| Instruction Sheet | Learning Guide #3 |
|---|---|

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Prepare plan for implementation of fifth pillar

- Tools and techniques to sustain 5s

- Implement tools and techniques based on procedures for sustain

- Reporting system

- Review sustain activity

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Prepare plan for the implementation of sustain

- use tools and techniques to sustain 3s

- Review sustain

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described in number 3 to 13.

3. Read the information written in the "Information Sheets 1". Try to understand what are being discussed. Ask you trainer for assistance if you have hard time understanding them.

4. Accomplish the "Self-check 1" .

5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).

6. If you earned a satisfactory evaluation proceed to "Information Sheet 2". However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity #2.

7. Submit your accomplished Self-check.  This will form part of your training portfolio.

8. Read the information written in the "Information Sheet 2". Try to understand what are being discussed. Ask you trainer for assistance if you have hard time understanding them.

9. Accomplish the "Self-check 2" .

10. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).

11. If you earned a satisfactory evaluation proceed to "Operation Sheet 1".  However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity #1.

12. Read the "Operation Sheet 1" and try to understand the procedures discussed.

13. Do the "LAP test" (if you are ready). Request your trainer to evaluate your performance and outputs.  Your trainer will give you feedback and the evaluation will be either satisfactory or unsatisfactory.  If unsatisfactory, your trainer shall advice you on additional work.  But if satisfactory you can proceed to Learning Guide #3.

| Information Sheet-1 | Prepare plan for Implementation Of fifth 3S |
|---|---|

## 3.1 Prepare plan for Implementation Of fifth 3S

The fifth pillar is Sustain. In the context of the five pillars, to sustain means to make a habit of properly maintaining correct procedures. In your life in general, what do you mean when you talk about sustaining something? Usually, you think of it as drawing on something from inside yourself in order to maintain a course of action-even when forces in your life challenge in this effort.

- *Means making a habit of properly maintaining correct procedures*

**Problems Avoided by Implementing Sustain**

Here are some of the things that happen in a company when Commitment to the five pillars is not sustained.

1. Unneeded items begin piling up as soon as sorting is completed
2. No matter how well Set in Order is planned and implemented, tools and jigs do not get returned to their designated place after use.
3. No matter how dirty equipment becomes, little or nothing is done to clean it.
4. Terms are left protruding into walkways, causing people to trip and get injured.
5. Dirty machines start to malfunction and produce defective goods.
6. Dark, dirty, disorganized workplaces lower workers' morale.

These 5S related problems and others are likely to occur in any factory or office that lacks a commitment to sustain the five pillar gains over time.

