

Level 5 – Continuous Improvement with Industry 4.0

Improve 2 – 5 s



- A process and method for creating and maintaining an organized, clean, safe, and high-performance work area
- An approach to establishing standards and an environment that will help **identify normal vs. abnormal conditions.**
- A conditioning discipline for lean transformation

Japanese	Translated	English	Definition
<i>Seiri</i>	organize	sort	Eliminate whatever is not needed by separating needed tools, parts, and instructions from unneeded materials.
<i>Seiton</i>	orderliness	set in order	Organize whatever remains by neatly arranging and identifying parts and tools for ease of use.
<i>Seiso</i>	cleanliness	shine	Clean the work area by conducting a cleanup campaign.
<i>Seiketsu</i>	standardize	standardize	Schedule regular cleaning and maintenance by conducting seiri, seiton, and seiso daily.
<i>Shitsuke</i>	discipline	sustain	Make 5S a way of life by forming the habit of always following the first four S's.

Benefits

- Improved safety
- Higher equipment availability
- Lower defect rates
- Reduced costs
- Increased production agility and flexibility
- Improved employee morale
- Better asset utilization
- Enhanced enterprise image to customers, suppliers, employees, and management



Sort

- Separate what is needed now from what is not needed immediately, or not at all

Set in Order

- Organize and arrange what you need

Shine

- Keep the area clean
- Inspect equipment
- Develop ways to keep area clean

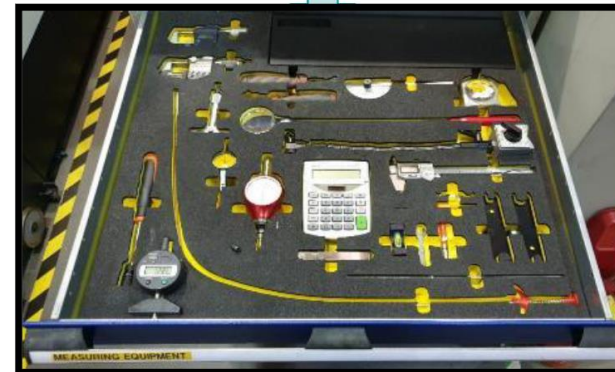
Standardize

- Standardize workstations and processes to remove variation and maintain safety and quality

Sustain

- Sustain 5S through leadership & teaming

The 5S's



- Nothing extra or unneeded in work area
- A place for everything and everything in its place
- Wall to wall clean workplace
- Waste and abnormalities immediately recognizable
- Equipment *Ready to Run* at all times
- Anyone can retrieve information in 30 seconds or less
- Work standards are easily understood & visually clear
- Performance goals and levels of performance are apparent
- Product and material flow is clearly visible
- Zero defects are the normal condition
- No unsafe condition or behavior in the work place

MFF TOOL STATION 1

Please return equipment after use



CLEANING STATION

Please clean
equipment
before returning
to its location



- Conduct regular audits of all work areas
- Score the level of safety, cleanliness & organization in work areas
- Provide input on where improvement opportunities exist
- Clarify what the company 6S standards are to the teams
- Monitor the team's progress on recommended improvement opportunities
- Notify management if issues are not corrected
- Inform management when teams deserve recognition

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SS Production Area Audit

Location: _____
Date: _____
Scored by: _____

Score

0
No marks

1
Minor improvement

2
Significant improvement

3
More improvement needed

4
"Not Good"

