



Kaizen

Organized By:

Facilitator:
Syed Arshad Ali,
Consultant Corporate Quality



SPEAKER'S PROFILE AT A GLANCE

Basically an Automotive Engineer, undergone advance trainings on Quality and Maintenance Management from Japan. Having over 40-years experience of working very closely with Japanese experts during his long association with multi-national joint venture project of Hino Motors LTD. in a capacity of General Manager of quality & product support divisions.

Beside his internal 25-years services to Hinopak Motors Ltd. Karachi-Pakistan, having the privilege of sharing good management practices with other organizations at national and international levels. So far have interacted with more than 10,000 business executives on various quality & service management practices as Trainer.

He is a visiting faculty member of several reputable universities & business management institutes, disseminating the acquired knowledge of his real experiences on quality & service maintenance issues. Japanese style management approaches for continuous quality improvements viz. Kaizen, 5S, QC circles, QC tools are his expertise as trainer.

He is a regular guest speaker in seminars on quality and presented many papers in national & international conferences. He is senior member American Society for Quality (ASQ) and imparting trainings countrywide on modern TQM approaches that are widely practiced in Japan.



SYED ARSHAD ALI

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60 years

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Personally **I** Believe,

You cannot teach
a person anything;
you can only help
him / her discover it
in himself / herself.

Improvement initiatives

Approaches

Proactive

- R & D
- Prevention Action

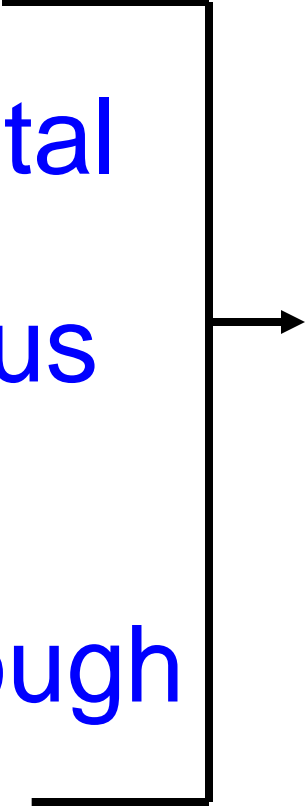
Reactive

- Problem solving
- **Kaizen**
- **QC Circles Activities**

QUALITY IMPROVEMENTS

Each can be

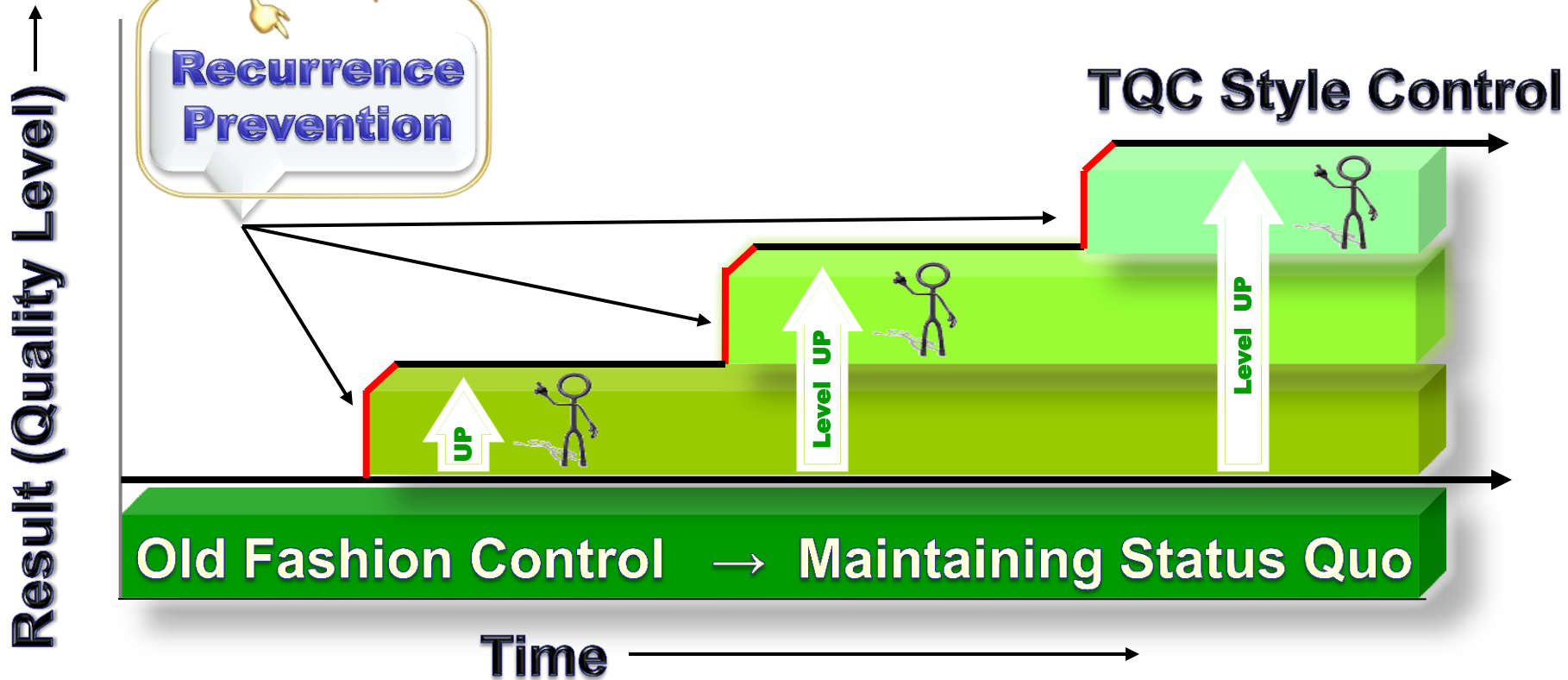
- Incremental
- Continuous
- Breakthrough



All require
systematic and
structured approach
to problems solving

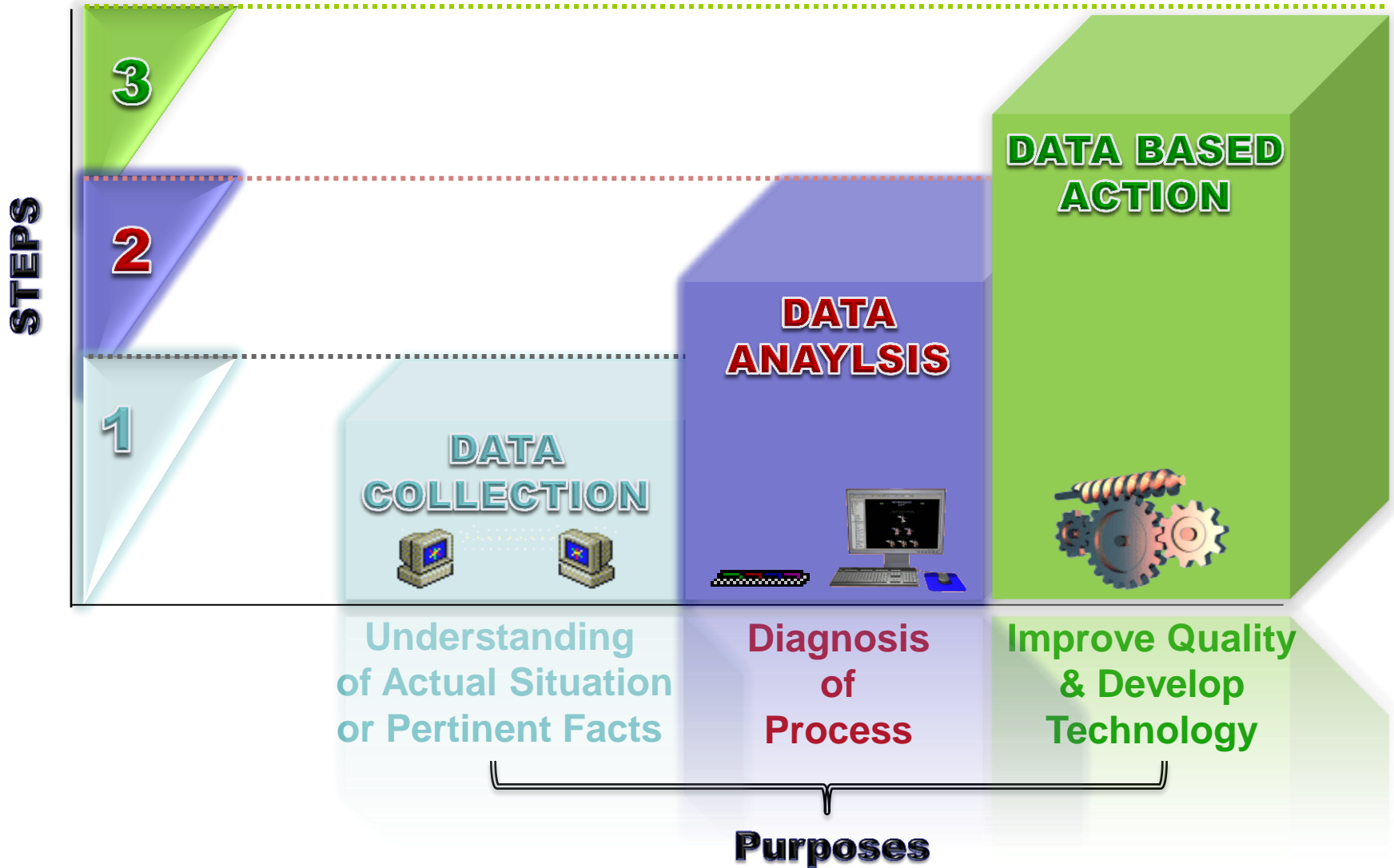
Problem Recurrence Prevention

(Old Fashion Control vs. TQC Style Control)



- 🧑 Eliminating Symptoms or casual factors are good enough for maintaining status quo.
- 🧑 Elimination of root cause is the real recurrence prevention measure.
- 🧑 Recurrence Prevention Measures Enhance Quality Levels little by little and develop Technology.

