Georgia Tech Supply Chain & Logistics Institute
Stewart School of Industrial & Systems Engineering

LeanCor Training and Education

WEBINAR: Developing Lean Supply Chain Problem Solvers

1-Hour Webinar

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Lean Supply Chain Professional Series

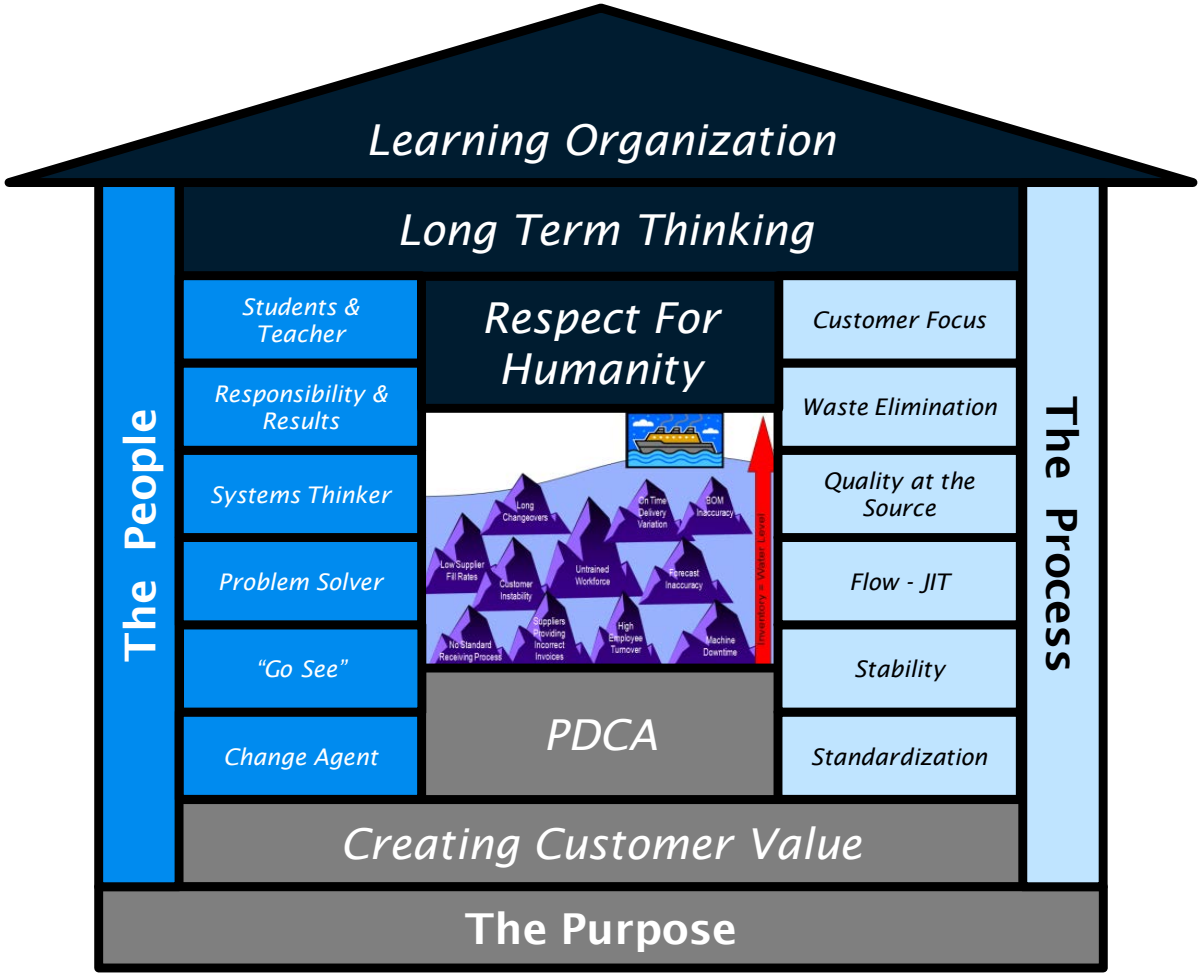
Building the Lean Supply Chain Problem Solver

March 10-12, 2015 | September 15-17, 2015
Georgia Tech Global Learning Center

www.scl.gatech.edu/blscps & www.scl.gatech.edu/LEAN

Advancing the World's Supply Chains

The Lean Enterprise System



Lean Organizations Think Differently

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

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

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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?

