Introduction to Continuous Improvement

Solving Problems That Change Lives

Agenda

- Welcome
- Introductions
- CI overview
- Simulation Activity
  - Round 1
  - Round 2
  - Round 3
- Lean video & discussion
- Your role in CI
Course Objectives

• Understand the concept of “customer value”

• Begin to SEE the 8 wastes in our processes

• Learn about Continuous Improvement
  – Apply Lean methods and tools to remove process wastes

What is Continuous Improvement?

• Continuous improvement (CI) is an ongoing effort to improve products, services, and processes.
Why Should CI Be Important to Me?

Status Quo

- Increasing performance expectations
- Shrinking workforce
- Aging population
- Public pressure for greater accountability and transparency
- Increasing customer expectations
- Declining or static budgets
- Increasing employee retirement rate

Sense of Urgency for Change!

CI Beliefs / Values

Handout: What is Continuous Improvement?

- Customer focus
- Data-driven decisions
- Focus on Results
- Respect
- Performance Excellence
Voice of the Customer

Customer Focus:

• Who are our customers/stakeholders?
• Who are our end-user customers?
• What do they want/need?

How is Value Defined?

<table>
<thead>
<tr>
<th>Value-Added Steps</th>
<th>Value-Enabling Steps</th>
<th>Non Value-Added Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Physically changes the product/service</td>
<td></td>
<td></td>
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<tr>
<td>• Customer is willing to pay for the activity</td>
<td></td>
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<tr>
<td>• Done correctly the first time</td>
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<tr>
<td>• Allows Value-Added tasks to be done better, faster, and in compliance</td>
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<tr>
<td>• Consumers resources without creating value for the customer (CYA and 8 Wastes)</td>
<td></td>
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<tr>
<td>• Customer is not willing to pay for the activity</td>
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</table>

1-10% of typical process steps are value-added
Why Measure?

Data Driven Decisions:

• To determine customer needs
• To understand the process
• To identify problems and root causes
• To assess improvements
• To communicate progress

Focus on Results

• Begin with the end in mind
• Set SMART goals
• Follow through on commitments
• Hold others accountable
• Monitor progress
• Share results
Respect

- Design processes for employee successes
- Involve and empower employees
- Provide resources
- See where the work is done
  - Learn-Do-Coach
- Collaborate
- Model and reinforce desired behaviors

CI Supports Diversity & Inclusion

Cl = Diversity and Inclusion

“We allow our ignorance to prevail upon us and make us think we can survive alone, alone in patches, alone in groups, alone in races, even alone in genders.”

- Maya Angelou

Reduces Bias  Requires Diversity of Thought  Needs us ALL!

CI is about Equity, not Equality
Performance Excellence

- Challenge the status quo
- Apply best practices (Lean, Six Sigma, Baldrige, Balanced Scorecard, RBA, etc.)
- Innovate
- Learn from experience

In Summary ...

- No process is perfect.
- All processes can be improved.
- Lean provides a time-tested, non-blaming method and set of principles and tools to improve service quality and efficiency by removing process wastes & standardizing work.
Simulation Roles:

- Director (instructor)
- 1 Administrator
- 4 Technicians
- 1 Supervisor
- 1 Materials Coordinator
- 1 Customer
- Observers

Minnesota Statutes XYZ
Regulation on Permitting

Every permit shall be on a yellow post-it note with 2 red dots, 2 green dots, 1 yellow dot, and 1 blue dot. The yellow dot shall go in the lower left, the red dots shall go in the middle, the blue dot shall go in the upper right, and the green dots shall go in the two remaining quadrants. The yellow dot must be placed first, followed by the two red dots, followed by the blue dot, followed by the green dots. Failure to produce the permit as outlined above shall be punished pursuant to Minnesota Law.
Round 1

- 5 minutes
- Create permits in batches of 5
- Complete as many permits as possible
- Only Materials Coordinator moves materials
- Stick to your role (don’t change the process)

MN Permit

- Yellow: lower left
- Reds: middle
- Blue: upper right
- Greens: upper left and lower right
Measure Round 1 – Current State

1. Permits completed
2. Correct permits (no defects)
3. Percent complete and accurate (complete and accurate / completed X 100)
4. Incomplete permits in process (WIP)
5. Permits/minute (completed/ minutes)
6. Customer wait time
7. FTEs
8. Work space (building)
What CI concepts and tools could we use to improve this process?

Let’s Consider ...

