

Introduction

5S is defined as a methodology that results in a workplace that is clean, uncluttered, safe, and well organized to help reduce waste and optimize productivity. It's designed to help build a quality work environment, both physically and mentally. The 5S philosophy applies in any work area suited for visual control and lean production. 5S Lean was developed by **Hiroyuki Hirano** in post-war Japan, where it was famously utilized by Toyota. By integrating **5S principles** into their already famous manufacturing framework dubbed the **Toyota Production System** or **TPS**, Toyota gained international prominence as a prolific producer of high-quality motor vehicles. These principles were pioneered by Toyota Motor Company and has improved efficiency in their manufacturing facilities.

Definition

5S applies the five principles: Sort (seiri), Set in order (seiton), Shine (seiso), Standardize (seiketsu), and Sustain (shitsuke).

When to Use it

5S is helpful to almost any type of operation, regardless of industry. Some cases where to use it are:
 Material, manufacturing, and/or operational costs are increasing
 Lack of consistency in quality and output
 An increase in customer complaints regarding the product



Details

The 5S quality tool is derived from five Japanese terms beginning with the letter "S" used to create a workplace suited for visual control and lean production. The pillars of 5S are simple to learn and important to implement:

Seiri. Organize. Sort: To separate needed tools, parts, and instructions from unneeded materials and to remove the unneeded ones.

Seiton. Orderliness. Set in Order: To neatly arrange and identify parts and tools for ease of use.

Seiso. Cleanliness. Shine: To conduct a cleanup campaign.

Seiketsu. Standardize: To conduct *seiri*, *seiton*, and *seiso* daily to maintain a workplace in perfect condition.

Shitsuke. Discipline. Sustain: To form the habit of always following the first four S's.

Example:

S1: Sort

Action Plan:

Remove machinery, equipment, tools, and materials that are not used at least once a week from all work desks, production floors, and areas of operation. These items should be marked with a tag and moved to a designated area where they will remain for 7 days, at which time personnel can go through the items and reclaim the ones that are still needed in the performance of work. All unclaimed items at the expiration of the time frame will be disposed of.

S2 – Shine

Action Plan:

Begin by eliminating existing dust, dirt, and debris in all work desks and other areas of operation. Hire a third-party cleaning and maintenance company with good reviews to ensure that proper cleaning procedures are utilized, and work equipment and areas are safe from damage. Assign a company supervisor to oversee cleaning procedures and ensure that all equipment, tools, materials, amenities, and storage areas are adequately cleaned and tidy.

Next, identify sources of dust, dirt, and debris and work on minimizing or eradicating them, if possible. For example, if dust accumulates in the office too quickly, have the HVAC filters checked as they may need cleaning or replacement.

Finally, create protocols such as a regular cleaning schedule to maintain cleanliness in the workplace.

S3 – Set in Order

Action Plan:

Start with identifying the ideal, ergonomic location for specific machinery, equipment, materials, and tools. Some factors to consider would be the distance between two machines that are used in sequence or the distance between the material stock room and the production floor. The objective is to put facilities in their most sensible locations to maximize work efficiency.

Next, brainstorm with key stakeholders to figure out if the suggested changes are feasible. Discuss logistics, time and budget constraints, room layouts, etc. Take pictures of the work area before implementing approved plans and track work improvements to properly measure the impact of changes made.

S4 – Standardize

The first three steps of sorting, shining, and setting in order introduce new practices that aim to revitalize a workplace through ergonomics and organization. The fourth step is concerned with taking successful experiments and standardizing them across the business.

Action Plan:

Start by holding a meeting with key stakeholders and assigning personnel to be in charge of standardization across departments and shifts. Ideally, they should be department managers and/or supervisors.

S5 – Sustain

S5 is concerned with maintaining the positive effects generated by S1 to S4. This section will focus on using S5 mainly

as an auditing initiative to ensure that the newly imposed standards are being followed consistently.

Action Plan:

Once the new standards have been rolled out and all stakeholders have confirmed receipt of your email, set up a meeting with the 5S committee to come up with an auditing plan to track the positive and any negative impact caused by the recent changes. Established audit schedules.

Reward workers who show initiative and dedication to 5S practices

