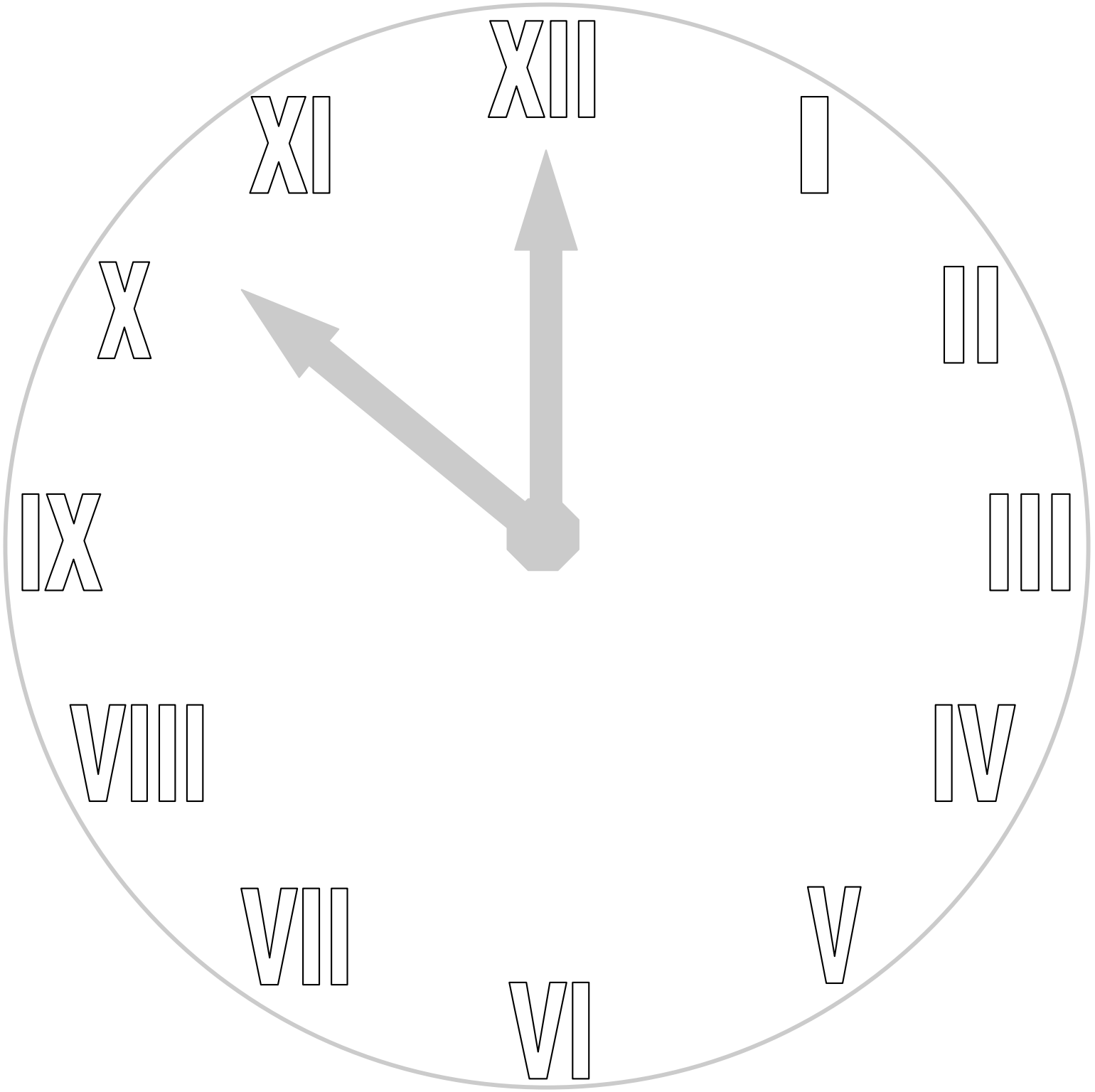
FINDING THE LOW-RISK SUPPLIER

Aerospace & Defense Supply Chains Need a New Kind of Supplier



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Are we really getting ready for the changes that are inevitable in this rapidly changing environment? Perhaps we're not changing fast enough.

What are the Warning Signs?

The aerospace supply chain is changing rapidly. Primes and tier ones are moving work into the supply chains faster than ever before in order to reduce cost and share risk. Most good suppliers are reporting they're at or above capacity, yet many suppliers in specific commodities such as forging and castings are going out of business (more on why this is later). This puts more business on the ones who are left. But the ones that are left aren't necessarily the best…they're just the "survivors."

