WEBINAR: Developing Lean Supply Chain Problem Solvers
1-Hour Webinar

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Lean Supply Chain Professional Series
Building the Lean Supply Chain Problem Solver
March 10-12, 2015 | September 15-17, 2015
Georgia Tech Global Learning Center

www.scl.gatech.edu/blscps & www.scl.gatech.edu/LEAN
The Lean Enterprise System

The Purpose

Creating Customer Value

The People

Learning Organization

Long Term Thinking

PDCA

Respect For Humanity

Customers & Teacher

Responsibility & Results

Systems Thinker

Problem Solver

“Go See”

Change Agent

The Process

Respect For Humanity

Customer Focus

Waste Elimination

Quality at the Source

Flow - JIT

Stability

Standardization

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Georgia Tech Supply Chain & Logistics Institute
Stewart School of Industrial & Systems Engineering
# Lean Organizations Think Differently

POLL QUESTION:
Where does your organization weigh?  Left (Traditional) or Right (Lean Thinking)

<table>
<thead>
<tr>
<th>Traditional Thinking</th>
<th>Lean Thinking</th>
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<tbody>
<tr>
<td>1  Push - Economies of Scale - Make the Numbers - Unit Cost</td>
<td>Pull - Make (move) only what the customer has ordered</td>
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<tr>
<td>2  Batch and Queue - Make (Order) and Move Big Batches</td>
<td>One Piece Flow - Move small batches and keep them moving</td>
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<tr>
<td>3  No standards or complicated standards hidden in a binder</td>
<td>Simple, visible standards for all critical processes for all to see</td>
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<tr>
<td>4  Move the product, let defects flow down the supply chain</td>
<td>Stop the process immediately - Deal with defects at root cause</td>
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<tr>
<td>5  Engineers solve problems and create the best way to do work</td>
<td>The people doing the work design it and solve the problems</td>
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<tr>
<td>6  Hire brilliant people to try to fix broken processes</td>
<td>Empower regular people to improve upon brilliant processes</td>
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<tr>
<td>7  Hide problems by throwing inventory and resources at them</td>
<td>Expose problems by reducing inventory and resource levels</td>
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<tr>
<td>8  Managers work in offices and manage with data and reports</td>
<td>Managers &quot;go and see&quot; and manage with data and facts</td>
</tr>
<tr>
<td>9  Execute fast and go on to the next &quot;new&quot; thing</td>
<td>Plan, Do, Check, Act...Getting the Right Things Done Right</td>
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<tr>
<td>10 A problem is an unclear opportunity... it is optional to fix it</td>
<td>A problem is a deviation from the standard...it must be fixed</td>
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<tr>
<td>11 The cause of a problem is people... we ask who?</td>
<td>The cause of a problem is the process...we ask why (5 times)</td>
</tr>
<tr>
<td>12 We become defensive if others suggest problems in our area</td>
<td>We are thankful others see what we do not see ourselves</td>
</tr>
<tr>
<td>13 The business is a collection of independent departments</td>
<td>The business is a system of inter-dependent processes</td>
</tr>
<tr>
<td>14 Focus on outputs and cost reduction</td>
<td>Focus on inputs and lead time reduction</td>
</tr>
<tr>
<td>15 If it's not broken, don't fix it</td>
<td>It can always be improved</td>
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Lean Thinking - Fundamentals

- Articulate Your Purpose and Customer Value Proposition
- Build the Learning Organization
- Show Respect for People
- Show Respect for Processes - Stability, Standardization, Quality at the Source
- Make Problems Visible - Solve Problems in Real Time
- Eliminate All Waste - Do Only Those Things That Add Value to the Customer
- Think Long Term as Well as Short Term
- Continuously Improve: Get Better Every Day
- Teach the Power of Process Review and use a simple and standard problem solving model
The Problem Solver

Audience Question: What does this even mean?

1. What is a problem?

2. What are different fundamental types of problems?

3. What is a solver?
This Gap = Problem

“The problem is at the top; management is the problem. You have to manage the system, the system will not manage itself.”

- W.E. Deming
Problem Solving and Process

• What we leaders need to recognize is that most problems are associated with processes.

• Therefore, the Lean Problem Solver needs to be a process thinker.
Lean Thinking 101: Inputs and Outputs

If it’s all about processes, we should know what a process is:

Process: a systematic series of actions directed to some end.

Process Elements

- Supplier
- Input
- Procedure
- Timing
- Output
- Measure
- Customer

\[ Y = f(x) \]

Business is about taking inputs and transforming them into outputs that our customer will see value in. How well we do this determines how well our organization performs.

What is a principle? What are principles inputs?
In a system, a process that occurs will tend to increase the total entropy of the universe.

**Entropy:** A measure of the disorder or randomness in a closed system

**System:** A group of interacting, interrelated, or interdependent elements forming a complex whole.

**Audience Question:** What does this have to do with Problem Solving?
Why Problem Solve?

Growth
Growth Through Continuous Improvement

Apply CI Process

Waste
Value Added Work
Incidental Work

Waste
Value Added Work
Incidental Work
Additional Value Add

CI Results
Application Questions

What are some Problem Solving model examples you use in your organization?

Why is it critical to have formal problem solving models?
### ORLOE Problem Solving Model

<table>
<thead>
<tr>
<th>Operate</th>
<th>Do the Work &amp; Identify the Problem</th>
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<tbody>
<tr>
<td></td>
<td>Plan &amp; perform the work.</td>
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<tr>
<td></td>
<td>Identify gap between plan vs. actual condition.</td>
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<tr>
<th>Review</th>
<th>Define the Problem</th>
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<td></td>
<td>Document &amp; validate current state.</td>
</tr>
<tr>
<td></td>
<td>Develop a clearly defined problem statement.</td>
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<th>Learn</th>
<th>Determine Root Cause</th>
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<td>Identify all possible causes to the problem.</td>
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<tr>
<td></td>
<td>Isolate critical few root causes to the problem.</td>
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<th>Optimize</th>
<th>Identify Solutions</th>
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<td>Develop solutions that address the root causes to the problem.</td>
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<td>Ensure the solutions support the entire value-stream.</td>
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<th>Execute</th>
<th>Implement &amp; Sustain the Solution</th>
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<td>Communicate, train, and Implement the solution.</td>
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<tr>
<td></td>
<td>Measure and monitor the impact of the solution.</td>
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Tools Are a Means, Not the Purpose! But Here Are Some Examples...

- **Shift Readiness**
  - Images showing digital and paper-based shift readiness tools.

- **Level Flow & Takt Time**
  - Images of level flow charts and takt time analysis.

- **Problem Solving Board**
  - Image of a problem-solving board with sticky notes and labels.

- **Picking Visuals**
  - Images of picking areas with visual management tools.
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Thank You for attending

Questions/Comments webinar@scl.gatech.edu

Included w/course

Everything I Know About Lean I Learned in First Grade