

# Kaizen Workshop

## Introduction

# Agenda – 4 day event

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1. Day 1
  - a.m. measure the current situation
  - p.m. ideas & plan for a new situation
2. Day 2
  - a.m. design new situation
  - p.m. make some changes
3. Day 3
  - a.m. make some changes
  - p.m. record the new situation
4. Day 4
  - a.m. complete action plan
  - presentation

# Agenda – 3 day event

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## 1. Day 1

- a.m. measure the current situation
- p.m. ideas & plan for a new situation

## 2. Day 2

- a.m. design new situation
- p.m. make some changes

## 3. Day 3

- a.m. Measure and record the new situation
- presentation

# What is KAIZEN?

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改

**KAI**

**Change**

善

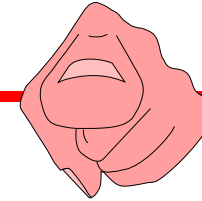
**ZEN**

**Good (or better)**

**KAIZEN - Continuous improvement  
Elimination of waste**

# 10 Ground Rules for Kaizen

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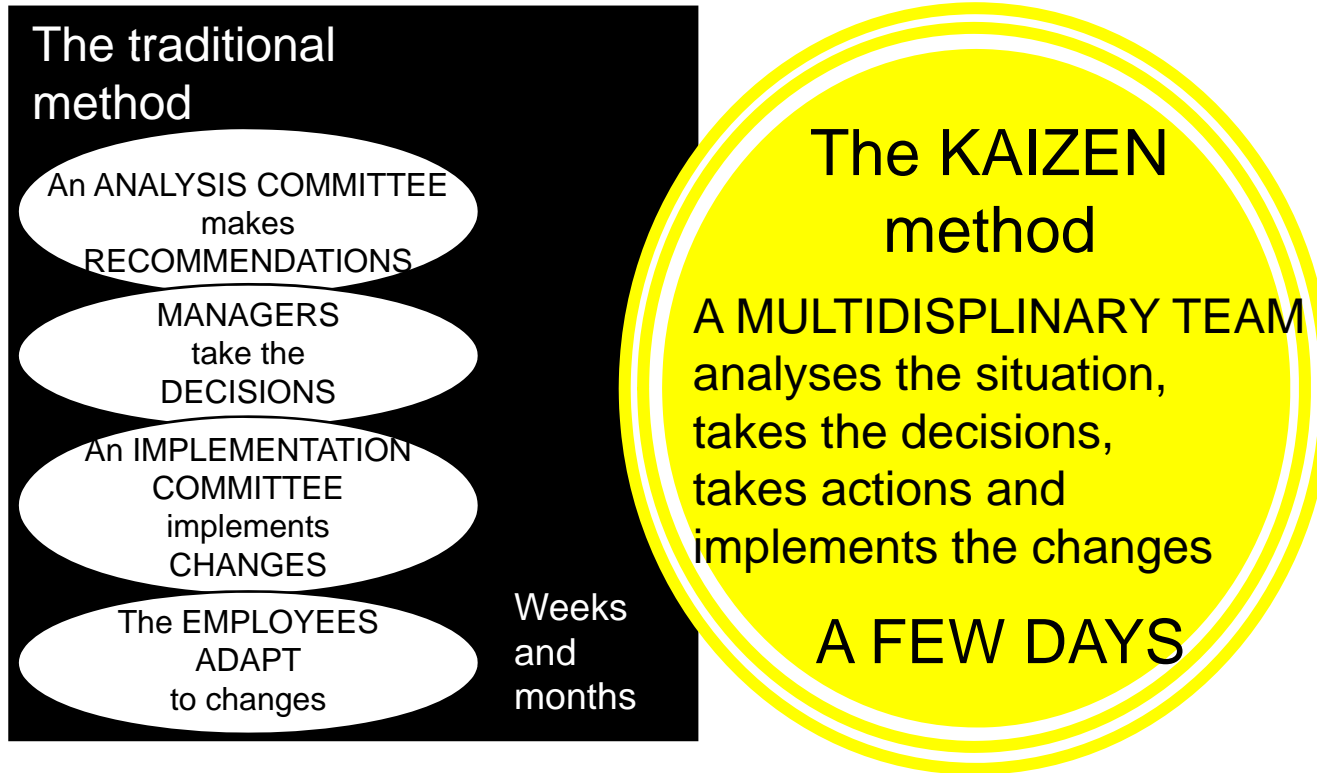
1. Don't try to justify the past – challenge fixed ideas
2. Be positive – think how things CAN be done not why they CAN'T be done
3. Use data, not pet theories
4. Use wisdom not money
5. Work smarter not harder
6. Set high standards
7. Correct failures immediately - 70% now is better than 100% never
8. Lead by example
9. A team is better than 1 expert – involve people
10. Identify the root cause

