

# KAIZEN

Change (KAI) to become good (ZEN)KAIZEN

“Improvement” or “change for the better”

- The participation of workers in the improvement.
- Incremental improvement
- People at all levels of an organization participate in kaizen

**Management is accountable for the actions for all  
Kaizen activities**

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## Benefits of a Kaizen:

- Eliminate waste (MUDA)
- Kaizen 5S Framework
- Standardization
- Improve Quality
- Space utilization
- Use of Capital
- Employee retention
- Communications
- Faster Delivery
- Customer satisfaction

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What can be achieved with Kaizen:

Teamwork

Personal discipline

Improved Morale

Lower turnover

Quality Circles

Suggestions for improvement

Better Safety

Sense of completion

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## Manufacturing VS Office Kaizen:

Similarities;

- Tool usage
- Process
- Standardization
- Employee engagement

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## Manufacturing VS Office Kaizen:

Differences;

- Data collection
- Processes
- Products are more visual in MFG
- Customers are easily defined in MFG
- Focus is typically on MFG
- Hr/Hr in MFG

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Why is Kaizen Important in the current economic situation?:

- Sales are down
- Public is more discrete
- Break even is harder to obtain
- Materials cost more
- Employees are not getting increases in wages
- Every second /minute counts!!

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## Why Kaizen for the office?:

- Efficiency / Effectiveness
- Best Practices
- Standardize process
- Eliminate MUDA
- Create a work culture to “produce” quality services and products not “race”
- Need for solution is urgent
- Competitive crisis
- High customer dissatisfaction
- Big impact projects
- Significant impact on sales or profits
- Bottlenecks
- Cannot tolerate prolonged disruption

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How do office Kaizen activities help MFG &

Business processes?:

- Flow of information
- Ordering parts on time
- Support MFG changes and specifications
- Defines Customer Requirements internal & external
- Reduces confusion on the factory floor
- Plans the activities to achieve goals

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## Where do you start an office Kaizen:

- Why do you need to conduct a Kaizen?
- Do you need to select a “Pilot area” ?
- Data collection
- Gemba, Verify and Validate
- UDO’s Undesirable Observations (list them)
- Understand your Customer (feedback)
- Establish the baseline
- Tough to call your baby ugly!
- Remember you are probably doing some things very well
- Don’t do this alone
- Select the area where gains can be made first then attack the tougher areas

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Start an office Kaizen:

- Training
- Defining the problem/goals
- Documenting the current state
- Brainstorming and developing a future state
- Implementation
- Developing a follow-up plan
- Presenting results
- Celebrating successes

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Start an office Kaizen:

- Team Kickoff (includes sponsors)
- Review draft charter, modify, approve
- Develop code of conduct (agreement on rules)
- Discuss training and event logistics, etc.

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## Start an office Kaizen:

- Establish the Charter
- Take pictures
- Establish the “burning platform”
- Try to eliminate your Bias
- However, input your expectations on the Charter
- Identify the Customer, on Charter!!
- Make sure all pre-work is complete
  
- See charter example:

### Kaizen Charter Title:

Your signature represents unwavering support and commitment to this kaizen event and dedication of the resources required.

Source: \_\_\_\_\_  
 Champion: \_\_\_\_\_  
 Process owner: \_\_\_\_\_  
 Team Leader: \_\_\_\_\_  
 Facilitator: \_\_\_\_\_  
 Start date: \_\_\_\_\_  
 Starting point: \_\_\_\_\_  
 Ending point: \_\_\_\_\_

Baseline Lever

Signature: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Signature: \_\_\_\_\_

Event Type: \_\_\_\_\_  
 Number of Days: \_\_\_\_\_

AOP Impact

Level - Owner

Specific Goal

Problem Description

Kaizen Objective

Improvement Metric(s)

