FlowPlus.co.uk

Productive Workspaces

Improve the performance of your team by transforming their environment

FlowPlus™

Helping you work smarter

Contents

Introduction

- What is a productive workspace
- What is 5S
- The productivity graph and its 3 elements

Introduction

What is a Productive Workspace

The importance of a well designed & maintained work environment in creating high performing individuals and teams cannot be undervalued. Without the right tools, equipment & resources made readily available, you cannot expect high productivity. The fundamentals of creating a productive workspace revolve around 3 key principles:

- Maximise value adding activities
- Encourage collaboration & clear communication
- Inspire innovation

The return on investment for improving a work environment can be extremely high & applied to a wide range of industries & environments. From manufacturing, banking, administrative and creative jobs; each with their unique requirements whether that is making more informed snap decisions, increasing output, or improving brand reputation and customer satisfaction.

This article will equip you with a strong foundation for improving workspaces within your Organisation. A manufacturing based methodology called 5S will be explained, outlining why it was developed, its typical benefits along with the common mistakes found when putting theory into practice.

Productive workspaces can be broken into 3 main elements; basic requirements, 5S requirements & innovative requirements.

Basic requirements include suitable lighting, a comfortable temperature and low noise levels. Fully satisfying the basic requirements simply provides an environment with the possibility to become highly productive. If basic requirements are not fully met then it is impossible to achieve high productivity – think of these as must haves before you move onto the next level. 5S requirements increase performance the more they are adopted, and finally innovative requirements go above and beyond normal productivity expectations and allow an extremely high level of productivity to be achieved.

This article will briefly cover basic requirements & focus predominantly on 5S requirements & innovation.
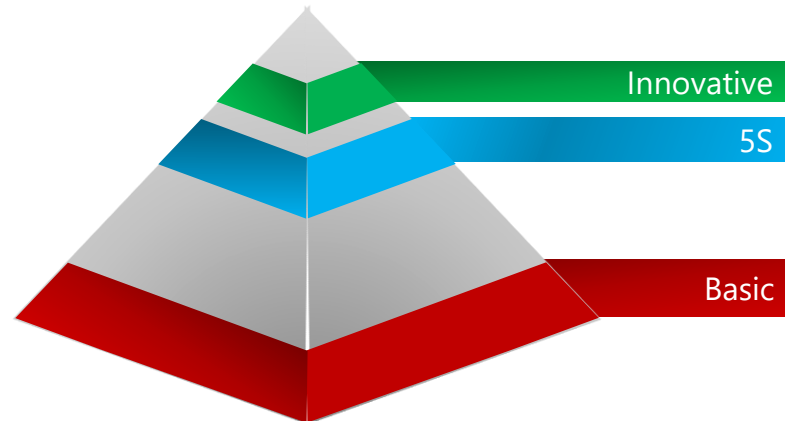
86% of companies agreed that their work environment could be improved
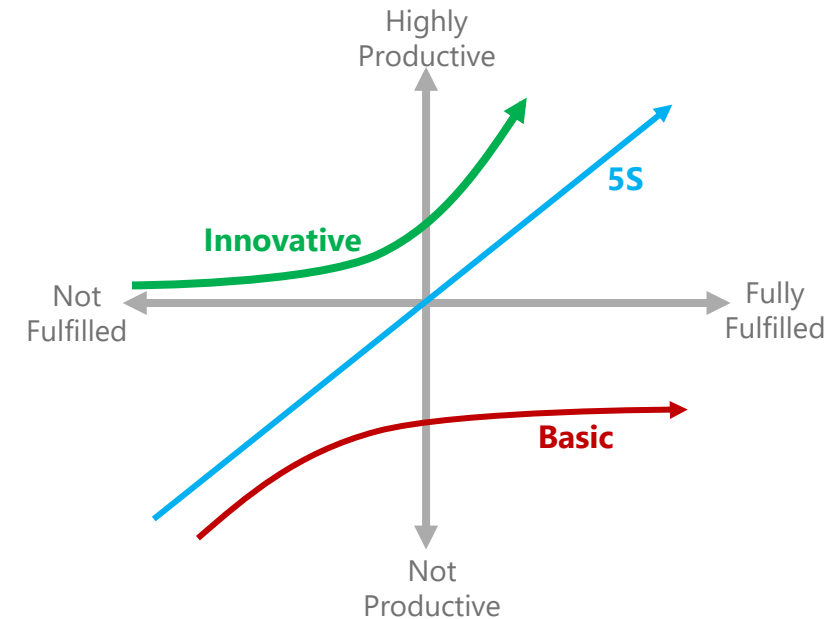
Basic Requirements

Basic requirements can be summarised as the necessities that are permanently required for a workplace to be productive. Only once all basic needs have been satisfied can you proceed onto the 5S and innovative needs. Without basic needs being fulfilled, you simply cannot have a productive workspace.

These basic requirements are sometimes called "unspoken" as they are assumed. But as they say, assumption is the mother of all mistakes, and more often than not companies wrongly assume that all basic requirements are fulfilled.

Basic requirements can be split into the following 3 categories; Safety, Comfort, & Equipment.

Safety requirements

For a workplace to be productive, it needs to be inherently safe. You cannot work effectively if you are in fear of your life, nervous or scared. Likewise you cannot perform well if your environment physically impedes your performance. Repetitive strain injury, excessive strain on the eyes or body, and poor manual handling practices are all very serious problems.

The Control of Noise at Work Regulations 2005 (Noise Regulations 2005) require employers to prevent or reduce risks to health and safety from exposure to noise at work. Controlling and maintaining a suitable work environment free from loud noises, distracting sounds and poor acoustics is very important.

Having helped clients within manufacturing sites, I have personally seen grown men cry when handed their first pair of ear defenders. Instantly eliminating the relentless background drone of stamping machines that they have put up with for years. With advancements in technology and the increasing capabilities of smart phones simply go onto the app store and download a Db meter for free and start recording. Using the government website for guidance you will soon be able to see whether ear protection or alternative measures are required. This really is one of those incredibly simple yet effective solutions.

Control of Vibration at Work Regulations 2005
Action is required when an exposure value of 2.5 m/s^2 A(8) is recorded. Employers should introduce technical and Organisational measures to reduce exposure. Exposure limits of 5.0 m/s^2 A(8) or greater should never be exceeded.

Work environments need to have suitable barriers against harm put into place. This could mean providing aspirators if you are working around volatile chemicals, protective clothing if you are working around corrosive chemicals etc.

In an office environment, ergonomics form part of safety, including setting correct computer heights, chairs with back support and adequate leg clearance at desks etc.

Comfort requirements

The working environment once it has become 'safe' needs to be comfortable. This means well lit, at a moderate temperature and with clear vision. Again, these basic needs may seem obvious, however unless they are fulfilled, further improvements will have little impact. If you work in an office environment, the never-ending debate about air-conditioning, "its too hot", "its too cold, etc". The best solution is to measure the air temperature at multiple different locations within the office. It should be at a suitable level -16°C for factories, 18°C for hospitals, and 20°C for offices **(**Chartered Institute of Building Services Engineers) and should not vary by more than 3 °C within the same environment. If it does then the air conditioning unit may need adjustments or maintenance.

Basic Requirements

Lighting at work is very important to the health and safety of everyone within the workplace. The quicker and easier it is to see a hazard, the more easily it is avoided. The types of hazard present at work therefore play part of role in determining the lighting requirements for safe operation.

Poor lighting can not only affect the health of employees through symptoms like eyestrain, migraines and headaches, but is also linked to something called "sick building syndrome" in new and refurbished buildings. Symptoms of this include headaches, lethargy, irritability and poor concentration. The hse.gov website provides an extensive set of criteria to ensure lighting is suitable for use, but for the purpose of this article, just understand the importance of lighting.

Equipment requirements

Equipment requirements refer to having suitable tools and equipment to carry out the tasks at hand. If you needed to tighten a screw and your only tools were spanners, then you need to purchase a screwdriver. There is a fine line between what are "nice to haves" and what are necessities. The rule is that equipment requirements are the bare minimum tools you need to carry out a function. The tools do not need to be state of the art or technologically advanced, the opposite is often best, they need to be simple, reliable and easy to maintain.

5S Overview

o What does 5s stand for?

o Where can it be used?

o What are typical misunderstanding?

5S Introduction

5S outlines a structured methodology for creating a clean and orderly workspace that exposes waste and makes abnormalities immediately visible. Often seen as a formalised approach of making sure everything has a home and is managed in a simple, visual manner. 5S is extremely popular in manufacturing environments or by lean, six sigma or continuous improvement advocates. It is however, not known by many people outside those circles.

