

CHAPMAN LEAN ENTERPRISE

COURSE DESCRIPTIONS

Introduction to Lean

Participants will be exposed to a broad list of Lean tools and definitions. This course is designed for individuals and teams that want to gain a better understanding of the principles and underlying philosophy of Lean, and how the elements and philosophy work together to create a Lean Enterprise. The training is a mixture of instruction, discussion, and a simulation. The simulation will help participants understand the concepts of flow, pull, takt time, kaizen, and work cell design in a total business system context. Small group discussions will give participants the opportunity to share ideas, reflect on their learning, and develop new solutions to apply in their organizations. The following topics will be discussed: The goals of Lean Enterprise, Value vs. Wastes, Types of Wastes, Lean Principles, Value Stream Mapping, 5S Visual Workplace, Standard Work, Cell Design, A3 Problem Solving, Kaizen, Kanban, Total Productive Maintenance, Setup Reduction, and Lean culture.

Value Stream Mapping

The value-stream map is a paper-and-pencil representation of every process in the material and information flow of a product or product family, along with key data. Mapping is a critical initial step in Lean transformations because it shows you where you could apply lean techniques, such as kaizen events, for maximum effect. Mapping helps you avoid the common mistake of cherry-picking individual lean techniques, which creates isolated islands of improvement and limited benefits. The mapping cycle of mapping current conditions then quickly drawing and implementing a leaner future state improves the overall flow of value to the customer and delivers the biggest benefits.

In this course, participants will first receive an overview of value stream mapping. Participants will learn the steps necessary to create a current state value stream map, from the customer back to the beginning of the process, and to develop a future state vision to act as a roadmap for Lean activities. At the completion of the course, participants should be able to understand and explain to others the benefits of value stream mapping, draw a map, and develop a basic implementation plan. This course will include instruction, discussion, group activities, and hands-on exercises.

5S Visual Workplace

5S is one of the first Lean tools to learn and implement within your organization. Implementing the 5S method with visual controls will provide managers, supervisors, and associates with a means of managing their operations efficiently and visually at a glance. 5S, a visual management system that helps reduce waste and achieve more consistent operational results through maintaining an orderly workplace, has been widely used in all sorts of organizations,

CHAPMAN LEAN ENTERPRISE

from manufacturing to health care, from military to financial institutions. 5S stands for *Sort, Set-in-order, Shine, Standardize, and Sustain*. 5S is a foundational step that makes it possible to implement other lean techniques and tools. For example, standardized work cannot be achieved without good 5S; quick changeovers become deficient if 5S is done poorly; and the whole Lean culture cannot be absorbed without the 5S mentality.

Participants will see examples of 5S visual workplace to stimulate their thoughts on how 5S can be applied to their own workplace conditions. At the completion of this course, participants will understand the benefits of 5S, how to conduct a 5S audit, and how to implement 5S in their organization. This course will include instruction, discussion, video, group activities, and interactive exercises.

Standard Work

By documenting the current best practice, standardized work forms the baseline for kaizen or continuous improvement. As the standard is improved, the new standard becomes the baseline for further improvements. Improving standardized work is a never-ending process. The benefits of standardized work include documentation of the current process for all employees, reductions in variability, easier training of new employees, reductions in injuries and strain, and a baseline for improvement activities.

This course is based on a “train and do” format, so the participants will learn the key concepts through instruction, discussion, and small-group exercises. At the completion of this course, participants will understand the fundamentals of standardization and its importance in the foundation of a Lean system, how to gather data using standard work forms, and how to introduce standardization techniques to improve training, eliminate wastes, sustain improvement, and increase predictability of results.

Cell Design

Cell design involves organizing processing steps adjacent to each other so that parts, documents, etc. can be processed in a continuous flow with little or no interruption. Work cells can minimize walking, material handling, work-in-process, queue times, and cycle times.

Participants will learn the fundamentals of cell design and efficient process flow. Topics will include various methods to design work cells, how to properly resource cells, how to right-size equipment, material presentation, and how to facilitate operator movement. The following supportive tools such as standard work, 5S visual workplace, and pacing mechanisms will also be discussed. This course will include instruction, discussion, group activities, and hands-on exercises.

CHAPMAN LEAN ENTERPRISE

A3 Problem Solving

Sustaining a lean transformation requires continuous problem solving by everyone in the company. Success hinges on how well associates practice and apply a robust, shared problem-solving method at all levels to incorporate "evolutionary learning" into the company culture. In order to build the culture of problem solving, an organization needs a community of problem solvers working together on continuous improvement and the A3 problem-solving process aligns with organization's business objectives.

In this course participants will practice several of the problem-solving steps. "Go and See" will be a key component discussed within all the steps of the lean problem-solving process. Participants will be introduced to the steps of the lean problem solving process PDCA and the A3 method. They will learn how to develop problem-solving A3's.

Kaizen

The Kaizen methodology promotes sustainable continuous improvement. It provides a structure to convert employees' improvement ideas into realized changes that has a positive impact on the business, transforming the organization in small incremental sustainable steps. Besides the tangible benefits, Kaizen is regarded as a most effective technique to improve engagement and culture within a company.

Participants will learn how to effectively organize and manage a cross-functional kaizen team aimed at achieving specific improvements in a short time. The training will include how to structure a kaizen event, pre-kaizen event preparation, tools and forms to use, how to document results, team roles and responsibilities, and presenting to management. At the completion of this training, participants will also understand how to use kaizen to achieve future state process improvement plans. This course will include instruction, discussion, group activities, and hands-on exercises.

Kanban & Supermarket

Kanban is a signaling device that gives authorization and instructions for the production or withdrawal of items in a pull system. The purpose of kanbans is to instruct processes to make products and material handlers to move products. Supermarkets are locations where predetermined standard inventory is kept to supply downstream processes.

Participants will learn where and when to apply kanban replenishment systems, mathematical calculations for sizing, and a variety of signaling methods used to signal production. They will also learn to use kanbans as tools to prevent overproduction, shortages, and waiting. This course will include instruction, discussion, video, and group activities.

CHAPMAN LEAN ENTERPRISE

Total Productive Maintenance (TPM)

In this course, participants will receive an introduction to Total Productive Maintenance (TPM). TPM goes far beyond traditional maintenance boundaries to attack equipment related wastes, including: downtime, speed losses, defects, minor stoppages, and breakdowns. This course illustrates a method to proactively increase the capacity of your equipment.

Participants will gain an understanding of TPM and its major components, including how to measure and increase overall equipment effectiveness (OEE). The course also provides a comprehensive understanding of autonomous maintenance. This course will include instruction, discussion, video, group activities, and hands-on exercises.

Setup Reduction (SMED)

In this course, participants will receive an introduction to Set-up Reduction/Single Minute Exchange of Dies (SMED). Participants will become familiar with the fundamental principles of set-up reduction. The course defines set-up, changeover, internal and external activities, the four categories of a setup (foresight, attachments, setting conditions, and trail-runs and adjustments), and the improvement methodology to reduce changeover time from hours to single minutes.

Participants will understand the benefits of implementing setup reduction/SMED, which include: shorter lead time, less material, fewer defects, less inventory, lower space requirements, higher productivity and greater flexibility. This course will include instruction, discussion, group activities, video, and hands-on exercises.

Making Lean Last

The reasons why change fails will be examined in this course. The eight steps to producing sustained change within a work environment will be discussed. Participants will learn about different ways of promoting, communicating, and rewarding change efforts. They will also discover new insight into the Lean management philosophy and its methods as well as the organizational structure and change management methods they'll need for implementing Lean in their organization. This course will include instruction, discussion, group activities, and hands-on exercises.