## 5S PROCESS

# Purpose

5S is a systematic way to standardize the work environment, processes & materials to reduce waste, increase productivity, and provide a foundation for continuous improvement. Additional benefits of 5S include a clean work environment and an engaged and motivated team. The 5S process can be done within a physical space as well as digital spaces (e.g. spreadsheets or shared folders).

# Key Components

1. **Sort**

Definition**:**

* Clearly distinguish between what is necessary and what is unnecessary and dispose of the unnecessary.

Key Question:

* What do we need and what do we not need in a workspace?

Value:

* Eliminates obstacles and extra or incorrect materials. The process of sorting also highlights unnecessary items that have accumulated in a workspace.

1. **Set in order**

Definition:

* Place needed materials in the correct place to allow for easy and immediate retrieval.

Key Question:

* Where do we need to use materials for tasks?

Value:

* Eliminate wasted time and effort to find and obtain materials, and to complete the required task.

1. **Shine**

Definition:

* Make it easy to “see” defects in the materials.

Key Question:

* Are the materials correct, defect-free, and ready to complete the required tasks?

Value:

* Promote a reliable work environment and high-quality product through the correction of poor performing processes and materials.

1. **Standardize**

Definition:

* Implement visible signals and visual management; maintaining and improving the standards of the first three 5S’s.

Key Question:

* How do we know the standards and the correct 5S conditions?

Value:

* Reduce variability and promote a high-quality process and product through consistency in how work is conducted and how a workspace is maintained.

1. **Sustain**

Definition:

* The habit of maintaining the order created and continuing to identify ways to improve.

Key Question:

* How do we know that we are ALL following the standards set for a workspace and that we are continuing to improve the efficiency and effectiveness of the required work?

Value:

* Promote long-term gains and year-over-year improvement through establishing a clear baseline of performance in a workspace that can be leveraged for identifying improvement opportunities.

# Further Resources

* 5S Audit Checklists for Offices and Manufacturing: <https://citoolkit.com/templates/5s-audit-checklist/>
* Youtube, Learn What 5S is All About And Why It's So Much More Than A Housekeeping Initiative <https://www.youtube.com/watch?v=jPXYa3FQP8k>
* A Short History of the Use of 5S: <https://www.quality-assurance-solutions.com/History-of-5S.html>

## 5S EXAMPLE – Baking a Cake

1. **Sort**

Sort the required ingredients and tools needed to bake the cake.

* After discussing the customer cake order, finding a recipe, and reading the recipe, the baker puts away any equipment or tools that won’t be needed and preheats the oven
* They then check that all the required equipment is on the counter and ready to use: bowls, measuring spoons and cups, cake pans, parchment paper, spatula, cooling racks, whisk and mixer
* The baker then places the butter, flour, sugar, baking powder, salt, eggs, and milk on the counter

1. **Set in order**

Place the needed ingredients in the order that they will be used in the recipe.

* The baker groups together “dry” and “wet” ingredients, and places the equipment in the proper order, e.g. wet ingredients near the mixer and cooling racks near the oven

1. **Shine**

Look over the ingredients and equipment, measure, and mix precisely.

* Baking tools are all neatly organized and labeled on shelves in one area of the kitchen. This allows the bakers to recognize when tools are missing or damaged
* Baking ingredients are grouped, dated, and labeled in clear bins in the fridge and on pantry shelves so that bakers can readily see what ingredients need to be replenished or should be used first based on the date
* The baker makes it easy to “see” defects in the materials while baking: they measure carefully and precisely, and use a knife or spatula to scrape the top of any measuring cups to prevent excess

1. **Standardize**

The recipe and final product should be able to be replicated by any baker.

* The chosen recipe and photos of the cake produced are kept in a binder used by all bakers at the bakery
* The baker closely follows the recipe and uses exact measurements, baking at the time and temperature listed on the recipe

1. **Sustain**

The process of baking the cake to meet the standards should be sustained over time.

* How does it taste? If the baker has closely followed the recipe it should taste as expected.
* The baker can ask the customer how the cake tastes and use those reviews to decide if the product has followed the standard or improved, noting where it could use improvement
* Bakers at the bakery meet quarterly to review the recipe books, photos of products produced, and customer cakes reviews, and make changes as needed to ensure adherence to standards and customer satisfaction