

5S Training Module





Presenter:

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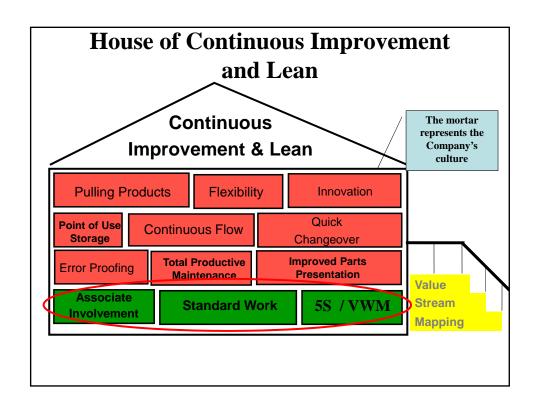
Cell Phone: 937-309-6904

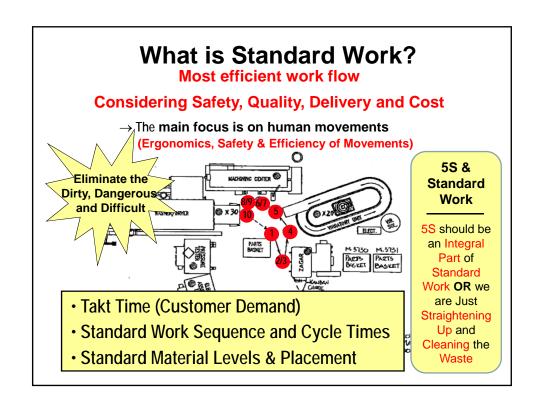
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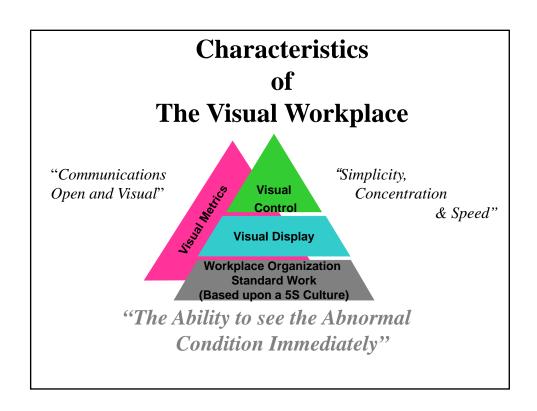


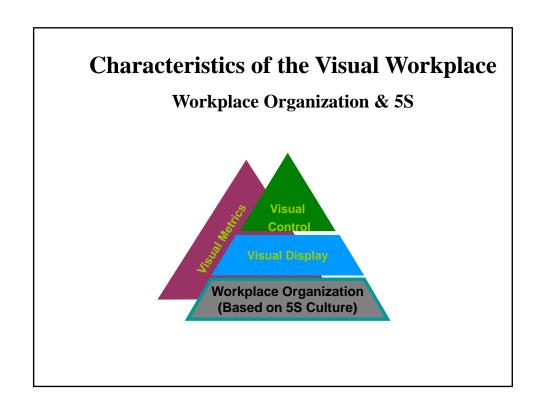
Introduction and Agenda 5S

- House of Continuous Improvement / Lean
- What is 5S?
- 5S Training and Audit









Introduction to 5S



- What is 5S?
- Getting Started
 - Sort
 - Set in Order
 - Shine
 - Standardize
 - Sustain
- Getting the Most Out of the 5S's

What is 5S?

- A systematic method to organize the workplace, to keep it neat and clean, to maintain standardized conditions, and to sustain the discipline that is needed for high performance.
- The 5S system should come first as a basis for other improvements. 5S identifies where the problems are.
 - 5S is a great way to eliminate waste.
 - 5S is a culture. It must be taught then used repeatedly to become part of everyone's daily routine.

Implementing

and

Sustaining

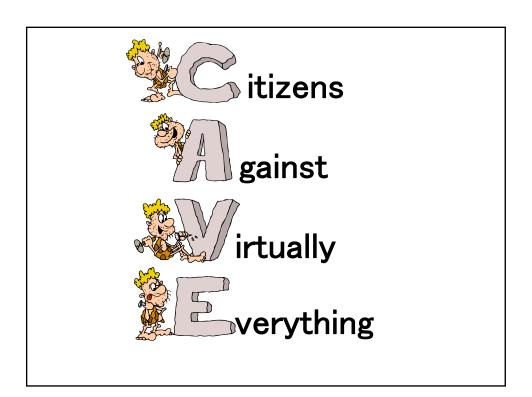
a 5S program takes a major

Culture Change.

