

# Continuous Improvement Toolkit Wifee!!d-Class Performance Tools for Business and

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MINITAB . 5S

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## **5**S

**5S** is an improvement tool for organizing and maintaining a disciplined and productive workplace. It helps creating a better working environment, reduces waste while improving



efficiency, safety and quality. 5S represents five simple practices that starts with the letter 'S'. It is commonly applied by manufacturing facilities in production lines, storage areas, maintenance areas, and office areas. It is now being increasingly applied by a wide variety of industries including health care, education, hospitality and retail.

5S is a Japanese management approach that was originally developed by Toyota as a part of their lean manufacturing system. It represents an important component of the lean production system and a prerequisite for driving other lean techniques such as TPM and Kaizen. Many companies start their lean transformation journey with 5S because it is one of the easiest lean techniques and exposes some of the most visible examples of waste. Many lean experts believe that you

need to be successful with 5S so you don't struggle with the other lean techniques during lean implementation.

5S is a structured way to create and maintain an organized, clean, safe, and high-performing work environment. It is not just about the appearance and keeping the place tidy, nor it is a housekeeping technique. It is more a way of eliminating waste, identifying opportunities for improvement, and making a more efficient and productive workplace. 5S helps making waste visible to everyone so it can be eliminated right away. With 5S, you can eliminate or reduce excess inventory, wasted motion, waiting while searching to find the required items, and having more parts than required.



With 5S, waste (or muda) can be eliminated or reduced

Everybody likes to work in a clean and well organized environment. Once fully implemented, 5S can make work areas cleaner, safer and more pleasant to work in. A clean and tidy workplace leads to reduced wasted time looking for things and therefore reduced frustration. This not only will make everybody's job easier, it will also make employees feel better about where they work and creates workplace ownership and motivation. It will promote effectiveness, encourages teamwork, builds pride, and forms a great starting point to implement other lean techniques.

A clean and tidy workplace is also essential for efficient operations and for the creation of smooth working. 5S will create an environment in which people are sensitive about mistakes and abnormalities. Employees will be able to distinguish between normal and abnormal conditions at a

glance. As a result, problems quickly identified, are accidents and mistakes are minimized, and work areas are easier to be managed. 5S will also create positive impressions on customers as expected that is standards displayed in the

Quality	Safety
Flow	Lean
Space	Productivity
Image	Motivation

workplace will be reflected on the products and services delivered. This builds customer confidence in the brand, improves the image of the business, making it more profitable and competitive in the marketplace.

5S is sometimes considered as a stand-alone program that needs financial justification. One main issue faced when performing 5S is that cost savings typically can't be captured in most costing systems. There will be soft-savings in terms of quality, safety and moral, however, there will be no hard-savings that can be measured and tracked. One way to justify the value of 5S is by measuring the reduction in waste. For example, you may measure the time spent searching for tools or the time spent clearing the space to work. Make sure that these improvements are documented and backed up by data and analysis as this will build your case for investment.

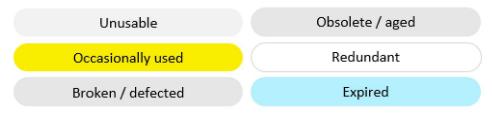
The term 5S is an abbreviation for five Japanese words: **seiri**, **seiton**, **seisou**, **seiketsu**, and **shitsuke**. These five words are often translated into English as: **sorting**, **setting in order**, **shining**, **standardizing**, and **sustaining**. Other English translations are possible.

<b>Seiri</b> Sorting
3
<b>Seiton</b> Setting in order
Seisou
Shining
Seiketsu Standardizing
3 canaar aizing
Shitsuke
Sustaining

**Sorting** is the first step in 5S. It refers to the practice of going through all the items in the workplace and keeping only what is actually needed. Items which are excess to requirements should be either stored offsite or discarded. The main idea behind sorting is to clear the area from distractions to concentrate on what will remain in the workplace. This will lead to less clutter and wasted time, free up space, and create a more streamlined workplace.

