**3S – Why can’t I get to 5?**

Maintaining and sustaining 5S is like quitting smoking. You often hear smokers announce, “Quitting smoking is easy, I’ve quit hundreds of times.” It is the same for 5S. The first three Ss are easy; the last two are the toughest. This article will provide guidance for all 5 steps.

**History**

5S began in Japan at Toyota following WWII. The original 5S terms are Japanese and there are many English translations of the Japanese originals. Common English translations are listed after the Japanese terms in parentheses.

Seiri (Sort) is to examine all tools, materials, instruments, and supplies. The non-essential items are eliminated in this step.

Seiton (Set in Order) is to arrange tools, materials, instruments and supplies to maximize efficiency. Locations and amounts are optimized and placed where they will be in the best place for the workers.

Seiso (Shining) is the practice of keeping the workplace neat and clean. The workplace is routinely cleaned, usually at the end of the shift, restocked and re-organized according to Seiton.

Seikuto (Standardize) is when the workers realize their roles in 5S and strive to maintain the first 3Ss. This is accomplished by setting standards for 5S.

Shitsuke (Sustain) is how to maintain 5S. It addresses 5S focus over time and prevents entropy from reducing 5S into chaos.

**Basics**

There are many reasons 5S can fail. Listed below are a few of the most common 5S bombs and measures to prevent the step failures from crashing your 5S program.

A common S-bomb is to require western employees to use Japanese terms. The change to 5S is difficult enough without causing resentment and confusion by learning new terms. Stick to English terms and save your energy to fight bigger battles in 5S deployment.

**Sort**

Another common S-bomb is encountered during Sort. The determination of what is useful is difficult to decide. A Red Tag system has been developed to aid in this decision. Red tags are placed on items deemed to be non-essential and the items are stored away from the workplace. All workers have the option to review the red tagged items and discuss their usefulness with co-workers. A way to supplement the Red Tag system is to develop and post Red Tag standards before Sort begins. The Red Tag standards define requirements for removing items from the workplace. The workers now have a system to determine need and this can prevent the Red Tag game. The object of this game is frustration and play begins when one worker Red Tags an item and the next shift worker returns it to the workplace. This can continue for many rounds and can lead to innovative rule changes such as hiding the red tagged item so the next shift cannot locate the red tag game piece.

Sort can also be applied to personal items. Removal of all personal items creates a sterile dehumanizing workplace. Standardize the display of personal items before Sort begins. This allows the workers a bit of personalization without cluttering the workplace.

Changing old habits is another S-bomb encountered during Sort. A workplace may contain 50 widgets but only 15 are used in a shift. It is common practice for the workers to base min/max amounts on what is currently stored in an area, not what is needed. Standards defining need expectations can prevent this. The standards can be based on time or unit of work etc. but they will provide guidance and prevent the workers from relying on current inventories to set the min/max amounts.

Disposition of items deemed non-essential can be an S-bomb during Sort. Should the items be completely removed from the site or stored in a satellite location for the rare occurrence when the item or excess material is needed? This should be a business decision based on cost. Is it cheaper to keep satellite inventory or re-order when needed?

**Set in Order**

Set In Order agreement among co-workers can be difficult. Spaghetti diagrams are a useful tool to gain acceptance among co-workers. Have each worker in a specific workplace draw a Spaghetti diagram for common tasks. Ask each worker to review the diagrams and come to a consensus on the organization of the area.

Have each worker agree on the 5S Bill of Rights:

* Right Item
* Right Place
* Right Amount

This will help prevent workers from reverting back to prior habits. Once again, developing standards prior to beginning Set In Order will prevent organization S-bombs. Develop a standardized organizational plan before starting Set In Order. This plan must contain details on item selection, item location and item quantities.

**Shine**

Shining is often the easiest S. Complications arise when some workers ignore the shining standards and rely on others to perform the shining. This can lead to resentment and discontent among the workers. A prevention tactic for this S-bomb is to assign cleaning tasks and frequencies to each employee. Perform a routine audit to ensure all cleaning is being performed. Best results are often obtained by performing the cleaning audit in addition to the 5S audits and in greater frequency. The cleaning audits can usually be discontinued after all employees understand the expectations and are aware of the review process. Shining can also be enhanced by providing specific locations for cleaning “crash baskets”. Crash baskets are simply trays, baskets or buckets containing all required cleaning items for the area. An employee can quickly grab the crash basket and clean the area without having to find cleaning supplies in another area. Crash baskets are, of course, included in 5S protocol.

**Standardize**

Standardize is a critical step. Without standards established for each 5S step, employees cannot know what is required or expected. One S-Bomb is to assign global standardization when local requirements cannot fulfill these standards. Standardization should be well thought out before assigning impossible standards to some areas. Local standardization by area such as production floor, laboratories, offices etc. will gain the most benefit. Even though the standards are local, they should be developed and/or reviewed by 5S organizers to keep standardization when possible. One area may want to use bright red labels with white fonts and another area wants white labels with black fonts. This is an example of items which should be globally standardized. This article focus is on standardization and without it, 5S never develops past 3S.

**Sustain**

Sustain is another step where 5S fails. At the beginning, there is a great amount of excitement and momentum as employees realize the benefits of 5S and start 5S projects. Once the project is complete and the area is 5Sed, attention fades. The concept that 5S is a continuous process is not explained to the employees. A common feeling after the area has been sorted, set in order and shined is “I’m done with 5Sing my area; let’s move on to something else!” The most effective way to sustain is to develop audits, but globally standardized audits are an S-Bomb. The audits must be standardized to the point where the compliance to 5S standards is reflected, but specific to the areas being audited. Many times, standardized audit forms ask questions that do not pertain to the area. For example, an employee auditing a storage cabinet using a standardized audit form may have a question “Are the floors clean and are garbage containers in designated areas.” This is not suitable for a storage cabinet and will result in a biased audit score for that storage cabinet. Plan each of the audit sheets carefully and organize the audit sheets by audit area. Try to keep the number of areas a small as reasonable to avoid having audit sheets for each area. Some areas may require a specific audit sheet, but keep this at a minimum.

Audits must be performed routinely and the scores tracked over time. Standardized reaction plans must be developed to address low audit scores and trends. Audit score review is critical. Upper management must review the audit scores and ensure compliance to the standardized reaction plans. Another critical element to move beyond 3S is management support. There is an initial investment in time and money to complete the first three steps. Management must set realistic standards on time and cost. Expecting 5S to be complete for an entire production area in two weeks for $500.00 is usually not practical and causes resentment and frustration for the employees. Take the time to develop a project to implement 5S and review it with department managers to ensure it is feasible. 5S can be delayed to address major issues, but pulling resources from 5S for non-critical issues. 5S implementation and effectiveness must be a scorecard item. There is no better driver than routine review by top management.

**Conclusion**

The key to moving past 3S is to avoid the S-bombs addressed in the article. The majority of the S-bombs can be avoided by carefully planning 5S strategies before implementation and develop standards when possible. Active management involvement is also critical. Review of the 5S implementation and effectiveness must be included in both strategic and tactical business reviews. Upper management should visit the 5sed areas in the plant to review the 5S projects. It gives employees a chance to brag on their accomplishments and lets the employees know that upper management considers 5S important. Mid and floor level managers will take an active role if upper management is visibly connected with 5S.