*Figure showing contemplating the rewards of sustain behavior*

**Why Sustain Is Important**

Usually you commit yourself to sustain a particular course of action because the rewards for keeping to the course of action are greater than the rewards for departing from it (see figure above). Viewed another way, the consequences of not keeping to the course of action may be greater than the consequences of keeping to it. For example, suppose you want to start an exercise program –say you decide you want to work out at a gym three times a week. You probably have difficulty sustaining this course of action. This is because forces in your life, such as limits on your time and energy as well as the power of inertia, challenge this plan. However, if the rewards of sticking to your exercise program (for example, feeling and looking better) are greater than the rewards of not sticking to it (for example, having more time for other things that you need to do), your commitment will increase and you will probably sustain this program over lime.
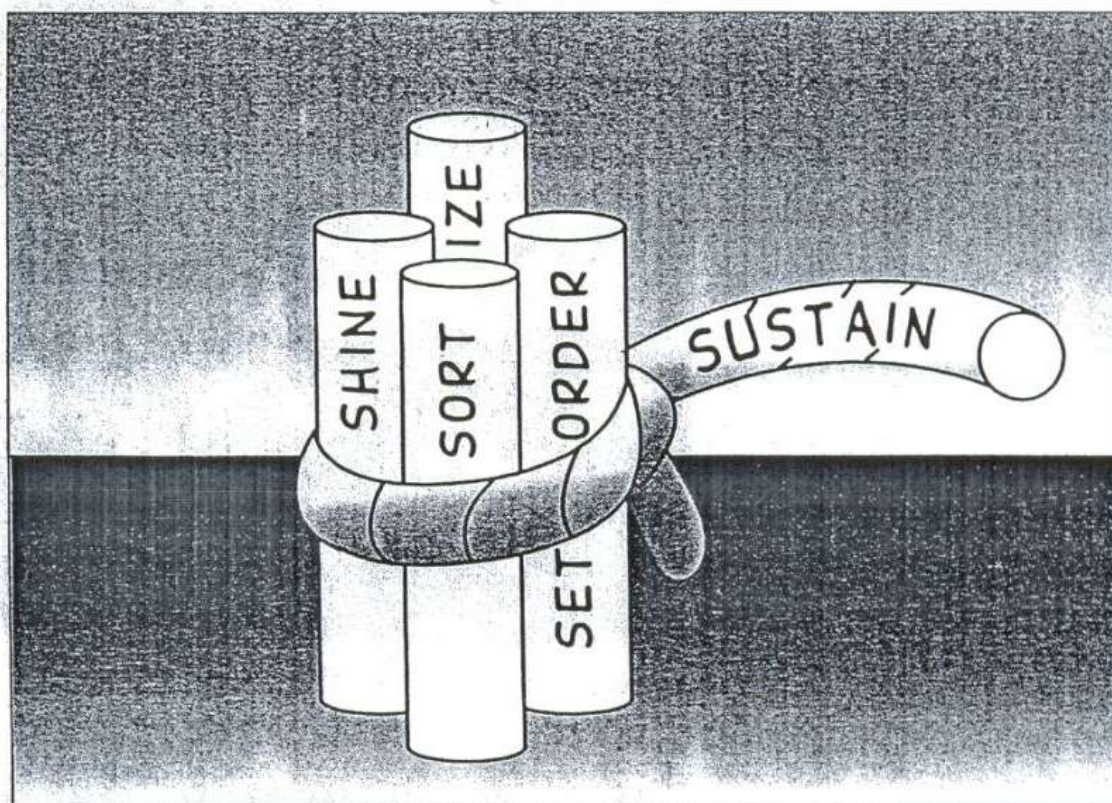
Figure: The sustain pillar holds the first four pillars together.

The same principle applies in your 55 implementation. Without your commitment to sustain the benefits of the 5S activities, implementation of the first four pillars quickly falls apart (see Figure above). However, if the rewards of implementing the first four pillars are greater for you than the rewards of not implementing them, sustaining them through the fifth pillar should be some- thing you take to naturally.

So, what are the rewards for you of implementing the first four pillars? You've probably discovered them for yourself at this point. Implementation of the first four pillars should make your workplace mare pleasant to work in, your job more satisfying and communication with your coworkers easier. it should also make your work more efficient and of better quality, which will hopefully lead to reward of your efforts by your company. It' true that that the five pillars take time to implement, but this investment of time will bring a great return, for both you and your company.

*Figure: creating the conditions to sustain your fitness plan*

### How to Implement Sustain

### Creating Conditions to Sustain Your Plans

The implementation of the sustain pillar is different from that of the sort, set in order, shine, or standardize pillars in that the results are not visible and cannot be measured. Commitment to it exists in people's hearts and minds and only that have shows its presence. Because of this it cannot exactly be "implemented" like a technique, However, we can create conditions that encourage the implementation of the sustain pillar.

For instance, going back to our exercise program example, how could you create conditions in your own life that would encourage sustaining your plan to work out at a gym three time a week? You might:

- Join a gym with a friend so you can work out together and encourage each other (see Figure above).
- Create a workout schedule with your friend.
- Make a plan with your spouse to eat dinner later three nights a week so you can go to the gym after work.
- Get extra sleep on the nights before you work out, so that you will not be too tired by the end of the day to follow through with your exercise plan.

These conditions would make it easier for you to sustain your schedule for exercising at the gym three times a week.

Similarly, you and your company can create conditions or structure that will help sustain to the five pillars. The types of conditions that are most useful for this are:

- **Awareness.** You and your coworkers need to understand what the five pillars are and how important it is to sustain them.

- **Time.** You need to have or make enough time in your work schedule to perform 5S implementation.

- **Structure.** You need to have a structure for how and when 5S activities will be implemented.

