



# Manufacturing Leadership: *Observations From the Front Lines*

by William Diamond, Senior Director

Over the past 15 years, I have spent my career working with underperforming manufacturing companies supplying to the automotive OEMs and larger Tier 1 suppliers. My experiences have led me to the conclusion that operational leadership, both at the corporate and plant level, is the single most important factor that leads to wealth generation in manufacturing companies. In the equation "revenue-cost = profits", revenue is an important variable but one that is more market driven than under the control of operations. Business that is under priced to the market can be a significant contributor to poor financial performance and needs to be addressed as part of the investment proposal. However, in a manufacturing company, operational management and the ability to control costs and continually reduce costs is the ultimate key to success.

For those considering the acquisition of manufacturing companies, it is necessary that the capabilities of the operational leadership are understood as part of the due diligence. This understanding will feed the strategic planning of who to retain from the current company. It will also define what talent, if any, needs to be acquired from outside the company to ensure a successful turnaround. Having the right team in place will speed up the turnaround process and guarantee quicker and more significant results.

Operational management assessments are not intended to be psychological analyses of the personality traits or leadership styles of the management team, but rather to focus on the tangible. Assessments target

the management processes and the results that those processes deliver. To be effective, operations management must ensure work is efficient (eliminate waste), provide feedback (two-way communication) and encourage continuous learning (people development).

### *Characteristics of ineffective operations leaders:*

#### **Focus on influences outside their control.**

One of the first questions I ask manufacturing leaders during an assessment is "What are your three biggest problems?" In underperforming companies, the theme is fairly consistent—the problems are outside their direct control. Typical answers include competitor pricing, customer quality requirements, supplier product quality, union work rules, management/ownership support, etc. Ineffective leaders look to someone else to improve their condition and point their fingers at others as the source of their problem. This negative attitude often filters down to the entire operations staff, preventing development of sufficient improvement plans and accountability for performance.

I recently assessed a supplier facility for an OEM. The company had generated a significant amount of new business but had executed it poorly, going from a profitable enterprise to one losing money. The company requested significant price increases to provide relief and get them back to profitability. When asked about their biggest problems they identified two—quality requirements from assembly plants and material from suppliers. They had no sufficiency plans to address the

## ANNOUNCEMENTS

**BBK is proud to announce the following team additions:**

Pierre Benoit, Managing Director  
New York

Stephanie Childress, Executive Assistant  
Detroit

James Downes, Manager  
Detroit

David Gloer, Manager  
Detroit

Edward Macek, Director  
Detroit

Payman Mahjoory, Manager  
Detroit

Scott Muth, Network Administrator  
Detroit

Steven Sadowski, Associate  
Detroit

James Street, Manager  
Detroit

James Tyson, Director  
Detroit

Andrew Zeleney, Associate  
Detroit

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For more information on any of the articles shown here, please contact [marketing@e-bbk.com](mailto:marketing@e-bbk.com).

## CASE STUDY

# Impelling Improvement

*BBK was engaged to develop and implement an operational improvement plan for a manufacturer of edge welded metal bellows for use in semiconductor components, medical devices and aerospace.*



### Engagement Challenges

- COO was resistant to outside recommendations
- The current culture lacked systems and disciplines
- Manufacturing flow was negatively impacted by layout and physical limitations of the structure
- Needed to improve sense of customer urgency
- Organization's time was allocated towards crises, instead of focusing on proactively managing issues

### BBK's Approach + Strategy

- Conducted a plant assessment to identify improvement opportunities
- Met with individual staff members to brainstorm action strategies
- Developed a consistent format for tracking of the improvement actions
- Agreed upon key metrics to track improvement
- Developed a scorecard to measure and communicate performance
- Reviewed progress of improvement initiatives weekly
- Physically reviewed on-site progress monthly
- Coached and mentored the organization to continue implementing the improvement plan

