

Developing Lean Supply Chain Problem Solvers



with
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Lean Supply Chain Professional Series

Building the Lean Supply Chain Problem Solver

September 17-19, 2013 | Georgia Tech Campus (Atlanta, GA)

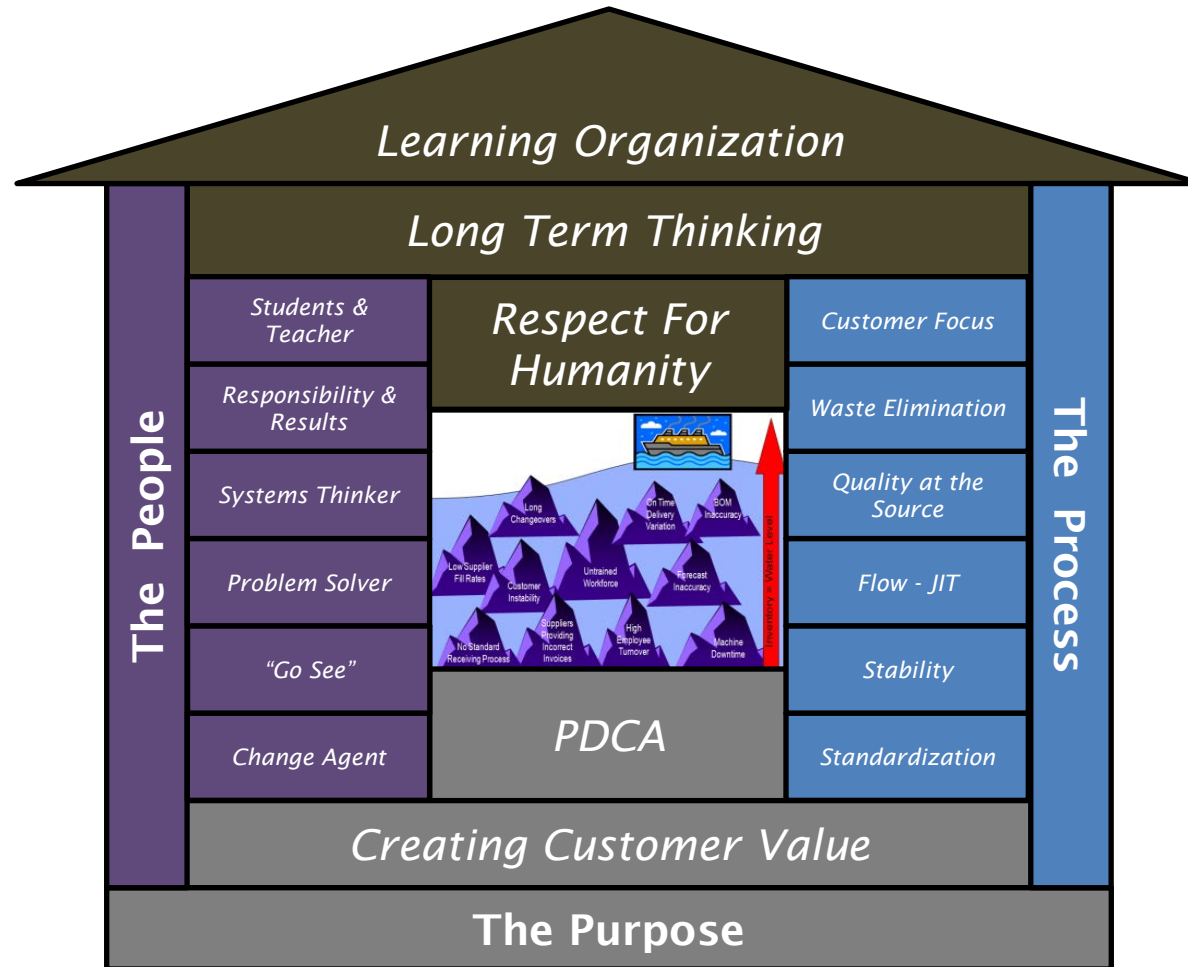
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The Lean Enterprise System



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

What does this even mean ?