Does anyone look familiar?



Do you have "CAVE" Men or Women in your company ?



The 5S System Japanese -- English Terms

Seiri -- Sort

Seiton -- Set in Order

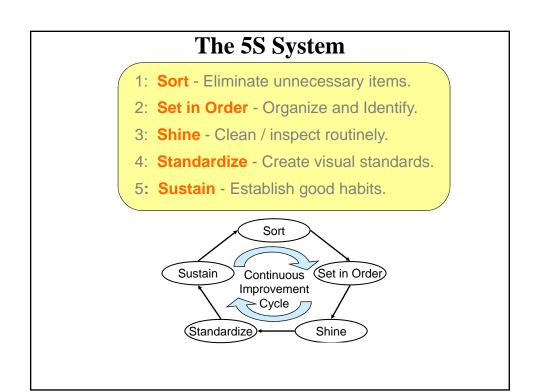
Seiso -- Shine

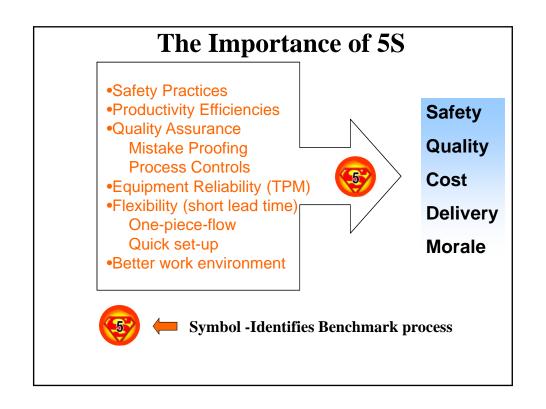
Seiketsu -- Standardize

Shitsuke -- Sustain









Benefits of the 5S System

- Reduces
 - Waste
 - Downtime
 - Defects
 - Changeover time
 - Delays
 - Questions

- Improves
 - Safety
 - Customer satisfaction
 - Personal satisfaction
 - Visual Control
 - Standardization
 - Process Control

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Getting Started

- Prior to starting a 5S implementation project, planning and preparation must take place.
- Laying the groundwork:
 - Explain the overall concepts and objectives of 5S to upper-level management in the plant.
 - Get upper-level management support.
 - Select target area(s)
 - Choose a project facilitator for each target area.
 - Ensure that you have the target area management's support, including resources.

Getting Started

- Form a core implementation team to manage 5S implementation in target areas.
 - People who are interested / willing to participate.
 - Represent the different job functions in the area.
 - Area manager must support each member's involvement.
 - Each team member must understand scope of project.
 - Communicate 5S concepts and plan to all Associates.

Getting Started

Introducing 5S to associates. (flyers, banners etc.)



5S Implementation Schedule: (Target Area Example)

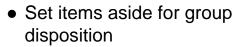
Item	Months													
ПСШ	1 :	2 3	4	5	6	7	8	9	10	11	12	13	14	15
Preparation	∇	∇												
Getting Started		∇												
Workplace Scan			V											
Sort				V		V								
Set in Order						V		V						
Shine								V		V				
Standardize										V		V		
Sustain												V		∇

- Notes: 1. Each S may take several months to implement but perfecting the process never ends
 - 2. The 5S system will expand into other areas after the initial area is complete.

Sort / Seiri

 Identify what is needed and not needed right here, right now





• Dispose of items:

KEEP

- Find a better location in the work area
- Locate elsewhere in the facility
- Sell, give away, or throw away



Sorting Items from the Workplace

Level	Degree of Need (Frequency of Use)	Storage Method (Stratification)
Low	Things you have not used in the past year or won't be needing	Throw them out
	• Things you have only used once in the past 6-12 months	Store at a distance
Average	• Things you have only used once in the last 2-6 months	• Store in a central place in the workplace
	Things used more than once a month	
High	 Things used once a week Things used every day	Store near the work site or carry on the
	Things used hourly	person



