

Cleanliness & Orderliness



The average person spends 30 seconds looking for something for every five minutes they spend working.

That adds up to nearly 45 minutes out of every eight-hour shift.

So, Housekeeping is important!

Let's talk about taking Housekeeping ...

5S vs Housekeeping



This deck will ..

- Establish some terms and concepts for thinking about Housekeeping
- Take the concept of mere Housekeeping to a *whole new level* (5S)

Housekeeping – 3 Terms



Think about the last time you cleaned a closet ...
what steps did you use?

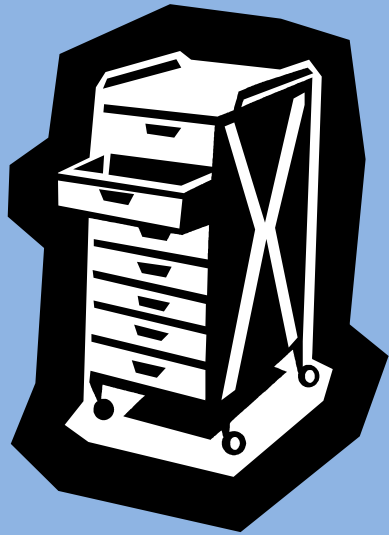
- **Sort**
 - You pulled everything out and sorted it into piles.
 - Stuff I'm keeping, stuff I'm giving away or putting somewhere else, and stuff I'm putting into the trash
- **Shine**
 - Before re-loading the closet, you took the opportunity to clean and maybe even paint.
- **Set**
 - Now that you have less stuff, you could design proper storage.
 - Maybe create or install new hooks, bins, shelves, etc to better organize it
 - Finally, you started putting your 'keep' pile back into the closet, in a logical manner.

You know
3S
intuitively

Housekeeping - SORT

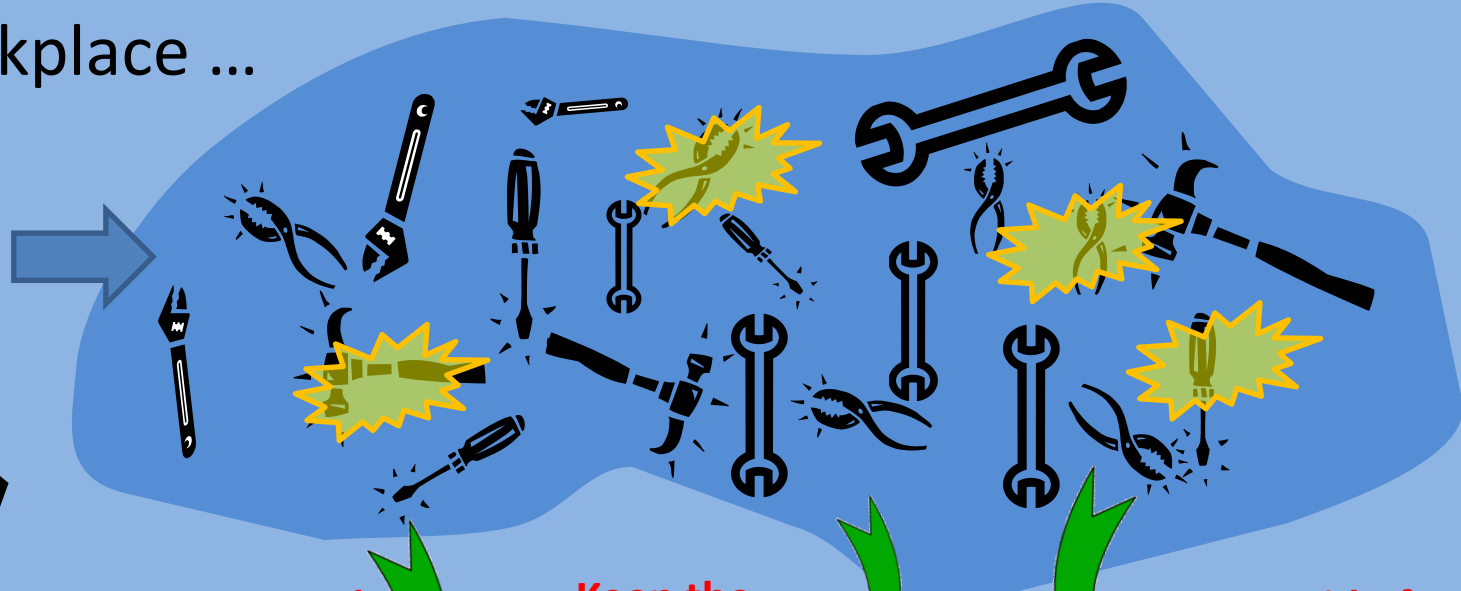


In the workplace ...



Big, bulky roll-around tool chest

- A tool for every occasion (much searching)
- Too big to be mobile (walking back and forth)

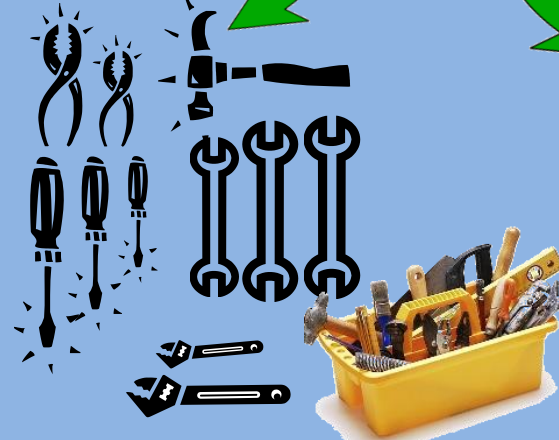


Store rarely used



Remote

Keep the critical few



Portable / Point-Of-Use

Get rid of some



Gone

FEAR causes us to keep stuff

“I think we can live without this, **but ...**”

- I may not be authorized to trash it.”
- Someone else might feel differently about it.”
- As soon as I throw it out, we’ll need it!”
- I’m not even sure what this is.”