→ *What is a problem ?*

→ *What are different types of problems ?*

→ *What is a solver ?*



Problem Solving and Process

- ➔ *What we need to recognize is that most problems are associated with processes.*
- ➔ *Therefore, the Lean Problem Solver needs to be a process thinker.*



Application Question

What is a process?



Brilliant Processes

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.



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.*

What does this have to do with Problem Solving ?



Application Question

Why is it critical to have formal problem solving models ?

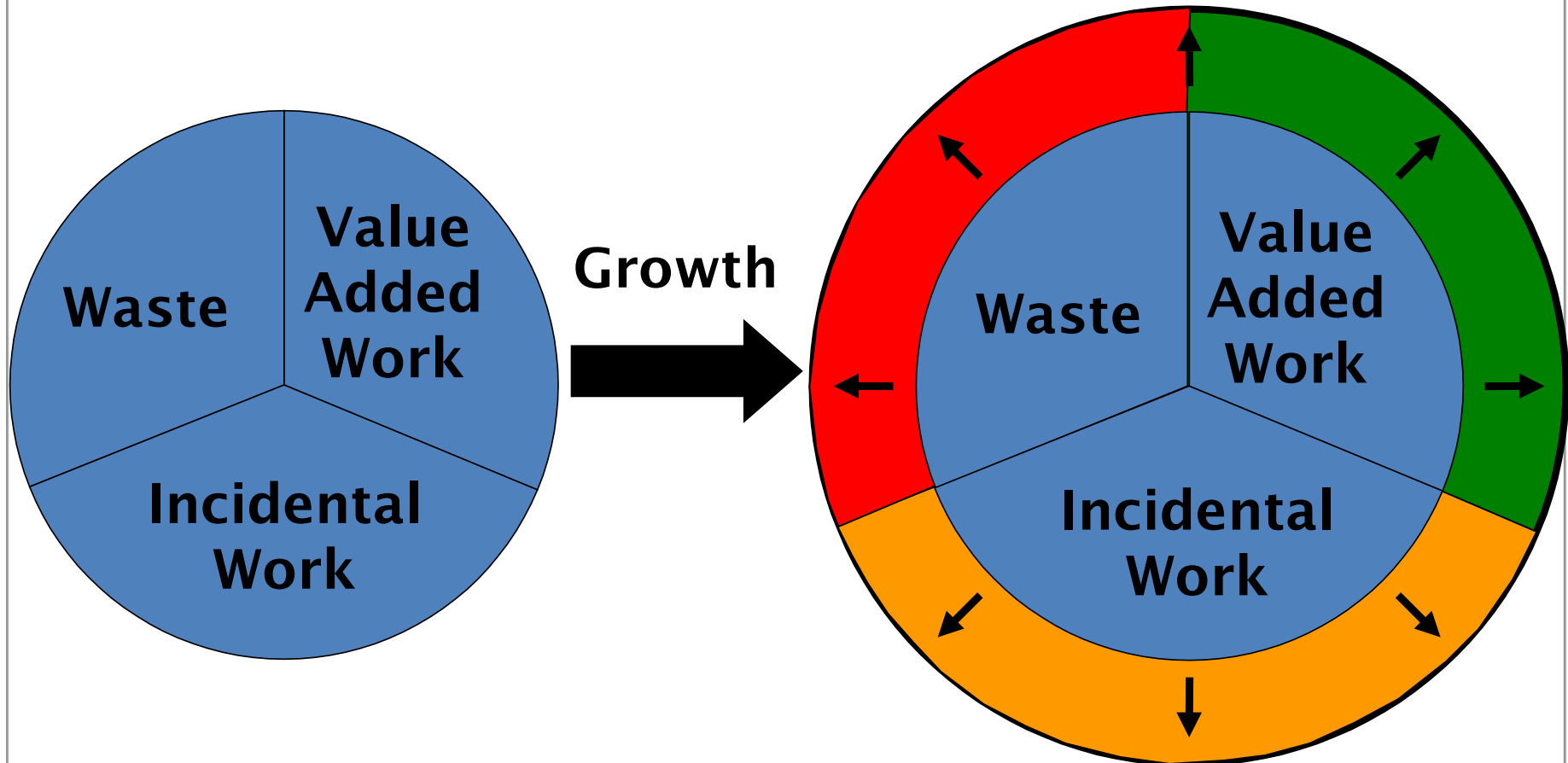


ORLOE Problem Solving Model

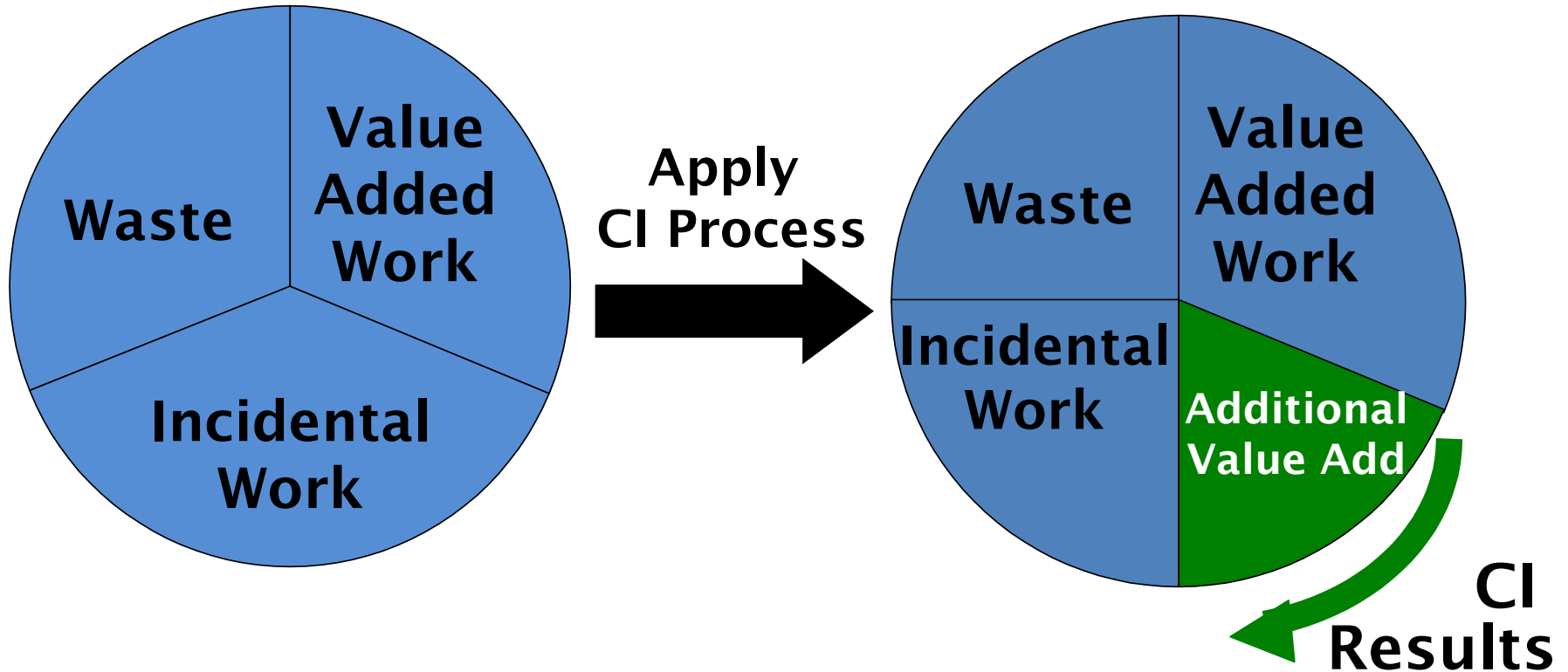
Operate	Do the Work & Identify the Problem
	<i>Plan & perform the work. Identify gap between plan vs. actual condition.</i>
Review	Define the Problem
	<i>Document & validate current state. Develop a clearly defined problem statement.</i>
Learn	Determine Root Cause
	<i>Identify all possible causes to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



