COVER PAGE AND DECLARATION

	Master of Business Administration (M.B.A.)
Specialisation:	M.B.A in Strategy
Affiliated Center:	CEO Business School
Module Code & Module Title:	MGT550-Managing Operations
Student's Full Name:	Mohammed Atif Mansour Al Gohary
Student ID:	EIU2021046
Word Count:	3543
Date of Submission:	November 28, 2022

I confirm that this assignment is my own work, is not copied from any other person's work (published/unpublished) and has not been previously submitted for assessment elsewhere.

E-SIGNATURE: _____Mohammed Atif_____

DATE: _____ November 28, 2022_____

EIU Paris City Campus
Address: 59 Rue Lamarck, 75018 Paris, France | **Tel:** +33 144 857 317 | **Mobile/WhatsApp:** +33607591197 | **Email:** paris@eiu.ac

EIU Corporate Strategy & Operations Headquarter
Address: 12th Fl. Amarin Tower, 496-502 Ploenchit Rd., Bangkok 10330, Thailand | **Tel:** +66(2)256923 & +66(2)2569908 | Mobile/**WhatsApp:** +33607591197 | **Email:** info@eiu.ac

Table Of Content

Introduction:

It is that comprehensive management method that mainly revolves around balancing the various aspects of the organization with the needs of buyers of services. This method confirms and supports the idea of effectiveness and efficiency, and tends towards flexibility, innovation, innovation and linking them to modern technologies, business process management is characterized as the process that is based on the development of processes. Business process management leads to increasing the ability of organizations to work efficiently and enable them to accept change compared to organizations that adopt the traditional style of management, and progressive organizations have adopted administrative qualities to develop business management within them, and these qualities and capabilities include the following:

- Strengthening the business management style within the organization, starting from the structure of the company to establishing applications that raise the efficiency of the organization's work.
- Achieving the objectives of the organization by linking action plans with effective and successful work programs to reach the desired goals.
- Modernize operations management to ensure its rapid deployment and also to ensure that it continues to develop its administrative processes in a realistic manner.
- Developing the customer service system and providing training to employees on modern programs to manage business processes through comprehensive technologies.
- Create internal and external homogeneity in the results of business processes and objectives with the plans and objectives of business processes within the organization.
- Documenting business processes through which they help to achieve the objectives of the organization.
- Monitoring business achievements, which are the most important basic inputs in both the inputs and outputs of the institution or company.

- **Chapter 1:**
- **Cost-efficient manufacturing processes:**

After kicking off meeting with the big green company to fix the streamlines of the product manufacture operation, we have fixed the below hierarchical plan to achieve the cost-efficient inside the manufacture process also and plan will be as following:

1. Mission: fixing the streamlines of manufacturing process

2. Goals: reduce or control the cost -efficient and minimize the defect as per the strategic objective plan of the organization.

3. Organizational & Functional Strategies: the plan or roadmap to achieve company mission as following.

3.1. The Product Design or Redesign (DFM): it is the first and important step to start the product manufacturing process because it is the ability of products to fulfil the customers or user's needs, also it is involving inter-functional collaboration to achieve the organization target and as it:

3.1.1. Translates customer wants and needs into the products.

3.1.2. Refines existing products.

3.1.3. Develops new products.

3.1.4. Formulates quality goals.

3.1.5. Formulates cost targets.

3.1.6. Constructs and tests prototypes.

3.1.7. Documents specifications.

3.1.8. Translates products specifications into process specifications to be easy to use by end users.

3.1.9. Ethical considerations as we need to process the design or redesign fast in economic way.

And DFM is shortcut of design for manufacture which it is a concept to provides a guidelines to how produce the product in easily and at in low cost by using a techniques which are simplification, standardization and modularization , **Simplification** used if need to reduce the number of components in design to reduce cost and increase reliability, **Standardization** used with number of components to reduce the cost through economies of scale and minimize the inventory and **Modularization** used modules of components that are standard across products to reduce cost and increase reliability.

3.2. The Process Selection of The Manufacturing Product Inside The Plant: as the process layout will give the best efficiency in productivity and reduce the defects throughout the manufacture moreover reduce the waste as well due to the waste in time or manufacturing is a cost money which it will effect the cost of the product and it won't give me the competitive advantage in market, the design process it should be related to volume and variety of the demand in market and they are three types of the process:

3.2.1. Project: it is termed of produces the product in high variety and low volume to make one-off product to customer satisfaction and it is designed to demand a problem-solving approach to ensure it is complete in one time and have a comparatively long duration of manufacture.