### Results

- Organization completed initiatives documented on the improvement plan
- Improved past dues by \$900,000
- Increased Supplier On Time to 76%
- Reduced inventory by \$500,000

## AUTOMOTIVE

# A Comprehensive Approach to a Healthy Supply Base

On Thursday, May 17 in Nashville, Tennessee, William G. Diehl, BBK President and CEO, spoke at the Automotive News Manufacturing Conference, sharing his perspective on how OEMs and Tier 1s can keep their supply chains strong by instituting a proactive approach that includes both operational and financial monitoring. Mr. Diehl, with his experience and great success in leading BBK to help companies overcome supply base challenges, answered a few questions on key highlights from his speech:

**Q:** *You suggested that it is critical for OEMs and Tier 1 suppliers to take a comprehensive proactive approach to carefully monitor both the operational and financial health of their suppliers. Why is it so important?*

**A:** The first reason is that time is your ally if you use it wisely and understand the problem. The second reason involves the limitations of just conducting an operations review. The third key reason you should get proactively involved, is that many suppliers are slow to recognize that they may be heading for distress—the entrepreneurial mind-set is a major reason for this blind spot. And for additional motivation, there have been 64 supplier bankruptcies since 2000.

**Q:** *From the BBK Ratings study based on 80 public top suppliers, it was noted that 22 percent of automotive suppliers could face financial trouble within the next 12 months. (33 percent of North*

*American suppliers fell into the financially distressed category, with only 14 percent in Europe and none in Asia.) Does this mean that NA suppliers are doomed?*

**A:** No, it's definitely not all doom and gloom. The auto industry is going through a right-sizing. I don't see it ending in the near term, but I think we're making progress with both the automakers and suppliers. It's really a product mix change, as suppliers are focusing on their core products and shrinking to match the smaller sizes of the domestic automakers.

**Q:** *And what about private companies?*

**A:** A look at our data shows that 46 percent of private companies were rated as having some potential for distress. That is more than double the percentage for publicly traded suppliers. And by the way, more than two thirds of supply base companies are privately-held.

**Q:** *What is your prediction for the future?*

**A:** Over the next three years, consolidation of the supply base will allow suppliers to leverage economies of scale and drive costs down. The suppliers who find the right balance between outsourcing to lower-costs countries and looking for cost-effective ways to improve efficiency will be well poised for a healthy and sustainable future. ■

*For more information, please contact [marketing@e-bbk.com](mailto:marketing@e-bbk.com)*

## OPERATIONS—VIEW FROM EUROPE

# JIT Modules: A Strategic Approach for Optimum Vehicle Production

by Dr. Harald Wieland, Director

JIT production is a common practice today in the automotive industry. JIT, or “just in time”, means the correct *quantity* of components in the correct *quality* are delivered at the right time. The goal is minimum inventory in the entire value chain, with the procurement and delivery of components occurring synchronously with production. The same applies to the procurement of modules that consist of components that are procured and delivered synchronous to production for modular assembly. If there are numerous types of modules, their assembly and delivery can only take place in an exact sequence (JIS) in order to be economically feasible.

### Module Assembly

The workload on each assembly station depends on the model mix, as the assembly expenditure is different depending on the types of equipment. Assembly must be set up on an extremely comprehensive workplace, and the slowest section determines the speed of production (cycle time). Greater independence of model mix and shorter throughput times are achieved by parallel assembly processes. The prerequisite here is that the assembly is broken down into individual, complete pre-assemblies. Ideally, the assembly layout is changed so that the main assembly line is surrounded by module assemblies. Special equipment variants with higher assembly expenditures are

separated out of module assembly into additional pre-assemblies. The result is the fractal factory.

The more comprehensive the pre-assembly and thus their modules are, the more the throughput time can be reduced. Modules can also be set up on special assembly equipment, making the assembly work more ergonomic than for direct installation of components in the body, having the effect that assembly occurs faster and at higher quality. This allows final quality testing at the end of the assembly line enabling assembly errors to be detected before installing the module in the vehicle.

