

Lean Thinking Applied to Information Processes

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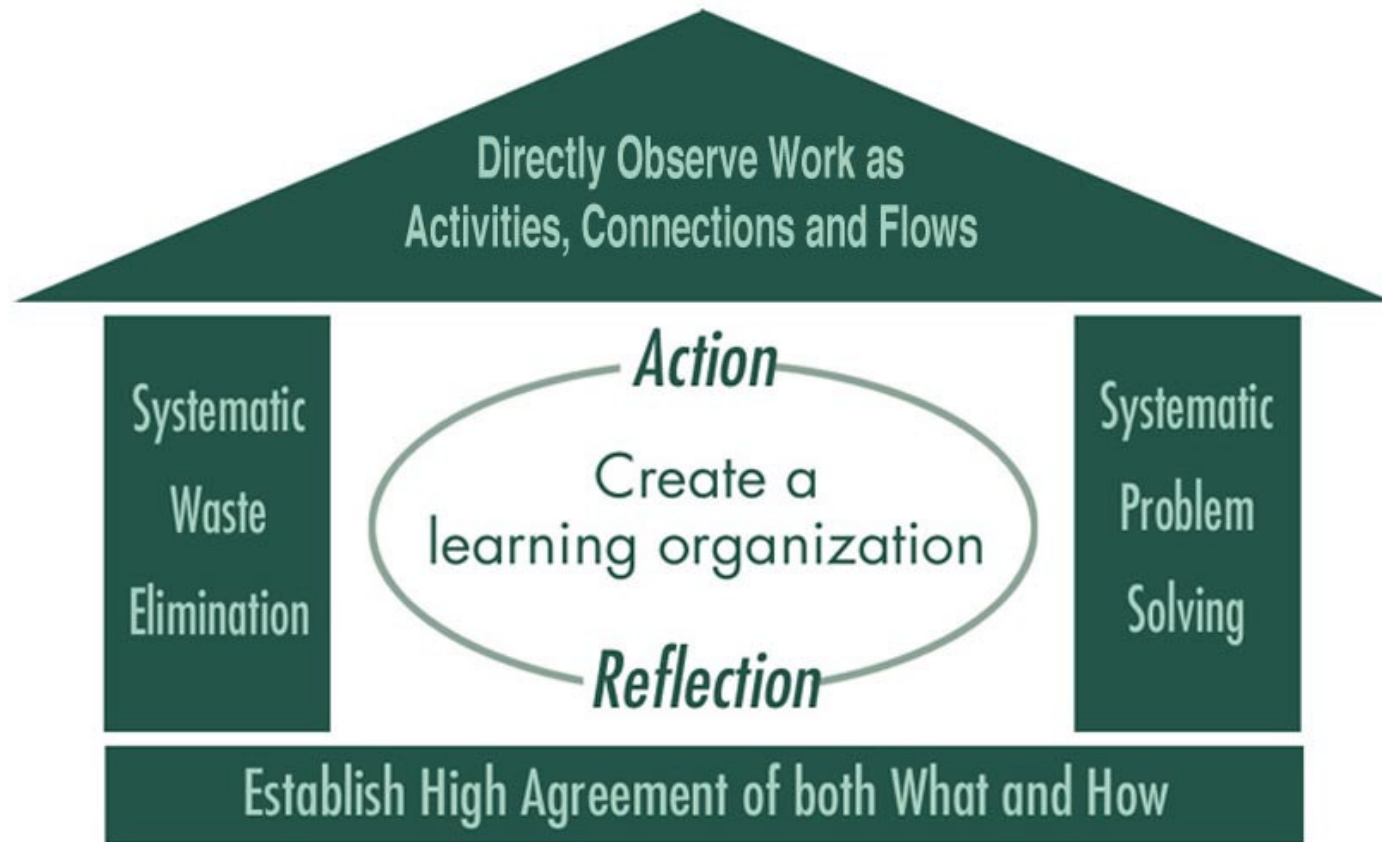
What is Lean?

Lean Manufacturing became “popularized” with TPS
Really Started with Henry Ford

When are you Lean?

