

cicc

CONTINUOUS IMPROVEMENT CHAMPION CERTIFICATION



What is Continuous Improvement?

Continuous Improvement is based on the principles of Lean, a business strategy focused on:

- improving productivity and quality
- eliminating waste and non-value added activities
- reducing delays and total costs
- growth through creating capacity

LEAN fosters a company culture where all employees:

1. continually improve their skills
2. contribute to streamlining processes
3. efficiently respond to fluctuating demands

Develop the skills necessary to implement Lean and create positive change within your company.

This course provides comprehensive exposure to the principles and practices needed to develop and sustain the Lean Enterprise. Participants apply classroom training to an actual project at their organization to help reinforce what they have learned. Combined with on-site mentoring and knowledge assessments, this approach dramatically reduces the timeframe from training to bottom-line results, providing greater value to your company.

CONNSTEP'S Continuous Improvement Consultants have designed 16 modules that are essential to understanding the principles and practices of Lean. Upon successful completion of the program and on-site project, participants receive a Continuous Improvement Champion Certificate awarded by CONNSTEP, part of the Manufacturing Extension Partnership (MEP) National Network.

Connecticut companies of all sizes and from all industries trust CONNSTEP to develop their internal continuous improvement champions – those that drive Lean principles and initiatives forward – gaining not only bench strength for their Lean strategy, but also real-time financial impacts for their investment in the course.


On-Site Mentoring & Project Selection

A CONNSTEP Continuous Improvement Consultant will serve as a project mentor to each participant. The CONNSTEP mentor will schedule an initial site visit at the participant's company to discuss possible opportunities for a Lean project.

The CONNSTEP mentor will schedule additional site visits to assist in completing a project linked to the client's strategic goals.

Throughout the CICC program, participants have email and phone access to their CONNSTEP mentor to help ensure the successful completion of their on-site project. The CONNSTEP mentor will also assist in preparing the CICC project report.

At the last classroom session, each participant presents their CICC company project – sharing successes and receiving feedback from the class. Company sponsors are encouraged to attend this Project Report Out session.

A black and white photograph of a woman in a white hard hat and safety glasses, looking intently at a machine. She is wearing a light-colored jacket over a dark shirt. In the background, another person wearing a hard hat and safety glasses is working on a similar machine. The scene is set in a factory or industrial environment.

“If you think you’re effective now, and you think you have what it takes to really develop a product, you really don’t know anything until you have gone through this program.”

Jim Jamra, Manager, Engineering & Customer Production Support,
Kaman Precision Products

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CICC Graduate Companies

Acceleron, Inc.
Accu-Time Systems, Inc.
ACMT, Inc.
Aerospace Alloys, Inc.
AGC Acquisition
Algonquin Industries
Alpha Q, Inc.
AMerican Heat Treating, Inc.
APCM, LLC
Aplicare
Aptar
Arthur G. Russell Co., Inc.
ASML
Bead Industries, Inc.
Beekley Corporation
Belimo Customization (USA), Inc.
Bell Power Systems, Inc.
Birk Manufacturing, Inc.
Cambridge Specialty Co., Inc.
CAMM Metals, Inc.
Capewell Aerial Systems
Carris Reels, Inc.
CATIC
CBS Manufacturing Co., Inc.
CCL Label, Inc.
C. Cowles & Co
Centrix, Inc.
Chabaso Bakery

CNC Engineering, Inc.
Colonial Spring, LLC
Commercial Sewing, Inc.
Connecticut Spring & Stamping
ConnTrol International, Inc.
CooperSurgical, Inc.
Crabtree & Evelyn
CRC Chrome
CT Acquisitions, LLC
DACRUZ Manufacturing
Deep River Plastics
Defibtech, LLC
Demusz Manufacturing Co., Inc.
DIBA Industries
DucDuc
Dur-A-Flex, Inc.
Durham Manufacturing Company
Dymax Corporation
Dymotek
EDCO Engineering, Inc.
Edgewell Personal Care, LLC
Edward Segal, Inc.
Electri-Cable Assemblies
Five Star Products, Inc.
FLABEG Technical Glass
Foster Corporation
Franklin Products, Inc.
FuelCell Energy
HABCO Industries, LLC