- **Support.** You need to have support for your efforts from management in terms of acknowledgement, leadership, and resource

- **Rewards and Recognition.** Your efforts need to be rewarded.

- **Satisfaction and Excitement.** The implementation of the five pillars needs to be fun and satisfying for you and the company. This excitement and satisfaction gets communicated from person to person, allowing 5S implementation to build as it involves more people.


**Roles in Implementation**

In order to sustain 5S implementation in your company, both you and the company management have important roles to play. Part of this role involves creating the conditions that sustain 5S activities. The other part involves demonstrating a commitment to 5S yourself.

**The Role of Management**

The supervisors and managers in your company have a major role to play in ensuring the success of the five pillars by creating conditions that help sustain 5S activities. This role includes:

- educating you and your coworkers about 5S concepts, tools, and techniques;

- creating team for implementation

- allowing time for implementation and creating schedules for this work

- Providing resources for 5S implementation. such as supplies-s

- acknowledging and supporting 5S efforts

- Encouraging creative involvement by all workers, listening to their ideas, and acting on them.
- creating both tangible and intangible rewards for 5S efforts
- promoting ongoing 5S efforts

Your supervisors and managers also have an important role to play in implementing the fifth pillar in their own work. When they sustain the first four pillars, they perform three very important functions.

- improving the quality and efficiency of their own work
- teaching by example
- demonstrating the company's commitment to 5 implementation

**Yours Role**

Similarly, you have an important role to play in creating the conditions that Sustain 5S activities. This role includes:

- continuing to learn more about 5S implementation
- helping to educate your coworkers about the 5S
- being enthusiastic about 5S implementation
- helping to promote 5S implementation efforts

You also have an important role to play in order to sustain 5S activities in your own work. This role includes:

- taking the initiative to figure out ways to implement the five pillars in your work on a daily basis
- asking your supervisor or manager for the support or resources you need to implement the five pillars
- participating fully in company 5S implementation efforts
- bringing to your supervisor or manager your creative ideas for promoting or implementing the five pillars
- participating fully in company 5S promotion efforts
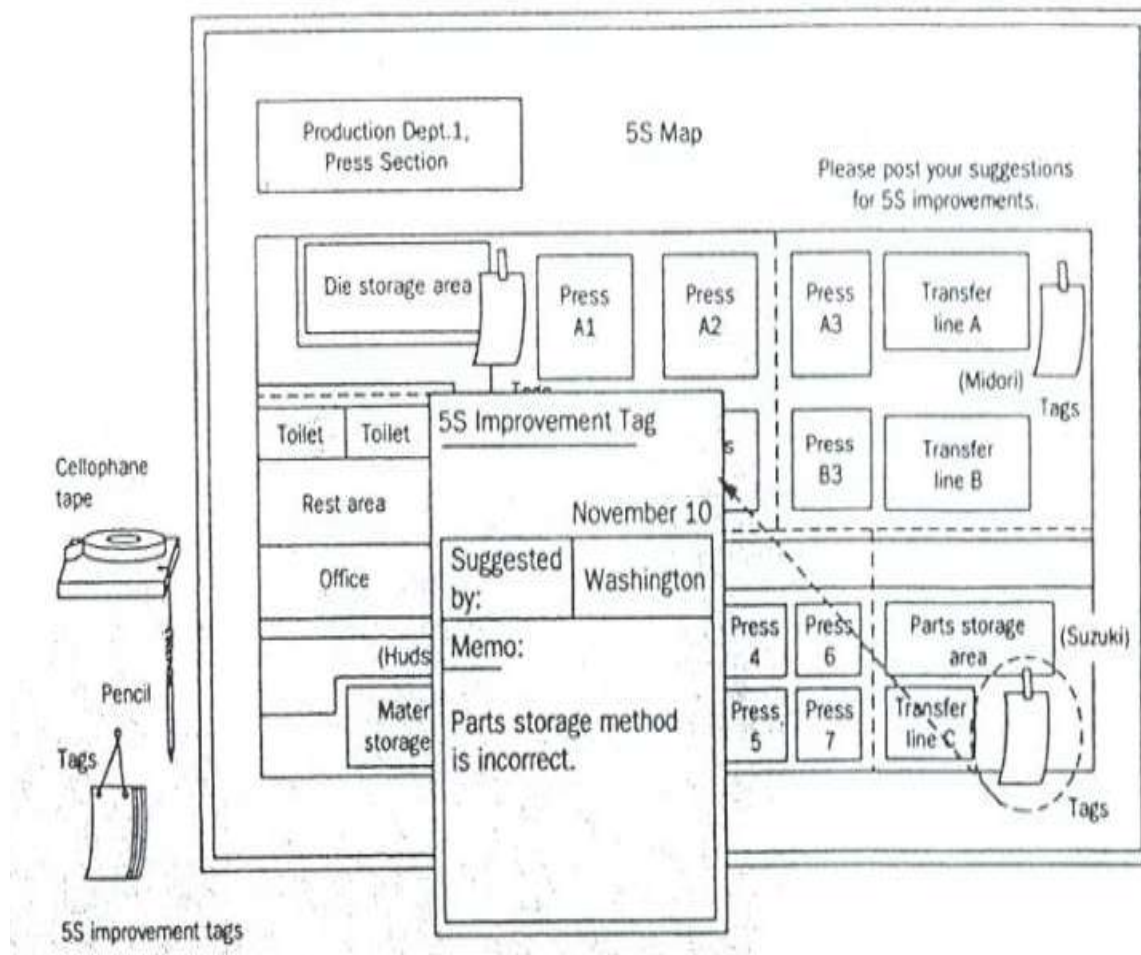
*Figure: 5S map used to gather improvement suggestions*

