

Metals Manufacturers Set a Solid Lean Pace with a Customer Focus

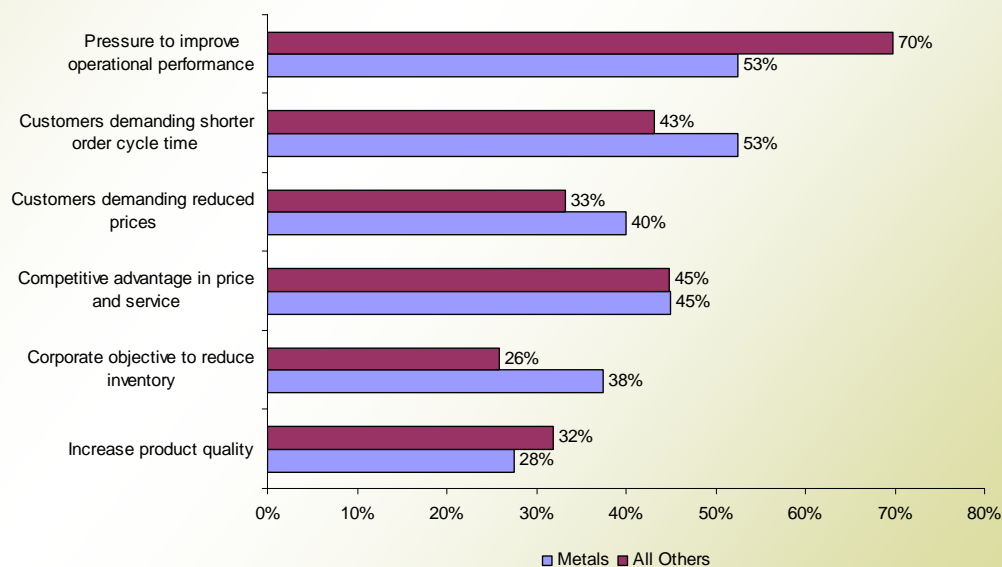
Market Segment

Customer oriented focus is a key for organizations that want to be successful in this competitive marketplace. To that end, more and more manufacturers are recognizing the capabilities that a Lean-enabled production environment can have for delivering product when the customer wants it, right when the customer requests it. As Lean adoption continues to grow outside of automotive as a viable option for all industries, metals manufacturers in particular are heavily investing in Lean practices and basic philosophies, driven to serve the customer while simultaneously trying to drive down inventory and deliver products just in time.

Key Findings

While companies across industries face the challenge to *improve operational performance*, metals manufacturers are also looking to Lean to deal with customer demands for *shorter order cycle times* (53% vs 43%) and *reduced prices* (40% vs 33%), while driving down *inventory* (38% vs. 26%). The point of competitive differentiation is a factor that is not lost on companies cross industry, with 45% recognizing the benefits that Lean plays in beating rivals with competitive *prices and service*.

Figure 1: Top Factors Driving Lean



Source: AberdeenGroup, March 2006

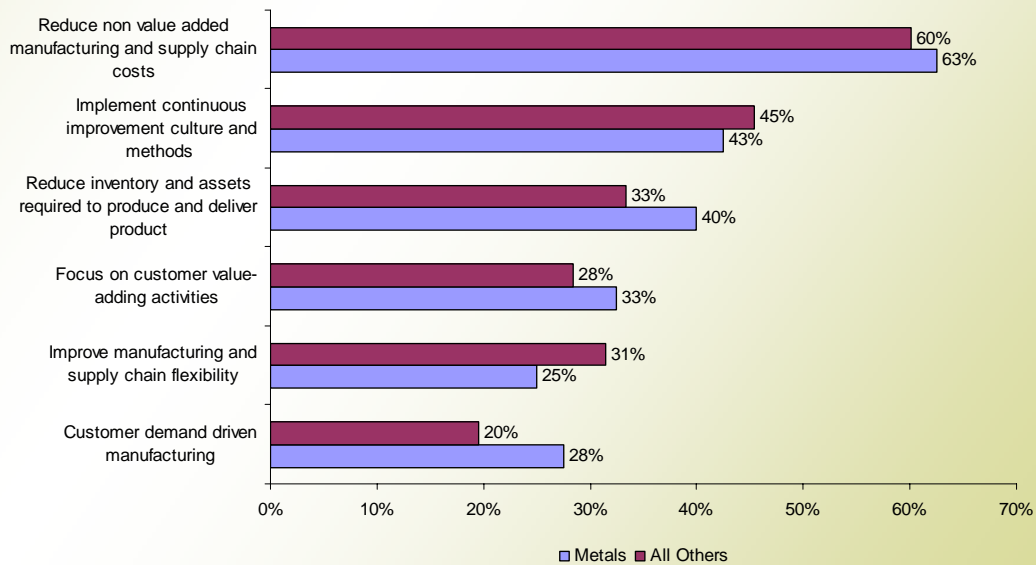
As Figure 2 demonstrates, metals manufacturers, slightly more so than their cross industry counterparts, are looking to eliminate *non-value added manufacturing and supply chain costs* (63%), while continuing the focus on *inventory reduction* (40%) and *customer value-added activities* (33%,) thereby moving to a *customer-demand driven manufacturing environment* (28%.) But how do these actions correlate with how far along these companies are in their Lean journeys? Looking at the maturity level of Lean practices, metals manufacturers are more likely to be early on in their Lean progress, with 44% between 1-3 years, compared to 33% across all companies. In addition more than a third of metals manufacturers (37%) have just begun or have no program in place.

