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The Importance of Being Lean: Using Lean Principles and Tools to Improve Acquisitions Workflows

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The Importance of Being Lean: Using Lean Principles and Tools to Improve Acquisitions Workflows

John Novak and Richard J.W. Zwiercan



John: Provides Introduction

We're here to talk with you about how we used Lean principles and tools this past year to understand, evaluate and improve our acquisitions workflow.

What is Lean?

...is to see and eliminate Muda 'waste'
—which is essentially any activity in which absorbs
resources but creates no value.



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RZ: Provides introduction into Lean

- My credentials in process improvement
 - Certificate in process improvement through UNLV Continuing Ed. (four courses taught over a year by Dan Madison)
 - Continuous reading, practice, and application of process improvement methodologies directly and indirectly related to my position at UNLV.
- Poll audience
 - How many of you know have heard of Lean, or process improvement?
- Provide a brief history:
 - Origins of Lean (process improvement) can be traced back to Henry Ford, then to WWII, then to the past 30 years or so with the Toyota Production System, TPS and the Lean Enterprise Institute...
- Discuss basic principles of Lean:
 - To provide value adding to the customer.
- Why we use Lean:
 - To evaluate and improve processes to better serve our users.

Eight Types of Waste

1. **Defects** (any mistakes/errors)
2. **Overproduction** (producing more, sooner, or faster than is required by the process step)
3. **Waiting** (time on hand)
4. **Non-Utilized People** (creativity, ideas, and/or abilities not fully utilized)
5. **Transportation** (unnecessary movement of things)
6. **Inventory** (excess supplies/items; any form of batch and queue processing)
7. **Motion** (unnecessary movement of people's actions)
8. **Extra Processing** (having to do more than is necessary for any process)

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RZ:

- With Lean (Process Improvement), we provide value-adding to the customer by eliminating 'wastes'.
- There are 8 types of waste
- Provide an overview of the eight types of waste:
 - Brief definitions are in the parentheses.

Value Stream Map

A tool used to identify a set of activities required to produce a good/service from conception to delivery that creates flow to deliver 'specified value' and eliminates waste.

Alternative definition: tool that helps you visualize complex work systems so you can address the disconnects, redundancies, and gaps in how work gets done.

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RZ:

Why Value-Stream Mapping is an Essential Tool:

- One of the ways we identify 'waste' is to use a Value-Stream Map
- A Value-Stream Map:
 - Helps to visualize more than just the single-process level
 - It helps to not just see waste but the source of waste
 - Provides common visual-language with staff (e.g. makes decisions about flow apparent...)
 - Forms a basis of an implementation plan
 - Shows linkage between information flow and material flow

“Current State” at UNLV



Image courtesy of Super Furry Librarian <https://www.flickr.com/photos/30976576@N07/>

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JN:

Discuss “current state” at UNLV.

- Mention that current state has lean specific meaning . . . it is the state of our acquisitions before we began mapping.
- Two years ago, underwent big reorganization of our technical services. In the midst of that change, our Director left.
- Now have new director, and she asked Richard and me to understand acquisitions process.
- What we found: three different units/persons reporting to three different supervisors. This makes collaboration difficult.
 - They were doing what they thought was correct; however, no one joined up the dots, understood the big picture, and quality control lacking.

Composition and Goal of Team



Image courtesy of <https://www.flickr.com/photos/thepowermaxstore/>

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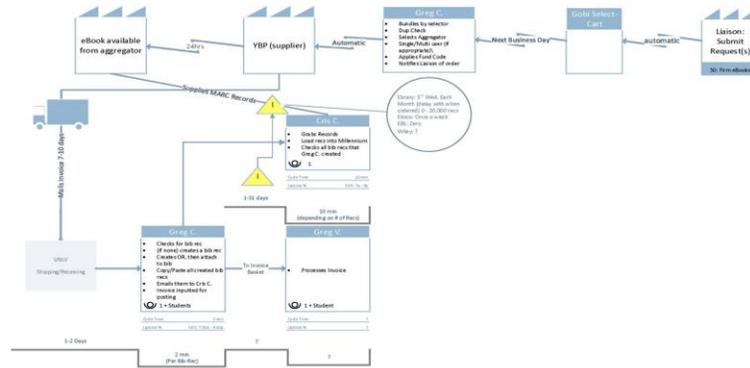
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- Team consists of those who know the process as well as those who can authorize change
 - Director, department heads, and those who did the processing.
 - I facilitated meetings, Richard mapped, and we brought in hands on staff as needed.
 - We mapped print and e-book workflows.

For me, VSM an ideal tool because:

- 1) It would create a visual storyboard that would help create an understanding of the entire workflow from a birds eye view.
- 2) It was a good first step in gaining clarity about a complex process.
- 3) The creation of a VSM would help us plan, communicate, align priorities and build consensus. The process of mapping would encourage inter-department collaboration.

Example of Value Stream Map



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RZ:

- Here's an example of our value-stream used (ebook). Note: we used for print as well.
- What are the key elements of the value-stream map?
 - Flow of information
 - Flow of product/processes
 - Lead time (total time, from start to finish) vs. processing time (actual time it takes to complete the process).
 - Indicators of waste, e.g. inventory, waiting (large discrepancy in time between 'lead time' and 'processing time').

Areas for Improvement

- (Defects) Issues with how records are downloaded
- (Waiting) Issues with vendor timeframe/methods of supplying records:
lead time (1 or 31 days)
- (Inventory) Performing one downloading of records per month
- (Transportation/Motion/Extra Processing)
 - Unnecessary movement of invoices and going back and forth between departments
 - Having to communicate more than necessary between Acquisitions and staff downloading records

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- Marc Record tripping – a lot of hands touching records throughout this process.
- Errors with the records in the catalog and duplication of records.
- Large batches of records being downloaded once per 30 days.

How we changed

1. Workflow changes
2. Reorganization

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- Reorganized to think of fulfillment in a broader context
 - Need to get resources to our patrons faster
 - Delivery to include owned and not-owned materials
 - Synchronizing processes in acquisitions
 - Stronger coordination of the lifecycle management of print and ebook process
- Outsourced record creation to simplify process
 - Aimed to reduce staff efforts associated with workflows

Results we are aiming for with this reorganization

1. members involved in acquisitions can see how their role fits in holistically.
2. We are not in isolation but what we do affects things up the line, and they are doing that work.
3. creating a unified workflow by reporting to one head
4. clearer communication - now we are all reporting to one department head, me, and we have bi-weekly meetings to discuss acquisitions

Future

Continue using Value Stream Map
Process Map
PDCA
Utilize Other Evaluative Tools

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- Exploring ILS systems to meet our new workflow
- Utilizing a formal/informal structure for value-stream mapping
 - Centralized location to reference value-stream maps
 - Continued education of value-stream mapping processes
 - Build a universal language around value-stream mapping
- Plan Do Check Act (a tool used at the micro process level)
- Other Lean tools:
 - Visual management systems
 - Travelers
 - A document that 'travels' with a product through each process step as it travels through various silos. The idea behind a traveler is to document lead-times for large gaps with waiting time.

Further Reading

- Byrne, A. (2013). *The Lean turnaround: How business leaders use Lean principles to create value and transform their company*. New York, NY: McGraw-Hill Companies, Inc.
- Martin, K. (2013). *Value stream mapping: How to visualize work and align leadership for organizational transformation*. New York: McGraw-Hill.
- Rother, M., & Shook, J. *Learning to See*. Brookline, MA: Lean Enterprise Institute, Inc.

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Few readings to help you learn more about Value Stream Mapping

Thank you!

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