

Business Velocity: An Introduction to Lean Six Sigma

BY LARRY MARTOF

Is your business moving in the right direction?

EVERY BUSINESS WANTS TO ACCOMPLISH THREE KEY BUSINESS GOALS: lower costs, increase profits, and exceed customer expectations. If you can meet and sustain these three goals, then you have built a successful business—but is it moving forward and is it sustainable?

Enter the concept of “Business Velocity.” To best describe this term, let’s break it apart. “Business” is obviously what you do, whether that is steel fabrication, erection, manufacturing, design, servicing, or some other element of the steel world. “Velocity” is defined basically as speed and direction. When we combine them, we have a company or business with speed and direction, or velocity. Now you may be asking, “How do we obtain speed and direction?” By deploying advanced, proven improvement tools found in the methodologies of Lean Six Sigma.

Lean (aka Lean Manufacturing, Toyota Production Method, Throughput Design, and some other monikers) is defined as the continuous systematic pursuit of the elimination of waste. This waste (or “muda,” in Japanese) takes on many forms, which can be described by the acronym DOWNTIME, as follows:

- Defects resulting in rework and scrap.
- Overproduction resulting in cost and space burden of excess inventory.
- Waiting, such as one process waiting for another process to complete before it can begin.
- Non-utilized talent—the waste caused by having the wrong person in the wrong position.
- Transportation waste, which occurs when product is moved around without any value-added activities.
- Inventory waste—excess raw materials that are not being processed.
- Motion, the wasted human movement—not having what is needed where it is needed.
- Extra processing as seen in redundant steps, duplicated work, or data and energy waste.

This “leaning” of the business is accomplished by targeted improvement efforts, which eliminate or reduce any of these areas of waste. By eliminating waste the process becomes more efficient or faster, and hence speed is added to the business. It is important to look for waste across the business, not just in the production areas. Waste occurs in the front office, design, detailing, project management, scheduling, book-keeping, purchasing, and even in the conference room. (When was the last time that you couldn’t find that dry-erase marker when you needed it?) Waste in these areas is often referred to as the “Hidden Factory.” It is not obvious unless you are actually looking for it. Before we explore the Hidden Factory and its counterpart, the “Visual Factory,” let’s first look at the concept of Six Sigma.

As we mentioned earlier, we need speed and direction to have velocity. The Six Sigma methodology provides the direction. Now, you might be thinking that Six Sigma doesn’t fit your process; you don’t make thousands of widgets that are identical. I always hear folks say that steel construction is unique; every project is different and requires different things.

Although it is true that every project may be different, every project uses our processes and every project has one thing in common: Every project has a customer. Actually, every project has many customers. There is the customer that owns the project and is paying for it, there are the customers that will use the project (i.e., those who drive across our bridges, climb our stairs, occupy the offices we build, etc.), and there are the customers all across the supply chain whom we must interact with and satisfy. This idea of “customer” is what Six Sigma is all about. It’s not about statistics, green belts, black belts, and hugely expensive training and capital investments that only large corporations can afford. It is about customers throughout the building process.

Six Sigma is defined as the scientific and systematic approach to quality-based improvements driven by the voice of these customers. The use of statistics or statistical process control (SPC) is just one of the tools in the Six Sigma toolbox that you may or may not use.

We have just stumbled upon a really good analogy: this idea of a toolbox. When we really look at Lean and Six Sigma, we are looking at two sets of tools. Think about the last time you attempted to do some maintenance on your car. You needed some standard SAE fractional-sized wrenches and you probably needed some metric tools too. Then there is the ever-handy adjustable wrench that can work with both. Think of Lean as your SAE wrenches and Six Sigma as your metric wrench set. As for that adjustable wrench, well, some tools can be used for Lean- and Six Sigma-based improvements. So by putting all of our tools in one toolbox, we get Lean Six Sigma, which in turn gives us the power of speed and direction: velocity.

There are a lot of tools in the Lean Six Sigma toolbox, and finding the right tool to fit your needs is important. Sometimes, we have to try a couple of different tools before we find the one that fits. Earlier, we mentioned the Hidden Factory that is everywhere in our companies. We need to transform this Hidden Factory into a Visual Factory where we can see and eliminate the waste and hear the voice of the customer.

In Part Two of this article, we will look at a few of the basic tools that we need to uncover the Hidden Factory and provide for a Visual Factory that is focused on reduced costs, increased profits, and total customer satisfaction. Keep watching Quality Corner for this second installment, where we reach into our Lean Six Sigma toolbox and discover how others have used these tools to achieve improvements. **MSC**



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