3-Step PROBLEM SOLVING PROCESS



WHAT IS KAIZEN

KAIZEN IS A JAPANESE WORD

KAIZEN

KAI
(CHANGE)

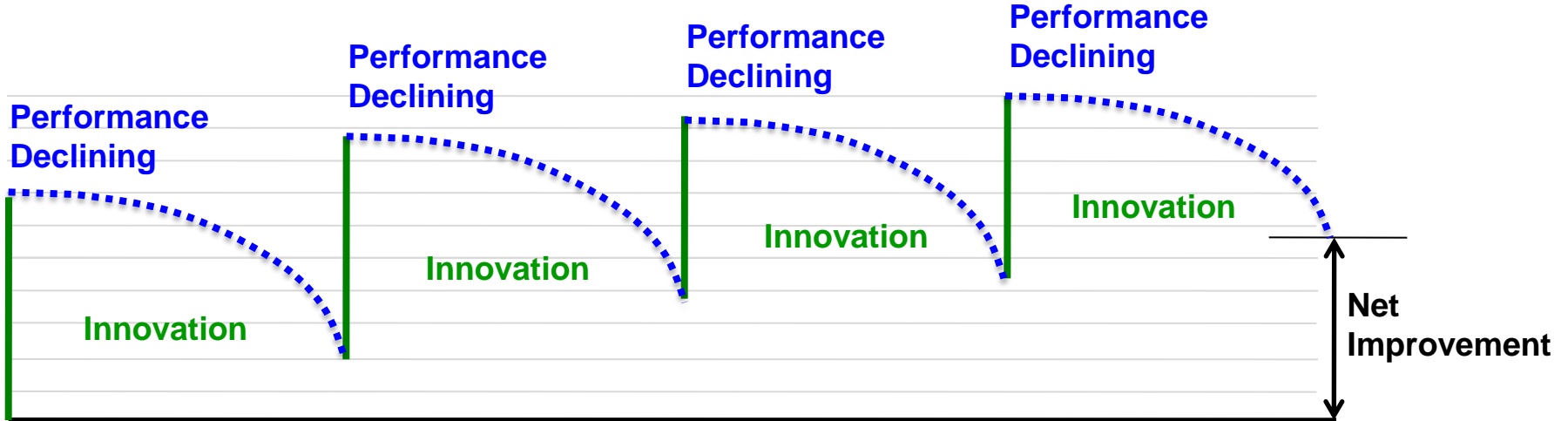
ZEN
"GOOD (FOR THE BETTER)"

MAKE IT BETTER

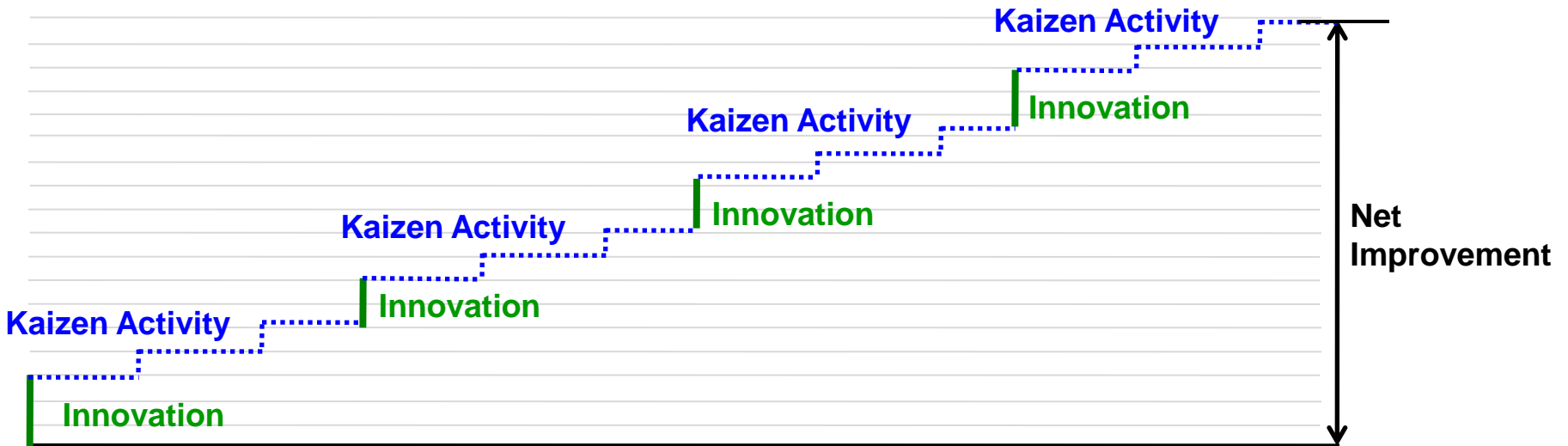
CONTINUOUS IMPROVEMENT

- A Selection of better means or a change of Current Method for achieving an objective.
- Gradually, Orderly and Continuous Improvement.
- An accumulation of Small Changes.
- Ongoing Improvement Involving Everyone.

IF KAIZEN ACTIVITY NOT PERFORMED

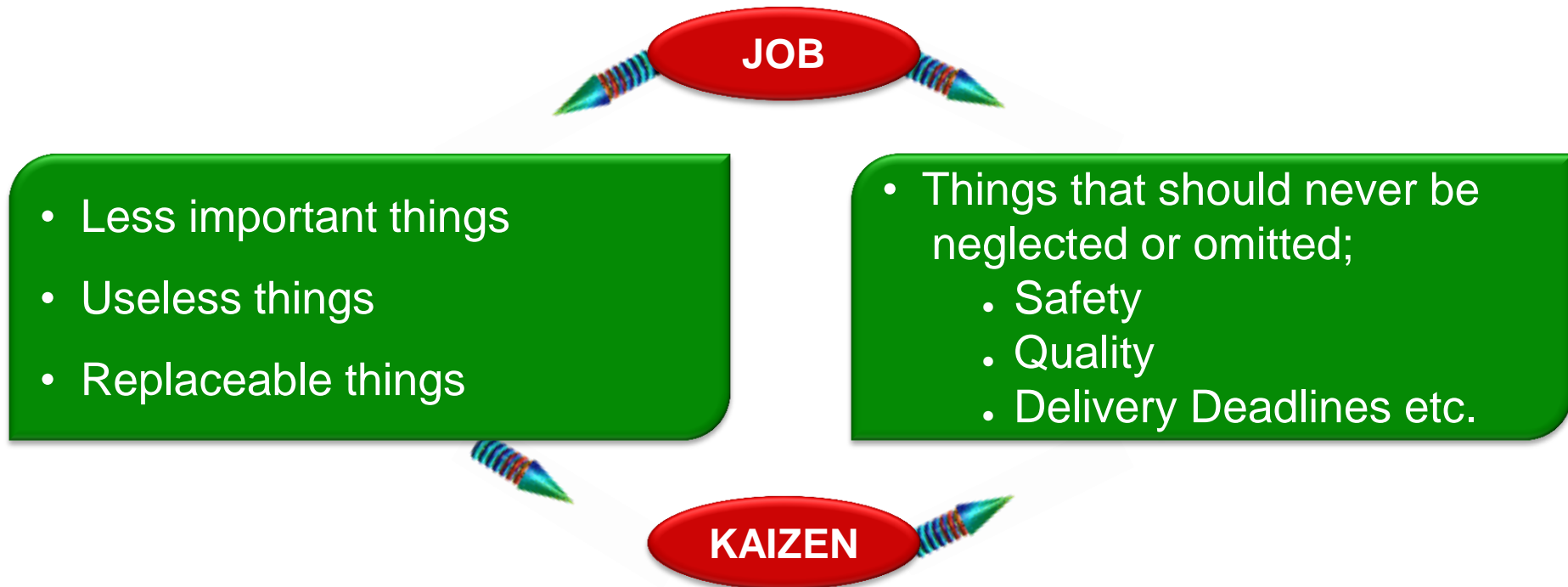


COMPANY PERFORMANCE WITH KAIZEN ACTIVITY



Purpose of Kaizen

1. To make the work easier, environment better and to reduce wastage.
2. The purpose is to reduce or eliminate useless work.



