LEAN ON LEAN

August 26, 2016

Portland PMI ~ Annual Conference

Blue Sky
STRATEGIC SERVICES

Lean Background

Rebecca Knight

Agile Coach, Capital Insurance Group

CEO, Blue Sky Strategic Services

- Lean/Six Sigma Green Belt Credential, *ASU*
- Certified Scrum Master, *Scrum Alliance*
- Adjunct Professor, DeVry University
- Practitioner & Coach Projects
  - Strategic Business Improvement Initiatives
  - Agile Technology Delivery – Software/Infrastructure

Lean Stats

- WHY WE CARE/SHOULD CARE
  - Curious about the similarities and differences?
  - Eliminate wasted time and resources?
  - Discover ideas addressing continuous improvement?

- Industry List Using Lean (outside of manufacturing & software)
  - Healthcare
  - Government
  - Education
  - Law Firm
  - Financial Services

- Industry List From isixsigma.com
  - Transportation & Logistics
  - Retail Industry
  - Pharmaceuticals
  - Insurance
  - Industrial Sector

Simple Pairing

LEAN	SIX SIGMA
"Don't do a process that does not Add Value"	"Once we can identify value added processes let's absolutely minimize the variability and get them in control"
Focus on f<u>low</u>	Focus on the <u>problem</u>

Lean Value

- What does my <u>customer want</u>?

- What is my <u>customer willing to pay</u> for?

- <u>Value streams</u> – Is all work that I do providing value to the customer?

- <u>Pull</u> – Do I do work only when it's needed?

- <u>Flow</u> – Does work flow continuously through the value chain?

- <u>Perfection</u> – How good is the work I perform?

Lean Overview

- Focus is on the FLOW

- "Hurry Slowly" Socrates

- Fail Often-Fail Fast Mindset

Lean Waste

- Two Categories Of Muda

  - Type 1: <u>Necessary</u> (to the strategic value chain)
  - Type 2: <u>Unnecessary</u>

- 7 types of Muda

  1. **C**orrection
  2. **O**verproduction
  3. **M**ovement of Material or Information
  4. **M**otion of Operators
  5. **W**aiting
  6. **I**nventory or Other Resources
  7. **P**rocessing

Lean In Action

- Remove Waste a.k.a ., MUDA
  - Identify Value
  - Identify Value Stream
  - Flow
  - Pull
  - Perfection

Six Sigma Overview

- Motorola is credited developing Six Sigma around 1985
- Focus is on the Problem
- Reduce Variation {DMAIC}
  - **Define -- What problem needs to be solved?**
  - **Measure -- What is the current capability of the process?**
  - **Analyze -- When and where do waste occur?**
  - **Improve -- What are the improvement tools or strategies?**
  - **Control -- What controls or metrics can be put in place to sustain the gain?**

Six Sigma

- **Sigma** is a Greek symbol represented by "σ"

- **Sigma** is a statistical term which measures process deviation from a process mean or target.

- **Mean** is also referred as average in common language

- **Six Sigma** is usually related to the magic number of 3.4 defects per million opportunities

Six Sigma Math

"A rigorous and disciplined methodology that utilizes data and statistical analysis to measure and improve a company's operational performance, practices and systems."

- Data

- Sampling

- Gage R & R (Repeatability & Reproducibility)

- Regression Analysis

- Spaghetti Charting

The Four "T"s

- Theory of Constraints (TOC) = manage constraints

- Tools

- Techniques

- Talents

Theory of Constraints

- Foundational meaning is reflected by the long-time sports analogy " a team is only as strong as it's weakest link".

- Identify Constraints
  - Physical
    - Materials, machines, supplies
  - Non-Physical
    - Behaviors, policies, attitudes

Theory of Constraints

- What To Change?
  - UDEs = Un Desirable Effects
- What To Change To?
  - Root Cause
- How to Cause Change?
  - Implementation of solution

Tools

Lean	Six Sigma
Visual Controls	Control Charts
Error Proofing	Fish Bone Diagrams
Level Schedules	Process Mapping
Process Controls (SPC)	Failure Mode Analysis (FMEA)
Work Place Organization (5s)	Design of Experiments (DOE)

Techniques

- Kanban

- Value Maturity Index (scale of 1 to 5)

- Current State Mapping

- Future State Mapping

- Pareto Principle for a project manager is reminder to focus on the 20% of things that matter

Philosophy Of Complete Elimination Of Waste

Conceptual diagram of the Kanban System

Operational Flow of Production Instruction Kanban **A**

Operational Flow of Parts Retrieval Kanban **A**

< Preceding process >

① Production instruction kanban A is removed when an operator retrieves parts.

② Only the exact number of parts indicated on the kanban are produced.

③ The kanban is attached to the newly produced parts, ready for the next process.

② The operator carries the kanban to retrieve replacement parts.

③ The operator removes the production instruction kanban and replaces it with a parts retrieval kanban.

< Next process >

① The parts retrieval kanban is removed when an operator uses parts.

④ Parts displaying the parts retrieval kanban are transported to the next process.

Lean Talents

- PM Competencies/Credentials: PMP®, PMI-ACP®
- Communication Competencies – creating & using information radiators
- Change Agents
- Culture Stewards
- Statistics & Mathematics Competencies

Use Case - Farming

Use Case – Portfolio Management

LEAN UNITY

- Power of the Unity

  – Combination of the speed and power of *both **Lean** and **Six Sigma***

  – Simultaneous Focus on both Problem (Six Sigma) and Flow (Lean)

  – Blends mathematical based analysis with qualitative discoveries

  – This hybrid approach uncovers latent UDEs

  – <u>Concurrently</u> Addresses Variation and Waste

Lean Focus Thru A Green Belt Lens

- Waste Focused

- Project Based

- Analyze The Aggregate

- Improve The Process

- Sustainable Solutions

Suggested Books

- Lean Farming
- Becoming Lean
- The Fifth Discipline
- The Goal
- The Competitive Advantage of Nations
- The Machine That Changed the World
- The Toyota Way