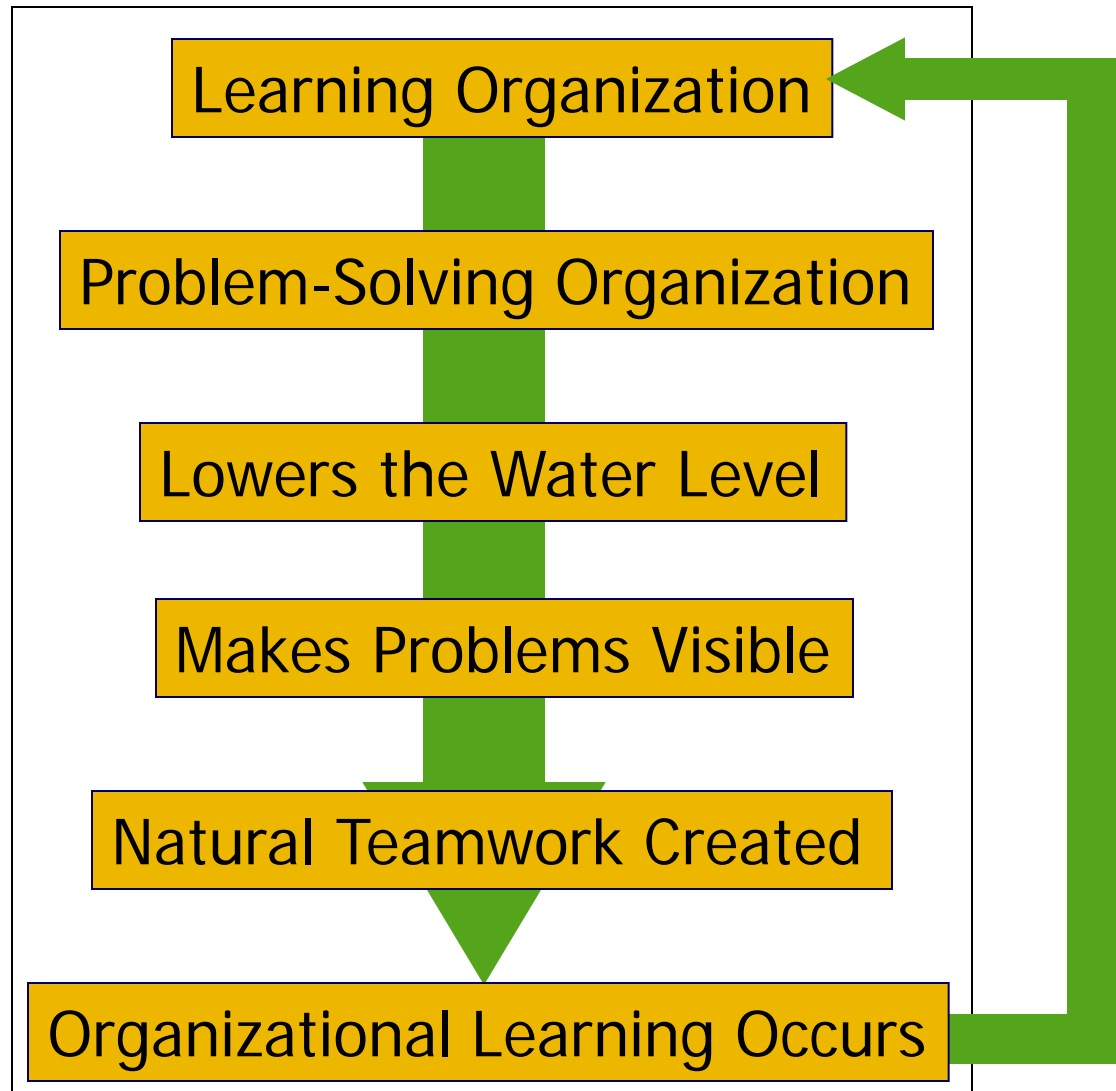
Why Problem Solve?



Growth Through Continuous Improvement



Reinforcing the Learning Organization



Lean Organizations Think Differently

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



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