Lean is a Process Focused on Effective, Efficient
& Sustainable Practices

Lean Principles



Lean Rules

Structure every Activity

Clearly Connect every Customer &
Supplier

Specify and Simplify every Flow Path

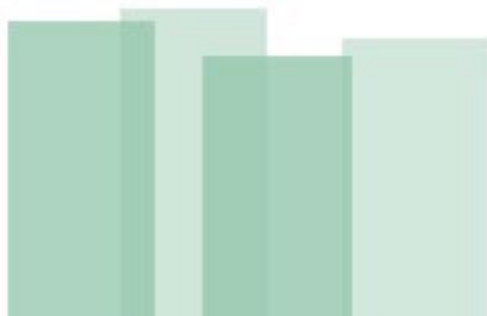
Improve Through Experimentation

Does Lean Thinking Apply to IT?



3 days

Recently challenged to reduced the manufacturing time of a primary assembly.



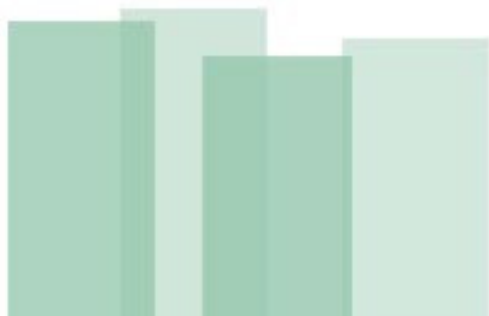
Successfully Reduced The Manufacturing Time to 11 Hours!



3 days

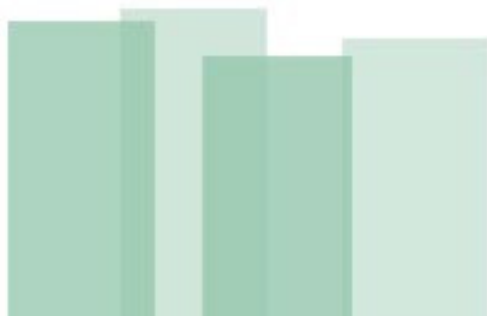


11 hrs



Customer Not Happy

Products Still take too long to Ship



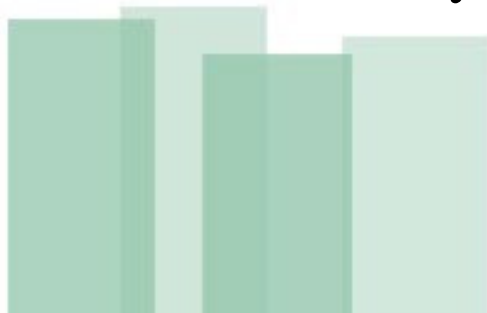
Total Order Cycle Only Reduced from 18 Days to 16 Days.



15 Days OE + 3 Days Manufacturing = 18 Days Total



15 Days OE + 1 Day Manufacturing = 16 Days Total



Successfully Reduced The OE Time to 3 Days!

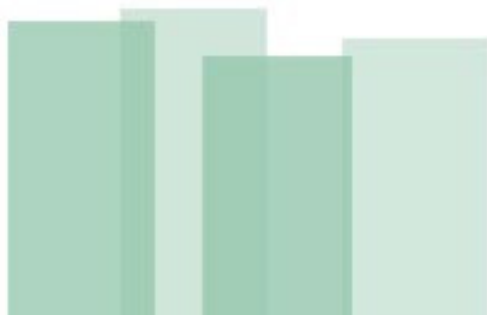


15 days



3 Days

Total order cycle time reduced from 18 days to four days



Lean Thinking Does Apply to IT!

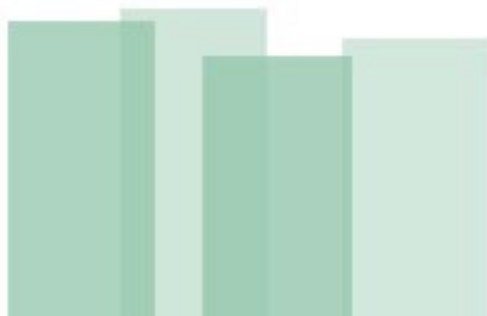
While Lean has its roots in manufacturing, it really applies to everything in business, even IT

May be Harder to See

Usually Harder to Implement

Impact may be even greater (it is worth the effort)