3.2.2. Batch**:** it is a process to produce the product in medium variety and medium volume because of the relatively high volumes involved in batch process it could be cost-effective to use specialist labors and machine to certain products.

3.2.3. line or Mass**:** it is termed of produces the product in low variety and high volume, the feature of the line is the product may be automated using a conveyor system which it led to broken down into numbers of small, simple tasks.

3.3. The Operation Management System: it is revolving around three theories, and they are:

3.3.1. Business Process Redesign (BPR): the system is focusing on analyzing and designing workflow, it is a process to help companies dramatically restructure the organization by designing the business process from the ground up.

3.3.2. Six Sigma: it is a process to improving quality, reducing costs and increase customer satisfaction and statistically the program designed to reduce defects as it could reduce till is 3.4 defects per million.

3.3.3. Lean Manufacturing: it is the systematic elimination of waste within the manufacturing process. This theory sees resource use for any reason other than value creation for customers as wasteful and seeks to eliminate wasteful resource expenditures as much as possible.

3.4. Reduction of Overhead or Redistributing The Employees If Needed: to get the best productivity need to monitor the overhead and to know the number of employees I need it from start the input of process till output the product and also, each employee responsibility in every process and where I could reduce the overhead in one of those process or operations because reduce the excess employees it will give me more cost efficiency and more productivity as well.

3.5. Analytical Aptitude: it is a skill in risk analysis and mitigation when initiating new projects or redesigning. the purpose of analyze processes it is identify challenges and offer solutions in the event negative situations develop, the following points show where we should analyze and focus:

3.5.1. Analyze The Market: it is a quantitative and qualitative assessment of a market. like the size of the market in both volume and value, customer segments and buying patterns, the competitors, and the economic environment of the market, analyze the risks and how I can solve it out.

3.5.2. Analyze The Inventory: it is the practice of identifying the items in a company's stock. it could be done manually or through automated, the goal of inventory analysis is to get an accurate picture of what a company has on hand so that they can make informed decisions about ordering, stocking levels and improve the cost efficiency.

3.5.3. Analyze of Supply Chain: it is the process of evaluating every stage of a supply chain starting from the time the business acquires raw materials, account the

production and raw materials cost, technology, labors wages, to the delivery of final products to the customers.

3.6. Total Quality Management: it is the act of overseeing all activities and tasks needed to maintain a desired level of excellence and high quality of the product and system as well, to reach to customer satisfactions. it includes the determination of a quality policy, creating and implementing quality planning and assurance, and quality control and quality improvement, also the cost of quality is part of TQM as all parts from production process will effect the costs and it is categorized to:

3.6.1. The Cost of Good Quality: it is a cost to achieve the ability of product to consistently meet or exceed customer expectations and we can categories into appraisal cost & prevention costs.

- Prevention Costs: it is incurred in trying to prevent problems from occurring like all TQ training, TQ planning, customer assessment, process control and quality improvement costs.
- Appraisal Costs: it is all tangible and intangible costs of activities designed to ensure quality or uncover defects like testing and inspecting products, maintaining testing equipment's, time spent to gathering data of testing, time spent to adjusting and repairing the equipment to maintain the quality.

3.6.2. The Cost of Poor Quality: it is a cost which you are incurred if the products having defects or need to fix the products design and we can categories into internal failure costs & external failure costs.

- Internal Failure Costs: it is incurred costs to fix the defects and problems of products inside the organization like the scrap costs to remove the poor-quality parts, fixing defects of the product, time loss of machine to fixing the issues.
- External Failure Costs: it is incurred costs after customer has received the products or customer services like responding of customer complain, replacing the poor-quality products, litigation cost.

3.7. Supply Chain Management: it is a sequence in an organization between their facilities, functions and activities and it is involved the producing and delivering a product, the goal to achieve productivity supply chain is to match the demand as effectively and efficiently as possible like determining appropriate levels of outsourcing, managing procurement, get the highest quality of raw materials with less price from suppliers.

4. Operation to Achieve The Organization Goals: it is a methods and action plan to achieve the company target like prepare the accurate forecasting plan to control cost and waste into the whole system ,make a plan to sales team to approach customers and implement the product in the market, create incentive system to motivate the team, provide and arrange all tools to team like vehicles & phones & documents of historic data of the areas and mobile data, ETC… for easy work and communication to achieve the more productivity.

5. Minimize the defects throughout the manufacturing process: it is important to reduce the defects into the product to achieve the highest productivity with the lowest cost throughout the manufacture process and to achieve that we need to care about the following point:

5.1**.** Products Design Process: need to give more care to products design because the whole operation will be effect if design or redesign the product is not planning properly.

