

# **MAKING SENSE OF 5S AND WHY IT MAKES SENSE FOR YOU**

*by Angie Bourke*

*An overview and guideline for implementing  
5S principles for small businesses*

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*by Angie Bourke*

Imagine having something you use once a month, or even less frequently, right next to your computer keyboard while an item you use every day is across the room, in the closet, on the top shelf. That doesn't make much sense, does it? Of course not. Making sense of the **5S principles** is a lot like keeping what you use every day close at hand while storing what you don't use very often.

As a small business owner or manager, you have probably heard about some of the principles of 5S management, Lean Manufacturing, Six Sigma and other similar topics. And like most small business owners and managers, you probably dismissed evaluating them, let alone employing them, thinking they were only for large corporations or behemoth manufacturing facilities. Maybe you're just starting your business and are searching for the right management technique. Or as the economy tightens, maybe you're feeling the pinch and are looking for ways to cut costs and increase your profitability. I want you to know that the sound principles of 5S management make sense for any size business, in any industry now more than ever. You probably agree with me to some extent or you wouldn't be reading this e-book in the first place.

I was lucky enough to undergo intense training in the concepts of Lean Manufacturing and have personally witnessed the benefits it offers for the company in terms of monetary increase and to the staff in terms of both job satisfaction and enjoyment. Imagine how fantastic it would be arriving at work every day to be met by positive statements from the

bank and employees truly enjoying their jobs. The more I learned about Lean Manufacturing and the 5S model, the more I saw what a perfect fit the concepts and principles are to small- and medium-size businesses. Although 5S and Lean have similar objectives and can work in concert with each other, they are not identical. Both focus on the elimination of waste; however, for smaller businesses, I believe 5S provides a great starting point with the opportunity to grow into the concepts of Lean Manufacturing after 5S is in place and working.

Simply stated, “5S” is the acronym for management principles based on five words: Sort, Straighten, Shine, Standardise, and Sustain. It's based on a Japanese process employing the same five principles. In Japanese, the words are: Seiri (which translates to “clearing up”), Seiton (which translates to “organising”), Seiso (which translates to “cleaning”), Seiketsu (which translates to “standardising”) and finally, Shitsuke (which translates to “self-discipline”). You can easily see that the English translations maintain the original Japanese acronym and meanings.

### ***The History of 5S***

5S was first employed by a Japanese industrial engineer, Dr. Shigeo Shingo. Dr. Shingo distinguished himself as one of the world's leading experts on manufacturing practises and the Toyota Production System, although he became far better known in western culture as a result of cooperative work with American entrepreneur, Norman Bodek. In 1981, Bodek traveled to Japan to study the Toyota Production System and discovered books authored by Dr. Shingo. Shingo had been teaching industrial engineering courses as an external consultant for Toyota since 1955. Bodek had many of Dr. Shingo's books translated into English and invited him to lecture throughout the United States. With Shingo's support, Bodek developed one of the first lean manufacturing consultancy

practises in western culture. Today, the Shingo Prize is awarded annually to world-class lean organisations.

### ***What's Waste?***

The foundation of 5S (and Lean) is the elimination of waste, so it is important to have an understanding of the definition of waste before we tackle the implementation process of 5S. In either process, the simplest definitions of waste are:

“Work that adds no value to the product or process.”

“Something useful but in the wrong place, form or quantity.”

Regarding waste, Dr. Shingo observed that only the last turn of a bolt tightened it – the rest was simply movement. That analogy helps define value-added activity and non-value-added work. The last turn of the bolt is a value-added activity; it adds to the end product. The previous turns of the bolt are non-value-added work. In the end, your client pays for a tight bolt, not all the turns it took to get it there. Granted, in this case, you can't achieve one without the other, but it helps us differentiate the concepts. Once we can differentiate them, we can measure them, and by doing so, minimise the waste. There's quite a lot more to defining waste in Lean Manufacturing, but to help speed your implementation of 5S, we'll keep it pared to its simpler form: If the process or material does not add value, it's waste. If your client isn't willing to pay directly for it, it's waste.