Many suppliers operating at capacity are reporting they're operating at break even or even at a loss. Why? Because they do not have the process capability to control operating costs at their current level of business and in many cases they took business at prices and costs they had not yet achieved but were hoping to achieve at some time in the future through lean and continuous improvement.

This phenomenon is not new. During a similar transition in the automotive industry, the supplier population was reduced from 30,000 to 5,000 in a 12 to15 year period. After 15 years, the remaining 5,000 suppliers were studied by ATK[1]. They determined that 36% were not financially viable.

Preferred suppliers--often called gold- and silver-level suppliers--who typically gain most of the business are creating the biggest surprises and the most significant failures.

Process Maturity in our industry, for sub-tier suppliers, is not increasing. Lean adoption in our industry, at the sub-tier supplier level, is not progressing.

Firefighting and supplier visits are on the up-swing, and this is only the beginning.

It is said that when you lower the water, the rocks show up. Our rocks are beginning to show up everywhere.

The Gold Level Supplier

So let's take a look at a great sub-tier supplier for a minute. A Gold Level supplier for several customers. They are AS9100, NADCAP certified, and more.

How did they get their Gold Level Certification? Well, you see, normally they could not maintain the on-time delivery of 98% or better to qualify, and normally their quality would vary, but with the goal of gaining that Gold Level Certification, and increased business, there are ways to ensure that on-time delivery and quality are high.

[1] Restructuring the Global Aerospace Industry, A.T. Kearney, Page 3 - http://www.seaonline.org/docs/Restruct_aerospa-B5929.pdf

It's Called Expediting and Inspection

Expediting…every morning in most supplier companies there's a production-scheduling meeting. The group looks at a list of products that need to get out the door, prioritizes them by customer and how late they are. Now if we're trying to get a Gold Level Certification from a customer, then we have to move their product to the top of the list. What happens to the others? They move to the bottom of the list.

Inspecting…every day, dozens of errors, omissions, goofs, and blunders get built into products. It's not because suppliers aren't trying to build things right, it's just that the processes that most suppliers use aren't under control and aren't capable of producing an error-free product – and therefore they must add extra management and inspection even to achieve a minimal quality level. But when I'm trying to get that Gold Level Certification, I make sure that parts going to that customer are inspected 100% and at least twice or three times – for about three to six months.

So at the end of three to six months – whatever the customer uses for their certification period--I get my gold plaque in the lobby. Now my name goes on a list of suppliers who are the best at what they do and every buyer is encouraged to order from me.

Now we move on to the next Gold Level Certification and guess what happens? That's right – I expedite and inspect for someone else and it's "business as usual" for yesterday's Gold Level customer.

Suppliers working on certifications can routinely have 20 to 40% variation in on-time delivery. It can be 50% for some, 90% for others.

And as a customer of this supplier, we don't help things at all. If a delivery is late, we send someone over to help fix the problem, or we pay a visit ourselves. Our agenda? Make sure this supplier knows that not delivering 100% on-time and 100% quality will cost them the business. What do they do with this new perspective? Increase expediting and inspection.

We Have Arrived

And now that I'm a Gold Level Supplier, things begin to change. I'm no longer striving to expedite or inspect into anyone's "golden circle." I've got more business than I know what to do with and if you don't like it, take it somewhere else – after all, "We're the best! We're a Gold Level Supplier."

Next month, our backlog increases and we run out of capacity to do anything and our delivery drops to 50% and our quality drops to 60% - was that really a surprise to anyone?

Suppliers stop all development when they run out of capacity. They stop training the workforce. They stop problem-solving team meetings. They stop implementing SPC. They stop everything!

But then, they weren't doing those things in the first place. Training industry surveys tell us that small companies rarely provide more than four hours training per employee per year. The actual training needed is closer to 24 hours per year and that doesn't count a single Kaizen event that could be as much as 40 hours.

And suppliers who are at capacity get over-confident. They believe that the reason they have so much business is that they have distinguished themselves as better than the competition. They believe that the

customer needs their services and capabilities. Meanwhile their customer is usually either looking for a better alternative or has determined there are no alternatives.