Use a **5S Holding Bin** to overcome *fear*

- Think of it like a “Trial separation”
 - See if you can live without it
 - See if others want to keep it
- Rule #1: Must have a proper place to store an item before you can remove it from the bin
- Rule#2: If no one claims it, then get rid of it!

SORT – 5S Holding Bin

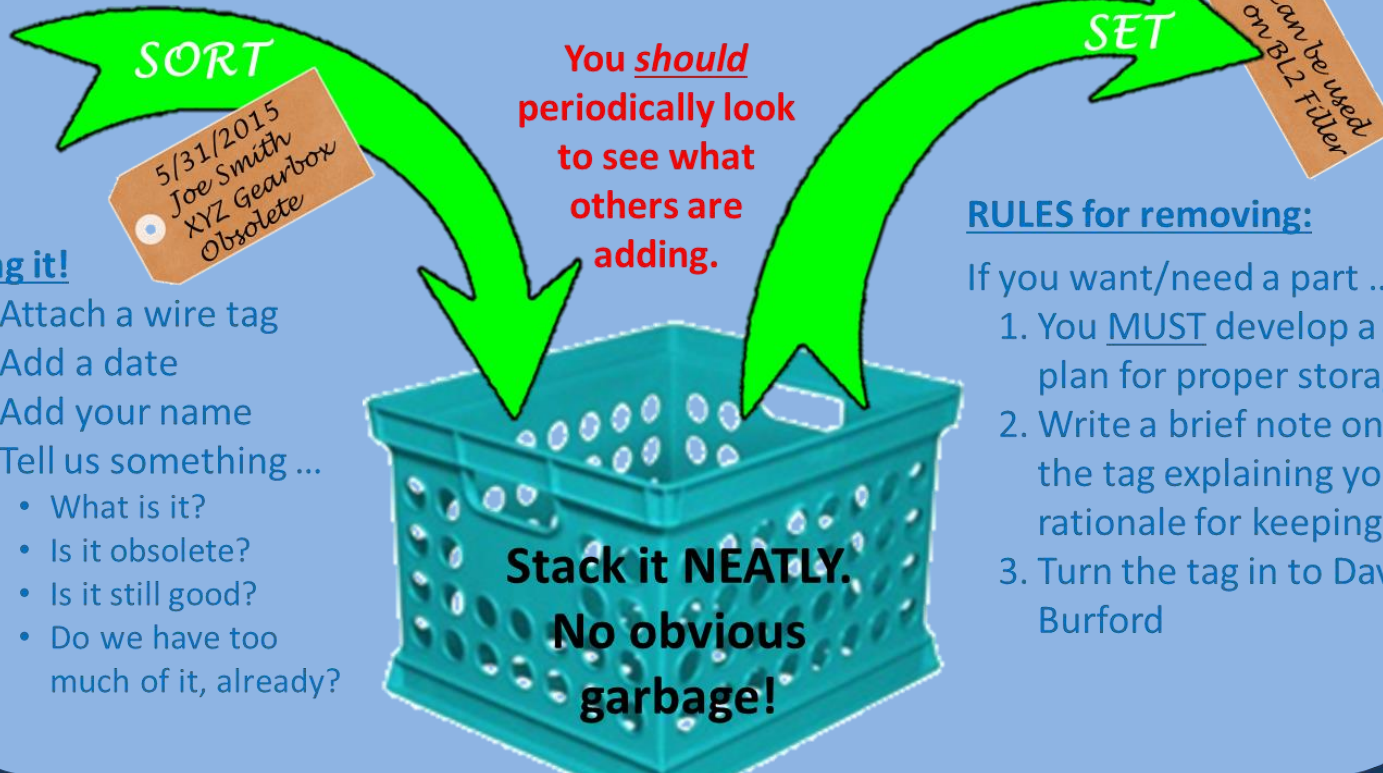


5S HOLDING BIN

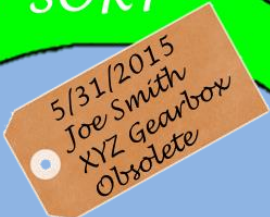
Think of this process like a 'trial separation'.
Put stuff here to test if you (and others) can live without it.
All items remaining >30 days will be removed.

You may put stuff IN

You may take stuff OUT



SORT



Tag it!

- Attach a wire tag
- Add a date
- Add your name
- Tell us something ...
 - What is it?
 - Is it obsolete?
 - Is it still good?
 - Do we have too much of it, already?

You should periodically look to see what others are adding.

