



Managing the Lean Transformation

22-23 February & 18-19 April 2016

Description:

This four-day course will introduce operations managers to the system of philosophies and methods that are necessary for achieving lean operations through the adaptation of the core principles and processes of the Toyota Production System to their own enterprise operations. In order to achieve constancy of purpose in pursuit of an organization's mission a clear vision must be developed of the potential future state of operations and a systematic approach taken that permits flexibility in navigating the dynamic shifts that occur as external factors influence the organization's decisions and cause revisions in its core strategy which requires management steering to maintain progress. This course prepares participants to sit for the SME/AME/The Shingo Institute and ASQ Bronze Level Lean Certification Examination which will be administered through Laatukseskus. Further development of personal lean competence areas is possible through the arrangement of individually guided mentoring by lean experts.

Target Participants:

- Operations Managers, Quality Managers, Lean Project Managers, Process Engineers, Industrial Engineers, and Process Managers in organizations who are seeking to transition to higher levels of efficiency through adaptation of lean principles and methods to their business practices.

Course Modules:

- History of Lean and Essential Elements that Define a Lean Enterprise Culture
- Core Elements of Lean Thinking: Systems, Variation, Psychology and Factory Physics
- Mathematics and Statistical Methods for Lean Flow Analysis and Problem Solving
- Managing for Zero: A Systematic Approach to Lean Philosophy, Methods and Techniques
- The Human Dimension of Lean: Responsibility, Accountability and Lean Performance Measures
- Principles and Methods of Lean Research, Development, and Design
- Principles and Methods of Lean Production and Design for Manufacturability
- Principles and Methods of Lean Production Control, Logistics and Distribution Systems
- Facilitating the Transition to Lean Management

Lean Philosophies:

- Lean Systems Analysis and an Integrated Approach to Improvement
- Waste, Failure, Control and Mistake-Proofing as a System
- Customer Product Requirements and Maintaining Traceability During Design
- Customer Logistical Requirements, Pull and Flow as a System
- Performance Measurement Systems for Lean Management
- Probability and Statistics to Achieve Process Capability and Assure Consistency in Flow
- Humanized Design of Workstations for Safety and Ergonomics
- Job Analysis and Personal Development for Lean Teams and Individual Contributors
- Motivation and Engagement of Workers in the Lean Journey

Lean Methods and Tools:

- Core Elements and Interrelationships within the Toyota Production System
- Lean Goal Setting and Capability Management (DANTOTSU, MONOZUKURI, and WA).
- Production Control and Pull Systems (Seven Flows, HEIJUNKA, and NAGARA)
- Performance Measurement and Lean Accounting Methods (YAMAZUMI)
- Role of Suggestion Systems and Feedback Mechanisms from Employees and Customers (TEIEM)
- Problem Solving and Continual Improvement Methods (PDCA/SDCA and DMAIC/ DMADV)
- Lean Planning and Management (HOSHIN KANRI, KAIKAKU, KAIZEN, and NICHIGO KANRI)
- Waste Awareness and Analysis Methods (HINSHITSU KANRI, MUDA, MURI, and MURA)
- Failure Analysis and Assessment Methods and Risk Management (POKA YOKA)
- Value Stream Mapping (VSM), Flow and Process Analysis, and Streamlining Techniques
- Cycle Time Analysis and Reduction Methods (SMED, NAGARA, and CHAKU-CHAKU)
- Zero Quality Control (Zero QC, Seven Zeroes, and Statistical Process Control (SPC))
- Kaizen Blitz and Rapid Prototyping Projects (SUNAO mind and KAIZEN KANRI)
- Production Layout (JIDOKA) and Housekeeping Methods (5S/10S, SERI, SEITON, and SEISO)
- Visual Factory Standards and Discipline (ANDON, SEIKETSU and SHITSUKE)
- Process Automation and safety (JIDOKA, HANEDASHI, KITANAI, KIKEN, and KITSUI)
- Total Productive Maintenance (TPM) and Autonomous Maintenance
- Worker Responsibility and Decision Rights Assignment (JI-KOTEI-KANKETSU (JKK))
- Material Flow and Inventory Management Procedures (MINOMI, KANBAN and JUNDATE)
- Lean Personnel Management (SHOJINKA, Cross-Training, On-the-Job Training, Quality Circles)

Learning Objectives:

Participants will understand the philosophy and the tools of Lean, their range of applicability, and their implementation methods. The following learning objectives will be addressed:

1. How to conduct an operational lean self-assessment to analyze current performance and estimate its potential for improvement, set strategic directions, and define improvement projects that will initiate a kaizen journey. Philosophy and methods that are applicable include:
 - Characterizing the demand flow and calculating Takt time
 - Analyzing work to detect and categorize waste and recognize variation reduction opportunities
 - Mapping current, ideal and future value streams
 - Assessing technical and human capabilities of process activities
 - Setting strategic direction and identifying improvement projects
 - Assessing employee lean skills and coaching or mentoring employees toward maturity.

