



Lean as an Investment Thesis

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The M&A Chicago Expert Author Series®



In this series of articles, we will explore operational excellence as an investment thesis, or at least a healthy part of one. In this article we will focus on Lean Manufacturing, the management approach that is closely tied to the success of Toyota and their invasion of the world auto market and GM's market share. Our hypothesis is that a commitment to Lean will lead to an increase in the market capitalization of your portfolio company on its own, and, combined with a growth investment thesis, will lead to a dramatic increase.

An Example

A couple of years ago we completed a Post LOI operational diligence on a packaging company that had about \$6 million in EBITDA. We found evidence that the company could increase EBITDA by about \$1 million through the application of Lean principles. They had work in process inventory, periods with high overtime, periods with excess capacity, poor controls, a loose inventory strategy, frazzled customers and a lot of expedited shipments. Our private equity sponsor incorporated the identified improvements into their model and successfully closed the acquisition. We worked with the CEO and his team and the company realized \$2 million in EBITDA improvements within 6 months. Just as importantly, however, the company also realized the following:

- A 20% increase in capacity. Not only did existing business become more profitable, but the company could grow by 20% without adding additional capacity.
- Enhanced ability to scale (up or down)
- An initiation into the virtuous cycle of continuous improvement
- An increase in on time delivery
- Virtual elimination of break ins to the production schedule
- Reduced inventory

Within a year, the management team actually realized \$3 million in increased EBITDA and \$1 million in reduced inventory. Without increasing revenues, the company manufactured a 50% increase in EBITDA and built \$30 million in market capitalization.

Why Make Lean Your Investment Thesis

Here is the good news. Developing an investment thesis on a foundation of Lean Manufacturing principles does not preclude a growth component. In fact, as the above example illustrates, a Lean approach will actually position the company to be able to handle additional revenue without compromising quality or service levels. To the extent that a company develops a culture based on Lean principles, the following benefits will follow:

1. Increased capacity. Consistently, lean applied to portfolio companies of all sizes leads to increased capacity and throughput. In one case, we saw an increase of 53% in output. We were able to increase shipments by 30% while going from a 7 to a 5 day work week. Other examples are more modest, but are often double digit improvements.
2. A virtuous cycle of improvement. Lean cannot be separated from the process of monitoring performance, conducting root cause analysis and implementing corrective action. This aspect of lean leads to a self-improving organization and a culture that embraces and solves problems.
3. Scalability. Implementing lean requires that we educate and empower people, that we replace tribal knowledge with process. In many cases this allows us to develop people from within. Other times we realize that we need to top-grade some positions and people to develop the right team. With that done, however, companies can learn to scale (up or down).
4. Increased inventory turns. Finished goods, raw and work in process inventory are all impacted by a lean operation. In addition, the development of a designed inventory strategy, built on the flexibility of a lean operation will lead to dramatic increases in the return on your investment in inventory.

5. Increased space and asset utilization. 20% to 50% increased capacity, reduced inventory and the impact of the housekeeping aspects of lean combine to free up space and increase the earnings generated by the footprint you do utilize.
6. Leadership focus. A lean culture leads to an operation that is predictable and consistent. Executives will no longer need to personally drive production scheduling, problem solving, repair, and other day to day decisions. This frees up the executive to work on the business.

Applying Lean, fiercely and enthusiastically, led from the top will drive these benefits. If you grow as well, the new revenues will generate EBITDA on a variable cost basis. If you do not grow, you will generate profits at levels you would not otherwise have been able to sustain. Your company becomes scalable and nimble.

Another avenue to demonstrate the impact of lean is to compare the performance of public companies committed to lean vs. their competitors. This goes way beyond Toyota, GE or Danaher.

Apply?

I repeatedly refer to the application of lean, rather than simply implementing lean. This is purposeful. Lean, and other operational excellence approaches, are concepts and philosophies. They contain much truth and espouse proven principals that can help a company achieve their investment thesis. The real value, however, is in actually applying that philosophy to a specific company, with their customers and product mix, with their suppliers and workforce, with their position in the market and customer demands. We are fortunate that others have blazed a trail and have shared their learnings about Lean. We don't have to invent it, just apply it!

Which Portfolio Companies are Good Targets?