Two kinds of Technologies

```
graph TD; A[Two kinds of Technologies] --> B['Y'-technology]; A --> C['X'-technology];
```

'Y'- technology

- Purely new technological break -through.
eg: jet propulsion, semiconductor
- Can be conceived in the brain of single genius.
- Stays as a universal principle.
- Not able to produce any product only with y-technology

'X' - technology

- An application technology utilizing bulk of nitty gritty improvements and practical skills to support Y-technology.
- Are made possible by people..
- Normally non-professional employees are encouraged to participate.
eg, QC-circles, employees suggestion schemes, team concepts.
- Is constantly renewed and added.
- Brings variety of more dependable and economical sub-technologies.

**A single step forward, taken by one hundred
people, is more important and valuable**

than

**One hundred steps forward, taken by a single man,
Today we need no hero!**

....Shuichi Yoshida

Kaizen, Quality Circles and Six Sigma Problem Solving

Common Sense,
Suggestions,
No Stats Tools

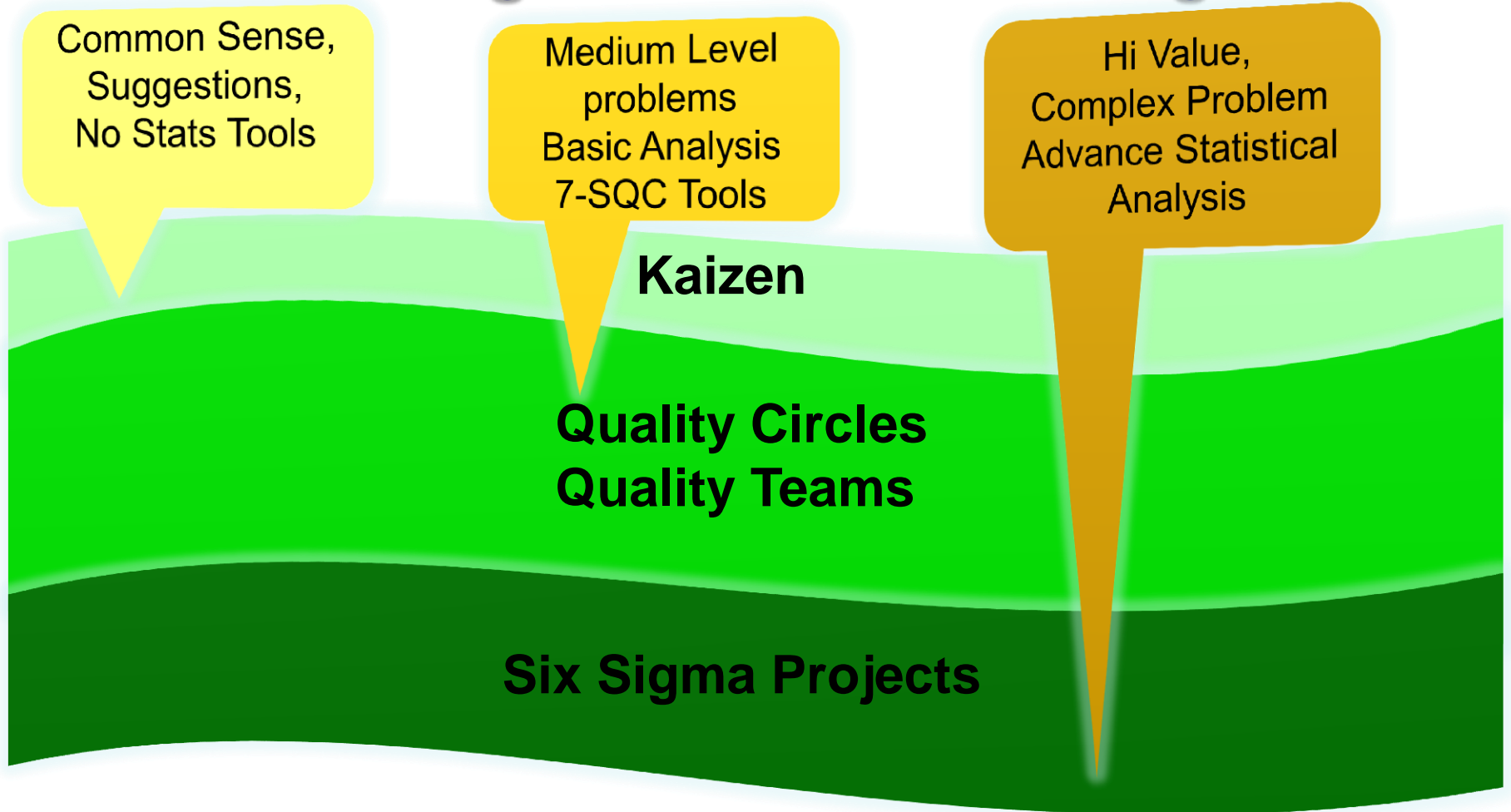
Medium Level
problems
Basic Analysis
7-SQC Tools

Hi Value,
Complex Problem
Advance Statistical
Analysis

Kaizen

**Quality Circles
Quality Teams**

Six Sigma Projects



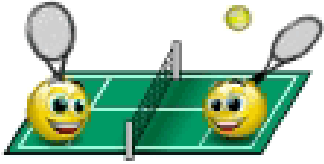
Performance depends on **3** Factors

1. **Capability / Competency**
2. **Facility / Resources**
3. **Opportunity to perform**



Performance: Output vs. Outcome

Sports



Performance



Production

Service

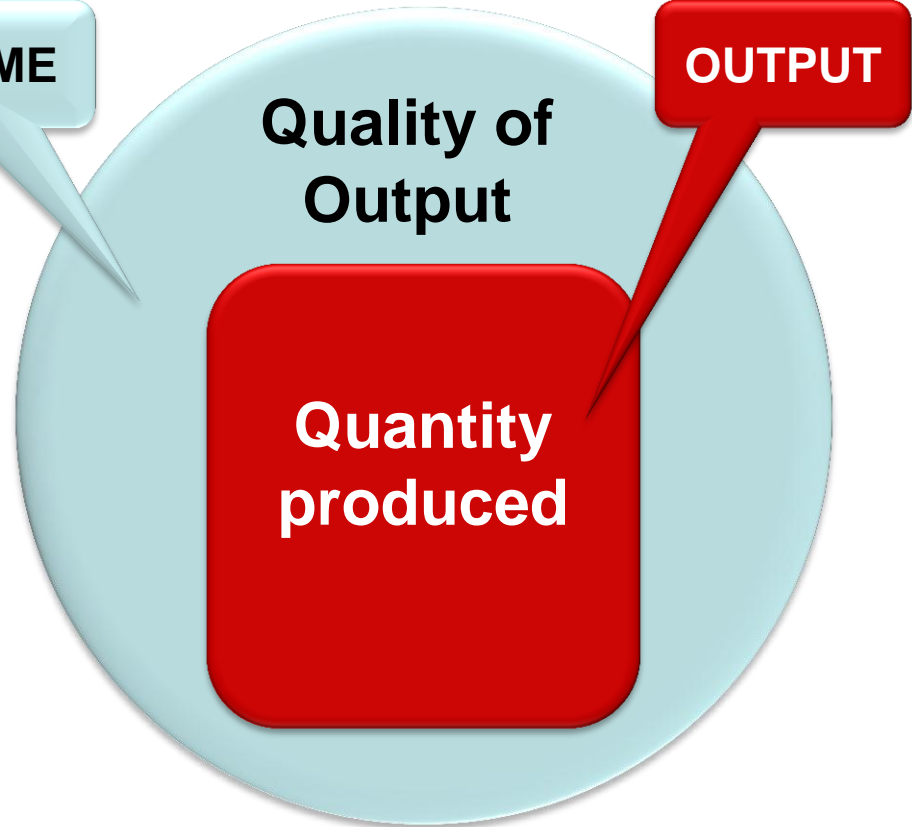


OUTCOME

OUTPUT

Quality of Output

Quantity produced



ICEBERG MODEL OF TPS

Kanban **5S** **Teams**
Kaizen

Culture Change:
Involve people in continuous improvement.

