6S Training Overview

Why Implement 6S?

- ☐ Customers' needs constantly change.
- ☐ Companies compete to meet these needs.
- ☐ To survive, we must stay competitive.
- ☐ This means improving products and services and lowering costs.
- ☐ The 6S system is a good starting point for all improvement programs.

Typical Resistances to 6S

1. Implementing Sort and Set in Order will not boost output.

2. Why concern ourselves with triviality?

3. My filing system is a mess – but I know my way around it!

Typical Resistances to 6S

4. 6S's and related improvements are just for the factory.

5. We're too busy to spend time on Sort and Set in Order.

6. We don't need the 6S's – We're making money, so just let us do our work!

What is 6S?

A process for creating and maintaining an organized, clean, and high performance work place, which serves as a foundation for continuous improvement activities
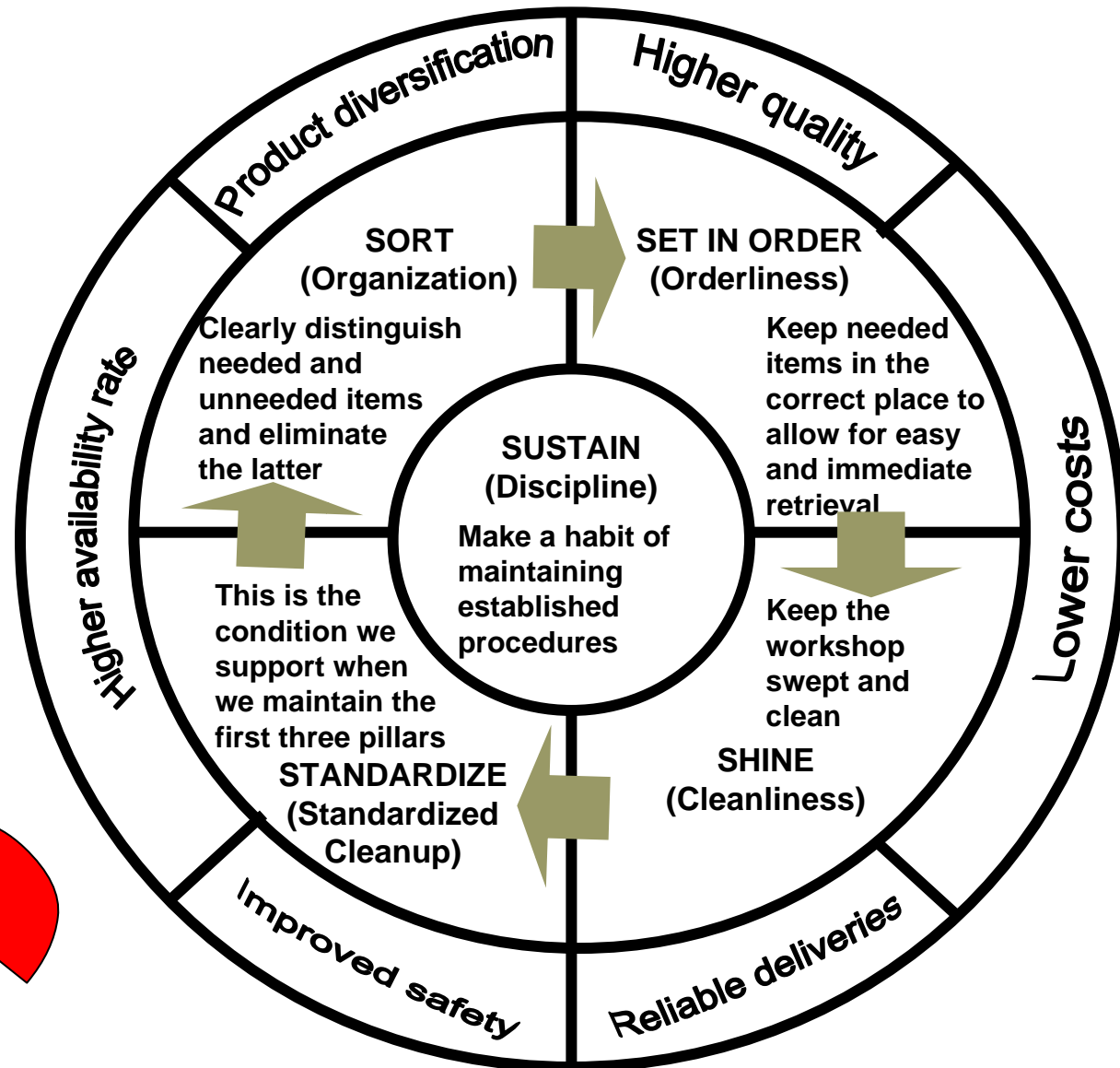
What Is 5 S