Can do, do it, do it now!



# Traditional Method vs Kaizen

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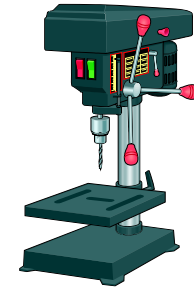
# Contents of an Operation

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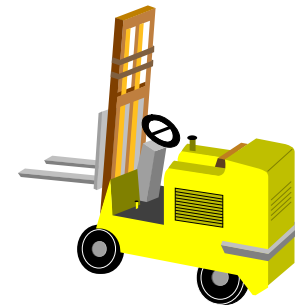
## Value Added Work

The part of the job the customer wants to pay for



## Hidden Waste

Work that does not add value but is **necessary** under the current operating conditions



## Obvious Waste

Work that does not add value and is **not necessary**

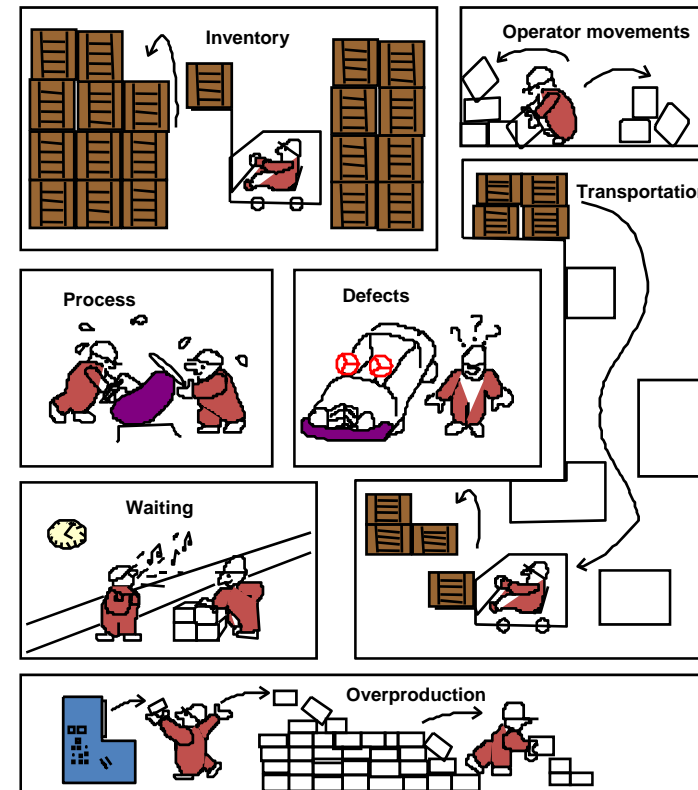


# What is Obvious Waste?



**Work that does not add value and is not necessary.**

1. Overproduction
2. Waiting
3. Transportation
4. Process
5. Inventory
6. Operator Movements
7. Defects



**The 7 sins of Muda**

**Eliminate these activities**



# Workplace Organisation

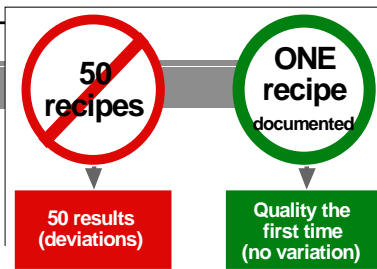
*Establish norms and respect them*

## 5S - Housekeeping

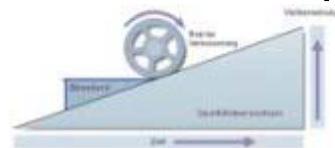
Example : Skills matrix  
ELECTRO MECHANICAL SPECIALISTS