5S is called 5S as it simply stands for the five steps of the process:

Sort, Straighten, Shine, Standardise & Sustain

- 5S is misunderstood by many as being nothing more than housekeeping and doing what your mother told you; to clean up after yourself and make sure you leave things in the condition you found them. If utilised to its full potential, it is in fact a way to drastically reduce wasted motion and increase efficiency; reducing costs and creating a safer workspace.
- By ensuring employees have the most effective tools & equipment easily to hand, coupled with a robust process that ensures they are always maintained and available whenever required, productivity is maximised and the time taken searching for items/data & looking through folders/store rooms is eliminated. The result is an environment where employees are motivated to work, take pride in their work area and never have the stress/frustration of not being able to efficiently do their job.

Created out of a necessity to improve productivity, 5S was first used in post war Japan, where the leaders in Toyota Industries (neé Toyoda Automatic Loom Works) were seeking to reduce manufacturing waste and inefficiencies.

5S is often seen as a good starting point for companies looking to partake in a lean journey, however it is important to note that 5S isn't restricted to certain environments or only businesses looking to become lean, it is simply a best practice that should be used across all industries.
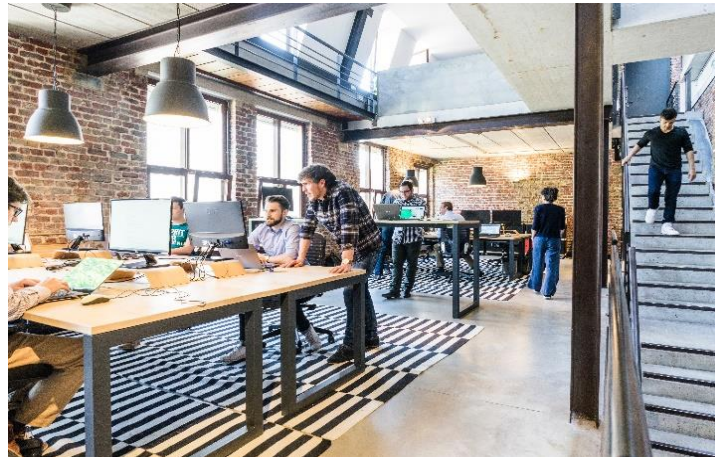
The concept of 5S can be seen everywhere and in everyday life, follow the methodology and the results will speak for themselves.

For example:

If you are organised at home, you will have a dedicated spot, a bowl or a hook where you put your keys as you enter your house. This is a form of 5S, an organised environment that reduces stress and ensures things are where they belong.

In business, the same principles apply and go one step further, dedicating a visually marked place where the keys are placed. For example if you drew an outline of the keys onto a board, anyone walking past could instantly identify if, when and what is missing, allowing action to be taken before it becomes a costly mistake; this is called a *shadow board* – named because the outline of all items leave a permanent "shadow" that is visible when the item is missing.

House Key   Garage Key   Shed Key
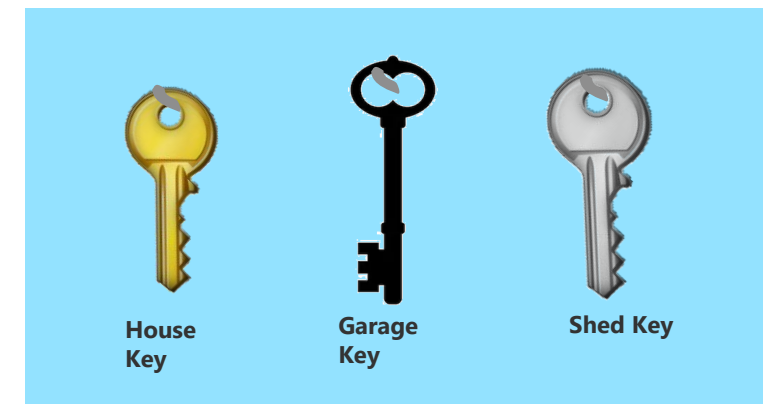
5S Methodology Overview

1 **Sort**

Remove what is not required for the process

2 **Straighten**

Organise items in a simple, visual manner

3 **Shine**

Restore the area & equipment to its original condition

4 **Standardise**

Create Standards to maintain new conditions

5 **Sustain**

Comply and improve standards
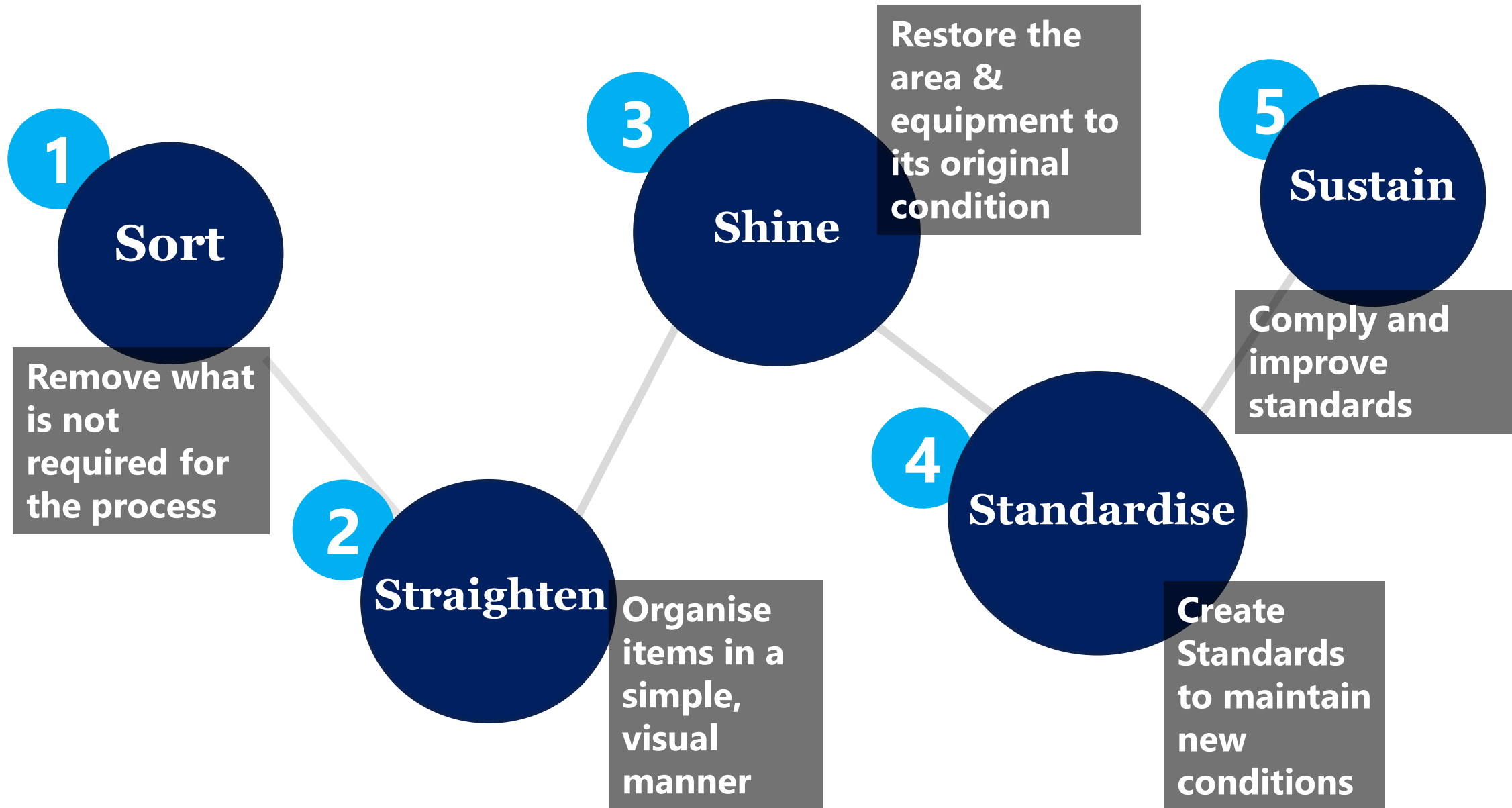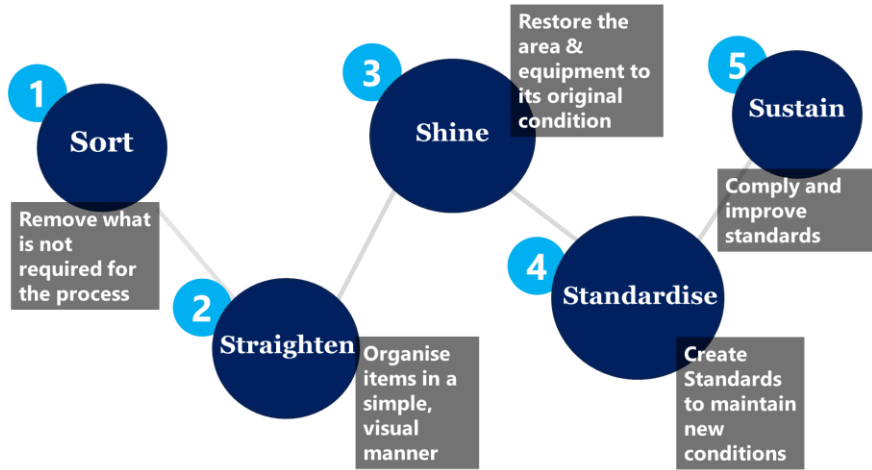
5S Overview

What is 5S

Sort; starting with the first S, the environment needs to be sorted to remove anything that is not required. In a physical environment this could mean throwing out obsolete tools, in a virtual environment this could mean deleting unused files or documents. It is important to do this step first, so that you clear the space and environment for the next steps of the process.

