Lessons of a Failed Kaizen Event

A guide to Managing Change
Objectives
Introduction
Lean Concepts
49ers Form 1 and Form 1A Kaizen
Culture Change
Taco Bell and My Hammer
Taco Bell and My Hammer
Clark Pacific’s Lean Journey

• 2010 PCI Productivity Tour

• Mike Strain

• Garrett Bradford

• CIS Department
Clark Pacific Before and After
Clark Pacific Before and After
My 1st Kaizen at Clark Pacific– CCAPP Frame Shop

Goals:
1. Increase Productivity by 20%
2. Identify and correct 3 Safety issues

Objectives:
1. Develop work cells and implement One Piece Flow
2. Develop a 6S program
Productivity Tracking

- Divided the shop into 3 work stations, P-rod/mesh, cut/pin, and assembly
- Established “Pull” between the work stations
- Developed Standard work (TAKT, SWIP, Flow)

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Kaizen Results
Kaizen Results
Kaizen Results
Kaizen Results
Kaizen Results
GREAT SUCCESS!
Lean Concepts

**Standard Work**

**Visual Management**
- Production Boards
- 6S
Standard work – a series of steps, assigned to a single person, balanced to Takt time.

the best way we know how to do it right now
Lean concepts – Standard Work

Start

Monday

Tuesday

Wednesday

Thursday

Monday Result

Tuesday Result

Wednesday Result

Thursday Result

Desired Results
Lean Concepts – Standard Work

Start → Consistent Processes → Desired Results
Lean Concepts – Standard Work

- Process Maps
### Process Maps

#### Process Timeline

<table>
<thead>
<tr>
<th>Process</th>
<th># of Men</th>
<th>Timeline</th>
<th>1st Hour</th>
<th>Start Time: 3:00AM</th>
<th>2nd Hour</th>
<th>Time: 4:00AM</th>
<th>3rd Hour</th>
<th>Time: 5:00AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Huddle/prep tools</td>
<td>All Men</td>
<td>05:10</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Remove and fold tarps</td>
<td>4 men</td>
<td>05:10</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Remove Plastic</td>
<td>2 men</td>
<td>05:10</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Remove Planks</td>
<td>4 men</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Remove top frame bolts</td>
<td>1 man</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Flip top cage</td>
<td>1 crane operator</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Sweep off panels</td>
<td>1 man</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Remove bolts from under the form</td>
<td>1 man</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Unbolt Bulkheads</td>
<td>2 men</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Remove grout tube inserts</td>
<td>2 men</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Remove stripping inserts</td>
<td>1 man</td>
<td>05:10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
<td>40</td>
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</table>
Lean Concepts – Standard Work

- Process Maps
- Process Timeline
- Crew Timelines
Lean Concepts – Standard Work

**Critical Process Sheet**

SET FLANGE BULKHEADS

<table>
<thead>
<tr>
<th>Process Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. GET THE FORKLIFT WITH THE PECKER BAR</td>
</tr>
<tr>
<td>2. TWO MEN ATTACH THE FLANGE BULKHEAD TO THE PECKER BAR BY BOLTING IT TO THE PICKPADS LOOSELY BY HAND.</td>
</tr>
<tr>
<td>3. FORKLIFT LIFTS THE FLANGE BULKHEAD AND BRINGS IT TO THE MEASURED OUT LOCATION WHERE THE PANELS ARE TO BE SEPARATED.</td>
</tr>
<tr>
<td>4. FORKLIFT LOWERS FLANGE BULKHEAD AND SECURES IT TO PANEL.</td>
</tr>
<tr>
<td>5. REMOVE PICKPADS AND BOLTS BY HAND TO THE NEXT FLANGE BULKHEAD.</td>
</tr>
<tr>
<td>6. REPEAT STEPS 2 TO 4 UNTIL ALL FLANGE BULKHEADS ARE IN PLACE.</td>
</tr>
</tbody>
</table>