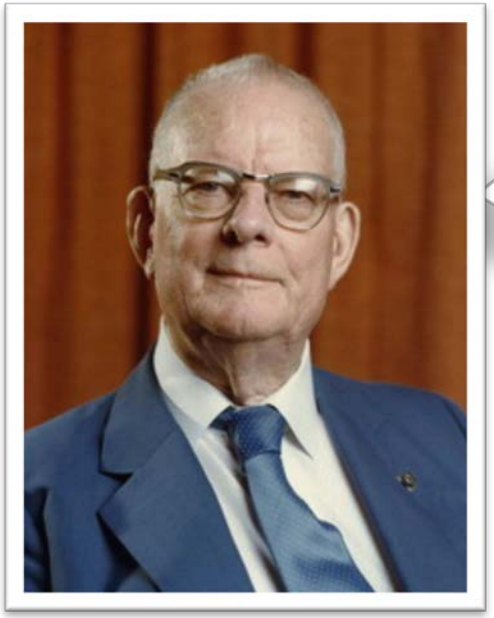
1. What is a problem?

2. What are different fundamental types of problems?

3. What is a solver?

ACTUAL

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

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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 ?

Lean Thinking 102: Second Law of Thermodynamics

In a system, a process that occurs will tend to increase the total entropy of the universe.

