

6 Elements of Flexibility to Help You Maintain a 5S/6S Lean Culture

Six Sigma or lean manufacturing can help you gain an edge in the marketplace. However, elements such as changing customer demands, increased competition, constant product innovation and unpredictable commodities costs can pose a challenge. Certain elements of flexible manufacturing systems can help your plant follow 6S lean manufacturing, especially the following six classifications:

1. Labor Flexibility

Having a workforce that is cross-trained in several jobs, machines or tasks beyond their primary one is crucial to a flexible or lean manufacturing environment. This allows you to pivot quickly during times of change, and gives you the ability to switch individual employees to other tasks during an off-season or slow time. Having a team that can perform multiple tasks means you can keep your overall workforce smaller, which also helps you maintain a lean culture.

2. Machine Flexibility

Just as your labor force benefits from having employees who can perform multiple jobs, your manufacturing process will benefit by having machines that can perform a wide range of operations. Machine flexibility allows you to respond quickly when there are changes in the marketplace or client demands—and can also reduce the need to invest in new equipment.

3. Volume Flexibility

Designing volume flexibility into your process can help you remain profitable during fluctuations in supply and demand. Following steps one and two is crucial for making volume flexibility possible. It allows for other requirements, such as being able to subcontract some work to other firms during times of higher volume.

4. Routing Flexibility

Breakdowns can and do happen in any plant, but having a flexible routing system in place allows you to bypass broken equipment in the assembly line—and that greatly reduces potential downtime. Having stations, employees and machines in place to perform a variety of tasks can help you plan for multiple routes in the instance of a breakdown.

5. Material Handling Flexibility

Planning the logistics of moving parts, products and tools can ensure your workers have what they need when they need it, and nothing is slowed down due to a production backup. But just like with routing, being flexible in the paths you take when transporting material across your plant can help you plan for the unexpected, which leads to less downtime when instances do occur.

6. Product Flexibility

Being able to seamlessly add new products into your workflow gives you the ability to respond to client needs and to stay ahead of the curve when it comes to market trends. There are measures you can implement to help you stay flexible while also remaining lean. Having CNC machines, 3D printers and rapid tooling centers readily available helps you pivot quickly when a new part hits the assembly line. This availability allows you to make the needed changes without having significant interruptions to your processes.

While you may not be able to incorporate all the elements of flexible manufacturing systems, these six are some of the more important ones when it comes to remaining lean. The unpredictability of the marketplace can easily disrupt the process of a lean manufacturing environment, but planning for it with a few flexible practices can make all the difference to your bottom line.