SET



RULES for removing:

- If you want/need a part ...
1. You MUST develop a plan for proper storage
 2. Write a brief note on the tag explaining your rationale for keeping it
 3. Turn the tag in to Dave Burford

**Stack it NEATLY.
No obvious garbage!**

Tidying-Up = HIDING something

SET = Taking it 'HOME'

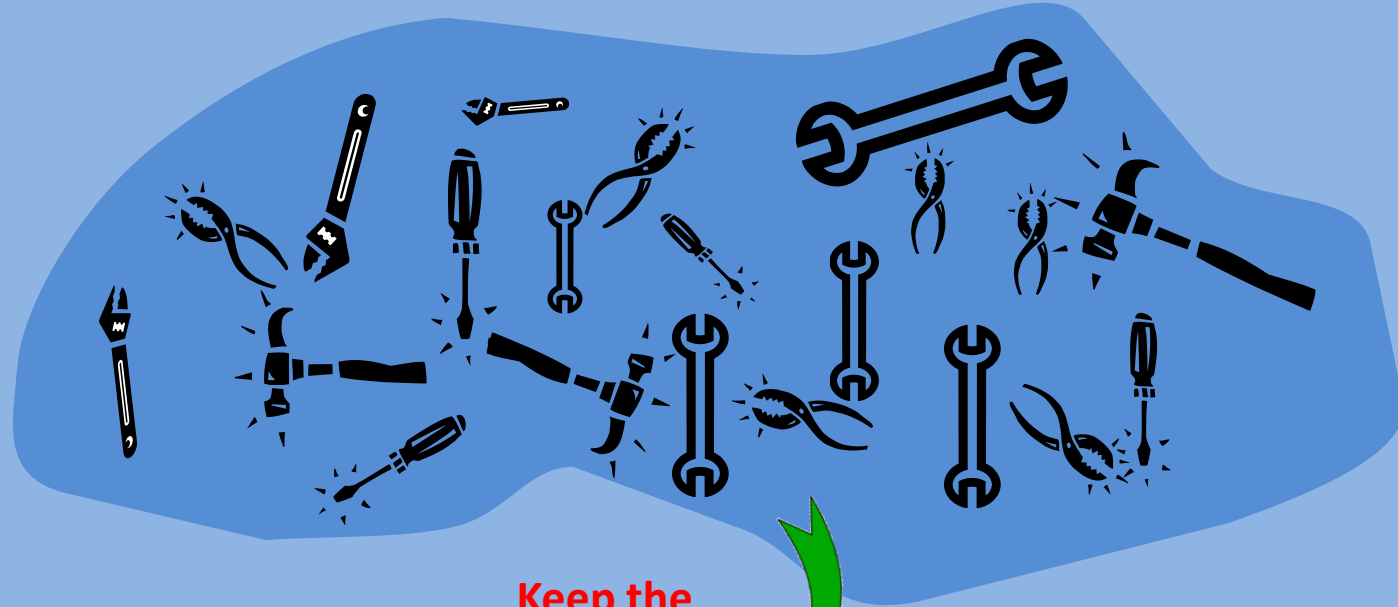
- Stuff gets left out because we are *delaying* the difficult decision of what to do with it
- SET means everything already has a designated place (its *home*)
 - Makes the decision easier

Housekeeping - SET



Too many things to organize

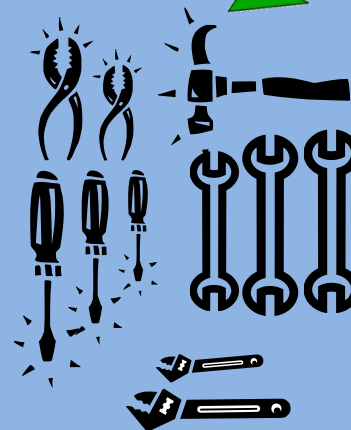
- How can we possibly designate specific spots for so much stuff?



SORT enables SET

- There is a cost to everything you keep
- If you keep it, you have to manage it!

Keep the critical few



A reasonable amount

- We can manage this many.

Housekeeping - SHINE



- Broken Window Theory



A single broken window, not repaired ...



Invites more rocks to be thrown ...



Which invites graffiti ...



Which requires trespassing ...



Eventually leading to vandalism and arson ...



Spreading to other buildings (Urban Decay) ...



And eventually, crime waves and police states.

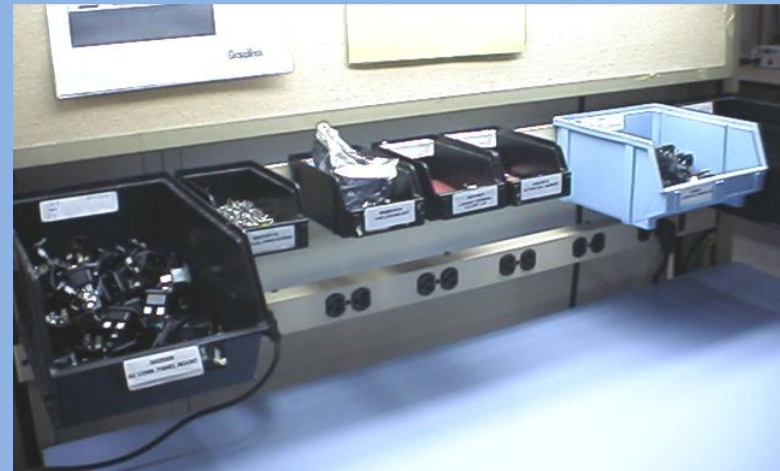
Housekeeping - SHINE



- Declutter and clean to avoid the “Messy Shop Theory” / “Messy Office Theory”
 - Make everything spic-and-span



How bad would you feel about leaving a tool out on this work station?



How about now?