Red Tagging

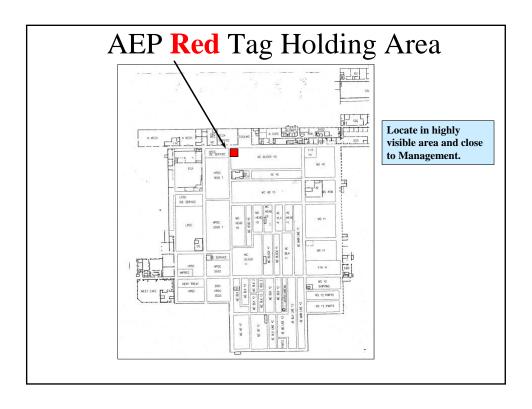
- Red tagging is a visible way to identify items that are NOT needed or in the wrong place.
 - Establish the rules.
 - Identify unneeded and misplaced items.
 - Throw out items that have no use or value.
 - Attach Red tags to items that are unknown or might be used outside of the work area.
 - Move tagged items to the Red tag holding area for temporary storage.
 - Communicate that items have been moved.

5S Red Tag Example

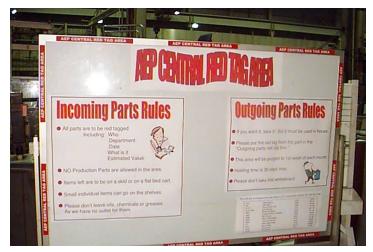


The red tag should include:

- Description of item
- Where & when tagged
- Date
- Reason tagged
- Additional items for your situation



Here's a Red Tag Area that's easy to understand.

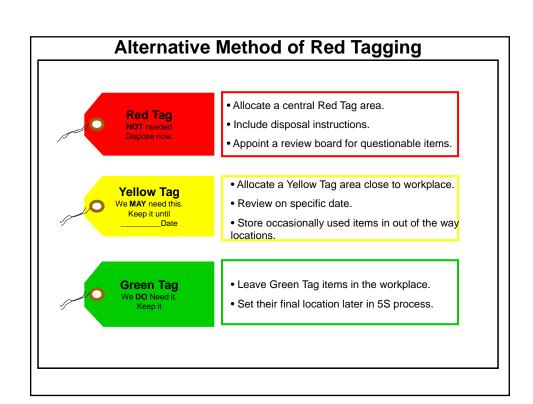


Simple instructions posted on the board indicate how the area is to be used.

It's amazing how much you can find!



Central Red Tag Area at the Anna Engine Plant.

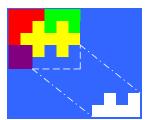


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Second S: Set in Order



"A Place for Everything and Everything in its Place"

- · Organize and locate all necessary items.
- Decide how many of each item will be stored in a given location (set height, size, and min/max inventory limits).
- Make it easy for anyone to find and use them.
- Make it obvious when they are not in their correct place.

Second S: Set in Order

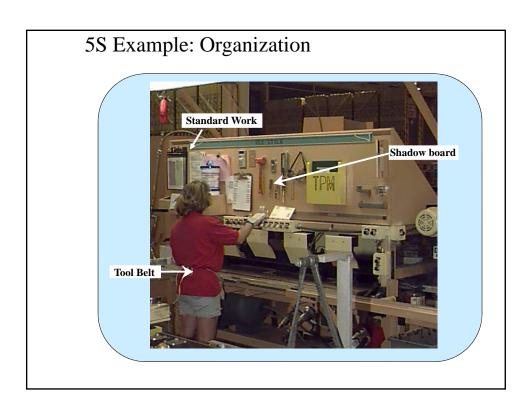
- Increases job efficiency by making it easier for anyone to find, use and return items.
- Check points for your workplace:
 - Are the positions of main corridors, aisles and storage places clearly marked?
 - Are tools / office equipment divided into specialized use and "regular items?"
 - Are all pallets always stacked to the proper heights?
 - Is anything stored around fire extinguishers & eye wash stations?
 - Are office areas / workstations clearly identified?



Principles of Storing Jigs, Tools & Materials

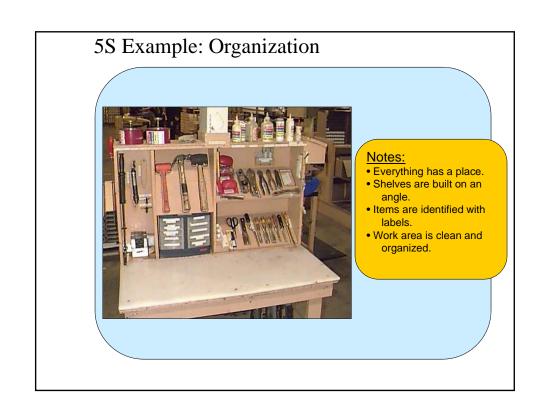
- Locate according to their frequency of use
- Items used together should be stored together
- Right size storage areas
- Eliminate variety by using *multi-purpose tools*
- ✓ Use open storage systems
- ✓ Use Gravity to your advantage
- Make it obvious where things belong