A crucial component for module assembly is the time available (“lead-time”) between transmission or reception of sequence signals and the installation time of the module in the chassis. In this time frame, the JIT module must be assembled completely, checked, repaired (if necessary), and re-sequenced, loaded, transported, and unloaded again; as well as transported to the vehicle assembly line at the time of installation (independent of equipment variation). The lead-time is only a few hours. The farther the module assembly is from the vehicle assembly, the larger the transportation expense, and thus the higher the risks for production. *A faulty or incorrect JIT module can lead to the interruption of the entire vehicle assembly!*

### OEM self vs. external production

A distinction must be made between self-production by the OEM and external production. External production can be done by a logistics service provider or by a system supplier. External production is particularly important in order to lower personnel costs. This is done by avoiding the current high wages of the automobile manufacturer, or if the OEM facility does not have enough space for in-house assembly.

There are three basic delivery variations for external production: assembly of the JIT module in a plant of the supplier, in a

## ADDED VALUE OF JIT MODULE IN PRODUCTION

- Significantly more far-reaching than just simple cost reduction
- Lower material provision costs
- Lower throughput time in production
- Improved ergonomics at the assembly work place
- Higher quality in production or lower quality costs
- Shorter cycle time
- Higher production quantities
- Greater flexibility

supplier park (there are already 30 such parks in Europe alone), or on the premises of the automobile manufacturer, ideally with direct integration in vehicle assembly (e.g. MCC-Smart Hambach, France).

The risk that a JIT module is mounted incorrectly or that faulty components are installed can be well controlled today, and is basically independent of self or external production. What is critical is the transportation from a physically separated module assembly location to the vehicle assembly line. The goal must be the closest possible delivery to the vehicle assembly line, which reduces costs as well. This proximity must also be strived for external production.

### Road to success

Additional expenditures, which result from modularized manufacturing (e.g. additional special loading equipment or assembly systems) are overcompensated by the economic and technical advantages of a JIT module. All successful automobile manufacturers, such as BMW, Daimler, Porsche, Toyota or the VW Group, have, in the meantime, successfully modularized their production process. It is daily practice for their employees—whether in Spain, Belgium, England, Poland or Japan. The next step will be further flexibility, in order to manufacture different vehicle models on one assembly line—as BMW has already demonstrated under the management of the past production executive Norbert Reithofer (today CEO of BMW). ■



...Continued from page 1

## Front Lines

launch readiness process, scrap, downtime, containment labor, employee turnover, or low capacity utilization that was driving the cost side of their profit equation.

### **Their manufacturing philosophy is not consistent with Lean principles.**

As part of due diligence, it is important to go where the product is produced. In board rooms, operations leaders can profess to have a Lean vision and point to a box on the organization chart as evidence. An assessment of the words versus deeds is essential. The philosophy of the manufacturing system is made evident through observation. The extent that there is waste in the system to the experienced person will be obvious. Inventory, overproduction, correction, material movement, non-value added processing, and waiting and motion are examples of waste in the production system.

Ineffective operations leaders do not have an understanding of the current state (where the waste is) and vision of the future state (waste reduced or removed). Improvement is not possible if you don't know where you are today and where you are going tomorrow. In the absence of a fact/data based plan you are only hoping to improve performance. The Lean vision provides a

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*“Unidentified problems and the lack of an improvement plan renders leaders incapable of distinguishing important from unimportant activities”*

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frame work for organizational communication, a call for action and the structure for employee empowerment. When assessing leaders' understanding and commitment to Lean, I request current and future state value stream maps, sufficiency plans and action plans. To confirm credibility, onsite Lean assessments are performed to identify the process flows and inherent waste in their production systems.