And here is the final blow: Gold Level suppliers operating at or above capacity have higher costs. Because their processes are not under control, costs go up as production increases and suppliers struggle to make a profit and often don't. So our ability to gain year-to-year cost reductions is very limited. That's why at the end of 15 years in the automotive industry, 36% of the suppliers left were not financially viable.

A Lack of Profound Knowledge

When Deming returned from Japan, where he educated Japanese executives as a part of MacArthur's mission to rebuild Japan after World War II, he cautioned American executives that they were unwilling to develop a profound knowledge of processes they were trying to manage and improve.

In the book, "The Fifth Discipline," Peter Senge tells the story of a merchant who lays out his most beautiful carpet before the opening of the market. He hopes to show it off and gain a buyer. But a lump appears and he rushes to step on it only to see a lump in another spot. After 20 minutes, and many lumps, a snake crawls out from under the carpet that is now looking very worn and tattered.

A superficial knowledge of supplier companies and lean production can lead to superficial assessments of root causes and therefore a lack of effectiveness in changing supplier performance.

If we send out a specialist in quality – they will naturally determine that the single cause of the supplier's problem is a lack of quality processes. If we send out a specialist in organizational psychology, they will naturally determine that the single cause of the supplier's problem is a lack of leadership or supportive culture. The truth is, when it comes to a supplier's long-term success, all of these factors and more enter into play. There are no simple one-cause solutions when it comes to transforming an organization or supply chain.

Our purchasing and quality communities, and government agencies do not have this "profound knowledge" about suppliers and yet they all want to "transform the supply chain."

We respectfully submit that the industry is trying to bypass Profound Knowledge about that which it wishes to change. The result has been a lot of "stepping on" suppliers and a lot of tattered and worn relationships.

During the pilot test conducted by the Supplier Excellence Alliance (SEA), the state of California offered to pay almost 100% of the cost of conversion, and most suppliers--almost 99% of those invited--declined. Do we really understand why?

In 15 years of ISO9000, AS9100, NADCAP, and lean mandates, the inventory turns within our industry have remained at two to three turns continuously. That tells us, as an industry, we're not getting any leaner. How can that be true?

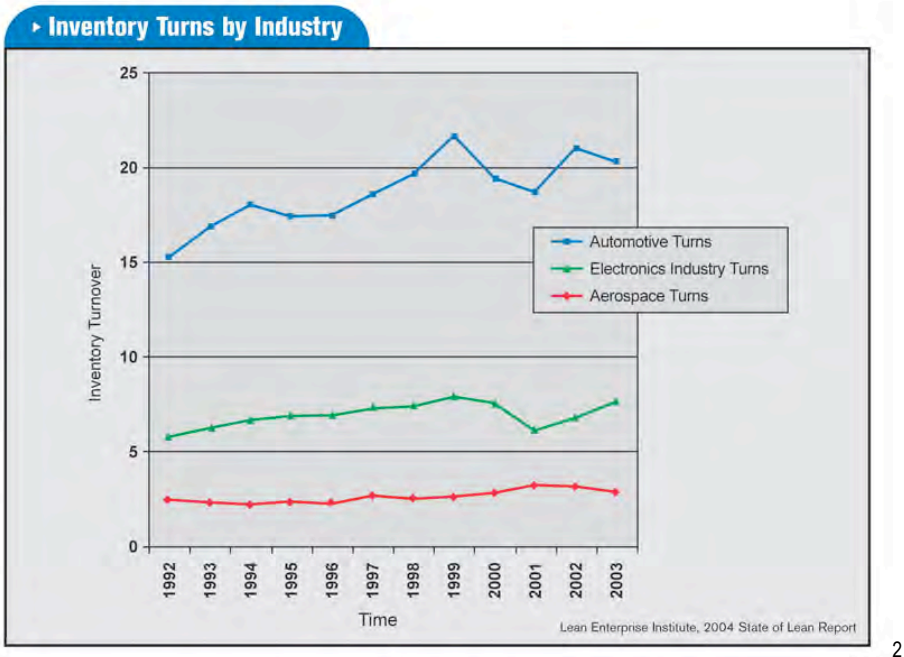
How Lean is Our Industry?

Inventory turns measures and normalizes the speed at which materials move across our supply chains. In spite of popular opinion, being lean is not about reducing the number of people employed. Lean is about velocity. Certainly many lean implementations focus on the reduction of waste, including scrap, rework, wait

time of all kinds, excess inventory, excess labor including excess set-up time, and more. But the net effect of eliminating waste is a faster flow of materials.