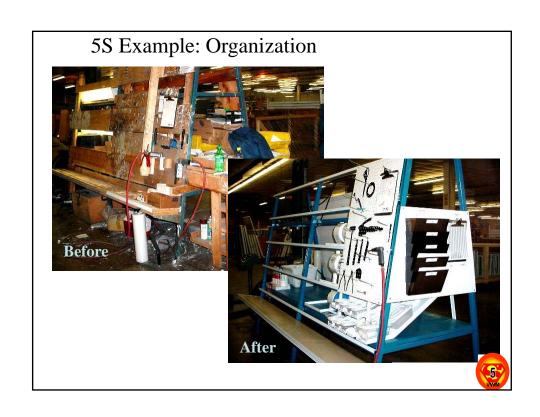


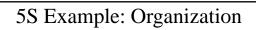








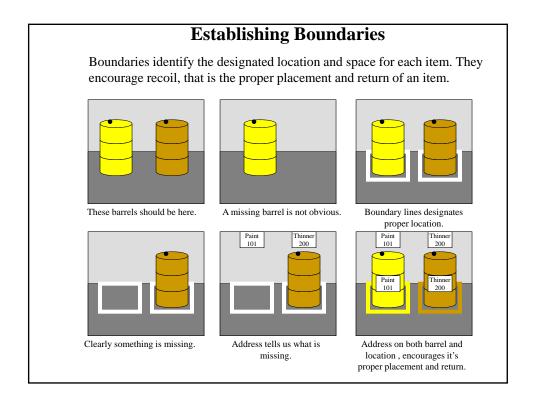






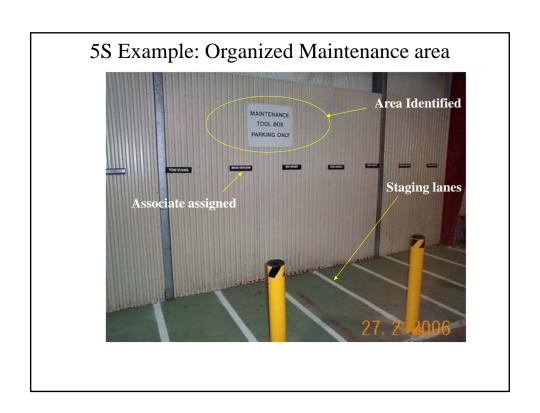
Organized Tool / Die repair area











5S Example: Assembly aisle Identification



5S Example: Organized Traffic Flow



Tow motor route controlled through floor markings.



Introduction to 5S



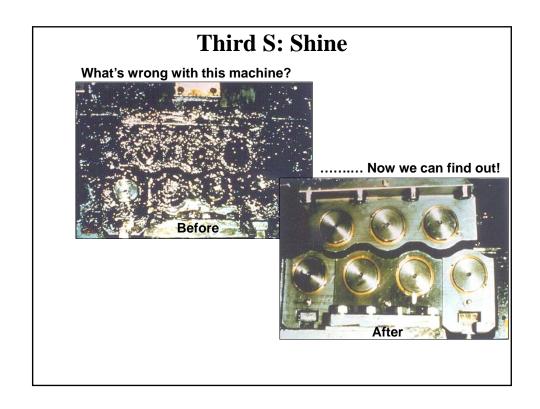
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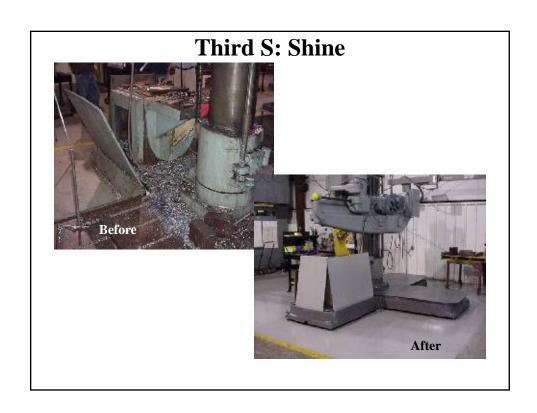
Shine / Seizo