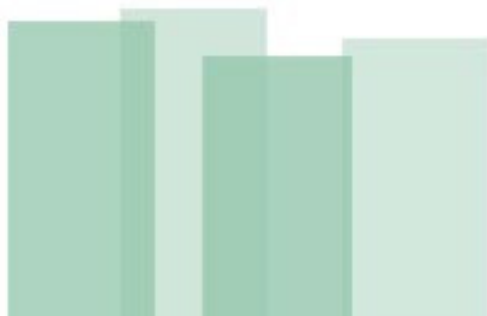
(CMMi, ISO, RUP and ITIL all have pieces of Lean in them!)



Two Key Areas to Focus On

1 - Waste Elimination

2 - Process Improvement Sustainability



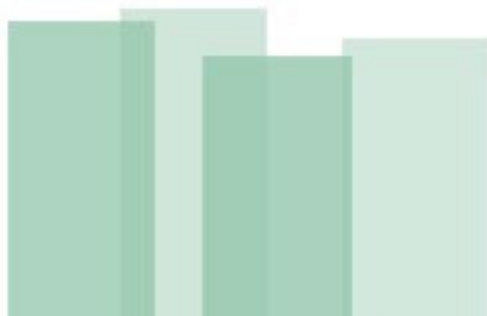
Identify Opportunities

Where is the waste in the process?



What is Waste?

Waste is anything beyond the absolute minimum amount of materials, manpower and machinery needed to add value to a product or service



Value-added Example

Football Game

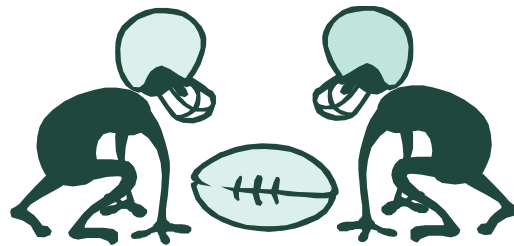
Elapsed Time = 180 minutes

Regulation Time = 60 minutes

Penalties = 6 minutes

Active Playing Time = 18 minutes

Value-Added= 10%



The Customer Lens -- Value Added Activities

Value added activities...

1. Must be an activity the customer is willing to pay for
2. Must change the product
3. Must be done right the first time.

Must meet all three criteria

7 Types of Waste

- **Overproduction**
- **Waiting**
- **Transportation**
- **Overprocessing**
- **Inventory**
- **Motion**
- **Defects**

Examples

- ◎ Changes, copies, files, storage
- ◎ Takt time vs. cycle time
- ◎ Distribution
- ◎ Processing
- ◎ Excess documentation, procedures, work backlogs
- ◎ Walking, keystrokes
- ◎ Errors
- ◎ Incomplete information
- ◎ Multiple data entry
- ◎ Inspection/approvals
- ◎ Handoffs
- ◎ Inventory (forms, stationary, multiple copies)

Create simple processes:

Eliminate duplication

Promote standardization

Improve cycle times

Eliminate non-value added activities

Improve lead times

Eliminate errors

DOCUMENT	NO. OF WORDS
Lords Prayer	57
Ten Commandments	71
Gettysburg Address	246
Declaration of Independence	300
U.S. Government Contractor Management Evaluation	38,000

Hurdles for Successful Data Delivery

Accessible, Accurate and Available

Timely and Pertinent

Concise, Complete and Understandable

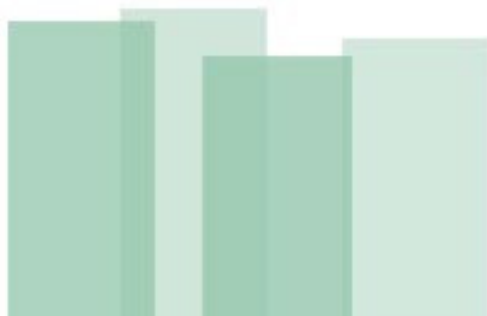
Consistent Form and Terminology

Sustainability?

How many capture lessons learned?

Do you have an effective method to search your lessons learned database (what is the required search criteria?)

Do you have a method to systematically use lessons learned to improve your processes?



Create a Learning Organization!

Every problem is an improvement opportunity!

