Implementing 5S:
A Foundation for Your Lean Journey

SME Webinar

June 11, 2008

Back2Basics, LLC
Webinar Agenda

• Learn the fundamentals of 5S methodology

• See relationship of 5S to process improvement and business results

• Explore cases that range from heavy industry to medical products to administrative areas

• Learn about several implementation strategies

• Identify ways to overcome skeptics and anchor-draggers
“Seeing” Waste is a Basic Skill

Seven Kinds of Muda (Waste)

• Overproducing
• Waiting
• Transporting
• Overprocessing
• Inventory
• Motion
• Defects and Rework
5S Definition

5S -- a method for achieving stability and standardization in the workplace and for removing “muda”
Benefits of 5S Implementation

- Removes waste
- Provides a safer work area
- Regains space
- Enables visibility of the process
- Saves time
  - no searching for items
  - shorter travel distance to standard locations
Benefits of 5S Implementation (Continued)

- Makes a cleaner work place -- contributing to quality
- Specifies good practices to be maintained
- Delivers significant bottom line results with minimum investment
- Focuses workforce on initial discipline required for lean
- Improves morale
Pre-5S Work Area Characteristics

- Dirty
- Cluttered
- Unsafe
- Poor Ergonomics
- Isolated
- Poor Communication
- Missing Visual References
- Undocumented Aids & Workarounds
- Improper Storage
- Poor Lighting
- Lack of Work Area Organization
What are Elements of 5S?

1. **S**ort & Select “remove everything not needed”
2. **S**traighten & Store “set-in-order”
3. **S**crub & Shine “clean & inspect”
4. **S**tandardize “regular locations & cleaning”
5. **S**ustain “spread, train, self-discipline”
1. Select & Sort

- Identify what is needed/what is not needed to do value-added work
- Consider all resources
- Be objective and critical (people may get emotional about items)
- Look at the area for perspective of person who adds value
Sort - Red Tag Campaign

- Use “Red Tags” to make things not needed visible
- Consider frequency of use
- Consider all shifts
- Consolidate all “Red Tagged” items in central, highly visible location
- Disposition of “Red Tag”
  - Item to throw away (may use a “hold” area)
  - Scrap/rework/repair
  - Return to stores
  - Return to work area
Red Tag Helpful Hints

• Make sure everybody understands what is to be Red Tagged and why.
• Do not Red Tag people.
• Do not put multiple tags on any one object.
• Don’t compromise: If in doubt…. Throw it out.
• Discourage people from being defensive. Be fair, all areas will get tagged.
• Make reasonable allowances for decorative and personal items (family pictures, plants, etc.).
• Record information about all tags used on a Red Tag Log so that new positions can be tracked easily.
# Red Tag Log

<table>
<thead>
<tr>
<th>Tag Number</th>
<th>Tag Date</th>
<th>Item Name</th>
<th>Cell/Area</th>
<th>Reason</th>
<th>New Position</th>
<th>Status</th>
<th>Date</th>
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</thead>
<tbody>
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</table>
2. Straighten & Store

• Standardized, orderly arrangement of all resources required for value added work

• “A place for everything and everything in its place”

• Placement and proximity to worker should consider
  – ergonomics
  – “prime real estate”
  – Frequency of use

• Visual management / visualization for items
  – tangible
  – intangible
Prerequisites of Visual Control

- Housekeeping
- Organization
- Consistency

Make it easy for anyone to identify the state of normal or abnormal conditions
3. Scrub & Shine

- Cleanup workplace to eliminate waste, variation, dirt, hazards, (etc.)
- During cleaning - inspect workplace resources for problems, defects, safety issues, variation, non-standard conditions
- Identify items found during inspection
- Correct items found
  - yellow tags:
    - resolve by maintenance or engineering
  - white tags:
    - resolve by team or operators
Example of 5S in Action

Before:
• Lot of spatter and grime
• Worn clamps
• Overall “dirty” condition

After:
• Shiny fixture
• General PM performed
• Easy to see

Scrub & Shine
In motion!
Example of 5S in Action

Before at Cell D:
- Large containers
- Heavy congestion
- Operators invisible

After at Cell D:
- Operators visible
- Small containers
- Easy to see process
4. Standardize

• Identify actions required to maintain workplace organization and control
• Develop standard process
• Train people in use of standards
• Provide resources and time to follow standards
5. Sustain

- Management demonstrates commitment to the on-going 5-S process
- Self-audits and peer-audits are part of the standard process
- Employee participation in the process is crucial to continuously improve area conditions
- Management leading by example ("Walk the Talk")
- Workplace order & organization becomes a consideration throughout total enterprise
- The organization's culture supports & practices workplace organization & control
## Example 5S Audit Worksheet