"Through enabling a pull-based system we have seen a 20-25% improvement in inventory turns."

-Denny Wist, President, Thomas Steel Strip

Many respondents from the survey were relatively new with their Lean progress, and therefore it is not surprising to find the principal focus is on reducing non-value added costs, as this is typically one of the first steps along the Lean journey. Metals manufacturers in particular seem to be intent on responding to customer demands while also keeping inventory down. The first priority is to improve customer delivery and often this comes at a price of excess inventory. By placing a focus on addressing both of these factors, metals manufacturers are well on their way to maintaining a truly "Lean" enterprise by creating a "pull-based" manufacturing environment that ultimately serves the customer, and eventually brings inventory down by starting production only when requested and not building excess.

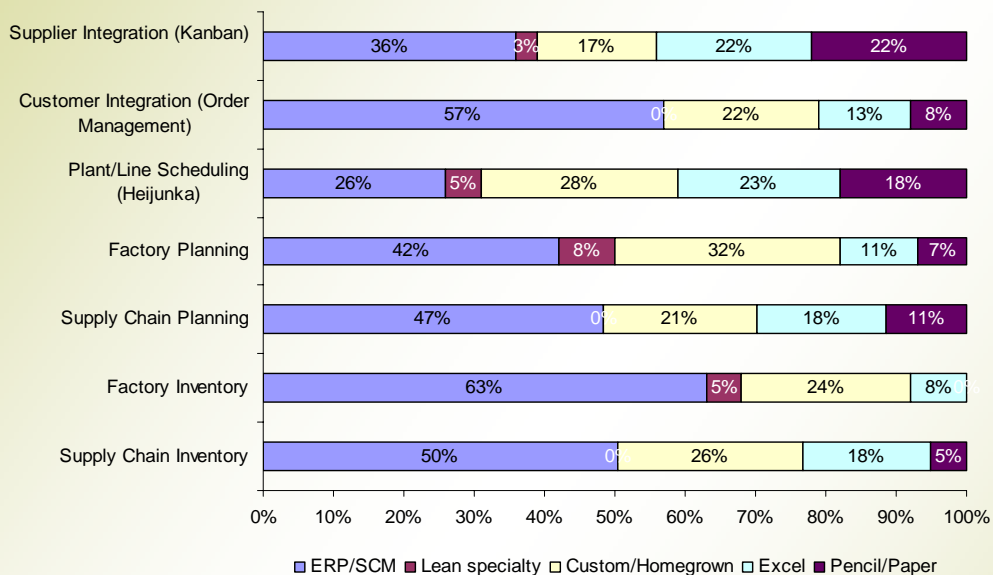
Figure 2: Top Strategic Actions for Lean Implementation



Source: AberdeenGroup, May 2006

As Lean continues to grow in adoption, so too have the various technology enhancements that can greatly help with the orchestration of plant floor activities (Figure 3). Although the Lean early adopters were not proponents of technology, circumstances have changed. The majority of metals manufacturers rely on a combination of corporate ERP, Supply Chain Management solutions and semi-automated Lean processes to support their business operating models. With ERP or Supply Chain Management solutions in particular, metals manufacturers are capitalizing on the ability to queue up customer orders with production and the greater supply chain to truly create a pull-based manufacturing environment. Following the focus on inventory, 63% of metals manufacturers are utilizing their ERP solution for keeping *factory inventory* in check (Figure 3).

Figure 3: Level of Automation



Source: AberdeenGroup, May 2006

By flowing orders through ERP to manage financials and aid in scheduling, these companies are able to coordinate production with demand as customer requests come in. The end goal to move to a pull-based manufacturing environment that has “Leaned” out excess cost to deliver value to the customer is possible through the focus on continuous improvements, with an unrelenting focus on process standardization. Adhering to process requires performing the same task time and time again, measuring standard performance on that task, and continually investigating ways to improve future performance. This premise is based on the ability to measure, set standards, and work toward improved performance.