Build a culture that stops to fix problems

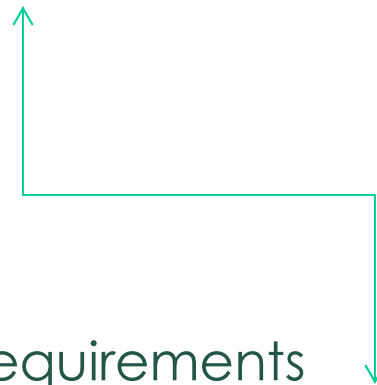
Use Plan-Do-Check-Act

Use After Action Reviews (AAR)

Include a “Feedback Loop” in all Processes

Requirements

- Use case
 - Test Case
 - UAT
 - Traceability to Requirements



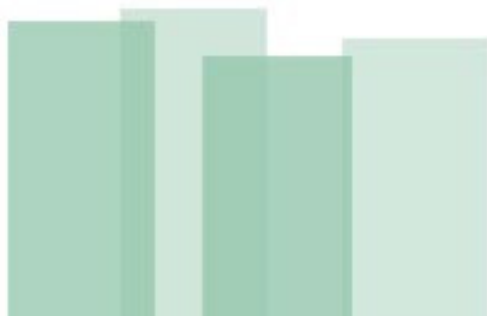
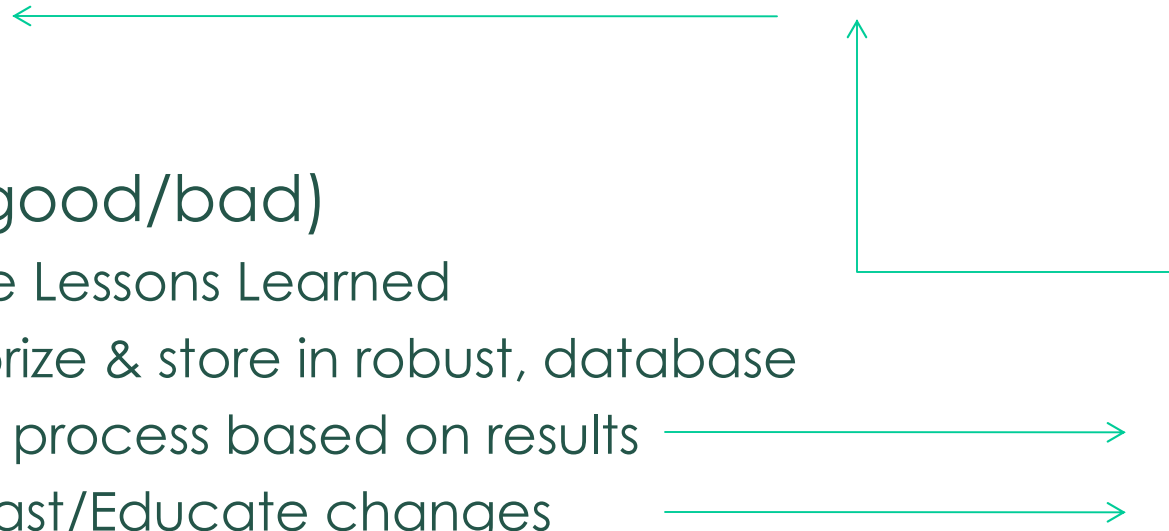
Include a “Feedback Loop” in Lessons Learned

Process

- Execution

- Results (good/bad)

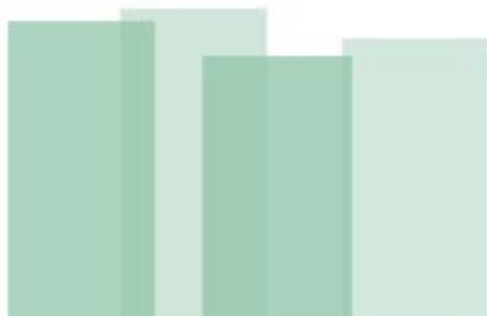
- Capture Lessons Learned
 - Categorize & store in robust, database
 - Update process based on results
 - Broadcast/Educate changes