Work Station #/S	4101	4102	4104	4105	4106	4107	4108	4109	4116	4118	4111	Part Handling	The Wrap
Work Description	Buff Chassis	Buff Top	38 GA Holepunch	14.5L 14.5 GA	1822 Holepunch	18 GA Auto Punch	PC Panel	Heavy Wire	Paint	Stn- Screen	Pack Out	Tap	Lasered
Dorothy H.	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐
Ellen B.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pat M.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
LeRoy W.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Steve H.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bill B.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lawrence D.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Diane M.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rhea F.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Glenda M.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Legend :   
 I : None / Basics / Training   
 L : Can Do With Help   
 U : Can Do Without Help   
 ☐ : Can Teach Someone Else   
 ☒ : Can Improve the process



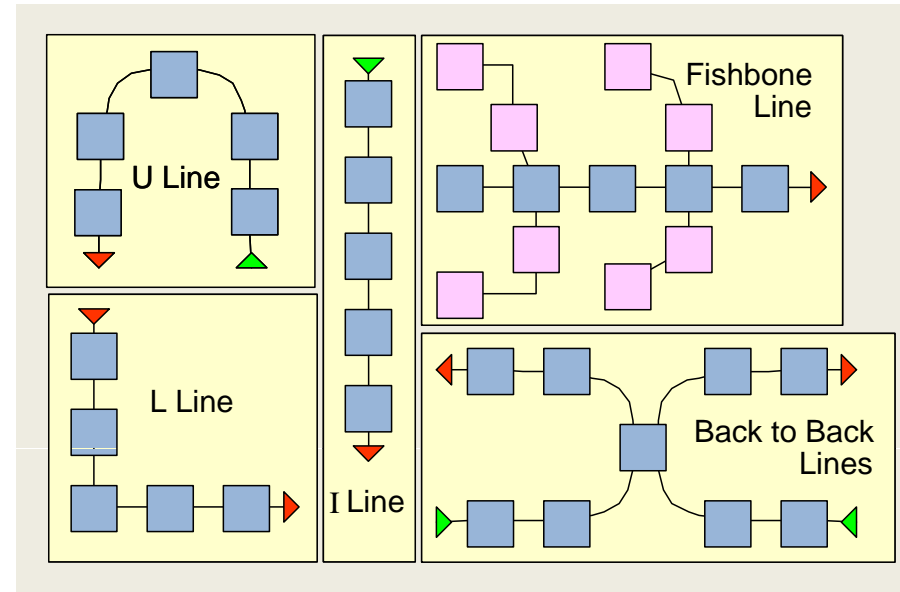
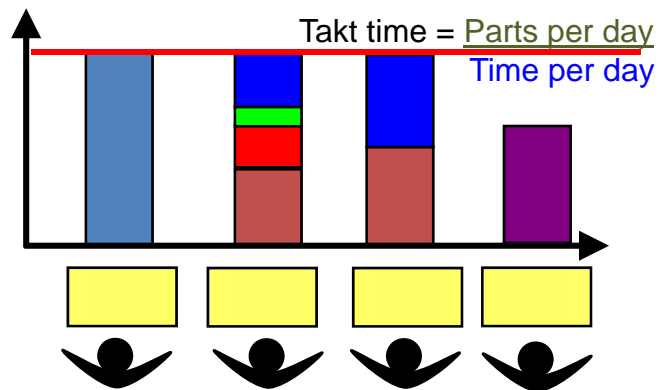
## Standard Ops.



