

## Lean Manufacturing – Are You Ready?

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"LEAN MANUFACTURING", you hear it everywhere, everyday, you can't escape it, but what is it? We all have our ideas, however, if you haven't been formally trained or deeply involved, odds are, you're thinking only of the cost savings side. Think back when ISO became all the rage. The basic understanding was that we would hire a quality engineer, put some standards and checklists in place, and magically, all our problems would be solved. In a short amount of time and with a reasonably small budget; our defects would vanish, our lead times and inventories would shrink, the customers would beat a path to our doors, and our profits would soar. Company after company embraced the concept, and a considerable percentage of those companies soon abandoned it as too costly and time consuming when compared to the immediate financial returns.

Now, as we are deeply entrenched in the lean manufacturing era, most small to medium businesses are of the same mindset. Just as we saw company after company abandon the ISO certification process because it was too time consuming, costly and wasn't bringing those throngs of customers to our doorsteps, so too are many companies abandoning, or in many cases, taking only a random or unsystematic approach to this concept.

The major stumbling block to achieving a successful lean approach is usually shortsightedness. We mean well, we want to improve, but we really don't have a genuine understanding of what is involved. For lean to work we need to approach it as a long term solution that requires continuous attention, involvement and commitment.

### LONG TERM METHODOLOGY

Lean manufacturing is a continuous and living entity. To approach it as a quick fix that will bring increased profits and efficiencies is a guarantee of failure. Although the lean process has been documented in countless papers, lectures, seminars, and accredited training programs, many organizations lack even the basic fundamental processes and tools needed to implement lean manufacturing. Most failures can be attributed to this lack of a solid foundation on which lean will be built, and as a result, we are quickly overwhelmed by the amount of work and capital that must be spent before we can even begin to implement the lean initiatives. In a relatively short time we lose enthusiasm, get increasingly bogged down in seemingly mundane tasks, we eventually succumb to immediate time and budget constraints, and before we realized it, the program has been pushed to the back seat or shelved altogether.

### TOTAL COMMITMENT

To be successful, any program which requires us to stray from our normal day to day behavior patterns has to be embraced and driven from the top down. This approach lends credibility to our actions, provides visibility of our endeavors, and assures motivation and direction will be maintained. Anyone who has tackled lean manufacturing will tell you it is a constant uphill struggle that requires leadership with a strong will and an ambitious outlook. The major players need to be forward thinking, self motivated pioneers, who can look at the big picture and effectively break it down into smaller manageable tasks that move the project ahead one step at a time. Team leaders must possess an inherent ability to fully understand the day to day operational procedures of the company and to pull all departments together in a common purpose toward the same goal. Managements' direct participation is essential in providing the support,

motivation and cooperation of everyone involved. And make no mistake, everyone must be involved.

## GROUNDWORK

Though the fundamental procedures outlined in the lean initiatives seem simple and systematic at first glance, implementation of these principles can be overwhelming. For instance, taking a close look at those processes that are too long or wasting valuable time and improving on those numbers through proven manufacturing methods is in itself somewhat obvious, but exposing those processes often is not. How do you know what processes are questionable? Do you have valid, proven process sequences? Do you even have documented process models? Are these sequences measured against valid cost studies or accurate estimates? Before you can begin to solve problems you will need to put into place all those procedures, time studies, controls, records, documents, etc. Who will perform this work? Are they capable of managing these tasks in addition to the daily workload? This are just a few of a multitude of tasks that will be required before the actual cost saving can begin, and it is precisely at this point that the project begins to lose effectiveness.

You are suddenly faced with mountains of work that drain resources and don't show results on the bottom line. Experienced personnel are reduced to clerks, measuring and documenting data. The forms and documents produced are not universal across all departments. There is no system in place to file, maintain or control the mountains of paper and the endless sea of data collected. More often than not, as the day to day problems continue to pile up, you are forced to commit your resources to keeping the company afloat and lean manufacturing fades into the background.

## GOAL DRIVEN

Only by having well defined goals can you hope to succeed. Outlining precisely each and every task that will be required, not just on the improvement side, but in developing the basic infrastructure that will be required to implement those improvements, will put the project in perspective.

Once you have a complete and concise understanding of what is truly involved you can determine reasonable time frames, budget resources accordingly, assign the appropriate personnel, and develop acceptable expectations. Break the processes down into smaller, more manageable tasks that can be scheduled into reasonable time frames. Commit to addressing these tasks on a regular basis. And most importantly, understand that it is going to take time.

Take advantage of the projects you've identified to groom your employees, set long and short term goals, involve your entire organization and truly promote that team approach we all claim to practice. As goals are met, publish your success and reward the participants.

Taking small steps in the early stages has several key advantages. This allows for small successes to be realized which foster a sense of worth in those involved as it provides a means of gaining experience and confidence to take you to the next level. Smaller projects take less time, tie up significantly less capital, and still provide the ability to handle your day to day business. These smaller projects facilitate two major advantages which are often overlooked. First they generate savings that can be used to offset current losses in poor productivity and inaccurate estimates which can defer the costs of overtime, additional equipment and customer dissatisfaction. And secondly, they provide a means to identify and finance your future projects.

## ADAPTATION

No matter how accomplished you become in the short term, continued long term success can only be achieved by the realization that the system, complete with all its procedures, documentation and controls is a living entity and it must be allowed to grow and adapt. If you think you will get it right the first time, every time, you are destined to fail. As you improve your processes you will inevitably become aware of opportunities that were previously unforeseen. Changes in company direction or market demands will move you into new territories and you will need to adapt quickly. If something doesn't work as well as it should, change it. Don't be afraid to admit your shortcomings. Audit your systems, evaluate your controls, assess your needs, and when warranted, adapt your system so it serves your purpose.