Score

0

1

2

3

4

Check Item	Description	Score	Comments
SORT	1 Materials & Parts	1	No unnecessary inventory, obsolete or defective items in the area.
	2 WIP	1	Items are properly labeled and placed in clearly marked containers.
	3 Machines, Tools, Bench Cabinets & Furniture	1	Only necessary machines, tools, work benches, and furniture are kept in the area. Unnecessary items are labeled with a Red Tag and moved to the designated Red Tag Area. Storage cabinets contain only necessary items.
	4 Tools & Fixtures	1	All tools and fixtures in the area are used on a daily basis. Anything that is not used frequently is stored out of the area.
	5 Organization	1	Work surfaces and storage areas do not have items in or on them that obstruct working. Personal items are not in production areas. Inspection area is free of clutter.
SET IN ORDER	6 Aids, Workways & Floor Markings	1	Lines on the floor are unobstructed and clearly mark aisles, work areas, storage locations, equipment locations, and danger areas.
	7 Documentation & Visual Signals	1	Documents applicable to the work being performed in the area are maintained or exhibited in a neat and orderly manner.
	8 Visual Displays & Signs	1	Items are properly arranged, displayed, and labeled such that it is obvious where items are stored and if an item is missing, items are kept clean and free of damage & deterioration.
	9 Electrical Wiring	1	Electrical wiring is free of defects. Unused wiring such as extension cords is bundled in a safe and organized manner.
	10 Floors & Working Surfaces	1	Storage of items on the floor, on top of cabinets, or leaning against walls is prohibited. Items stored on floor are clearly indicated with floor markings and labeled.
SHINE	11 Floors & Lines	1	All walls, ceilings and floors are clean and free of debris, oil and dirt. Cleaning is done at appropriate predetermined intervals. Aiseways are clear. Floor paint and line markings are clean, intact and color coded.
	12 Restrooms, Break Room & Gathering Areas	1	All employee use areas are cleaned daily. Surfaces, sinks and equipment are good working order and well maintained throughout the day. Use standards are posted and clean up supplies convenient.
	13 Machines, Equipment & Benches	1	Regular cleaning of machines, equipment, and work benches is required. Oil, dirt and debris is properly contained and absent on work surfaces. Clean view of work areas and devices are clean & visible.
	14 Machine Condition & Lighting	1	Painted surfaces on equipment and work areas are in good condition and free of dirt, scratches and fading. Equipment markings are clear and legible. Machine lights are uniform. Lighting is sufficient and properly illuminates the entire work area.
	15 Overall Appearance	1	Area specific 5S checklists have been established and are posted. Aids, labels, cleaning and organizational elements are properly defined on checklists.
STANDARDIZE	16 Document Control & Storage	1	All documents and binders are clearly labeled indicating their contents. All dated documents are authorized and appropriate. Area Production Review checklists are consistent and documents are current.
	17 Training	1	Employees in the area have received 5S training. 5S supplies (e.g. labeling equipment, foam) are readily available for employee use.
	18 5S Finding Close Out	1	Area 5S checklists have been completed at specified intervals. Action plan is in place for previously identified issues. Repeat issues are tracked.
	19 Leadership Engagement	1	All areas inside and outside of the site have been assigned to an individual with 5S auditing and assignment authority. The area manager visits each work area on a regular basis and provides feedback on 5S efforts and results.
	20 Best Practice Sharing	1	Success stories are displayed. Team has adopted one new external idea and presented one improvement idea to another area in the past month.
SAFETY	21 PPE	1	Area specific PPE notices are posted and legible in every area and are readily available to employees. All employees are wearing the required PPE.
	22 Machine Guarding & PPE	1	Safety devices are clearly marked and in proper working order. Machine guards are undamaged and no suppressed alterations have not occurred. Daily PPE checks are completed.
	23 Emergency Access & Egress	1	Emergency access and egress routes are clearly marked, highly visible and unobstructed. Exit signs and emergency lights are functional and are tested both at specified intervals and on a random basis.
	24 Safety Equipment	1	All fire extinguishers, eye washes and ACDs are visible, unobstructed, and are inspected on a regular basis (monthly at a minimum). Every employee can quickly identify the location of the nearest station.
	25 Chemicals & Waste Management	1	Chemicals are properly labeled and stored in a Safety Data Sheet is available for every chemical. Waste collection areas are clearly labeled and maintained properly.