To eliminate waste through the Toyota way.

3 – Ways of
Kaizen

3 WAYS OF KAIZEN

Approach

ELIMINATE

- **Abolition**
- **Discontinuance**
- **Exclusion**
- **Removal**

3 WAYS OF KAIZEN

Approach

REDUCE

- **Simplification**
- **Centralization**
- **Standardization**
- **Integration**
- **Combination**

3 WAYS OF KAIZEN

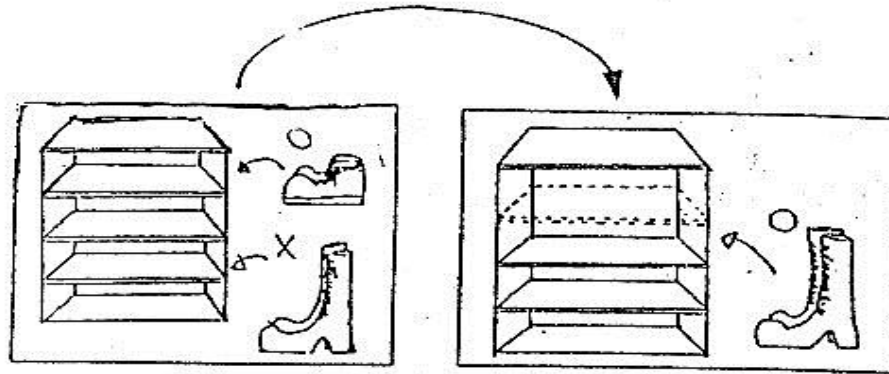
Approach

CHANGE

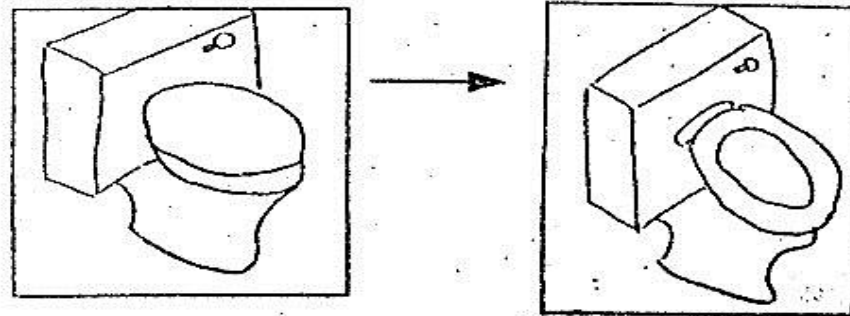
- **Alteration**
- **Conversion**
- **Diversification**
- **Separation**

(EXAMPLES)

Kaizen by "Elimination"



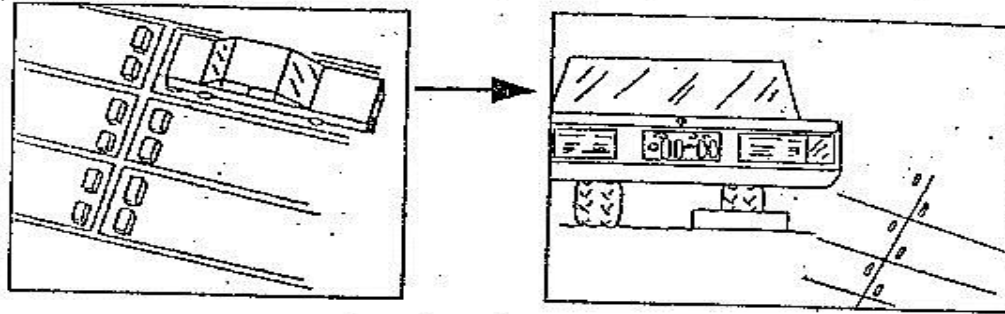
A shelf of the shoe box is removed.



Why is the toilet cover needed?

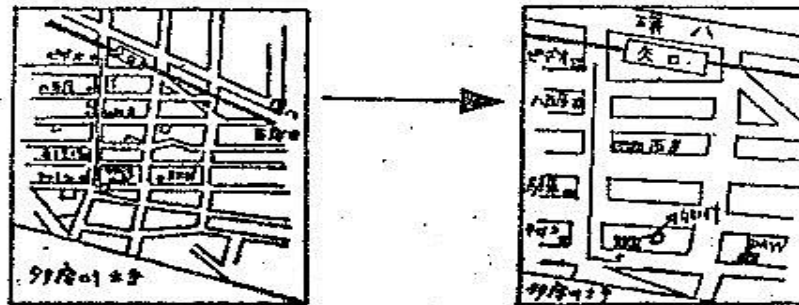
(EXAMPLES)

Kaizen by "Reduction"



One brick is enough to stop a car.

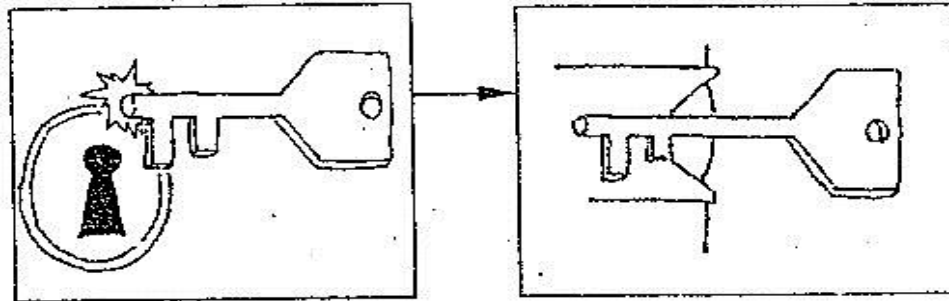
Too many landmarks on the map make the search of the destination difficult.



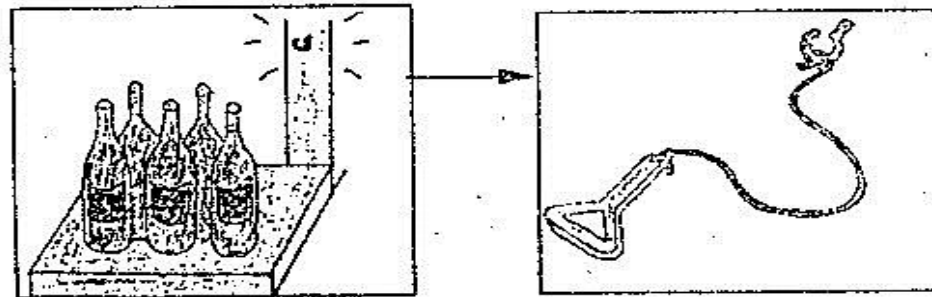
(EXAMPLES)

Kaizen by "Change"

The hollow about the key hole smoothes the key movement.



A bottle opener should be tied with a string.



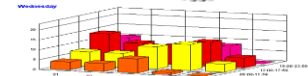


7 - MUDA

INTRODUCTION

Waste elimination is one of the most effective way to increase the profitability of any business. Processes either add value or waste to the production of a goods or service. The seven wastes originated in Japan, where waste is known as “muda”.

1. MUDA OF OVER – PRODUCTION
2. MUDA OF WAITING
3. MUDA OF CONVEYANCE / TRANSPORTATION ...
4. MUDA OF PROCESSING
5. MUDA OF INVENTORY
6. MUDA OF MOTION
7. MUDA OF REPAIR / REJECTS



1. MUDA OF OVER – PRODUCTION



Waste of over-production.

Eliminate by reducing setup times synchronizing quantities and timing between processes, compacting layout, visibility and so forth. Make only what is needed now.

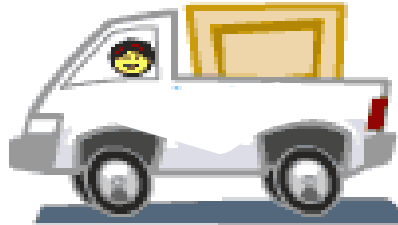
2. MUDA OF WAITING



Waste of waiting.

Eliminate through synchronizing workflow as much as possible and balance uneven loads by flexible workers and equipment.

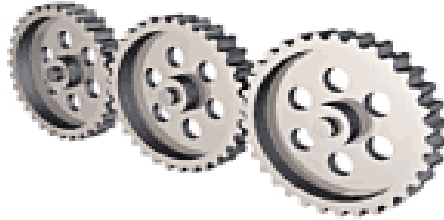
3. MUDA OF CONVEYANCE / TRANSPORTATION



Waste of Conveyance / Transportation.

Establish layout and locations to make transport and handling unnecessary if possible. Then rationalize transport and material handling that cannot be eliminated.

