White Paper

Lean Success Factors: 10 Lessons from Lean

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Jim Womack and Dan Jones, in the forward to Learning to See and in their book Lean Thinking, have succinctly defined a formula to start the lean transformation. This methodology is effective and proven.

- Find a change agent (how about you?)
- Find a sensei – a teacher whose learning you can borrow
- Seize (or create) a crisis to motivate action across your firm
- Map the entire value stream for all your product families
- Pick something important and get started removing waste quickly [1]

Why is it then that fewer than 20% of companies who embark on the lean journey succeed at their efforts and can truly be said to be "Lean Thinkers" five years later?

The reason is simple. A great start does not make a great finish. To finish well, a company needs to transform their culture. Paying attention to these 10 lessons will maximize your opportunity to finish well***.***

1. Motivated Management: Without demand from top management, lean efforts will fail

It isn't enough for the management team to support the lean initiative; they must demand success and demonstrate repeatedly that there will be no tolerance for lackluster performance. This motivation must come from the top, because in most cases middle managers do not have the influence to change the culture.

A Case from my files: A few months after commencement of a lean deployment at a plant which provides products for the home parcel delivery industry, it was becoming obvious that the lean effort was already stagnating. We had done everything per the formula laid out by Womack and Jones, but still progress was faltering. The normal excuses were rampant; our business is too complex, engineering isn't supporting the effort, poor suppliers, terrible maintenance, and so on.

In a weekly review with the CEO, I told him of my concerns and of our lackluster performance. Fortunately, he is a man of action. During the following day's work session with the facility's management team, everything changed. The meeting began in typical fashion, but then the CEO turned to the plant manager, pointed at him with both hands and said "The success or failure of this project is your responsibility, and if it fails, you will be gone from this company." Pointing to the support staff in the meeting with us, he continued "If any of these people fails to support you, let me know, and they'll be gone". He didn't have to say it twice, everyone understood.

Without motivated management, lean efforts will fail. Too often the commitment is half-hearted and everyone knows that there will be no real consequences. The demand maker need not be the CEO or President. If you are the plant manager, you can be the demand maker for your facility.

2. Expert Guidance: Find someone who has been through lean deployments before

Most of the lean concepts aren't difficult to grasp. We can easily understand that waste is the enemy we need to seek and destroy. Even the more advanced tools like value stream mapping, replenishment systems and load leveling systems, and process family analysis can be taught quickly and comprehended by most associates and managers. The roadblocks to lean are cultural, not intellectual or technical.

For example, during a plant floor intervention at a major manufacturer, a production supervisor was challenged on why he had not yet accomplished the changes to one of his work cells as promised. After the normal excuses were exhausted, we finally arrived at the truth. "Brian", he said, "I want to make sure I get it exactly right. I don't want to have to change anything again, so I'm taking it slow." Suddenly, it was obvious that he wanted to do his best, but his thinking after working for this firm for 23 years had been affected by the culture that mistakes weren't tolerated.

Without experience in lean efforts, his logic could be hard to discount. However, with many such workshops behind me, I quickly responded "Greg, even if you make it great, we're going to change it. Stop worrying about making it perfect, just make it better."

When someone has been working in an area for a long time, it can be difficult to for them to accept the obvious solutions that the lean methodologies reveal.

3. Full Time Lean: Form a lean implementation team to build a lean culture and you will see immediate results and long term improvements

While lean concepts are not complex, the work is not easy. A well conducted lean workshop can take hours to prepare. Developing the schedules, planning the training, procuring the resources and materials takes time. Find someone within your organization to send to lean conferences or training sessions. If there isn't anyone who can be trained, then hire someone who already has the experience. There must be someone unencumbered by the day to day fires of running the shop to focus on lean.

The chances of success are seriously jeopardized when the lean manager starts doubling as the safety coordinator, the environmental specialist, or the manufacturing engineering manager. The direct responsibilities of these positions will take preference over the lean initiatives, and lean workshops will cease, or at least cease to be effective. It is better to share a lean coordinator with sister facilities than to split the duties of the lean manager.

4. Just-In-Time Training: Incrementally change the culture of the organization

Training for lean need not be a burden. It's true that there are new concepts that need to be taught and new tools that need to be adapted by associates. But lean manufacturing disciplines are more cultural than technical, so training needs to be delivered in short bursts immediately followed by a workshop.