#### DETAILED DOCUMENTATION AND CONTROL

Documentation, documentation, documentation, it can't be said enough. If there is one place that begs to be overlooked it is proper documentation. Record keeping is a mundane and time consuming effort that is most often incomplete or ignored altogether. Documentation should be approached as a tool that provides many advantages: examples of our successes and failures; milestones of our progress; foundations for value stream mapping, process maps and work instructions; quality, safety and process controls; and an excellent means of disseminating information within the organization or publicly.

Documenting successes provides substantiated evidence of cost saving which can be utilized to bankroll future projects or new equipment and personnel in addition to being a great source of direction in moving the program ahead. If a particular solution to a problem in one area yields impressive results, it only makes sense to adapt this solution to other processes or problems within the company. We are very good and documenting what "went wrong" and trying to prevent it from happening somewhere else, but all too often we overlook the opportunity to take what "went right" and apply it across the board.

No matter how successful the program becomes at improving the processes, without proper documented controls in place, things will inevitably return to their old problematic ways. Controls are our best means of insuring what was put in place remains in place. It also provides an avenue to review our accomplishments from time to time to ensure things haven't gone awry. When new problems arise, the first place we look is to the controls. How did this happen? What can we do to prevent it from happening again? Properly developed controls will tie us back to supporting documents which can be a great source of trouble shooting. They give us concrete data to determine if the process itself needs changing or if the process is not being followed. It will illustrate lapses in training, inspection, materials, maintenance, etc., and quickly point us to the root cause. In addition, properly documented procedures will alert us to other areas that might be prone to the same setbacks.

#### DISSEMINATE AND CELEBRATE

Success is important to the progress of any endeavor and, therefore, should not be ignored. Success should be celebrated, often. The tendency is to wait until a project is complete and all the savings have been tallied before we think of celebrating the accomplishments. This method, however, will usually be seen as too little, too late by many of the individuals involved, and in some cases, invariably tends to overlook some of the participants. Each and every person involved did his or her part, each individual will view their contribution as important, and each participant will consider their input as having come about through hard work and added effort, above and beyond their day to day responsibilities.

By celebrating success as it happens, no matter how big or how small, everyone involved will not only feel appreciated and important, but motivated and driven to succeed further.

Acknowledgment of a job well done promotes the spirit we all want to see in our employees and co-workers, it instills pride in their work, and it fosters a sense of worth that culminates in a workforce that looks for problems and willingly brings forth solutions. Participation on a team will no longer be viewed as an added burden to an already heavy workload, but an honor and a responsibility. This ethical mindset will bring more to the bottom line and the future success of your business than you can imagine.

## SHARE THE WEALTH

Don't stop at simply celebrating your success, share the wealth. The old school approach has always been that since the company footed the bill to complete the projects, purchase the equipment, rearrange the facility, etc. they should reap the rewards. You'll discover that sharing the savings will go much farther and pay higher dividends than pocketing the profits. Sharing the wealth shouldn't be seen as distributing the cash, but reinvesting in the company. Reinvesting in equipment, facilities, personnel, and let's not forget, reinvesting in our customers.

As your success mounts, your business will grow, your profits will increase, and so too will the workload placed on your employees. You've already invested heavily in the training and development of your personnel; you don't want to lose them now. In all actuality, you should be looking to your employees to take on more of management roll than a laborer attitude, to mentor and train your new hires, and to apply their experience in finding and minimizing defects in the system.

Nothing will stop a person dead in their tracks and send them packing than the thought that their hard work was taken for granted. So make sure the raises you give out are commensurate with the employees' worth. Increase your perks and benefits; sick days, flex time, education, team building activities. Promote from within. Make it a given that when a person embraces the responsibilities imposed upon them, that the experience gained has value and that as the company grows so will its' employees. Why would you take a chance hiring an unknown when a perfectly capable leader is already on the premises? It is important to keep this in mind when setting employee goals and determining what training you will provide. Make a commitment to grow your employees just as you have committed to growing your business.

Spend some of that money on improving your equipment. Get that newer, faster, more accurate equipment on the floor; it will increase throughput and productivity, keep you on the leading edge of technology, and open new doors to capabilities and customers you didn't have before. Purchase software to reduce the documentation burden, improve the look and conditions of your facility, and hire a higher caliber of employee.

And don't forget about your customers. Passing a significant amount of your savings on to the customer will pay back exponentially. By reducing your costs you demonstrate a commitment to improvement and cost control, you also lend credibility to your organization much more than you might think. When everyone else is raising prices and tacking on surcharges, if you can hold, or better yet, reduce prices, who are your customers going to deal with? You'll not only retain the customers you already have, but you'll attract new ones looking to increase their own bottom line. Additionally, when you inevitably underestimate that one quote, you'll stand a better chance of having your customer accept an adjustment. If you can demonstrate time after time that you are reducing your pricing, when the time comes that you need to raise one, your customers will be much more willing to accept it and still feel confident that overall, they are still getting the best value out there.

So don't shy away from lean manufacturing, embrace it, it is vital to your future. If you approach the concept with an open mind, look to the long term, and strive for a continuous routine of

improvement you will be successful. Keep in mind there is no finish line to reach; true success is found in the continued pursuit of improvement.