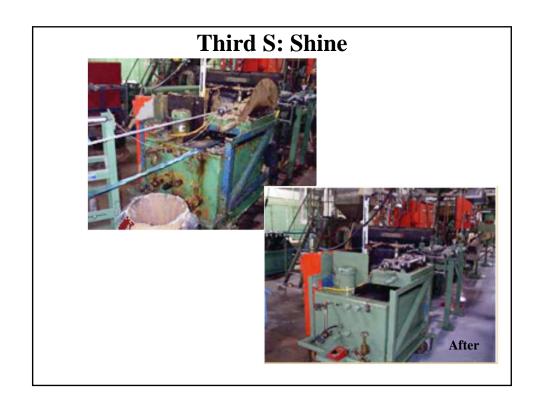
- Thoroughly clean the overall workplace.
- Clean workstations and equipment, inside and out.
- Identify and eliminate sources of contamination.
- Find ways to keep the workplace clean.
- Make cleaning part of everyday work.
- Adopt cleaning as a form of inspection.











Third S: Shine

- Restore items to like-new condition where possible.
 - Refurbish, paint, clean, polish, etc.
- Plan cleaning assignments and cleaning methods.
- Replace worn wires, hoses, etc.
- Prevent dirt, grime and contamination from occurring.

Benefits of Shine

- Cleaning helps uncover problems "Inspection".
- Cleaner facilities support higher quality, higher precision and finer processing technologies.
- Fewer equipment breakdowns because you spot problems/deterioration early.
- A safer workplace with fewer hazards.
- A more effective and satisfying place to work.





Example of 5S Cleaning Duties

			I	E.O.S. ASSI	GNMENT M	ATRIX		
002	NUT / PIPE WELDER	FIRST WELDER	FILLING MACHINE	SECOND WELDER	CARBON TESTER	VALVE / LEAK TEST	POKA YOKE / P.O.	
	1. WIPE MACHINES	1, WIPE MACHINES	1. WIPE MACHINES	1. WIPE MACHINES	1. WIPE MACHINES	1. WIPE MACHINES	1. WIPE MACHINES	
	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	
	3. STOCK MACHINES	3, STOCK LINE	3. CLEAN DUST	3. DISPOSE OF	3. CUT CANS	3. EMPTY TRASH	3. SCRAP PARTS	
			HOPPER	CARD BOARD	4. CLEAN CAN			
					CUTTING AREA			
008	FIRST WELDER		SECOND WELDER	LEAK TESTER	POKA YOKE / P.O.			
	1. WIPE MACHINES	1. WIPE MACHINES	1. WIPE MACHINES		1. WIPE MACHINES			
	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR			
	3. STOCK LINE	3. CLEAN DUST	3. DISPOSE OF	3. CUT CANS	3. SCRAP PARTS			
		HOPPER	CARDBOARD	4. CLEAN CAN				
			4. EMPTY TRASH	CUTTING AREA				
009	NUT / PIPE WELDER	FIRST WELDER	SCREEN INSERT	FILLING MACHINE	SECOND WELDER	CARBON TESTER	VALVE / LEAK TEST	POKA YOKE / P.O.
	1. WIPE MACHINES	1. WIPE MACHINES			1. WIPE MACHINES		1. WIPE MACHINES	1. WIPE MACHINES
	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR
	3. STOCK MACHINES	STOCK LINE		REPLACE VACC.		3. CUT CANS	3. EMPTY TRASH	3. SCRAP PARTS
				BAGS AND FILTER	CARD BOARD	4. CLEAN CAN		
		ON 009 AND CONV				CUTTING AREA		
			AS NEEDED	· AS NEEDED				
CONV.	A	В	С	D	E	F	G	Н
	1. WIPE MACHINES		1. WIPE MACHINES					1
	2. CLEAN FLOOR	2. CLEAN FLOOR	2. CLEAN FLOOR					
	3. STOCK LINE	3. SCRAP PARTS	3. DISPOSE OF					
			CARDBOARD					
			4. EMPTY TRASH					





Supply storage board



Cleaning kit and check sheet



Designated location for cleaning supplies.



5S Supplies or Tools provided line side





Organized and labeled recycle and trash locations.



Benchmark in cleanliness standards.



Electronic suppliers " clean room " environment



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Standardize / Seiketsu

- Determine standard procedures and make them visible.
- Designate standard colors, shapes, and symbols to be associated with standard procedures.