5.2. Manufacture Flexibility: it should have it inside the plant to avoid stuck and wasting time during the manufacture process because it will increase my overheads and cost - efficiency as well.

5.3. Inspection Points: it is important to have enough inspection points during the manufacture process instead of receiving the final product with a defect to avoid the huge waste in time and cost for organization.

5.4. Rules of Prevent Measures: to avoid any problems will face during the process.

5.5**.** Quality Control System: it is important factors to check the defects and quality of the product before introduce it to customer as it is a primary consideration for nearly all of them and achieving and maintain the quality standards is of strategic importance to all business organizations and the following are the quality certificates and awards known in all countries of the world which it is important for each organization to have it to proof that they have a quality

standard system of their products like ISO 9000 & ISO 9002 & ISO 9003 & ISO 14000 & Deming price and Malcolm Baldrige national quality award.

6. The greener process and 21st century tools: the green process is referring to the specific actions to reach the environmental control and how to reduce the impacts among in all the processes involved in the manufacture activities of a product and it is having a social responsibility to environmental as well because it will give a good image about the organization to their customers and buyers as well , definitely all those process need to use in economical way , in 21st century there are some tools it will gives the best green process to the organization as mentioned in below:

6.1. Worker Safety Tools: it is safety equipment which it protects the workers to avoid injuries, life threatening situations ETC, and there are different types of safety equipment are used by workers depending upon the nature of risk involved in the work.

6.2. Dynamic Windows tools: passive solar energy relies on windows to let in beams of sunlight to use for heat. but in the summer months you want to keep all that solar radiation out by use awnings, shades, to reduce incoming light, but there's a much cooler solution that promises to cut down on HVAC costs, it's dynamic windows which is uses to charge ions on a window layer and change the amount of light it reflects, smart glass developers expect a 25 percent reduction in HVAC costs thanks to that.

6.3. Sustainable Manufacturing Tools: it is defined by processes that are non-polluting, conserve energy and other natural resources, and address the economic and safety needs of employees, communities, and consumers and it is playing a larger role in shaping industrial operations.

6.4. life Cycle Assessment Tools: it is aims to quantify the environmental impacts that arise from material inputs and outputs, such as energy use or air emissions, over a product's entire life cycle to assist consumers in making decisions that will benefit the environment.

- **Chapter 2:**

The Big Green tractor company has asked to develop a social responsibility operation as per industrial standards to disposal of chemical waste because it cannot be disposed of in regular trash or in the sewer system and must be disposed of through the EHS Hazardous Waste Program, it is divided into two parts as following:

1. Storage of the chemical waste: it should be in appropriate containers; the plastic containers are preferred over glass for storing hazardous waste as per the ministry of environmental protection instructions and chemical waste containers must be labeled with the following information:

1.1. Full chemical name and quantity of the waste.
1.2. For mixtures, each chemical must be listed, abbreviations, acronyms, and ditto marks ("") to replace words are not allowed, as this does not comply with The Hazard Communication Standard.
1.3. it should not be overfilled above the marked given.
1.4. the cover of containers is leakage proof.
1.5. Date of waste generation.
1.6. Place of origin (department).
1.7. Bottle number assigned on corresponding waste sheet; and the tag or label must have the words: "Hazardous Waste".

2. The Industrial standards process: there are four types of processes to disposal the chemical waste as per the environmental protections agency (EPA) which are:

2.1. Recycling Process: there is some of chemical waste materials become to raw materials and it could be used for other processes, can be reused, sold, or recovered.

2.2. Incineration Process: some hazardous waste materials can be burned, this process has its drawbacks as when the waste is burned, it creates hot gases that go into the atmosphere, these gases have the potential of carrying toxic materials that have not been consumed by the flames, so, it is recommended to establish the burning area far from any residential area to not have any damage to human health or the animals or plants as well, and many environmental protection

associations are trying to reduce this process as it will led to damage of atmosphere and the health of employees are working in this field as well or build more incineration rooms but it is costly.

2.3. Reduction Process: reduction involves reducing the waste stream at the start of operations, generators of waste can change their materials and manufacturing to cut down on the amount of waste they create, an example the paper, plastic, rags, metal, and glass, and some of hazardous waste like electric light bulbs, batteries, automotive or tractor parts and chemicals items.

2.4. Treatment process: there are several biological, thermal, and chemical processes that can be applied to toxic compounds to neutralize or destroy them, an example the chemicals can remove hydrocarbons from water that has been contaminated or water desalination.

2.5. Land disposal process: certain hazardous waste materials can be buried in landfills, the EPA recommend these materials to be pretreated before they can be disposed of in a landfill. The materials can then only be placed in specially designed landfill disposal facilities.