5 Japanese Words

- Seiri - Sort (Housekeeping)

- Seiton - Set in Order (Workplace Organization)

- Seiso - Shine (Cleanup)

- Seiketsu - Standardize (Keep Cleanliness)

- Shitsuke - Sustain (Discipline)

Elements of a 6S Program

1. Safety – Throughout the entire process safety is number 1.

2. Sort - Clearly distinguishing between what is necessary and what is unnecessary and disposing of the unnecessary.

3. Set in Order - Organizing the necessary items so that they can be used and returned easily.

4. Shine - Cleaning floors, equipment, and furniture in all areas of the workplace.

5. Standardize - Maintaining and improving the standards of the first three S's.

6. Sustain - Achieving the discipline or habit of properly maintaining the correct 6S procedure.

6S Wheel

safety

Product diversification

Higher quality

Higher availability rate

Lower costs

Improved safety

Reliable deliveries

SORT (Organization)

Clearly distinguish needed and unneeded items and eliminate the latter

SET IN ORDER (Orderliness)

Keep needed items in the correct place to allow for easy and immediate retrieval

SUSTAIN (Discipline)

Make a habit of maintaining established procedures

This is the condition we support when we maintain the first three pillars

Keep the workshop swept and clean

STANDARDIZE (Standardized Cleanup)

SHINE (Cleanliness)

Benefits of 6S

☐ Individuals: a safer work environment, more pleasant workplace, more satisfying jobs, and a process that makes sense.

☐ Company: higher quality, lower costs, greater customer satisfaction.

Implementing 6S

- Role of Management:
  - Educating, creating teams, scheduling time, providing resources, encouragement, and recognition.
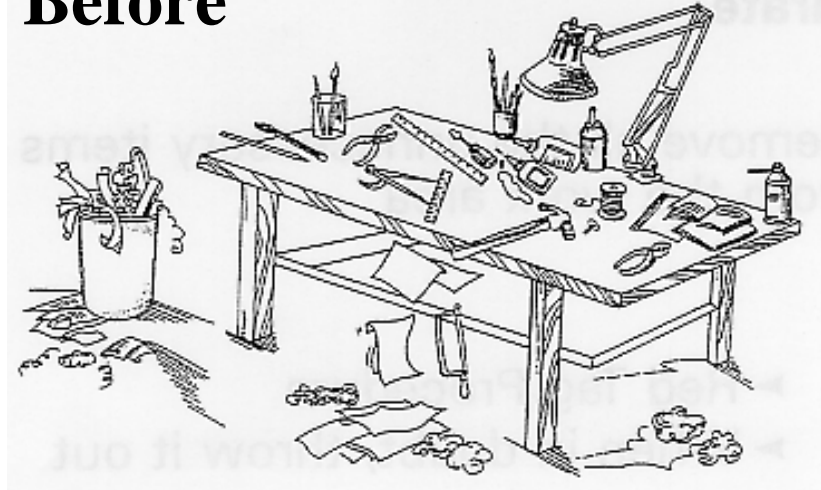
- Role of Associate:
  - Encouraging coworkers, participating, implementing, contributing ideas, and promoting 6S efforts.
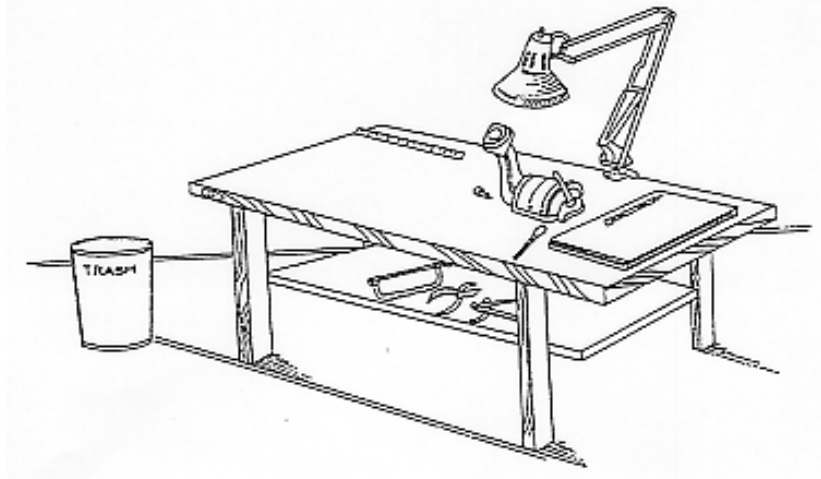
Sort

