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Lean Manufacturing:

Part 2





Implementing Lean

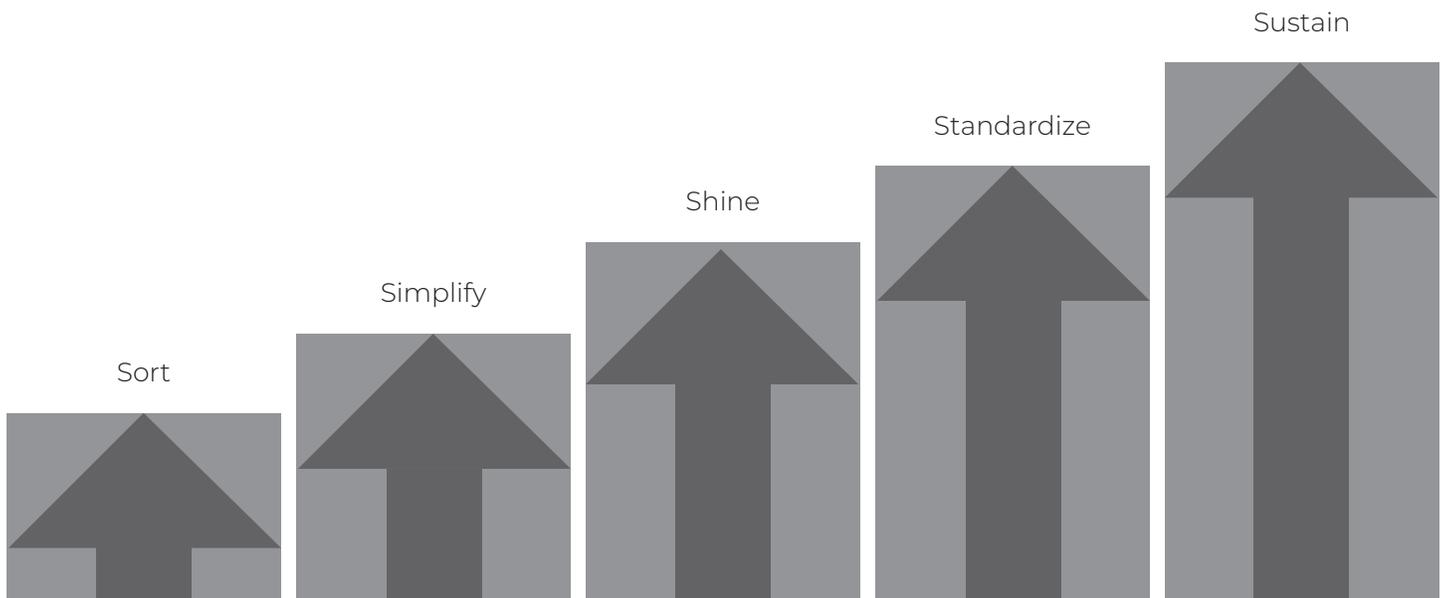
In “Lean Manufacturing Part 1” we examined manufacturing wastes, lean principles and the benefits of lean manufacturing. While still maintaining our objective of keeping the concepts of lean manufacturing simple for our readers, part two takes us into the action stage of implementing lean practices.

We will also observe how the rest of the story unfolds for GPC, our sample company from “Part 1.” Having successfully completed phase one of lean manufacturing, identifying wastes, GPC moved forward with the remaining phases, and are benefiting from their efforts.

The 5 S's of Lean Manufacturing

Many companies start by establishing a 5S program to implement lean. Adhering to this program establishes simple, understandable and relevant objectives. The idea that all things that add value have a clearly defined space, can lay the foundation of discipline required for effective implementation of more complicated lean tools.

The main purpose of the 5S program is to identify and create a specific space for items in the workplace that add value. Once embraced as an ongoing operation, employees typically enjoy higher work morale from an improved environment and culture. The 5 S's are illustrated as follows:





Sort

Sorting is simply determining what is needed or not needed in a workspace. Anything unnecessary should have a tag

and be removed. The only items to remain in the workspace are the parts, tools and instructions needed to perform a specific operation.

Simplify/Set in Order

Once sorting is complete, items that are determined necessary for that workspace must be put into the correct position for use. This will maximize optimum efficiency. Tools kept close to their point of use minimize worker movement. In order to save time, all items should be labeled for ease of locating and returning them to their places once complete.

Shine

Shining refers to deep cleaning of machines and work areas; restoring them to the best possible condition. The idea is that quality and efficiency will not deteriorate over time if the machine is maintained properly. Moreover, having a clean workspace improves employee safety and morale.

Standardize

Setting up a system for routine checks is the best way to standardize, or maintain, the lean manufacturing practices already in place. This involves a checklist with instructions detailing the who, what and when the work will be completed.