Straighten; the second S involves straightening the remaining items. By mimicking the sequence of tasks, the order of equipment can be placed in the most suitable position to minimise searching time and motion time. For example if you were applying 5S to a surgical tray in a hospital, this could mean placing scalpels, scissors and dressings in the most ergonomically/easily retrievable positions.

Shine refers to cleaning all equipment and ensuring it performs as it was intended by the manufacturer. This stage can be labourious however it is important to ensure tools are maintained as they were designed. If you were applying 5S to a fire station this could mean cleaning and testing fire extinguishers for example.

Standardise; a very important stage is to standardise the new improved condition. By creating visual standards, one point lessons or SOP's, the new procedure is clearly documented. Point to note: even if the standard is not perfect, it provides a basis for improvement so is worth creating regardless. It allows changes to be made and documented later on. The main thing about standardising is ensuring everyone works to the best way.

2. Straighten

Sustain is the final part of 5S and what distinguishes the lean maturity of a company. Organisations that do not have a developed and sustained continuous improvement culture may struggle as things start to slide back to the old ways. The important thing with sustain is to conduct audits or "kamishibai", which creates a daily routine to ensure the latest standard is being upheld.
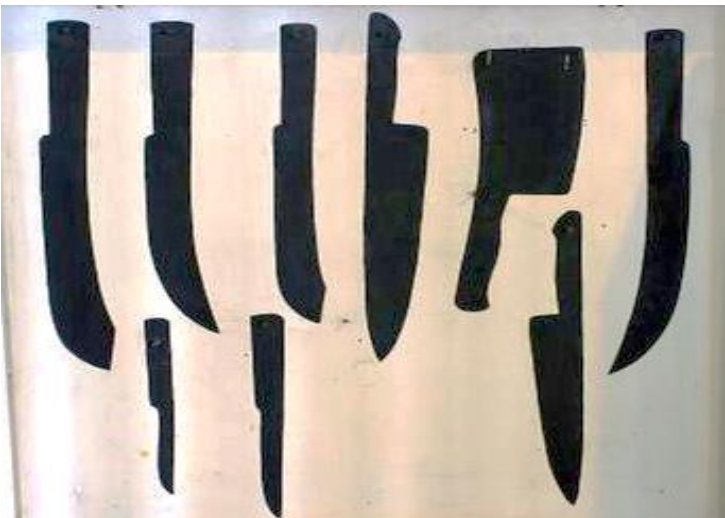
5S

Examples of where 5S can be applied

Examples can be seen in other professions:

Efficient Builders will typically wear a holster/belt with their most frequently used tools placed in specific, easy to access locations. By having clearly marked, dedicated spots for each tool, they can easily identify whether they are missing a tool before it is required. If a tool does become missing, action can be taken to identify where it was lost and the reason, allowing preventative action to be put in place to eliminate further reoccurrence.
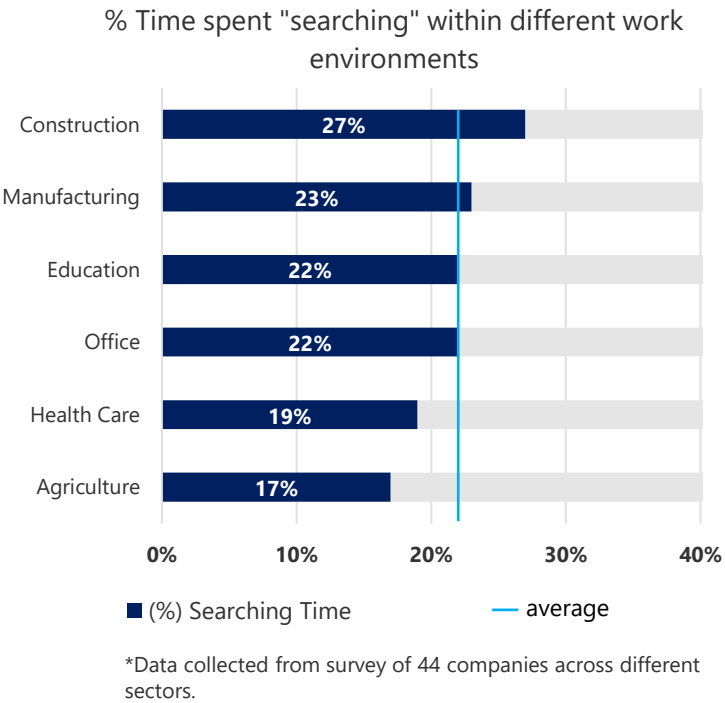
Additionally, the benefits of greatly improved ergonomics directly reduces the time it takes to complete a task, meaning more time can be spent adding value as opposed to searching for or collecting tools. The combination of being able to instantly identify anomalies, along with improved ergonomics & increased value adding time is the heart of 5S; benefiting operators and reducing the costs of poorly managed tools/material or information.

Prisons have used 5S for a long time as a matter of security, allowing personnel to identify whether knives have gone missing.

% Time spent "searching" within different work environments

Work environment	(%) Searching Time
Construction	27%
Manufacturing	23%
Education	22%
Office	22%
Health Care	19%
Agriculture	17%

■ (%) Searching Time — average

*Data collected from survey of 44 companies across different sectors.

Shadow board in Alcatraz prison

Many different work environments can benefit from 5S as a means to achieve productive workspaces. Very popular in the automotive and oil & gas sector, the benefits can eliminate the possibility of using the wrong tool, fitting the wrong component or as a matter of safety.

5S

Why 5S is so powerful

The difficulty with keeping a workplace organised and tidy is that everyone has a different definition of clean & tidy. This will sound very familiarfor those that went to University and lived with other students. Some students believe it is normal to clean the kitchen five times a day, others believe wiping the floor with their socks is an adequate substitute to using a mop.

A company brings together people from different backgrounds, with different habits and different views on what clean & tidy means. What 5S does, is aligns this definition across the entire Organisation, using visual management and logic to improve the way in which people work. Eliminating stock-outs and parts going missing, while simultaneously creating a safe environment where people take ownership to ensure their environment is kept orderly and efficient.

The purpose of 5S should always be made clear when it is selected and employed as a tool.

90% of the time it is utilised as a way to boost productivity by reducing searching, travel and motion activities. The tool has many additional, often intangible and overlooked benefits that actually contribute to the much bigger topics of culture and habit forming.

By creating a workplace where working productivity is promoted and celebrated, spaces are kept clean and employees take ownership to further improve the way they work, a sense of pride is established. With this pride comes a new employee mindset that symbolises how change is possible and positive, and that the company is happy to invest in their employees. By working in an improved work environment, good habits are formed where they would not have been encouraged previously. For example, if you cleaned your kitchen thoroughly from top to bottom, you will be much more likely to follow habits that maintain the cleanliness. Additionally, problems that would have previously gone unnoticed become visible and can be fixed. On the otherside, if your kitchen is filthy, your mindset for following good habits is likely to slip and you are not motivated (or it may not even be visible) to fix the tap that has been leaking for weeks.

An experiment conducted in Boston involved cleaning a select number of crime ridden areas to identify whether having an environment without graffiti, broken windows and rubbish on the streets encouraged better habits. The results showed that the areas that were cleaned (part of 5S) had a 20% reduction in crimes as a result. The extent to why these results were so significant is not fully understood, however the impact of 5S on pride and ownership was partially attributed.

5S – Step by step guide

- Why you need to follow the order
- How to decide where to start 5S
- How to know the best position for tools/equipment

Step 1 - Sort

How to sort the good from the bad in the work environment

Sort involves separating the necessary from the waste, the good from the bad. Much like when cleaning an area, the first thing to do is decide what is required and what can be removed. By doing this step first, you avoid spending additional time/resource organising things that are not required.

For obvious wastes such as rubbish, unrepairable equipment or outdated/duplicate files , it is as simple as disposing of them in the most suitable manner. For items that are not clear whether they are a waste or not, they need to be quarantined and reviewed by all relevant stakeholders. Quarantining items can be done using a variety of means, depending on the nature of the environment.

Physical Environment
In a physical environment with medium-large size of equipment, the best way is to conduct a 'red-tagging' event. This involves putting tools/items in a designated quarantine zone with a red tag identifying the item and the proposed date to be removed.

The quarantine zone acts as a parking lot for items, to identify whether they are required and used or whether they are dormant.