Take a hypothetical $200-million aircraft with a cost of goods of around $100 million. If it takes 52 weeks to assemble this aircraft, inventory turns will be two. If we reduce the time to produce this aircraft to six months, then our inventory turns becomes four. When we reduce the time to assemble to a week or less, our inventory turns are something over 50! Meanwhile one of the biggest wastes, the cost of carrying inventory, in this case almost $20 million, is reduced as well. We find that our customers have to pay 10% of the selling price for our inability to assemble this aircraft faster.

Our industry has invested heavily in lean over the past 15 years. Teams of experts from each of the primes have invested many hours of on-site work at supplier companies, while suppliers themselves have hired expert consultants and used other industry resources to get lean. The net affect of all this work? Two to three inventory turns.



[2]

The industry has doubled its productivity over the same time period. But it hasn't accomplished this by getting leaner. To understand this, imagine a machining process that produces twice as many parts using the same amount of labor due to better machines and tools, but the supplier cannot deliver the parts to its customer any faster because it has to make parts in larger batch sizes to justify the machine. Net effect – twice the productivity and no improvement in on-time performance.

Now imagine this supplier again taking on more work as we outsource a new program with a moving production line. The supplier is capable of doing the work with half the number of workers. But they cannot deliver the part on-time any better than they could 10 years ago. And now as we use up their capacity, they do not have the process capability to keep deliveries on-time or to keep quality from dropping as they spread limited inspection resources across more parts.

Our industry is no leaner than it was 12 years ago.

[2] Lean Enterprise Institute, 2004 State of Lean Report

Process Maturity and Process Capability – Why the Big Deal?

The central problem holding us back is our lack of Process Capability. The Process Maturity Model as used by SEA is simply a way to break down the elements and measure progress. So let's look into what process capability really is and why it's so important to our industry.

"Process capability refers to the ability of a process to produce a defect-free product or service in a controlled manner of production or service environment."[3]

"Defect-free" can refer to any defect including the ability to deliver on-time. When a process is "capable" it operates well within the requirements as set out by the customer. So when variations occur, the process, on its own, still produces the required result at the required cost.

Processes that are lean and capable have been designed to operate well within the customer requirements whether operating at capacity challenges them or not. They are foolproof. And they are profitable. This is why our hypothetical supplier cannot produce on-time delivery and perfect quality without using costly expediting and inspection. These are not mature processes but rather those with patches or quick fixes that introduce variation of their own. Their intended outcome doesn't occur consistently because the process was not designed to operate well within the requirements from the outset.

Without increasing process capability for the industry, we stand very little chance of surviving as the water line is lowered by industry trends toward moving production lines that incorporate lean requirements such as pull signals, consumption-based ordering, min-max supplier managed inventory, kitting, and more.

As primes ask suppliers to "move up the value stream" by taking on additional processes, we begin to encounter suppliers who could not produce a high level of process capability in processes they have managed for years, and the natural outcome, the inability to build new processes that are capable. This means more surprises are in the making, all due to a lack of process capability and the knowledge of how to produce it.

We find ourselves in an industry that has valued, rewarded, and recognized suppliers for their extraordinary management efforts at producing what the customer wants. It has engendered a culture of expediting, inspecting, and quick fixes to the exclusion of designing processes that work without intervention, without heroic efforts, and without constant vigilance. We have built an industry that is outcome but not process-focused.

Vertical Supply Chains Make it Worse

And the way we're using our supply chains is making it worse. In years past a program might have dealt with 5,000+ suppliers. Now we're reconfiguring supply chains to "packages rather than parts" – managing fewer suppliers and moving work down the supply chain. As tier ones do the same thing, our supply chains become more vertical and less horizontal.

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[3] http://www.isixsigma.com/dictionary/Process_Capability-299.htm

And the thing we already know about vertical supply chains is that the suppliers in a vertical relationship become a lot more interdependent than those where the customer is the hub for everything. This interdependence plays out as a supply chain where the performance of the supply chain is now the performance of the weakest link. Said another way…the on-time delivery of the supply chain can't exceed the on-time delivery of any one supplier in the chain; and the quality of the supply chain cannot exceed the quality of any one supplier in the chain.

But now, suppliers that are lower down in the supply chain are managing many of these relationships. Many of these have not developed the supplier management competencies to ensure that their performance does not suffer as a result of their supplier's performance.

