Introduction to Lean Six Sigma (Part 1)

When City of Tulare, City Manager, Don Dorman, wanted to implement a new continuous Improvement initiative with the goal of becoming an excellent local government, he soon realized that he was talking a language that no one else seemed to be sharing with him.

The challenge was to get everyone on the same page and communicate what improvement meant, and how to move from their current state to the next level of excellence.

To do this Don knew he needed to get the managers and Department Heads to have a common language and a common culture.

Sometimes the staff and managers get upset because they are hard-working and think they are doing the best they can do. The trick becomes in creating a standardized language or approach of identifying waste and working together in a cross-functional way to eliminate it.

In most cases, everyone has their own piece-of-the-action and throws the information over the wall to the next department. Problem solving can be cumbersome in this type of "silo of excellence" environment.

Lean Enterprise is about identifying and eliminating waste by creating a non-threatening scientific way of identifying this waste in any system, and then utilizing standardized tools to eliminate it.

There are "**Seven Classic Wastes**" in Lean Methodology. Waste is called "Muda" in Japanese because the concept of Lean was standardized in Japan and is known as the Toyota Production System (TPS). The concept though, is as American as apple pie.

In the United States, two automotive giants were using time and motion studies and assembly lines at the turn-of the 20th century. Ransom Olds and Henry Ford were the first Americans to use assembly lines for the auto industry in the early 1900's.

There are seven classic identifiable types of waste, or Muda. It doesn't matter if we are building cars or processing building permits. These Seven Classic Wastes are:

1. **Over-production**
2. **Defective product**
3. **Excess Transportation**
4. **Unnecessary process**
5. **Excess Inventory (Your In-Box)**
6. **Waiting & Delays**
7. **Unnecessary motion**

More specifically, we can divide this Muda into several categories:

1. Information Waste
2. Process Waste
3. Physical Environment Waste, and
4. People Waste

Each category has its own set of unique opportunities:

Information Waste

1. Redundant Input and Output of Data
2. Incompatible Information Systems
3. Manual Checking of Data that has been entered electronically
4. Data dead-ends (Input, but never used)
5. Reentering Data
6. Converting Formats
7. Unnecessary Data
8. Unavailable, unknown, or missing Data
9. Unclear or Incorrect Data
10. Data Safety Issues (Lost or incorrect data)
11. Unclear or Incorrect Data Definitions
12. Data Discrepancies

Process Waste

1. Defects
2. Scrap
3. Rework
4. Workarounds
5. Inspecting, checking and double-checking
6. Approvals
7. Variable Flow in the process
8. Too much Inventory (Feast or Famine scheduling or delivery of services)
9. Incomplete Work
10. Overproduction
11. Waiting
12. Over-processing

Physical Environment Waste

Waste related to Safety

1. Poor Ventilation
2. Insufficient Lighting
3. Noise
4. Fire Hazards
5. Faulty Office Furniture
6. Using Tables and Chairs as ladders
7. Unbalanced File Cabinets or unsecured shelving prone to tipping
8. Trip hazards: electrical cords, cables
9. Ergonomic Issues
10. Waste related to the movement of people or objects
11. Walking back and forth long distances or from building to building
12. Physical distance between adjacent processes
13. Covering up the Movement with “batch flow”
14. Walking to a centrally-located Printer or Fax
15. Meetings in other buildings, cities, countries, etc.

And People Waste

1. Unclear Roles, Responsibilities, Authority and accountability
2. Lack of Training
3. Work or Task Interruption
4. Underutilization of Talent
5. Hierarchy and Structure
6. Recruitment Errors
7. Lack of Strategic Focus

The Lean journey can be challenging, but with the right coach can be very rewarding.

In Part 2, we will share a more detailed definition of Six Sigma which is a disciplined, data-driven approach and methodology for eliminating defects in any process. The ultimate goal is to use statistical process improvements to better serve the critical needs of the Customer, lower costs and improve quality.

Our approach is to provide a holistic way for your organization to create your Lean Initiative as a central strategy and mindset -- a new way of life, and a new way of doing business at your organization to provide Value to your citizens.

Check out the short video clip illustrating the challenges faced by these organizations before, during and after implementing Lean Six Sigma.

https://www.youtube.com/watch?v=gg2BmTO2xWw

This article was originally posted for ICMA:
http://icma.org/en/icma/knowledge_network/blogs/blogpost/4911/Introduction_to_Lean_Six_Sigma_Part_1

Carlos Conejo

Lean Six Sigma Master Black Belt

http://mculture.net