Building a Culture of Innovation through Lean Six Sigma and Learning Organization Principles

US Senate Productivity and Quality Award for Virginia
2012 Forum for Excellence - September 11, 2012
Holiday Inn Koger Executive Center - Richmond, VA

Dan Stonecypher
Fred Salanitro (co-author)
Norfolk Naval Shipyard
Learning Objectives

At the conclusion of this workshop attendees should be able to:

• Define Innovation as it applies throughout the Baldrige Criteria, and specifically to Category 1: Leadership; and Category 5: Workforce Focus

• Define the “softer side” of Lean Six Sigma – engaging people for improvement and Innovation

• Define the five disciplines of Peter Senge’s *The Fifth Discipline* and how they engage people for improvement and Innovation

• Define how the Organization’s Leadership and Workforce engage in successful interaction through Lean Six Sigma and Learning Organization Principals to build an organizational culture for Innovation
• Gauging participant’s level of knowledge in Lean Six Sigma and Learning Organization – please answer the following questions:

  • Lean is aimed at eliminating __ __ __ __ __.
  • Six Sigma is aimed at reducing __ __ __ __ __ __ __ __ __.
  • Theory of Constraints is about reducing/eliminating __ __ __ __ __ __ __ __ __ __ __ __.
  • Learning Organization is aimed at encouraging __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __.
  • Human Behavior influences your process results as much as process improvement efforts (True or False)
Innovation

From The Baldrige Criteria pg. 59

The term “innovation” refers to making meaningful change to improve products, processes, or organizational effectiveness and to create new value for stakeholders. Innovation involves the adoption of an idea, process, technology, product, or business model that is either new or new to its proposed application. The outcome of innovation is a discontinuous or breakthrough change in results, products, or processes.

Successful organizational innovation is a multistep process that involves development and knowledge sharing, a decision to implement, implementation, evaluation, and learning. Although innovation is often associated with technological innovation, it is applicable to all key organizational processes that would benefit from change, whether through breakthrough improvement or a change in approach or outputs. It could include fundamental changes in organizational structure or the business model to more effectively accomplish the organization’s work.
1.1a(3) Creating a sustainable Organization: How do senior leaders create a sustainable organization? How do senior leaders achieve the following?

• Create an environment for organizational **performance improvement**, the accomplishment of your mission and strategic objectives, **innovation**, performance leadership, and organizational agility

*(Baldrige Criteria for Performance Excellence, Page 7, Leadership)*

5.2c(1) Learning and Development System: How does your learning and development system address the following factors for your workforce members and leaders?

• Organizational **performance improvement** and **innovation**

*(Baldrige Criteria for Performance Excellence, Page 19, Workforce Focus)*
Context for Change

• US Navy has a strong history of performance improvement

• Since 2001, there has been a strong emphasis on incorporating Lean, Six Sigma, and Theory of Constraint methodologies

• NAVSEA and specifically NNSY recognized that focusing on process alone (Lean Six Sigma) was not getting the most “bang for the buck”

• Innovation that leads to continuous learning and sustainable change requires effective interaction with People, Process, and Plant
The Softer Side of Lean Six Sigma

- Team Effort
- Empowerment
- Focused Improvement Efforts
- Visual Controls
- Creating a Culture or Mind Set of Process Waste, Variation and Bottleneck Elimination.
- Ergonomics (5 “S”) Point of Use, Poke Yoke
Senge’s Five Disciplines

• Systems Thinking
  o The idea of the learning organization developed from a body of work called systems thinking; also the foundation of the Baldrige Criteria everything is interrelated and interconnected; changes in one area affect other areas

• Personal Mastery
  o The commitment by an individual to the process of learning is known as personal mastery. There is a competitive advantage for an organization whose workforce can learn more quickly

• Mental Models
  o The assumptions held by individuals and organizations are called mental models. To become a learning organization, these models must be challenged. In creating a learning environment it is important to replace confrontational attitudes with an open culture that promotes inquiry and trust.
Senge’s Five Disciplines

• Shared Vision
  - The development of a shared vision is important in motivating the staff to learn, as it creates a common identity that provides focus and energy for learning. The most successful visions build on the individual visions of the employees at all levels of the organization.

• Team Learning
  - The accumulation of individual learning constitutes Team learning. The benefit of team or shared learning is that staff grow more quickly and the problem solving capacity of the organization is improved through developing the skills of learning together as a team.
NNSY’s Learning the Disciplines

• Education/Awareness

3 DAY LO 101 AWARENESS WORKSHOPS
• Cross functional and level
• 49% complete (25% / yr)

4 DAY LO FACILITATOR TRAINING
• Core of LO FAC/BB (20)
• Embedded LO FAC/GB (100)

5 DAY LO 201 TEAM BUILDING WORKSHOPS
• 8-9 areas identified
• 4 stood up
NNSY’s Application of the Disciplines

• Application (Practicing in a Safe Environment)

LEARNING CELLS
(Short Term Facilitated Teams)

- Safe Environment
- LO Facilitator
- 1 hr to 5 days

COMMUNITIES OF PRACTICE (Long Term Facilitated Teams)

- Focus: Product Lines, Project Teams, Systemic Problem Areas
  - Full Time Leader
  - Exists as long as beneficial

NAVSEA
NAVAL SEA SYSTEMS COMMAND
NORFOLK NAVAL SHIPYARD
Encouraging Workforce Innovation with Rapid Deployment of Employee Suggestions through Bright Ideas and Rapid Prototyping.
Integrating with Lean Six Sigma

• Process Improvement becomes Performance Improvement – the improvement comes with people first, improving performance is people, process and plant

• Lean Six Sigma Black Belts become cross functional LO Facilitators to facilitate the application of behavioral changes for performance improvement

• Learning Cells become the first application tool. If problem/issue warrants the Lean Six Sigma toolkit, use Kaizen or create a project
Successes

- The problem is well defined and bounded
- Problem is as close to actual work as possible
- Don’t be satisfied with “shallow answers.” Use Systems Thinking to explore the environment (“Why” – what are the interrelated system components) that created the behavior (more robust causal analysis)
- Management is a participant; all personnel solve the behavior problem(s); with workers recommending sustainment actions
Tools – Using the 5 Disciplines

- Moments of Awareness
  - Causal Loop Diagrams
- Dialogue vs Skillful Discussion
- Lean, Six Sigma and Theory of Constraints Tools
- Advocacy, Inquiry, Reflection
- Loyalty to the Truth
Building a Culture of Innovation

- Define and apply the 5 disciplines – No real starting place; you already have a good feel for Systems Thinking & Team Learning

- Don’t be satisfied with the answer being that a person has to change their behavior. What in their environment (system) is reinforcing the behavior change?

- A person is willing to talk when someone is willing to listen

- Success Builds Momentum

- Use the Whole Tool Box
Learning Organization Resources

Theory

Practice

Sustainment
What other comments or questions do you have?