

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



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What is Continuous Improvement?



- Continuous improvement (CI) is an ongoing effort to improve products, services, and processes.



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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!



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CI Beliefs / Values

Handout: [What is Continuous Improvement?](#)

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



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Voice of the Customer



Customer Focus:

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



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How is Value Defined?



Value-Added Steps

- Physically changes the product/service
- Customer is willing to pay for the activity
- Done correctly the first time

Value-Enabling Steps

- Allows Value-Added tasks to be done better, faster, and in compliance

Non Value-Added Steps

- Consumers resources without creating value for the customer (CYA and 8 Wastes)
- Customer is not willing to pay for the activity



1-10 % of typical process steps are value-added

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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



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Focus on Results



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



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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



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CI Supports Diversity & Inclusion



CI = 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



CI is about Equity, not Equality



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Performance Excellence



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



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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.



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Dept. of Permitting (DOP)



Simulation Roles:

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



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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.



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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)



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MN Permit



- Yellow: lower left
- Reds: middle
- Blue: upper right
- Greens: upper left and lower right



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Round 1



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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)



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Let's Consider ...

What CI concepts and tools could we use to improve this process?



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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



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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



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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](#)



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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”



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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?



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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



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Round 2



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



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MN Permit



Green Blue

Red Red

Yellow Green



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Round 2



5:00



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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)



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Let's Consider ...



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



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5S


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

Sort	<ul style="list-style-type: none"> Remove items not needed
Set in Order	<ul style="list-style-type: none"> Establish a place for every item and keep items in their place (visual management)
Shine	<ul style="list-style-type: none"> Keep the area clean
Standardize	<ul style="list-style-type: none"> Create a routine to sustain the first 3 Ss
Sustain	<ul style="list-style-type: none"> 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](#)
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Error Proofing (Poka-yoke)



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



Handout: [CI Concepts and Tools](#)

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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.



Handout: [CI Concepts and Tools](#)

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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?



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Improve



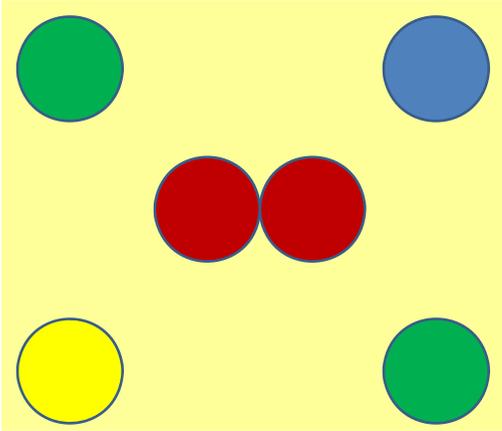
Condition: One dot technician retires and the position will not be filled. We will have only 2.5 minutes for this round.

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



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MN Permit



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Round 3



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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)



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Observations of Round 3

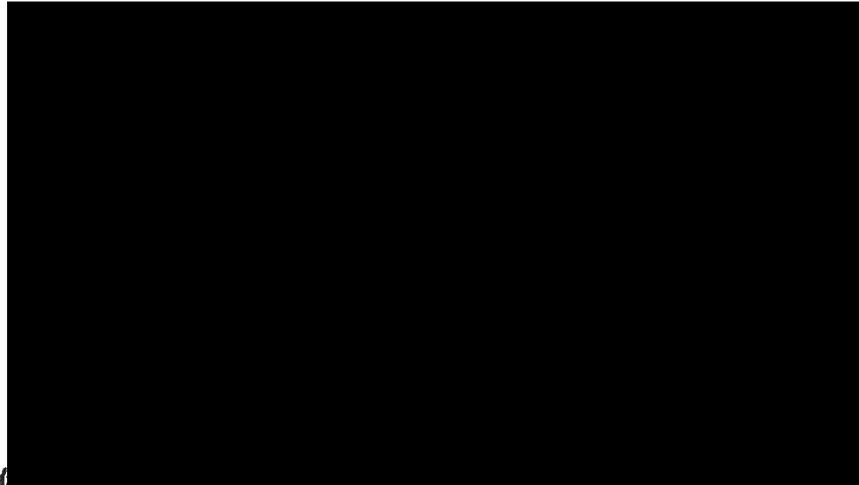


- What did you observe? What changed?
- Where were the 8 wastes?
- How close are we to the ideal process?
- What worked?
- What didn't work?
- Does the process reflect CI values and Lean principles?



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Meals per Hour Video



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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?

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Learn More!



- Website: <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/>
- Contact: CI@state.mn.us

Thanks!



Thanks for Participating!



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