| Self-Check 1 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define the fifth pillar of 5S? (2 point)

2. List problems avoided by implementing sustain. (6 points)

3. Why sustain is important? (4 points)

4. Explain how to implement sustain? (7points)

5. What are the roles of you and your management in implementation of sustain ? (9points)

*Note:* **Satisfactory rating - 15 points        Unsatisfactory - below 15 points**
You can ask you trainer for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____


Name: _____          Date: _____

1. _____

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2. _____

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3. _____

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4. _____

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5. _____

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| Information Sheet-2 | Tools and techniques to sustain 5s |
|---|---|

## 3.2 Tools and techniques to sustain 5s

### 3.2.1 Prepare tools and techniques

There are many tools and techniques your company can use to help sustain commitment to 5S implementation. We offer these below so you will be aware of them. At some point in your 5S implementation work, you may be called upon to use or even coordinate the use of these techniques. These are:

- 5S slogans
- 5S posters
- 5S photo exhibits & storyboards
- 5S newsletter
- 5S maps
- 5S pocket manuals
- 5S department/benchmarking tours
- 5S months
- 5S audit
- Awarding system
- Big cleaning day
- Patrolling system
  - ➢ Top management Patrol
  - ➢ 5S Committee members and Promotion office Patrol
  - ➢ Mutual patrol
  - ➢ Self patrol
  - ➢ Checklist patrol
  - ➢ Camera patrol

### 3.2.1.1 5S Slogans

5S Slogans communicate the themes of the five pillar campaign in your company. They are most effective when they are suggested by you and your coworkers. They can be displayed on buttons, stickers, flags, or posters.

- It encourages all the participants.

**Samples of slogan**

"Refresh yourself and workplaces by 5S activity."

"Let's maintain current 5S activity and KAIZEN for tomorrow"

"We polish "Our Minds" as well us our factories"

### 3.2.1.1 5S Posters

Posters displaying 5S Slogans or descriptions of 5S activities can be posted throughout the workplace. They can serve to remind everyone of the importance of the five pillars, or to communicate the results or status of 5S activities.

**Samples of poster**

### 3.2.1.3 5S Photo Exhibits and Storyboards

When it comes to communication about 5S implementation, the old saying that a "picture is worth a thousand words" is definitely true. Photo Exhibits and Story boards showing the before and after of 5S implementation activities are powerful tools for promoting the five pillars. Photos and Storyboards can also communicate the status of five pillar activities.

### 3.2.1.4 5S Newsletters

5S Newsletters are in-house news bulletins centered on five pillar topics. They carry factory reports on 5S conditions and activities. 5S Newsletters are most effective when issued on a regular basis, perhaps once or twice a month and at staff meetings.