Sustain

Sustaining the 5S system is simple if the 4th S, standardize, is adhered to. In addition, regular audits of the system help to sustain it as a whole. The audit relies on employee involvement. A rotating group of peers evaluates each component of the system and observes for deficiencies. The results are shared among employees and are they are then provided the tools and time necessary to correct the deficiencies.

GPC, our sample company, conducts semi-annual 5S audits in each of its workspaces. Results of the audits are displayed at various points throughout the facilities. A Kaizen room is maintained with sufficient tools and materials to allow employees to improve the appearance and cleanliness of their workspaces. This highlights management's commitment to lean manufacturing as a long-term, continuous improvement program for the entire organization.

Succeeding at Lean Manufacturing

As with any program that a company wants to run successfully, an action plan must be followed. The steps, although simple, require dedication from all sides of the organization.

First, a company should have a vision. This must be consistently communicated and fostered by senior management. The vision should be clearly defined by anyone reading it.

From the vision, a mission statement should be created. This mission should clearly express how the company is going to achieve their purpose. Just as the vision, the mission should be believable and simple, but also convey in broad strokes where the company is participating in the market and how the vision will be obtained. Lean manufacturing supports the concepts expressed in the mission, properly aligning it in the same direction as the company.



In order for lean manufacturing to thrive, support must be achieved from the highest level of management, including the company's president and board of directors. With persistent support (and pressure), to implement and maintain lean manufacturing, the organization will continue to be reminded of the importance of the program. Without this support, lean manufacturing may be perceived as a "lower level" initiative. This begins a lean manufacturing initiative that is viewed as a "production only" plan. Top management must hold project champions accountable for advancing lean manufacturing concepts. From here, the company needs to determine how lean manufacturing will be launched in the organization. Multitudes of lean tools, consultants and practices are available across many industries.

In the case of GPC, a lean manufacturing consultant was employed to discuss the various tools with the management team. 5S, TPM, VSM, Paynter Charts, and A3 reporting were selected as "starter tools" to commence the lean project. Once employees were trained and began using these tools, more advanced tools such as Kanban were implemented. Along the way, the company identified tools that did and did not work specifically in their operations, kept those that added value and discarded all others.

Why Lean Manufacturing Fails

The single most significant reason for failure in a lean manufacturing system is lack in participation from all members of the company. Most often, this breakdown originates from senior management who fail to take the time to fully understand lean, assume the policies do not apply to them and expect others lower in the corporate ladder to do it for them.

A second reason for failure in a lean manufacturing system is often managers try using only one element of the entire lean approach. For example, a manager will implement the 5S element, but not the others. Success of the program relies on all elements, not just one.

When management pursues short-term, quick fixes to their issues, they often miss the long-term shift in culture and improved operating practices that lean manufacturing programs offer. A sustainable, long-term approach is most beneficial in lean manufacturing practices.

A statement that reigns true in lean manufacturing is that what works for one company may not work for others. When employees are encouraged to experiment and given the freedom to fail and retry, are handed sufficient tools for implementation and expected to improve their processes continuously, lean manufacturing will thrive.

Finally, management may fail to understand how lean manufacturing applies to the entire organization; expecting lean accountability from only operations or manufacturing. Although different departments may have varying goals, each part utilizes processes that can benefit from eliminating waste and useless components of those processes.

Management at GPC is pleased with the overall success of the lean manufacturing program. They acknowledge that although it is early on in their lean journey, they have still benefited from inventory reduction expenses, and lower costs from improved operating efficiencies. Exploring new lean manufacturing practices and implementation may take years, but the benefit has been substantial. GPC has now implemented intermediate lean tools such as Kanban and Value Stream Mapping, and have already begun to see early cost reductions.



Conclusion

Having served as an introduction to lean manufacturing concepts, reading this paper is only the beginning of new business practices; a continuous journey that will bring companies and their customers together to create value and wealth for all sides. Lean practices require every person within an organization do their part in keeping the process in motion and striving for constant improvement.

About GPC

GPC is a leading global supplier of paint solvents, test fuels and paint-system recycling technology for the automotive industry. Their customers include automotive manufacturers and suppliers, as well as chemical and pharmaceutical companies, in the United States, Canada, Mexico, Europe and South America.

The company has supplied custom-blended solvents, test fuels, calibration fluids and refined products to the automotive industry for over 70 years. Its products are used in Original Equipment Manufacturer (OEM) assembly, engine and component plants and throughout the industry's supply chain.

GPC manufactures paint-related products and cleaners for a wide variety of industrial uses, as well as calibration testing fuels for use in the automotive industry. Paint-related products include paint-line and booth cleaners, purge solvents and thinners.

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