The Collapse of the Aerospace Supply Chain

Jack Welch said, "If the rate of change on the outside exceeds the rate of change on the inside, the end is near."

We submit that the rate of change inside the aerospace supply chain is measured by inventory turns, process maturity levels – things that we know and know intimately. These tell us that the rate of change on the inside is very slow.

Meanwhile the rate of change on the "outside" is blinding. New programs are designing themselves to work as moving production lines and existing programs are reconfiguring to use lean methods that require significant change from suppliers. Competition is global and global competitors are formidable.

Suppliers who fail and go out of business are financially weak. Suppliers who continue to serve the industry are stronger financially but not necessarily better in terms of process capability. Call these survivors – they have the resources to operate with lower margins for a limited period and they can inspect and expedite long enough to win business that is becoming available as the industry consolidates and weaker suppliers disappear.

The collapse, however, comes from the inability to tell the high process capability suppliers from the low-process capability suppliers. After all, when both suppliers are rated gold-level because of their past delivery and quality, how can you really tell which one did it the right way or the wrong way?

Managing the Risk

So the risk comes from not knowing which suppliers are more likely to surprise us and which are less likely. The determination of a supplier's capability to create and sustain processes with a high process capability level is not as easy as sending out a quality inspector. A supplier's ability to build and sustain highly capable processes is a combination of a variety of contributing factors such as leadership, culture, workforce skills, and operational achievements.

If we wished to assess the ability of a supplier to manage and develop the variety of factors most influential to process capability, we would have to give attention to all factors. One well-known organizational process assessment does this. It is the Baldrige National Award for Performance Excellence.

But the market is full of assessments and mandated requirements already – AS9100, NADCAP, etc. Every time we mandate another standard we drive the supplier further from any in-depth process capability work

because they lack the resources for in-depth implementation and compliance with multiple process requirements. That's why we have the greatest surprises coming from suppliers who are gold-certified, AS9100 registered suppliers. Suppliers are forced to create "storefronts" of compliance.

More process requirements to comply with just add to the problem. More compliance increases cost and develops a more robust "storefront" that obscures the supplier's real capability.

Understanding Supplier Capability

The real point of lean and Six Sigma or any other improvement activity is to design a process so well that it needs no inspection, no checking, no expediting, and no management. High levels of process capability free up machine and systems capacity. With less inspection, less expediting, less problem-solving, and less management action, a supplier company begins to free up management capacity as well.

Supplier process capability is not just an improvement on the shop floor. In order to make and sustain an improvement, the support mechanisms for a new higher level of operation must be in place. Thousands of improvements are made each year to supplier operations. Most of these don't stick. Sustaining improvements is the greatest challenge. Making improvements is the glitter. Sustaining improvements and moving them to the bottom line is the "cha-ching" that we rarely hear. Again, inventory turns for the industry proves this without question.

What's more, a supplier with excellent operations who relies on one or two suppliers who don't have those capabilities might as well not improve at all. Supply chains perform. Suppliers are the potential to perform. In order for solutions to impact customer operations, they must be supply chain solutions. A world class machining house that can't get a decent cast product on-time won't be any better than the rest. And a prime with a moving production line that is capable of 50 inventory turns has no hope of sustaining production and remaining within cost if the suppliers serving this line don't have the process capability to sustain the same level. And this applies all the way back to raw materials.

Supplier capabilities don't exist in a vacuum. They're not as easy to affect as just going in to do a Kaizen event. Building capabilities is just that – the careful crafting of capabilities that include leadership, the workforce, and operational improvements that include supply chain solutions.

Let's Help the Supplier

Up until recently, there was no roadmap that told suppliers simply what they had to do in order to take the most direct course to higher levels of process capability. On the contrary, suppliers were pulled to and fro by customers and experts who each had a different idea of how to implement lean, Six Sigma, and continuous improvement. Many of these sources of help were geared to larger companies, not to smaller production or job shops. Some understood smaller companies but did not know the specifics of aerospace.

There have been very few management tools that actually help top management in an aerospace supplier company to assess where they are in process maturity and lay out a course, complete with delegated responsibilities for their team.