Fourth S: Standardize

 Implement the rules by which the first 3S's are performed and maintained

sort

 Standardize Red tag procedures and Red tag holding area rules

Set in Order

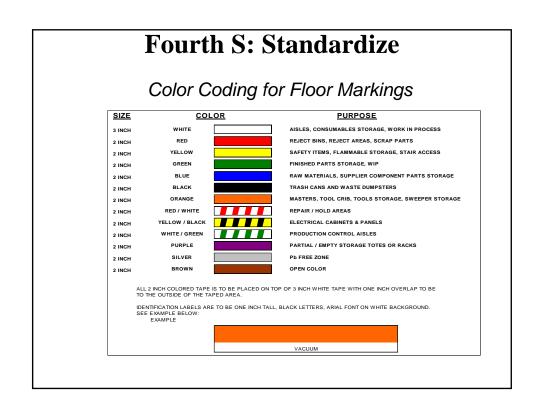
- Standardize location, number and position of all items (standardize colors, shapes, symbols, etc.)
 - Make temporary lines, signs, and labels permanent

shine

- Standardize cleaning schedules and procedures
- Standardize work procedures and make visible

Fourth S: Standardize

- Establish the standard conditions of Sort, Set in Order, and Shine.
- Attain those conditions
 - Additional 3S work may be necessary to reach the standards you have set.
- Make it easy (visual) to conform to standards.
- Maintain and monitor these 5S conditions.
 - audits & tracking, daily follow up



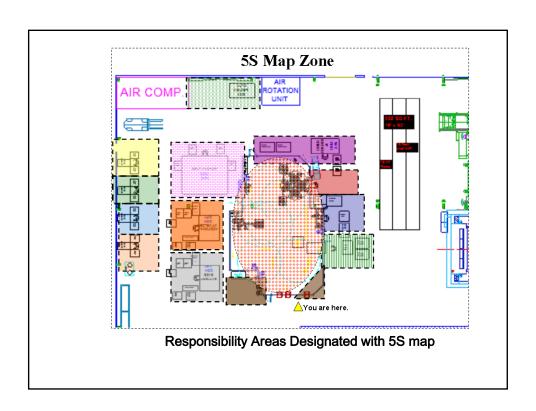
Standardize Example 5S Map & Color Coding Oil supply cans with spigots Lubrication tools

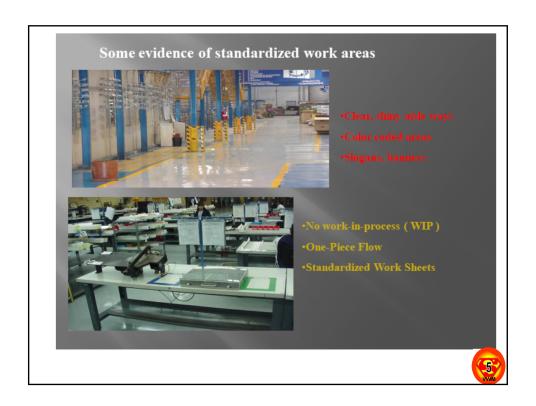
Standardize



Various plumbing going in and coming out of machinery.







Standardize Example





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Sustain / Shitsuke

Stick to the Rules

Sticking to the rules shows us where improvement is needed.

Adherence

When we achieve 100% adherence to standards, many of our workplace problems disappear.

Sustain / Shitsuke

- Use self-discipline
- Develop good habits
- Develop visual controls



Fifth S: Sustain

- Sustaining the habits and discipline of the first 4 S's (Sticking to the rules)
 - Correct procedures have become a habit.
 - Proper training of all Associates has occurred
 - 'Buy-In' from Associates and a change in work habits have been achieved.
 - The workplace is well-ordered and run by agreed upon standards.
 - Tools/ Supplies must be provided for associates.

Note:

- To remember something, people must see it 7 times
- To develop a new habit it must be repeated 21 times

How to Achieve the Fifth S: Sustain

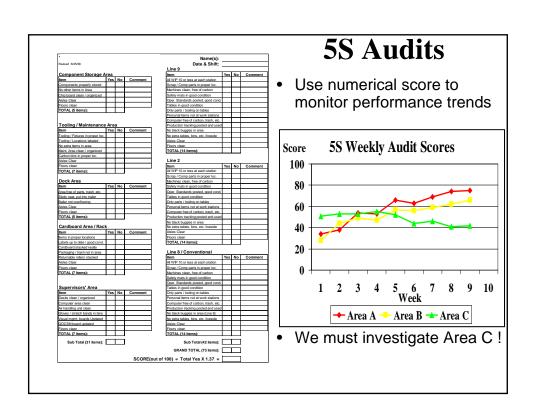
- Practice, Practice, Practice
- Training
- Continuous Improvement
- Audits / Inspections
- Feedback
- Total Associate Involvement

