Succeeding with 5S

WCM Consulting AB is a consulting company that supports the introduction of Lean and World Class Manufacturing

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Introduction – the goal is a change of culture

With my work, I am often out traveling and visiting many different workplaces.

Throughout my visits, I often find traces of previous attempts to introduce the 5S method. Many times, the teams have worked hard, but sadly have not succeeded in creating long-term results.

Among those “traces” of the old attempt is a 5S file that no one looks at anymore, a tool board with no tools, or a few before-and-after pictures on another board.

I think that both the strength and the challenge of 5S is that the concept offers a way to change the culture of the company for the better. Sadly, this point is often forgotten in courses and books. 5S is presented as a relatively simple step that should be completed as fast as possible in order to move on with other kinds of improvement initiatives that are considered more profitable.

For that reason, in this book, I will describe ways to improve behavior and attitude concerning 5S to more successfully create long-term results with many direct and indirect positive effects. Instead of using common, but largely ineffective, methods to change attitudes, such as kick-off parties, advanced salary systems or leadership courses, we introduce tools that make all of us, each day, act better in our everyday work.

When these good habits are repeated, they represent the foundation of an improved company culture.

Should the least orderly be able to set the standard?

In many work places, people think that the housekeeping standard is already way too low – an opinion often shared by both managers and co-workers. Therefore, you might think that it shouldn’t be very hard to make changes when almost everyone agrees that they’re necessary.
However, there is a big problem that needs to be handled first. Everyone wants order, but no one wants to clean up after someone else.

Let’s imagine that a workplace has just had a very important visit. Maybe the Swedish king popped in. While preparing for the visit, you cleaned for several days and everything was sparkling and fresh. After the visit, you said to each other: Imagine having our workplace this clean all the time!

Despite that sentiment, how long does it take before everything starts looking like it did before? A week? A month? Six months? Why don’t we just maintain the order that was created when we know that that is what everyone wants? Most of us are rather neat and organized anyways.

I think the process of a clean and orderly workplace reverting back to a dirty one usually looks something like this: The first time a neat and orderly person comes to work and finds their workplace in an unclean or bad condition, perhaps he or she tidies up a bit and just thinks that the person who made the mess probably had a bad day.

Imagine that this happens a few more times, and the orderly person continues to tidy up and sigh a bit, but eventually, even the most orderly person will get tired of picking up the slack. Instead, the person thinks:

“No one else seems to care, why should I bother?”

Instead of cleaning everyone else’s mess, they start to adjust and leave places dirty too. Slowly but surely, everyone begins accepting a standard that is below what they initially wanted to see.

What has happened is that they have unwillingly let the employee with the lowest standard for order set the standard for everyone.
Common standards

What separates 5S from your previous approaches is that we *jointly* decide a number of standards for how we want everything to be. These standards create and maintain the desired situation and become something to which we can compare the reality.

The first standard is how we want everything to look. This is often documented with pictures.

The second standard is how and when every 5S task should be performed, along with a visualization that makes them easy to remember.

The third standard is how every leader should act. The goal is to make it easier to be a good leader by investigating whether or not the system works, and also to standardize how the follow-up should be performed.

By working with these standards, we prove to ourselves and others that we care. When we see problems begin, we work in a structured way to permanently rectify those problems.

5S represents more than just order; it stimulates a change in the culture that will radically affect your workplace for the better.

Background – is this a new thing?

I think that people have always been aware of the fact that good order and cleanliness make it easier to perform good work of a high quality and maintain personal wellbeing. The problem has been about how to maintain that order.

Should we do it like in the military service, with daily check-ups of how stretched the sheets are and whether there is any dust on the windowsill? Or perhaps a simple request on a note in the kitchen that says, “Your mom does not work here, tidy up after yourself!” Or should we simply trust that we are all adults, and the problem will work itself out?
What separates the 5S method from other frequently failed attempts to improve order is that it consists of five logical and clear-cut steps that all depend on each other.

You could say that 5S creates order and maintains cleanliness in a systematic manner. The system is the most important component. In the initial three steps, we build the foundation for the two finishing steps, where we make sure that every day meets our desired standard.

**Why was 5S developed in Japan?**

The phrase 5S was coined by Hirano Hiroyuki, who described the method in the book *5 Pillars of the Visual Workplace*.