- Discourage people from being defensive.
- Be fair - all areas get tagged.
- Remove any unneeded items from the area.
- Allow for personal / decorative items per established policies.
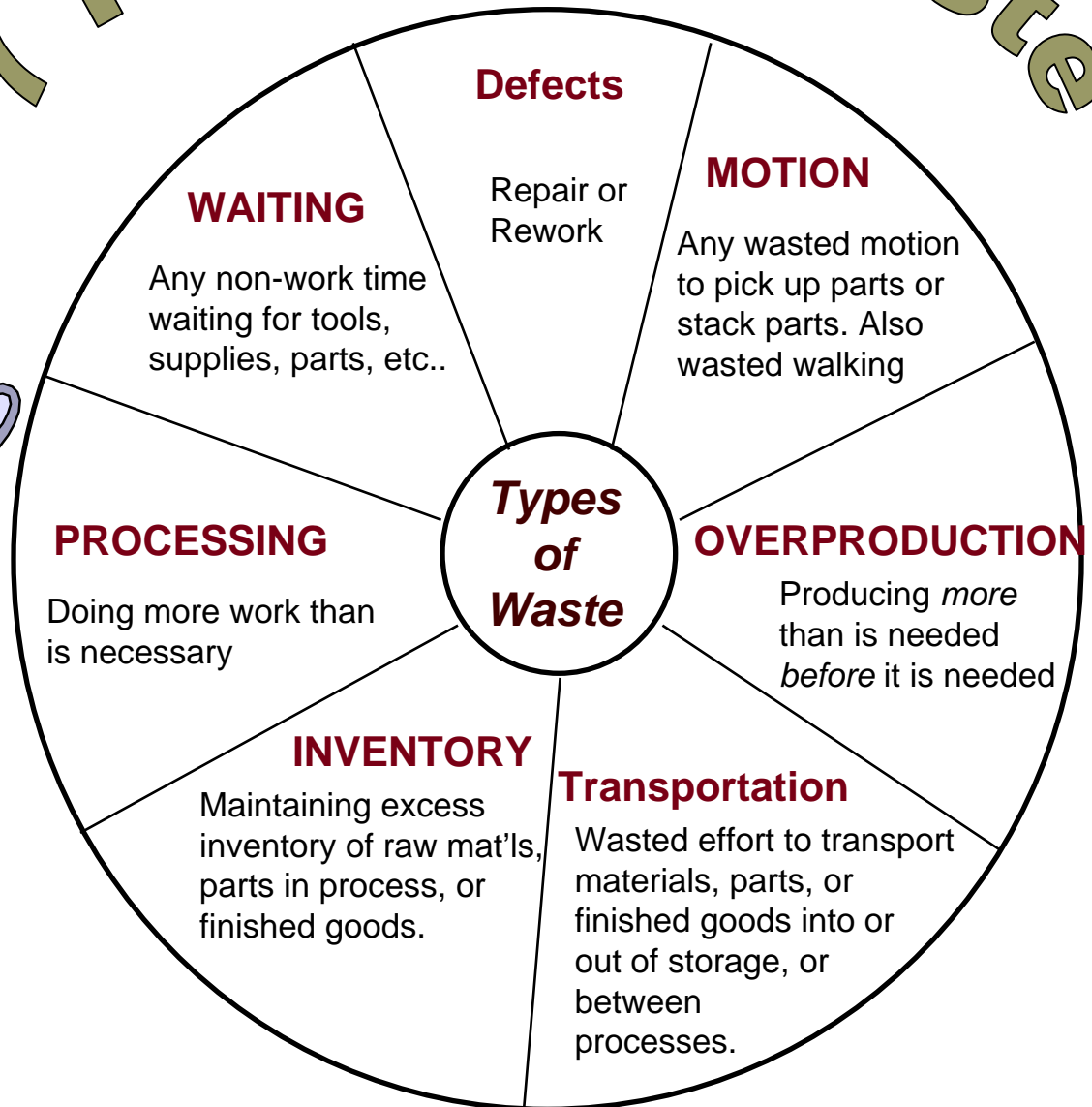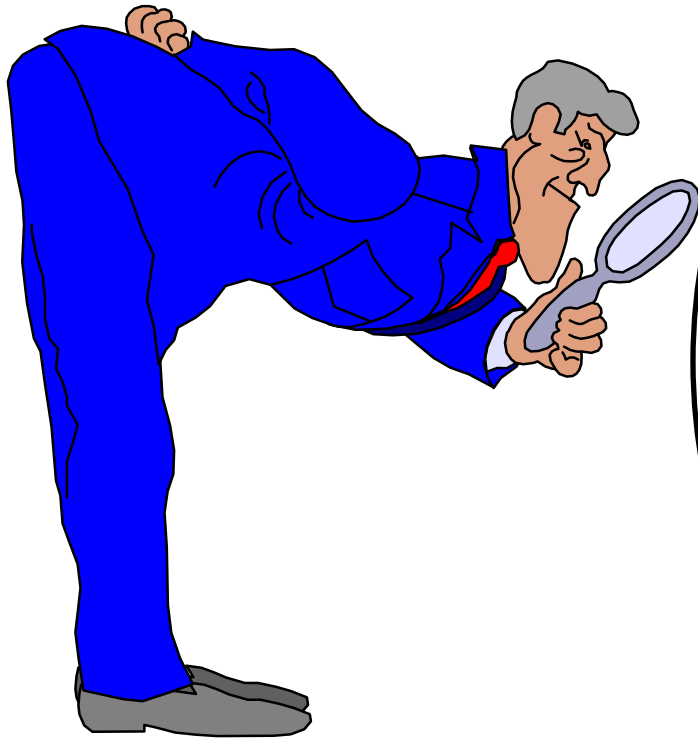- Leave only the bare essentials!
- When in doubt, throw it out!