2. How to evaluate alternative industrial designs of takt-driven production lines and cells in fabrication, machining, and final assembly, by focusing on flows of materials and movements of people. The tools include factory flow analysis using YAMAZUMI methods, JIDOKA, and NAGARA.

3. How to design and evaluate system-level flows in plants and across supply chains, involving the organization for elimination of MURA waste through lean logistics methods such as:
 - Spaghetti Diagrams and Value Stream Mapping (VSM)
 - Just-in-Time
 - Heijunka and production control
 - Kanban, Milk Run, and Water Spider inventory replenishment methods
 - Cross-docking
 - Total logistics cost

4. How to apply appropriate tools and methods for lean-focused quality improvement, including:
 - Process control and capability studies of current state and potential state conditions
 - Applying one-piece flow for process diagnostics and problem resolution
 - Prevention of inadvertent human-error prevention through POKA-YOKE/mistake-proofing.
 - Planned responses to common problems through standard work, visual factory, Change Point Management (CPM), embedded tests and responsibility management JI-KOTEI-KANKETSU (JKK)

5. How to organize people to execute and support takt-driven production, including:
 - Group dynamics and team management including Quality Circles and the roles of teams in the daily management process for routine production and continual improvement
 - Development of a daily management system with performance boards and stand-up meetings
 - Development and maintenance of standard work instructions and job aids

- Conduct on-the-job Training-Within-Industry (TWI) including Job Instruction (JI), Job Methods (JM), Job Relations (JR), Job Safety (JS), Problem Solving (PS), Discussion Leading (DL) and Train-the-Trainer Program Development (PD)
 - Integrated infrastructure for logistics, production control, maintenance, quality assurance, product engineering, human resources, supply chain management and customer service
6. How to manage lean operational transformation from pilot projects to company-wide deployment.
 7. How to select and deploy relevant metrics to monitor manufacturing performance and estimate the potential benefits of improvement projects both operationally and financially.

Presenter:



Gregory H. Watson was the Hewlett-Packard business manager for implementation of one of its first “Just-in-Time” (JIT) production cells during 1983-1985. He moved to HP Corporate and worked on the design of the high-volume distribution system for the inkjet product line and was a design engineer on the HP-JIT software project before joining Corporate Quality as Program Manager for Quality Leadership Development with responsibility for executive initiatives such as implementation of hoshin Kanri, QFD, and benchmarking. He was a member of the GOAL QPC Research Committee that supported translation of Japanese quality materials in the late 1980s. Professor Yoji Akao asked him to write the introduction to his Hoshin Kanri book in 1991 as the Japanese considered him a leading practitioner of the strategic dimension of quality management. He consulted to Toshiba CEO Taizo Nishimuri and his executive team on implementation of Six Sigma methods in Japan and in 2001 upon the completion of this assignment the Union of Japanese Scientists and Engineers asked him to collaborate with Dr. Noriaki Kano to deliver the 50th Anniversary Deming Lecture which compared and contrasted Japanese TQM with the Six Sigma developments in America. In 2009, JUSE recognized his accomplishments by awarding him the first non-Japanese Deming Medal for Distinguished Service in Dissemination and Promotion of Japanese TQM. Mr. Watson is a Former President and Fellow of the American Society for Quality which has bestowed on him ten awards, including its Distinguished Service Medal. He is a Former President and Honorary Member of the International Academy for Quality which has awarded him the IAQ Founders Medal. Mr. Watson has authored 10 books which have been translated into 11 languages and has received over 40 quality-related awards and honors from all major quality organizations in the world, including Life Time Achievement Award from Estonian Association for Quality in 2013.

Training Investment

The basic fee for participation in this class is 1295€ (plus VAT). This fee does not include costs of student travel.

Fee for the members of Estonian, Latvian and Lithuanian national Quality organizations is 995 € (plus VAT).

Administrative Information:

Please email your personal information to pirje.petter@eaq.ee in order to have a follow-up discussion about your interests and needs or to receive a specific description of the training program modules and cost as well as the possibility of group discounts.

Personal Information:

Name:

Position:

Company:

Address:

City, Country:

Post-Code:

Email:

Mobile Phone:

Dates of Autumn 2015

1. Period - 22-23 February 2016

2. Period – 18-19 April 2016