### ***It's Not Just Housecleaning***

Although there's a good bit of clearing out, cleaning up and organising that goes into 5S implementation, the process goes much further than that. Some refer to it as “housecleaning methodology,” but the key to a successful 5S program really occurs at the back end.

Think about your own house for a moment. Maybe you do a thorough cleaning every spring, or maybe your own garage is so cluttered you can't add something new and valuable. So what do you do? You clear everything out, sort through what's useful and what's junk, get rid of the junk, clean it up (maybe add a fresh coat of paint), and then you step back and admire how fantastic it looks. You take pride in your efforts. Then what happens? Slowly, the junk and the clutter re-invade the garage until you're right back where you started. At that point, all your previous clearing, organising and cleaning have become wasted work.

The key to keeping the garage clean and functioning as a garage is to avoid the invasion of clutter so that you can avoid repeating the clearing, organising and cleaning. The same is true in the 5S process which is why the fourth and fifth steps are critical to success as we shall see. To be successful, 5S programs must go far beyond housecleaning methodology.

### ***Adopting the 5S Principles***

Again, I'm reasonably certain that if you're reading this, you realise there's benefit to gain by employing 5S in your workflow. Now, how do you convince your employees? You might be genuinely surprised how quickly folks will jump on board with you. (Granted, it's human nature to fear change, and some employees will complain no matter what.) For

the most part, using 5S makes everyone's job easier. In some cases, that happens from step one, and at other times, it takes awhile for employees to realise the full benefit of the new process.

There are two essentials: First, as the leader, you *must* set the example. Secondly, employees *must* be involved in the decision-making process. Without both of these, your efforts are doomed. If you “walk the walk,” as they say, and your employees have a hand in making the changes and improvements, chances are excellent you'll achieve what you want: an efficient and profitable business. Workers, no matter where they are on the organisational chart, want to take pride in what they do. By giving them a voice in the process and listening to what they say, you'll have far more success at every level. What's more, your employees deal with the problems and issues every day. They fully understand them, and they've got a vested interest in making their own jobs easier and more efficient!

If your company is small enough, you can feel free to include everyone in the effort. Larger organisations will find it works best to assign a team to carry out the implementation of 5S. Ideally, when selecting team members, every department throughout your company should be represented as every department will be affected by the new process. Remember: it's difficult to complain about a new way of doing things if you're the one who developed the new approach in the first place. Equitable representation creates more universal buy-in.

In selecting team members, consider those employees who tend to be leaders among their peers, but this doesn't necessarily mean solely using your managers. It often works best to use non-managers who will not only appreciate being part of the team with expanded responsibility but who will also have greater day-to-day interaction with their peers, and thus more influence in “selling” the ideas to them. Don't overlook the “quiet ones.”

Sometimes, they have fantastic ideas and simply need the right forum in which to express them. Certainly, you know your staff best, and one of the benefits of 5S is that it can be implemented in stages (or department by department) giving you a bit of a trial-and-error opportunity.

One of the frustrations I often see in implementing 5S is the initial time it takes. Yes, you're going to have folks sitting in meetings and brainstorming, organising and cleaning, and following up in more meetings rather than being “productive.” But most find that every hour they invest in converting to 5S saves days, weeks and months in the long run. Keep that in mind. To prevent your efforts from derailing, it's best to set specific times during the week for your team's 5S efforts... and adhere to them! There will always be something that seems to demand more attention than your 5S efforts, but I strongly encourage you to ignore the desire to tend to it rather than 5S. Stick to your 5S time schedule and deal with the “crisis-of-the-day” when you're done.