Many sources of help wish to conduct a Kaizen event. In this Kaizen event, a team is taught to reduce set-up time, reduce overall cycle time, eliminate wastes, and improve quality. Many of the Kaizen events facilitated by customers have a specific agenda – reduce the cost of a part, improve the on-time delivery of

the part, or improve the quality of that part. It is generally a shared belief among customers and those who facilitate these Kaizens that conducting a Kaizen is like lighting a brush fire. The lean disciplines taught and experienced will light a "lean fire" that will continue to burn long after the corporate jet departs from the supplier's parking lot. Experience has proven that this is not the case. In fact, when three customers do the same thing in three successive weeks, the opposite is true. The supplier must focus their attention on getting their business back on track, after suffering through back-to-back Kaizen events that took as much as 20% of their most expert resources.

Others believe that conducting Value Stream Mapping events with suppliers, where "learning to see" is captured in the realization that processes, once mapped, are seen to be very inefficient. Although it is true that these visits, like the missionaries venturing into the jungles in Africa to win "converts", do leave the supplier with a religious fervor, experience has proven that this wears off very quickly. The back rooms of supplier companies are covered with value stream maps long since out of date--surrounded by piles of inventory.

The truth is, there are few actual roadmaps provided that realistically address small supplier resources and capabilities. Most approaches only address operational improvements because technical experts drafted them, but they didn't involve experts in organizational psychology or dynamics.

Some approaches claim to have a roadmap, but these lead to cost savings, or waste reduction, or places that might not address the fundamental issue of process capability. Therefore it is easy to see why many suppliers remain confused about what to do. *"What can we do that will please all of our customers, because we certainly cannot do what all of them want?"*

Finding the Low-Risk Supplier

So we come to understand that our methods for selecting and promoting suppliers have focused on the best firefighters, but not those suppliers who become the most process capable suppliers. Our management of these suppliers has encouraged and recognized firefighting, but not long-term sustainability of improvements and design of processes capable of meeting demand no matter what.

The elements of low-risk suppliers are not as familiar. The profile of a low-risk supplier is less tangible. It includes things like:

1. The supplier has a history of investment in workforce and management development.
2. The supplier has a history of investment in lean and Six Sigma-type improvement efforts.
3. The supplier management team has a history of building cooperation and alignment across its workforce and supply chain.

SEA has the first assessment and industry roadmap that encompasses best practices derived from supplier and prime supply chain experience. The SEA Roadmap provides not only operational improvements but also the elements necessary to sustain improvements. This Roadmap was designed by sub-tier suppliers for sub-tier suppliers. It is "owned" by a group of "Lead Suppliers" who wish to lead the industry's effort to transform our supply chains.

Initiatives for Transforming Our Industry

Finding and promoting suppliers who exhibit the characteristics of a low-risk supplier cannot be accomplished by one company acting alone – no matter how large the footprint. The reason is "cross-fire." When two or more customers engage a supplier in an extensive effort to adopt a total system of improvement, the problems only become worse – for the supplier.

Transforming the industry requires the cooperation of all customers and resources. We must recognize suppliers who are low-risk "Lead Suppliers" and aid these suppliers in adopting a common methodology that is responsive to the overall requirements of all customers.

The following initiatives can form the basis for unprecedented cooperation and transformation of the industry.

1. Establish the SEA Roadmap as the industry standard for supply chain development. Allow the Roadmap to serve as a common language and common criteria for assessment.
2. Establish a National Directory only for suppliers who have established a clear track record of investing in improvement, workforce development, operational improvements, and leadership development.
3. Develop a system of assessment and qualification/certification that can function industry-wide to surface those suppliers who invest and distinguish themselves based on process capability.
4. Focus on "lead suppliers" who distinguish themselves by building integrated supply chain solutions that exemplify supply chain partnerships solving long-standing problems in lead-time, quality, and cost.
5. Ensure that suppliers who distinguish themselves gain opportunities to build top-line business that utilizes new capacity and reduces overall cost.

Risk and Industry Consolidation

In the final analysis, there is no better way to build an industry transformation than by design. The haphazard, free market, "Let the industry find its own common denominator" approach is what the automotive industry did between 1986 and 2003. During this period, the chaos of consolidation from 30,000 suppliers to 5,000 left 36% of the survivors in financial ruin. We must be smarter than that.

The definition of insanity is doing the same thing over and over again, and hoping for a different result. These strategies are decidedly different than how the industry has addressed its problems in the past.