Don't teach about 5S in a classroom; show operators how to do 5S in the workcell. If they have questions, answer them on the spot. The event becomes the training, the learning means. When its time to do a paper kaizen event, explain the fundamentals, then do the event. The principle is the same – teach by doing, learn by practicing.

Initial training in lean principles can be easily taught in less than four hours. Subsequent training on specific tools and techniques can be conducted in short sessions of 30 minutes to one hour each. Training in this fashion will minimize the investment, while increasing the likelihood of success. It's hard to forget something you learned 15 minutes ago – it's hard to practice something you learned two months ago and haven't used since.

This Just-In-Time training doesn't replace the need to bring awareness of the lean effort to the entire organization. It is still critical to success to get everyone tuned into the upcoming efforts and the reasons why the lean journey is being taken.

5. Move decision making to the production floor: Management can't make all the decisions

The amount of change seen today in the management ranks of most midsized companies is extraordinary. Even within my clientele, there are examples where operations directors have had eight or more bosses over the past five or six years. This management turnover has left the balance of knowledge within companies strongly tilted towards the workers.

The production lines are staffed with skilled workers with years or even decades of experience working in our culture and on the products we sell. Indeed, after talking with these production workers, it is normal to discover they have a deeper and broader understanding of the issues than the current management team. To disenfranchise these experts by leaving them out of the decision making process is counterproductive.

However, they are likely to be disillusioned because of chaotic management. They are frustrated and burned out because each new management team brings new changes and demands. They know that if they just wait out the current crop of managers, whatever "fixes" are put in place today will be reversed tomorrow.

This distrust must be addressed during the lean deployment. A manager must take the time to listen and truly discuss the issues with employees. Only then will gains be quickly made, trust built and relationships formed. Yes, there still will be conflict, and occasions that individual employees will find it difficult or impossible to accept the changes coming from the lean deployment. But the changes will be smoother and more sustainable.

Don't demand perfection. Remember that lean is the pursuit of perfection, not achieving it. Even when you "know" the right way to change a process or implement a new system, allow those who have the experience to "fix" your solutions – who knows, they might even make it work.

6. Don't wait too long to establish a Total Productive Maintenance system

Lean manufacturing is designed to eliminate waste. Three of these wastes are the waste of excessive inventory, the waste of overproduction, and the waste of waiting. Much effort is expended to identify solutions, determine a course of action, and then make changes to eliminate these wastes.

But there are reasons why the wastes exist. In nearly every case, the wastes are a "band-aid" for serious, unresolved issues. Equipment that is poorly maintained cannot be relied upon for the just-in-time delivery of parts. Production planners and managers compensate by overproducing or by building inventory.

Without justified confidence that the equipment will run properly, the efforts of the teams will be short-lived. Otherwise when machines break down and production lines or work cells stop, the wastes of over-production and excess inventory that were so painstakingly eliminated will return. The associates won't soon forget this failure, and the next time a lean deployment is attempted, comments like "that 5S thing", or "Just-In-Time doesn't work here" will echo in the plant.

You need to start now. Total Productive Maintenance implementation is a big effort, and will undoubtedly be one of the hardest elements of your lean deployment. Here are some hints for a quick start:

- *Clearly identify each piece of equipment*
- *Document the historical performance of the equipment*
- *Observe the equipment while operating; it's surprising what you can learn by merely watching and listening*
- *Identify any chronic failures or problems with each piece of equipment*
- *Obtain full information about problem equipment - Research all possible information about the actual, expected and designed performance of the equipment.*
- *Establish realistic budgets to return the equipment to reliability*
- *Don't just go through the motions – take this very seriously*

7. Get rid of the "Concrete Heads"; especially those in management

People feel threatened by the changes brought about by lean. As waste and bureaucracy are eliminated, some will find that little of what they have been doing is adding value. The anxiety they feel is normal and expected. Supervisors may spend much of their day expediting parts and deciding which flare up to extinguish first. If this is how they define their job, they are sure to feel some distress; maybe to the point of withholding information they may believe makes them invaluable.

To counteract this, it is critical that people are shown how the concept of work needs to change. The advantages of sharing knowledge and responsibilities with the production operators should be constantly reinforced. Most people will adjust to the new expectations within a few weeks and adapt their work habits.