For example, if you decide you would like the 5S process to last 3 months (typical duration) then you may put the proposed removal date 2 months from present. If the quarantined item is required within the next 2 month it should be taken from the quarantine zone and the tag removed. At the end of the defined quarantine period any unused items (containing a red tag) can be sold or disposed. The main consideration when selecting a quarantine duration is whether the item is likely to be useful today or in the near future and what risk does it pose to not have the item. Other considerations such as depreciation rates, storage costs need to be also considered.

For example if you were red tagging a supply of raw material that hasn't been touched for over a year. If the projection is for the company to use the material within the next 3 months then it would be best not to red tag the material, remove it, only to have to repurchase it again. Additionally, if the material is very infrequently used but when required helps satisfy some of the companies largest and most important clients then the risk of removing the stock may not outweigh the additional space utilisation for 5S. It is all about using judgement and asking 'what if this stock was not here?'

Virtual Environment
When applying 5S to a virtual environment, treating data & files as physical items to be organised, the same principles apply, however the quarantine zone can be replaced by a folder named "archive_quarantine zone". By filtering files to see the last time they were opened, an expiry period can be applied (1 year for example), simply dragging and dropping files that haven't been opened in the last year into the archive folder.

A group wide email can then be sent with a link to the folder, informing everyone to have a look through the archive folder and remove any items as they require them. After the quarantine time has been exceeded the archive can be deleted. This step may appear trivial, however it is shocking how much time most people spend searching for the relevant files on their computers. The best way to save a minute is to find 60 ways to save a second.

Step 2 - Straighten

A place for everything & everything in its place

Straighten refers to ensuring the unit (equipment, material, data etc) has a designated place and the absence of that unit becomes instantly apparent. In other words, allocate a defined place for defined items of a defined quantity. Determine locations for materials and equipment and put them in that place and keep them there. In order to determine the best location for items to be stored, an understanding of the nature of the unit is required. For example if it is an extremely large item then it may be restricted and not possible to move, likewise if it is only used a handful of times a year then it is less important as an item that is used on an hourly basis.

It is understandable that all items within the workplace may not be able to be addressed straight away, additionally it is always best to start with the 'low hanging fruit' to help demonstrate results, gain momentum and employee engagement. In order to select the quick win items to be organised with biggest impact, a decision matrix can be used.

An additional way to prioritise items is to look at what items are 'complimentary', in other words they are often picked with the same other tools or materials. In order to do that a table can be created that identifies which items are often picked in succession or together. The items can then be placed together to provide convenience, enhanced quality and ultimately improved productivity.

Like the placing of tennis balls next to tennis rackets in a store or ink-cartridges next to printers, complementary products should be grouped. This may seem blindingly obvious, but unexpected groupings between products are often revealed once the analysis has been completed.

Organise Workplace by Frequency of Use
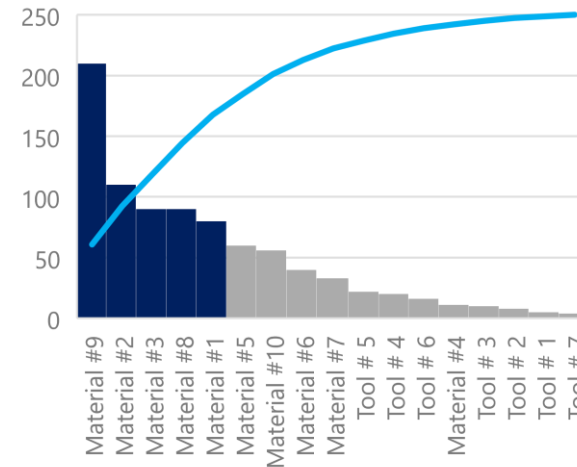
The method for this is to use sign or shadow boards along with the use of colours to clearly visually identify where items are located. In relation to a service environment, on a computer files, folders and programs should be organised in order to reduce number of clicks and search time.

One of the most effective ways to determine the new location of the items is to use a pareto (80/20) graph to identify the tools/material used the most frequently. By doing this, the items that are used the most can be placed in the 'prime' positions in the work environment. By viewing space within the work environment just like property/real estate, the positions most central near people are the most desirable. The same thing applies in business, only the most suitable items should be placed in the prime locations. With this in mind Material # 9 and Material # 2 would be placed in the best location.

Most desirable

Least desirable
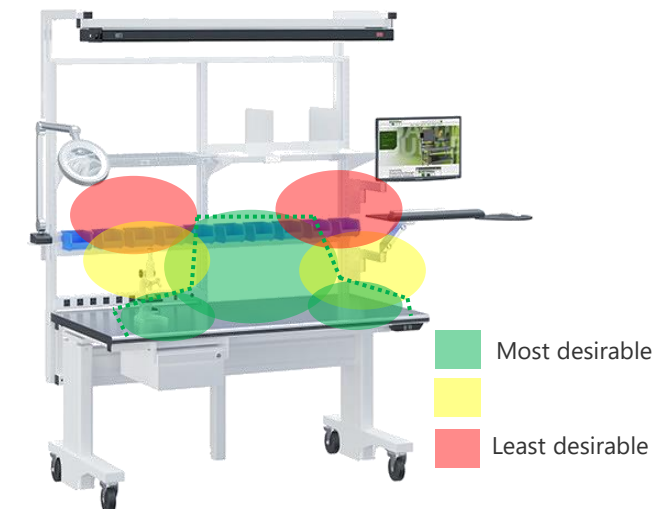
Step 2 – Straighten Continued

A place for everything & everything in its place

When designing a solution for the straighten stage, it is easy to miss the bigger picture – the macro layout. Instead of looking at the small details of whether an items should be on the left of a shelf or on the right, it is worth questioning whether the entire shelf is in the correct place or even whether it is required. Often items have been grouped in their current ways for a reason that no longer exists, or from the start with little thought.

Specialist FlowPlus tools are capable of finding the optimal position for each tool/product. The software requires product data (weight, frequency of use, complimentary items, no of operators using the resource & other factors) to determine where each tool should be positioned. Additionally if resources are shared between operators, the tool will identify the best location to minimise walking. For example, tooling might be organised to have drills and their related drill bits next to each other in a shared location for 3 operators to use.

When deciding the position, layout and orientation of tools you can start to think what is the most ergonomic, fastest and best way of storing each item for use. Some very easy, time saving options include utilising magnets to help pick metal items, using retractable tools that hang from the ceiling in the right place, lifting assistance tools that carry the load of an item etc.

Think big, think of examples from other industries and constantly aim to reduce the time it takes to find, collect and use an item. Best in class manufacturers have demonstrated the huge benefits that can arise from very small, highly repetitive tasks. For example by lining tables with foam, picking small items up becomes marginally faster as your fingers can press into the surface, not possible with a solid table. When an operation occurs a magnitude of 50,000 times per day, these improvements add up to large time savings and related monetary value.

Cockpit design, having most used and critical controls as close to the operator as possible

Magnetic screwdriver

Magnetic knife holder

Retractable, hanging tool

Step 3 – Shine

Restoring tooling/equipment to its desired condition

The shine stage of 5S requires persistence and an attention to detail. The focus of this step is to eliminate sources of contamination, dirt or anything that creates additional work. By cleaning physical items using the correct chemicals, procedures or measures you are simultaneously inspecting for problems.