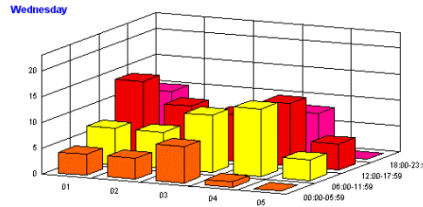
4. MUDA OF PROCESSING



Waste of Processing.

Waste of processing. First question, why this part or product should be made at all, then why each process is necessary. Extend thinking beyond economy of scale or speed.

5. MUDA OF INVENTORY



Waste of Inventory.

Reduce by shortening setup times and reducing lead times, by synchronizing workflow and improving work skills and even by smoothing fluctuations in demand for the product. Reducing all the other wastes reduces the wastes of inventory.

6. MUDA OF MOTION



Waste of Motion.

Study motion for economy and consistency. Economy improves productivity and consistency improves quality. First improve the motions, then mechanize or automate. Otherwise there is danger of automating waste.

7. MUDA OF REPAIR / REJECTS



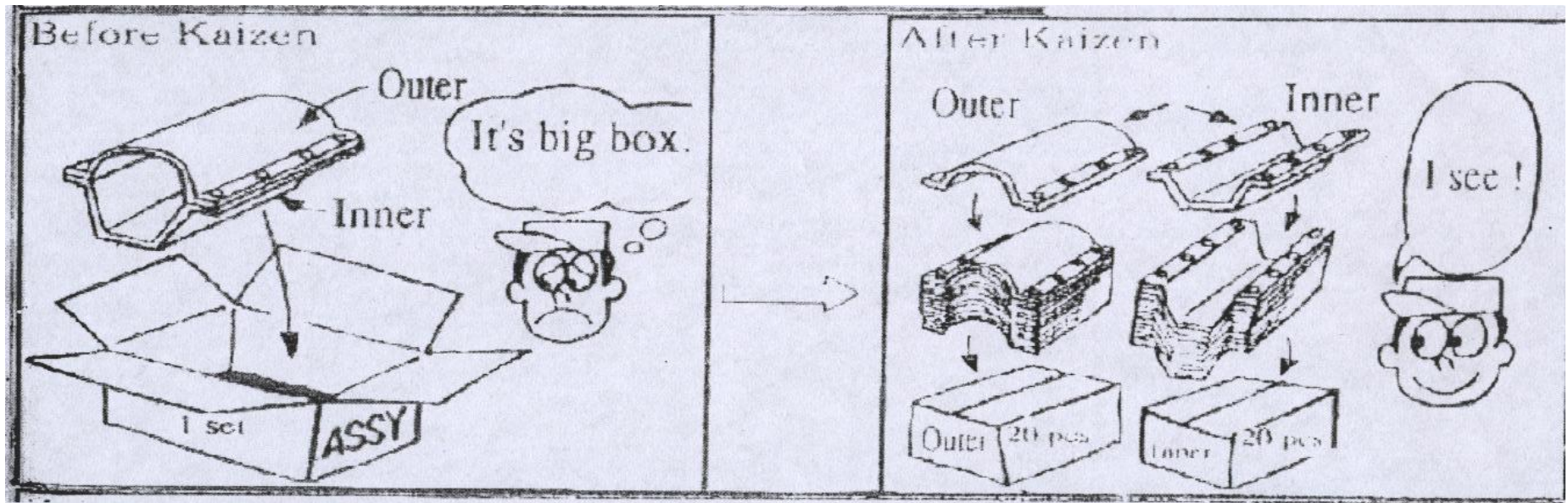
Waste of Repair / Rejects.

Develop the production process to prevent defects from being made so as to eliminate inspection. At each process, accept no defects and make no defects. Make processes come a quality product automatically.

Physical Distribution Improvement

Theme

Reduction of Efficiency of Capacity by Parts Disassembly



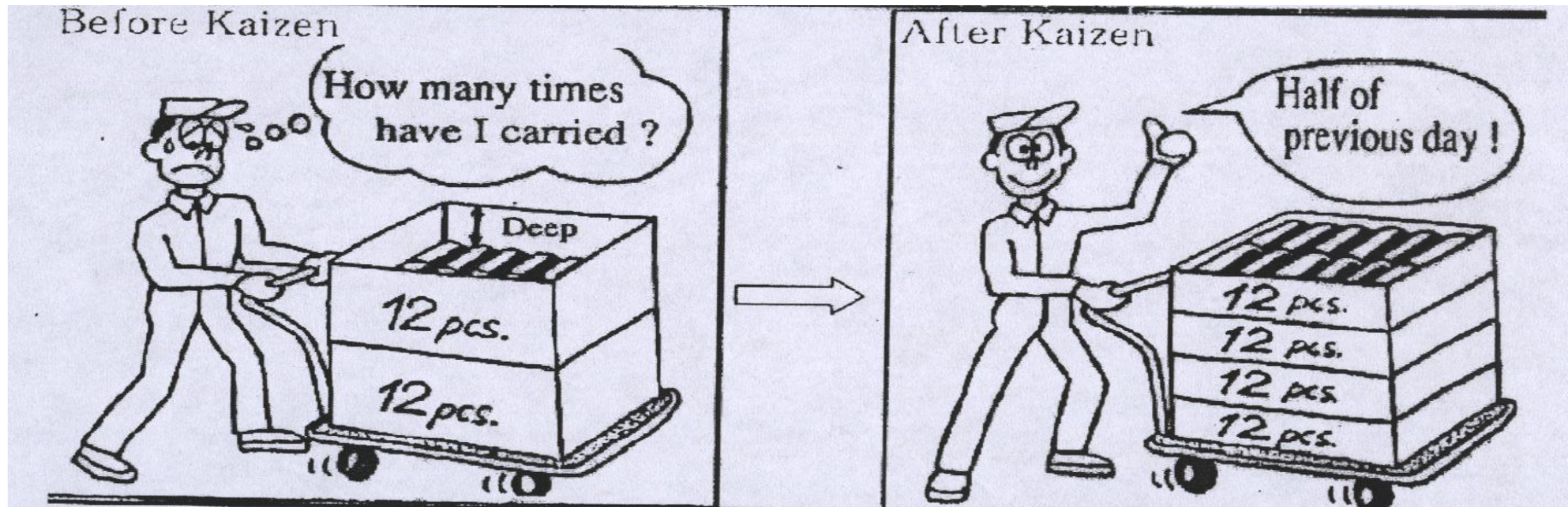
Kaizen Contents

Delivered the parts individually which were delivered at assembly, and promoted the efficiency of capacity as having in-house made for the sub assembly.

Physical Distribution

Theme

Reduction of transfer frequency by changing container



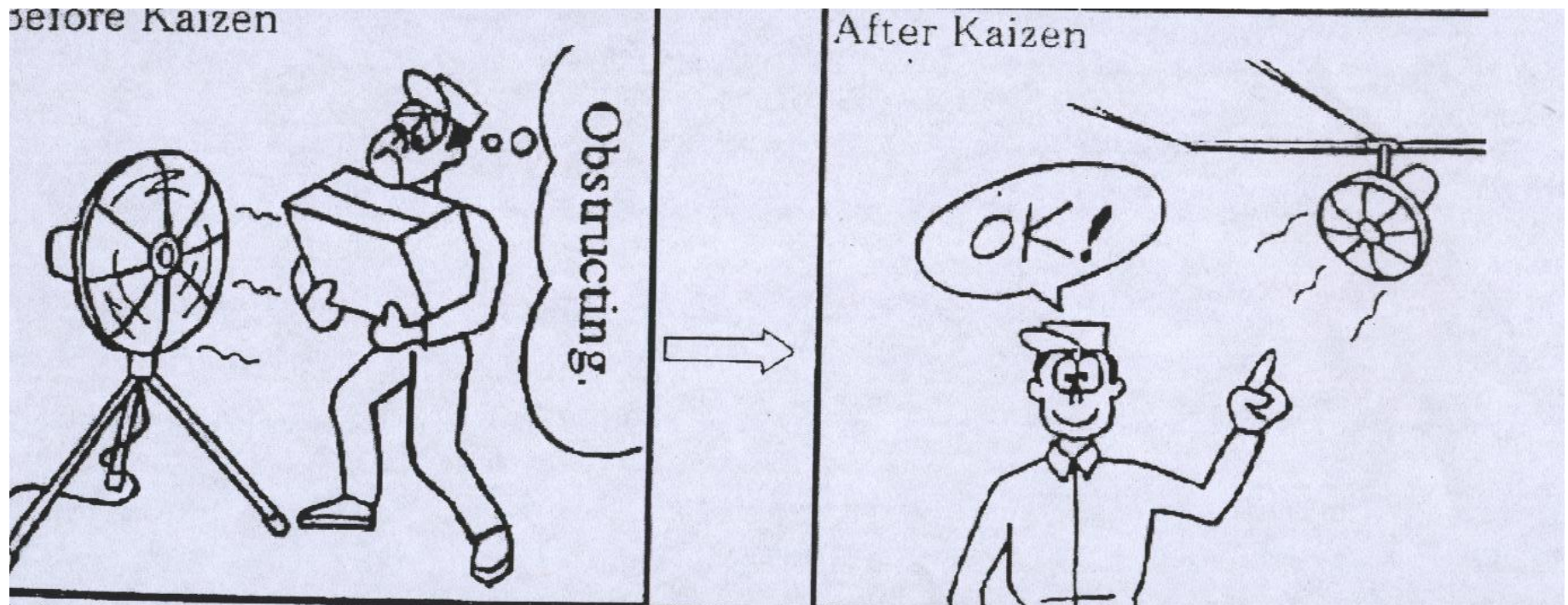
Kaizen Contents

Shallowed the bottom of polyethylene containers to increase the efficiency of capacity, and reduced the transport frequency.