1. Collaboration vs. Duplication – competitors and partners alike, we need to realize that suppliers are a shared resource that requires a cooperative effort. We can never duplicate our way to success in this industry. When all you can produce is compliance, all you can gain is surprises.
2. Prime Empowered; Supplier Led – we don't have a great history for top-down implementation. We have a much better history for collaborative efforts. We know this inherently in our plants and factories. Teams of employees working to improve their work processes and operations can do amazing things when completely empowered to change their own work process. The same holds true for suppliers. Given the opportunity, they can create a much higher standard, a common

structure, and relevant initiatives that overcome the compliance-based industry we've helped to create.

3. Investment Creates Reward – This rule doesn't work in our industry. But it should. When suppliers invest in accelerating their improvement, and actually show results in process maturity, reduced cost, improved capacity, and more, they should be rewarded with additional opportunities to win top-line business. Suppliers who improve process capability must build top-line business in order to return their investment and close the gap created by freeing resources that still continue to penalize the organization with higher burden rates. The industry must create and emphasize a system of recognition and reward for those suppliers who are on the path and demonstrating to others that it is not only safe but rewarding to invest to permanently improve process capability.

Epilogue

In 2002, the Final Report was issued by the Commission on the Future of the United States Aerospace Industry. The Commission is a list of "who's who" of the greatest minds in the industry. The first recommendation of the Commission reads as follows:

"*Recommendation #1*
The integral role aerospace plays in our economy, our security, our mobility, and our values makes global leadership in aviation and space a national imperative. Given the real and evolving challenges that confront our nation, government must commit to increased and sustained investment and must facilitate private investment in our national aerospace sector."

The specific recommendations of the Commission are still awaiting implementation. There are some who question whether they will in fact ever be implemented. If the best minds in the country provide their best effort to recommend actions that must be implemented in order for the industry to continue its worldwide leadership and these recommendations are not implemented, then we certainly can't hold much faith that in the future better recommendations might make a difference.

Sub-tier suppliers clearly see that if they are to be successful in the future, it is going to be up to them to invest in that future. "Facilitating private investment" is the role of SEA. Ensuring that investments in enhanced and world-class competitive capabilities pay off.

In California in the '40s and '50s, agriculture was a very competitive industry. Growers with crops of avocados, oranges, lemons, olives, and more were competing for resources – pickers, packers, equipment, and distribution. The net effect on supply chain resources was a reduction in effective resource utilization and an increase in resource costs. Fortunately, the most visionary competitors decided to form "cooperatives" where competitors shared resources equally and managed the effective utilization and cost of those resources together for the common good. Those growers who continued to play the game to win at the expense of others were rapidly reduced to taking what was left after the cooperatives satisfied their needs. The clear message, "Cooperate or be assimilated."

When an industry decides that cooperation is better than competition, the result is inevitable and no competitor, no matter how large, can thwart the combined power of the cooperative.

The California Cooperatives became a legal structure for corporations over the next 20 years and today the cooperative is the fastest growing organizational structure in the world.

CASE STUDY

When Frank took his job in supplier development, his role was mainly strategic – working with suppliers to develop the capabilities needed to take on new parts and assemblies for Frank's employer. One of the largest manufacturers in the aerospace market, Frank's employer's operations group were rapidly reconfiguring production lines using lean production techniques. This seemed to be placing demands on suppliers that were raising eyebrows.

One of Frank's long-term favorite suppliers, ABC Machining had proven to be his savior on many jobs too difficult for others to take on. Frank had come to know ABC as a problem solver, a fighter, and someone who wouldn't let him down in a pinch. ABC's CEO's home number resided in Frank's cell phone directory and if nothing else worked, he was free to call anytime day or night. That solution had only been necessary a few times in the past. Once the CEO answered Frank's call while on a skiing vacation. The commitment level from ABC was always without question.

ABC had become a gold-level certified supplier early on and had maintained the necessary on-time delivery and quality for many years. It was well-known that ABC continually improved their operations and in fact, had proven they were willing to terminate a manager who didn't react to situations the way their customer wanted. ABC was the model supplier. One that wouldn't cause you to lose a minute of sleep. They were on it. They just won the coveted "Supplier of the Year" award.

But one day Frank came into the office to find that things had changed. ABC had shown up as an on-time delivery problem and supplier quality had made a visit only to find that the yield of a new part was so low that ABC was scrapping almost 75% of the parts and slipping deliveries on top of that. On further investigation, it appeared that the part had much tighter tolerances than every before and ABC had been asked to take on a new process – to assemble several parts before delivering the assembly to the customer.