In a virtual environment, this stage is still important but instead of physically cleaning you will have to search through the files & folders on a computer to make sure the correct data is presented. An example could be inspecting an important excel file to make sure the variables are updated and the source of the data is linked to a live source that will automatically update without any interaction. The idea of this stage is to ensure that once the 5S steps has been completed the first time, everything is in prime condition to be used.
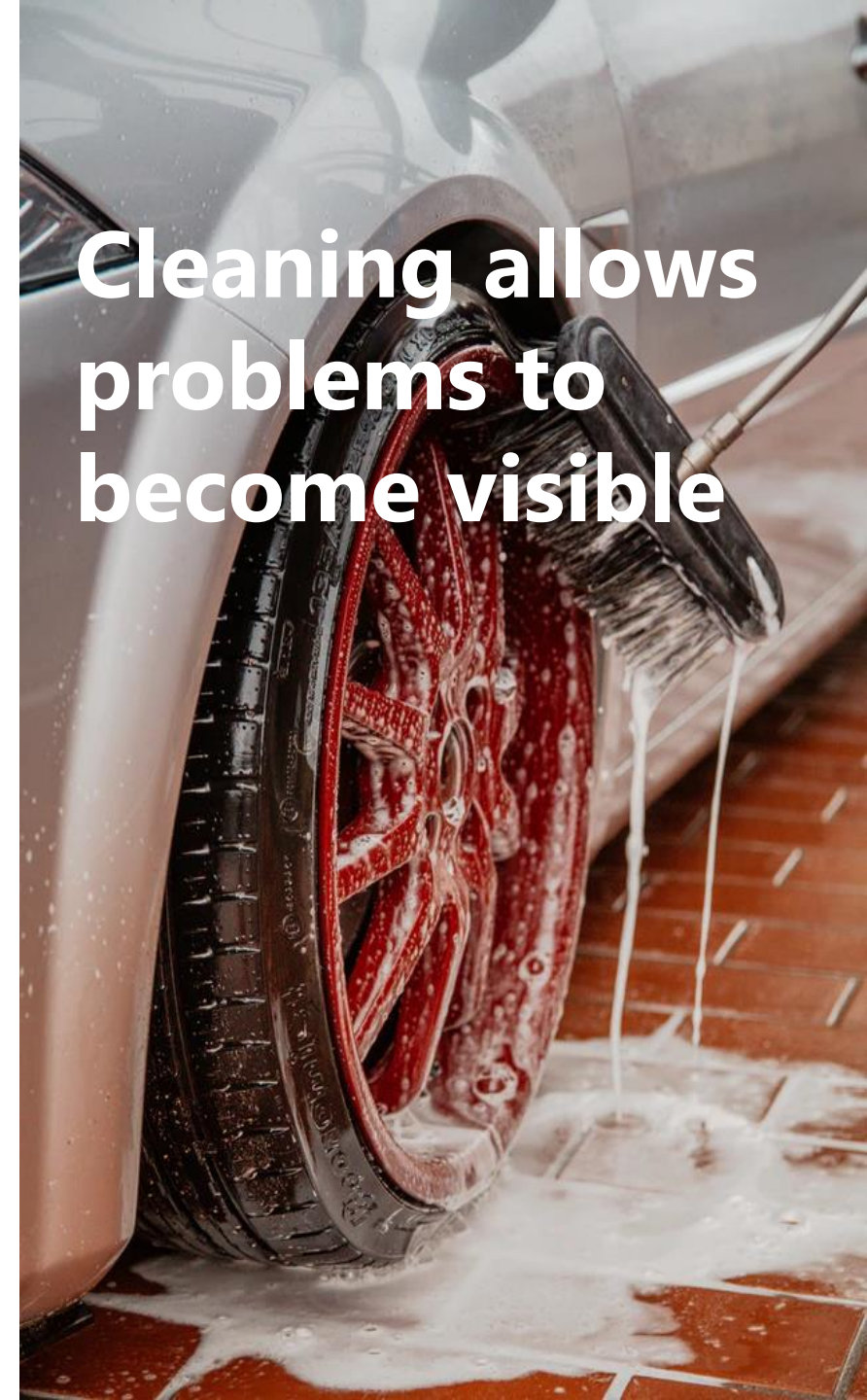
Clean & Inspect the workplace

Eliminate sources of dirt

Restore original operating conditions of equipment

Cleaning allows problems to become visible

Step 4 - Standardise

Ensuring everyone works the same way

Although every stage of 5S should be seen as equally important, it could be argued that standardisation is the most important step. Without standards, the previous 3 S' will not be maintained, followed or upheld. Standardisation also provides the means for sustainability (the final S). Standardisation can be viewed as the glue holding together the components of 5S.

It may appear contradictory but it is more important to create a standard then it is for the standard to be the optimum way of completing a task. A standard provides a common sequence of operations, rules and procedures. Even if they are not perfect, they form the basis for future improvements. By having a standard in place and followed, the variance between operators is vastly reduced and a uniform, easy to manage process is maintained. A process where deviations to the standard can be identified and acted upon. Without a standard, it is impossible to identify any deviation as it hasn't been defined.

Standardisation is about using visual prompts wherever possible to help in searching and completing a procedure. Colour coding is a very simple and effective way of reducing mistakes and working in smart way. Once the standard has been documented, train the standard to all operators. The standard is not a document to be stored in a drawer. It is a live document to be used by supervisors to ensure all employees are working to the same, best way. Standards are the foundation of quality.

Define who is responsible and the frequency for updating the standards, it is important the standard doesn't become static, it is dynamic and should change as improvements are discovered/identified.

OPL (one point lesson)

SOP (Standard Operating Procedure)

Work Instruction
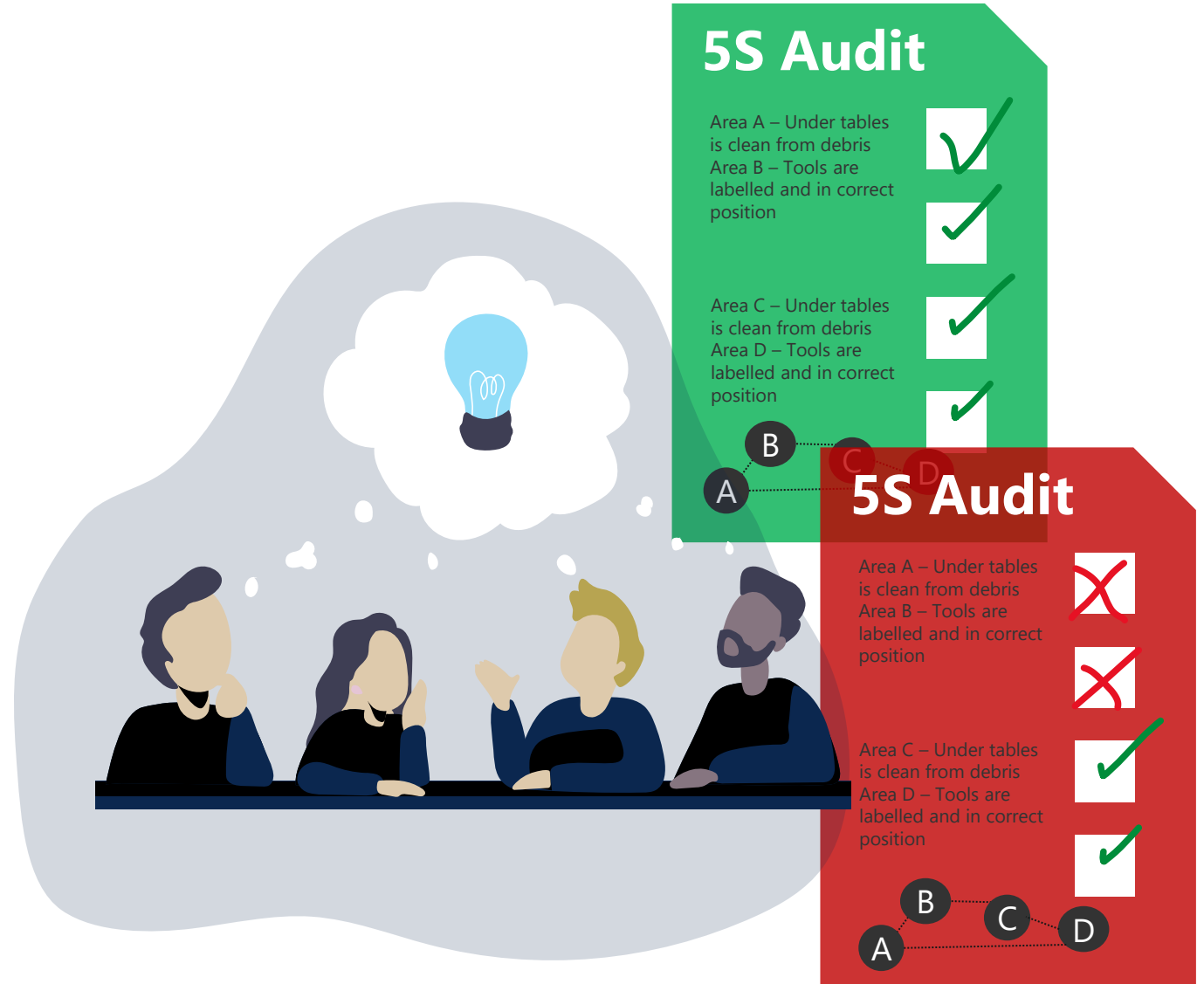
Colour coding can be extremely simple and effective

Step 5 - Sustain

Discipline and routine

In order to sustain any change, the new way of working needs to be maintained. The best way to do this is to have a daily check to update the status of 5S and identify any problems that require countermeasures.

A highly effective way to ensure sustainability, is through the use of daily meetings. These daily meetings do not have the sole purpose discussing 5S, they act as improvement meetings to discuss team performance, improvement initiatives and provide a voice to all employees. As part of the meeting, a visual audit card can be used to signify whether the workplace is organised as it should be according to the 5S standard.

An audit could include 10 questions and a diagram of the walking inspection route that should be taken. For example the audit will signify that at point A, check for any dirt, debris or rubbish under the tables. At point B check that all tools are labelled and in the correct positions etc. Once the audit has been completed, it will be placed on the team board either with the green side facing upwards (everything met the 5S standards) or red facing upwards (a problem was identified during the audit). This way, 5S will only be discussed if the standards are not being followed, hence saving time. The audit process is very simple but when followed correctly is highly effective. An audit rota can be placed on the team board to involve all members of the team on separate days, thus emphasising that 5S is about involving everyone to make improvements everyday and communicating that it is everybody's responsibility to maintain the condition of the workplace.