Space Saving

Theme

Hanging Method for Electric Fan



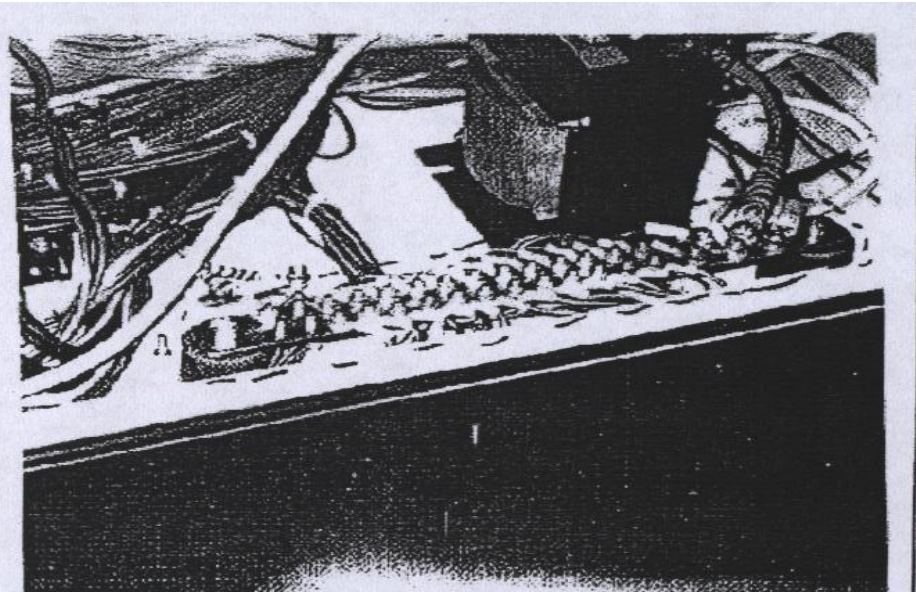
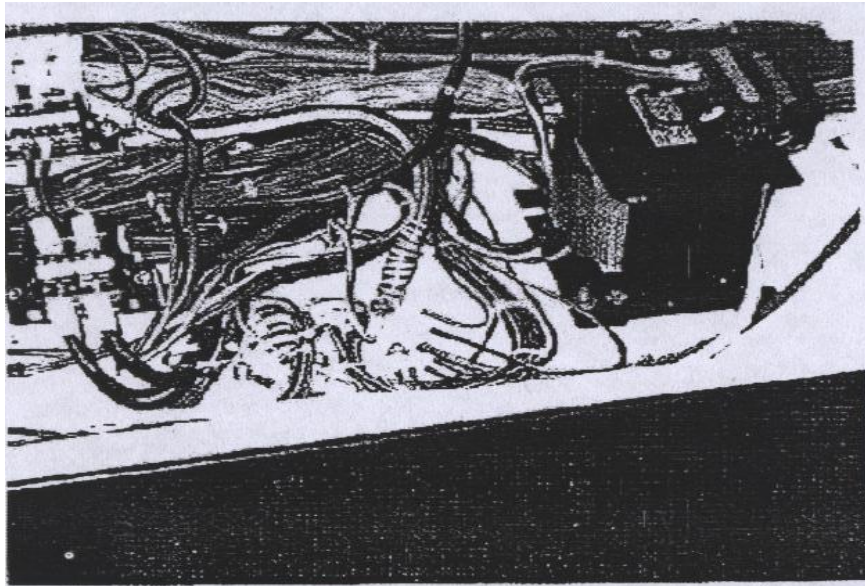
Kaizen Contents

Hung the standing type electric fan from the ceiling.

Communalization / Unification

Theme

Change in Earth wiring connections



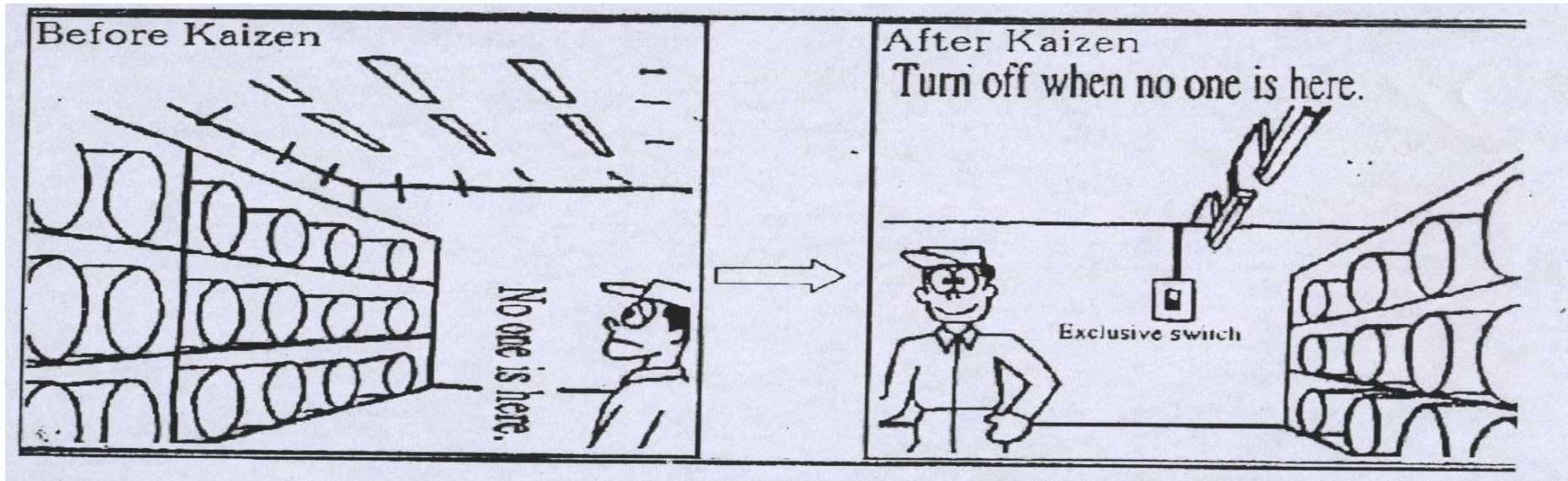
Kaizen Contents

The scattered wiring connections were shifted to a common Earthling Terminal.

Energy Saving

Theme

Removal of Fluorescent Lamp at Parts Yard



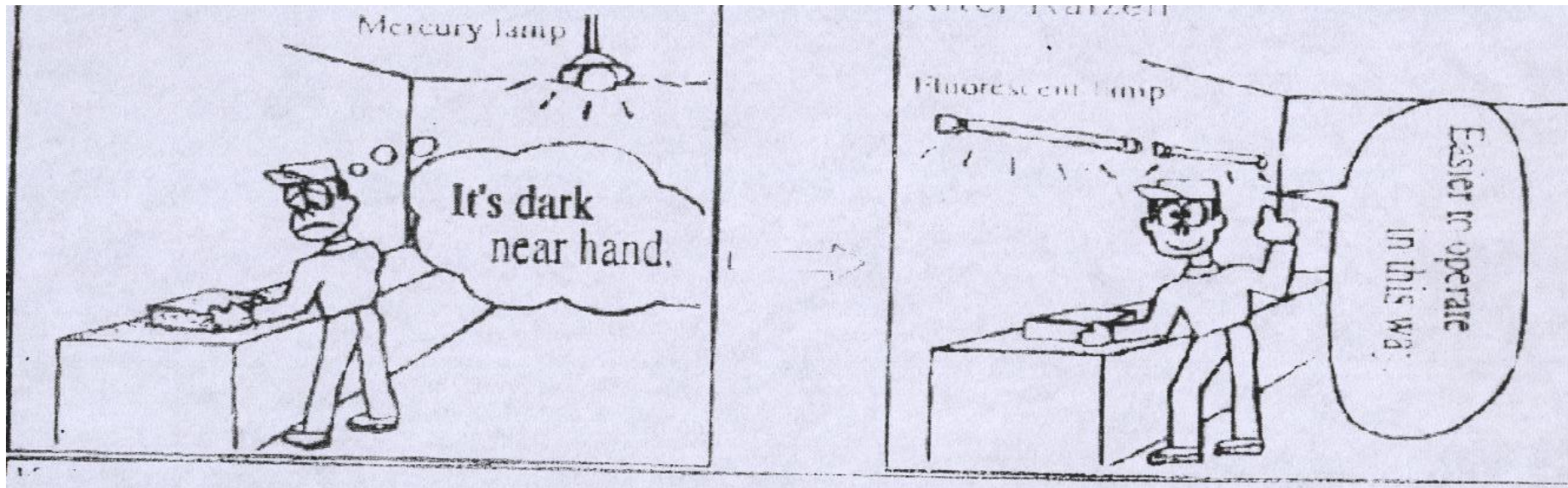
Kaizen Contents

Removed Fluorescent lamps at the parts yard. Installed an exclusive switch for 2nd shift to use it as occasion demands.

