

Creation, Implementation, and Sustenance of Standard Work

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Introduction

In this article I will attempt to cover the vast topic of “Standard Work” in a few words. In my experience creating Standard Work, implementing Standard Work, and sustaining Standard Work are actually three different pieces of the puzzle. In the narrow-web custom print industry, where short run lengths and increased variability between jobs are becoming the trend, it is easy to fall into the trap of believing that Standard Work is only applicable to manufacturers making widgets. As a Lean practitioner with experience working in the printing, aviation, and health care industries, I understand every domain has its unique quirks. However, I have yet to see a process that cannot benefit from standardization.

Another popular myth is that standardizing processes turns people into mindless boring robots and stifles creativity. In fact, the exact opposite is true. Standardization taps into the creativity and innovation of the process owner by providing a baseline from which the process owner can gauge his own ideas for improvement. By nature, Standard Work is not static. It is continually evolving as better ways are discovered to perform the same process. Today’s standard is the foundation for tomorrow’s improvement. Each evolution of the Standard Work is another step closer to the unattainable goal of Lean manufacturing—perfection.

Creating

To start the process of standardization, it is important to identify which processes would benefit the most from it. This can typically be done by looking at a value stream map and identifying the bottleneck processes. The creation phase of Standard Work is a critical opportunity to obtain the buy-in from the process owner. Whoever does the work should own the creation of the Standard Work.

For example, if a supervisor would like to standardize a setup process for a press, it would be ideal to conduct a Kaizen event with the press operators to reduce the setup time with the end result being a Standard Work document. Not only does this ensure buy-in from

the process owners—as they were involved in the creation of the Standard Work for their process—but it also provides a platform for continually improving on the Standard Work. It is a great idea to have the process owners write out their own Standard Work, rather than have it handed to them by a manager or a consultant.

Elemental analysis, where a complex process is stripped to its smallest functions, is a very useful tool to identify sources of waste. Time motion studies and spaghetti diagrams help create a process where tools are available at point of use. Takt time and cycle time analysis identify when an operation in the value stream is overproducing or creating work-in-process (WIP), helping drive one-piece flow. These are a few tools that can be used to incorporate the three main elements of Standard Work:

- Takt time
- Sequence of activities
- Inventory levels

Implementing

Determining the best way to disseminate the Standard Work is a challenge most companies face. More often than not, the Standard Work becomes just another piece of paper buried under a heap. Visual images placed near the work area can be used to effectively depict Standard Work sequences. If properly developed, the Standard Work would be cue-based, intuitive, and able to be followed by anyone regardless of their primary language. It is not a detailed technical document. The Standard Work should be used to train new employees on the process so that everyone, regardless of skill level, has access to the best method of performing the process.

It can also be used to grade the performance of employees. Support of top level management is critical to creating a company culture conducive to implementing Standard Work. Standardization is the forth “S” in the 5S process. Hence it is important the work area is sorted, set in order, and shined before attempting to standardize.

The design of the work area should be with the intent to allow problems to surface easily. Poka-Yoke or error-proofing systems should be implemented wherever possible.

Sustaining

The responsibility of auditing and ensuring compliance to Standard Work should belong to personnel closest to the work being performed, for example supervisors or even peers. Easy-to-use audit checklists and Gemba Walks can confirm whether the Standard Work is being followed. A defect can be purposely added to check if the Standard Work processes are robust enough to catch it. If an employee is observed not following Standard Work, a better practice is to ask *why*? Maybe the employee has a more efficient way to do the work or some coaching is required. Demanding blind compliance will kill the natural and spontaneous process of Kaizen.

Development of solid key performance indicators (KPIs) and statistical control processes to track the performance of the process is an effective reactive way of measuring variations to the process. When the process is found to be out of control, root causes are analyzed, countermeasures taken, and Standard Work is updated. The process owners, since they actually perform the process, should be encouraged to make suggestions to improve the process. Each

suggestion should be seriously considered, analyzed, and if validated, changes to the Standard Work made. Every employee has the dual responsibility of doing the work and improving the work.

Conclusion

Standard Work is one of the foundational building blocks of a Lean program. It defines the safest, most productive, and cost-effective way to perform a process. It reduces quality complaints and increases customer satisfaction by producing a consistent and predictable output. It leads to lower inventory and work-in-process levels. It aids in the creation of a data-driven, innovative, and problem-solving organization. It increases morale and loyalty across the organization by including employees at every level in the decision-making process. Most important, it provides a solid baseline for future improvements. In the words of Toyota's Taichi Ono, "Without standardization, there can be no Kaizen."

Manoj Ramachandran has more than ten years of experience as a Lean practitioner in the printing, aviation, and health care industries. He is a certified Lean Six Sigma Black Belt and a certified Project Management Professional.

Manoj will be presenting on Standard Work at the Continuous Improvement Conference in Indianapolis, Indiana, April 7–10. To register visit www.printing.org/ciconference.



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