Frank was a part of the team that jumped on a plane headed for ABC's headquarters. Naturally the CEO had cut his vacation short when hearing that Frank and his team would be arriving shortly. As Frank arrived and deplaned, he received a call from his boss, the VP of Procurement. The problem had turned out to be a strategic part on a moving production line. The line was point-of-use only and the two units in supplier Kanban had been used in one shift and the line was stopped. Nobody really knew how to estimate the cost of a line stoppage. Too many factors. But most of the production planners believed it was over $1 million per shift. Frank knew that this didn't even begin to include the cost of the customer relations problem when something stops aircraft from being delivered.

ABC's CEO, officers, and quality manager were in the lobby to greet the team. They were prepared and made a presentation showing their research on the problem, the root cause analysis work, and the corrective actions already put in place. Frank and his team toured the line before departing for home. The CEO gave them two more parts to take back with them. Frank followed up with a call to the CEO the next day and the CEO took his call personally and let him know that everything was still on track.

Frank thought.. "Boy, that ABC sure is a life saver. They really know how to react to a problem."

No sooner had the thought reached the top of his mind and the phone rang. The ABC parts brought back from the trip had been rejected. "This can't be happening."

A sampling of parts coming in from ABC confirmed it the next morning. 50% were rejected. 25% had escapes for mislabeling. "This isn't good," thought Frank as he picked up the phone.

On a plane again. This time with the big suitcase. “We’re going to have to stay there until we get this thing solved. This is embarrassing and I’m sitting on a high-profile situation with a supplier where I’ve been singing their praises for years. This doesn’t look good for me.”

This time Frank had warned the CEO not to do another presentation. He was starting to prepare the CEO for what needed to happen. There would be 7 a.m. meetings every day with both teams. An immediate Kaizen event would be organized to address the problem of yield and the resultant quality and delays. In order to stop the bleeding, they need to start producing twice as many parts immediately just to ensure that his company had the parts needed. It didn’t take long to see that given the problems, there was no way that he was going to produce enough parts to fix the delivery problems for his company.

And now the phone was ringing with his boss asking for updates two and three times per day. They weren’t going to bother calling the CEO – now Frank was the CEO and he was getting a taste of his own medicine. Not much fun.

And now the scary stuff started to become visible. Not only was the traditional machining process not under control – in spite of statistical charts pasted all over the walls, but the new assembly process was not even standardized. No process documentation. No training. How could this be, in a gold level supplier with AS9100 certification? “New processes” they explained. “Still working on the documentation and controls.”

But when the guy who had set up the assembly process left, nobody else really knew much about it. That’s when the problems began. The first day of the Kaizen event was spent teaching the basics of lean and continuous improvement. The workforce was remarkably uneducated. Nobody knew what statistical process control was. Only one person knew how to plot an SPC run chart. One older machinist was riding herd on a shop of relatively new and uneducated workers. The list of problems they made on the second day of the Kaizen event was three pages long.

But the worst problems were yet to be revealed. On day seven, the team discovered that most of the variation in how two of the parts went together began when a supplier, a plating shop, “improved” the plating process they were using and didn’t tell ABC about the improvement.

Twenty-one days later and over 60 man-days of Frank’s team time, the process seemed stable enough to consider going home. As Frank made the long drive back to the airport, he couldn’t stop thinking about how this supplier had gone so long without other problems occurring. How did they do it? It must have been shear brute force and will power. How else could you explain how a supplier could consistently perform year after year with processes that were so broken that you couldn’t possibly improve them without turning up a list of problem three pages long.

Little did Frank know that after transferring to another program that didn’t use ABC, ABC’s problems began to show up in other new programs. But Frank didn’t have time to think about ABC because his job was now consumed by traveling out to work with suppliers on problems that had escalated beyond anything he could have imagined. Frank didn’t sign up for 100% travel, and 12-hour days were starting to wear him down. Frank began to think about early retirement, or a career change. His strategic job had now turned into an industry “paramedic for suppliers” and he knew these “quick fixes” weren’t the solution either. “Time to get out while the getting is good.”

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Everyone working within our industry to improve supply chain performance finds himself or herself powerless to actually address the fundamental underlying issues causing the problems. And there is an air of hopelessness permeating the individual players who might otherwise dedicate their working lives to solving this problem. No individual, no system, no approach no matter how good will work without collaboration and ownership; without addressing the systemic issues facing those who would “accelerate supply chain performance.”