#### Some of the strategies used in Sorting are:

- Inspect all items in the workplace then define what is necessary to perform the work. Keep only what is needed and remove everything else.
- Remove items which are unusable, broken, outdated, redundant or occasionally used.
- Define standards for eliminating unnecessary items and for waste disposal.
- Don't forget computer files and emails. Archive or delete files that are no longer needed.



What to remove?

A very common tool used in the sorting phase is the **Red Tag** technique. It is a labeling tool used to highlight what is necessary in a given area. The goal is to determine if anyone thinks an item is necessary and in what quantity. Items are red tagged for a limited period of time during which their usage is evaluated. After one week or two, the items that are not used or pulled from the area should be relocated or get rid of resulting in a less distracting workplace.

RED TAG	RED TAG
Area found:	Reason for Red Tag:
Item name: Quantity: Date: Tagged by:	Unusable Occasionally used Defected Obsolete/ Aged Redundant Expired Other
108850 571	
Category:  Tool Equipment Raw material Packaging Machine part Instrument Stationary Documentation	Action to Take:  Return back Sell Discard Scrap Relocate Other

A Red Tag is a labeling tool used in the sorting phase of the 5S program

Setting in order refers to the practice of arranging  $\stackrel{?}{=} \stackrel{?}{=} \stackrel{?}{=}$ 

should be arranged. Once you have eliminated all the unneeded items, get back to the left items and organize them in a way that makes it easy to find what is needed. It should be obvious at a glance when an item is not in its designated place. This will result in an improved workflow and reduced wasted time and motion.

### Some of the strategies used in this phase are:

- Change from a closed to an open storage system.
- Assign positions for all equipment, tools, parts and materials.
- Organize items in modular cabinets, storage bins, drawers, shelves and racks.
- Use color coding to assign tools for different departments.

- Label cabinets, storage bins, shelves and racks.
- Outline and label storage areas, stacking areas, and the locations of safety equipment.
- Indicate minimum and maximum levels clearly to see exactly how many stock items are left at a glance.



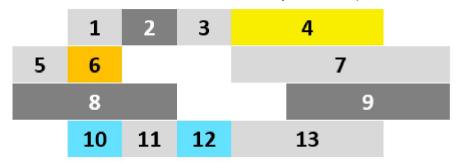


Indicate minimum and maximum levels clearly

Next comes the **Shining** phase. Shining aims of creating a clean workplace without rubbish, dirt or dust. This will enable easy identification of abnormalities such as repeat contamination and oil spills before the problem gets worse. Shining also helps in creating ownership of the work area making it safer and more pleasant to work in.

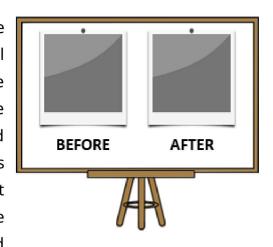
### Some of the strategies used in shining are:

- Eliminate all forms of dirt, contamination and clutter.
- Thoroughly clean, dust, polish and sweep.
- Clean all tools and equipment.
- Identify and eliminate causes of dirt.
- Identify the waste disposal storage area and regularly clean it.
- Establish a duty schedule and assign responsibilities.
- Don't forget computers, furnishings, cabinets, storage bins, workstations and display boards.



Divide the workplace into zones and allocate people to take charge of each zone

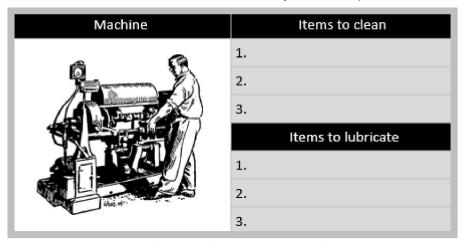
Keeping the workplace clean and tidy is a real challenge and can only be achieved if standards are established and adhered to. **Standardizing** means doing the right things right all the time. It is the communication and



maintaining of standards and expectations throughout the workplace. As you learn more, update and modify your standards to make the 5S practices simpler and easier.

## Some of the strategies used in standardizing are:

- Establish procedures and schedules to ensure the consistency of implementing the first three 'S' practices.
- Develop a work structure that will support the new practices.
- Ensure everyone knows their responsibilities of performing the sorting, organizing and cleaning.
- Use photos and visual controls to help keep everything as it should be.
- Review the status of 5S implementation regularly using audit checklists.
- Use machine cleaning/lubrication check sheets.