### 3.2.1.5 5S Maps

5S Maps can also be used to get employees involved in five pillar improvement on an ongoing basis. 5S improvement Maps should be hung in a central location with suggestion cards attached so anyone can suggest improvements.

### 3.2.1.6 5S Pocket Manuals

A 5S Pocket Manual can be created that contains five pillar definitions and descriptions, and is small enough to fit into the pocket of work clothes. Shop floor workers, supervisors, and managers can all use 5S Pocket Manuals for easy reference to the 5S essentials.

### 3.2.1.7 5S Department / benchmarking Tours

When one department in a company has implemented the five pillars successfully, it can serve as a model area for other departments to come visit. Since "seeing is believing," this technique is extremely effective for promoting 5S implementation throughout a company.

### 3.2.1.8 5S Months

Companies should designate two, three, or four months every year as "5S Months." During these months, various activities such as 5S seminars, field trips, and contests can be carried out of further promote 5S implementation in the company.

### 3.2.1.9 5s Audit

- The purpose of this audit is to outline an approach making 5S a success in industrial as well as our working areas.

- Enable 5S teams to design and establish a simple, effective and visual workplace organization, which creates a professional workplace and culture that is effective, organized and disciplined.

- Continual Improvement internal audit program enhance excellent service delivery

- Audit findings can be used to identify trends and the key issues.

## 5S AUDIT COMMITTEE

### FUNCTION

•Develop 5S evaluation criteria, guidelines and stickers

•Develop schemes on measuring impact of audit; Scoring point and achievement level

• Develop guidelines to aid in effective standardization of improvement projects

•Schedule audit activities

•Submit audit summary every month to the Top Management

### BASIC REQUIREMENTS

• Headed by a chair person who has more experience in 5S Practices.
• 5S auditors which are officially nominated by management.
• The number of auditors depend on size of companies.
• Knows what to audit especially understanding the 5S principles.
• Have 5S audit planning.
• Have interest and committed to make 5S a success.
• Dynamic and pro-actives.

CHAIRPERSON --- CHIEF AUDITOR

FORMULATING 5S AUDIT COMMITTEE

SECRETARY

1 2 3 4  AUDITORS GROUP ( 2 PERSON)

# Performing Audit

**Preparation**

1. All 5S auditors gather at the meeting room ½ hour before audit
2. Briefing by 5S audit chairman :-
    - Activities of the day
    - Highlight any new criteria to be checked
    - Action date on sticker (2 weeks from audit date)
    - Time to report back
3. Wearing 5S auditor tag
4. Every auditor is only allowed to use up to 3 stickers at each audit to each 5S zone. It is purposely not put burden to 5S team to make improvement in very drastic manner.
5. Previous audit summary report will be distributed to the auditors' team as a reference in order to avoid in consistency auditing.

**During Audit**

1. Bring all audit materials e.g. checklist, stickers, file holder & audit summary report
2. Get the KPT leader or facilitator to accompany auditor
3. Good public Relation
4. Check outstanding matter from the previous audit summary report
5. Proper issue of stickers & justified
6. Propose idea for improvement and justified.
7. Close matter when action has been taken.  Remove sticker
8. Issue new sticker when action is not fully satisfied (old sticker still remain) and also for new matter noted
9. Take photo as an example in case of  the 5S team has shown very creative idea to make the 5S initiative  significantly effective, safe work place, cost saving
10. Only use maximum 3 stickers of each type for  each working area / zone
11. Listen to the feedback given by workers

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12. Provide positive suggestion for improvement if stickers is not appropriate

13. Prepare audit report of each working area on the Audit summary

14. Document must be signed by auditor & team leader

15. Audit to the next area

16. You may take 10 – 15 minutes for one zone.

## Twelve Focal Points 5S Auditors Should Examine

- Do the Top and Middle managers support 5S program?

- Are people proud of their workplaces?

- Are workplaces clean and organized?

- Are workplaces safe for people to work in?

- Are machines and equipment clean and well maintained?

- Are items easy to retrieve?

- Are machines and tools conveniently located?

- Are inventories stored for FIFO retrieval?

- Are products free from dust?

- Do people clean daily without prompting?