| Cycle Time (minutes): | 2 |
| Number of Operators: | 2 (1 + FL) |

**Tools, Supplies, Equipment, & Documentation needed**

1. LEATHER GLOVES
2. FORKLIFT WITH PECKER BAR
3. PICKPADS
4. BOLTS
5. PICK HAMMERS

**Safety**

1. POTENTIAL TRIPPING HAZARD
2. HEAVY OBJECT IN THE AIR
3. PINCH POINTS DUE TO FORKLIFT

**Quality Checks**

1. CHECK FLANGE BULKHEADS.
   * ARE NOT CROOKED OR BENT.
<table>
<thead>
<tr>
<th>MILESTONE</th>
<th>SCHEDULED</th>
<th>ACTUAL</th>
<th>REASON(S) FOR MISSING SCHEDULED MILESTONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plank Removed from Form #1</td>
<td>4:55 AM</td>
<td>4:50 AM</td>
<td></td>
</tr>
<tr>
<td>Plank Removed from Form #8</td>
<td>6:05 AM</td>
<td>6:00 AM</td>
<td></td>
</tr>
<tr>
<td>Start Stressing First Cable</td>
<td>6:50 AM</td>
<td>7:00 AM</td>
<td>Stressing machine not working right - 3rd time this week.</td>
</tr>
<tr>
<td>Start Pouring Bottom of Form #1</td>
<td>8:30 AM</td>
<td>8:50 AM</td>
<td>Missing 3 of the #7 bars. Had to wait for rebar to bring them.</td>
</tr>
<tr>
<td>Start Pouring top of Form #5</td>
<td>10:30 AM</td>
<td>10:45 AM</td>
<td>New guy didn't follow the standard work for getting pour tools ready.</td>
</tr>
<tr>
<td>Start Pouring bottom of Form #7</td>
<td>11:00 AM</td>
<td>11:05 AM</td>
<td>Carryover from above.</td>
</tr>
<tr>
<td>Start Pouring Top of Form #7</td>
<td>12:15 PM</td>
<td>12:15 PM</td>
<td></td>
</tr>
<tr>
<td>Everything done &amp; crew ready to go home</td>
<td>1:30 PM</td>
<td>1:30 PM</td>
<td></td>
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</table>
Lean Concepts – Visual Management

Production Boards
Step 1: Sort
Step 2: Straighten
Step 3: Shine
Step 4: Standardize
Step 5: Sustain

The 6th “S” is Safety
49ers Form 1 and 1A Kaizen

Goals:
1. Increase Productivity by 20%
2. Identify and correct 3 Safety issues

Objectives:
1. Develop Standard Work for the crew
2. Develop Visual Management tools for the crew
3. Improve to level 3 in 6S
49ers Kaizen Preparation

- I studied and documented the process
**49ers Kaizen Preparation**

- I studied and documented the process
- I developed an improvement charter
  - Goals
  - Objectives
  - Team Members
  - Agenda

---

### Event Goals:

1. Safety - Identify and correct 5 safety issues
2. Quality - Identify 4 quality issues and reduce their frequency by 50%
3. Productivity - Improve the productivity of the core by 20% (defined by a reduction in overhead, a reduction in non-value-added time, or some combination of the two)

### Event Objectives:

1. Define Standard Work for each core member
   - Identify requirements for each process
   - Train 3
   - Tools
   - Quality Requirements
   - Train all core members in core Standard Work
2. Improve the use of the production board as a management for daily improvement
3. Bring the core up to Level 3 in the 5S audits and establish the 6S program

### Kaizen Team:

1.ندم: Main - Woodland Production
2. Davis: Engineer - Woodland Production
3. Tom: Teacher - Woodland Production
4. Andy: Web: Woodland Accounting
5. Roger: Manager - Inventory Production
6. Bob: Engineer - Engineering
7. Current-Richard Jr: 1.25
8. Dan: Commander - Woodland Production

### Agenda:

- **Monday, October 27th**: 8:30 am to 5:00 pm
  - Lunch meeting
  - Team Walk
  - All Day

- **Tuesday, October 28th**: 8:30 am until daily goals are met
  - Observe production
  - Breakthrough opportunities
  - Develop Action

- **Wednesday, October 29th**: 8:00 am until daily goals are met
49ers Kaizen Preparation

• I studied and documented the process
• I developed an improvement charter
  – Goals
  – Objectives
  – Team Members
  – Agenda
• I developed personalized training
49ers Kaizen Preparation

