



## **Lean Management System Applications**

The Lean methods were designed to minimize waste, maximize value, and reduce complexity and variation throughout an organization and its supply chain. The father of the Lean concepts was Henry Ford Senior. Toyota further developed and popularized Lean Management Systems. Toyota's production system effectively utilized Lean techniques to drastically improve its organization's performance. These techniques have proven to be effective in all types of organizations including distribution, manufacturing, transportation and the service industries.

Lean Six Sigma is the popular term used frequently today. At Harrington Institute we feel that these are two very different approaches – Lean Management Systems and Six Sigma.

Six Sigma uses two methodologies to reduce variation and improve performance related to major problems and processes over a three-month period. They are: Define-Measure-Analyze-Improve-Control (DMAIC) and Define-Measure-Analyze-Design-Verify (DMADV). The improvements are made using highly skilled people called "Green Belts" or "Black Belts" who receive advanced problem-solving training.

On the other hand, Lean uses many different approaches to remove waste from the organization and it focuses on everyone throughout the organization. Lean uses many of the tools that have been refined over the years. Some of the more popular ones are:

### **Lean Tools and Methods**

1. Benchmarking
2. Cell Manufacturing
3. Change Agents
4. Change-Overs
5. Co-Location
6. Concurrent Engineering
7. Conflict Resolution Diagram
8. Continuous Flow Production (Also called "single-piece flow" or "one-piece flow")
9. Continuous Improvement
10. Current Reality Trees
11. Current State Map
12. Demand Management (also known as Demand Forecasting)
13. Enterprise Resource Planning (ERP)
14. Error Proofing (a.k.a. Poka-Yoke)
15. External Set-Up
16. Five S
17. Flexible Automation
18. Flexible Manufacturing
19. FMEA (Failure Mode Effects Analysis)
20. Functional Layout
21. Future Reality Diagram
22. Future State Map

*16080 Camino del Cerro, Suite 100, Los Gatos, California 95032  
(800) 698-4270*

23. Ideal State Map (a.k.a. Future State or Should Be Map)
24. Internal Set-Up
25. Hoshin Planning (HP)
26. Just-in-Time (JIT)
27. Kaizen
28. Kaizen Blitz
29. Kanban
30. Materials Resource Planning (MRP)
31. Mistake Proofing
32. One-Piece Flow
33. PDCA (Plan, Do, Check, Act)
34. Perfection
35. Poka-Yoke
36. Prerequisite Tree
37. Process Kaizen
38. Pull System
39. Quality Function Deployment (QFD)
40. Quick Changeover (Also see SMED)
41. Rapid Prototyping
42. Sequential Changeover
43. SMED (Single Minute Exchange of Dies)
44. Single-Piece Flow
45. Standard (Rate of) Work
46. Standardized Work
47. System Kaizen
48. Takt Time
49. Theory of Constraints
50. Total Productive Maintenance (TPM)
51. Toyota Production System
52. Transition Tree
53. True Capacity
54. Value-Added Analysis
55. Value Stream Mapping
56. Visual (Management) Control

With a list of 56 plus tools or methods, it is easy to see that an organization needs to be selective in designing the Lean Management System that it uses. It is also advisable that the total Lean Management System shouldn't be implemented at the same time, but spread over a number of years so that the organization's culture is able to support the Lean Management approach. We at Harrington Institute have developed supporting training for the total Lean Management System. In addition, we have developed an implementation methodology to ensure that the Lean Management System is implemented in a way that is customized to the organization's needs and culture. This ensures that the lean efforts produce the maximum benefit and it is met with the least resistance. Our approach adds value to your organization by challenging your people and partners to grow and become more skilled and competent. A lean approach focuses on improving your processes. When leaders follow the right processes, they get the right results including decreased lead times, long term cost reduction, and quality improvement.

At Harrington Institute we provide Lean training for:

- Executive team

*16080 Camino del Cerro, Suite 100, Los Gatos, California 95032  
(800) 698-4270*

- Improvement change leaders
- Train-the-trainers
- Employees who have been assigned to the Lean Management System or who are affected by it

In addition, we will also work with your team to develop a Lean Management System implementation plan and we will help you implement the Lean Management System along with its associated Organizational Change Management activities. For more information on this subject, see our books, *Change Management Excellence* and *Lean Management Systems*.