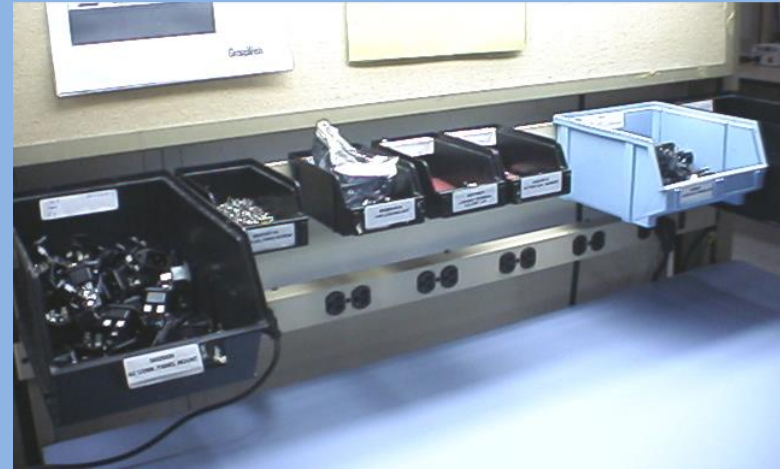
Housekeeping - SHINE



- Keep it organized and clean to avoid the “Messy Shop Theory” / “Messy Office Theory”
 - Make it easy to clean by removing obstacles



How long would it take to wipe the dust from this work station?



How about now?

DECLUTTERING



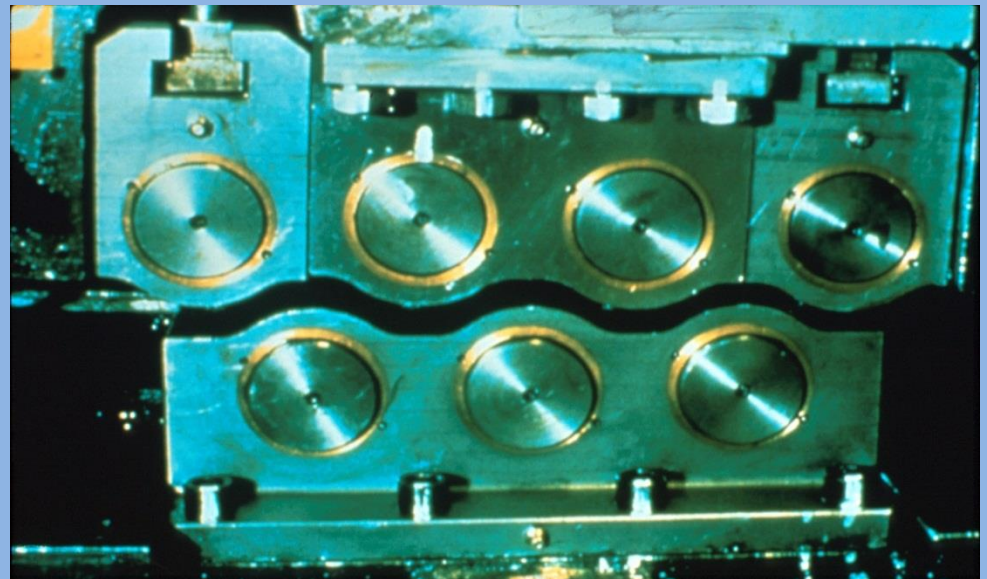
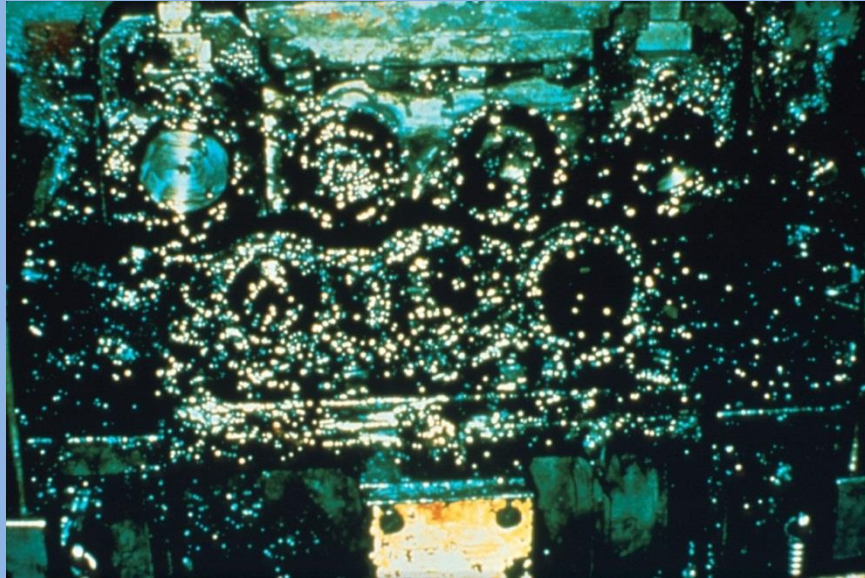
DECLUTTERING



