5S & Visual Control
5S and Visual Control

- 5 Elements of 5S
- Why 5S?
- Waste
- Workplace observation
- **Sort**
- **Straighten**
- **Shine**
- **Standardize**
- **Sustain**
- Visual Factory
5 Elements of 5S

- Sort
- Straighten
- Shine
- Standardize
- Sustain
Why 5S?

- To eliminate the wastes that result from “uncontrolled” processes.
- To gain control on equipment, material & inventory placement and position.
- Apply Control Techniques to Eliminate Erosion of Improvements.
- Standardize Improvements for Maintenance of Critical Process Parameters.
Types of Waste

- Overproduction
- Delays (waiting)
- Transportation
- Process
- Inventories
- Motions
- Defective Products
- Untapped Resources
- Misused Resources
# Elimination of Waste

<table>
<thead>
<tr>
<th><strong>5 S Element</strong></th>
<th><strong>Waste/ Improvement Item</strong></th>
<th><strong>Deliverable</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic Organization</td>
<td>Elimination of finding.</td>
<td>Reduced Costs</td>
</tr>
<tr>
<td></td>
<td>Reduction of part selection errors.</td>
<td>Improved Quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased Product Options</td>
</tr>
<tr>
<td>Sorting-Visual Placement</td>
<td>Elimination of finding.</td>
<td>Reduced Costs</td>
</tr>
<tr>
<td></td>
<td>Elimination of nonconformances.</td>
<td>Increased Safety</td>
</tr>
<tr>
<td></td>
<td>Elimination of motion.</td>
<td>Improved Quality</td>
</tr>
<tr>
<td></td>
<td>Reduction of part selection errors.</td>
<td>Increased Product Options</td>
</tr>
<tr>
<td>Scrubbing Clean</td>
<td>Increased safety.</td>
<td>Increased Safety</td>
</tr>
<tr>
<td></td>
<td>Preventive maintenance.</td>
<td>Improved Quality</td>
</tr>
<tr>
<td></td>
<td>Increased equipment knowledge.</td>
<td></td>
</tr>
<tr>
<td>Standardization Control</td>
<td>Increased equipment life.</td>
<td>Improved Quality</td>
</tr>
<tr>
<td></td>
<td>Higher morale.</td>
<td>Consistent Delivery</td>
</tr>
<tr>
<td></td>
<td>Clean environment.</td>
<td>Improved Safety</td>
</tr>
<tr>
<td></td>
<td>Increased visibility of nonconformances.</td>
<td></td>
</tr>
</tbody>
</table>
Waste Identification

- What waste can be identified in the following photos?
After 5S

- Clear, shiny aisles
- Color-coded areas
- Slogans & banners
- No work in process
Workplace Observation

- Clearly define target area
- Identify purpose and function of target area
- Develop area map
- Show material, people, equipment flow
- Perform scan diagnostic
- Photograph problem areas
- Develop a project display board (area)
Sort

- When in doubt, move it out
- Prepare red tags
- Attach red tags to unneeded items
- Remove red-tagged items to "dinosaur burial ground"
- Evaluate / disposition of red-tagged items
Straighten

- Make it obvious where things belong
  - Lines
    - Divider lines
    - Outlines
    - Limit lines (height, minimum/maximum)
    - Arrows show direction
  - Labels
    - Color coding
    - Item location
  - Signs
    - Equipment related information
    - Show location, type, quantity, etc.
Shine

- Clean everything, inside and out
- Inspect through cleaning
- Prevent dirt, and contamination from reoccurring

Results in
- Fewer breakdowns
- Greater safety
- Product quality
- More satisfying work environment
Standardize

- Establish guidelines for the team 5-S conditions
- Make the standards and 5-S guidelines visual
- Maintain and monitor those conditions
Sustain

Determine the methods your team will use to maintain adherence to the standards

- 5-S concept training
- 5-S communication board
- Before and after photos
- One point lesson
- Visual standards and procedures
- Daily 5-minute 5-S activities
- Weekly 5-S application
Visual Factory Implementation

- Develop a map identifying the “access ways” (aisles, entrances, walkways etc.) and the “action” areas.
- Perform any necessary realignment of walkways, aisles, entrances.
- Assign an address to each of the major action areas.
- Mark off the walkways, aisles & entrances from the action areas.
- Apply flow-direction arrows to aisles & walkways.
- Perform any necessary realignment of action areas.
- Mark-off the inventory locations.
- Mark-off equipment/machine locations.
- Mark-off storage locations (cabinets, shelves, tables).
- Color-code the floors and respective action areas.