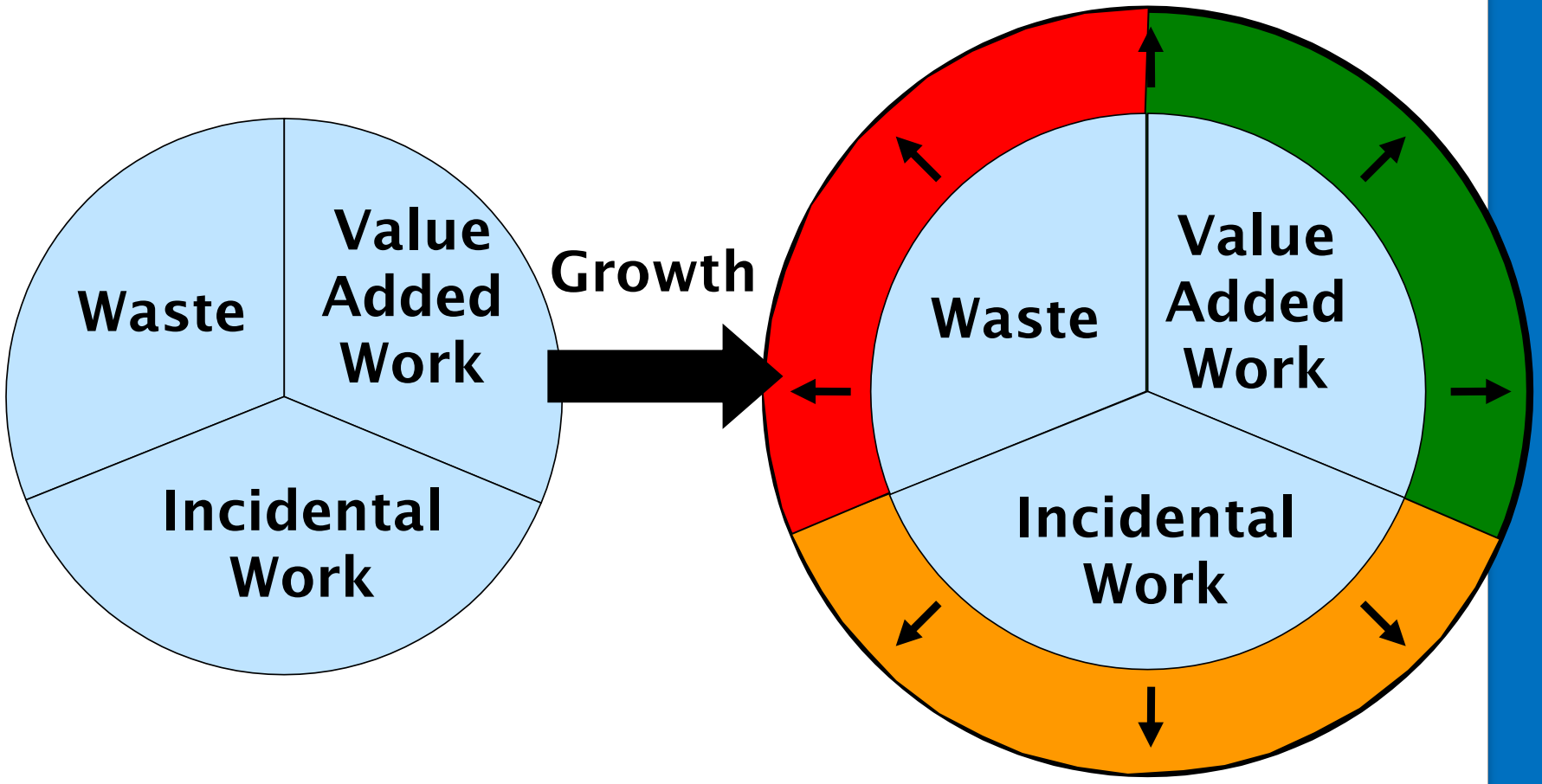
Second law of thermodynamics

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

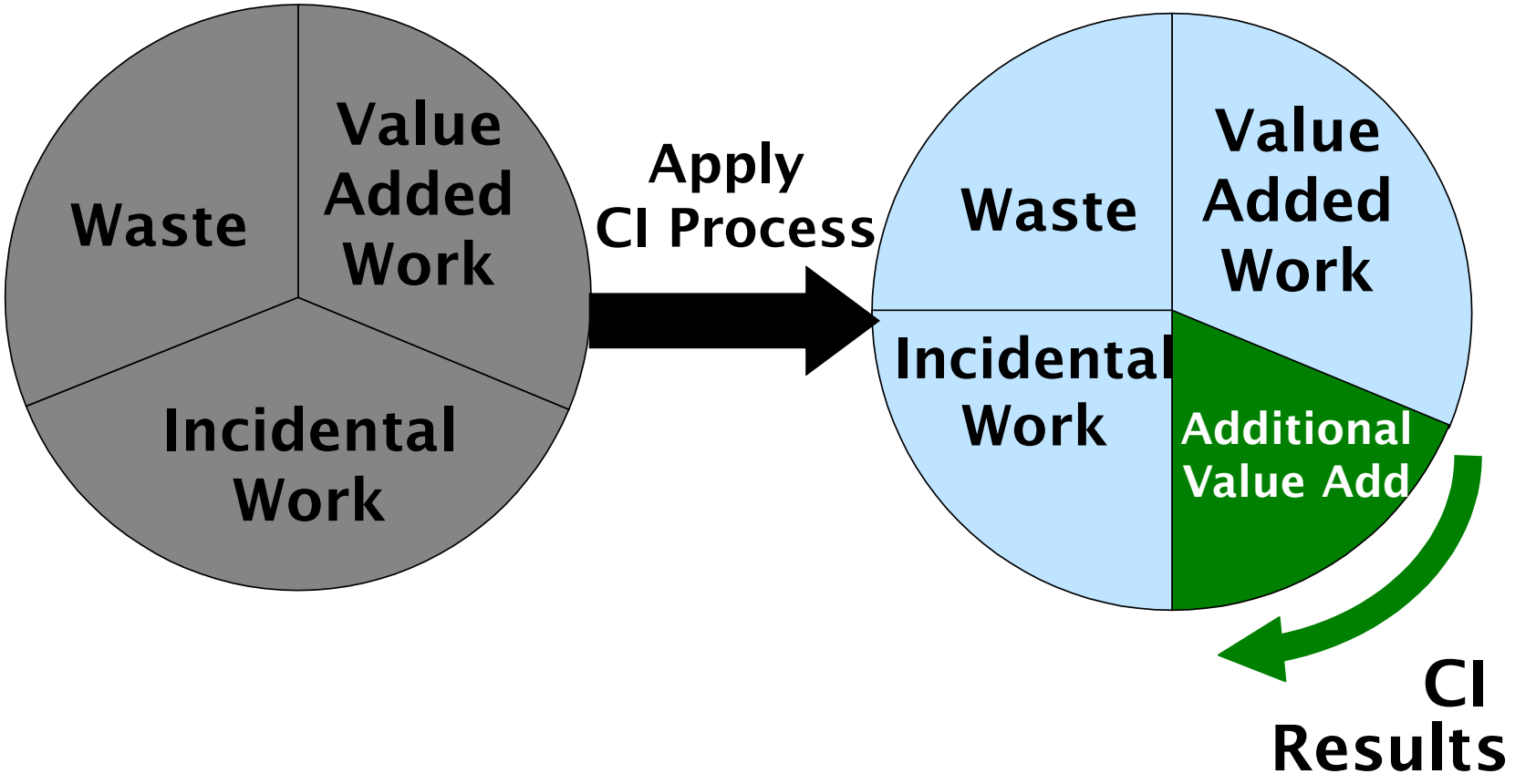
System: *A group of interacting, interrelated, or interdependent elements forming a complex whole.*

