Library Technical Services Process Improvement
Based on LEAN

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Introduction

_Lean Thinking_ ...is to see and eliminate _Muda_ ‘waste’ – which is essentially any activity in which absorbs resources but creates no value.

### 8 Types of Waste

- Defects
- Overproduction
- Waiting
- Non-Utilized People
- Transportation
- Inventory
- Motion
- Extra Processing
How do we eliminate those wastes?
Five Principles of Lean

1. Value – specified by the customer/end user
2. Value Stream – value adding activities
3. Flow – sequence of actions
4. Pull – just in time
5. Perfection – continuous improvement
1. Value

Specified by the customer: where meaning is express for a specific good or service, while delivering highest of quality at the lowest possible cost.

2. Value Stream (VS)

Identify a set of activities required to produce a good/service from conception to delivery that creates ‘specified value’ and eliminates waste.
Customers:
  - Subject Liaisons (librarians) & library users (i.e. faculty, students, staff)

Good/Service:
  - Rush/Replacement Orders (2-4 days)
  - Firm Order (5-10 days)
  - 100% Complete/Accurate
Value Stream – Current State

VS Manager
Value Stream – Current State

Errors

- GOBI
  - Retrieve/Make Corrections
  - Submit Orders
  - 2min
  - Clarification errors:
    - 30min-48hrs
    - 5min (minor error)

- GOBI
  - Review selection cart
  - Make corrections
  - 2min (zero errors)

- GOBI
  - process GO-BI orders
  - (check 3-4 x daily)
  - 1min

- Millennium
  - Check Duplicates
  - Added Titles
    - (liaisons will note)

Error Rate:
- 20% error free
- 70% minor errors
- 10% clarification errors
Value Stream – Current State

Shipping

GOBI Shipments

GOBI Shipping:
- Rush 4-5 Days ($10-$15, 2-DAY AIR)
- Firm 1.5 Months ($ Built into contract)

Amazon Prime Member Shipping:
- Rush 2 Days ($0, 2-DAY AIR)

Campus
Receiving
- Receives, sorts, and delivers packages to Library
  10min - 24hrs

Library
Receiving
- Sorts and Delivers Packages to Acquisitions
  5min

Acquisitions
- Unpacks
- Verifies items with invoice
  1hr

10min
Value Stream – Current State

Do we create value for the customer?

Value Desired

Customer(s)
- Liaison Librarians/Branch Heads
- Faculty
- Library Users
  - Monographs
  - Rush/Replacements 2-4 days
  - Firm Orders 5-10 days
  - 100% complete/accurate

Value Stream: Current State – Value Creating?

Total Production
Lead Time = 13.3 days (Rush)
1.75 months (Firm)

Total Process Time = 45min (zero errors)
1.2hrs (minor errors)
Next Step:
Establishing a *Future State*
3. FLOW

All steps required proceed through the value stream in a continuous flow without: backflow, scrap, and/or stoppages.

Media Process in BMS

• Process Redesign
• Flowchart
• Travelers
Process Redesign

“As-Is” Flowchart: Media Process in BMS
<table>
<thead>
<tr>
<th>Activity</th>
<th>Started Work Date</th>
<th>Time worked on the Item</th>
<th>Sent Out Date</th>
<th>Initials</th>
<th>Comments</th>
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“New” Flowchart: Media Process in BMS

1. Receive in BMS
2. Cyrus pickup from cart in BMS; barcode as necessary, and cataloged
3. Students capture call number and hub labels
4. Deliver to Media or place in mail bins for delivery to branches
Flowchart: Comparison

"As-Is" Flowchart of Media Process in BMS

1. Receive in BMS
2. Students barcode, property stamp
3. Checked by Serials Librarian, as necessary
4. Placed on Media shelves for cataloging
5. Media cataloged
6. Students capture call number and hub labels
7. Deliver to Media or place in mail bins for delivery to branches

"New" Flowchart of Media Process in BMS

1. Receive in BMS
2. Cyrus pickup from cart in BMS; barcode as necessary; and cataloged
3. Students capture call number and hub labels
4. Deliver to Media or place in mail bins for delivery to branches
4. **PULL**

*Tasks are taken by employees when they are ready for more work.*

**Eliminate Scheduled Tasks**

- Prioritized list of daily tasks
- Next person does next task
- Reduce inventory/waiting
5. PERFECION

All activities along a value stream create value.

Shelving Accuracy Tracking

• Main purpose of Stacks
• How do we add value for users?
Establish the goal.

Design method to track data.

Phase-in new procedures.
### Shelves Accuracies

**Goal is 100%**

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- **January**: 96.79%
- **February**: 94.40%
- **March**: 96.25%
- **April**: 95.68%
- **May**: 100.00%
- **Spring 2012 Average**: 96.65%
DATA FOR INITIAL AS-IS STATE
Assess first round of data

Why was goal not attained?

Implement new idea:

• Incorporate Shelf-reading
Assess second round of data

Why was goal not attained?

Implement new ideas:

- Better training
- Reduce Batch Size
RESULTS AFTER SECOND REVISION
“...If I find 10,000 ways something won't work, I haven't failed. I am not discouraged, because every wrong attempt discarded is often a step forward...”

Thomas A. Edison
QUESTIONS?
REFERENCES


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