Lean Methodology

- Adopt, adjust or abandon?
- Did we achieve our goals?
- Measure performance
- What results do we want?
- What’s going on?
- Why?
- Identify, select, and implement improvements
Lean Principles

1. Define value from the standpoint of the end customer.
2. Enhance value by eliminating steps that do not add value – “Learn to See”.
3. Create flow by making the steps occur in tight sequence – “one stop shopping” goal.
4. Let the customers pull value from the process by keeping pace with the rate of customer demand (e.g., customer can order the product or service when they want and the way they want it, versus having the product/service pushed to them).
5. Continuously improve and strive for the “Ideal” process.

Source: Womack & Jones, 1996

The “Ideal” Process

• Completed by one person
• Completed one at a time (no batching)
• Completed as soon as requested
• Completed without interruption (flow)
• Completed with information provided
• Completed correctly the first time (no defects)

Handouts:
   – What is Continuous Improvement? – Ideal Process
   – Process Issues and Solution
8 Wastes to Eliminate

1. Defects
2. Overproduction
3. Waiting
4. Non-utilized staff talent
5. Transportation
6. Inventory
7. Motion
8. Extra processing

Handout:
- “Identifying and Removing Process Wastes”

Observations of Round 1

- What did you observe?
- Where were the 8 wastes?
- How close are we to the ideal process?
- What worked?
- What didn’t work?
- Does the process reflect CI values and Lean principles?
Improve

Condition: job descriptions cannot change and 40 permit goal

1. Brainstorm improvement ideas
2. Write down your recommended improvements
3. Get Director’s approval of recommendations
4. Implement improvements

Round 2

• 4 minutes
• Goal: complete 40 permits
• Complete as many permits as possible
• Process may have changed, but roles have not
MN Permit

Green  Blue

Red Red

Yellow  Green

Round 2

5:00
Measure Round 2

1. Permits completed
2. Correct permits (no defects)
3. Percent complete and accurate (complete and accurate / completed X 100)
4. Incomplete permits in process (WIP)
5. Permits/minute (completed/ minutes)
6. Customer wait time
7. FTEs
8. Work space (building)

Let’s Consider ...

- That was better, right?
- What more CI concepts and tools could we use to improve this process?
**5S**

A simple method for creating a clean, safe, orderly, high performance work environment.

- **Sort**
  - Remove items not needed

- **Set in Order**
  - Establish a place for every item and keep items in their place (visual management)

- **Shine**
  - Keep the area clean

- **Standardize**
  - Create a routine to sustain the first 3 Ss

- **Sustain**
  - Put structures and measures in place to maintain and improve the first 4 Ss
  - 6th “S” for “Safety”

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**Standard Work**

The best way to perform the process.

1. Determine customer requirements
2. Define most efficient steps and time for each step
3. Create forms/documents – Document the process
4. Set quality control checks
5. Train supervisors and staff
6. Validate standard work
7. Continuously improve (PDSA)

Handout: CI Concepts and Tools
Error Proofing (Poka-yoke)

- Make it impossible or difficult to do a process step incorrectly
- What examples can you think of?

Visual Management

A communication device that tells, at a glance, how work should be done.

- Where items belong
- How many items
- Standard procedure
- Work-in-process (WIP)
- There is only one place to put each item.
Observations of Round 2

- What did you observe?
- Where were the 8 wastes?
- How close are we to the ideal process?
- What worked?
- What didn’t work?
- Does the process reflect CI values and Lean principles?

Improve

Condition: One dot technician retires and the position will not be filled. We will have only 2.5 minutes for this round.

1. Brainstorm improvement ideas
2. Write down your recommended improvements
3. Get Director’s approval of recommendations
4. Implement improvements
MN Permit

Round 3

5:00
Measure Round 3

1. Permits completed
2. Correct permits (no defects)
3. Percent complete and accurate (complete and accurate / completed X 100)
4. Incomplete permits in process (WIP)
5. Permits/minute (completed/ 5 minutes)
6. Customer wait time
7. FTEs
8. Work space (building)

Observations of Round 3

• What did you observe? What changed?
• Where were the 8 wastes?
• How close are we to the ideal process?
• What worked?
• What didn’t work?
• Does the process reflect CI values and Lean principles?
Meals per Hour Video

Actions You Can Take

- Ask customers what they need and how they prefer to get their services
- 5S your desk, network drive or common work area
- Develop standard work
- Measure performance (sign up for process improvement measurement training!)
- Visit mn.gov/CI to learn more about CI and get access to CI resources and tools

What CI actions will you take to improve performance?
Learn More!

- Website: [http://mn.gov/admin/government/continuous-improvement/](http://mn.gov/admin/government/continuous-improvement/)
  - Course catalog, tools, contact information.
- Twitter: CI_Minnesota
  - First to hear CI news and information, course registrations.
- Newsletter: [http://mn.gov/admin/lean/resources/newsletter/](http://mn.gov/admin/lean/resources/newsletter/)
- Contact: CI@state.mn.us

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Thanks for Participating!

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