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

Why Problem Solve?



Growth Through Continuous Improvement



Application Questions

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

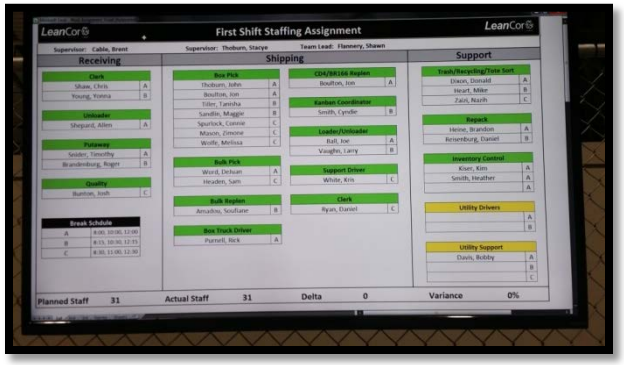
Why is it critical to have formal problem solving models?

ORLOE Problem Solving Model

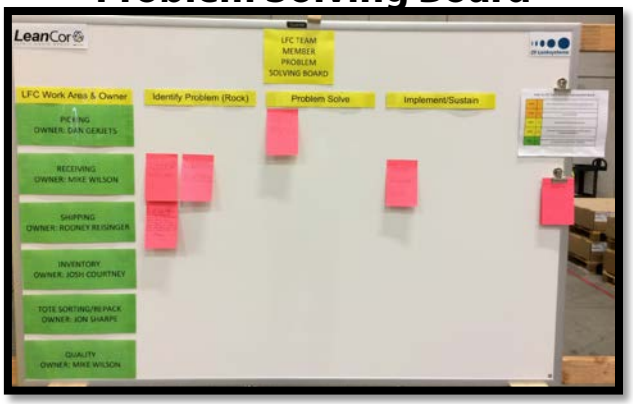
Operate	**Do the Work & Identify the Problem**	
	Plan & perform the work. *Identify gap between plan vs. actual condition.*	
Review	**Define the Problem**	
	Document & validate current state. *Develop a clearly defined problem statement.*	
Learn	**Determine Root Cause**	
	Identify all possible causes to the problem. *Isolate critical few root causes to the problem.*	
Optimize	**Identify Solutions**	
	Develop solutions that address the root causes to the problem. *Ensure the solutions support the entire value-stream.*	
Execute	**Implement & Sustain the Solution**	
	Communicate, train, and Implement the solution. *Measure and monitor the impact of the solution.*	

