Key Steps in Implementing a Kaizen Event

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What We Will Cover

- What are kaizen events?
- Choosing the best projects
- Selecting a “pilot” event
- Team members and their roles
- How to prepare for a kaizen event
- 10 steps for conducting the event
- Finding the time for kaizen events
About Kaizen

- Kaizen is continuous improvement
- Kaizen is employee involvement
- Kaizen requires a cultural change
- According to the originators at Toyota
  - 80% of the journey involves learning and living the new philosophy
  - 20% involves physical changes
A Kaizen Event

- Is a highly focused “assault” on an area or process to achieve rapid improvement
- Uses a cross-functional team with process insiders and outsiders
- Achieves as many improvements as possible during a typical 3-5 day event
- Augments, but does not replace, continuous improvement
Some Paths to Improvement

- Individual efforts
- Part-time groups or teams
- Kaizen events
When Are Kaizen Events Appropriate?

- Need for solution is urgent
  - Competitive crisis
  - High customer dissatisfaction

- Big impact projects
  - Significant impact on sales or profits
  - Bottlenecks

- Cannot tolerate prolonged disruption
Selecting Candidates for Kaizen Events

- Factors to consider
  - Strategic goals of the organization
  - Current performance of process, department, machine (good time for Value Stream Mapping)
  - Feasibility (difficulty, resources required, probability of success)

- Selecting the top few candidates
  - Decision matrix (sample available on request)
Value Stream Map

- Technique to analyze the production of a product line from receiving dock to shipping dock
- Structured way to gather, organize, and present pertinent data about the existing process
Value Stream Map - Current State

6-day lead time as shown

From F/J:
5,350 finished pieces/day
5 %
90 %
5 %

Lam #1
- Crew size: 4
- Run speed 58 ft/min
- Output: 500 pieces/hr
- C/T = 7.2 sec
- C/O = 5 - 25 min
- % Crew:days = 100%
- Swing = 0%
- % Reliability = 98%
- Waste = 1/2%
- Sec available 27,000
- Weekly hr = 5

Resaw (4 saws)
- Crew size: 1 1/3
- Run speed 184 ft/min
- Output: 1,584 pieces/hr
- C/T = 2.3 sec
- C/O = 7 - 30 min
- % Crew:days = 100%
- Swing = 0%
- % Reliability = 95%
- Sec available 27,000
- Weekly hr = 5

Molder #4
- Crew size: 4
- Run speed 300 ft/min
- Output: 1,285 pieces/hr
- C/T = 2.8 sec
- C/O = 5 - 45 min
- % Crew:days = 100%
- Swing = 0%
- % Reliability = 98%
- Waste = 1/2%
- Sec available 27,000
- Weekly hr = 31.6

Prime
- Crew size: 3
- Run speed: 3,151 ft/min
- Output: 1,350 pieces/hr
- C/T = 1.3 sec
- C/O = 1 min - 1 hr
- % Crew:days = 100%
- Swing = 0%
- % Reliability = 73%
- Waste = 3%
- Sec available 27,000
- Weekly hr = 18.5

Staging

Weekly shipments:
- 700,000 lineal
- 50,000 pieces

VA Ratio 1:311

Production lead time:
- 521,874 sec

Value-added time:
- 1,674 sec
Selecting the “Pilot” Event

- High likelihood of success
- Results will be highly visible
- Makes a significant impact to the organization
- Solves operational problems, not management issues
- Area has a stable current process
Preparing For the Event

- Select team sponsor
- Select team leader
- Choose the facilitator
- Choose team participants
- Develop the team charter
- Gather data prior to the event
- Prepare the organization
Team Sponsor

- High level champion of the cause
- Upper management advisor to the team
- Breaks through road blocks
- Arranges support for the team during the event
- Ensures coverage so that team members are not interrupted during the event
Team Leader

- Determines session objectives and process to be followed
- Meets with facilitator to review session objectives and process
- Sends agenda to team members in advance
- Is the leader, not the boss
Traits of Good Team Leaders

- Previous success as a leader (church, scouts, military, civic, etc.)
- Has experienced a kaizen event
- Good knowledge of lean manufacturing (if production area event)
- Good knowledge of waste elimination techniques
- Not dictatorial - understands participative management
- Comfortable working in the target area
- Good people skills
Team Facilitator

- Manages how people work together during team activities
- Keeps activities moving along the process and time schedule set by the team leader
Recorder