Before

After

7 Forms of Waste

Types of Waste

Defects
Repair or Rework

MOTION
Any wasted motion to pick up parts or stack parts. Also wasted walking

WAITING
Any non-work time waiting for tools, supplies, parts, etc..

OVERPRODUCTION
Producing *more* than is needed *before* it is needed

PROCESSING
Doing more work than is necessary

INVENTORY
Maintaining excess inventory of raw mat'ls, parts in process, or finished goods.

Transportation
Wasted effort to transport materials, parts, or finished goods into or out of storage, or between processes.

Lean = Eliminating the Wastes

Typically 95% of <u>Total Lead Time</u> is Non-Value Added!!!

RUN TIME	Order Processing, Transport, Storage, Waiting, Rework, Machine Setup, Inspection, Machine Breakdowns, etc…

Total Lead Time

Method for Sorting

- ☐ Use a red tag for the item to be removed.
  - ■ Ask three questions about each item:
    - ☐ Is it needed?
    - ☐ In what quantity?
    - ☐ Where should it be located?

Red Tags

RED TAG

Category	1. Equipment 7. Quassi products 2. Jigs and tools 8. Finished products 3. Measuring instruments 9. Quassi material 4. Materials 10. Office products 5. Parts 11. Paper, pens, etc. 6. In-process inventory		
Item name			
Manufacturing No.			
Quantity	Units	Value	$
Reason	1. Not needed 6. Other 2. Defective 3. Not need soon 4. Scrap material 5. Use known		
Disposal by:	Department/Division/Section		
Disposal method:	1. Discard 2. Return 3. Move to red-tag storage site 4. Move to separate storage site 5 Other	Disposal complete (initials)	
Today's date:	Posting date: Disposal date:		
Red-tag file number			

Red Tags

- ☐ Record tag information in the Red Tag Log for disposition tracking