### ***Welcome to Widget World***

To illustrate the principles and steps in 5S, I'd like to introduce you to ***Widget World*** – a company that's gone through the 5S implementation process – so that you can draw parallels to your own company. As the name indicates, Widget World manufactures widgets and ships them around the country. Walter Widget, company founder, struggled with profitability. He's owned the company for twenty years and has overseen many changes and improvements in widget manufacturing. The economy tightened and employees seemed to merely tolerate the drudgery of making widgets. Walter wished he could pay them more. They're good folks, and many have been with him a long time. There was simply no extra money in the budget.

We'll focus on what happened to Widget World throughout the coming chapters, but keep in mind, the 5S principles apply to any department in any company (sales, finance, personnel, and so on) and not only to manufacturing plants.

That said, let's get started!

## **STEP ONE: SORT**

The first step is sorting, or in the Japanese version, “Seiri” meaning to clear up.

### ***Define the Current State***

Before we can do anything, we have to figure out where we are and what we've got. You and your team may be anxious to get started on the improvements, but it is worthwhile to take a moment, hour, day, week or month as needed to assess your current state. It's a great idea to snap a few photographs to document the “before” look. You might look around and cringe at how cluttered things are and even feel a tinge of embarrassment about it. Then you can let yourself off the hook knowing that you and your employees work long hours every week keeping up with orders and trying to stay competitive. But now it's time to start improving, and the first part of step one is *honestly* assessing your current state, no matter how cluttered and dirty it might be. Believe me, current state documentation and those photos come in handy later as a quick reminder of how far you've come and why the effort has been worthwhile.

The idea of sorting is to literally go through and “touch” everything. Whether it's equipment or a process, you will separate the things that are needed from the things that aren't. Obviously, because it's a physical entity, equipment lends itself to this type of examination more easily, but the fundamentals are the same for procedures.

## ***Red Tags***

In your sorting process, have your team and/or employees attach obvious red tags to any item or piece of equipment that is not used or unimportant in *their* area of responsibility. Remember one of the definitions of waste is “something useful but in the wrong place.” What is not needed by department A might be a windfall to department B. The problem is that department B doesn't know it exists... yet! Red tags should also be placed on inventory items that are in the right place but in the wrong quantity. Remember, that is the second part of the waste definition: “something useful but in the wrong quantity.” Don't limit red tags to overstocked inventory. Be sure you place tags on items that are rapidly depleted. It's important for everyone to keep in mind that red tags don't necessarily indicate items to be permanently removed or trashed. They indicate what any given department deems unnecessary in *their* area.

Once everyone has had a chance to apply red tags in their area, it's time for your 5S team to go to work. Two keys in determining what's waste and what's not are: 1) frequency of use and 2) importance to the end product. No one should make an arbitrary decision on what should be kept. Again, something of no use to one department might be like gold elsewhere in the company. Some 5S implementers designate a company-wide quarantine area into which all the red tagged items are placed. If you've got some space for that, fantastic. If not, try to move everything into a single area within each department, production area or room. The decisions on the dispensation of red-tagged items will be equitable because you've included all facets of your company on your team. And this very diversity will help the team identify equipment and other materials that are better suited elsewhere in the company.

The time frame for sorting really depends on the size of your implementation effort. If you've decided to take it company-wide, it will take longer than implementing it one department at a time and might tend to create a bit more disruption. Keep reminding your employees (and yourself) that the efforts will have long term benefits.

### ***Benefits of Sorting***

By “touching” and sorting everything, you'll probably discover many items that were inefficiently used or stored. You might even find things you didn't know existed or forgot that you had. In essence, you “gain” equipment and in some cases, raw materials. And one of the biggest single gains from sorting comes as expanded floor space! Who can't use more space? Gained space is surely a benefit when it can be put to productive use rather than simply a storage spot for clutter.

In much the same way that some of us can use more space, we can all use more time. You'll find hours are saved once clutter and waste are out of the way. For instance, employees won't need to spend time moving one thing to access what they need at the moment. Ultimately, that improves your cycle times, reduces lead times and improves your percentage of on time deliveries. And time gained invariably leads to improved quality. Who can argue with that?