Hampford Research, Inc.
Har-Conn Chrome
Heim Bearings Division of RBC Bearings
Hobson & Motzer, Inc.
Identification Products Corporation
IMCORP
InCord
Industrial Heater Corp.
Inventec Performance Chemicals USA, Inc.
Ivy Biomedical Systems, Inc.
Jaypro Sports, LLC
Joining Technologies
Kaman Precision Products
Kamatix Corporation
Kerite Company
KTI, Inc.
Leed Himmel Industries, Inc.
Lee Spring
LEX Products
Linemaster Switch Corporation
Liturgical Publications, Inc.
Logosportswear.com
Lyman Orchards, Inc.
Macton
Magnetech, LP
Mallory Industries, Inc.
Matthew Warren Economy Spring Div.
MB Aerospace

Mercantile Development, Inc.
Metallon, Inc.
Metallurgical Processing, Inc.
Microbest, Inc.
Microboard Processing, Inc.
MiNTEQ
Microsemi a Microchip Company
Midstate Electronics
Modern Metal Finishing, Inc.
Modern Woodcrafts, LLC
Morgan Advanced Materials
NPI Medical
Numet Industries, Inc.
OEM Controls, Inc.
Omar Coffee Company
Orange Research, Inc.
Oxley, Inc.
O'Keefe Controls Co.
Peening Technologies
Pegasus Manufacturing, Inc.
Perry Technology Corporation
PHARMCO - AAPER
PIC Design, LLC
Pitney Bowes, Inc.
Plymouth Spring Company, Inc.
Powerhold, Inc.
Proflow, Inc.
Projects Inc.
PTA Plastics

Radio Frequency Systems (RFS)
R.C. Bigelow, Inc.
RBC Aircraft Products, Inc.
RBC Bearings
Renchel Tool, Inc.
Respironics Novamatrix, LLC
Rosco Laboratories, Inc.
Satellite Tool & Machine, Inc.
Sheffield Pharmaceuticals
Smiths Medical
Specialty Cable
Swift Textile Metalizing
The Lighting Quotient
Thule, Inc.
Tier ONE, LLC
TIGHITCO, Inc.
Timbercraft, LLC
Total Wall Systems
Triple Stitch Sportswear
Ulbrich Stainless Steels
Unicorr/Connecticut Container
US Button Corporation
Web Industries, Inc.
Wepco Plastics, Inc.
Whyco Finishing Technologies
Willington Nameplate, Inc.
Yarde Metals, Inc.
Zendex Tool



Lean Principles & Practices

A Lean Enterprise produces more with existing resources by eliminating non-value added activities and aligning processes to meet customer demand. Simply said, Lean forms the basis of an integrated enterprise-wide strategy focused on excellence through continuous improvement, and the relentless elimination of waste.

This session focuses on Lean principles and techniques and how to apply them. During a simulation exercise, students apply Lean concepts such as standardized work, visual signals, batch-size reduction, pull systems and more. Students experience firsthand how Lean improves quality, reduces cycle time, improves daily performance, reduces Work In Progress (WIP) and enables profitability.



Value Stream Mapping (VSM)

Value Stream Mapping (VSM) is a tool used to create a visual representation of a material and information flow map of a product or service. This essential Lean tool allows companies to map the flow of products and information from order to cash as well as throughout the supply chain. VSM forms the foundation for streamlining work processes, cutting lead time and reducing operating costs.

During this session, students use the VSM tool to create a current state map using the ACME Stamping case study, analyze the current state, and discover non-value added activities. Applying Lean guidelines, students draw a ACME's future state map, minimizing non-value activities.



Problem Solving & Mistake Proofing

The Problem Solving process uses a structured and systematic approach to the Plan, Do, Check, Act (PDCA) model. This process is geared toward improving quality, exposing waste, improving operational efficiency and establishing metrics that promote the right behaviors. Mistake proofing is the use of process or design features to prevent errors and their negative impacts using a team approach and follows a kaizen process.

In this session, students describe a problem through the use of a problem statement and learn to use the problem-solving tools (e.g. check sheets, histograms, Pareto analysis, 5-Whys, fishbone diagrams, etc.) to define the root cause. The session also features principles and applications of mistake proofing.



The 5S System & Visual Management

The 5S System improves workplace organization and standardization. The 5S's include:

- SORT through and remove all unneeded items
- SET in order, set limits and create location indicators
- SHINE and clean – use cleaning as inspection
- STANDARDIZE the first three and implement visual controls
- SUSTAIN gains

In this session, students learn the concepts of the 5S System and apply them to transform a cluttered, disorganized area into a clean, organized and orderly workplace. The benefits of utilizing the 5S System are improved quality, safety, work standardization, storage costs, reduction in cycle time and decreased changeover time. A notable side effect of the 5S System is improved employee morale. Students also learn to apply real-time information sharing through Visual Management techniques.