- ☐ Record the reason the item is tagged
- ☐ Don't red tag people!

Red Tag Holding Areas

☐ An area set aside to store red-tagged items that need to be evaluated.

☐ Two kinds:

- Central Red-Tag holding area
- Local Red-Tag holding area

Steps in Red-Tagging

- ☐ Step 1: Launch the red-tag project.
- ☐ Step 2: Identify the red-tag targets.
- ☐ Step 3: Set red-tag criteria.
- ☐ Step 4: Make red tags.
- ☐ Step 5: Attach the red tags.
- ☐ Step 6: Evaluate the red-tagged items.
- ☐ Step 7: Document the results of red-tagging.

Set in Order

- A place for everything and everything in its place.

- Arrange things so they are easy to find, use, and put away.

- Work place organization is apparent through use of lines, labels, color-coding, shadow boards, photographs, etc.

Elements of Set in Order

- ☐ Set in Order and Standardization

- ☐ Visual Controls

- ☐ Principles of Deciding Locations

Set in Order and Standardization

- Standardization means doing things in a consistent way.

- Set in Order is the core of standardization.

Visual Controls

☐ Devices or methods which show, at a glance, how work should be done and/or where items should be placed.

Principles of Deciding Locations

☐ Get rid of waste by storing jigs, tools, and dies.

☐ Get rid of unnecessary motion: "motion improvement."

☐ Get rid of whole operations: "radical improvement."

Using the 6S Map to Decide Locations

- ☐ Make a floor plan of the work space.
- ☐ Draw arrows showing the work flow.
- ☐ Evaluate this "spaghetti diagram."
- ☐ Experiment drawing new layouts.
- ☐ Decide on a new layout and implement it.

OLD
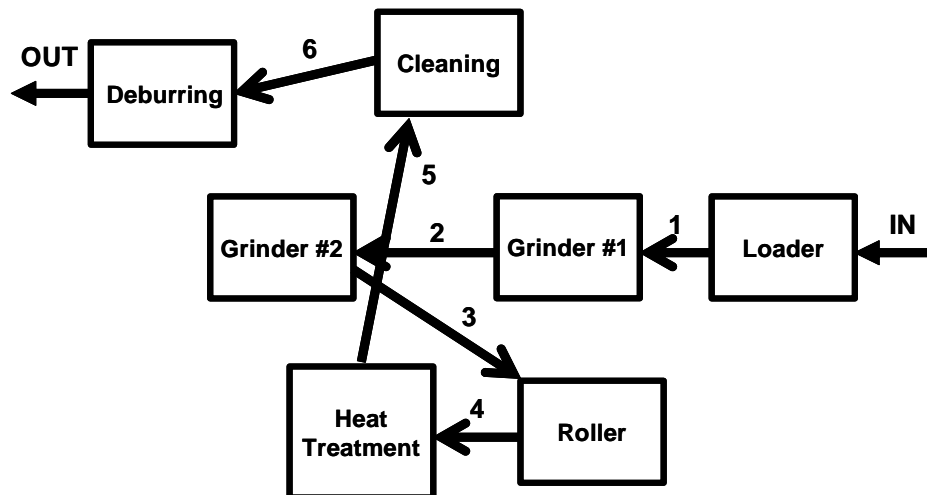
NEW
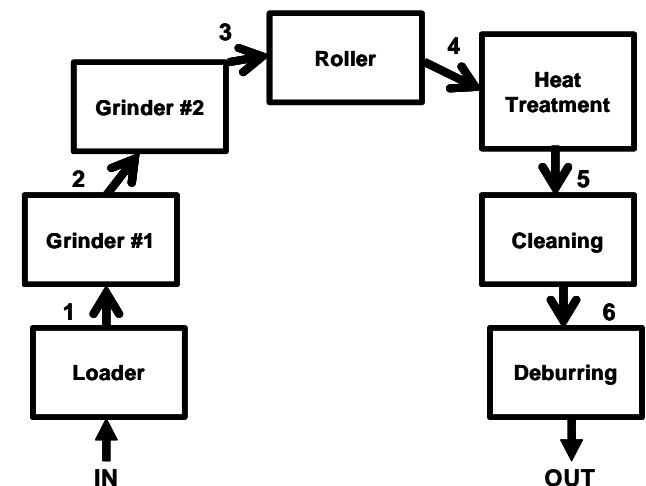
Strategies for Identifying Locations