5S Audit

Area A – Under tables is clean from debris
Area B – Tools are labelled and in correct position

Area C – Under tables is clean from debris
Area D – Tools are labelled and in correct position

5S Audit

Area A – Under tables is clean from debris
Area B – Tools are labelled and in correct position

Area C – Under tables is clean from debris
Area D – Tools are labelled and in correct position

Getting the most from 5S

- 5S is a mindset
- 5S was born from necessity, it is results focused
- Painting the floor isn't 5S

Getting the most from 5S

How to ensure the fullest results are obtained and sustained

With customer expectations ever rising and new competitors arising much faster than ever before, companies need to continuously improve to survive. "Even if you are on the right track, you'll get run over if you just sit there. " Will Rogers. The question turns from being a matter of 'if' to a matter of 'when' you are going to embark on a 5S initiate within your business. When commencing a 5S journey it is very important to follow the methodology step by step and to the full extent into which it is described. This may seem self explanatory and obvious, however the full results are only achieved when each step is completed in the outlined order and to the detail outlined. The methodology is proven and should be trusted.

5S should not be a one-off event, selected as a means to clean an area, but instead is a new way of working, specifically designed to overcome particular problems. These problems include:
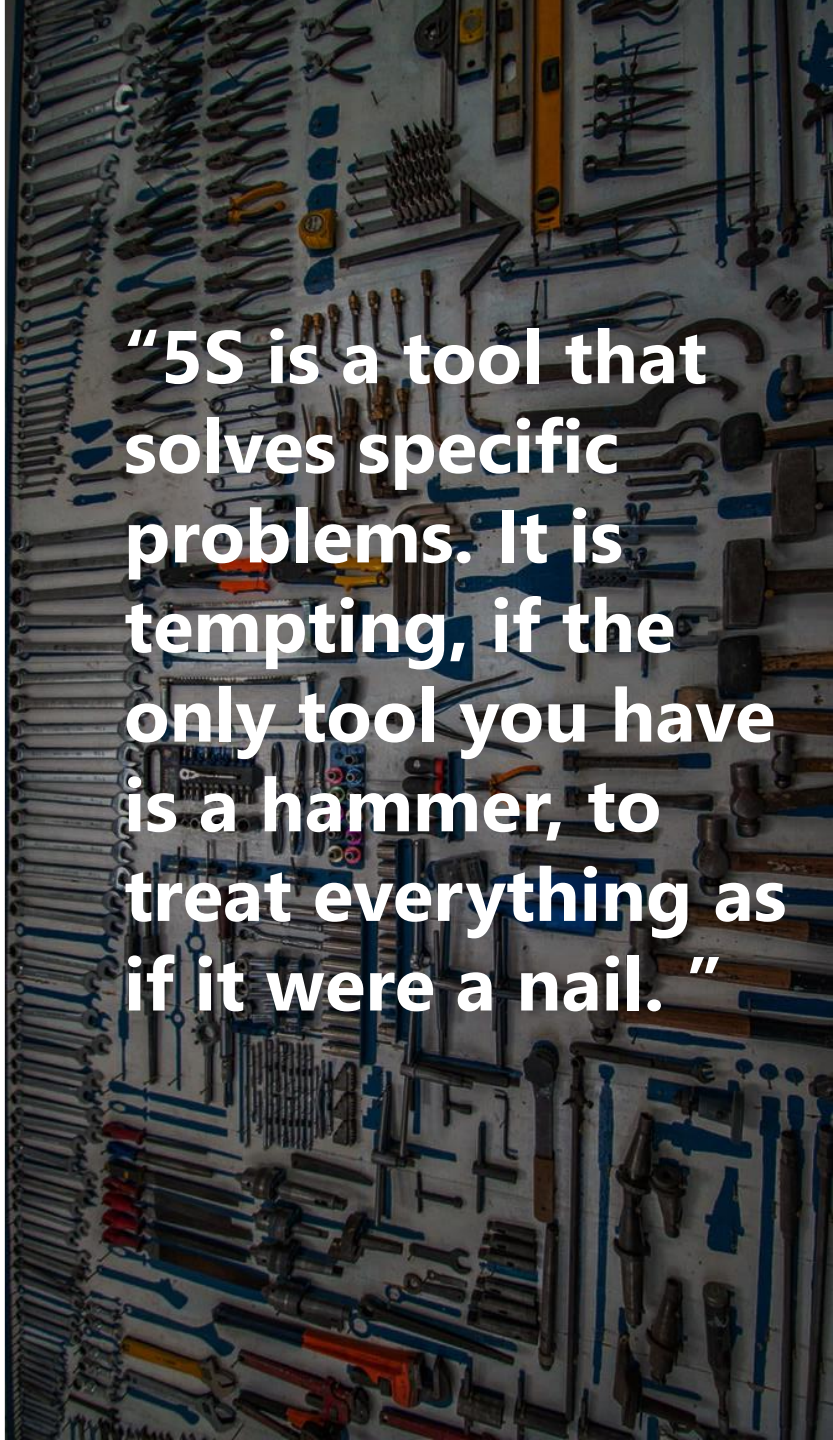
When utilising 5S as a tool to address any of the problems outline above, make sure you measure the benefit and quantify any improvement. Record the time taken to carry out a common task before and after 5S and compare the times, this way you can prove the significant benefits that will come. For example if you are selecting to do 5S within a workshop environment (like a car mechanics workshop), record the total time spent searching, locating & selecting the correct tooling for a task then do the same after. You can then multiply the benefit in time saved by the frequency of similar jobs that occur to identify the annual time saving.

An **un-safe work environment**/ not up to desired H&S standards

Excessive motion of operators/employees

Extensive searching times for material, information, tools, equipment & resources.

A **lack of employee engagement**

"**5S is a tool that solves specific problems. It is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail. **"

Getting the most from 5S

Common mistakes when improving workplace environments

Although 5S is regarded by many as the 'introduction of lean' into an Organisation, it is often too narrowly interpreted and if not utilised properly can cause people to see lean as something trivial and 5S being nothing more than cleaning up. This is of course not correct, however it is very important to ensure productive workspaces are rolled-out throughout the organisation and real, tangible and measurable results are obtained. You do not simply '5S' an area or do a 5S initiative for the sake of doing it. Like any other tool, it is a tool to be used in specific circumstances to deliver productivity improvements and that is the bottom line of it. If you do not improve productivity then you haven't organised the workplace correctly.

5S isn't about being obsessive about how things look, it is about creating a logical, efficient work environment, followed by sustainment & improvement. Low cost, simple devices like retractable hanging tooling can be highly effectively and shave seconds of tasks, soon multiplying to create a large improvement. Alternatively, in hazardous environments such as on oil & gas plants, 5S can be used as a safety mechanism to ensure people remain away from harms way.

5S is a mindset

5S is a mindset and part of the company culture. A shift from, "I don't care that it's a mess" or "not my problem" to "I work in an efficient, organised environment that exposes wastes and abnormalities before they escalate". Much like TPM, where operators conduct basic maintenance tasks and take **ownership** of their machines, 5S is about giving operators ownership of their environment , coming hand in hand with TPM.

Productive workspaces with a **Can Do** attitude (an alternative acronym to replace 5S):
1. Clean-up
2. Arrange
3. Neaten
4. Discipline
5. Ongoing Improvement

CAN DO
attitude

Preventing abnormal & unfavourable working conditions

A good way to introduce 5S to a team and encourage motivation is to address the stress, mistakes and poor workmanship that result when 5S is neglected. For example if you are a mechanic and can't find the correct spanner to perform the job, feeling of frustration will arise. Additionally, the customer is the one that is being punished by having to wait unnecessarily long. The lack of organisation is negatively effecting customer satisfaction and the performance of the business. Likewise, imagine being a patient in hospital and seeing a surgeon looking frantically for a misplaced tool, it instils a lack of trust, professionalism and poor quality of service. By using 5S to address these frustrations it becomes easy to gain employee motivation as opposed to stating 5S as a means to increase productivity.

FlowPlus works with clients to produce 'Productive Workspaces' as opposed to deploying 5S initiatives. We believe 5S provides the fundamentals to equip operators with everything needed to operate effectively, but misses the human and personal aspects of creativity & innovation. Within our suite of tools we use an in-house software that identifies the movements (physical & virtual) and redesigns your work environment to reduce unnecessary movements, waiting & handing time. Developed from Engineering formulas called Boothroyd expressions, the small time losses related to all actions are calculated & improved. This provides a much 'bigger picture' view that has a greater impact than 5S in isolation.

Innovation

- Reaching new levels of productivity
- How to decide where to start 5S
- How to know the best position for tools/equipment

Innovation

Customer focused workspaces

Understanding what the customer wants should be at the heart of any business. The voice of the customers should be heard, and decisions should be made with the customer in mind.

It is our customers that enable us as a business to keep operating and grow. In order to continue, we need to understand how they interact with our product/service. If you can make all employees practical users of the product/service they produce, they can understand what can be improved and what makes the product successful.