- Records important results, actions, & decisions
- Promptly distributes minutes to participants
- Usually a team member
Identify Other Members

- **Insiders** – who work in or around the process
  - Machine Operator
  - Buyer
  - Assembler
  - Planner

- **Outsiders**
  - Provides non-tainted viewpoint & new ideas
  - Can be inside or outside of the company
Traits of Good Participants

- Understands the target area
  - May work in area
  - Can learn the area
- Open to doing things differently
- Will get involved
- Good communicators
- Brings knowledge (technical or procedural) that will help the team succeed
The Kaizen Team Charter

- Team Charter clearly identifies rules of operation
  - Objectives
  - Scope
  - Resources available (budget, assistance, etc.)
  - Authority of the team (and it’s limits)
  - Deliverables
  - Schedule
  - Code of Conduct (developed at kick-off meeting)

- Created by leader and approved by team
Before 1\textsuperscript{st} Team Meeting

- **Gather detailed information in advance**
  - Process steps
  - WIP levels
  - Capacities/process times
  - What is produced and how much?
  - Cycle and queue times
  - Batch sizes & changeover frequency
  - Defect Rates
  - Up-time
  - Number of operators

- **Photos and layout of target area**
Rolling Out the Kaizen Event

- **Preparing the Organization - considerations**
  - Developing a sense of trust across the organization
  - Generating enthusiasm about the event
  - Demonstration of commitment by management
  - Publicizing the event - before and after
  - Getting the union to cooperate

- **Team Kickoff (includes sponsors)**
  - Review draft charter, modify, approve
  - Develop *code of conduct* (agreement on rules)
  - Discuss training and event logistics, etc.
Setting the Proper Environment for the Event

- **Logistics**
  - Location – off-site, on-site, or in work area
  - Food – feed the team – feed everyone?
  - Tools, supplies
- **Work hours (in advance)**
- **Handling interruptions (coverage)**
- **Support from rest of organization (sponsor’s responsibility)**
- **Energy breaks**
Kaizen Event Sequence (Start to Finish)

1. Training & kick-off activities
   A. Lean manufacturing (if in production area)
   B. Tools of continuous improvement
      (pareto, fishbone, run charts, 5-whys, process analysis, etc.)
2. Analysis of current “state”
3. Select areas of focus
4. Create possible solutions
5. Select solutions

Creates a Plan That has Team Buy-in
Useful Tool - *Pareto Analysis*

- Helps visualize the larger sources of waste
- Visual application of the *80-20 rule*
- Helps team focus on those causes that have the greatest impact if solved
Analyzing the Current State-
Some *Wastes* to Look For

- Too many process steps
- Excessive travel distance or time
- Waiting
- Ineffective scheduling
- Excessive handling
- Inventory storage areas
- Excess WIP
Analyzing the Current State-
Some Wastes to Look For

- Bottlenecks
- Defects
- Poor organization of work area (5S needed)
- Large batch sizes and long setup times
- Disjointed process steps (need flow)
- Inefficient processes
- Opportunities to apply technology to improve efficiency
Creating Solutions

- Open your mind to new possibilities
- Don’t be bound by what is done today
  - Do you need it?
  - Should it be outsourced?
  - Build it a different way
  - Design it differently
- Don’t be discouraged by prior failures
  - We tried to get approval for that before!
  - That’ll never happen!
Visualize the Perfect Solution

- What would be the ideal situation?
- What if all waste were eliminated?
- Elevates the target for generating solutions
Kaizen Event Sequence

6. Establish metrics for success
7. Plan & implement (repeat if necessary)
8. Standardize and sustain

Gets the job done

9. Report results
10. Celebrate

Paves the way for future events
Finding Time for Kaizen Events

- Work overtime to recover lost production
- Reroute production to other area
- Perform the event over a weekend
- Run the event early in a production period
- Finish “period” production early and then run the event
- Take advantage of a “slow” time
- Outsource some production to “buy” time
- Run the event concurrent with production
Successful Uses of the Process

- **Sales - quotes take too long**
  - Reduced quote cycle by >40%
  - Improved on-time delivery of quotes from “?” to >80%

- **Engineering – a bottleneck**
  - Improved on-time releases of engineering from <<50% to >80%

- **Assembly – high cost**
  - 40% reduction in manual assembly costs
Successful Uses of the Process

- Quality costs – too high
  - 50% reduction in defects
- Late material deliveries
  - Late deliveries cut in half
Summary

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