☐ Signboard Strategy

☐ Painting Strategy

☐ "After" 6S map

☐ Color-coding strategy

☐ Outlining Strategy

Shine

- ☐ Clean EVERYTHING!
- ☐ Inspect and repair while you clean.
- ☐ Scan the work place.
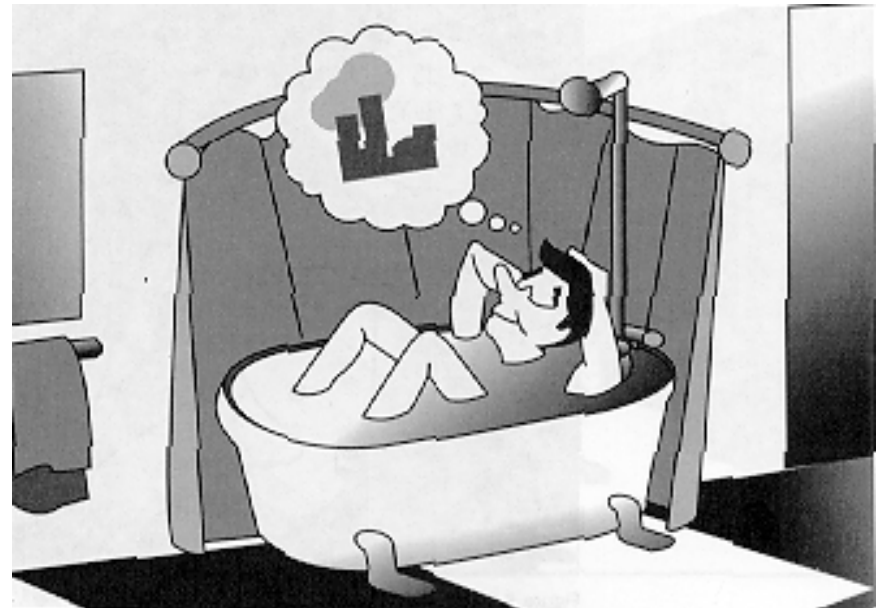
Planning a Shine Campaign

- ☐ Step 1: Decide Shine targets.

- ☐ Step 2: Decide Shine assignments.

- ☐ Step 3: Decide Shine methods.

- ☐ Step 4: Prepare Shine tools.

- ☐ Step 5: Implement Shine activities.

Shine Means Inspection

- When you clean an area, you also do some inspection of machinery, equipment, and working conditions.
- Including inspection with shine procedures turns "cleaning" into "cleaning/inspection."

Steps in Cleaning/Inspection

- ☐ Step 1: Decide cleaning/inspection targets.
- ☐ Step 2: Assign cleaning/inspection jobs.
- ☐ Step 3: Determine cleaning/inspection methods.
- ☐ Step 4: Implement cleaning/inspection.
- ☐ Step 5: Correct equipment problems.

New Tools and Techniques

- ☐ 6S Schedule

- ☐ Five-Minute Shine

- ☐ Cleaning/Inspection Checklist

- ☐ Checklist of Needed Maintenance Activities.