- Coaching
- Facilitation
- Education
- Self Discipline
- Leader Involvement

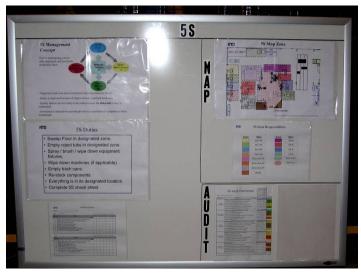
Note: The first effort at implementing the first 4 S's is NOT permanent--continue to question and improve as needed.

Fifth S: Sustain 5S Audit Checksheet | Set in rore | Level 0 | 3 - 4 | Level 1 | 3 - 4 | Level 2 | 3 - 4 | Level 3 | 4 | Level 3 | 4 | Level 3 | 4 | Level 4 | 3 - 4 | Level 4 | 3 - 4 | Level 4 | 2 | Level 4 | Level 5 | 3 - 4 | Level 5 | Revel 6 | Level 6 | Revel 6 | Level 6 | Revel 6 | Level 7 | Level 8 | Level 9 | L

Covering all 5S Categories.



Ex: 5S Practice Floor display



Includes Duties, Check sheets, 5S Map, and last audit results.



Plant "Overall " status displayed for all associates to see.

Why do we conduct audits?

Our goal with the audit is not just to measure 5S, but to **create a system of thought** centered on the principles behind 5S - defining and simplifying the job, organizing the flow, improving communication with other departments and making / tracking constant improvements. It all comes down to the Rules in Use. 5S is really a tool to gain better understanding of how the Rules impact your day-to-day and the overall company practices.

(If time allows and training is being conducted at Supplier location)

Exercise #1 5S Practical Application

- Performing a 5S Audit
- Results of your 5S Audit

Date ·	5S Audit Checksheet	5 or more 3 - 4 2 1 None		Rating Level 0 Level 1 Level 2 Level 3 Level 4		
	1					
CATEGORY	ITEM DATE RATED Distinguish between what is needed and not needed	#1	#2	#3	#4	Average
	Unneeded equipment, tools, furniture, etc. are present	_				
Sort	Unneeded items are on walls, bulletin boards, etc.	H				
	Items are present in aisle ways, stairways, corners, etc	+				
	Unneeded inventory, supplies, parts or materials are present	1				
	Safety hazards (water, oil, chemical, machines) exist	+				
	Salety hazaros (water, or, chemica, macrines) exist	-	_	_	-	
Oct III Order	A place for everything and everything in its place					
	Correct places for items are not obvious					
	Items are not in their correct places					
	Alsle ways, workstations, equipment locations are not indicated					
	Items are not put away immediately after use					
	Height and quantity limits are not obvious					
	Charles and leables for your to have it along and associated					
Shine (Cleanliness)	Cleaning, and looking for ways to keep it clean and organized	-				
	Floors, walls, stairs, and surfaces are not free of dirt, oil, and grease	+				
	Equipment is not kept clean and free of dirt, oil, and grease	+				
	Cleaning materials are not easily accessible	╁				
	Lines, labels, signs, etc. are not clean and unbroken Other cleaning problems (of any kind) are present	⊢				
	Other cleaning problems (or any kind) are present	-	_	ш	-	
	Maintain and monitor the first three categories					
	Necessary information is not visible					
	All standards are not known and visible	L				
	Checklists don't exist for all cleaning and maintenance jobs					
	All quantities and limits are not easily recognizable					
	How many items can't be located in 30 seconds?					
	Stick to the rules					
Sustain (Self-discipline)	How many workers have not had 5S training?	т				
	How many times, last week, was daily 5S not performed?	т				
	Number of times that personal belongings are not neatly stored	T	-	П		
	Number of times job aids are not available or up to date	Г				
	Number of times, last week, daily 5S inspections were not performed	T		П		
	Tota	1	1 -	ΙП		

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Getting the Most Out of the 5 S's

- Formulate a 5S plan and follow it through.
 - **Involve** lots of **people** with the plan.
 - Make slogans, posters, and **publicize** and **train**.
 - Set up a 5S organization.
 - Set targets and plan for feedback on schedule and implementation progress.
 - Use quick Kaizen projects to help meet objectives.
 - Consider starting with "model" areas.
 - Break work down into **manageable** portions.