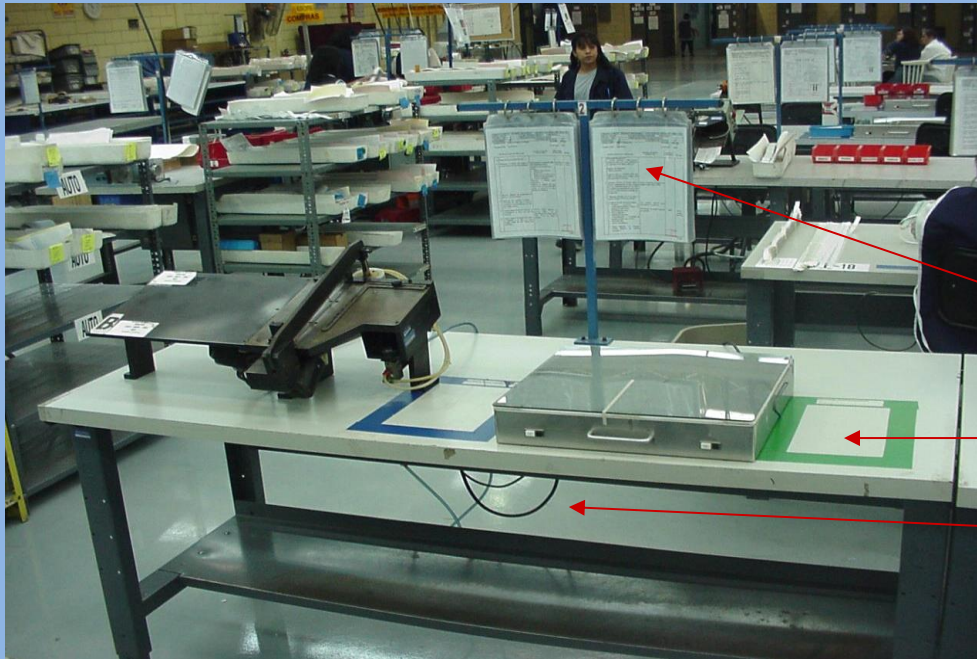
DECLUTTERING



DECLUTTERING



A 5S Work Station



- No tabletop clutter
- Landing Zones
- Elevated cables/wires

After Housekeeping



Question:

- After the last time you cleaned and organized your closet, how long did it last?
- Did it fall back into disorder because other people also use your closet (and perhaps did not respect your work)?

After Housekeeping



Traditional method of keeping an area clean ...

**IF I'VE TOLD YOU ONCE, I'VE
TOLD YOU 100 TIMES!**

**KEEP THIS PLACE
STRAIGHTENED UP OR ELSE!**

**DO YOU LIVE LIKE THIS AT
HOME? WHY DON'T YOU
HAVE SOME PRIDE?**



*How is this
MY fault? I
clean up my
stuff, but
nobody else
cares ...*

There must be a better way ...

What is 5S?



5S = Housekeeping + Controls

**Clean and
Organize**

+

Behavior

S = SORT

We keep on-hand only what we need.

S = SET

Everything has its place and is in its place.

S = SHINE

Everything shines like new. Order is apparent.

S = STANDARDIZE

5S is part of the daily routine. Compliance.

S = SUSTAIN

5S thinking is a habit and way-of-life.

5S PROCESS



SORT

To sort and systematically discard items that are not needed in the workplace

- 1 Develop a project work plan for area
- 2 Sort and keep only what is necessary
- 3 Stage and Tag Parts
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SET

To arrange necessary items in a neat and systematic manner so that they can be easily retrieved for use and to return after use

- 5 Develop a plan for the proper Storage
- 6 Consider where and why to store
- 7 Design with visual controls in mind
- 8 Label Storage Area

SHINE

To clean and inspect the workplace thoroughly so that there is no dirt on the floor, machines and equipment

- 9 Create a priority plan for area
- 10 Restore to like-new condition
- 11 Include floors, walls and ceilings

STANDARDIZE

To maintain a high standard of workplace organization by keeping everything clean and orderly at all times

- 12 One look and feel for site
- 13 Use SMART Techniques
- 14 Use 5s Standards
- 15 Follow Safety Standards

SUSTAIN

To install a process to monitor the (5S) system continuously so that it becomes habitual and ingrained in the culture

- 16 Routine Inspections
- 17 Team meetings to check Progress
- 18 Celebrate Success
- 19 Conduct Refresher Training

KEYS TO SUCCESS

Involves everyone in the work area

Create an overall Project Plan

Use SMART Objectives

- Specific -
- Measurable -
- Actionable -
- Relevant -
- Timebound -

Use TEP tracking to manage process

STANDARDIZE



Standardize is about putting controls in place to ...

- **Communicate** the expectation
- **Guide** the behavior of others

Controls should be ...

- Intuitive – others will automatically know what to do without being directly told
- Passive - Make doing the correct thing the easy thing to do (or, make doing the wrong thing difficult)
 - You can't be there all the time to police the situation
 - People take the path of least resistance.

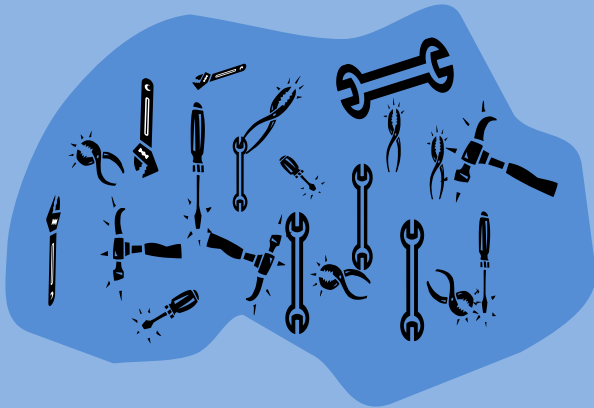
Evolution of STANDARDIZE



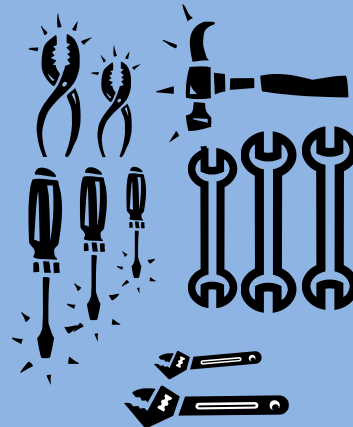
Make doing the 'right thing' easy to do.

- Tools should be easy to retrieve and easy to return.