Tools Are a Means, Not the Purpose! But Here Are Some Examples…

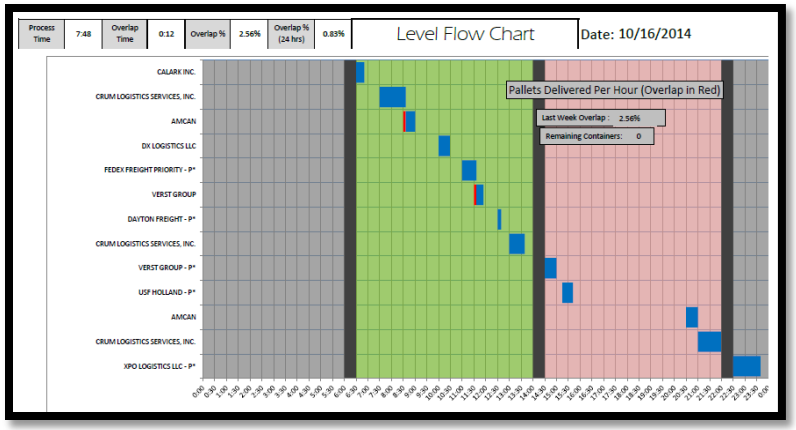
Shift Readiness



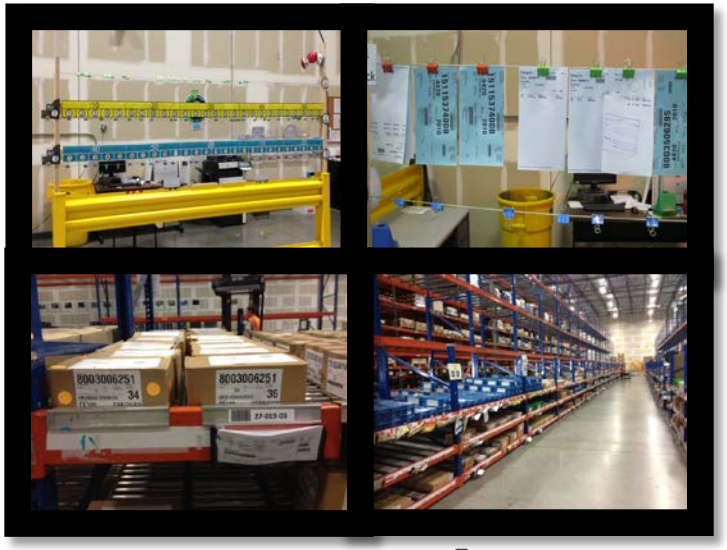
Problem Solving Board



Level Flow & Takt Time



Picking Visuals



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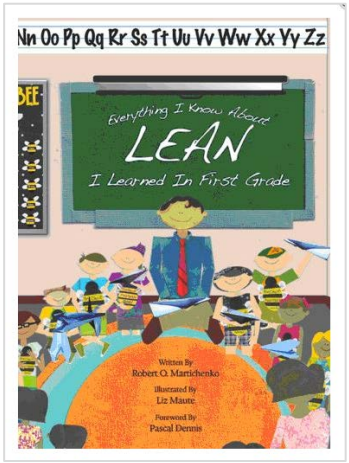

Included w/course

Everything I Know About Lean I Learned in First Grade

Thank You

for attending

Questions/Comments

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