Caution. Do not believe this only applies to manufacturing companies. Regardless of whether you manufacture, distribute, provide healthcare or business services, you produce value for a customer. Lean Manufacturing principals can be applied to the processes and tasks required to generate that value. No portfolio company gets a pass on this. For example:

- Distribution companies benefit from Lean similar to manufacturing companies. Instead of looking at the fabrication and assembly of products, we look at the on time, complete and accurate fulfillment of an order as good production. We focus on pick times and accuracy, slotting methodologies, manning tables and controls.
- Healthcare companies can apply lean principles to patient care. How long does it take a patient to register in your healthcare facility? How well can we move resources to address actual patient population and flow? How many claims are returned for demographic data collection issues?
- Business Services companies also complete tasks and processes in order to satisfy a customer demand. We can apply lean to those processes that directly create the value customers pay for, and we can apply lean to the supporting administrative processes that document, invoice, collect and produce financial statements.
- Any Company can benefit from applying lean to support and administrative functions. Closing the books on a monthly basis, reporting to the bank, developing forecasts, planning demand, supply planning, invoicing and so many more areas. While these areas do not directly add value to customers, they do impact a company's ability to manage profitability and to maintain an environment in which you can add value to customers and get compensated appropriately.

Estimating the Impact of Applying Lean BEFORE Acquisition

We work to estimate the value of implementing Lean (or other operational excellence approaches) beyond management's plans. In other words, during your pre and post LOI diligence, you can evaluate the opportunities to apply lean at the company and quantify the EBITDA, working capital and shareholder value that will come with that implementation. Here are some of the indicators we look for that a company can benefit from applying lean.

- We see work in process inventory in the process. Work in process inventory shows that the operations are not balanced. Some may be faster than customer demand requires and some are slower.
- We do not see metrics. Every time we see a company that does not monitor key performance indicators, we find at least 10-15% improvement opportunities. People need to know how they are doing to know what to improve.
- Scrap, rework, warranty costs, especially above the performance of the top quartile in the industry. These are signs of waste that can be eliminated.
- Post mortems. Lean companies review progress, output and KPI's during the shift or work day. If the company reviews performance the following day or less often, there is an opportunity to materially increase productivity.
- Excess and obsolete inventory. If a company produced inventory before it was demanded by a customer, there is opportunity to improve.
- Downtime. We measure companies against the theoretical maximum production their facility could produce.
- Past due back orders. If a company cannot keep up with demand, then there is a dramatically profitable opportunity to improve throughput through lean. While this does not specifically indicate the potential improvement through lean, it does highlight the payback if you do apply lean and increase throughput.

- Experienced observations. There is tremendous value in having an experienced lean expert tour the facility and review the CIM / management presentation. This step consistently provides actionable feedback and directional estimation of the potential to go beyond management's plans.

What is Lean?

We have intentionally avoided exploring what Lean Manufacturing is and how it works. There are many books and articles that focus on that topic and, while the geek in me would love to share our views and definitions, the point of this article is to open the possibility in your mind that Lean is a valid and valuable component of any investment thesis.

Now What?

Many private equity firms avoid dictating changes or approaches to a management team. We do not want to have to run the company from the board room. That is what the CEO is for. Within that framework, however, you can setup an environment that is conducive to lean and encourages the executive team to explore, evaluate and apply lean principles. Here is how we have seen it work consistently.

1. Document the opportunity (before close or NOW). To make a good decision, we need to understand the benefits, costs, investments, resource requirements and timeline for any new approach or process. Make it a habit to quantify the opportunity BEFORE you buy the company. If you already own the company, find a way to do a "health checkup" or to have an assessment done.
2. Socialize impact before close (burn the boats). When the acquisition of a company is built on models that require the impact of lean, it creates powerful motivations for management to take up the mantle and champion the approach.
3. Hard early wins. While Lean is not about the tool, applying Lean as a tool early in the process will produce dramatic wins. Often, we find opportunities to streamline and balance the flow of an operation and quick change overs are good candidates to drive visible and quantified improvements. This gives the team motivation and momentum.
4. Hire the right team and/or supplement with external resources. Unless you have company wide support and the time to work your way through a lean transformation, hire someone (permanently or not) who has experience leading continuous improvement. They will help the company through the myriad of obstacles you will encounter.
5. Measure / CI. No company or person stays the same. You are either getting better or getting worse. Developing a virtuous cycle of improvement requires a healthy set of operational metrics and a consistent root cause analysis and corrective action implementation cycle.
6. Stay involved. Do not set and forget. The passion will fade and old habits will return without your dogged interest. Ask about the lean initiatives, look at the metrics and expect continuous improvements.

Applying lean to your portfolio company will pay for itself in the short term with EBITDA and working capital improvements. In the longer term it will also develop additional capacity and a virtuous cycle of improvement. Make Lean part of your investment thesis and drive it!

If you have any questions or requests, please feel free to contact me at tvm@proactiongroup.com.

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