CICC Program Project Results

Since the program began in the Spring of 2005, the CICC course has produced impressive financial impacts for participating companies.



90% reduction in lead time, 23% reduction in cycle time and a 75% reduction in work in process leading to an annual savings of \$50,000.

(electromedical equipment manufacturer; 47 employees)



65% reduction in lead time allowing company to ship product faster, increasing gross margin 5.4%.

(glass manufacturer; 120 employees)



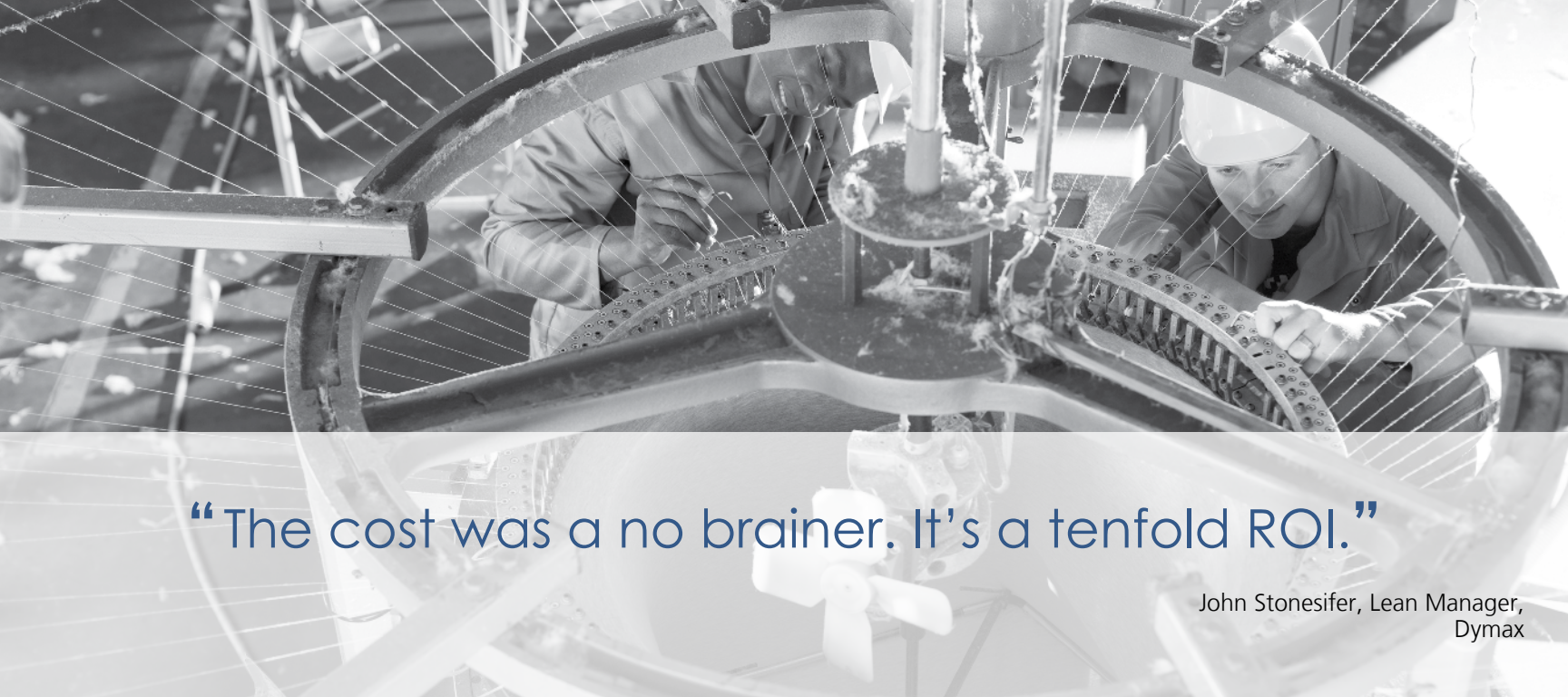
\$150,000 in annual savings through implementation of set-up reduction and batch-size reduction in the order entry process.