Pre-Kaizen

Post-Kaizen

1			
R			

### Key Deliverables from Kaizen (Prioritized)

1	
2	
3	
4	
5	
6	
7	
8	

### Prework

1	
2	
3	
4	
5	
6	
7	

### Team members

	Team members	Function (Role)
1		Champion
2		Process Owner
3		Team Leader
4		Team Member
5		Team Member
6		Team Member
7		Resource
8		PE
9		MPP
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		

### Kaizen Schedule

	Milestones
Training	
Lo	
Ti	
Discovery	
Lo	
Ti	
Change	
Lo	
Ti	
Standardize	
Lo	
Ti	
Communicate & Celebrate	
Lo	
Ti	

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## Assemble the Team:

- Cross Functional team still applies
- Establish roles and responsibilities
- Make sure Leaders are involved
- Leave your hat at the door !!

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## UDO's / Gemba:

- Make sure everyone on the team can visually see the process
- Make sure the collection of UDO's are posted
  - Joe's desk is a mess
  - Mary's desk is full of non working material
  - Storage cabinets are a mess
  - Etc...
- Start and Stop the Gemba at the specified points !

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Create the Value Stream Map then Future State:

- Step by step processes with timing
- Id travel distance to copier, etc.
- What is TAKT time
- What is your cycle time / process time

$$Y = F(X)$$

Identify the controllable x's

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## A3

Goal/Metric: XRF Testing Reduction		A3 SR - Status Report		Time Period: Q1, 2010													
Leader: Jerry Wood		Team: Harold Miller, Neil Murdie, Tim Hine, Craig Schaefer, Todd Majewski										Champions: Nieb/Schaefer					
Background		Future State (Desired Outcome)															
<p><b>Background Analysis:</b> XRF testing is currently required for all A380 discs. 400 discs/month @0.5 man-hr/disc ~ \$60K/month 200 man-hr/month (ISC, R&amp;T, MTC) + lost opportunity costs</p>		<p>* Reduced XRF testing for both OEM and Field Return discs by ~80%. * * *</p>															
Objective or Problem Statement		Implementation Plan															
<p><b>Objective -</b> Gain Airbus approval to reduce/eliminate XRF testing by 3/31/2010.</p> <p><b>Problem Statement:</b> Current XRF testing requirements are costly, time and resource consuming and a potential capacity constraint. Plans call for additional XRF testing of rework parts from the field in 2010.</p>		Task	6/9	7/9	8/9	9/9	10/9	11/9	12/9	1/10	2/10	3/10	4/10	5/10	Responsible		
		1	Demonstrate on-going minimal disc fallout levels												Wood		
		2	Generate grinding process capability												Hine/Cremer		
		3	Obtain ISC funding for demonstration dynamometer test and perform test.												H. Miller		
		4	Develop recommended reduced sampling plan												Kaczynski		
		5	Propose to reduce/eliminate XRF measurements												Schaefer		
		6	Obtain Airbus approval												Schaefer		
		7	Implement approved measurement plan.												Hine		
		8	Acquire third XRF unit for productivity												Hine		
		9	Obtain quote for Automated XRF unit for 2010.												La Forest		
		Due Date Key: Gray = original due date; Green = task complete; Red = task overdue															
<b>Expense Impact</b>		Performance Measures															
Reduce current monthly XRF labor expense by ~\$50K.		<b>Measure</b>							<b>Current State</b>							<b>Future State</b>	
		1 XRF Sampling plan (% of discs)							100%							<20%	
		2 Monthly Labor Expense							\$60K							<\$12K	
		3															
		4															
		5															

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- 5S:
- Follow 5S protocol
  - Don't focus on just the desk area focus on where materials are, forms, etc.
  - Make items as Visual as possible
  - Establish min/max opportunities
  - PDCA

See examples:

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#	Standardize Questions	Possible	Score (0 or 1)	Expectations	Comments/Observations
1	Is everyone using personal protective equipment in the areas where it clearly indicates to do so?	1	1		
2	Are waste accumulation or storage areas clearly and consistently marked (red-hazardous, yellow/black-nonhazardous)?	1	1		
3	Are all chemicals properly labeled and a standard disposition procedure for outdated chemicals followed?	1	1	See copy of disposition procedure in area.	
4	Can an audit be performed at any time by any member of the and the explanation of the 5S process and metrics is be consistent?	1	1	5S audit procedure and forms?	
5	Are metrics visible, standard across the site, and up-to-date?	1	0	Results of daily walkthrough, last audit results, etc.	SITE COMPLIANCE
6	Are aisles clearly and consistently marked?	1	0	Every aisle must be lined/marked.	MARK AISLES
7	Do storage labels match the item stored in that location?	1	0	All storage locations. If no labels, "0"	ORGANIZE AREA
8	Kanbans are in place and effective for all practical applications. (raw materials, WIP, supplies, consummables etc.)	1	0		KANBANS EFFECTIVE?
9	Is there a standard process in place to replenish or replace parts, supplies, broken tools, tools that need calibration?	1	1	Paper, gloves, materials, etc.	
10	Are tools, fixtures and jigs arranged in order of frequency of use?	1	1	Ask operators. Look at written process.	
11	Is it easy to know when tools, fixtures and jigs are missing? (i.e. is there a process in place to know if an item is being used outside of area or is misplaced?)	1	1		
12	Do all work areas used for the same process have the same 5S standard?	1	1	Documented procedure for how to borrow tools. See it.	
13	Is it visually obvious what items/materials are ready for work, what items/materials are in work and what items/materials are completed?	1	0	Work areas/stations should be 5Sed the same if the same work is being done on them.	
14	Are 5S checklists, standard work, and procedures up to date and accurate?	1	0	Without asking anyone, you must be able to see signs or signals that tell you this.	VISUALS
15	Is there a 5S notebook, or similar means, available for ease of locating 5S info, schedules, previous months' scores, etc.?	1	0	5S standardization procedures. If they don't exist, then "0".	
	<b>Total Score</b>		<b>2.67</b>	See it. Make sure it has schedules, instructions, etc.	

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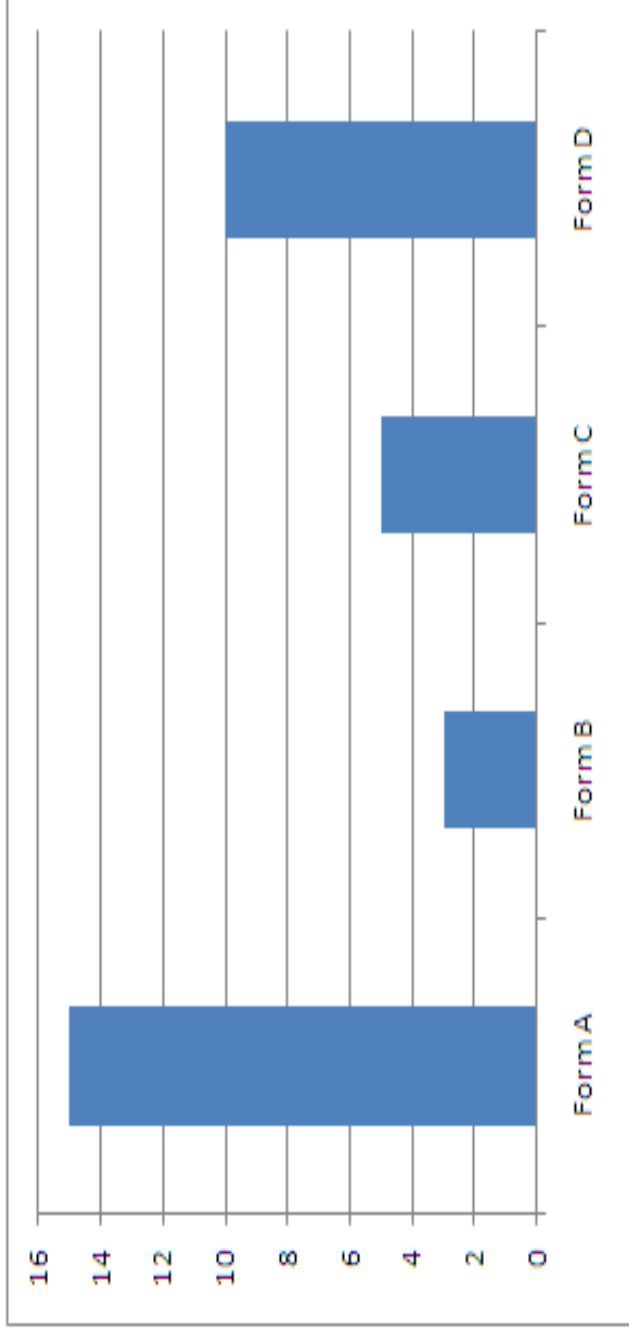
## SORT FORMING RAIL