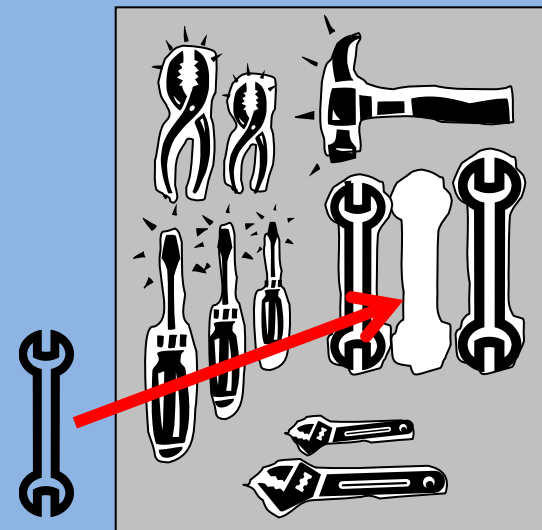
Bad



Better



Best



Too Many

- Little or no apparent organization

Critical Few

- Only have to control the critical few
- No indication of where each tool belongs

Critical Few + Controls

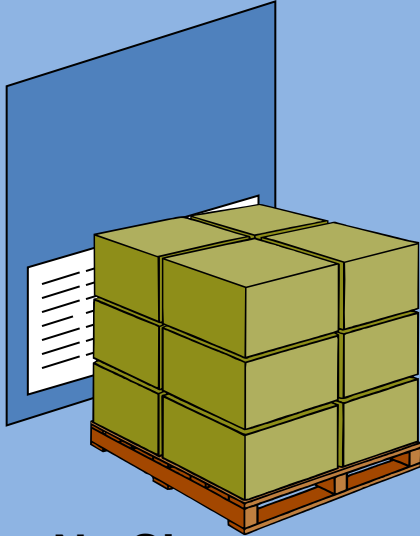
- No need for words; the picture instantly communicates the expectation
- An empty space begs to be filled.

Evolution of STANDARDIZE



Communicate the Expectation.

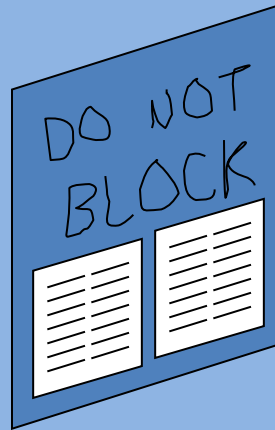
Bad



No Sign

- Pallet blocks heat vents
- No labels to tell users what is expected

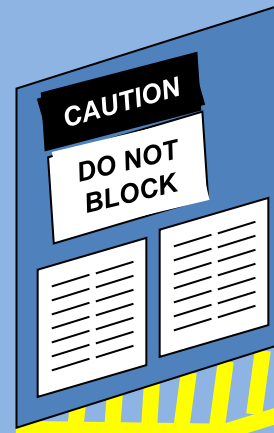
Good



Graffiti

- Communicates a need
- Hand written labels
 - Legibility?
 - Clarity?
 - Encourages other (non-productive) graffiti

Better



Signs

- Clear
- Eye-catching
- Does not tell why

Best



Prevention

- Make it impossible not to comply

Examples of STANDARDIZE



Communicate expectations



How much material is required here?



Where do these pallets belong?

Examples of STANDARDIZE



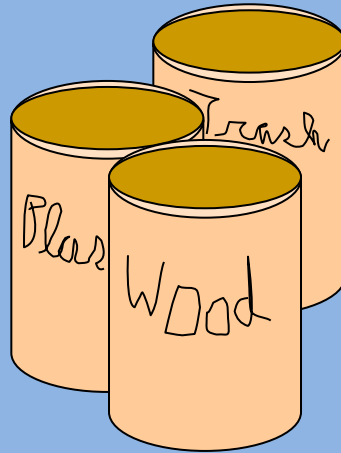
Bad



No Sorting

- Sloppy
- All trash treated as one

Good



Sorting

- Sort as you go
- Hand written labels
 - Legibility?
 - Clarity?
- Encourages other (non-productive) graffiti

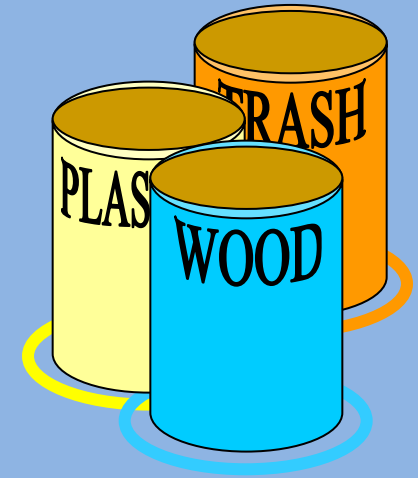
Better



Labels

- Clear, eye-catching labels
- But where do cans go?