(paint & coating manufacturer; 75 employees)



Project implementing 5S, kanban and cellular design resulting in an inventory reduction of \$350,000.

(machine tool manufacturer; 50 employees)



“The cost was a no brainer. It’s a tenfold ROI.”

John Stonesifer, Lean Manager,
Dymax



Lean Office

To truly become a Lean Enterprise, Lean methodologies must be applied throughout the organization. The same Lean principles and tools utilized in manufacturing operations can be applied in the office or to the administrative process. Office wastes can manifest in excess paperwork, redundant approvals, inefficient work area design/layout, incomplete or inaccurate information and complex tracking systems. Accurate estimating, efficient order handling and timely service help to protect profits, and improve customer satisfaction.

In this session, students learn how Lean tools and methodologies are used in office and administrative applications to eliminate waste and streamline information flow.



Set-Up Reduction

Set-Up Reduction builds on the principles of the Single Minute Exchange of Die (SMED) system developed by Shigeo Shingo to dramatically reduce or eliminate changeover time. The changeover improvement process leads to no or low-cost solutions to reduce changeover time. This, in turn, allows the company to meet customer demands for high-quality, low-cost products, delivered quickly and without the expense of excess inventory.

In this session, students learn the principles of Set-Up Reduction, the SMED system and how to apply the changeover improvement process using a simulation exercise to achieve Set-Up Reduction.

A blue geometric graphic consisting of a square and a triangle, with a white diagonal line separating them.

Cellular Design

When processes are balanced, the product flows continuously and customer demands are easily met. Cellular Design streamlines the linking of manual and machine operations into the most efficient combination of resources to maximize value-added content while minimizing waste. The most efficient combination implies the concept of process balancing. Only in a balanced process will the product continually flow. As a result, transportation waste is minimized, wait times and inventory are reduced, while communication and productivity improve.

Through a simulation, students learn the concepts of Cellular Design, transforming the traditional batch production areas into a cellular environment, experiencing dramatic improvement in product flow.



Kaizen, Team Development & Facilitation

A kaizen is a focused approach to process improvement. This continuous improvement methodology combines Lean tools with team empowerment, brainstorming and problem solving to rapidly make improvements to a specific product, process, or service, resulting in positive changes within the organization.

In this session, students learn to facilitate a kaizen event utilizing a team-based approach to process improvement. In order to increase the effectiveness of organizational improvement initiatives, it's necessary to develop an understanding of people's reactions to change and transition. Students are given the framework, tools, disciplines and techniques of facilitating cross-functional teams to enable the successful achievement of outcome-based goals.



TWI: Training Within Industry Job Relations (JR)

Training Within Industry (TWI) is a set of standardized programs addressing the essential skills needed by supervisors – including team leaders and anyone indirectly leading others. If students are new to TWI or have not yet embarked upon a cultural shift in the organization toward continuous improvement, they will encounter many issues around employees' perceptions of upcoming changes. Job Relations (JR) training is an excellent place to start.

JR training teaches supervisors how to handle problems, how to prevent them from occurring and, most importantly, it aids in developing a logical, common sense approach to handling issues with a people-centric view. The core elements of the program are conducive to teaching the basics of consensus-building and individual problem solving. This program lays the groundwork upon which students can build the next step of stability into their processes.

JR teaches the foundations of positive employee relations. Developing and maintaining strong relationships prevents problems from occurring and is paramount to earning loyalty and cooperation from others. When problems do occur, Job Relations teaches a proven method of getting the facts, weighing options, deciding, taking action and checking results.



Standard Work

Standard Work is an agreed-upon set of work procedures that establishes the best and most reliable methods and sequences for each process and each worker. Standard Work is a technique used to best utilize people and equipment to effectively meet customer demand.

In this session, students learn the many benefits of standardizing processes within their organization including overall cost reduction, improvement in on-time delivery, reduction in customer complaints and the positive effect on employee morale.



Kanban/Pull Systems

Pull Systems and Kanban control the flow of resources in a process based on actual demand and consumption rather than forecasting. Implementing Pull Systems can help eliminate waste in excess inventory, handling and storage.

In this session, students explore the process of designing and implementing Pull Systems and Kanban through classroom instruction, case studies and exercises demonstrating how these tools can be applied to manufacturing and office operations.