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>5S EVALUATION and SCORING CRITERIA</th>
<th>SCORE</th>
<th>MOVEMENT OPPORTUNITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Removal of all unnecessary items</td>
<td>All items not necessary for performing work are removed from the workplace, only tools and products are present at work stations.</td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Storage of cleaning equipment</td>
<td>All cleaning equipment is stored in a neat manner, handy and easily available when needed.</td>
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<tr>
<td>3</td>
<td>Floor Cleaning</td>
<td>All floors are sealed / clean and free of debris, oil and dirt. Cleaning of floors is done on a routine (minimum of daily) basis.</td>
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</tr>
<tr>
<td>4</td>
<td>Bulletin Boards</td>
<td>No out-dated, form or soiled announcements are displayed. All bulletin boards are arranged in a straight and neat manner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Emergency Access</td>
<td>Fire hoses/extinguishers &amp; other emergency equipment are unobstructed &amp; prominent, easy to see location. Stop switches &amp; breakers are marked - color coding for easy visibility.</td>
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<tr>
<td>6</td>
<td>Items on the floor</td>
<td>Work in process, tools &amp; all other materials are not left directly on the floor. Labeling such as tote bins are positioned on the floor in clearly marked areas -- defined lines.</td>
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</tr>
<tr>
<td>7</td>
<td>Aisles ways -- marking</td>
<td>Aisles &amp; walkways are clearly marked &amp; can be located straight and at right angles with no chirp;</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>Aisle ways -- maintenance</td>
<td>Aisles are free of material and obstructions. Nothing is stored on top of these aisles, objects are placed at right angles to the aisles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Storage and arrangement</td>
<td>Storage of boxes, containers &amp; material is always neat &amp; stacked; items are never crooked or in danger of falling over.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Cabinets / Shelves</td>
<td>All cabinets and shelves are painted and kept clean by routine inspections. Windows and work surfaces are kept clean.</td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>Cabinets / Shelves</td>
<td>Cabinets, shelves and all other equipment are kept clean and all objects are stored in the proper place.</td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Cabinets / Shelves</td>
<td>All shelving locations clearly and properly marked in accordance with company standards.</td>
<td></td>
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</tr>
<tr>
<td>13</td>
<td>Equipment -- storage</td>
<td>Nothing is placed on top of machines, cabinets or equipment but inside cabinets over walls or columns. Guards and deflectors are used to keep proper equipment in the floor.</td>
<td></td>
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</tr>
<tr>
<td>14</td>
<td>Document -- storage</td>
<td>Only documents necessary to the area are stored at work stations, documents &amp; binders are stored in a neat &amp; orderly manner.</td>
<td></td>
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</tr>
<tr>
<td>15</td>
<td>Document -- control</td>
<td>All documents are clearly labeled with contents and responsible parties.</td>
<td></td>
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</tr>
<tr>
<td>16</td>
<td>Tools &amp; gauges -- arrangement</td>
<td>Tools, gags and fixtures are arranged neatly and stored clean and free of any risk of damage or contamination.</td>
<td></td>
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<tr>
<td>17</td>
<td>Obsolete parts</td>
<td>All stock is regularly checked for obsolescence. Any obsolete stock is stored and isolated for disposal.</td>
<td></td>
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</tr>
<tr>
<td>18</td>
<td>Desks &amp; work stations -- arrangement</td>
<td>All arranged, divided and clearly labeled such that it is obvious where &amp; how items are stored and where they should be returned.</td>
<td></td>
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</tr>
<tr>
<td>19</td>
<td>Shelves, benches, desks &amp; work stations -- control</td>
<td>All kept free of unused objects, including files and documents. Tools and equipment are cleaned before being returned to their proper location.</td>
<td></td>
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</tr>
<tr>
<td>20</td>
<td>5S control &amp; maintenance</td>
<td>There is a disciplined system of control &amp; maintenance to assure that each of the above items is maintained at the highest possible level. It is the responsibility of management to maintain this system.</td>
<td></td>
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</tbody>
</table>

**Scoring System:**
- 0 = Unacceptable
- 1 = Poor
- 2 = Acceptable
- 3 = Good
- 4 = Excellent
- 5 = Operating Room

**TOTAL of ALL ITEMS**

**Total Score Divided by 20 = 5S RATING**

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### Key Points About Audit Worksheet:

1. Engage workforce and mgmt.
2. Score 20 items from 0 to 5.
3. Calculate weighted score.
4. Trend results and make visible.
5. Use audit process to drive CI.
Relationship to Process Improvement
And Business Results

How does 5S impact business results?

- Reduced minor stops
- Better tool control
- Effective utilization of space
- Quicker changeovers
- Less disruption of skilled & technical resources
- Fewer mix-ups
- Increased employee satisfaction

Lean tools, methods, and techniques stand on the shoulders of 5S

5S is the foundation for improvement
Range of Cases to Demonstrate 5S Versatility

- Heavy Industrial
- Medical Products
- Office and Administrative Area
Implementation Strategies

1. Management kick-off and demonstration project

2. Component of regular Kaizen event

3. Stand-alone Kaizen event

4. Standard part of the way business is conducted
Winning Over Skeptics and Anchor-Draggers

• Be inclusive...share what’s going on.

• Get early positive results...pick your demonstration projects carefully.

• Create a groundswell of momentum.

• Measure and post results...show how 5S benefits the various stakeholders.

• Spend individual time to respond to people’s concerns, fears, and negative perceptions.

• Make the 5S process non-negotiable!
Thank You for Participating in
“Implementing 5S” Webinar

Question & Answer Session

Back2Basics, LLC
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