



Pull Systems (Kanban)

(Onsite – 5 Days, 8 Hours/day – Optimum class size, 6 - 9 participants)

Training Description:

A Pull System is a lean manufacturing strategy used to reduce waste in the production process. In this type of system, components used in the manufacturing process are only replaced once they have been consumed so companies only make enough products to meet customer demand. A Pull System is the single most visible and operational way to drive Lean Manufacturing. This training is designed to introduce concepts and methods meant to control inventory, manage bottleneck operations, and shorten lead-times. Where flow ceases, a “supermarket” or “buffer inventory” may be required to maintain the total system linkage with the customer and within the system itself. Pull Systems provides this system linkage where flow is not possible by establishing buffer inventory. This training is delivered in person, on site and is intended for all levels of the company.

Training Objective:

Participants will be taught a 5 – step process enabling them to design low-cost solutions for reducing inventory, creating flow, and improving lead-times. This will help to meet customer demands for high-quality, low-cost products, delivered quickly and without the expense of excess inventory.

- Supermarket, and FIFO
- Properly located inventory
- Properly sized inventory
- Capacity planning for EPEI (Every Part Every Interval)
- Order Points
- Order Quantities
- Kanban (signals for self-management)

Most Pull System (Kanban) “Kaizens” result in an increase in cash flow by reducing inventory and improving lead-time through the plant, 50 to 75% setup time reduction resulting from the initial activity.

Skill Attainment:

The workshop will provide a proven formula for a team to implement a Pull System. The team will use the 10-Step Kaizen Process (Plan-Do-Check-Act Cycle) to discover how to:

1. Document the Current Process & Future State
2. Design the Pull System
3. Plan A Pull System
4. Create A Pull System
5. And Finally, Optimize the Pull System

Training Agenda:

Pull Systems (Kanban) can be delivered as a 3-day training depending on the needs of the company.

Day 1, Day 2, & Day 3

- Power Point Presentation
- Select product(s) to Pull
- Document Current Process



- Determine if MTO or MTS or Hybrid
- Inventory basics, measures, and data
- Draw Current State Map
 - Draw current state, use pre-event data collected
 - Walk the Process
- Define Future State/Ideal State
- Design Pull System (Model all Components)
 - Define Pull System design goals
 - Establish Point of Use stock locations
 - Calculate order point and order quantities
 - Decide on Kanban's (signals)
 - Determine flow details
 - Draw the pull system layout
- Create Action Plan
 - List Actions
 - Test, test, test
 - Set priorities
 - Assign responsibilities
 - Establish completion dates
 - Post Pull / Kanban action plan

Company Actions (Prior to Day 4&5)

- Complete Actions on Plan
- Manufacture or Purchase materials on Pull Model Plan
- Establish POU Locations
- Make Kanban Cards or Pull Signal Identifiers

Day 4 & Day 5 (about 30 days after day 1-3)

- Install Pull System
 - Set up POU Locations with Identifiers
 - Set up Kanban Boards
 - Set up Inventory into card quantities and place cards on inventory
 - Place any over stocked items in front of all material, to be used prior to triggering a Kanban card
- Ensure the Pull and Replenish System is working
- Optimize Pull System
 - Adjust quantities as needed
 - Install visual controls
 - Develop a method to update KANBAN quantities based on demand.
 - Investigate use of MRP to calculate KANBAN quantities



- Ensure the Pull and Replenish system works
- Train all affected employees
- Audit on a Regular basis

All training will include:

- Lecture
- Using PowerPoint and handouts
- Interactive discussion
- Hands on application of methods applying to client related issues
- A complete report out presentation with Impact to the client management team.