

The NTMA 6S Implementation Instructions

The following are instructions that the NTMA Technology Team put together to aid in the implementation of the 6S Program.

It is a good idea to choose a small implementation team. Have this team work on a department or small area and cover all six of the elements first. One team member should be from the department or area. After completing the process, establish similar teams sequentially and tackle the other departments or areas. The processes should not take long if everyone gets into the act. Due to scheduling issues it might take a few weeks to complete each area. Please use the NTMA handout, "What is a 6S Class A Shop? As a guide on what the Technology Team envisions a Class A shop to look like.

Sort: Get rid of clutter. Separate out what is needed for the operations.

- A. The first task is to have a short training class for your employees.
 - 1. One good tool is the 5S Garage video.

- B. Take a small area such as shipping and start the process using the training. The sort process should be completed totally before moving onto Set-in Order.
 - 1. Take a photo of before.
 - 2. Remove all items that are not being used.
 - a. Sort the items, throw out the trash, red tag useful items for storage.
 - b. Red Tag – use this tag to identify something you want to store.
 - 1. Place these items in a Red Tag storage area.
 - 3. Sort through all material, fixtures and equipment, keep only what is needed for that area.
 - 4. Remove all personal items from areas.
 - a. Some employees like photos of their family hanging in their areas...
 - b. One or two are acceptable.
 - c. Try to keep items like food storage containers, sports items out of site.
 - 5. Remove all un-needed tools. Store away.

- C. When you have only the tools, material and equipment needed to perform the task in the area, it is sorted. You will find homes for them in the Set-in Order element.

- D. Take a few after photos to submit with your application

Set-in-Order: Have a place for everything and everything is in its place.

- A. Go through all tools, materials, fixtures and equipment that are left in the area after the sorting process.
 - 1. Take a few before-photos.

- B. Review the area with the employees working in it.
 - 1. Make a list of what is needed to store each tool, fixture and material.
 - a. Do you have the supplies to mark and store everything?
 - b. It is a good idea to purchase a label marking system.
 - c. Locate or purchase storing aids, such as white boards, storage shelves, etc.
 - 2. Do any tools, fixtures, etc. need to be added?
 - a. Locate or purchase.

- C. Also review the layout of equipment, benches and storage systems.
 - 1. Can they be moved to make the area more efficient?
 - 2. If possible, move them to the desired location.
 - a. Is there adequate room between equipment for easy cleaning and servicing?
 - b. Are the walkways by the area or department marked and clear of chips and oil?
 - c. You may want to perform some of the Shine element before relocating the equipment.
- D. After gathering all required storage aids, start organizing the areas.
 - 1. Wait a week or two before labeling, white boarding or making up storage containers.
 - a. It may take some time to fine-tune.
 - 2. If using storage boxes or containers mark the container and the front of the shelf on which you will be storing the item.
 - 3. You might want to visit the Standardize element.
 - a. You should have similar storage containers throughout.
 - b. You should try to standardize similar work areas.
- E. Encourage your employees to put items away;
 - 1. At the end of day.
 - 2. At end of the job or process.
- F. Take a few after-photos to submit with your application

Shine: Clean work areas and equipment throughout the facility.

- A. Go through the area or department and perform a good cleaning.
 - 1. Take a few before-photos.
- B. Do not forget about other non-manufacturing areas.
 - 1. Offices, lunchroom and restrooms.
 - 2. It is ok to have a closed storage area to hide unsorted items.
- C. Review the area's lighting.
 - 1. Is it bright enough? Do you need to add task lighting?
 - 2. Check with you local utility company. They might have a lighting upgrade program.
 - 2. Good lighting is better for the employees and can make the plant look larger.
- D. Wipe down the equipment.
 - 1. Standard chip can/container locations
 - 2. Use oil absorbent mats instead of oil dry.
- E. Some ideas are to paint floors or walkways.
- F. Applicants are encouraged to maintain an overall clean building appearance inside and out.
- G. The goal is to design a cleaning schedule as part of **Sustain** that will keep the area or department clean all the time.
- F. Take a few after-cleaning photos.

