

Lean Thinking in the Office

Organize administrative and office processes by value stream rather than function *By Drew Locher*

IN THEIR LANDMARK BOOK *Lean Thinking*, James Womack and Daniel Jones wrote that all companies are typically involved in three primary value streams—or some combination of the three:

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

If the goal of an organization is to be a lean enterprise, then the intent is to apply the commonsense business practice embodied by lean thinking to all areas of the business. In manufacturing applications, there are many well-documented successes. However, much of the untapped potential for improvement in an enterprise's productivity lies beyond the shop floor in non-production areas. Service organizations and administrative processes within manufacturing companies have struggled with applying these concepts (the second and third primary value streams identified above). One of the major difficulties companies have in applying lean principles to non-production operations is their inability to apply systems thinking in identifying value, waste, and flow in the office.



Much of the untapped potential for improvement in an enterprise's productivity lies beyond the shop floor in non-production areas. If the goal is to be a lean enterprise, then apply lean business practices to all areas of the business.

When companies do try to apply lean to the office, most companies focus simply on trying to better organize the workplace through 5S techniques, often translated as Sort, Straighten, Shine, Standardize, and Sustain. These 5S techniques are impor-

tant, but by limiting lean efforts to this, 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 commonsense lean concepts to office and administrative processes? When asked, companies often reply that the nature of work performed in the office is "different." When pressed for clarification, they most commonly cite 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, most of which are created by the companies themselves and how they organize themselves to process information.

ORGANIZING FOR OPTIMUM PERFORMANCE

One of the most formidable obstacles to the application of

applying lean thinking to office and administrative processes is the existing organizational structure. Most companies are organized by functions or departments that have little relationship to the information they actually process. Experience has

shown that in most cases functional structures impede the flow of information. They can result in parochialism where managers may be responsible for portions of the information flow, but nobody is responsible for the management and continuous improvement of the overall process. More specifically, they tend to add to the number of hand-offs and often give rise to conflicts of priorities between departments. Budgetary practices can further increase the likelihood and effects of these conflicts, contributing to turf battles.

This is no different from what used to be seen in manufacturing where functional organizations existed with separate machining, assembly, quality assurance, and even packaging and shipping departments. While this approach may have optimized performance of the individual functions, it was often at the expense of overall process or system performance. Many manufacturing organizations have realized that they must change the fundamental way they are organized in order to realize breakthrough results in improved material and product flow. Office environments are just starting to come to the same conclusion.

The objective must be to optimize the performance of the overall system—the “value streams.” The ongoing continuous improvement of key business systems or value streams must also be insured. This can be accomplished by organizing and managing by value streams, what some have called “end-to-end” process management. Consider an organizational structure based on actual information flows, for example, “order to cash,” “requisition to pay,” etc. What advantages would the organization realize by having order processing, planning, invoicing, and collection personnel working together as a team rather than as separate departments? What would be the disadvantages?

The concept of organizing by information process can be applied even at the department level. One of the breakthrough exercises—when people begin to

see the application of lean—is to identify “service families.” Here a team will identify the key services that are being delivered by a department or function. They begin to see the “processes” that are being regularly performed, and realize that they are not adequately organized by service or process.

TIME	MONDAY	TUESDAY
9:00 – 9:30 a.m.	Check e-mail	Check e-mail
9:30 – 10:00 a.m.	Enter orders	Enter orders
10:00 – 10:30 a.m.		
10:30 – 11:00 a.m.	Unscheduled work	Unscheduled work
11:00 – 11:30 a.m.	Process RMAs	Work on Order Holds
Etc.	Etc.	Etc.

Table 1: An Example of “Plan for Every Process”

SERVICING THE CUSTOMER

One example is Customer Service. Often customer service personnel are involved in numerous activities, all of which fall under the umbrella function of “customer service.” Personnel are then expected to determine the best way to organize themselves—whatever works best for the individual. The result is a very unpredictable, highly variable work environment, with little or no standard work throughout.

However, an alternative would be to organize by “service family.” Typically customer service personnel deliver three

key services: order processing; problem solving (this may include providing technical support, order status, or order maintenance); and value creation (proactively generating sales).

Unfortunately, so much time is spent on providing the first two services that little time is left for customer service personnel to create more value for the business. What if the personnel within the Customer Service department were organized by these three service families? How would this lend itself to greater organization of the activities? What would be the impact on the effectiveness and efficiency of these activities? Can variability be reduced and standard work achieved?

Even if the same resources are expected to perform multiple tasks, can we better organize the completion of these tasks? Too often office personnel are left on their own to decide how and when to perform the multiple tasks expected of them. The problem that this creates is that each person in the office may organize himself or herself in a slightly different way. The timing of the completion of work may not be appropriate, and the prioritization of work inconsistent through the value stream. Once again, this contributes to the problem that is found in the office—the unpredictability of the movement of work from one step to the next.

PLANNING FOR EVERY PROCESS

What if a “plan for every process” was developed for all of the key information processes in the office? The plan would define specific days of the week and times of the day for the performance of each task. Further, the plans for different people (i.e. roles) in the office will be synchronized with each other to maximize the flow information. In such a way, tremendous predictability can be provided to the multi-tasking work environment. Each person knows what to do and when. Simultaneous processing of different information by the same person can be avoided, which can provide significant productivity improve-



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Steps to a Lean Office

1. Identify service families.
2. Define standard work for each process, including improving workplace organization through "5S" techniques.
3. Cross-train personnel.
4. Implement basic pull systems, including leveling and visual management techniques.
5. Implement office cells, where appropriate.
6. Drive continuous improvement using visual management techniques implemented as part of the first five steps.

ments. It is typically easier for someone to perform one task at a time than attempting to do three things at once.