TWI: Training Within Industry Job Instruction (JI)

The Job Instruction (JI) component of Training Within Industry (TWI) is designed to develop stability in students' processes (standard work). This program teaches the method to instruct a trainee on how to perform a job correctly, safely, and conscientiously. As is frequently the case, most processes are performed by various employees using different methods. JI training requires the student to identify the "one best way." The student then trains employees how to perform the process in this one way, and thereby creates a standard method. The basis of stability is generated by doing the same thing in the same way across shifts.

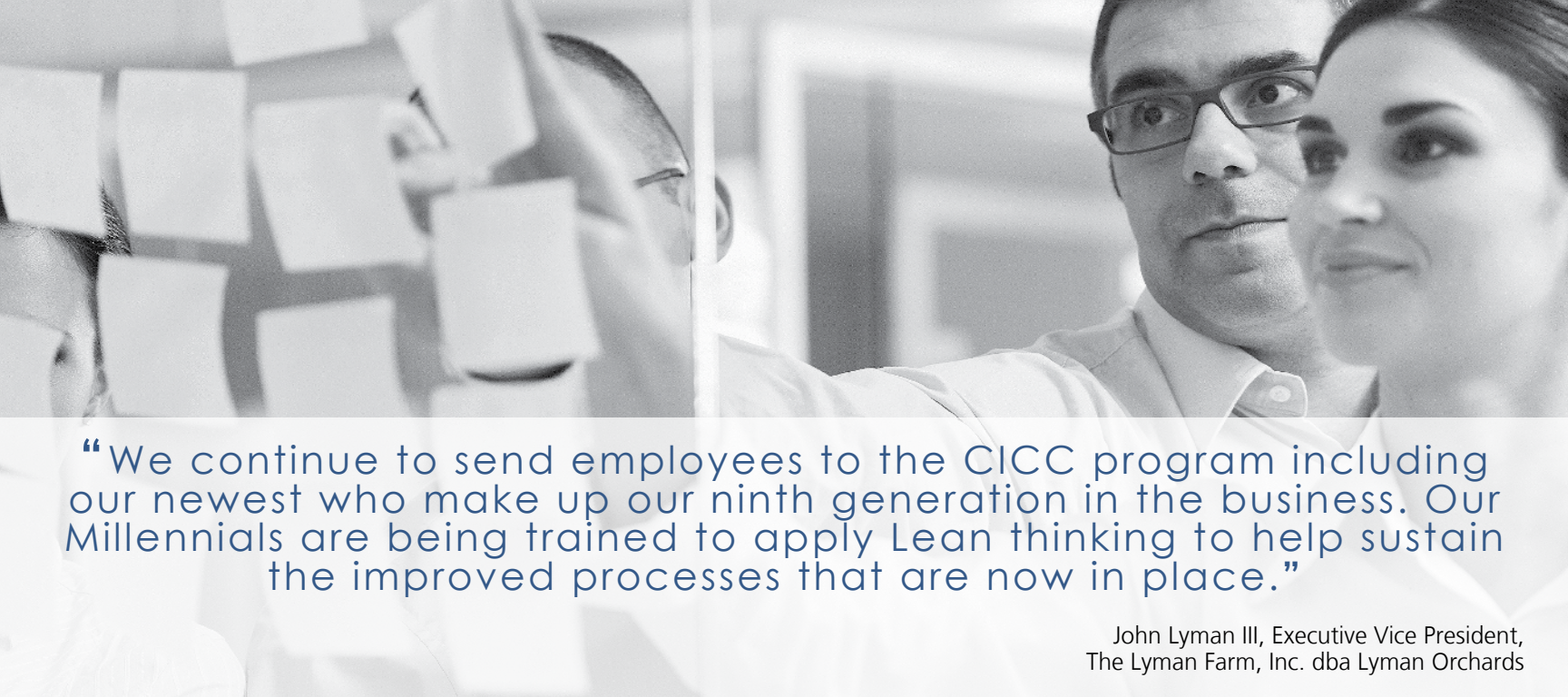
By utilizing JI, students gain the benefits of consistent training and develop a stable process upon which continuous improvement may be applied. This lays a solid foundation for any continuous improvement program.



Total Productive Maintenance (TPM)

Total Productive Maintenance (TPM) is a process that maximizes the productivity of equipment for its entire life. TPM fosters an environment where improvement efforts in safety, quality, delivery, cost and creativity are encouraged through the participation of all employees. The goal of TPM is to maximize Overall Equipment Effectiveness (OEE) and to reduce equipment downtime to zero while improving quality and capacity.