A private equity firm requested an operational assessment as part of its due diligence prior to purchasing an automotive component manufacturer. The assessment included an analysis of operational key performance indicators, board room presentations made by the operations leader, and onsite observation of three manufacturing locations. In the board room the presentation included discussion of the company's Six Sigma and Lean initiatives as a major asset. Our observation at the manufacturing facilities did not support the presentation; their implementation of Six Sigma and Lean principles was superficial and opportunities to reduce waste were evident. An assessment was provided and the equity fund used this data as part of their purchase proposal and retention plan.

### **Time management is not appropriately allocated.**

Interrelated with the previous behaviors is ineffective leaders' inability to focus their energy and time on the key things that will garner the greatest impact on results. Unidentified problems and the lack of an improvement plan renders leaders incapable of distinguishing important from unimportant activities. Typically, the lack of focus allows the leader and the organization to reactively chase daily crises at the expense of continuous improvement.

From a tactical perspective, leaders' time should be spent on the 20% of opportunities driving 80% of the results. The application of the Pareto principle and the methods it entails is seldom used by ineffective leaders. All operations leaders should have their top three to five opportunities for improvement, along with defined actions and timing for completion. Structures based on the top five will assure that work is productive and results driven, communication and feedback are provided, and continuous learning occurs.

I consulted with a company to implement a continuous improvement process based on Lean and Technical Solving principles. The executive team would meet monthly at a manufacturing location for an operational performance review. The preparation took the functional leaders at least two days and the presentations another two days. Basically, the staff was tied up for 20% of the month to review history. It was not surprising that problems continued month-to-month as the organization focused on too many initiatives and achieved very few results. Given the condition of the company, the staff should have focused on the action plans to improve and achieve desired results.

### **Summary**

Assessments of operations leadership, operations management processes and manufacturing operations are critical elements in due diligence. Not having data regarding these elements places potential buyers at a disadvantage to those who do. In addition, the data and analysis will identify strengths and weaknesses to form wealth enhancing strategies prior to an acquisition. These strategies can then be implemented prior to acquisition or early in ownership to verify that the investment meets or exceeds the financial returns expected. Especially critical is a clear understanding of whether the current operations management will be an asset and a contributor to achieving the desired results. ■





## LETTER FROM BBK

# BBK Ratings

## *Proactive Supply Risk Management*

One of the biggest risks for the automotive manufacturer today is the financial viability of its supply base. Many OEMs have been surprised by a call, usually at 5:00 p.m. on a Friday afternoon, informing them that a supplier will not be in business the next Monday morning. With potential risks such as this, BBK identifies and evaluates the risk and then designs plans to mitigate or reduce that risk. How can we do that?

BBK offers a program of financial risk management that begins with BBK Ratings, our proprietary tool used to evaluate both public and private company financial data to determine the overall financial strength of a company. BBK Ratings assigns a grade from "A" to "F" depending on the potential for distress. (We used this to conduct our recent study on 80 of the top global automotive suppliers based on 2006 revenues). In addition to a letter grade, a Ratings report includes sections for financial metrics and analytical comments. The metrics section helps to identify areas of strengths and weaknesses, while the analyst's comments include recommendations for future actions.

The most common question I am asked is "How do you get financials from private companies?" While BBK has built close relationships with OEMs and Tier 1s for more than 20 years, we also will not release the private company's data without their permission. For example, if "Company A" wants a rating on "Supplier X" and BBK provides that rating, and then "Company B" wants that same rating on "Supplier X", BBK will not release that information to "Company B" without getting permission from "Supplier X".

Additionally, when a company requests a private supplier's rating, we will provide a confidentiality agreement between BBK and the supplier. In this situation, BBK will only release the letter grade rating to the company—not the metrics, analytical comments, or financial data of the supplier. Our customers trust BBK's process, and the supplier trusts BBK to honor the confidentiality agreement. Suppliers are recognizing the need for their customers to assure themselves of the supplier's financial viability, and the supplier is looking for a trusted process to accomplish that legitimate request.

