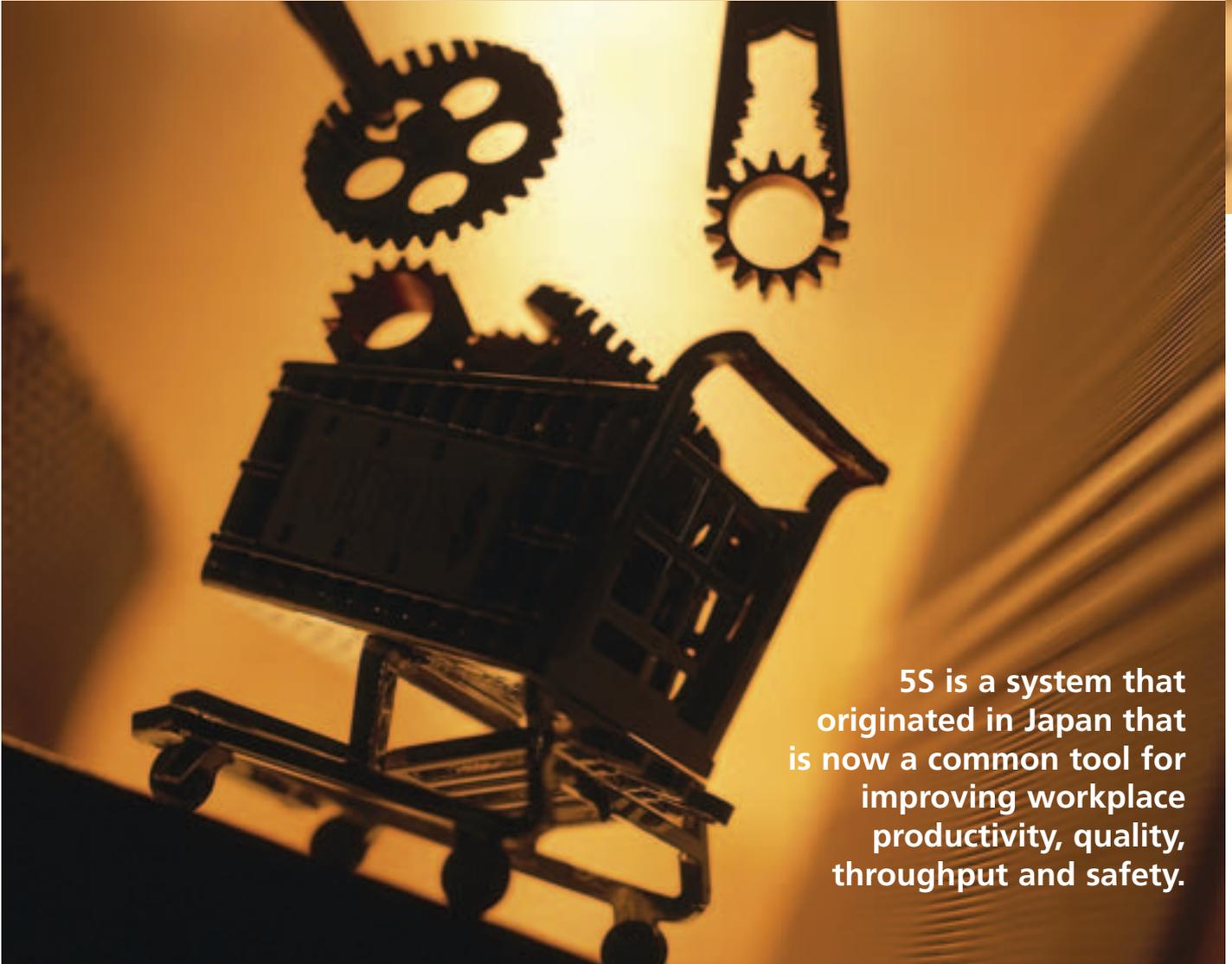


Tool for productivity, quality, throughput, safety



5S is a system that originated in Japan that is now a common tool for improving workplace productivity, quality, throughput and safety.

Five S can be used in any environment including the factory floor, warehousing and storage, workshop and the office. Many companies implementing lean manufacturing start with a series of 5S events to remove the workplace clutter and improve workflows between processes.

The 5S system is based around five Japanese words all starting with the letter 'S', and hence has been given the name 5S.

There are several systems promoted in the Western world that use slightly differing definitions of these words, but the methodology does not vary.

Seiri: Sort. You must first ask what is actually needed in an area. This is similar to spring-cleaning. If you

don't use it, get rid of it or store it in the right place.

Define how much is needed and identify where it should be placed (information, tools, equipment, material, etc) and put what is left in a logical order.

Seiton: Straighten or set in order. Everything has its own place and should be located where it is to be used and organised for a smooth flow.

Often referred to as 'a place for everything, and everything in its place'.

This phase includes colour coding, labelling and other methods of easy identification.

Seisou: Shine or sweep develop methods for ensuring the plant/office is 'tour ready'.

When a plant/office has a clean layout it is easy to recognise something out of place, or a source of contamination/defect.

Seiketsou: Standardise or define standards to ensure that things stay tidy, orderly and clean.