A clue to why it originated in Japan and not another country can be found in this picture:

*Image 1: Japanese example*
No, that is not a hired cleaner. The man in the picture is actually the CEO of a large corporation who has come down from his office to take part in the work. This enthusiasm for teamwork and unified responsibility, which can be found throughout the company, is one of the reasons why 5S has become a long lasting and important part of many Japanese companies’ work methodology.

I think another reason why 5S was developed in Japan is the culture. I have taken the fast train in Japan a few times, also known as the Shinkansen. What struck me was that even though nearly all of the travelers were eating from a “bento box” during the trip, there was not a single crumb to be found on the floor (a bento box is a form of take-away food which often consists of rice or noodles and other vegetables or small side dishes).

I have learned that for Japanese citizens, it almost feels unnatural and wrong to leave your seat in a state that was not as clean as possible.

Shifting this view to the workplace was probably not a major step.

**Is 5S simply a cleaning campaign?**

All organizations have probably tried to improve their order and cleanliness. A lot of times, this takes the form of campaigns leading up to important events or visits.

I think that you should see 5S as the end of campaign cleanings.

I usually ask one important question when I visit a workplace and they tell me that they already work with 5S:

“What happens if a very important guest comes to visit?”

If the answer is that they would have to clean a bit more than usual, then they don’t have a fully working 5S system yet.
They may have 5S boards, 5S hats, 5S posters or various 5S projects, but they have not succeeded in creating a real 5S culture.

In this guide, I will describe my own experiences in implementing this method.

I have educated over a hundred professional teams on 5S. In the beginning, I used the standard method from Japan. During the process, however, I have broken down the steps and made them a bit simpler, so that the idea will be easier for everyone to understand.

A milestone occurred when I let go of the rule that all of the steps should begin with the letter “S”...” Instead, I started using simpler words. I noticed that the number of skeptics in the groups dropped dramatically!

The goal is to use 5S to create a real change of culture and also lay the foundation for even more improvement work, for example with Lean.

In this book, you will find four case studies from companies in completely different sectors that used 5S in a very successful way to achieve their goals.

You will read about how Trioplast halved all of their waste with 5S and other methods, and about how one major corporation used 5S in their journey to becoming a world-class producer.

As you will notice, 5S does not only work with production. One case study discusses how Holmen uses 5S to speed up the process of writing monthly reports and how Adrito uses 5S for handling documents.

What is common with all of these examples is that they have stubbornly remained dedicated to performing 5S, so that it is now an integrated part of the company culture.
Why 5S?

There are many different reasons for implementing 5S. You will achieve a number of direct gains, like improved safety, wellbeing and productivity, but also indirect gains, such as building the foundation for further improving the company. Let’s start by exploring the direct gains.

5S for improved safety

One of the most important arguments for using 5S is that it will likely lower the risk of accidents. From the very beginning, this concept was developed to increase the safety level, and this is still a large part of its purpose.

Some have even wanted to put a bit of extra thought into the safety aspect, and have therefore added an extra S to the five S’s - Safety and Health. However, others argue that safety is well integrated into the whole concept, making the extra “S” a bit unnecessary.

How is safety improved?
• No items are lying on the floor. This lowers the risk of falling over or getting caught in something, which could result in injury.

• The safety equipment is always in the right place and potential faults can be discovered more easily.

• Less dust and dirt helps to avoid the risk of slippery floors or dirty tools on which you can hurt yourself.

• Less of a mess gives you a clearer overview and lowers the risk of making poor decisions.

The important thing to remember is that safety is improved by being serious about keeping everything in order. When everyone starts following the routines and rules, a safe and secure circle is created.
5S for increased wellbeing

By creating a good working environment we get a workplace that we like better. Dirty, cluttered spaces that no one seems to care about don’t help anyone. Working in a functional and clean place creates good feelings and pride.

Since 5S depends on you being a willing part of creating a better workplace through teamwork, the result of which will be something to be proud of. Motivation and morality increase when you have proven that you can personally make a difference and improve your establishment.

This increased motivation is a big reason why 5S is often the first step towards other concepts, such as Lean or World Class Manufacturing. When implemented correctly, 5S creates the habit of positive changes that are built on standardization, visualization, and more present leadership. This makes the next step towards more efficient work much easier.
Why 5S

5S for the environment

Another important reason for implementing 5S is the risk of releasing waste into the oceans and the air if the workplace is messy. Perhaps a machine is leaking oil, or an air-suctioning cap is not working correctly. If we do not regularly clean or maintain things like this, it may take a long time to discover the problem, which can have serious consequences for the environment.

