

LEAN SIX SIGMA

Lean Six Sigma is a quality management methodology used by businesses to eliminate waste. Lean is famous for its ability to handle waste while Six Sigma known for process improvement. Lean and Six Sigma both aim to handle waste. Waste is defined as any step or action in the process, that a user does not gain any value from. They are things that a user would not want to pay for. This waste can be divided into eight categories.

1. **Transportation:** refers to the excess movement of people, tools, inventory, equipment, and other components of a process than it is required.
2. **Inventory:** occurs due to having more products and materials than required. This can cause damage and defects to products or materials, greater time for completion, an efficient allocation of capital etc.
3. **Motion:** this refers to the time and effort wasted due to unnecessary movement of people, equipment, or machinery.
4. **Waiting:** this can be time wasted waiting on information, instructions, materials, or equipment.
5. **Overproduction:** this is the waste created due to producing more products than required.
6. **Overprocessing:** it refers to more work, more components, or more steps in a product or service than required.
7. **Defects:** this is the waste originating from a product or service that fails to meet customer expectations.
8. **Skills:** refers to the waste of human potential, underutilizing capabilities, and delegating tasks to people with inadequate training.

Over the years, many systems have emerged that use the lean methodology to identify and handle the different kinds of waste. The most popular and effective ones are Just-In-Time (JIT), 5S, and Kanban. These methodologies help in optimizing the waste production and are often used together to maximize results.

The JIT methodology focuses on reducing the amount of time the production system takes to provide an output and the response time from suppliers to customers. 5S is another methodology that focuses on cleanliness in organization while improving profits and efficiency. Kanban is a visual method to manage tasks and workflows. Kanban enables users visualize the workflow to identify issues in the process and fix them.