

Supply Chain Needs to Embrace Excellence



Michael G. Beason

Chairman of the Board
Supplier Excellence Alliance (SEA)
Irvine, CA

Things are changing dramatically in the aerospace and defense marketplace. Global competition is part of the reason. More and more, very capable and well-funded suppliers are springing up throughout the world to challenge small US suppliers. On the surface, there appears to be a great competitive advantage for countries that have lower labor rates. But this may not be an advantage at all.

Aerospace OEMs or Prime Contractors are scrambling to gain lower costs for airlines that are teetering on bankruptcy, and for a defense department that has more missions and less money each year. The strategy for OEMs to be competitive is to focus on their core competencies and source everything else to suppliers with more expertise and less overhead. Some call this the large-scale integrator strategy. It means that the OEMs will be assembling their product using prefabricated or assembled and tested subsystems and assembly lines that are moving faster and faster to eliminate the overhead costs associated with having these high value items in their inventory.

Supply chain implications: To execute this strategy, OEMs need to build supply chains that are more capable and competent. These supply chains will have to perform at levels for lead-time, on-time delivery, quality, and cost that no one thought possible in the past. The OEMs will have to look to the few highly capable suppliers that are able to grow their capabilities and capacity. For many suppliers who have not been investing in accelerating their improvement, this situation will have implications that include escalating problems in customer relationships and lost business. Suppliers will have to develop their capability to function

within a highly accelerated supply chain. These suppliers will have to learn to build products in very low quantities with much higher mix, sometimes even a quantity of one, and deliver quickly.

Highly capable production suppliers will need to develop engineering capabilities. They will be asked to partner in sharing the risk of a new design. Engineering suppliers will be asked to develop systems capability. Every supplier will be challenged to increase capacity and capabilities to provide a larger share of the value and "move up the value chain."

The problem is acute. The false sense of security that more business brings is masking the problem. Margins are eroding because the

"In the future, being the best supplier won't be good enough."

industry attempts to meet steadily increasing performance requirements by adding inventory, inspection, and expediting. Each of these "wastes" also serves to mask the real problems.

The aerospace industry has average inventory turns of two to three per year. Inventory turns are an important metric because this ratio of cost of goods to revenue tells us just how quickly we are moving materials through our processes. How fast we move materials tells us how lean our supply chains are. A truly lean supply chain in our industry would be at 12-15 inventory turns or more. We would have very responsive systems with very low lead times. We would solve the materials problems through collaborative efforts and our costs would be much lower.

So it's clear we're not ready. We're not investing in becoming leaner at a high enough—or fast enough—rate. True, we're all improving, but it's the rate of improvement that is at issue.

What it takes to become competitive: All suppliers will need to learn to partner with other suppliers, sometimes even competitors, in order to achieve the capacity to compete. In the future, being the best supplier won't be good enough. Building and managing an effective supply chain will be essential to success.

We're becoming a highly interdependent industry. In the past, it was sufficient to be a highly independent supplier. We simply worried about doing our job and let everyone else worry about doing theirs. But today, our supply chains are becoming more vertical and less horizontal. We are more concerned about our customer's performance because it affects their ability to capture more business. We are realizing that we don't operate in a vacuum. We can no longer use the excuse that our suppliers didn't perform. Our competitors are solving those problems.

The need for a common production system across the entire supply chain will become more and more apparent as time goes on. Effective collaboration and improvement efforts that effectively operate across multiple supplier companies will prove to be essential. A common language will be required to accelerate improvement efforts between suppliers.

So, for suppliers the game plan is fairly simple. Build capability and capacity fast. Increase the speed of improvement through careful investment. As improvements and productivity increase, suppliers gain visibility

to build top-line revenue so they don't need to lay people off as they continue to enhance productivity.

New methods to address new challenges: The nonprofit Supplier Excellence Alliance (SEA) was founded to help suppliers become more competitive. SEA founders—the leading OEMs/Primes, and tier-one contractors—had the vision to see the forces that would influence and shape the future. As the Alliance has grown, certainly primes and Tier-Ones have benefited. This holds true for suppliers as well.

A recent survey of the SEA Board of Directors tells us they value working together to align the industry, reduce wasted effort, and reduce variation. Avoiding the cost of duplicate visits to suppliers for the purpose of helping to implement lean production is also a great benefit to the SEA approach.