When things are in order, we may not need as much workspace as before. This will mean that we do not need as much heating or cooling, which is also better for the environment. The excess space and energy can be used for more important things, like producing new products that may make the company more profitable.
Poor conditions or a lack of order mean environmental risks

**Increased productivity and quality by making fewer mistakes**

Every time we perform a task, there is a risk of making an error. The probability of mistakes is increased by factors like distraction, tiredness, misunderstanding, or stress.

One of the goals of 5S is to lower these risks. The main idea is that it should be easier to do something right than to do it wrong. Everything that disturbs the daily work process should be fixed.

To do a good job, we need appropriate and functioning tools, and a workplace where we are not always distressed by other things.
During the 5S implementation, we make sure that we have updated instructions at the right place to help with the work. Using pictures or a video as a complement to a written text makes it easier for everyone to understand how to work best.

Another reason for many errors is the small but annoying faults in the equipment or bugs in the computer programs. More experienced workers may have grown used to them and found work-arounds, but they still affect the work flow, especially for newly hired staff.

Knowing and compensating for these minor flaws is sometimes mistakenly labeled as a skill, but the most skilled worker should not simply be the one who has learned all of the flaws in the establishment.

Instead, a skilled worker should be a person sharing their experience with others, participating in the standardization of work, educating others into their way of working, and proposing ways for improvement to upper management.

**Increased productivity by less searching**

During courses, I usually ask what aspect of 5S would make the most difference at your workplace. The answer that often comes up first is “no searching.”

By having the right tools in the right place, the frustration of not being able to find what we need will disappear. That allows us to save time and avoid buying new equipment simply because we can’t find something in the mess.

During the implementation phase, a common agreement is established on which tools one should have (and not) and where they should be placed.
Increased productivity by better reliability

Do you get a lot of “strange faults” from electronic systems? Faults that may come and go and are hard to investigate and do something about?

A lot of times, these problems exist because of dust or dirt in the air. By working with 5S, leakage is lowered and cleaning is done more often. This makes both the equipment and the staff work better!

By regular cleaning in the right way, there will be less dirt and wear on moving parts. This is very important for increasing reliability and giving clear results in automated production. (It may be important to point out that the wrong kind of cleaning may make the reliability worse, such as by using a pressure washer. Always read the manuals before introducing new cleaning routines!)

Another important reason why 5S improves equipment up-time is that when you clean properly, you will find faults. Maybe a cover is loose, or perhaps air tubes are leaking. By discovering faults
early on, there is a possibility of doing something before it has grown into a full-on problem. This results in lower overall maintenance costs and more reliable production.

Image 7: Dirt creates “strange faults”

Cleaning as a part of 5S is, in many cases, the first step towards introducing increased operator participation in maintenance activities, called autonomous maintenance or TPM (Total Productive Maintenance).
Image 8: A good impression

**Indirect gains with 5S**

Working after a standard that is always being improved is a supporting pillar of successful concepts like Lean Manufacturing and Total Quality Management.
A strong argument for 5S is that it stimulates learning within the organization concerning why we should start working in a more standardized way, and what changes are necessary to get there.

What we will learn from 5S is that to successfully work towards a standard, we need to discover any deviations early, as well as analyze and initiate remedies. To achieve this, managers on all levels need to work more closely with their co-workers than before. An important goal in 5S is to simplify the job of being a good manager, since everyone after the 5S implementation knows what should be done and how. If there are deviations from the standard, then it will be easily spotted so that the root cause can be found. Working and improving the 5S System is therefore a good first step to becoming a “Lean Manager.”

Another indirect reason for introducing 5S is that it creates more enthusiasm and a sense of responsibility among the employees. When everyone sees that it actually is possible to improve the situation with simple methods, future improvement to the working process will be much easier. Things that we have considered irritating for years will finally be rectified, and the frustration of not being able to find what you need will be eliminated.

When we are done, it will be very clear that improvements have occurred, and we know that the credit is largely due to our system. This creates enthusiasm and motivation, making 5S the first step towards all improvement work.