In this session, students learn about OEE and how it is related to capacity; the ten-fold effect of the 5S techniques when applied to equipment; the six major equipment-related losses and how to find and eliminate them; and the causes of 75% of equipment breakdowns. Through case studies and exercises, students apply the techniques and experience how TPM achieves dramatic improvements in uptime and increased equipment effectiveness.



“We continue to send employees to the CLCC program including our newest who make up our ninth generation in the business. Our Millennials are being trained to apply Lean thinking to help sustain the improved processes that are now in place.”

John Lyman III, Executive Vice President,
The Lyman Farm, Inc. dba Lyman Orchards



Green Manufacturing

Green Manufacturing seeks to continuously improve processes and products to increase a company's productivity and lessen the impact on the environment. It is a discipline that embraces the idea of efficient utilization of raw materials and the reduction of waste at its source.

In this session, students learn to take Lean one step further to identify and eliminate materials that could negatively impact the environment. Students also learn methods to map process inputs and outputs, and analyze system performance, to identify causes of waste in operations.



Lean Supply Chain

The supply chain is a series of separate entities (OEMs, customers, manufacturers and suppliers) that combine to form a value stream for a product or service. The ability to extend consistent process improvements throughout the supply chain helps companies address many of the critical challenges they face.

In this session, students are introduced to key concepts and challenges facing supply chains and gain insights into proven methods that extend Lean principles throughout. Students are also introduced to Lean supply chain techniques and methodologies related to procurement and materials management.



Performance Measurement & Management

Managing performance is critical to the effectiveness of any organization. This workshop provides best practices on how to design and use a set of metrics, tools and scorecards to drive the organization's performance and motivate employees. Students learn to measure and monitor performance using meaningful metrics that are closely tied to their organization's strategy. Topics discussed include:

- Why measurements are important – creating measures that matter
- Traditional vs. Lean measurements
- Three levels of measurement
- Tracking performance
- Developing linkages between business strategy and performance measurement
- Managing performance
- Successfully launching performance management processes within the organization

Attributes of a Continuous Improvement Champion



ENERGY: Leading a Lean initiative can be taxing work and energy is a must. Participants should have the ability to energize teams, especially when the going gets tough. They should also have a reputation for exhibiting a passion for change and demonstrating a “Just Do It” attitude in the course of their daily work.



INTERPERSONAL SKILLS: An effective Lean leader must be able to build relationships easily with teams and be viewed as an informal leader or “resident expert” within the organization. They are known for having the ability to “get things done” through influence and capability rather than administrative mandate. They should also be able to communicate at all levels of the organization as well as being good listeners.

3 **"EYE FOR WASTE":** The ability to identify all types of waste in processes is paramount to good Kaizen facilitation. Good participants have a reputation for constantly examining (challenging) their own processes and eliminating waste. The Lean Champion will collaborate with the leadership team to develop the organization's Lean strategy and lead the selection, prioritization, development and execution of process improvement initiatives linked to organizational objectives.

4 **LEARNING AND MENTORING:** Participants will carry on the Lean work in their facility and must have a strong desire to learn and mentor others. This enables their business to continue to innovate and become a learning organization.

5 **INNOVATION/CREATIVITY:** Truly great Lean facilitators have the ability to pull their view away from, "doing what we do better" or justify why something is done a certain way and drive towards "what could/should be."

CICC Registration

Upcoming course dates & registration available online: www.connstep.org/events/

A 25% deposit per participant is required to confirm registration. Registration includes all course materials, parking, breakfast and lunch at each classroom session. No refund of the 25% deposit will be given on cancellations received less than two weeks prior to the start of the program. Registration is transferable; substitutions may be made up to 48 hours prior to the start of the course.

To be certified as a Continuous Improvement (CI) Champion, participants must attend and participate in all classes and complete a project with measurable results utilizing the Lean methodology.

Participants will present their projects on the last day of the class and will receive a certificate noting their successful completion of classroom requirements. Within 90 business days, those students who submit their project summary report with measurable results (validated by their sponsor), and approved by CONNSTEP, will be certified as a CI Champion.

Additionally, there is a maximum of two participants per company on a single CICC project team in order to provide each participant with the opportunity to fully engage and realize project results. Additional information will be provided on the project parameters at the first CICC classroom session. If you wish to discuss this prior to registration, please contact CONNSTEP at 800.266.6672.



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