Best



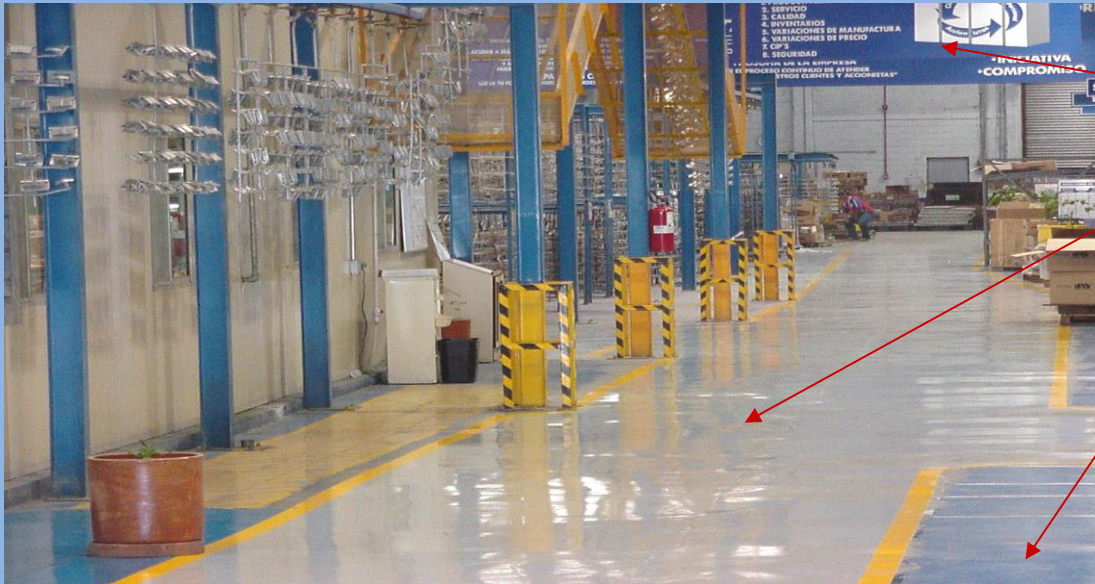
Color Coding

- No need to read text; just memorize a few colors
- Match cans to colored circles on the floor

SUSTAIN (the 5th S)



Sustain is about making sure that the 5S routine becomes habitual



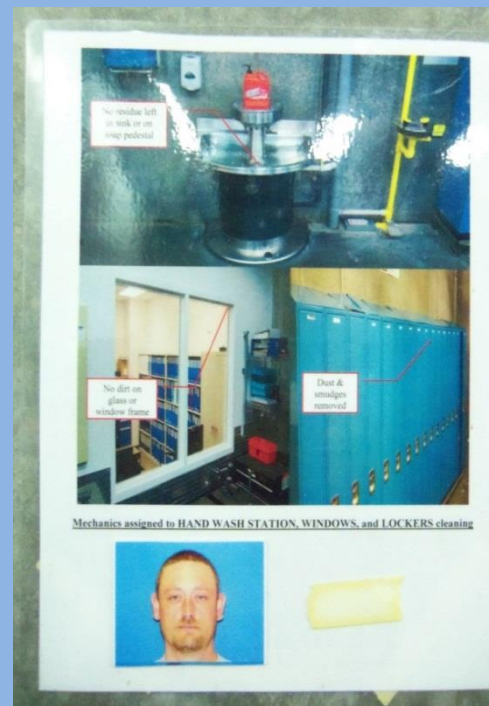
- Slogans, banners
- Clear, shiny aisle ways
- Color coded areas

The keys to Sustain are ...

- **Exposing** the anomalies
- **Exposing** non-compliance

Until everyone fully embraces 5S, Housekeeping will need human intervention and oversight

- Zone Champions monitor their areas and evaluate the effectiveness of 5S controls



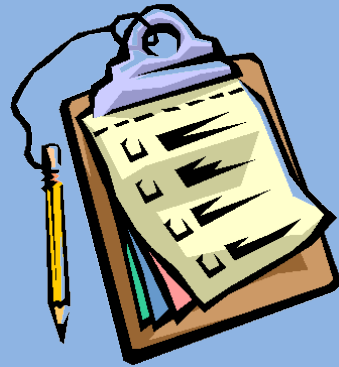
Example:

- *Zone Champion pictures attached by velcro for easy rotation of assignments.*
- *Pictures highlight the key expectations*

SUSTAINING Audit



The most basic form of Sustaining is the 5S Audit



		5S SCORECARD				Dept. _____	Date: ____/____/____	
		Sort	Set in Order	Shine	Standardize	Sustain		
Level 5 Culture	★ ★	A) Needed items can be retrieved in 30 sec. or less. B) Obsolete materials are removed from area ASAP. C) Preventative measures are in place to keep unnecessary items from entering the workplace. D) Preventative measures are followed.	A) Anyone can walk through the workplace and easily locate work by priority. B) Corrective measures are in place to address abnormal conditions.	A) Workplace organization is routine way of life. B) Corrective action is in place to address cleanliness issues. C) Visual and physical sweeps are done routinely. D) A "clean as you go" practice is ongoing.	A) Team is following the standardizing plan. B) Team is following workplace controls. C) A work methods improvement system is in place and is used. D) Visitors can tell what work is performed and where it is being done.	A) Visual information is posted and used routinely. B) Root causes of problems are quickly ID'd. C) Root causes of problems are quickly eliminated. D) Actions are taken to focus on prevention.	0.0	0.0
		A) All work material is stored in the order it will be used. B) Materials, tooling, and documents are reviewed weekly for necessity.	A) Team members can easily determine what items are currently in use and their priority. B) Visual controls are in place to indicate normal and abnormal work conditions.	A) Workplace organization roles and responsibilities are established and followed on a daily basis. B) Cleaning materials are stored and are readily available.	A) Team is using standard work methods on a daily basis. B) Visitors can tell what work is being done and where, in more than 1/2 of the work stations in the area.	A) Checks are made daily to maintain the 5 Ss. B) Posted information is meaningful. C) Source and frequency of problems are documented. D) Team has a plan to reach next 5 S level.	0.0	0.0
Level 4 Commitment	★	A) Only tools and documents required for the work are stored at work stations. B) All necessary tools and documents are stored in an orderly manner and readily retrievable.	A) A priority method has been established to highlight the order in which jobs will be performed. B) All equipment, tooling, gages and hand tools have designated locations.	A) Recurring cleanliness issues have been ID'd. B) Preventative measures are documented, in place, and in use.	A) Team has documented 100% of the work methods and they are readily available in the work area. B) Visitors can tell what work is being done and where in more than 1/4 of the work stations in the area.	A) 100% of the team members are using 5 Ss on a daily basis. B) Workplace information is posted and is current.	0.0	0.0
		A) Tops of cabinets and machines are not used to store items. B) Items that are not needed are removed from the work area.	A) An initial complete workplace cleaning operation has been performed. B) All equipment and machines are neatly painted where applicable.	A) An initial complete workplace cleaning operation has been performed. B) All equipment and machines are neatly painted where applicable.	A) Team has agreed to standardize at least 1/2 of the processes and methods.	A) 100% of the team members are using 5 Ss on a daily basis. B) Workplace information is posted and is current.	0.0	0.0
Level 3 Organization Understanding	★	A) Team has no needed items for the workplace. B) Team has segregated the unnecessary from the necessary.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) At least 1/4 of the work processes and methods are documented.	A) At least 1/2 of the team members have received some 5S training.	0.0	0.0
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Level 2 Awareness of Need/Change	★	A) Team has no needed items for the workplace. B) Team has segregated the unnecessary from the necessary.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) At least 1/4 of the work processes and methods are documented.	A) At least 1/2 of the team members have received some 5S training.	0.0	0.0
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Level 1 Initial Effort & Buy-In	★	A) Team has no needed items for the workplace. B) Team has segregated the unnecessary from the necessary.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) Area cleaning is performed at least once every two days. B) Work benches, machines, equipment, and tooling are free from unnecessary objects.	A) At least 1/4 of the work processes and methods are documented.	A) At least 1/2 of the team members have received some 5S training.	0.0	0.0
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Though auditing may be required (especially at first), it is also the most costly and least effective means of Sustaining a 5S system