- Are the uniforms worn by people clean and tidy?

- Is a good image of the enterprise reflected in its people?

# DEVELOP 5S EVALUATION STICKERS

# Develop 5S Evaluation Criteria & Guidelines

## 1. Set up audit checklist criteria according to area of 5S team

| ASPECTS | NO | AUDITED ASPECT | SCORE | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | 5 | 4 | 3 | 2 | 1 | |
| FLOOR | 1 | NO DUST ON THE FLOOR | | | | | | |
| | 2 | | | | | | | |
| | 3 | | | | | | | |
| EQUIPMENTS ARRANGEMENT | 4 | TIDY AND WELL ARRANGED | | | | | | |
| | 5 | | | | | | | |
| | 6 | | | | | | | |
| EQUIPMENTS AND TOOLS | 7 | IN GOOD CONDITION AND BEING USED | | | | | | |
| | 8 | | | | | | | |
| | 9 | | | | | | | |

## 2. Set-up "Audit Summary Report"

Audit Area : Group 5S
Date: .....................

| No . | Areas of Audit | Improvement Needed | | | Contoh Cemerlang | Situation During Audit | Proposed Enhancement |
|---|---|---|---|---|---|---|---|
| | | Sort | Set In Order | Shin e | | | |
| | | | | | | | |

Auditor: a).................................          Signature:  ................................

b) ...............................          Signature:  ................................

# CRITERIA FOR 5S AUDIT RATING

## RATING ACCORDING TO SCALE 1 TO 5

| Evaluation Scale | 5S Practice | 5S Theory | Data/Fact |
|---|---|---|---|
| 1 (0 - 30 %) | • Nothing at all and no sense of commitment. <br> • Not doing 5S at all. | • No knowledge and cannot explain. | • No data. <br> • No improvement effort. |
| 2 (31 – 50 %) | • Doing some but not sufficient. <br> • Doing before auditors arrival. | • There is a knowledge but people do not know how to practice. | • There is data but superficial. |
| 3 (51 – 70 %) | • Doing what is supposed to do but need to put more effort. | • Understand and have overall knowledge. | • Sufficient data but not in order. |
| 4 (71 – 90 %) | • Almost ok, but not fully completed yet or insufficient. | • Almost ok, but in some are need further improve. | • Sufficient data and in order. <br> • Able to explain. |
| 5 (91 – 100 %) | • There is a proper evidence of 5S. <br> • 5S culture can be seen. | • Completely YES | • Orderly stratified data. <br> • Can show and answer immediately <br> • Visual Control is functional. |

### 3.2.1.10 Awarding System

Awarding for 5S promotion results according to evaluation is recommended.

Awards may be:

- ➢ For Good performance
- ➢ Award for efforts
- ➢ Award for good Ideas
- ➢ Prize winner
  - ✓ Group
  - ✓ Individual

### 3.2.1.11 Big Cleaning Day

It is a cleaning that carried out from two to four hours by the organization.

Example: Before national holidays

### 3.2.1.12 Patrolling System

- Top management Patrol
  - ➢ Check Up the activities Comprehensively
  - ➢ Give emphasis on sustaining of the activity
  - ➢ consider committees feedback
- 5S Committee members and Promotion office Patrol
  - ➢ Evaluate "5S Check List"
  - ➢ Record problems on"5S check findings"
  - ➢ Tack picture of 5S problems
- Mutual patrol
  - ➢ Check mutually among KPT
- Self patrol
  - ➢ 5S leader and members check the results of activity by themselves.
- Checklist patrol
  - ➢ Point out the problems by themselves at site as well as evaluate the results and encourage members to urge KAIZEN.
- Camera patrol

> ➢ Visibly highlight the problems and progress of the activity using photographs.

**3.2.2 Implement tools and techniques based on procedures for sustain**

In some way, each of the tools and techniques described is intended to help achieve one of two goals: *dematerialization* or *consumption optimization*. *Dematerialization* focuses on functionality, rather than just product design, to address customers' needs. This approach increases economic efficiency because it involves tracking the throughput of materials and energy in industrial and consumption processes. Successful dematerialization may involve the substitution of a product with a service ("product service systems") or a significant increase in resource productivity resulting from product or service redesign (e.g., "Design for the Environment").