Standardize

- Maintain Sort, Set in Order, and Shine.

- Standardize methods to ensure the improvements become a way of life.

- Create or revise check sheets and operator instructions.

- Scan the work place.

Tools and Techniques

- 6S Job Cycle Charts

- Visual 6S

- The Five-Minute 6S

- 6S Checklist for Factories

Taking It to the Next Level: Prevention

- ☐ Preventive Sort Procedures

- ☐ Preventive Set in Order Procedures

- ☐ Preventive Shine Procedures

Other New Tools and Techniques

- 5 Whys and 1 How Approach (5W1H)
- Suspension
- Incorporation
- Use Elimination
- Preventative Shine

Sustain

- ☐ Renewal and improvement.

- ☐ Build on earlier accomplishments.

- ☐ Make a habit of using correct procedures.

- ☐ Without discipline, improvements cannot be sustained. For example:

  - ■ Audits
  - ■ Work place scans
  - ■ Team reviews and reports
  - ■ Recognition
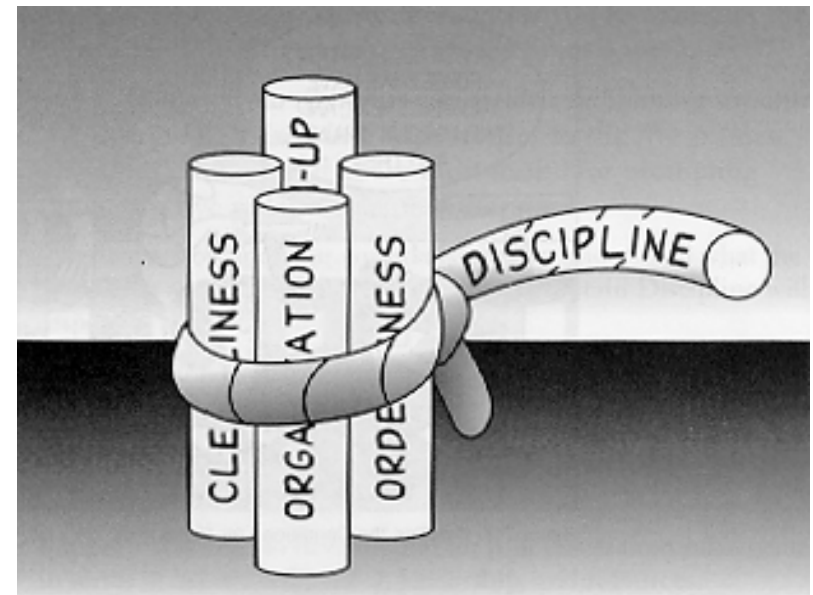
Creating Conditions for Sustain

☐ Awareness

☐ Time

☐ Structure

☐ Support

☐ Rewards and Recognition

☐ Satisfaction and Excitement

Tools and Techniques to Sustain

- ☐ Slogans
- ☐ Posters
- ☐ Photo Exhibits and Storyboards
- ☐ Newsletters
- ☐ Pocket Manuals
- ☐ Department Tours
- ☐ 6S Months

Points to Remember

- Establish guidelines and develop the discipline to maintain them.
- If you always do what you've always done, you'll always get what you've always got.
- If nothing is done, nothing will improve.
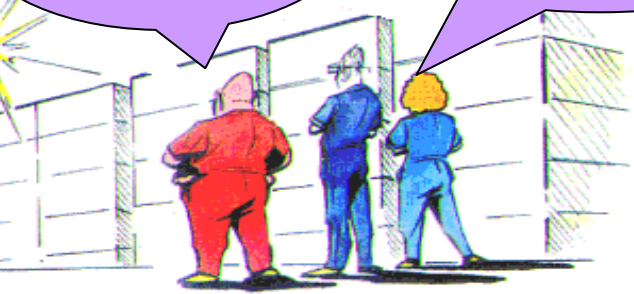- Develop habits that won't be forgotten.

Questions ???

Thank You