• I studied and documented the process
• I developed an improvement charter
  – Goals
  – Objectives
  – Team Members
  – Agenda
• I developed personalized training
• I prepared for the event
  – Scheduled the room
  – Planned Food
  – Prepared all my materials
49ers Kaizen Preparation

- I studied and documented the process
- I developed an improvement charter
  - Goals
  - Objectives
  - Team Members
  - Agenda
- I developed personalized training
- I prepared for the event
  - Scheduled the room
  - Planned Food
  - Prepared all my materials
- I communicated goals /objectives
  - To the Team Leader
  - To the Team Members
  - To Management
The Event

Monday: Training
Tuesday: Observation
Wednesday: Improve
Thursday: Implement
Friday: Present
The Next Week

How are we going to sustain this?

Were’ Not!
It Looked Like Chaos
The Perspectives

- **Plant Manager** – “Your kaizen didn’t work”
  - Disrupted the entire plant
  - Took resources from other needed projects
- **Plant Superintendents** – “Your kaizen didn’t work”
  - Shut down our crews
  - Created safety issues
  - You overworked the team
- **Team Members from the plant** – “Your kaizen didn’t work”
  - The team didn’t listen to our ideas
  - You pushed your ideas on us
  - We didn’t have input
- **Form 1 and 1A Crew** – “Your kaizen didn’t work”
  - It is too confusing
  - We liked the way it was before
  - You are making us work harder
What went wrong?

WHAT HAPPENED?

How Many Times Did I Say
49ers Kaizen Preparation

- I studied and documented the process
- I developed an improvement charter
  - Goals
  - Objectives
  - Team Members
  - Agenda
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Supporting Change

• Concepts
  – Organizational Rate of Change
  – Push vs. Pull

• Tools
  – Improvement Steering Committee
  – Improvement Charter
  – Defined Kaizen Team Roles
  – Kaizen Team Leader Meetings
Organizational Change Rate

\[ y = f(x) \]

\[ f(a+h) \]

\[ f(a) \]

\[ a \]

\[ a+1 \]

\[ a+h \]
Push vs. Pull
CIS Management Review Meeting

**Goal:** Align CIS activity to the needs of the plant

**Agenda:**
1. Review KPI’s
2. Review CIS Systems
   - 6S Program
   - CIS Training
   - Visual Management
3. Review previous Months CIS activity
4. Schedule next months CIS activity
5. Plan additional CIS activity

- Held monthly in all production facilities
- Attended by
  - Director of Construction
  - Plant Manager
  - Plant Superintendents
  - Plant CIS Manager
- Initiated for cross departmental improvements
**Goal:** Assure the success of an improvement effort through alignment

**Elements:**

1. **Event Roles** – Champion, Sponsor, Team Leader, CIS Facilitator
2. **Problem / Opportunity Statement**
3. **Event Scope**
4. **Metrics**
5. **Event Goals**
6. **Event Objectives**
7. **Event Team Members**
Kaizen Team Structure

**Champion** - The champion is a member of the management team who champions the cause and:
- communicates the companies' high level goals
- ensures that this improvement effort is achieved
- provides support to the use of resources and time
- breaks down barriers to ensure success
- provides a path of communication to the senior leadership team

**Event Sponsor (process owner)** – The event sponsor is a member of management who
- is the driving force behind the kaizen
- writes the event charter with the team leader
- makes sure the kaizen event goals and objectives are aligned with the overall company goals and objectives
- holds the kaizen team accountable for achieving the goals through team leader meetings
- reviews ongoing metrics developed in the kaizen to monitor sustainment of the event
- works with the team leader when sustainment issues arise

**Team Leader** – The event team leader is responsible for
- holding the team accountable to timelines
- helping facilitate brainstorming
- assuring that resources are available to the team when they are needed
- assigning duties base on action plans developed by the team
- sustaining improvement after the event
Kaizen Team Leader Meetings

**Goal:** The goal of team leader meetings is to hold the kaizen event team leader accountable to the goals of the event and understand the broader impact of changes the team is proposing to make.

**Attendees:**
- Event Sponsor
- Event Champion
- Event Team Leader
- Event Facilitator

Strong team leader meetings assure goals are met and allows the team to make decisions guided by leadership.