Quality Improvement (Reducing Defects)

Theme

Improvement of Washing Machine Outlet Chute



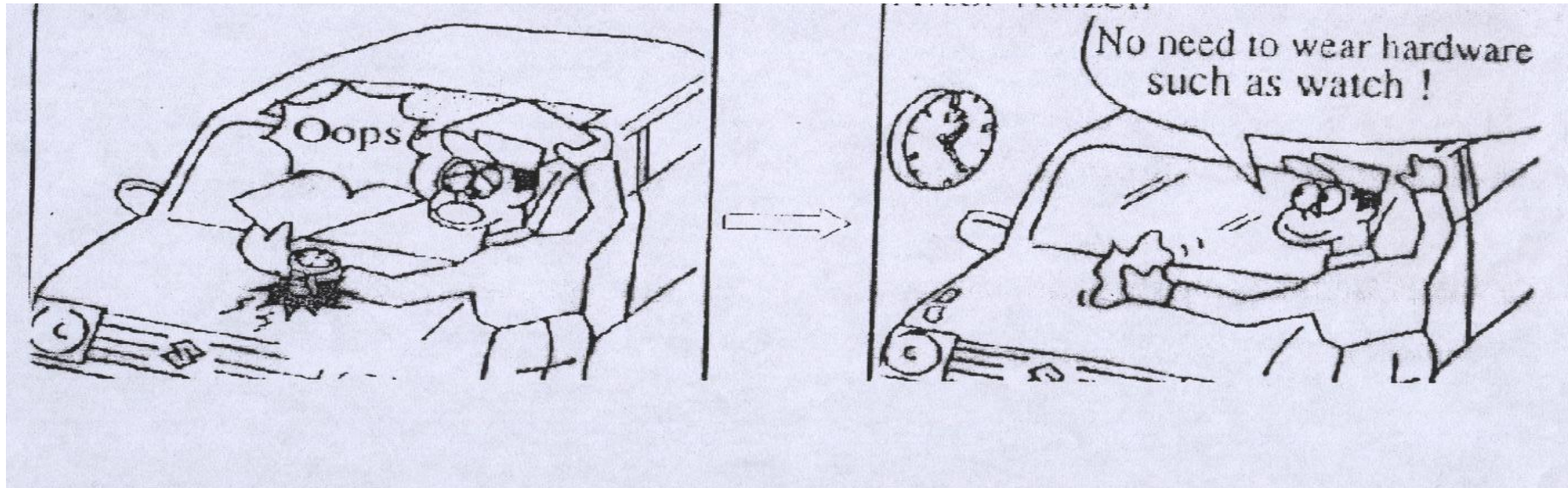
Kaizen Contents

Fixed a chute on the part outlet to prevent a different kind of part from mixing together.

Quality Improvement (Reducing Defects)

Theme

Prevention of Body Scratch



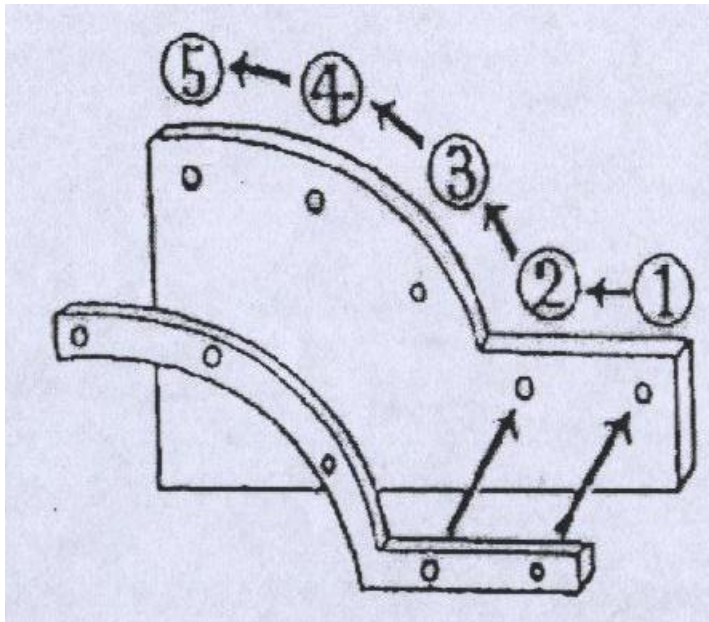
Kaizen Contents

Fixed a clock on the wall so that operators don't have to wear a watch and scratch car bodies.

Quality Improvement (Reducing Defects)

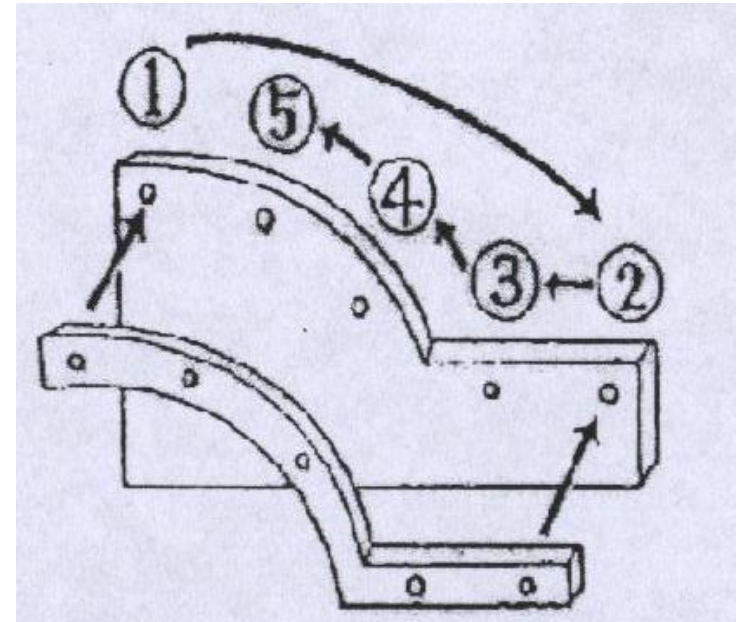
Before Improvement

The Sequence of spot welding to the Flange was prescribed from right to The left in order. Many defectives Were found at the last spot at (5)