Shitsuke: Sustain. Developing a

5S is used to manage the work area more effectively

system of constantly assessing performance and challenging for improved methods.

While 5S systems have been used by the Japanese since the 1980s, many British companies are only just



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introducing these concepts.

Predominantly used in the manufacturing sector, they can now be found deployed in diverse industries such as banking, mining, construction and many other different industries.

5S is used to manage the work area more effectively and should not be confused with other programs such as TPM (total productive maintenance) that are more machine and equipment focused, even though the concepts are similar.

One Australian consulting company has adapted the concept and called it 'work area management', or WAM, as a way to de-emphasise the

Japanese terminology.

The Japanese Industrial Safety and Health Association found that companies that have implemented a 5S program have made significant impacts on the safety and productivity of their workforce.

How does 5S work?

Lean manufacturers will often identify the bottlenecks in their processes, or services (equipment or turn around time for maintenance and repairs), and then decide that a 5S activity should take place to improve the throughput of that process or service.

A team will be formed to review

the workplace layout and workflows following some initial training.

As with all lean tools, 5S is about eliminating waste and maximising value-added work.

To this end, 5S uses its process to create and maintain an organised, clean and efficient setting that enables the highest level of value-added performance.

This means eliminating search, travel, transporting materials, inventory.

It achieves its ends by introducing organisation and orderliness, eliminating unneeded materials and establishing self-discipline.

Training will often include the completion of a workplace assessment, and/or 'waste hunt' using the criteria of the five 'S's.

Action will be identified during this process to streamline the workflows.

This is then followed by a 'Red Tag' event – any item not required is removed, or 'tagged' pending a decision on where it should be stored.

Excess equipment/material is often sold off, donated, recycled or removed to its rightful place.

This is part of the 'Sort' process.

Once any surplus items have been removed the team then decides where, how much and how remaining items should be stored.





Industries with high risk profiles have the most to gain yet many are unaware of 5S and 6S

This often includes colour coding, installation of storage systems, shadowboards, labelling, etc This is known as ‘Set in Order’.

This is also a good time to really challenge the existing workflows, and try to reduce retrieval times for tools, equipment, material and information.

A good guide is that material should be capable of being retrieved ‘right first time’ within 30 seconds in the immediate work area, and two minutes within a department.

If you cannot achieve this then you should go back and ask the basic question – ‘Is this the right place for this item/s?’.

A clean-up and often a new coat of paint is applied in the next step – ‘Shine’.

This step, if implemented properly, will install a sense of pride in the workplace and ensure that it is easy to keep in pristine condition – ‘Tour Ready’.

The next step is to ‘Standardise’ methods for maintaining the workplace in the new condition – maintenance standards (no oil leaks or spillages), cleaning standards and frequencies, lubrication standards, storage standards, etc. Most companies neglect to do this step and often find that their plant/process/office reverts back to the original state over a period of time.

The final step is to develop a

method of ‘Sustaining’ improvements in the workplace.

This is often done through a series of ongoing assessments carried out by the work area team and supported by management.

Impact on safety Implementing a 5S program will improve safety and reduce the risk profile of a work area, but it does not focus on safety directly.

Many companies have realised this and have now included safety into their 5S programs, and now call these either 6S or 5S+1 programs.

The Japanese Industrial Safety and Health Association found that companies that have implemented a 6S program made even further gains on their safety and productivity results.

Ideally, the new 6S system will follow the following sequence – Sort, Set in Order, Safety, Shine, Standardise, Sustain.

Once the original clutter is removed then safety, work practices, access, risk exposure, etc can be assessed and actioned.

When we start ‘setting in order’

we can review the new process for ergonomic risk and repetitive use injury risk and ensure that appropriate systems are built into the new methods.

The introduction of Safety as the sixth ‘S’ allows us to create and maintain an organised, clean, safe and efficient setting that enables the highest level of value-added and risk-free performance.

Companies that have included Safety into their existing 5S program, and are now reaping the benefits of lower risk profiles, include US Defence Forces, Boeing, Northrop Grumman, and many food processors and pharmaceutical manufacturers (HACCP and food contamination risks).

Industries with high risk profiles – metal industry, mining, construction – have the most to gain yet many are unaware of 5S and 6S systems.

Recent discussions with senior officials within an Australian State Government Workplace Health and Safety Department revealed that they were also unaware of the impact of 5S and 6S programs.

In 2004, the UK construction industry introduced a ‘5C’ program as an equivalent to the manufacturing 5S programs.

There are some crucial differences between the application of a 5S system and a 6S system.

Many lean companies will use 5S to improve productivity in a bottleneck work area or to balance workloads between processes.

Their focus is on lead-time reduction.

6S is an ideal tool for workplace health and safety officers to address risk profiles in a work area or reduce cross-contamination risk.

By converting your existing 5S system to a 6S system you can benefit immensely – if you are already doing lean you have the foundations there.

By incorporating safety as the sixth ‘S’, it is easy to align safety goals with business objectives using a common tool.

Article courtesy of manufacturingtalk.com

Companies that have implemented a 6S program made even further gains on their safety and productivity results