

LEAN INSIGHTS

The road to Lean: Identifying and prioritizing wastes

By Dr. Timothy Hill

Not too long ago, I was reading an interview with Robert “Doc” Hall, Professor Emeritus at Indiana University, and a founding member of the Association for Manufacturing Excellence. In the interview, Hall mentioned that when Toyota first created the Toyota Production System (TPS) and Lean, these now well-known terms had no formal name. They simply called it Just-In-Time or kaizen. Hall said that Toyota leaders believed that Westerners would see past the shallow names to sense that there was a lot more to it; that it was also a people development program. Thirty years later, Westerners are just beginning to appreciate both points.

“Lean” was a helpful descriptor. It implied more than just low inventories and delivery as needed. But the financially minded may still see Lean merely as a cost-cutting measure and the elimination of superficial waste. They also may see it as a manager-led project, complete with end dates. Truth be told, there really aren’t any end dates in Lean. It is not a project, but a process, as many companies are starting to realize.

Just-In-Time or kaizen originated to maximize the contributions of people to process improvement, and to sustain those contributions after the system was in place. Changing situations requires re-thinking all of the time. This month’s problems are not last month’s problems.

Bear in mind that these terms originated when Toyota was struggling for financial survival. Overproduction was a sin. Quality was defined as anything that added to customer satisfaction. Waste was anything that did not. From there it was easy to define waste as any activity that a customer would not pay for if they knew about it. For maximum efficiency, every action should add value for the customer. Anything else should be eliminated.

But that really isn’t what it’s all about. There are a lot of processes that go on that the customer isn’t aware that they’re paying for. Be it the health care or the automotive sectors, there are non-value-added steps that are also essential steps. It’s about improving on the waste where you find it. Taiichi Ohno said that eliminating waste is not the problem; identifying it is.

So how do we identify waste?

Below are the three factors to help you identify whether or not something adds value, and eight wastes to look out for.

It adds value if...

- The customer is willing to pay for it (i.e., the worth placed upon something);
- The activity transforms the product or service in some way; and
- The activity is done correctly the first time.

Eight wastes include:

- **Defects:** Also known as correction, repair, rejects, etc. This includes resources and time wasted to find and fix defects because the process fails to meet expectations and was not done right the first time; and any processing that does not transform the product or service.
- **Overproduction:** Producing more than the customer requires and causing other wastes like inventory, manpower and conveyance to deal with excess product and consumption.
- **Waiting:** Waiting in all forms is waste.
- **Non-utilized staff creativity:** Not using people’s mental, creative, physical skills and abilities. Using the wrong level of staff for certain tasks.
- **Transportation:** Also known as conveyance. The movement of product, materials and resources between operations. The more you move, the more opportunity there is for damage or injury.
- **Inventories:** Inventory anywhere is non-value-added, though needed. It ties up financial resources and risks damage, expiry, spoilage and quality. It takes up floor space and resources to manage and track.
- **Movement:** Any movement of people’s bodies that does not add value to the process (e.g., walking, bending, twisting and reaching). This includes any adjustments or alignments made before the product or service can be transformed.
- **Excessive processing:** Activities that add no value to the end user. Causes of excessive processing are unnecessary paperwork, unclear work instructions, redundant approvals/inspections or over processing to accommodate

perceived customer needs.

To help you remember these, you may notice that if you take the first letter of each waste, you get the word “downtime.”

You may identify many wastes, so you’ll need to prioritize which ones you’ll address first. Begin with those, but put the others in a parking lot. Put the parking lot items on your Lean board and come back to them later. *

Dr. Timothy Hill is an Industrial and Organizational Psychologist and Certified Lean Six Sigma Black Belt with global expertise in Human Resources/Human Capital. He can be reached at drtim@kyoseicanada.ca.

Question from the floor

QUESTION: I’ve got managers that refuse to go to the gemba, although they all agree that it’s important to do. I know that things can get busy for them, but how do I help them get to where the problems are?

ANSWER: I agree that it can be tough, especially if they’ve never gone to the gemba before. They may give face to the concept, but never make time for gemba kaizen. Masaaki Imai, founder of the Kaizen Institute, explained: “Kaizen is a mindset. Although many Lean practitioners have Kaizen in their toolbox, those who strive to live it each day are the people who are making a difference in people’s lives.”

Gemba kaizen embraces the skills of a whole organization, inviting and rewarding employee contributions and understanding that even the smallest improvements will create greater value over time. The concept focuses on achieving continuous improvement through activities on the work floor.

Have it written in their job descriptions if necessary. Henry Ford did it with his managers. He mandated that they take a gemba walk four to five times a day. He would watch them take their walks and if they returned too quickly, he would ask them why it took such little time. When they returned after being gone for a long time, he would congratulate them. This practice will have them viewed by those on the line as a resource. Go with them and show them that they can be a resource to those closest to production.



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