Kaizen Introduction

## Visual Controls

# WorkFlow – line balancing



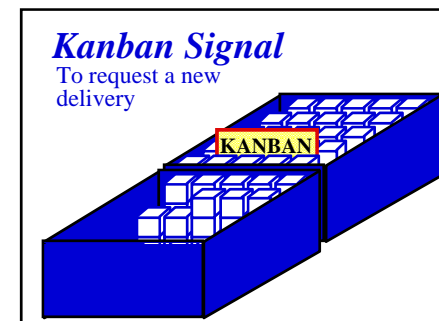
*Time per day*  
*Parts per day*

Data 420 production minutes per day  
(8 hours = 480 min - 60 Minute Break)

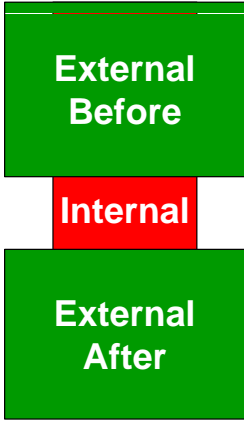
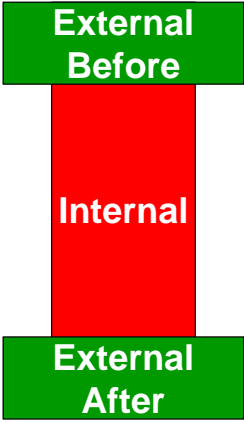
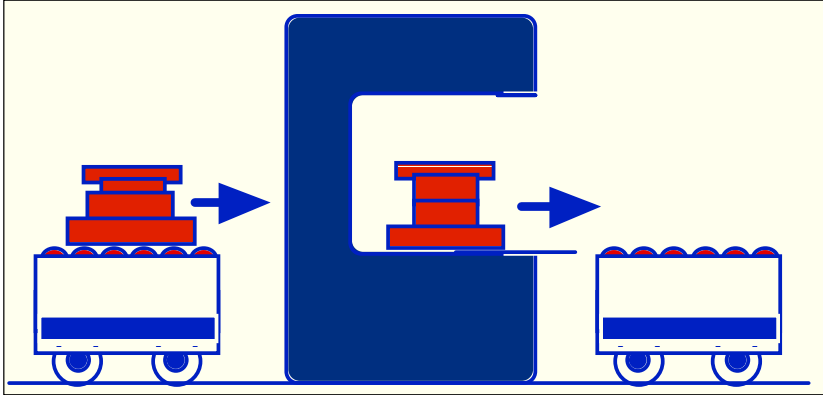
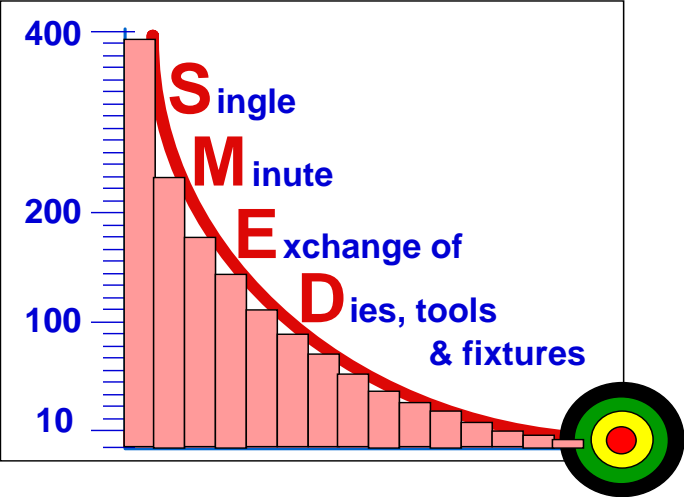
6 parts per day  
(120 parts per month - 20 Production Days)