## ***Widget World Goes Sorting***

Let's look at what happened at Widget World when they went through the sorting process.

After making the decision to adopt 5S at his company, Walter Widget selected his team and they chose a day to begin sorting. Some of his team members were long-term employees and some were new to the company. Walter figured a fresh point of view wouldn't hurt, and he was right on the mark with that decision. Since Widget World is a small company and its production departments are interdependent, Walter and his team decided that company-wide implementation was right for them. All team members led their department through the “red tag” process.

Orville was in charge of order processing. His department was predominantly an administrative one, so they focused on their processes since there wasn't much in the way of equipment. Orville posted a red chart in his department on which his staff wrote everything they did that seemed wasteful to them. They questioned the service each procedure provided and whether or not it added value to the widgets going out the back door and to their clients. To Orville's surprise, he had to get red tags to attach to filing cabinets that contained archived records that no one looked at for over a year. The records needed to be kept, but not in prime office space.

In the scheduling department, Susan was leading her team through the sorting process. She was new to Widget World, but she had already implemented a more automated process which had increased productivity by using computers located throughout the facility. With this process in place, her team red tagged the old schedule board and all of its components. Additionally, they tagged the copy machine that was still operational but no longer used by their department. The computer-based process now in place made that

equipment obsolete... to them. The problem was that the copier still sat where it had for two years.

Out on the production floor, Pete and his crew evaluated every piece of equipment and tagged two inserters which had been replaced with a single, state-of-the-art version six months prior. They also found tools that were scattered here and there that had been forgotten as well as some of the maintenance manuals. It took quite some time, but Ian sorted all the component parts of their widgets, and in doing so, realised they had too many 'zips' while he knew he wasted time every day trying to find 'zaps.'

Down the aisle from the production line, Matilda and her material packing crew sorted through various packaging materials to determine what they still used and the frequency of use. She tagged custom cartons that were used once a year for special widgets made for a single customer, ABC Supply. Invariably, these boxes always seemed to get in the way when other rush orders came through.

Lastly, in shipping and receiving, Sam put a red tag on an old copier that didn't work as well as it should. His department was making due, but they could be a lot more efficient if they didn't waste time trying to fix it every few days.

Walter cringed a week later when he walked through the facility and saw all the tags and everything in a state of disarray, but he knew things would be better now that the sorting was complete. In fact, he felt better when he sat down and calculated what they saved and gained already. He could see the floor space they would gain in the production area and knew intuitively that the gain would lead to faster throughput and greater efficiency. The team evaluated the red-tagged items, and improvements began to happen by the time they left the meeting:

Order processing was streamlining their procedures and gained space by moving archived records out of their daily work area.

Scheduling gained space by removing the copier they no longer used, and they sold the scheduling board in an online auction to a company not as automated as Widget World.

The production area also gained space by finally getting rid of the two old inserters which were also sold to another company.

Matilda's department wouldn't be wasting time moving ABC Supply cartons every week when they only used them once a year. Walter knew that material packing was often the bottle-neck in getting widgets off the production line and out the door.

Finally, Sam no longer wasted time fixing his copier. He inherited the one Susan didn't need in scheduling. With this turn of events, Walter was glad Sam had been included. Otherwise, no one would have known about the copier struggles Sam and his department were having.

Widget World's 5S team knew they'd already made great strides and put together an audit checklist of what they'd accomplished during the sort phase:

*Team creation*

Be sure all departments/facets are represented

Set firm meeting days, times and durations

*Review physical areas*

No unnecessary objects on the floor, in corners, or in cupboards

Place waste and recycling bins at every station

*Machines*

No unused machines allowed

*Tools*

Inventory of all existing tools

List tools by department – who needs what, where

*Parts*

Ordering schedule is established

Determination of correct materials ready at the needed time

*Manuals, drawings and instructions*

Correct manuals and instructions are available and up-to-date

They were now ready to move to the next step.