Let's look at some better ways.

Examples of SUSTAIN



Tidying-Up = HIDING something

5S (Sustain) = Exposing

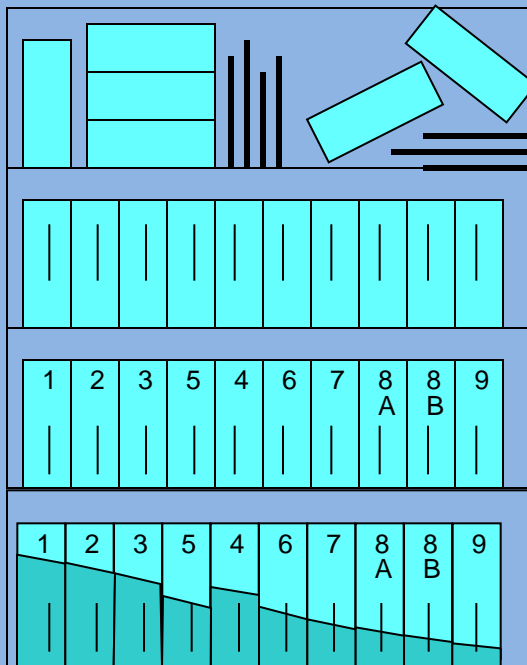


Doors removed for
easy inspection ...

- At-a-glance
- From a distance

Expose the Underlying Order

Binders on a Shelf



YUCK: Some without binders. No apparent order. At least they are on a shelf!

GOOD: Everything is in a binder, labeled, and neatly arranged on a shelf
Are any binders out of order? Who can tell?

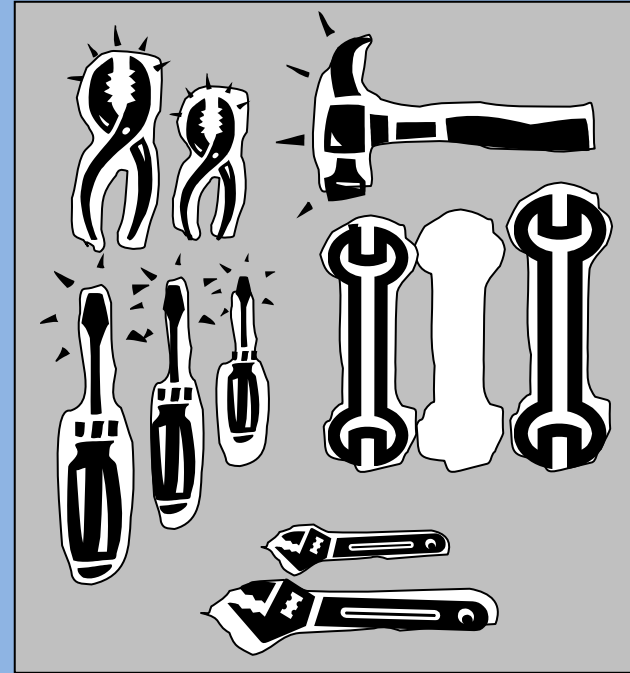
BETTER: Binders are numbered
Did you notice that binders 4 and 5 are out of order?

BEST: Visual indication of order
Binders 4 and 5 are obviously out of order?

Examples of SUSTAIN



Are any tools missing from this toolbox?



Are any tools missing from this shadow box?

Which version tells you a tool is missing BEFORE you actually need it?

Examples of SUSTAIN



Real-life example of Shadowboxes



Nice first try!

- Note the space between the top of the tools and the top of the drawer
 - Why might this be bad?



Revision

- Note: no gap above tools
 - Now people cannot pile stuff on top of the tools and foam
- = Easier to Sustain!**

5S is a Journey



Just get started.



**Start small.
Learn as you go.**

If you persevere, it will come.

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