



## Lean Thinking in the Office

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*In their landmark book "Lean Thinking" (Simon & Shuster, 1996), James Womack and Daniel Jones identified three primary value streams that all companies are typically involved in, or at least some combination of the three.*

- 1) Physical Transformation** - manufacturing companies
- 2) Problem Solving** - engineering and design companies as well as many service organizations
- 3) Information Management** - which most all companies are involved in to some degree

The goal of an organization is to be a Lean Enterprise – to apply the common sense business practices embodied by Lean Thinking to all areas of a business. There are many well-documented successes in manufacturing applications. However, service organizations and administrative processes within manufacturing companies have struggled with applying these concepts to the second and third primary value streams identified above.

The lean office effort in most companies consists of simply trying to better organize the workplace through what are called "5S" techniques. These organizations fail to implement the key lean concepts of: standard work, flow, pull and leveling. In turn, they fail to realize the full benefits of lean. Why have so many companies struggled with the application of common sense Lean concepts to office and administrative processes? Often heard as a reason, is that the nature of work performed in the office is "different". When pressed for more clarification people most commonly respond with the variability of the work, the multi-tasking that goes on, the unpredictability of demand, and the "creative" nature of the work. The truth of the matter is that work performed in the office does tend to be highly variable. However, this occurs for several reasons, much of which is created by the companies themselves, and how they organize themselves to process information.

In many printing companies, the information process consumes the largest amount of lead time – a key differentiator between competitors. Therefore, a printer most often must address the lead time through prepress. Certainly, this must happen while ensuring the quality of the information that is being processed and provided to the pressroom and/or bindery. Typically, an assessment is made of the current information flow from "quote-to-cash". This is accomplished by developing a "value stream map" of the current process. Value Stream Mapping (VSM) is the assessment and planning tool of lean practitioners. In "The Complete Lean Enterprise – Value Stream Mapping for Administrative and Office Processes" (Productivity Press, 2004) I provide a simple guide to develop value stream maps, and to redesign business processes based on Lean principles.

Most often, issues of information quality originating as far back as the customer are identified as opportunities for improvement in the early stages of a Lean effort. After all, information cannot flow smoothly if persistent questions arise. Key information quality metrics that are noted on the Value Stream Map (VSM) are called "Percentage Complete and Accurate (%C&A)" and "First Pass Yield (FPY)". %C&A is the percentage of time that a process step receives all the information that is required so that it can be processed without interruption, and it is accurate. FPY is a summary measure of the %C&A's for the entire value stream (e.g., "quote-to-cash"). This figure tends to be less than 40% in printing companies.

To address these issues, printers will apply "quality at the source" concepts such as checklists, and "standard work" throughout the process. Included in this effort is defining standard work for those people in sales roles who are often the first interface with the customer. Receiving complete and accurate information from the customer, and better managing customer expectations (e.g., identifying acceptable paper stock) early in the sales process is critical to the success of any company. Standard work – performing each process in a consistent way that insures a quality result – is a foundation concept of Lean Thinking.

Beyond information quality, additional opportunities to improve the flow exist. Very often, companies will organize themselves by departments or functions, with multiple hand-offs between. With each hand-off comes the opportunity for a queue to form. Typically, the lengthy lead times in the prepress process are related to the many

hand-offs and queues that exist. How can these be minimized? Many printers have made significant investments in “Direct-to-Plate” or “Direct –to-Press” technologies. Such technologies certainly reduce process steps and hand-offs. However, perhaps there are other non-technology related opportunities. What if a company reorganized itself into cross-functional teams with people from different departments co-located in the same area? Such approaches have been described as office “cells” or “pods”. Communication between resources can be more direct, effective and efficient – of particular importance and benefit in the “job-shop” environment that most printers represent.

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Now consider a highly cross-trained team that could more readily lend assistance to each other in the event that a “bottleneck” arises. Cross training becomes much easier when standard work exists, and when cross-functional resources are co-located. Bottlenecks to flow are often identified on the VSM, and must be addressed. Many times bottlenecks are found in some form of “pre-flight” process where only a very limited number of people (i.e. highly experienced) can perform this final inspection oriented step. This is true because standard work has not been adequately developed, and people have not been sufficiently cross-trained.

While these are not the only concepts that can be applied to the information processes within a printing company, they can certainly be considered fine starting points. The

key to a successful Lean transformation is to understand what it really involves – a change in the way people think, act, interact, communicate, and make decisions – the very culture of an organization. Some of the concepts covered in this article can help a printer begin its cultural transformation based on Lean Thinking.



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