In our Customer Service example, trying to answer the phone while entering an order can give rise to possible errors and increase process time. Can developing a plan for every process minimize the number of disruptions and interruptions? This is analogous to the "plan for every part" concept applied in manufacturing—where delivery times and quantities are set for every part used in the manufacturing process. An example of such a plan for every process is provided in Table 1.

More and more organizations are setting up office "cells" or "pods"—cross-functional teams of people, co-located to process information in fractions of the time previously required. Experience has shown that lead time, including queue time, can be reduced by as much as 90 percent, while process time (the "touch time") can be reduced by as much as 40 percent.

Office cells can improve the effectiveness and efficiency of communication and decision making, while reducing quality defect or correction waste. They can also reduce the number of hand-offs, and help develop a greater awareness of the needs of "internal" customers. The result is the reduction of non-value-added waste throughout the value stream. Two examples of office cells are provided in Figures 1 and 2.

In addition, some organizations have effectively installed "pull systems" in the office to control the flow of information and to "pull" resources to maintain flow when interruptions occur. In its most basic sense a pull system is a decision tool. A pull system consists of establishing acceptable levels of work-in-process (WIP), providing visibility to the queues of work at key points in the process, and establishing rules that people will follow when particular levels are reached. When necessary, resources are re-assigned in order to maintain the flow of informa-

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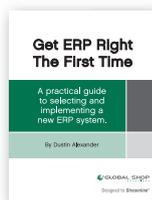
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tion through a particular segment of the process or value stream. The most common form of pull system used in the office is a sequential pull system. The desired sequence may be first-in-first-out (FIFO) or due date for project-oriented work.

STANDARD WORK PRACTICES

“Standard work” practices for each process are required in order to maximize the benefits of pull systems in the office. People within the office must be cross-trained in the standard work so they are ready to lend assistance when a “pull signal” directs them to do so. This leads to one of the least practiced of all lean concepts—standard work.

Too often, it is left up to individual office personnel to determine the best way to perform work—what works best for them as individuals. What difference does it make how the process is performed, as long as the work is completed? This statement, commonly heard, flies in



Figure 1: Several multi-functional “Order-to-Cash” cells, where each team includes representatives from Customer Service, Planning, Accounting, and Collections. Customers are assigned to teams in a way that “levels” the demand across teams.

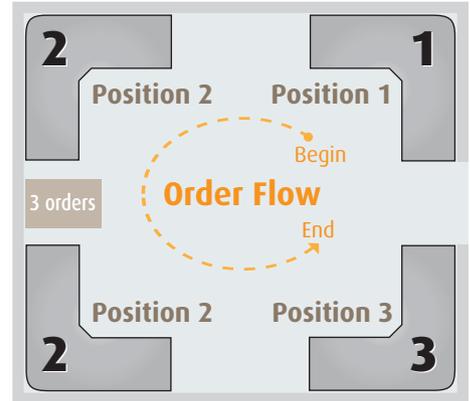


Figure 2: An Order Processing cell where each order requires some amount of designing. Three different functions have been co-located. Position 2 is duplicated based on the level of effort required for this task to meet demand.

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the face of a foundation concept of lean. Lean enterprises seek to have consistent ways of performing all tasks—best practices, if you will. Standard work:

- reduces variability;
- provides more predictable processes;
- reduces the learning curve for new employees;
- results in greater flexibility as resources can be effectively moved around when necessary;
- provides a means to identify non-standard conditions that management must act upon; and
- lays a foundation for continuous improvement.

Sustaining and continuously improving standard work practices is one of the most important responsibilities of managers. However, very few managers see this as part of their role.

Finally, lean seeks to level work through the process. Certainly some of the concepts discussed above, such as “plan for every process,” will help to level work and



Figure 3: When volume exceeds capacity based upon color folder system, flag is changed to red—triggering pre-established personnel to come support this process.

improve flow. The arrival, or movement of work from step to step, can be better planned as “throw it over the wall” (i.e. “push”) practices are eliminated. The pull systems previously described will help systems regain level when they become imbalanced. Another lean concept that can effectively level work is “batch reduction.”

CREDIT PREP



INVOICE PROCESSING SCHEDULE



Figure 4: Two examples of leveling work in an office are shown above. Each breaks work down into two-hour buckets (literally). This helps to insure that work is being completed in a smooth and steady way. The visual organization allows for easy determination of whether the two-hour goals are being met. If not, action can be taken to maintain flow. Perhaps a “pull” system is triggered.

Office personnel often do not view what they do as batch processing. Typically there is no set batch size or quantity. However, tasks are performed at certain frequencies. In other words, information is allowed to queue up for a period of time, before it

is processed and moved on to the next step. This is, of course, the classic definition of “batch.”

The key is to perform work frequently enough to reduce the pile of work making its way through the system. Leveling should be considered when developing the plan for every process. In this way, the variability in work content and in the movement of work can be reduced,

thereby providing levelness through the system.

The month-end closing process is an example of “un-level” work. Most companies wait until the end of the monthly reporting period to initiate month-end closing activities, resulting in a spike in demand on the resources expected to perform this work. These resources become

stressed, frustration levels increase, and other work is pushed aside until month-end close has been completed. However, the fact of the matter is that as much as 75 percent of month-end closing activities do *not* have to wait until the end of the month to be performed. What would be the benefits of leveling the work on these resources throughout the month?

In fact, the manner in which people and companies organize—or not—their activities contributes to the very problems that they believe make lean not applicable to the office environment. Once companies recognize this, they can begin to overcome their bias that the office is “different.” At that point, the clouds start to lift from their eyes, and they can clearly see that lean thinking most certainly applies. 🌈

For More Information

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