Visual Management

Visual Management is a business management technique that communicates important information in the physical workplace. It is a system of information displays, visual controls, labels and signs, color coding and other markings instead of written instructions. Lean organizations rely heavily on visual management to detect abnormalities and reinforce standards while ensuring stability and safety in the workplace. Ideally, everyone should be able to assess the status of a situation at a glance, even the casual observer. Employees also need visual displays that show what is expected from them and to keep them informed about production status and customer needs.

An effective visual management system seeks to display production status and performance information, communicate standards and work instructions, make problems and abnormalities as apparent as possible and show identity and directions. It can reduce the opportunity for miscommunication, highlights abnormalities and deviations,

and provides an immediate insight to what needs to be done next. When problems and deviations are visible and apparent to all, immediate corrective action can be taken to increase the efficiency and effectiveness of the processes. Visual controls are also used to share goals and ideas, report team and Kaizen progress, and indicate safety risks and promote safe behavior at work.

Research shows that people tend to learn and process information more visually. Therefore, effective visual communications can have impact on safety, productivity, cost, quality, on-time delivery, inventory and equipment reliability. Workplace visuals can play an important role in job training which will eliminate the need for constant supervision. Employees will quickly identify and react to safety, quality, efficiency problems. Visual management offers other benefits including:

- Creates stability to the environment, equipment and work performed.
- Reduces errors and mistakes.
- Reduces downtime and maintenance costs.
- Increases the awareness of waste and waste management.
- Improves compliance to safety.
- Improves the communication between different shifts.
- Improves employees involvement and morale.
- Eliminates the need for time consuming meetings.
- Reinforces continuous improvement.

Many lean techniques and principles rely on visual management starting from floor marking using adhesive floor tapes to the large visual displays and scoreboards. Visual management serves as the key sustaining force for many popular lean techniques

including 5S, standard work, total productive maintenance (TPM), quick changeover, and pull production. It is especially important during the early phase of Lean implementation when companies are using concepts such as 5S and TPM to create standards and establish operational stability.

- **5S** is one of the most fundamental principle in Lean. It involves many visual activities that can help create a better work environment. It suggests the use of colors and labels to clearly mark storage locations for each item in the workplace. It also defines inventory levels and reorder triggers to ensure everything is available as needed at the point of use. If something is not normal, we want to make that as apparent as possible.

- **TPM** visuals simplify preventive maintenance activities ensuring that equipment remains in optimal running condition with minimal breakdowns. They can also be used to identify and prevent abnormalities from turning into failures. Labeling and marking gauges, oil levels and lube points are all examples of visual controls that enables employees to easily detect abnormalities and out-of-specification conditions at a glance. Evidence of equipment transparency should exist to ease set-up and checking. It is also recommended that trouble logs are used at every machine.

- **Safety** visuals are important to keep the facility safe and environmental friendly. They alert employees and visitors to potentially hazardous locations and situations to prevent unsafe conditions. It's important to properly identify fire protection equipment, safety showers, eye wash stations, personal protective equipment, and first aid stations. Signage, hazard warnings and safety instructions should be provided at the point of need. All disconnect switches for every electrically powered equipment should be clearly identified.

- A strong visual management system seeks to promote consistency and create process stability. **Standard work** visuals help ensuring that tasks are always performed by all in the most efficient and effective way possible. They include procedures, work instructions, check sheets, checklists, flowcharts, schedules, photos and one-point-lessons. These visuals will help minimize production errors and ensures that workplace standards are adhered to by all. Remember that the best visuals are those that include photos and/or drawings and those that are placed at the point of need.

More Applications:

- Marking the floor and the piping system.
- Marking the materials and products being produced.
- Marking the machines, equipment and production lines.
- Marking the offices, rooms, cells and storage areas.

- Way-finding visuals to help people find the way around.
- Signs such as do not enter and no-smoking signs.
- Using color coded cards and Kanban boards in a pull system.

Standard Floor Markings

- Using of boards to prioritize problems and communicate countermeasures.
- Using of posters and banners to reinforce Lean goals and principles.
- Using of tracking boards to facilitate communication in multi-shift operations.
- Using of scoreboards to communicate and track process metrics in a real time basis.
- Using of production summary boards to display information such as efficiency, Takt time, etc.

Andon and Production Summary Boards:

An **Andon** display is a multi-colored lighting system that provides a simple and consistent mechanism for communicating information on the shop floor. It is an effective communication tool that brings immediate attention to problems as they occur at a machine or a manufacturing cell. The system may include means to stop production so the issue can be corrected. For example, a light may turn on or change color to indicate

a shortage of raw materials or the need for maintenance.

A workplace without a display of production metrics is like a car without a speedometer. You may know where you are going but you have no idea when you will be there. **Production Summary Boards** are used to monitor the process output and see if it meets customer demand. Andon lights and production summary boards should be visible in the shop floor to communicate the current status of a production system. Everyone should be able to see where production stands which allows maintenance and production teams to quickly resolve process and quality problems which may occur during production.

Tips to Create a Cohesive Visual Management System:

- Remember that your goal is to make the area more informative.
- Determine where you need to implement visual management.
- Decide who are going to be involved in the implementation effort.
- Identify information deficits, determine what needs to be shown and the type of information that need to be conveyed. One way is to design a visual checklist that covers storage locations, standard work, safety, maintenance, process metrics, visual boards, etc.
- Mark floors, add signs, label storage areas, etc. Use the color standards that are being used consistently in the facility.

- Information has to be easily understandable, concise, accurate, relevant, up-to-date and accessible to everyone. Everyone has to be able to understand the message.
- Create a guide that describes the key elements associated with each visual type.

Further Information:

- Visual management is not just making charts and metrics visible on a wall, it is a real-time, hourly or daily visuals that allow the team to respond promptly to signals to solve issues or support the production process. This often generates a sense of urgency among the team and allows solving problems on spot eliminating possible complications.
- Process metrics need to be displayed at the machine or manufacturing cell, while general plant information need to be posted in a central location where everyone can see it at a glance.
- It is very common to conduct Kaizen events where the main focus is to enhance the visuality of a specific work area or a process. For example, stabilizing the work environment using 5S, stabilizing how work is performed using standard work, or stabilizing equipment performance and reliability using TPM.