

AI-04577 5S System

#problem, #cmp

Explain the 5S System

The **5S system** is a lean manufacturing and workplace organization methodology designed to improve efficiency, safety, and productivity by eliminating waste and maintaining an orderly environment.

Originating in Japan (and popularized as part of the Toyota Production System), the name stands for five Japanese words that each begin with the letter **S**, representing a step-in a continuous organization process.

The 5 Steps of 5S

Step	Japanese Term	English Term	Primary Objective
1. Sort	<i>Seiri</i> (整理)	Clear out	Separate needed items from unneeded items and eliminate clutter.
2. Set in Order	<i>Seiton</i> (整頓)	Organize	Arrange remaining items so they are easy to find, use, and return.
3. Shine	<i>Seiso</i> (清掃)	Clean & Inspect	Clean the workspace regularly and inspect equipment to catch defects early.
4. Standardize	<i>Seiketsu</i> (清潔)	Systematize	Establish rules, visual controls, and protocols to maintain the first 3 steps.
5. Sustain	<i>Shitsuke</i> (躰)	Self-Discipline	Build habits and institutional discipline to keep the system active long-term.

Detailed Breakdown

1. Sort (*Seiri*)

- **Goal:** Remove unnecessary items from the immediate work area.
- **Action:** Audit tools, materials, documents, and equipment. Keep only what is required for current operations.

- **Key Technique: Red-Tagging.** Items that are questionable or unused are given a red tag and moved to a temporary holding area. If unused after a set period (e.g., 30 days), they are relocated, recycled, or disposed of.

2. Set in Order (*Seiton*)

- **Goal:** Create an intuitive location for every necessary item ("A place for everything and everything in its place").
- **Action:** Arrange tools and materials based on workflow and frequency of use. Keep high-use items within arm's reach.
- **Key Technique:** Visual management—using shadow boards, floor markings, color coding, and clear labels so anyone can instantly spot missing items.

3. Shine (*Seiso*)

- **Goal:** Keep the area clean and visually inspect equipment during cleaning.
- **Action:** Sweep, wipe down, and maintain the workspace daily. Cleaning double-functions as maintenance—wiping down equipment makes leaks, crack fractures, or loose fittings immediately visible.

4. Standardize (*Seiketsu*)

- **Goal:** Turn the first 3 steps into repeatable daily routines rather than a one-time project.
- **Action:** Create Standard Operating Procedures (SOPs), checklists, standard color codes, and visual schedules so tasks are predictable across shifts and teams.

5. Sustain (*Shitsuke*)

- **Goal:** Transform the process into a natural workplace culture.
- **Action:** Conduct regular audits, track key performance metrics, train new team members, and recognize continuous improvements. Without *Sustain*, environments tend to drift back to disorder over time.

Note on "6S": Many modern safety-conscious organizations add a sixth "S" for **Safety** (*Seiketsu/Safety*), explicitly auditing physical hazards (e.g., trip hazards, proper PPE, ergonomic setups) throughout every phase.