- Finally, the organizations having the flexibility to choose one of those process as per their financially or available for her.

3. The Green Alternative to Traditional Manufacture Process: manufacturing along with other industrial processes, is one of the primary industry sectors being targeted for green technology use and currently , the world wants the traditional manufacturing methods are must to transforming into lean, green conserving machines that benefit the planet ,more than that, the companies need to communicate how they are dealing positively with environmental and their social responsibility to customers who increasingly demand environmentally responsible practices because the consumer class has expanded to the point where upward price pressures are being placed on resources, including construction and industrial materials, energy, and water. The costs of conservation and green technology are more easily justified in this financial climate and globally, government-led incentives are being developed for businesses willing to adopt emerging green technologies (EGTs) and the defines green technology as the application of advanced systems and services for wide variety of industry sectors to improve sustainability and

efficiency which its effect energy efficiency and conservation, water conservation and quality or water desalination, reduction of waste & carbon emissions and emissions of toxic gasses, In addition, it helps the organization to promote the following process:

3.1. Energy: it is the renewable and alternative energy production using of green building materials and processes.

3.2. Water Saving: it is predominantly performed through conservation and recycling, however, production of potable water is also being promoted through alternate sources such as the desalination of sea water.

3.3. Environmental and Pollution Devices: waste management and disposal have changed over the years to emphasize recycling and reusing what were previously waste materials, pollution services include the reduction or elimination of toxic waste and controlling emissions. Services include compliance auditing and inspection as well as engineering, testing, and consulting.

3.4. Engineering and Product Design: it is the other areas has impacted by the green wave are product and systems design and re-engineering to meet new regulations of environmental protections agency and they have created a change within product design and industrial process design, including factory automation and drive the efficiencies of heating, ventilation, and air conditioning products.

And the Green technology could boost manufacturing activity like design and fabricate wind turbine components and solar panels, as well as transport to where the people need to use or to go due to the diesel and port fees are rising, reducing the transportation fees and it will require skills and manufacturing expertise to cost effectively produce components like : EGTs must align themselves to industry standards and capabilities, manufacturing of green technology must orient itself to mass production and efficiency, ETC…. all those things are needed to reduce the cost to manufacture, the demand is there for green technologies are available and are being integrated into the manufacturing industry every day.

- Finally, the traditional manufacturing is changing, as it always has, to incorporate new technologies that increase efficiency and decrease cost. It is now integrating green

technology because it not only saves money, but it also saves the Earth because a clean environment is critical for keeping us healthy, the clean and green ecosystem provides us with fresh air and pollution is also reduced, we can save the planet by conserving trees, natural vegetation, water, natural resources, electricity, and other resources, therefore is globally ,they are started to create global Green Initiative is a collaboration between some of environmental protections agencies to raise environmental awareness in the moving & relocation industry to aim to educate the new generation on the importance of improving sustainability industry wide.

- **Conclusion:**

  Operations management is a management field concerned with the design and control of the production process and the redesign of business processes in the production of goods or services, as It involves the responsibility of ensuring that the company's operations are efficient in terms of using a few resources as needed and effective in terms of meeting customer requirements and it is primarily concerned with planning, organizing, and supervising in the context of production, manufacturing, or service delivery and it is concerned with the management of a complete production system and the process that converts inputs (in the form of raw materials, labor, and energy) into outputs (in the form of goods and/or services) or provides a product or services. Processes produce products, control quality, and create service and it is including sectors such as banking systems, hospitals, businesses, working with suppliers and customers, and using technology. Operations is one of the main functions in an organization along with supply chains, marketing, finance, and human resources. The task of operations requires the management of both strategic and daily production of goods and services.

  In manufacturing or service process management, several types of decisions are made including operations strategy, product design, process design, quality and capacity management, facility planning, production planning, and inventory control. Each requires the ability to analyze the current situation and find better solutions to improve the effectiveness and efficiency of manufacturing or service processes.

- **References:**

- Porter, A. (2011). Operations Managment. In A. Porter, *Operations Managment* (P. 17 & 18). Ventus Publishing APS.
- Porter, A. (2011). Operations Managment. In A. Porter, *Operations Managment* (P. 20 To 22). Ventus Publishing APS.
- Virasak, L. (n.d.). *Manufactureing Process 4-5*.
- Luica, L. (N.D.). *Key Elements of Chemistry* (Third Edition ed.). North Carolina State University .
- Gupta, H.N, Gupta, R.C, & Mittal, A. (2009). *Manufacturing Processes* (Second Eidtion ed.). New Delhi: New Age International (P) Limited.