



## REVIEW OF 6S METHODOLOGY

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### ABSTRACT

In the modern days, the manufacturing companies require not only quality management system standards, but also require the continuous improvement in the quality management and safety of workers in the plant. This requirement is fulfilled with the help of many advanced techniques and methods in the manufacturing sector. 6S is the one of most popular method in these days to fulfill the need of manufacturing companies. This method provides the improvement in quality, standards and safety in the plant. The implementation of 6S method in the any organization creates a clean and safer work environment for the employees in that organization. The 6S technology uses many tools like TQM, lean manufacturing etc. to improve the work environment of the any organization or company. The main aim of 6S method is to make the all processes of any organization more efficient and safer. The implementation of 6S method results in improvement in quality, reduction in wastage and cost, increase in efficiency and improvement in safety.

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## INTRODUCTION

6S is most popular method to improve the efficiency and safety of any company or organization. The 6S method can be implemented in all type of industries or organization like small scale industries, medium scale industries and large scale industries etc. The 6S is a method for sorting, cleaning, organizing and doing necessary improvement in workplace. This method helps to increase the efficiency and reduces wastage and optimizes quality of any work environment. The 6S method gives good results for required improvement in an organization or company. By implementing 6S method we can get good improvement in the production process and safety in any company. The 6S method is highly support the objectives of organization to achieve continuous improvement and higher performance in quality and safety.

#### The steps of 6S method are as follows

- Sorting
- Set in order
- Shine

- Standardization
- Sustain
- Safety

The 6S is the methodology of creating and maintaining well organized, neat and clean, high effective, high quality and safer workplace in any organization. The 6S method also increases the work efficiency of workers in any organization. After implementation of 6S in any organization, workers feel more comfortable and safer in the work environment. This results in improvement in the work efficiency of workers in that organization.

#### Literature review

The 6S method is the advanced version of 5S method. The 5S method is originated in Japan. The 5S method is uses the five steps sorting, set in order, shine, standardize and sustain. This was the invention of a most important technique in the Japan to improve the quality and performance of an organization. The 5S method was developed by Hiroyuki Hirano.



Figure 1: 6S method processes

It was first used by Toyota in 1970. This method used by many organizations after that. But safety is not main priority in this method. The main aim of invention of 6S method was to give priority to the safety as well as quality and performance. The 6S method can be implemented in all type of organization or companies. The safety is the main concern in manufacturing companies and all other organizations in the 21<sup>st</sup> century. So, 6S is the best method to implement in the organizations to achieve high quality, high performance and high safety in the work environment.

## METHODOLOGY

6S is the methodology to improve the quality, higher performance and safety in the work environment of any organization.

Table 1: 6S Methodology

6S Methodology Steps	Meaning
SORT	Sort the all useful material and throw away the waste material from workplace.
SET IN ORDER	Keep the all things in a proper order and place to quick and easy access them,
SHINE	Clean the all machine, equipment and workplace. Maintain the workplace neat and clean regularly.
STANDARDIZE	Uses the standards in the workplace. Constantly keep order at workplace and make it habitual.
SUSTAIN	Implement this process regularly and make it compulsory for everyone in the workplace.
SAFETY	Install all needed safety equipment at workplace and make compulsory the wearing of safety equipment at the workplace.

### Sorting

Sorting can be classified as throw away all waste material, non-conforming products, useless and damaged tools from the workplace. Keep the all equipment, tools, material and other information that is useful for attainment of work. It helps to maintain the workplace clean and effective for searching and receiving stuff cut down the time of running the operation

### Set in Order

Manage the all items in a proper order and place at the workplace for quicker access and use. Place labels on every item for identifying easily.

Make sure items can be recognized by tagging them properly. Every working method has its own type of order. Identify and rectify it.

### Shine

Routine cleaning makes the workplace neat and clean. Way of cleaning is monitored during cleaning machines, workshop and light source. Operator should take care about own maintenance and cleanness.

### Standardize

Work out and implanted standards in the workshop. Management should give the instruction to the employees which are easily understandable so workplace clean and would be in order. All workers of the workshop should be participating in this activity. It is concluded that standards not only being implemented in usual operational process, e.g. maintenance, movement, production, sorting but also in organizational process like customer service, bookkeeping etc.

### Sustain

The main objective is to setup a clean environment and to maintain it as an ongoing process forever. This increases the awareness in the workers and increases the quality. It also increases the human relation and communication between the workers.

### Safety

Safety is the main step of 6S method. Safety is the state of being safe, the condition of being protected from harm. Safety uses some policies and protections to protect the workers from any accidental injury at the workplace. Much safety equipment is also used such as safety helmet, safety jackets, safety shoes, fire extinguishers etc. in the workplace. Make sure that all safety equipment's like fire extinguishers, personal protective equipment, first aid kit etc. are present at the workplace. All safety equipment's should be regularly maintained.

### Advantages of using 6S Method

- Reduction in material handling cost.
- Neat and Clean workplace is available.
- Easy to find tool and use it.
- Easy to access the all equipment's and files in the organization.
- Saves process time.
- Always neat and clean tools are present at the workplace.
- All things are in well-organized order.
- Increase productivity of plant.
- Increase quality of products.
- Reduce possibility of workers injury.
- Create a safe work environment.
- Improve communication between employees.
- Reduce manufacturing cost.
- Increase workplace safety.
- Increase efficiency of plant.
- Increase work speed at the workplace.
- Maximize use of tools.
- Reduces wastage in the plant.

- Minimizes equipment and tools breakdowns at the workplace.
- Reduces tool changing time.
- Increase workers performance at the workplace.
- Increase overall efficiency of workplace.
- Increase workers safety at the workplace.
- Reduces chances of accident at the workplace.

### Conclusion

By studying 6S methodology we conclude that this method is very useful and beneficial for any organization or manufacturing company. Main motivations to initiate this activity in the company or organization to do away with excessive inventory, improve process flow, organize work, make work climate healthy and make safe working environment. The implementation of 6S methodology results in the improvement in quality, performance and safety. The 6S methodology has positive effect on the overall performance of any organization.

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