Getting the Most Out of the 5 S's

- Top management must take the lead and be serious about the 5 S's
- Everyone must take part.
- Quantify results of workplace audits and post in each area.
- There can be no backsliding.
- Success has to be consolidated and achievements recognized at each stage.

Example of a Shop Floor 5S

Transformation







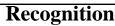
Recognition



"Golden Bucket" trophy

Presented to weekly department winner by President. Put on display in department until another department defeats the weekly champions.

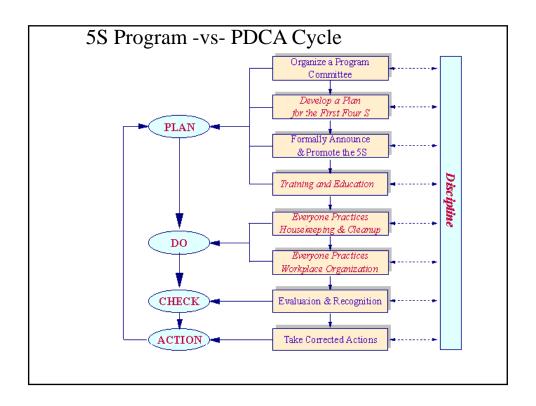






Detailed Before and After "Recognition of Success" with team members pictures.



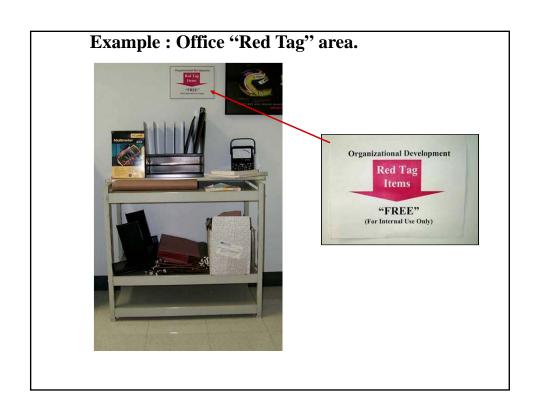


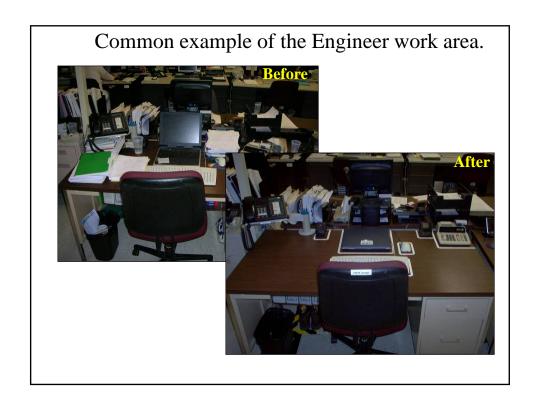
- •<u>Do not</u> limit your 5S activity to the production floor.
- •When 5S becomes part of the "Culture" it must be plant wide.

The office area in most cases can use the 5S principles.

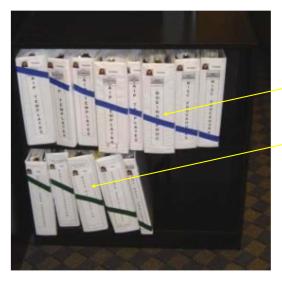
Overstated but you Get the Idea?







Example: 3 - ring Binder shelf Organization



Draw or tape line through Binders. Easy to see if one is missing or out of order.

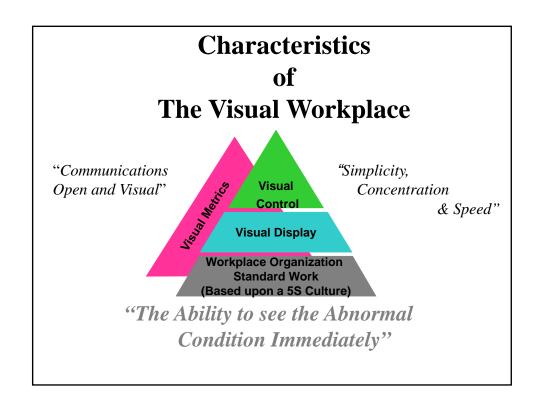
Even Conference Rooms need 5S.













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Thank you!



