

LEAN OPERATIONS

As a company president, owner, operations manager, etc. have you read or listened to discussions where other presidents, owners or managers have commented on attaining productivity improvements of 10% to 30%, up to a 90% reduction of work in process (WIP), a 30–40–50% improvement in space utilization, quality increases of 80–90% and possibly lead time reductions approaching 90%? Did you hear how they attained such results? This is the range of benefits some companies have attained with the implementation of Lean Operations. Does it have your interest? The NCC Business & Industry Center has the resources to assist industry with Lean concepts in reducing “waste” which drives reduction in costs, inventory, achieving greater productivity, and improving quality all which drives an improved bottom line. But keep in mind: **Lean is not a destination but a continuing journey.**

Lean is?

The Lean Methodology is a systematic approach to eliminate waste and producing what your customers want when they want it. It is doing more with less waste. The process of implementing Lean encompasses many of the improvement activities you may have tried before. It is the systematic approach to identify and do only what is needed to make improvements while incorporating it into your culture that makes the difference.

The components of Lean:

- Factory and Materials Flow
- Value Stream Mapping
- Visual Factory
- Set-Up Reduction
- Cellular / Flow Manufacturing
- Total Productive Maintenance
- Just-In-Time Inventory
- Dealing with Change
- Team Building
- Team Facilitation
- Problem Solving
- Project Management
- Business Planning
- Strategic Planning
- Lean Accounting

Lean Assistance

NCC will assist you to assess your systems and procedures to identify a baseline and develop recommendations that will help you improve your operations. If waste exists, we will find it. The operational areas we assess include:

- Production
- Inventory
- Defects
- Processing
- Transportation
- Motion
- Underutilized people and machines

We will then assist you to design an improvement plan for your operations that will combine both training and implementation assistance to commence the Lean Journey. The methodology development will blend with both your company's goals and budget.

NCC Business & Industry Philosophy:

- Employers and their employees are **valued customers.**
- Each customer has unique, time sensitive needs which demand **customized and effective solutions.**

Lean Workshops

Lean 101—Principles of Manufacturing

This is a workshop that combines classroom with hands-on simulation of an operating factory in a 1-day, 8-hour course. It is the first step to learning the principles of lean manufacturing. No previous experience is required. Participants begin by manufacturing simulated circuit boards in a traditional forecasted manufacturing setting. The results of the first simulation round will provide the basis for continuous improvement applying lean manufacturing principles. Performance improvements are measured and compared for improved results.

Lean 202—Value-Stream Mapping

This workshop provides the tools and teaches how to use them to map the current state of a product or process. It typically is a two-day, 16-hour event which may be conducted in your facility starting your mapping. It can be a 1-day, 8-hour course strictly teaching the tools and concepts. In the workshop you learn how to create a map of an entire value stream. You will learn how to map the current state of a product or process. Using the current state data you will determine the non value-added events or activities in your operation then develop a proposed future state. Participants will learn the steps necessary to eliminate waste in the system using the power of the value stream map to achieve an enhanced future state. Real company examples are presented and discussed.

Lean 203—Visual Workplace /5S + 1

This also is a workshop that combines classroom with hands-on simulation for productivity and communication in a 1-day, 8-hour course. It may be held at your facility with part of the event on your factory floor. We can also take the next step making this a 2 day session and commence Implementation to an area in your operation.

This course will successfully teach how to transform a factory into a place where messages concerning product quality, productivity, schedule, and safety are accurately and rapidly delivered every day. Participants learn methods to implement specific, easy to access, visual systems to enhance communication and productivity. Course participants go away with knowledge of what visual order is and what the visual workplace looks like and how these concepts work on the production flow. The course teaches how to deal with resistance, develop checklists, and use a process map to drive the process. Examples are taken from case studies of successful companies.

Lean 204—Set-Up Reduction

A combined classroom and hands-on simulation to reduce set-up time by applying Single Minute Exchange of Dies (SMED) in a 1-day, 8-hour course. It teaches the fundamental principles of set-up reduction. The instructor will clearly define set-up and discuss reasons and barriers to reducing set-up time. The course follows the principles first expressed by Dr. Shigeo Shingo and his work in Single Minute Exchange of Dies (SMED). Participants learn the standard methodology in applying SMED to any type set-up industry. This course can also be expanded to an additional day with implementation steps of the concepts on a selected operation in your facility.

Lean 205—Cellular Flow Manufacturing

A combined classroom and hands-on simulation to link and balance operations, reduce lead times, minimize work in process, and optimize floor space in a 1-day, 8-hour course.

This hands-on course teaches how to link and balance manufacturing operations to reduce lead times, minimize work in process, optimize floor space usage, and improve productivity. The instructor leads the class through the 5-step process for designing and implementing work cells.

Lean 206—Pull/Kanban Systems

A combined classroom and hands-on session to control shop floor inventory and production schedules in a 2-day course with implementation on an area of your plant. Participants will learn how to control shop floor inventory and production schedules by implementing pull systems. This course teaches how to design and implement a visually driven, employee controlled material replenishment system. Participants also learn how to implement repetitive and non-repetitive pull systems, to set up point-of-use material storage, to interface with planning systems, and to balance lot sizes with capacity, not economic order quantity.

Lean 207—Total Productive Maintenance

A combined classroom and hands-on simulation to proactively maintain machines and equipment at their peak productivity. This can be presented in a 1-day classroom setting or a 2-day session incorporating implementation. This course offers the participant a method to proactively maintain machines and equipment at their peak productivity. Attendees come away with an understanding of TPM and its five major components. Each student should understand how TPM increases overall equipment effectiveness and how it can help avoid interruptions to production. The course provides a deep understanding of the seven steps to process maintenance.