*Consumption optimization* seeks to make patterns of consumption meet consumer demands more sustainably. In UNEP's view, optimized consumption patterns will not just be *efficient* and *different*. They will also reflect consumption that is *Conscious* (i.e., seeks to improve quality of life) and *appropriate* (i.e., at the right level).

## 3.3 Reporting system

Reporting system is a form that documents and summarizes the sustain 3S activities. It is used to share improvements and best practices across an organization, division or group. There are many ways to share sustain 3S reports including public display boards, dedicated Kaizen bulletin boards, emails and the intranet. In all cases, sustain 3S activities should be written clear and simple so that every team member can easily understand them. Additionally, sustain 3S reports with photos and drawings tend to capture more attention.

## 2.4 Review sustain activity

However, sustain activities does not always bestow advantages. "Whether or not a correct established standard is the best standard is a different matter" (Hashimoto 2013/2015). Such a statement makes sense when we look at the history of the revisions made to the ISO 9000 series. Thus, for ISO 18404, it is planned to periodically review the ranking of the techniques used at each stage of DMAIC (Ishiyama 2017b).

## SUMMARY

The fifth pillar, sustain, means to make a habit of properly maintaining correct procedures over time. No matter how well implemented the first for pillars are, the 5S system will not work for long without a commitment to sustain it.

In your life in general, why do you commit yourself to sustain a particular course of action? Usually you do this because the rewards of keeping to the course of action are greater than the rewards of not implementing them, sustaining them through the fifth pillar should be something you take to naturally.

Unlike the first four pillars, the sustain pillar cannot be implemented by a set of techniques, nor can it be measured. However, you and your company can create conditions or structures that will help sustain the commitment to 5S implementation.

To sustain 5S activities in your company, both you and the company management have important roles to play. Part of this role involves creating the conditions that sustain 5S activities. The other part involves demonstrating that you are committed to sustain these activities, too. Some of the tools to help sustain 5S activities in your company include: 5S Slogans, 5S Posters, 5S Photo Exhibits and Storyboards, 5S Newsletters 5S Months, 5S Pocket Manuals, 5S Department Tours, 5S Maps, and 5s Audit

| Self-Check 2 | Written Test |
|---|---|

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What are the common tools and techniques to sustain 3S? (13 points)

2. How 5S slogans are used to sustain 3S? (2 points)

3. Why 5S photo exhibits and storyboards are used to implement sustain activities (3 points)

4. Describe 5S newsletters? (2 points)

5. What are the 5S pocket manuals? (3 points)

6. How 5S months are scheduled? (3 points)

7. Describe 5S audit. (4 points)

8. What are the activities performed during preparation of audit and during audit (4 points)

9. Why awarding is necessary in sustain implementation? (2 points)

10. List types of patrolling system. (6 points)

*Note:* **Satisfactory rating - 22 points        Unsatisfactory - below 22 points**
You can ask you trainer for the copy of the correct answers.

**Answer Sheet**

Score = _____

Rating: _____

Name: _____          Date: _____

1. _____

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| **Operation Sheet 1** | **Procedures in Implementing Sustain** |
|---|---|

**Sequence of Sustain**

1. Planning

   ➢ Set schedules for sustaining techniques

2. Prepare sustaining Tools and Techniques

3. Implement sustaining activities

4. Feedback comments on the sustain results

| **LAP Test** | **Practical Demonstration** |
|---|---|

Name: _____   Date: _____

Time started: _____   Time finished: _____

*Instructions:* Given necessary templates, workshop, tools and materials you are required to perform the following tasks within ------ hours.

Task 1: Prepare slogans and posters for your work area.

Task 2: Evaluate your work place by using the 5S check list and use stickers.

Task 3: Prepare audit summary report by using the given template.

- identify the:
  - ➢ person -in-charge
  - ➢ technology workshop
  - ➢ work station
- consider the:
  - ➢ OHS procedures
  - ➢ workplace procedures and standards (work area)
  - ➢ frequency of maintenance activities

## List of Reference Materials

- 5S for operators (1995)
- Journals/publications/magazines
- Reference Book
- Job specifications
- Safety Manual and Guide
- Learning Guide #3