OVERALL SCORE 25

The Scoring Questions

SS Production Area Audit - Results

Location: _____
Date: _____
Scored by: _____

Total Audit Score

25

Audit Grade

D

Category	Max Score	Audit Score	Audit Percent
Sort	20	5	25%
Set in Order	20	5	25%
Shine	16	4	25%
Standardize	12	3	25%
Sustain	12	3	25%
Safety	20	5	25%

Audit Score Distribution

Improvement Suggestion #1

(Suggestion should be practical and typically achievable within 1-2 weeks)

Improvement Suggestion #2

(Suggestion should be practical and typically achievable within 1-2 weeks)

Improvement Suggestion #3

(Suggestion should be practical and typically achievable within 1-2 weeks)

The Results Sheet

- Post your results on the area's Shop Walk Board and Plant Performance Center

6S TEAM BOARD - INTERS CELL

TEAM MEMBERS



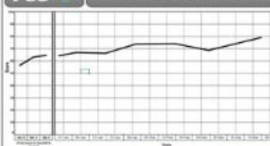
6S AUDIT RESULTS

PCC - 6S Production Area Audit		PCC - 6S Production Area Audit	
Category	Score	Category	Score
Overall Score	81	Overall Score	81
Visual Management	10	Visual Management	10
Organization	10	Organization	10
Housekeeping	10	Housekeeping	10
Equipment	10	Equipment	10
Inventory	10	Inventory	10
Quality	10	Quality	10
Safety	10	Safety	10
Environment	10	Environment	10
People	10	People	10
Process	10	Process	10
Performance	10	Performance	10
Improvement	10	Improvement	10
Communication	10	Communication	10
Leadership	10	Leadership	10
Teamwork	10	Teamwork	10
Customer Focus	10	Customer Focus	10
Supplier Focus	10	Supplier Focus	10
Community Focus	10	Community Focus	10
Environment Focus	10	Environment Focus	10
Health Focus	10	Health Focus	10
Safety Focus	10	Safety Focus	10
Quality Focus	10	Quality Focus	10
Inventory Focus	10	Inventory Focus	10
Equipment Focus	10	Equipment Focus	10
Housekeeping Focus	10	Housekeeping Focus	10
Organization Focus	10	Organization Focus	10
Visual Management Focus	10	Visual Management Focus	10

6S ACTION LOG

Item #	Item	Action	Responsible	Complete Date	Approved Date
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
4	...	...	...	...	...
5	...	...	...	...	...
6	...	...	...	...	...
7	...	...	...	...	...
8	...	...	...	...	...
9	...	...	...	...	...
10	...	...	...	...	...
11	...	...	...	...	...
12	...	...	...	...	...
13	...	...	...	...	...
14	...	...	...	...	...
15	...	...	...	...	...
16	...	...	...	...	...
17	...	...	...	...	...
18	...	...	...	...	...
19	...	...	...	...	...
20	...	...	...	...	...

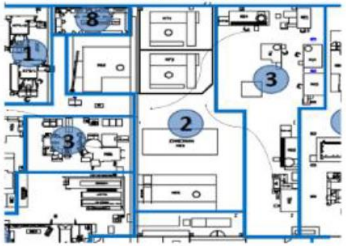
6S WEEKLY SCORE



IMPROVEMENT IDEAS

IMPROVEMENT IDEA	NAME	DATE	REVIEW DATE	STATUS / COMMENTS

CELL LAYOUT / PROCESS FLOW



BEFORE / AFTER PHOTOS





SUBMIT BOARD

R.G.Sissons 01/08/18

During meetings with internal and external stakeholders, Kaiser Permanente Colorado's Medicaid Enrollment Project Team used the lean 5S tool to improve the enrollment template, as well as the template process. They implemented the 5S pillars as follows:

- The fields were sorted and unnecessary fields were eliminated.
- The fields were set into order based on stakeholder input.
- The team shined by creating a Microsoft Access database that would not allow duplicate entries.
- The spreadsheet was standardized by protecting it and making it a template.
- A self-sustaining system was created by using Microsoft Access (to control data format and duplication) and Microsoft Excel templates (to control spreadsheet format and order).



“without standards, change would amount to little more than trial and error”

Spear and Bowen