But in every lean deployment, there will be a few who refuse to adopt the lean principles. Here's how to recognize them:

a. They stand back, usually with their arms crossed, saying almost nothing. They usually don't take notes, and seldom ask questions.
b. They don't offer suggestions, only criticisms. They remind the group subtly of past programs that have failed.
c. They constantly look for problems, not solutions. They won't add to an idea, only subtract from the energy of the team.

Once identified, concrete heads need to be confronted. They need to understand the seriousness and permanence of the lean changes. Make sure they understand that their obstinacies are viewed as their desire to cease employment at your firm, but give them a chance to consider their options. If this doesn't work, they have to go.

A Case from my files: Several years ago, while serving as the Vice President of Operations for ASC Incorporated, Dave, the production superintendent at our newest facility took issue with our lean manufacturing program. In short he was a concrete head.

After several weeks and growing frustration on the part of the Plant Manager, I had the opportunity to meet with Dave during one of my routine visits to the plant. As we toured the facility discussing what was happening at the plant, we eventually reached the key point. "Brian", he said, "I just don't think this lean stuff is the way to go here. It will never work." Stopping for a moment, I looked him in the eye and simply said "That's not your choice. It's mine. Your choice is whether YOU are going to implement lean here, or force me to find someone who will."

Dave decided on the spot that he wanted to be a lean practitioner, and he remained one of the best superintendents we had until he moved on.

8. Establish a Lean Deployment Team (Steering Committee)

The deployment of a lean initiative at any company is a significant and stressful process. It is not a simple matter, it is not short-term or just a production thing; it is complex and cross functional. Everyone within the company, from the executive team to the workers on floor will be affected.

In order to be successful at executing the transformation of the company and its culture, it is necessary to have good oversight. Typically, the oversight team is composed of managers and executives of the various functions, and is designated as the Lean Steering Committee, although my preference is "Lean Deployment Team".

The Lean Deployment Team provides the primary mechanism for the management of the lean effort, and they are to ensure that lean techniques and values are displayed and supported in each functional department. For example;

Purchasing develops supply relationships so that long lead times can be reduced, quality enhanced, and value enhancements can be realized. They are to play the key role in deploying target pricing methodologies in the development process.

Engineering ensures that customer requirements are clearly identified.

Engineers must work closely with production personnel to guarantee products and components are designed for easy manufacturing and assembly, including specific efforts to reduce part proliferation.

Operations have the responsibility to lead the lean implementation effort by improving quality, productivity and throughput so that issues are more easily identified. They need to provide the vision of where the company needs to go.

Quality is required to provide leadership on problem solving efforts; including identifying specific customer concerns to focus on and provide real time feedback on the effort to improve the quality performance of the facility.

Finally, in order to be effective, the team must have the authority to make tough decisions. If they are second guessed or ignored by the executive team, they will struggle in their efforts.

9. Follow Up: Lean only begins when the project is "complete"

Continuous improvement workshops (Kaizen or Kaizen blitz) are the most often practiced methodology for the implementation of lean manufacturing. But don't make the mistake of thinking that the events, value mapping exercises, or paper kaizens ensure that you will successful in your lean deployment. Lean success comes from how we think about our business and how we act when improvement opportunities are confronted.

Many kaizen workshops conclude with action items undone. Maybe a machine was discovered to have maintenance issues, or tools for completing the job are inadequate. If these issues are not promptly resolved, the message you send will be that nothing has really changed. They need to see that the lean philosophy has changed operational practices.

Remember these 4 follow-up rules, and your lean deployment will improve;

1. Success depends upon ongoing, two way communications with the operators
2. Operators are the customers of the lean projects
3. Follow up on action items immediately following projects is how culture change is effected
4. Follow up builds confidence towards the lean deployment

10. Shift the activity to the production floor: Now!

While a great start does not make a great finish, you must start in order to finish. So apply these lessons and follow the Womack and Jones formula.

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- Find a sensei – a teacher whose learning you can borrow
- Seize (or create) a crisis to motivate action across your firm
- Map the entire value stream for all your product families
- Pick something important and get started removing waste quickly [1]

Move to the production floor today and see how quickly something can be improved. Remember that lean disciplines aren't an extra burden on production, manufacturing or engineering, but are instead tools to assist them in accomplishing goals.

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[1] Womack, Jim, & Dan Jones. Forward to Learning to See. Version 1.2. Brookline, MA: Lean Institute, June 1999.