NEEDLE Item #	Sort	ACTION	WHO	DATE	STATUS
1	1	0			G
2	1	0			G
3	1	0			G
4	0	Remove Clutter			R
5		0			R
6	1	0			G
7	0	0			R
8	1	0			G
9	0	Aisles not marked			R
10	0	Remove Clutter			R
11	1	0			G
12	0	0			R
13	1	0			G
14	0	0			R
15	0	0			R

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## Pareto Analysis:

- Helps visualize the larger sources of waste
- Helps prioritize the corrective efforts
- Helps team understand the biggest impact if solved



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## Leadership Standard Work (LSW):

Week Beginning Date:	M	T	W	Th	F	Weekly Task/Meetings	Actions and Follow Up	Daily Actions
						<b>Monday</b>		
6:30 Maint Mtg						Collect data for 5 critical		ensure employees following O/N procedure
6:35 Daily build						Update Tier 2 & 3 data		Assign 2nd shift staffing at assignment board.
6:45 Collect data						8:00 Mach shop T&A		Check for daily overtime
6:50 update Tier 2,3						10:45 review top 3, 5s		Assign one item per day to make better
7:00 Tier 1						11:00 sign of Hr/Hr mach		
7:15 Tier 2						Spend time on the floor		
7:30 Tier 3						CK PPE for empl		
8:15 T&A						<b>Tuesday</b>		
9:00 MPPS						9:00 MPS mtg conf rm A		
9:30 staff mtg						10:45 review top 3, 5s		
5 Critical						11:00 sign of Hr/Hr mach		
10:30 War rm						Spend time on the floor		
11:30 Mach shop						CK PPE for empl		
1:00 5 S						<b>Wednesday</b>		
2:00 sched OT						Spend time on the floor		
3:00 Maint mtg						10:45 review top 3, 5s		
Pmt 5s area Tier 3						11:00 sign of Hr/Hr mach		
Satellite area audit						CK PPE for empl		
CK PPE for empl						<b>Thursday</b>		
3:40 Next Day Build						9:00 MPS mtg conf rm A		
						Complete two 5s Audit's		
						11:00 sign of Hr/Hr mach		
						10:45 review top 3, 5s		
						2:00 Establish sched for week		
						Spend time on the floor		
						CK PPE for empl		
						<b>Friday</b>		
						Spend time on the floor		
						11:00 sign of Hr/Hr mach		
						Post 5S results		
						CK PPE for empl		
						<b>● = Missed Task</b>	<b>NA = Not Required</b>	<b>X = Complete</b>
								<b>☞ = Looking into it</b>

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## Process Standard Work:

- Create a place for everything and everything in it's place
- Label as needed
- Make visual
- Conduct work to a standard
- Forms, sequence in a process
- Audit processes at all levels

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Celebrate:

- Understand the change
- Celebrate the activities of learning
- Summarize the gains
- Describe activities for sustainment

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## Summary:

- Gather data to identify areas for a Kaizen
- Create the “burning Platform”
- Learn the tools
- Apply the Tools
- Establish sustainment metrics
- Audit often to assure attainment
- Summarize the gains
- Describe activities for sustainment

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Remember:

“It’s what you learn after you know everything  
that is important”