The Ideal Lean Scorecard Assessment Tool

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Using the Ideal Lean Scorecard to Assess Opportunities for Improvement

One of my mentors, Dr. Joe Martinich, an Operations Professor at the University of Missouri St. Louis, developed a tool to help you assess where you should be applying your process improvement efforts. What is so great about this tool is it really doesn't have anything to do with Lean, specifically, but is about good operational business practices.

The Ideal Lean Scorecard

- All employees show up to work every day, are motivated, can work at any operation and are constantly looking for ways to improve processes
- Supplies can be ordered and delivered immediately, in whatever quantities are needed and are defect free
- Equipment never breaks
- Processes have no variation and produce defect free products
- Work can be divided up into very small increments and all processes have identical cycle times
- All processes flow in one direction; there is no need to double back
- There is no cost to change from one product to another
- Tools and information are exactly where needed at all times
- Orders from customers come in at the same level (no variation) every time period
- All operations are inherently safe with no possibility of injury

What to do when you're not Ideal?

There is no company or process that meets even one of these ideal states. However you can use each one to determine your current state and decide what to work on now, using Lean, Six Sigma or any other business tool. This can be done with a 1 – 10 scale, with 10 being ideal and 1 being the lowest level of performance in this area. I will discuss each ideal state, assuming you scored low for that state.

All employees show up to work every day, are motivated, can work at any operation and are constantly looking for ways to improve processes

Improvement starts with measurement. Is attendance and turnover a key performance measure you review weekly or monthly? This is the place to start. Are you communicating with your workforce, or are the "working in the dark." People who are working in the dark do not feel valuable and therefore are not fully adding value. Do you have an active cross-training program, which tracks and incents people to learn new skills? Flexible employees are not an accident. This requires you are purposeful, organized and consistent in your pursuit of this goal.

Supplies can be ordered and delivered immediately, in whatever quantities are needed and are defect free

Once again we begin with measurement. Having ideal suppliers starts with measuring suppliers on these dimensions. Suppliers who score low should be subject to competition; to find better sources of this service or product. One of my clients has a saying, “Would Wal-Mart do it that way?” He means would they accept sub-standard products or service. An active purchasing department that rewards the best suppliers with more business and removes the worst can move you to an ideal state.

Equipment never breaks

Toyota created a method called total productive maintenance. It is largely driven off of operations (not maintenance) personnel conducting most of the preventive maintenance tasks and even perform lower-level troubleshooting and repair. This requires detailed record keeping and training. The theory is that people that operate the equipment will take better care of it, and get to know it better, making repair times faster. In addition, the people that work on the equipment don’t have to wait for maintenance to show up.

Processes have no variation and produce defect free products

Process variation and mistake reduction largely falls under the business tool called Six Sigma. There is a lot to this tool, but in summary we use statistical analysis to measure variation and mistakes. This helps identify the root cause of the problem. However, once problems have been fixed, constant measurement is required to prevent reoccurrence.

Work can be divided up into very small increments and all processes have identical cycle times

One of the goals of Lean, and any business process, is to keep product moving and get it to customers. When products (which include physical products and also information) batch up and wait around, costs build up and customers wait. This both disappoints customers and lengthens the time to collect their money.

If you can divide up the work into roughly equal amounts of time, it can be handed off and flow to the customer. Where this cannot be done, there are a variety of mathematical balancing tools, to help overcome this barrier and keep product moving.

There are many examples of this in manufacturing, healthcare and financial services.

All products flow in one direction; there is no need to double back
Sometimes in processes there is a need for product to “double-back”, going through a machine twice. It is very difficult to create a good flow when this occurs. One thing Toyota discovered is that lower-cost purpose-built machinery, that may not be as fast or efficient, can be very useful for preventing double-backs. Where a very expensive, and flexible, machine could not be justified, an inexpensive purpose-built machine can make economic sense to use in the flow.

There is no cost to change from one product to another
One of the most powerful Lean tools comes from Shingeo Shingo, founder of the quickchangeover method. This method uses time studies to analyze elements of a set-up or changeover and by categorizing them into internal (must be done with the machine off) and external (can be done with the machine running) seeks to reduce the time the machine is down or not producing saleable product.

Tools and information are exactly where needed at all times
The solution to searching for tools and information not being where needed is 5S Visual Management. This tool seeks to standardize work and ensure that there is a place for everything and everything is in its place. It requires constant attention and “re-5Sing” to ensure its sustainment.

Orders from customers come in at the same level (no variation) every time period
This ideal state is most likely the hardest to achieve. However there are some supply chain management tools to reduce order variation.

You must create visibility of end-customer demand to all echelons of the supply chain. This will reduce over and under ordering, which can artificially create peaks and valleys of orders.

Some supply chain partners use collaborative planning and forecasting, where everyone uses the same forecasts and shares production plans. This creates a more steady state and reduces artificial peaks and valleys. There will still be variation, but not due to over or under reacting to customer demand patterns.

The last tool is vendor management inventory. If you have a customer that creates too much variation in ordering, you can suggest that you manage their inventory of your products at their site. This provides you will visibility and you get to decide on the replenishment cycle, with the promise that they will always have what they need. It makes you an ideal supplier.

All operations are inherently safe with no possibility of injury

I put this ideal state last, but in reality it should be first. Not only is this morally important, but safer companies have been shown to be more profitable and safer sites more productive. 5S has been expanded in recent years to include safety… being called 6S. While a 5S workplace can be safer, there is a science to safety that is not included in 5S. This is called behavior-based safety. It is also a moral absolute for my safest clients to never promote speed over safety. And as I stated earlier, it pays off in greater profits because it standardizes work, reduces turnover and creates a motivated workforce.