are forecasted to continue to increase to almost 20 percent of GDP by 2017. Unlike the current financial and oil crises however, the accelerating cost increases in healthcare span a significantly wider spectrum of sources including technology, litigation, insurance, regulations, and an aging population.

Employers, both large and small, are taking actions to reduce their growing costs of providing healthcare benefits. This is impacting employees in a number of ways including larger employee contribution paycheck deductions, increased co-pay requirements for services, and higher annual deductibles for insurance coverage. Some smaller businesses are being forced to drop employee healthcare benefits entirely as insurance premiums have become economically unaffordable. Recent retiree benefit plan changes at several large U.S. corporations will likely result in significant future economic challenges for all retirees. This alarming trend will likely propagate across the entire country as other companies follow this new precedent to attempt to contain their escalating healthcare costs. An increasing number of Americans who do not have employer-provided health insurance are purchasing individual policies with high deductibles or simply have no health insurance at all. A single major illness or accident may financially bankrupt an entire family.

The provider side of healthcare doesn't look much better. An increasing number of hospitals and physician private practices are experiencing lower demand as patients are deferring elective surgeries and postponing recommended preventative examinations. Patients without health insurance are not getting medical help until their illness becomes life threatening. They are then going to the emergency room for care. Often, the hospital is ultimately stuck footing the bill or pursuing payment through legal measures.

Likewise, health insurance companies are experiencing higher costs as increased regulations and continuing budget cuts in Medicare and Medicaid from Federal and State governments are forcing insurance providers to add administrative staff and procedures just to address these challenges. Employers are pushing insurance providers to cut administrative overhead and reduce employer insurance premiums.

Employers, providers, and health insurance companies need to actively pursue opportunities to get control of escalating healthcare costs — before they create a financial tsunami that wreaks havoc within the U.S. economy akin to the resulting and dramatic effects of Hurricane Katrina.

The implementation of Lean and supply chain management have allowed manufacturing companies to become significantly more cost competitive, while increasing quality and customer satisfaction. These same Lean principles are now being successfully applied to healthcare. Examples of healthcare performance improvement implemented by BBK include costs reduced by up to 50 percent, inventory reduced 60–90 percent, and direct labor expense improved 45–75 percent.

BBK's existing world-class Lean expertise is now complemented by the addition of new BBK talent with extensive healthcare expertise in such specialties as insurance and provider networks.

For more information on healthcare, contact Alex at 248.603.6369 or acraig@e-bbk.com.


Alex Craig
Managing Director

BBK PE POWERTRAK

Top Five International Private Equity Firms in Automotive Related Deals:

CURRENT EQUITY INVESTOR	# OF AUTO INVESTMENTS
3I GROUP PLC	25
COFIDES, S.A.	17
SUN CAPITAL PARTNERS	11
CARLYLE GROUP	10
COURT SQUARE CAPITAL	9

Source: Capital IQ as of October 2008

BBK PE PowerTrak identifies monthly changes and activities relative to private equity firms with significant automotive related investments.

INDUSTRY EVENTS

BBK voiced its thought leadership at the following industry events:

August 6, 2008 GM Diversity Council Meeting, William G. Diehl, President and CEO; Guy Morgan, Managing Director; and Marcus Hudson, Director, presented "Surviving in Today's Automotive Industry".

September 16, 2008 INSOL Shanghai, William G. Diehl, President and CEO, participated on a panel "Gearing up for Restructuring Success: Operational Turnarounds".

October 2, 2008 IIE's Operational Excellence Conference and Expo, Guy Morgan, Managing Director, presented "Implementing Lean Throughout the Enterprise".

For information on upcoming events, contact marketing@e-bbk.com.



BBK OPERATIONS

Lean Manufacturing (continued)

Material Scheduling and Availability. Waste as a result of poor scheduling habits must be eliminated for improved performance. Tools such as these can help:

- Reduction of start-ups and improved changeovers
- Improved department layouts focusing on reducing conveyance and eliminating walking
- Min/max inventory levels to control overproduction and reordering

Lean Principles. Lean principles are useful to determine causes, solutions and significance of manufacturing problems and use of the right Lean tool, along with assigning ownership, is vital to improved performance. The following principles were implemented for Jack's company and can also provide valuable insight into a variety of manufacturing processes:

- Downtime Paretos and a Top 5 focus
- Management/operator scrap reviews and a Top 3 focus
- Process times matched with Takt times and measures put in place to monitor parameters to reduce incorrect processing
- Implementation of Lean "quick change" initiative

Lessons Learned From Jack

Jack learned that while competitive environments and economic forces are always changing, proactive approaches to management can reduce risk and uncertainty. By leaving retirement, Jack was able to implement processes that reduced total head count, improved labor cost, productivity performance and quality, reduced scrap and overtime,

DID YOU KNOW?

Applying Lean principles is not a program, it's a *behavior* influencing processes that can be applied to various industries to:

- 1) Improve Quality
- 2) Eliminate Waste
- 3) Reduce Lead Time
- 4) Reduce Costs

and launched a recycling program that, in total, provided a cost savings of more than \$2.5 million on a \$10 million budget.

Fixing the problem before it happens is the best-case-scenario for any company's bottom line, but for Jack things didn't happen that way. The long-term viability of a company is dependent on its sustainability in weakened economic conditions and, as markets continue to change and become increasingly global, it is vital that management teams are able to adapt in volatile situations. ■



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