The Five Principles of Lean

James Womack and Dan Jones, two of the authors of The Machine That Changed The World mentioned in a previous article, continued their research and work and in 1996 published their second book – Lean Thinking: Banish Waste and Create Wealth in Your Corporation. In this book they set forth a roadmap for organizations seeking to emulate Toyota. As a foundation, they proposed the following Five Principles of Lean as the model for implementation:

Specify value from the customers’ perspective
Map the value stream to understand value and non-value added steps
Flow the work through the processes in the value stream
Schedule the work based on customer pull
Strive for perfection through continuous improvement and waste elimination

Value

To understand value we must first understand who the customer is. Lean defines the customer in a simple and clear manner – those who buy our services and pay the bills.

So value needs to be defined from the perspective of these customers. Do they see value in this process? Does this activity add to the function or characteristics of our products and services in a manner for which the customer is willing to pay? One great way to determine whether a particular activity or step is value-added or non-value added is to ask “If we were to stop doing this, would the customer mind? Would they know? If the answer is “no”, we can safely categorize that activity as non-value added and target it for elimination.

Mapping

Many of us have seen or even been involved in creating maps of processes. There are many different types of maps – SIPOC (Supplier, Input, Process, Output, Customer), swimlane, timeline, etc. Lean uses an approach called Value Stream Mapping. Value Stream Maps (VSM) have several characteristics that are unique to Lean:

- VSMs are created by teams comprised of front-line employees who do the work being mapped – the real experts in the process!
- A VSM always begins and ends with the Customer
- VSMs capture both the product flow and the management information flow
- Once the basic flow is drawn, the VSM team goes out to the Gemba (the place where the work actually happens) and observes the workflow
- While observing the workflow, cycle times, quality/defect counts, inventories, and other data are collected

Because of their visual impact, VSMs make it easy to identify the barriers to quality, service, and productivity so improvements can be tackled.

Flow

Once the Current State (as things presently are) map is completed, the VSM team brainstorms problems and creates the ideal Future State Map. In the Future State, product (the claim, inquiry, sales order, or other workload being processes for the customer) flows smoothly
through the process without interruption or delay. The team identifies barriers that presently prevent this and develops enhancements to eliminate them.

Pull

The Future State will also be designed to match the customer demand. If customers order 500 new widgets per week, we need to build our process to complete 500 widgets per week. Less than this will result in delays for our customers (waste and poor service) and more than that does no good since we only have 500 to deliver.

Perfection

Even with the best of intent and effort, it is unlikely that our first attempt at creating an ideal Future State will be, well, perfect. So Lean teaches us to continuously re-examine our work and look for additional, incremental improvements. And if we ever do get it perfect, the business, customers, or environment will likely change and we’ll have to improve again! Lean continuously seeks perfection but recognizes we may never actually attain it, at least not for long.

Lean is focused on the pursuit of perfection through the systematic, continual identification and elimination of waste. The Five Principles are our roadmap on this journey to excellence.