Machine cleaning/lubrication check sheets

Once the first four phases have been implemented, you must now focus on **Sustaining** what has been accomplished. Sustaining is the disciplined application the first four 'S' practices in order for the 5S program to be successful. It is by far the most difficult part to implement. Many companies have found themselves with a cluttered dirty areas after their attempt to implement 5S.

5S has a tendency to fail when there is lack of ownership from the top and when leadership does not place continuous focus on it. Leadership must buy in and be personally committed to ensure the success of the programs. They must establish a culture where 5S excellence is expected and nothing less is tolerated. Proper planning, training, monitoring and a formal system of accountability must exist in order for the program to ensure its successful continuation.



Sustaining is the effective interaction of the People, Processes and Systems

## Some of the strategies implemented to sustain the gains include:

- Use 5S posters and signs to remind of the benefits.
- Ensure everyone is involved and held accountable.
- Make it part of health and safety.
- Make it part of daily Gemba meeting.
- Ensure all defined standards are being followed up.
- Communicate audit results.
- Monitor results through appropriate metrics and analysis.
- Reward and recognize the efforts and accomplishments.

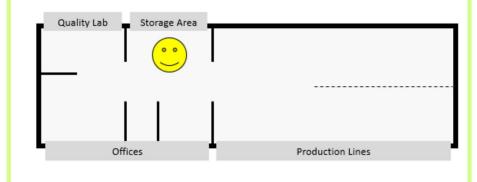
## How to Implement 5S

The best approach is to start with a pilot work area and use it as a model for the rest of the company. Start with whatever is the simplest, or find a problem for which 5S plays a key role in its solution.

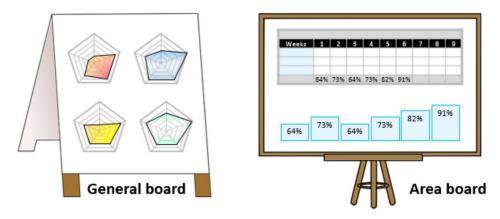
## The following steps describe how to implement 5S in one area:

- Establish a 5S team and appoint a team leader for that area.
- Observe the area and evaluate the current situation.
- Collect data and take 'before' photos.
- Brainstorm with the team to identify opportunities for improvement.
- Establish an improvement plan that details the activities, responsibilities and timeframes.
- Implement the plan to improve the area. Spend proper time on each 'S'.
- Audit the area and take the 'after' photos.
- Develop and implement a control plan to sustain the improvement.

 Once you have created a good example and demonstrated a success, you can create a plan to progress area by area.



The progress and effectiveness of the program should be evaluated regularly. This can be achieved using the 5S Audit Checklist which will help ensuring that 5S standards are being met. It will enable the observer to better address compliance gaps and provides an opportunity for continuous improvement. It is important that top management and supervisors participate in these reviews as well. An effective audit should also end up with a list of improvement actions.



Audit results can be shared using information boards

#### **Other Formats**



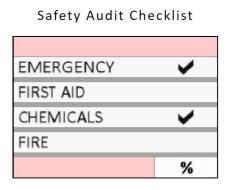
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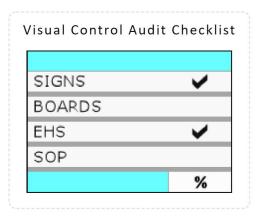




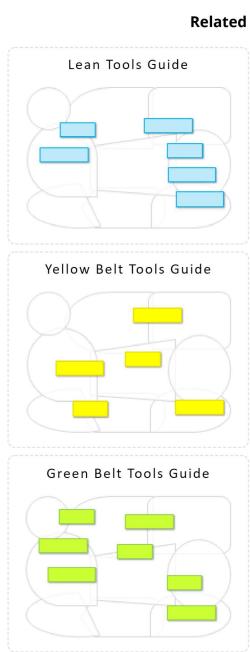
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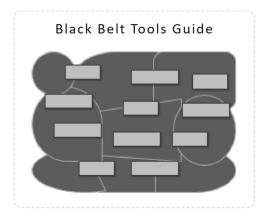






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