



PRODUCTION & OPERATIONS MANAGEMENT

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Lesson No 1 – introduction to Production and Operation Management

Lesson one introduction to Production and Operation Management the concept of manufacturing management exists since 18th century when Adam Smith established the economic benefit of specialized labor where he recommended breaking of the jobs down into subtasks, which further enhanced by Frederick Taylor who developed Scientific Management. Then in 1970s when computers become available, we have computer applications like MRP or material requirement planning and then in later we have CAD / CAM In 1980s we can also include topics like continuous improvement which includes lean manufacturing, six Sigma operational dashboard under the same umbrella. And now we are talking about Industrial Revolution 4.0 which is about technology driven changes as well. It represents a fundamental change in the way we live, we work and how we relate to one another. With this quick reflection on the history, let's look into the definition of the production and operations management. The Production and Operations Management is a process which combines and transform various sources used in production operation subsystem of the organization into value added products and services in a controlled manner as per the policy of the organization. It is a part of the organization which is concerned with the transforming a range of inputs into required product, having the needed label of quality. Production management is the set of inter related activities which are involved in manufacturing certain products. Now let's look at the difference between manufacturing and service operations. Classically manufacturing companies used to manufacture product and the service company used to provide services. But the lines are purely blurred right now, right? Because most of the company who make products do offer some kind of value added services and sometimes which are very service oriented companies do get involved in some kind of manufacturing or basically outsourcing. So let's look at the difference between manufacturing and service operations. Manufacturing, that means a tangible output. Service means an intangible output. In manufacturing, degree of customer contact is low In service operations Degree of customer contact is very high. In manufacturing Customer participation in the process conversion is low in service operations, customer participation in the process is very high in manufacturing generally, it's very In manufacturing

generally, it's very capital intensive that you have a manufacturing plan, you have machines, you have people, you have electricity costs, that means it's going to cost a lot of money by nature. However, in service operations it is a labor intensive In manufacturing, low skill personnel required. In service operations generally, you need a highly skilled people who are knowledgeable to deliver the the service operations or the value you want to deliver to your customer.