BBK Ratings is not just used to find the areas of weakness in a company. Actually, the objective is to make sure all relevant data is presented correctly so a proper sourcing or credit decision can be made by our Ratings customer. For example, a small private supplier was rated an "F" on a confidential rating (the financial data was not provided to the Ratings customer). To begin building a stronger relationship between our customer and the supplier, we were able to get the supplier to provide the financials. Our customer saw the supplier was making good progress on their turnaround program and the two companies continued their work together, with a period of monitoring to make sure the supplier stayed on their plan to recovery.

BBK is proud to be trusted by suppliers and manufacturers as we offer our risk management services with an ultimate goal of success. Especially in today's automotive industry, it's important to maintain a good relationship between the supplier and manufacturer to help meet the need for financial disclosure and evaluation for proper risk analysis.

*Mike Wagner*  
**Mike Wagner**  
 Director of Proactive Services

For more information,  
 visit [www.bbkratings.com](http://www.bbkratings.com)

## ANNOUNCEMENTS

Marcus Hudson, Manager, was awarded a **Certificate of Distinguished Performance** by the Board of Directors at AIRA (the Association of Insolvency and Restructuring Advisors) based on his exceptional CIRA (Certified Insolvency and Restructuring Advisor) examination results. Mr. Hudson was recognized for his achievement on Thursday, June 7 at AIRA's Annual Conference in Chicago.

## INDUSTRY EVENTS

*BBK voiced its thought leadership at the following industry events:*

**April 16, 2007** SAE's World Congress, Mark Ripple, Manager, presented "Scrap Reduction Project at a North American OEM".

**April 26, 2007** Distressed Debt Forum 2007, Jim Connor, Managing Director, participated on a panel discussing "Irrational LBOs".

**May 17, 2007** The Automotive News Manufacturing Conference, William G. Diehl, President, CEO and Global Automotive Advisory Group Lead, presented "A Comprehensive Approach to a Healthy Supply Base".

**June 6, 2007** Association for Corporate Growth's First China International Private Equity Forum, James Feldkamp, Director, was on a panel discussing "Effective Communications and Realistic Expectations".

**June 8, 2007** Association of Insolvency and Restructuring Advisors Annual Conference, Guy Morgan, Managing Director, was on a panel discussing "Fixing Manufacturing in the New Millennium".

*BBK is scheduled to speak at the following upcoming events:*

**August 22, 2007** at the OESA Council Meeting, Mike Wagner, Director of Proactive Services, will speak on "Proactive Process".

**September 20, 2007** at the Automotive Industry Restructuring Finance Summit, Jim Connor, Managing Director, will join a panel on "Early Experiences with Financial Restructuring: Successes and Lessons Learned".

BBK also participated in The 61st China Automobile Parts Fair in Nanjing, China, ACG's Annual InterGrowth Conference in Phoenix, AZ, the IIE Annual Conference in Nashville, TN, AIRA's Annual Conference in Chicago, IL, ABI's Central States Workshop in Traverse City, MI, and the Automotive News Europe Congress in Prague.

WE'VE MOVED

## BBK China: Moving Forward

*With a New Office Location in Central Plaza,  
BBK China is Ready to Continue its Growth.*



*William G. Diehl talks with Automobile  
and Parts - AutoCAR professional in China*

"This relocation signifies our progress here in the Chinese market," said James Feldkamp, Director and head of the Shanghai office. "We are fully committed to our clients, and also prepared to move towards our next steps in further building our critical mass and the expansion of our client base."

BBK President and CEO, William G. Diehl, recently spent time in Shanghai and attended Auto Shanghai 2007. In an interview with *Automobile and Parts - AutoCAR professional* (pictured left), one of the many questions asked to Mr. Diehl was why BBK entered the Chinese market. In response to this Diehl said, "Because China will become an indispensable player in the global automobile industry." He added: "BBK is very optimistic about the future of the Chinese automobile market, and we are very proud of our firm in being capable of helping clients improve their business performance, raise their value, and maximize their returns of investment, by introducing BBK's professionalism and expertise."

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