This idea of immersing yourself into the mindset of a customer is not new but translating that into the workplace is not common practice.

Examples could include, if you are a producer of hi-fi speakers, put a range of different speakers around the office/production facility and test them out firsthand. What sounds good, what looks good, what was a pleasant user-experience etc. By interacting with our products we understand the small things that customers pick up on, the smell of the varnish etc.

Adidas for example have a showroom/wardrobe in the center of their London head office, for all staff to browse, understand the products, and see how their role has impacted the finished product. By creating a focus on how the customer might feel and the reactions to products, much greater results will follow.

Once the customer requirements have been addressed, it is worth shifting focus from external interests towards internal interests. How can we as a business work well internally to deliver as much value as possible externally?

Teams should work in product groups/workstreams as opposed to department. You should be surrounded by your internal customer and supplier. Understanding what the person next in the process wants and how you can deliver it with more value, in less time.

Imagining all work like a production line, moving from one process (department) to the next, from raw material to finished goods. The space between processes should be minimised and communication should be encouraged wherever possible. Instead of having departments located on different floors, different areas or even different buildings, the supplier and customer should be sat next to each other.

Surround yourself by your customer and supplier

Innovation

Multi-functional workspaces

The majority of office designs focus on cost per person or per square foot rather than on inspiring people to perform at their maximum potential.

A well-designed office needs to include different environments for different tasks & processes, each with their unique benefits. Depending on your specific purpose, function and nature of work, your environment needs to be specifically tailored for its purpose. As all people are individuals, people have different tastes, preferences and priorities.

CBRE analysed a survey conducted by human resources advisory firm Future Workplace and smart-building tech company View Inc. The survey polled 1,600 North American professionals. The subjects were asked to answer questions about workplace amenities, and how these elements impact their level of engagement with their job.

53% of the polled workers said they valued natural light and views of nature most—"well above amenities like fitness centers and game rooms," the report reads.

The most important amenities after **natural light** and views were:

44%

on-site cafe or food (44%)

37%

Nice kitchen (37%)
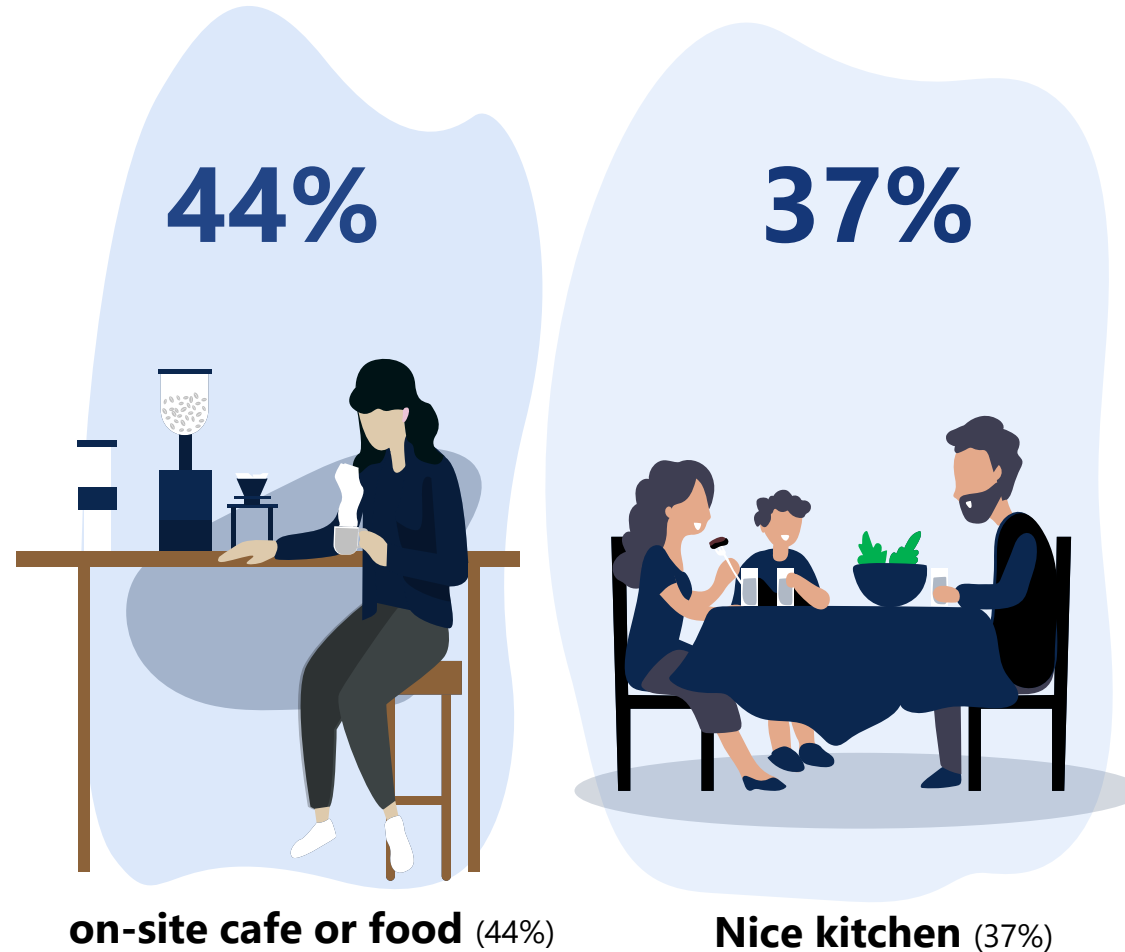
As people spend roughly 25% of their time at work, it is important to make sure they feel comfortable and their time is respected and appreciated.
For those reasons, wherever possible any facilities that reduce the inconvenience and save time are identified as highly desirable.

The 4 main categories of worker within an office environment need to have a suitable space:

Team Work

Solo Working

Collaboration
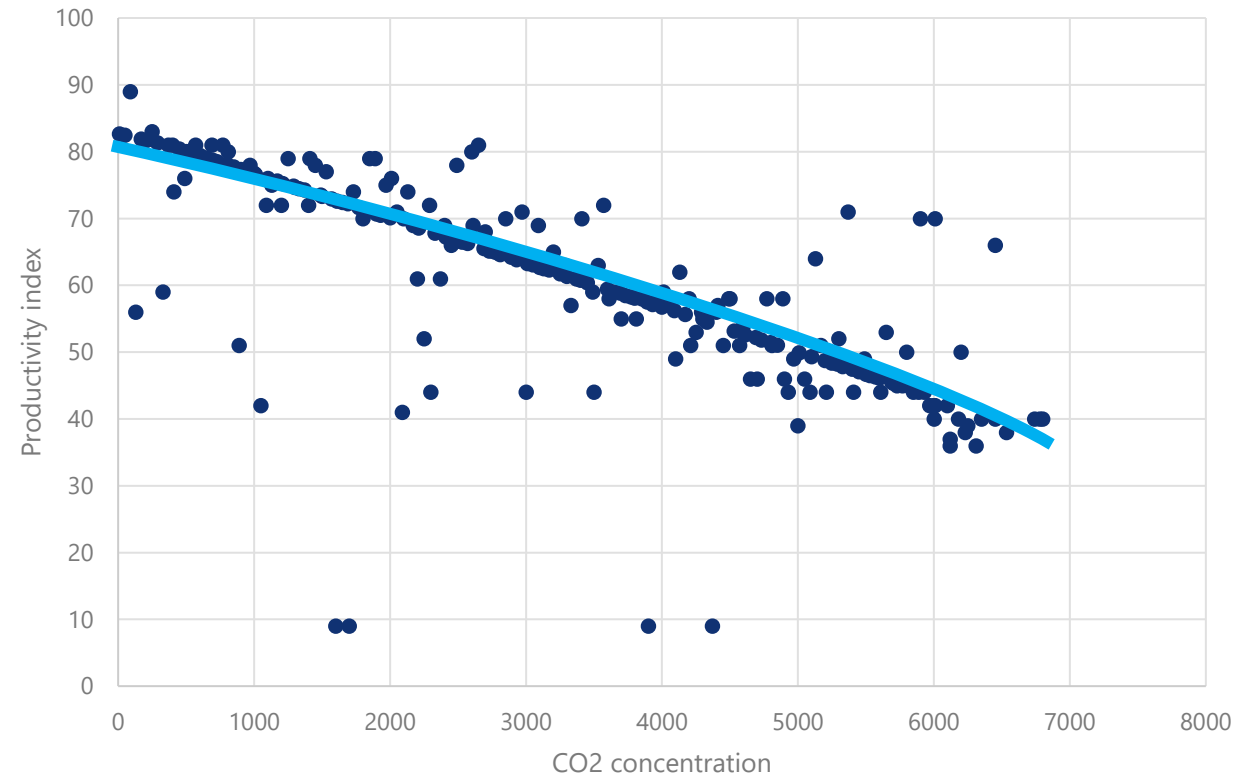
Formal
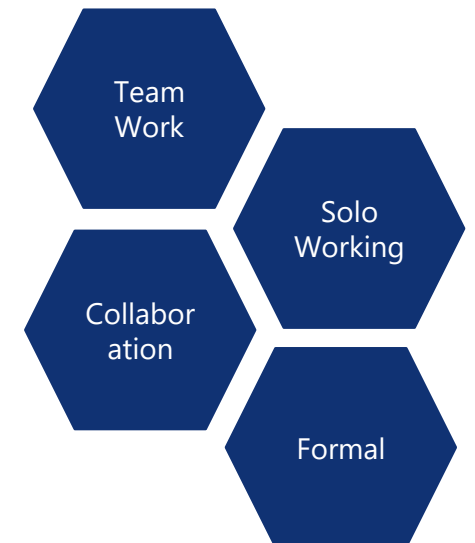
Innovation

Air Quality

Although the lack of ventilation, poor air quality or 'stuffy' sensation cannot be visibly seen, they can be monitored with indoor quality detectors. Factors like carbon dioxide, carbon monoxide or volatile organic compounds can hinder both health and productivity.

