WEEK 9

• UNIT 4: MANAGEMENT AND OPERATIONS • UNIT 5: LEADERSHIP AND MANAGEMENT FOR SERVICE INDUSTRIES

OVERVIEW

- Operations management involves certain responsibilities. One of those responsibilities is ensuring the business operates efficiently, both in terms of using the least amount of resources necessary and in meeting customers' requirements to the highest standard economically viable.
- The knowledge of how to successfully oversee company or project operations is important for any project manager. This knowledge is referred to as Operations Management Theory (OMT): the application of several practices with the goal of promoting efficiency in production.

 Six Sigma is a method that provides organizations tools to improve the capability of their business processes. This increase in performance and decrease in process variation helps lead to defect reduction and improvement in profits, employee morale, and quality of products or services.

- "Six Sigma quality" is a term generally used to indicate a process is well controlled.
- Different definitions have been proposed for Six Sigma, but they all share some common threads:
- The use of teams that are assigned well-defined projects that have a direct impact on the organization's bottom line.



 Training in "statistical thinking" at all levels and providing key people with extensive training in advanced statistics and project management.

 A typical Six Sigma project measures the current state and increases the performance of the business process to a new and statistically significant improved state using statistical tools.
 Standard Six Sigma capability refers to a very small number of possible failures that can exist outside the specification.

 The method most frequently associated with Six Sigma is DMAIC, which stands for Define, Measure, Analyze, Improve and Control. Before beginning any Six Sigma improvement project, it is necessary to select a process that, if improved, would result in reduced cost, superior quality or increased efficiency.

 The process also must possess measurable data because what you cannot measure you cannot improve. The process selected may currently be experiencing quality problems or generating a large amount of scrap.

 A Black Belt or Master Black Belt will usually initiate Six Sigma projects through the creation of a charter. The charter typically includes details of the proposed improvement project, a business case and information regarding how the project fits into the company's goals or business strategy.



 Source: https://www.6sigma.us/six-sigma-articles/lean-six-sigma-essentials-for-effective-salesoperations/

• During the Define phase, the team should complete the following activities:

- - Develop a problem statement
- Define the Project Scope

- Identify Project Resources
- -Develop a Project Plan.
- Develop a High Level Process Map

- During the Measure phase of the project, the team assembles a complete picture of the current state of the process and establishes a baseline through measurement of the existing system.
- Other activities may include:
- Develop Detailed Process Maps

- Develop Data Collection Plan.
- Validate the Measurement System
- Collect the Data

- The focus of the Analyze phase is to identify all possible causal factors and determine the root cause of the problem.
- Analyze the Data
- Identify Causal Factors
- Determine the Root Cause(s)

- At this point in the project, the team has identified possible root causes of the problem. The Improve phase should identify, implement and validate corrective actions to resolve any process issues and improve performance.
- Identify Potential Solutions
- Analyze Failure Modes of Proposed Solutions
- Validate Improvements

- The objective of the Control phase is to support and maintain the gains realized during the Improve phase. Proper action must be taken to assure the process does not regress back to its previous state. In order to achieve this goal the team will need to take the following steps:
- Update Process Documentation
- Associate Training



- Implement Statistical Process Control (SPC)
- Create a Process Monitoring Plan
- Celebrate

Six Sigma Certification Structure



• Source: www.international-training.com

 Lean production (also known as the → Toyota Production System) is an approach to management that focuses on cutting out waste, whilst ensuring quality. This approach can be applied to all aspects of a business – from design, through production to distribution.

- Lean production aims to cut costs by making the business more efficient and responsive to market needs.
- This approach sets out to cut out or minimise activities that do not add value to the production process, such as holding of stock, repairing faulty product and unnecessary movement of people and product around the business.

 Lean production originated in the manufacturing plants of Japan, but has now been adopted well beyond large and sophisticated manufacturing activities.

- The lean approach to managing operations is really about:
- Doing the simple things well
- Doing things better
- Involving employees in the continuous process of improvement
- ...and as a result, avoiding waste
- The concept of lean production is an incredibly powerful one for any business that wants to become and/or remain competitive.

- Benefits of Lean Production
- Establishment and mastering of a lean production system would allow you to achieve the following benefits:
- Waste reduction by 80%
- Production cost reduction by 50%
- Higher \rightarrow quality
- Manufacturing cycle times decreased by 50%

- Labor reduction by 50% while maintaining or increasing throughput
- Inventory reduction by 80% while increasing customer service levels
- Capacity in current facilities increase by 50%
- Higher \rightarrow profits
- Higher system flexibility in reacting to changes in requirements improved
- More strategic focus
- Improved cash flow through increasing shipping and billing frequencies



• Source: totalqualitymanagement.wordpress.com

• The Queuing Theory, also called as a Waiting Line Theory was proposed by A.K. Erlang. According to him, the queuing theory applies to those situations where a customer comes to a service station to avail the services and wait for some time (occasionally) before availing it and then leave the system after getting the service.

 The situations where the arrived and departure problems can be seen: people waiting to deposit the electricity bills, flow of automobile traffic through a road network, queues formed at the ticket counters, people waiting to make deposits or withdrawals at bank, machines waiting to get repaired in the workshops, etc.

 The waiting lines are formed due to the inefficiency of the service system to render immediate services to the customer when they arrive. If the customer has to wait for a long duration, it might lead to the frustration among them, the goodwill might get damaged, direct cost of idle server- in the case of poor coordination may arise, etc.

 The demands of a person can only be met by increasing the service capacity, or enhancing the efficiency of the existing elements in the service systems. But however, adding too much capacity may be a costly affair as it may lead to the increased idle time on the part of the server in case of a few or no customers. Also, the setup cost would be too high.

 Therefore, a manager has to decide the optimal level of service which is neither too high nor too low. The following elements should be kept in mind while designing the queuing system:



• The ultimate goal of the queuing theory is to achieve an economic balance between the cost of rendering services and the cost associated with the waiting time.

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