Figure 4 looks at the specific metrics that both metals manufacturers and companies across other industries are dedicated to improving. The focal point again is on the customer, with 87% (vs 66% all other industries) looking at *on-time delivery* and *customer lead times* at 33% (vs 16%). While driving down inventory was highlighted as a corporate mandate it is not surprising to find almost half of all companies measuring *inventory turns*.

Though relatively new to Lean, Thomas Steel Strip, a mid-size manufacturer, has already achieved value from its Lean program. “Through enabling a pull-based manufacturing system via kanban, we have been able to reduce our inventory, with a 20-25% improvement in inventory

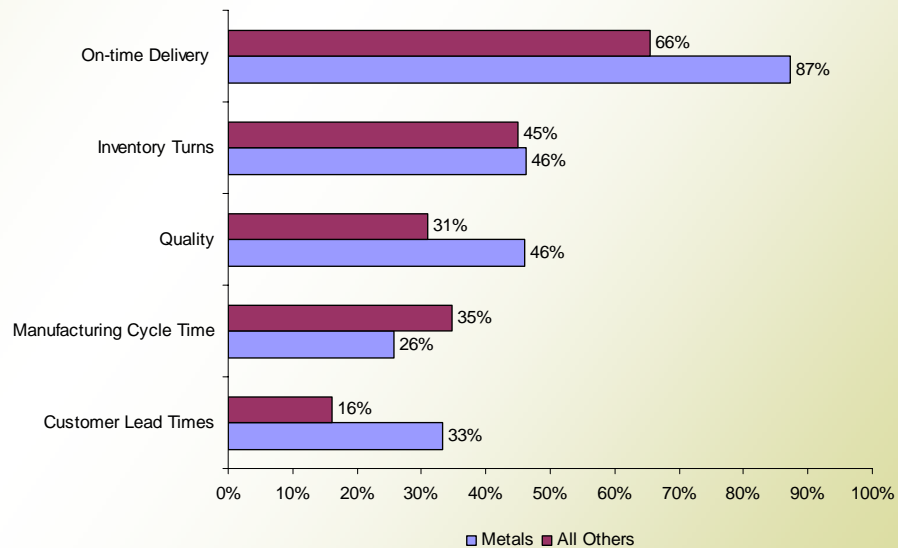
turns,” says Denny Wist, President. By focusing on Lean basics like 5S (sort, set in order, shine, standardize, sustain, safety), Thomas Steel Strip has also been able to find unexpected cost savings by uncovering excess raw material. “Because of using 5S to organize our work stations, we actually found an excess of raw materials. Normally you think of the 5S’s as a net cost to you, for workplace improvement and organization, but we have actually been saving money, easily at a 10:1 ratio.”

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Because of the increase in raw material costs over the years, metals manufacturers in particular are cognizant of the effect that *quality* can also have on the reduction in scrap and waste. Forty-six percent of metals manufacturers (versus 31% of companies overall) are looking to continuously monitor *quality*. Placing a priority on quality metrics as part of its Lean program, Thomas Steel Strip has been making improvements in the reduction of scrap from their processes. “Our product is very high value and we have found that any sort of scrap tends to occur towards the end of the process, when it is the most expensive to lose it.” By monitoring quality early on in the process, Thomas Steel Strip has been able to minimize the amount of scrap on the backend of production. Setting appropriate metrics like this will help chart the progress for other metals manufacturers to manage quality issues upfront, rather than incurring excessive and costly scrap later on.

Figure 4: Top KPIs to Measure Lean Performance



Source: AberdeenGroup, May 2006

Aberdeen Conclusion

While metals manufacturers are early on in their Lean journey, they are well-poised to reap rewards by staying focused on basic Lean principles and continuously evaluating methods of improvement while delivering value to the customer. To aid in the standardization of Lean metrics, metals manufacturers are also recognizing the role that technology plays to enforce consistency across defined areas of focus. To this end, 63% of metals manufacturers are already taking advantage of their ERP in order to manage *factory inventory*, with 50% of these companies also extending this to the greater supply chain (See Figure 3.). A successful Lean program entails the identification of improvement opportunities, and consistently monitoring these metrics to further growth. Metals manufacturers that are driving towards a pull-based manufacturing environment are doing so by keeping the customer in mind, simultaneously driving down inventory by delivering products as customer requests come in, and further exploiting the benefits from available technology like ERP to coordinate production.

Recommendations for Action

- √ “Pull” requests from the customer to deliver exactly what the customer wants, exactly when requested, instead of “pushing” unneeded products which can lead to excess inventory.
- √ Focus on instituting 5S for organization and work flow improvement benefits.
- √ Strive towards perfection at every stage of the Lean program by looking for ways to continuously improve upon identified metrics and KPIs.

Related Research

[The Lean Benchmark Report](#); May 2006
[Roadmap to Lean Success: Measurement and Control Benchmark Report](#); July 2006

[The Lean Supply Chain Benchmark Report](#); September 2005

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