After Improvement

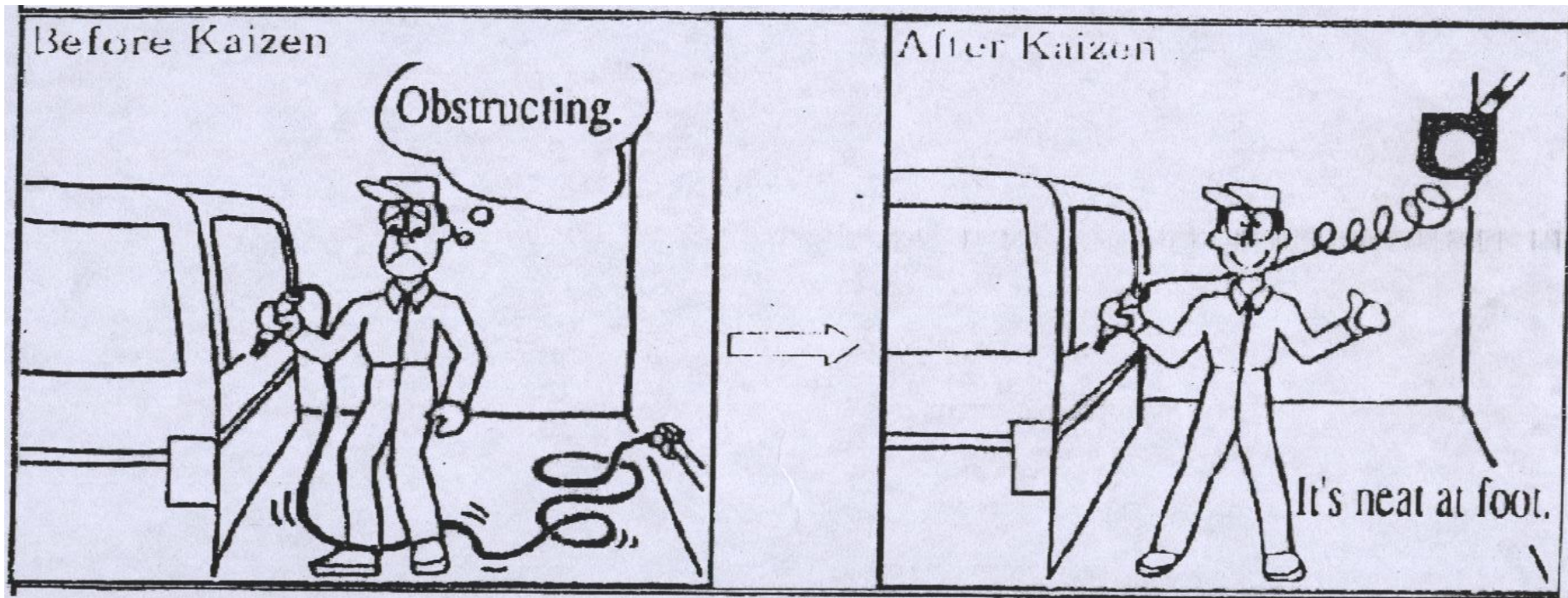
The sequence was changed as shown in the picture below. The mismatch of the spot welding reduced.



5-S

Theme

Removal of Hose



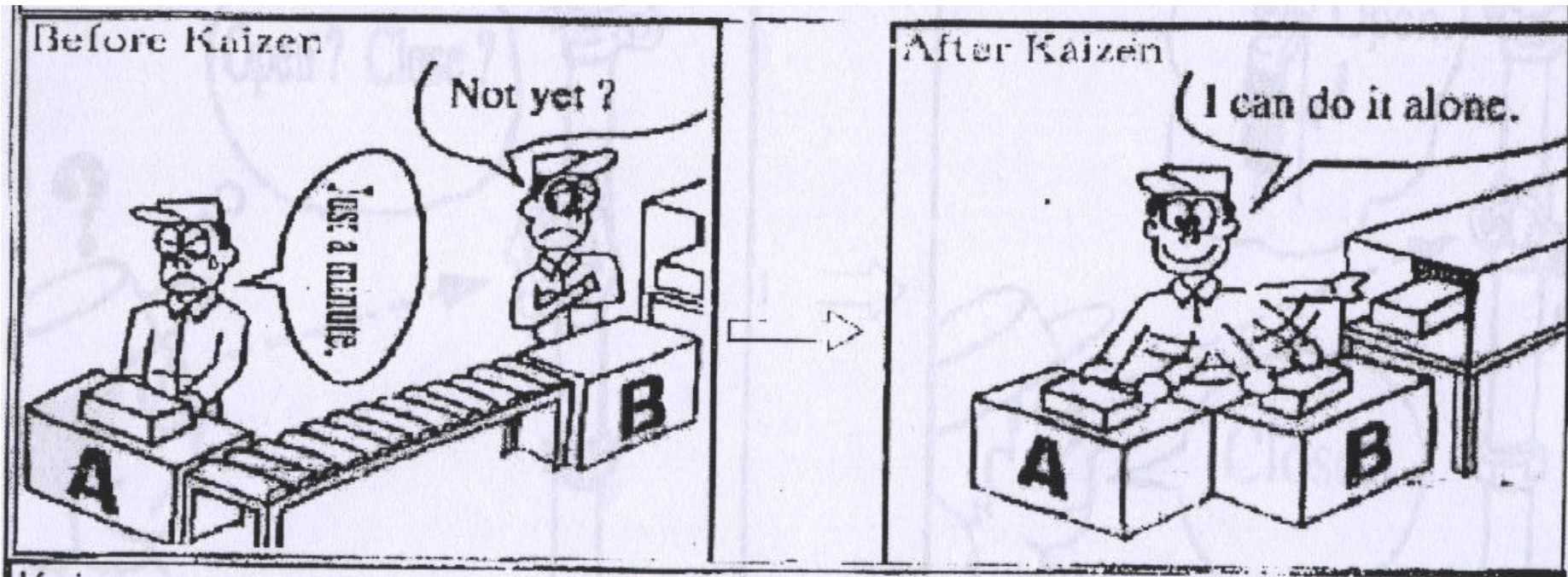
Kaizen Contents

Hung the reel type overhead hose as the hose was too long.

Manpower / Man – Hour Saving

Theme

Reduction of walk by Changing Layout



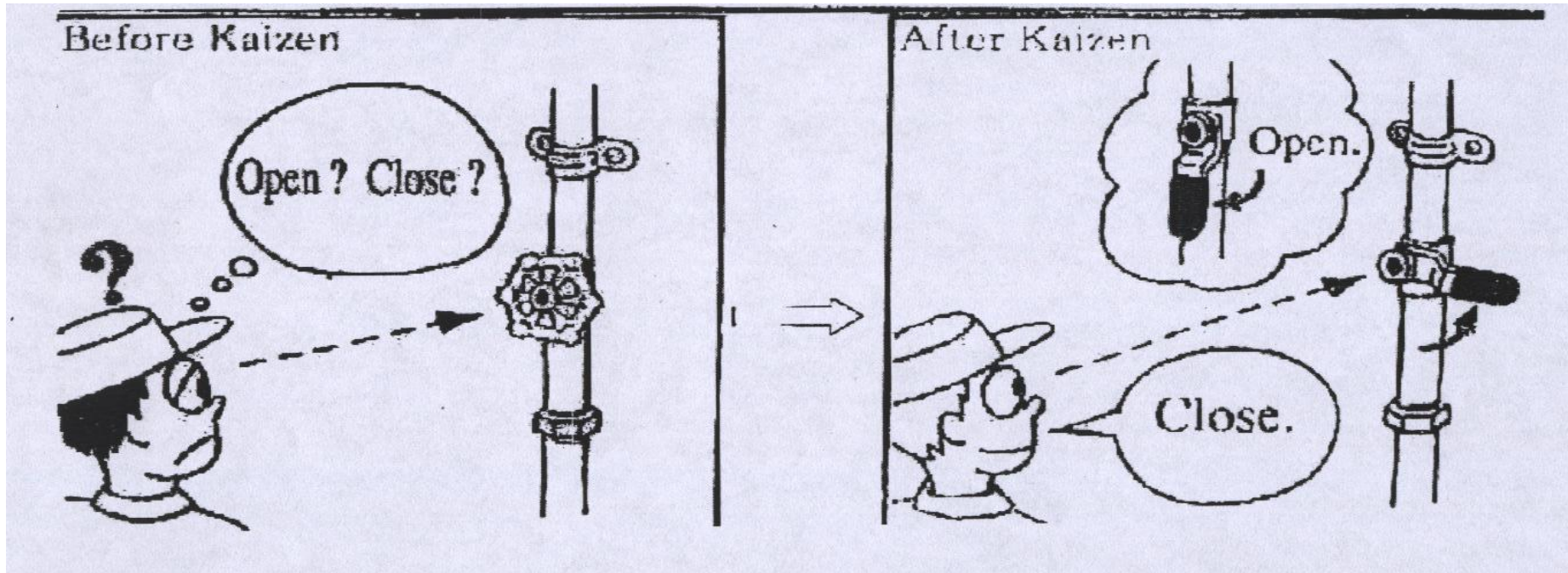
Kaizen Contents

Reduced walk, and abolished conveyors by changing layout

Manpower / Man – Hour Saving

Theme

Obviousness of opening and closing of Air Valve



Kaizen Contents

Change the method from revolving to ball valve.

Minimize / Avoid **3Ms** for Business success

1. **M**URI **Impossibility**
2. **M**UDA **Waste**
3. **M**URA **Waviness**
(unevenness)

KAIZEN Stands For

COMMITMENT

TO

CONTINUOUS IMPROVEMENT

IN

- **P**HILOSOPHY
- **P**ROCESS
- **P**EOPLE
- **P**ARTNERSHIP

NIH SYNDROME
(Not Invented Here)

Do you feel:

- **THAT'S NOT OUR WAY**
- **THEIR CULTURE IS SPECIAL**
- **WE DID NOT LEARN THAT WAY**
- **WE'VE TRIED, BUT ...**
- **WE ARE DOING IT ALREADY**

If any of above feeling is there; you are suffering with NIH Syndrome.

Have a Nice Day