**A better impression**

Why are you skeptical about leaving your car in a dirty and unorganized workshop? Even if you know that their staff is professional and efficient?

It’s easy to imagine that if the workshop cannot even handle being organized, then they may also have trouble handling the car. Will it get scratched? Can they really find all of the minor flaws? Are they going to keep track of the car keys?
The same concept applies to all workplaces. If we can keep every-
thing in order, then a visitor will have an easier time believing that 
we are capable of performing our high-quality work. Later, you 
will read the case study from Aditro, where you will see how mak-
ing a good impression makes it easier to get new customers.

Good order is obviously important when welcoming customers or 
other visitors. Something that is easily forgotten is how important 
it is to also make a good impression on guests from within the 
company. Decision makers are more inclined to risk money on 
investments or new products if the staff shows that they can take 
care of the establishment that is already in place.

This becomes especially clear in larger corporations with multiple 
production sites, but it also applies when you are deciding on 
whether or not to create a new product yourself or to pass it off to 
a subcontractor.
Case study – 5S for faster reports

Mattias Brodén is the business development manager at Holmen Paper AB. He has been responsible for implementing 5S in administrative processes, as well as around-the-clock production.

Holmen is a forest industry company that produces print paper, cardboard and wooden products; it has establishments within the forestry and energy industries and employs about 4000 workers.

OO: Can you describe how you worked with 5S in the administrative process?

MB: A statistics team worked to put together monthly statistics and reports. The team consisted of two people. It took three weeks to put together a report and the work created a lot of stress. For example, free days and vacations were often impossible at the end of the month.

A downsizing of the organization made it possible for one of the people in the group to be offered early retirement. So there we were, with six weeks’ worth of work and only one person to do it – an impossible situation.

Since I had previous experience with 5S from the production environment, I thought that we should be able to use the 5S methods here as well. By investigating the purpose of every step in the process, I thought that it would be easy to transfer that way of working into this administrative process.

OO: In what way did you work with 5S?

MB: We started with the “Sorting Step” and tried to get rid of everything unnecessary and cut down on waste. We put together a list of all the work being done and asked
the receivers of the reports if they really needed them to continue with their work. It turns out that only about 50% of the reports actually created value. The other half was simply wasteful and could easily be removed!

We then moved on to the “Set-in-order Step.” This is where we organized all of the reports in the right order so that we would always do the most important first and the least important last. This decreased the stress of working with everything at the same time under pressure and also reduced the amount of waste in the process. The priority list became the first page in a numbered Table of Contents in a binder.

During the “Shiny Clean Step,” we looked at what could be automatized. This showed that many of the lasting reports could be done automatically with a bit of coding and feeding the computer with fresh start and finish dates.

In the “Standardize Step,” we made simple standardized instructions for each report. The goal was that anyone with limited training would be able to step in and replace the regular statistics staff. Every instruction was placed behind a numbered tab in the binder. In this way, the priority list/Table of Contents was connected to an instruction. For example, if you wanted to read about how to write the Economy report, just open Tab 1.

The last step was “Sustain.” After each point in the Table of Contents, a row was added containing the months from January to December. When a report was finished at the end of every month, it was now easy to just check it off on the priority list. If the regular staff was ever sick, the sub could simply open the file and see how far along the process was, and then continue from there.

OO: How did that work out for you?
MB: The result was that we went from three weeks with a specialist to four days for a substitute. For the first time in seven years, the regular staff could now go on vacation by the end of a month, and I could even substitute for her myself!

OO: And now you work with 5S throughout the production site?

MB: Yes, that is correct. We are about halfway through the 5S implementation with 350 employees.

OO: Why did you choose 5S as a work method in production?

MB: The main reason was safety. Before implementing 5S, we had a lot of accidents, which were often simply caused by sloppiness. An example of this could be stumbling on hoses that were lying on the floor or tools lying where they could fall on someone’s head. We needed order around the processes to create a normal level. The goal was that this standard would be safe, efficient, and would reduce the need for extra cleaning time before important visits.

In this way, we save time by making sure that everything is always in the right place. A lot of time used to be spent on searching for tools and materials, which did not add any value to the company.

OO: How did you implement 5S into the production process?

MB: We started with an introductory course for all of the managers and employees, which they took together. The purpose of this was to inform them about our goals and what was actually going to happen.