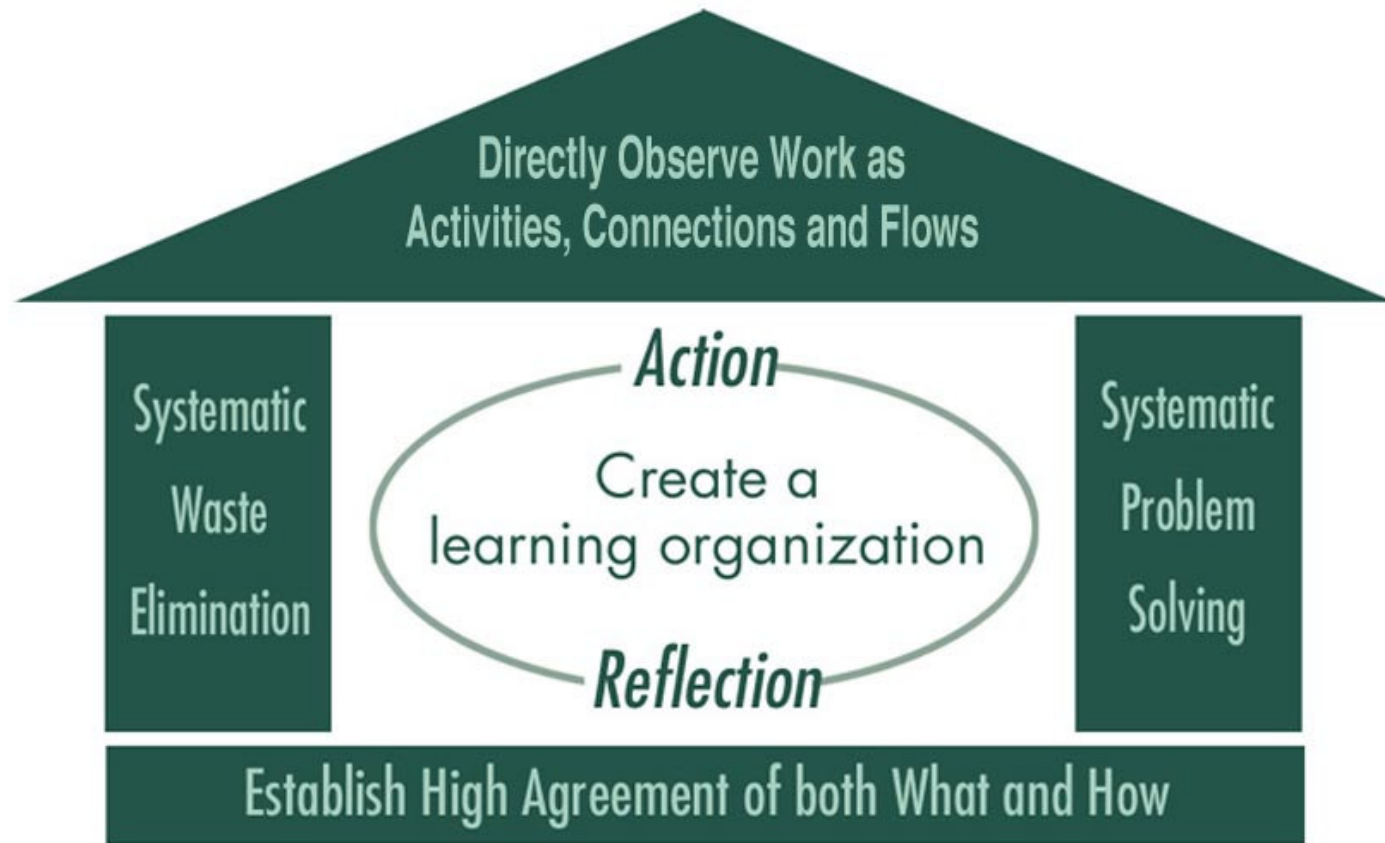
Create a learning organization!

This is the Single Most Important Concept!

One concept really missing from most IT
Organizations and Methodologies



Lean Principles



Bill's Lean IT & PM Principles

Standardize, Simplify and Connect all Activities

Focus on Systematic Root Cause Problem Solving
and Waste Elimination

Use “Plan-Do-Check-Act” to Focus on Process Improvement
(Not Punishment)

Create a Learning Organization!

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