Standardize: Establish schedules and methods of performing the cleaning and organizing.

- A. After sorting, setting-in-order and cleaning, you will need to develop a schedule and method to maintain the housekeeping of the area or department.
 - 1. This schedule should include equipment and tool maintenance as well as basic cleaning schedules and instructions.
 - 2. This schedule should be fit to the type of equipment; some might need more than others.
 - 3. The method should also be specific to the equipment or area.

- B. When possible, similar areas should be standardized.
 - 1. This makes it easier for employees to move from one area to another.
- C. Trash and chip removal.
 - 1. Scheduling chip and trash removal is an item that is generally overlooked.
 - a. Set a standardized schedule for this task.
 - b. Each area should have a method of modifying the schedule during heavy use.
- D. Good scheduling makes sustaining the program much easier.
 - 1. Take some photos of standardized areas and chip control areas, to submit with your application

Sustain: Audit and monitor the schedules. Stick to the rules.

- A. After developing schedules for maintaining good and lean housekeeping, you will need to develop a method to audit the process to make sure it works.
 - 1. This schedule should include equipment and tool maintenance, as well as a basic cleaning schedule.
 - 2. This schedule should be fit to the type of equipment; some might need more than others.
 - 3. The method should also be specific to the equipment or area.
- B. There is a simple way to audit the process; you can develop a quick audit that you can use to help sustain the program.
 - 1. Once each area has been through the 6S process, a simple 5 or 6 step audit performed monthly is all that would be required.
 - a. Are the areas, machines and nearby walkways clean, neat and free of personal items?
 - b. Are tools returned after use and only the required tools are out?
 - c. Are all tools, fixtures and materials removed and put away after operation is complete?
 - d. Are all trash and chips removed as scheduled?
 - e. Is the maintenance schedule being preformed and is it adequate?
 - f. Are employees wearing personal protective equipment when required and hazards marked?
 - 2. Use the above audit for each department, (may vary for some departments).
 - 3. You should use the same number of audit steps for all audits.
- C. Posting the audits.
 - 1. If you have more than one area in the department, you should post a small audit board in the department.
 - a. Each department should have a calculated average overall rating.
 - 2. All departments should be listed on an overall chart.
- D. System reinforcements.
 - 1. One idea of a system to promote the 6S.
 - a. Design a simple award.
 - b. Give the award to the most improved department, or the department who had all 6s for 3 months in a row.
 - c. Make up different reasons to pass around the award.
 - d. Keep in mind that if you provide a monetary incentive, your employees might have to declare it on their taxes.
 - e. Give out the award at a monthly meeting.
- E. An item should be added to your management meetings to review the 6S program.

F. Take a photo of your audit display board and award to submit with your application

Safety: Are the areas safe?

A. During your sort, set-in order and cleaning process, you should mark any hazards or hazard areas as required by OSHA or your local fire code.

1. This should be part of your audit checklist.

B. We encourage all applicants to require their employees to use personal protective equipment when required.

1. This should be part of your audit checklist.

C. When working on set-in order, make sure you locate your equipment so as to have adequate space between them.

D. Your company should look into participating in a Safety Award Program.

1. The NTMA has a Safety Award Program, which was developed to help their members record the required OSHA information.

2. Check with your local OSHA office or your worker compensation provider.

E. Take a photo of some hazard areas and/or any safety awards, to submit with your application

Conclusion:

This process is not a quick process. If your company sticks with the implementation and is able to sustain the program, it should bring great benefit to you and the metalworking industry. Please use the 6S audit worksheet to help define the 6S audit process. Please see the NTMS 6S Award Application for eligibility rules.

Goal:

To bring the U.S. machining work environment up to consistently world class standards.