Researchers studied Californian fruit pickers who were paid based on the weight of fruit they picked each day. Comparing average daily salaries to daily air quality measures, the researchers found that the workers earned the least amount of money on days with the highest ground-level ozone readings. The worse the air quality was, the less productive workers were when it came to picking fruit. The drop in productivity was only 5%, however it could be seen that a more creative, less repetitive job that requires more thinking would be affected more severely. Additionally, 5% across a large no of employees is still significant, especially as errors will become more likely as well.

There are many ways to improve air quality at a relatively low cost. The most effective means is to have an air-quality sample analysed to understand the nature of air pollution within your environment.

Air quality samples should be recorded in a variety of settings within your environment to take into account localized differences. With the results, targeted actions can be implemented. For example wherever possible the source of the pollution can be removed, if it is being produced form dirty air conditioning units they could be cleaned, if from cleaning chemicals, they can be changed and if from vehicles outside, plants can be placed near office entrances etc.

Carbon Dioxide Effects on Productivity

Implementation

- Where to start
- How to rollout

Implementation

How to select where to start a workspace improvement project

Methods used to assess and analyse the 5S performance can be: Heat maps, movement diagrams & visual observation.

The most effective way of deploying 5S across your Organisation is to start by selecting an area with large potential benefits. This involves identifying where a large amount of time is spent searching and collecting items. Judgement needs to be made to ensure the selected area would be a good showcase example for the rest of the Organisation to see.

Once you have identified a pilot area/department/process that would greatly benefit from 5S, don't be tempted to start it anywhere else until it has been completed to a very high standard. By breaking the problem into smaller, more manageable areas, you can demonstrate the benefits much faster and use the area as a proof of concept to inspire other teams during the rollout stage.

Typically pilot areas will be highly manual operations, using a large selection of tools and with high repetition. For example, in a physical environment this could be a workshop. In a virtual environment this could be an administrative role that uses 5 different programs or folders on a computer.

Pilot

100   80   60   40   20

(%) Organisational Deployment
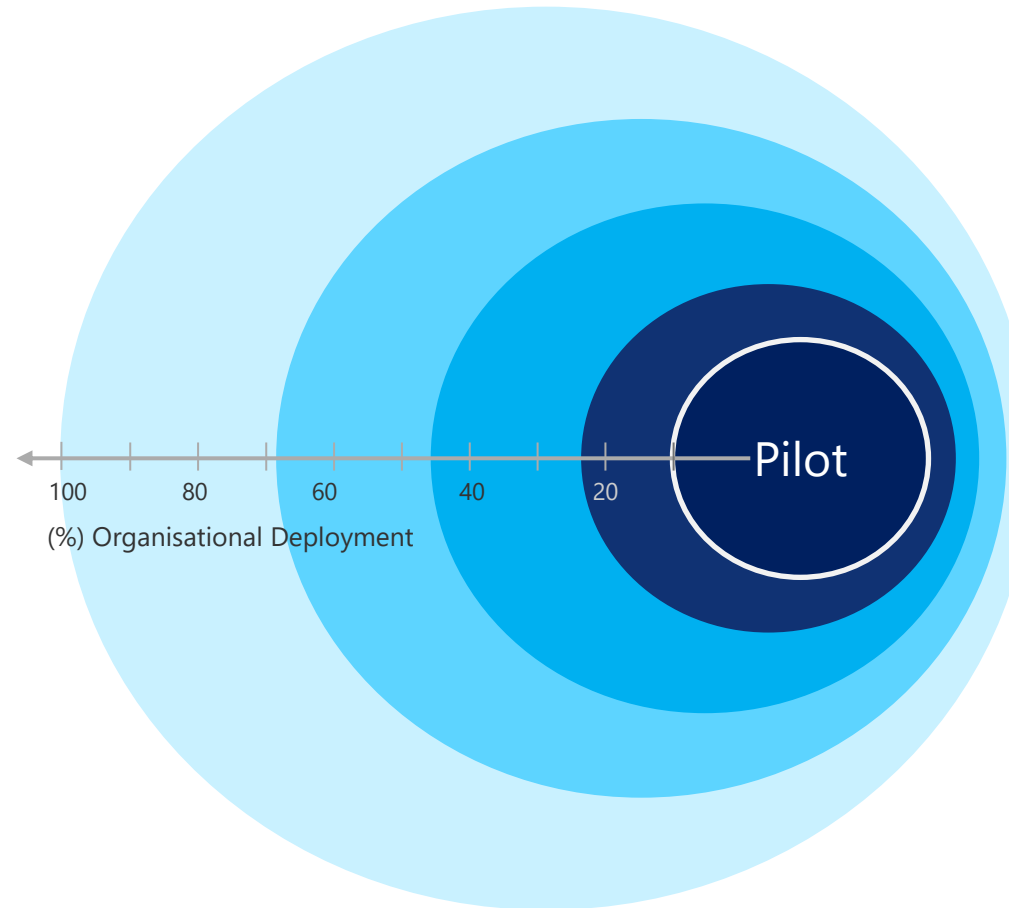
The pilot acts as a model example, showcasing the benefits and results from a highly productive workspace.
A ripple effect will spread across departments and to all areas of the organisation, spreading the results throughout.

In order to increase the speed of the ripple effect, the pilot example should be communicated to the wider organisation with the chance to go and see for themselves. This could be achieved through a lunch-time presentation to showcase the results and nominate champions from each department.

FlowPlus™

o What we can do

o Where we can help

FlowPlus

What is **FlowPlus**™ and what do we do?

About Us

With headquarters in London, FlowPlus™ is a specialist in operational improvement, with a fundamental principal that by making processes flow we can create vast improvements in productivity & cost reduction. We help you work smarter by creating solutions that eliminate non-value added activities, enhance quality, reduce costs, improved delivery, transform culture & enable growth.

Our approach is deliberately different. We believe sustaining results is the true test. That's why we follow a 3-step process; Assessment, Implementation and Sustainability.

We work hand in hand with our clients, delivering at the place where value is added. Together, we crack some of the largest and most complex challenges in the public and private sectors, by pinpointing and implementing the changes that have the greatest impact.

Our promise is simple: we'll leave your O
rganisation better equipped to solve future challenges without us. We believe we have done a good job when we are no longer required.

Quality

Growth

Cost

Culture/
Motivation

Delivery

FlowPlus

The 3 Services We Provide

FlowPlus™ Assessment

"Recognising the problem is more important than finding a solution, because the exact description of the problem leads almost automatically to the correct solution." *Albert Einstein*

For that reason we believe that it is critically important to get things right first time and ensure we are solving the most impactful problems, with the biggest potential.

The creation of your company DNA profile allows us to use various benchmarking methodologies to conduct a 'gap to potenital analysis', identifying your improvement potential using an audit of over 30 criteria. A roadmap and action plan is then created to bridge the gap and ensure long term, sustained improvements in growth, quality, cost & delivery are achieved.

FlowPlus™ Implementation

Our Industry experts utilise our selection of bespoke tools to work directly with you. We believe that if you don't change, then you can't improve, and change needs to take place where you work. For that reason we don't produce reports from behind a computer, we roll up our sleeves and solve the problems as close to the source as possible.

Consulting is what we do. We identify the problems that are most significant, and work with the teams to create permanent solutions.

We are so confident in our expertise & methodology that we only charge on the results we deliver. It eliminates any risk to our clients and shapes our organisation to evolve & continuously improve the tools and ways in which we work.

FlowPlus™ Sustainability

In order to sustain improvements, we strive to develop the skills internally so you can solve problems on your own. We do this partially through training but also through the introduction of an improvement framework/routine to ensure a continuous improvement habit is maintained.

The combination of both a routine, and the ability to overcome firefighting by solving problems at the root is the magic formula.

FlowPlus™

Helping you work smarter