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6S

NHS England and NHS Improvement

6S

What is it?

6S (previously known as 5S) is a visual system for improvement that helps create and maintain an organised, clean, high performance workplace. It forms the basis for standards work, which enables you to measure improvement.

The extra 'S' was added to the 5S Lean tool to emphasise the importance of safety.

The 6S stands for:

1. **Sort**: remove what is not needed
2. **Set in order**: agree what goes where and make easily accessible
3. **Shine**: keep the environment clean
4. **Safety**: identify and prevent unsafe conditions
5. **Standardise**: a consistent process agreed by all
6. **Sustain**: continually improve.

Using 6S will help you to reduce the opportunity for variability in activities by ensuring that everything needed at each step of the process is easily available. This means that any defect in a particular step is easier to see.

When to use it

This is a useful tool if you want to focus on how the working environment affects services as it helps to identify where changes need to be made as well as helping staff to create and maintain a safer environment for patients, staff and visitors.

How to use it

Start the process by communicating with relevant staff what is going to happen (see **stakeholder analysis**). These may include trade unions, stores staff, management, health and safety, estates personnel, maintenance engineers, etc. You may also want to include some of these groups in the activity as they bring **fresh eyes** to the project.

Before you start, take photos of the area. These will act as before and after measures of any improvement. It may also help to focus effort on the place staff wish to tackle first.

1. Sort – remove what is not needed

This is a team-based activity for all those who work in the area.

- Remove all items that are not used in the area you're focusing on, eg outdated materials, broken equipment, redundant equipment or files on the computer that you no longer use.
- Ask staff to tag all items they don't think are needed. This improves understanding about need and use.

- Classify all equipment and materials by frequency of use to help decide if anything should be removed. This is known as a red tag. Include the date when the tag is attached, as well as a date for completing any action. Record the quantity of material related to the tag and the reason for tagging it. It may be that the item is unnecessary, defective, non urgent, left over or held 'just in case'. Include a place to record what you intend to do with it, eg dispose, store close by, store in area, send to main stores, hold for analysis.
- Keep a log of red tags to track activity.
- Establish a holding area for items that are difficult to classify. These items will be held for an allotted period to enable those who use the area but are not in the team to identify their use.

2. Set in order – agree what goes where and make it easily accessible

Set in order classifies the remaining items. It is also the stage at which the team sets a standard for cleanliness. Unclean items can hinder day-to-day work or lead to a failure or breakdown of equipment.

- Put frequently used items close at hand.
- Arrange items visually in the best position for day-to-day work, for example arrange files so you can immediately see if one is missing or has been replaced incorrectly. This step also applies to computer filing systems.
- The visual nature of the revised system is particularly important, so you may want to use colour coding or another visual clue such as sticker outlines to show where items are stored. You should be able to see at a glance if something is not there. This reduces the opportunity for error and saves time locating missing items such as a patient's notes.
- A version of a **spaghetti diagram** might help you work out the order to put things in.

3. Shine – keep the environment clean

Once you have arranged the items in your work area, it is tempting to move onto another area and not look back. This step reminds us to maintain standards by setting aside time each day. Decide who is responsible for what standard and who will do what. Include a chart with signatures to show that maintenance has taken place.

4. Safety – identify and prevent unsafe conditions

All too often we take safety for granted. Aim to build vigilance into the work area to continuously monitor any safety issues that might arise or could be prevented.

5. Standardise – an agreed, consistent process agreed by all

The next step is standardise, which means the organisation sets consistent standards so that staff who work in different areas are not expected to work to different standards. This saves time as it allows routine tasks to be undertaken in a routine way.

6. Sustain – continually improve

The final step is maintaining the set work standards and actively removing any causes that obstruct the maintenance of these standards. This means you can consistently reduce the time needed on a daily basis. Make sure you identify the root causes for any problems to prevent them recurring. You can use **root cause analysis using five whys** and **cause and effect (fishbone)** diagrams to do this. Use rapid small-scale tests of change to test out possible solutions (**PDSA**).

Examples

Figure 1. Before and after sort and shine

Figure 2. The benefits of a visual system: photos on the outside of a cupboard to save staff time searching.

Figure 3. Visual management in the sorting area for specimens: the laminated blank form helps non pathology staff to sort specimens.

What next?

Allot time to 'shine' on a daily basis. For example, develop a routine to check stock. Compare your team's standards with organisational standards and aim to conform as this makes it easier for staff working in more than one area. Look out for problems that prevent you from sustaining the improvements you have made. If you do come across problems, try to identify the **root cause analysis using five whys** and **cause and effect (fishbone)** diagrams and use more rapid small-scale tests of change to test out your ideas (**PDSA**).

Additional resources

Bicheno, J (2004) *The Lean Toolbox: The Essential Guide to Lean Transformation*, PICSIE Books: 4th edition

Osado, T (1991) *The 5S's Five Keys to a Total Quality Environment*, Asian Productivity Organization

Rich, N (1999) *Total Productive Maintenance: The Lean Approach*, Liverpool: Liverpool Academic Press

Rich, N, Bateman, N, Esain, A, Massey, L and Samuel, D (2006) *Lean Evolutions*, Cambridge University Press: Cambridge

References

Hirano, Hiroyuki (1995). *5 Pillars of the Visual Workplace: The Sourcebook for 5S Implementation*, Cambridge, MA: Productivity Press.

Osado, T (1991) *The 5S's Five Keys to a Total Quality Environment*, Asian Productivity Organization

Womack, J, Jones, D and Roos, D (1991) *The Machine That Changed The World*, London: Simon and Schuster UK Ltd.

Background

The original 5S is seen as the foundation of Lean transformation. It originates from Japan where the five steps are called seiri, seiton, seiso, seiketsu and shitsuke. The technique is visible, apolitical and improves safety and improvement consciousness in the workplace.

Linked to organisational learning, the underlying approach is the need to understand the detail of all activities in the workplace in order to understand the whole system. It forms the discipline for Lean quality and safety.

The tool was used extensively as part of the NHS Institute for Innovation and Improvement's Productive Series.