Solution

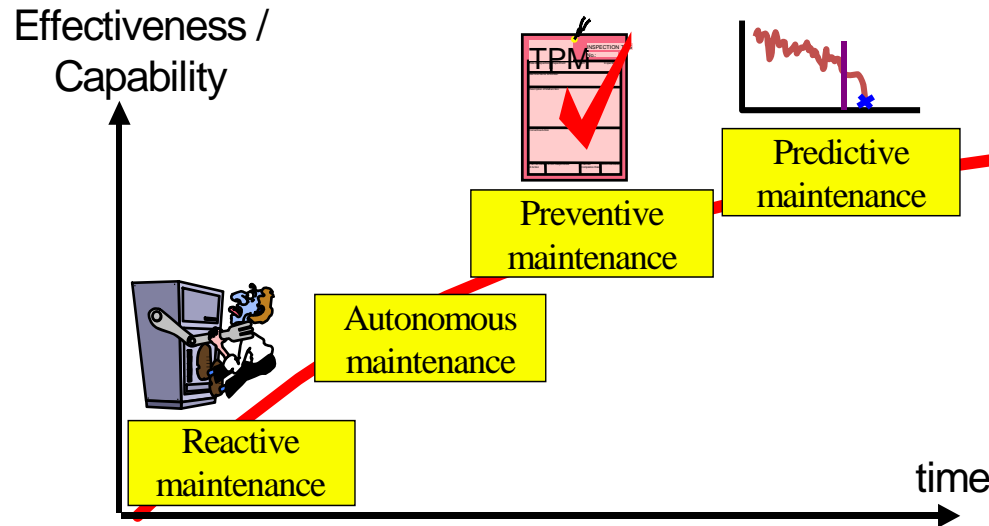
**TAKT** =  $\frac{420 \text{ mins /day}}{6 \text{ parts /day}} = 70 \text{ min/part}$



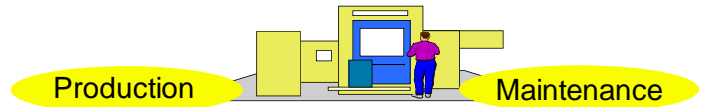
# SMED - Quick Tool Changeovers



# Total Preventative Maintenance

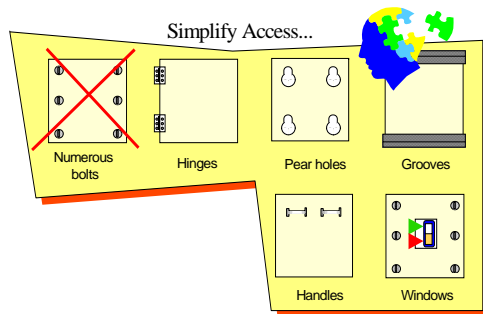


## Sharing Maintenance Responsibility

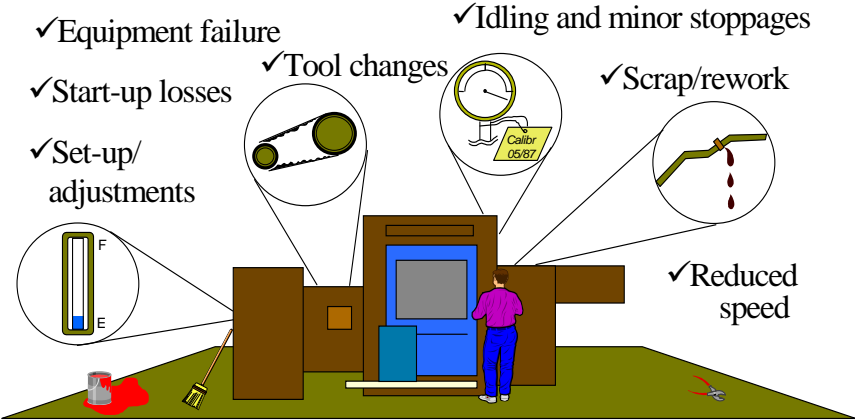


- Top up fluids
- Perform general maintenance
- Clean interior / outside
- Monitor machine condition
- Call maintenance: detected or suspected problems
- Perform specialised maintenance
- Troubleshoot /fix actual and potential problems
- Eliminate their root causes

**Manufacturing Engineering**  
Improve maintainability and safety



## Overall Equipment Effectiveness



TPM = **elimination of waste** + **continuous improvement**



PARAMETERS	UNITS	BEFORE	AFTER	IMPV'T	REMARKS
House Keeping Score	%				
Ergonomics	%				
Quality	ppm				
Number of Parts in Process					
Floor Space	M <sup>2</sup>				
Travel Distance (Mat'l)	M				
Travel Distance (Man)	M				
Number of people (all shifts)					
Productivity					
Production Lead Time					
Value Added/Total	%				
TPE	%				
Bottleneck Process Time					
Set-up time (last to first)					
Number of Error Proofs					