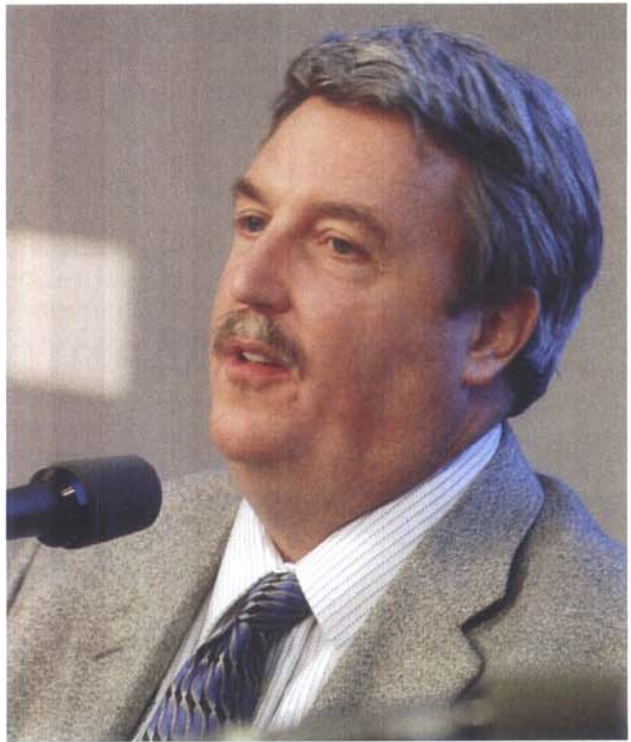
Today, suppliers partnering with SEA are working together to solve materials problems, to establish best practices for lean enabling procurement practices, to establish high-performing combinations of suppliers, and more. Leading suppliers are tak-

ing the initiative and taking control of their future.

The basic approach to implementing lean has changed too. While adopting the Toyota Production System has been a credible goal, all too often suppliers fail to realize that they are leaving out key parts that make it function. We've accepted the notion that we can implement lean by simply doing Kaizen improvement events. Although these can be effective, they're typically three steps forward and two or even three backward. We've failed to understand how to ensure *sustainability*. We



Michael Beason (far right) moderating a panel discussion on lean at a SEA Member Conference in February. The panel members are, from left to right, Cristi Cristich of Cristek Interconnects, Tony Lawson of Hitco Carbon Composites, Chet Claudon, formerly of Meggitt Defense, and Brad Hart of Roberts Tool Company.



Christi Cristich, founder and president of Cristek Interconnects (left), Brad Hart, president of Roberts Tool Co. (right) and Dennis Bent, VP, Operations & Strategic Sourcing at BAE Systems, Inc. (not shown) are the newest members of the SEA Board of Directors. SEA member companies include Boeing, Lockheed Martin, Northrop Grumman, United Technologies, Parker Aerospace, Rockwell Collins, Pratt & Whitney, Hamilton Sundstrand, Sikorsky Aircraft, Textron, Bell Helicopter, Cessna Aircraft, Honeywell, Bombardier, and Dresser-Rand.

haven't yet "cracked the code" on how Toyota actually makes its production system work.

SEA responded with a common business system called the Lean Enterprise System that's currently being deployed throughout the supply chain. Yes, the Lean Enterprise System focuses on gaining improvements through Kaizen events, but it doesn't stop there. Like the Toyota Production System, the Lean Enterprise System has a strong foundation in standard work. And it has a leadership component that transforms the culture of a supplier organization into an enterprise where lean principles are rigorously practiced in all areas of the business, whether it is on the production floor or in administrative processes. These are the distinguishing elements that not only ensure improvement, but also ensure *sustained* improvement.

The SEA approach also embodies the basic principles of collaboration, supplier ownership of their own improvement effort, a common language and framework for lean, common goals and a common vision. The SEA effort is based on primes empowering suppliers to take control of their own destiny.

Just as the AS9100 quality management system has become a framework for quality that you must adopt,

"The SEA effort is based on primes empowering suppliers to take control of their own destiny."

the SEA Roadmap—part of the infrastructure of the Lean Enterprise System—is a framework for lean production. It includes all or most of the disciplines that you currently consider important for your company. The SEA

Roadmap is used to gauge where you are in your lean journey, and to assess what needs to be done next. But here is an important difference. Instead of figuring out how best to implement, the SEA Roadmap helps by providing a sequence known to produce results in the fastest manner possible.

Where do we go from here? We've discovered that SEA is not for every supplier. Change is difficult, especially when the target is moving at warp speed. However, progressive suppliers who are passionate about improving their businesses have discovered that SEA is a platform for achieving sustained operational improvements, gaining new business, and collaborating to find innovative supply chain solutions. So, while US suppliers may not enjoy the lowest labor rates, they are discovering new ways to become more competitive in the global marketplace. ➔