MBAMS 635 OPERATIONS MANAGEMENT

Course project

By

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Describe your dream company.

A. What is your main product or service?

I would like to begin a wheel's manufacturing company. My product will be wheels for heavy vehicles such as trucks, buses, and trailers, as well as wheels for light vehicles such as cars and minivans, will be manufactured and supplied. It should be a producer of steel wheels for passenger cars, utility vehicles, trucks, buses, agricultural tractors, and construction equipment as well.

a. Wheels for heavy vehicles
b. Wheels for light vehicles
c. Wheels for construction equipment
d. Wheels for agriculture vehicles like tractors.
e. Wheels for private planes

B. Where is it located?

It should be located in Pune, Maharashtra which is in Indian and is my home city.

C. My target customers would be all the big companies of heavy and light vehicle, automobile, planes and truck manufacturers in the world, like Nisan, Tesla, Toyota, Hyundai.

D. My competitive advantage is my ability to produce the wheels at the lowest possible cost. My plant is located in Pune, India. I can use the cheapest labor available in India, and I can also acquire the land for the plant at the lowest cost in the world.

2. Operations management is responsible for all activities involved in turning a product concept into a finished product. Additionally, it is responsible to plan and control the systems that produce goods and services. In other words, operations managers oversee the process of converting inputs into outputs. They must fine-tune their production processes to focus on quality, keep material and labor costs low, and eliminate all costs that add no value to the finished product.

a. List of 10 OM related issues in my company

1. How the wheels will be produced, where the production should take place, and the layout of the manufacturing plants.

2. Inventory management and considering inventory ordering and holding decisions and issues related to the purchasing of raw materials and handling the inventories.

3. To determine the number of suppliers and which supplier is best for purchasing the raw material.

4. Managing Quality and the statistical process control of the wheels that are being produced.

5. Forecasting the demand for the wheels for the next year.

6. Meeting the needs of the customers according to their product requirements.

7. The selection of site for the manufacturing plants so that it can minimize the shipping costs and be in areas where there is ample of skilled labor available. OM should also look for locations which have favorable climate to the business needs.

8. Issues related to human resource and Job design

9. To Determine and implement immediate short-term schedules that use personnel and facilities effectively and efficiently while meeting customer demand

10. Capacity and constraint management.

b. OM tool/model to help deal with the above issues.

1. Operation process chart, flow process chart, process flow diagram are some of the tools used to determine the layout of the plant.

2. Cycle counting to improve accuracy, ABC analysis for prioritization, Integrated planning and execution, Lot tracking and traceability are some of the tools for inventory management related issues.

3. Supplier and vendor management software can be used like SAP

4. We can use market research techniques to determine customer needs and batch quality assurance testing on products and services in production.

5. Moving averages, exponential smoothening, trend projection are some of the tools that can be used for forecasting of the demand for the next quarter.

6. Be clear on the customer's demands and then meet those expectations. Get customer requirements and then work on those specific requirements of the customer.

7. Requires judgments regarding nearness to customers, suppliers, and talent, while considering costs, infrastructure, logistics, and government.

8. To achieve success in HR and job design, we can implement continuous improvement programmes with regular reviews, provide continuous training for employees, and institute employee satisfaction programmes.

9. PERT (Program evaluation and review technique), Schedule Compression are some of the tools for scheduling related issues. Consider both production and people. Ask questions such as how much product is required to be produced for the customer in the required time? How many people and how many machines are required to do the job effectively and efficiently? This differs among industries and business departments.

10. A value stream map can help determine what processes are necessary and how to keep them running efficiently.

3. Chapter 3: Project Management

Project management concepts can tools can be very helpful for my dream company. To understand the concepts let me first explain a few concepts that I understood from Chapter 3. Project scheduling can be a difficult challenge for operations managers. Poor scheduling and poor controls cause cost overruns and unnecessary delays. Projects that take months or years to complete are typically developed outside of the traditional manufacturing system. Project organizations within the firm may be formed to handle such tasks, and they are frequently disbanded once the project is completed. Project management is divided into three stages.

Planning, Scheduling, controlling.

The work breakdown structure (WBS) defines the project by breaking it down into major subcomponents (or tasks), which are then broken down into more detailed components, and finally into a set of activities and their associated costs. This technique can help me breakdown my dream company's tasks into various categories. Categories such as major tasks, subtasks in major tasks and activities to be completed. The division of the project into smaller and smaller tasks can be difficult, but it is essential for project management and scheduling success.

The Gantt chart is a popular project scheduling method. Gantt charts are a low-cost method of assisting managers in ensuring that activities are planned, performance order is documented, activity time estimates are recorded, and overall project time is developed.

Today, scores of competing software firms offer computerized PERT/CPM reports and charts. These charts can be useful for my dream company in scheduling of various tasks and activities.

b. PERT Technique

1	Chanllenge in my dream company					
2						
3	Activity	Description	Dependence			
4	A	Cutting for machining	-			
5	B	Machining	A			
6	C	Assembly 1	B			
7	D	Disassembly 1	C			
8	E	Painting	B, C, D			
9	F	Assembly 2	E			
10	G	Assembly 3	F			
11	H	Assembly 4	G			
12	I	Quality	E, F, G			
13	J	Packing	I			
14	K	Shipment	J			
15						
16						
17	Activity	Normal Duration	Acc. Duration	Normal Cost	Accelerated Cost	Increase in cost
18	A	4	2	$ 45.00	$ 100.00	$ 55.00
19	B	12	8	$ 130.00	$ 230.00	$ 100.00
20	C	14	10	$ 270.00	$ 430.00	$ 160.00
21	D	3	1	$ 180.00	$ 290.00	$ 110.00
22	E	10	5	$ 150.00	$ 350.00	$ 200.00
23	F	14	10	$ 90.00	$ 135.00	$ 45.00
24	G	15	11	$ 85.00	$ 156.00	$ 71.00
25	H	16	13	$ 145.00	$ 189.00	$ 44.00
26	I	12	8	$ 189.00	$ 258.00	$ 69.00
27	J	2	1	$ 190.00	$ 344.00	$ 154.00
28	K	1	0.5	$ 890.00	$ 1,000.00	$ 110.00
29	Total	103	69.5	$ 2,364.00	$ 3,482.00	$ 1,118.00
30						
31	Total increase in cost of the project		$ 1,118.00			

Conclusion: The total cost increases by $1118 if the process are not scheduled properly using a proper OM tool like PERT which is user for scheduling any tasks in a project by the project managers and this could cause a big cost loss to my company. Hence, I learned that it is very essential to make use of such techniques in order to save costs and improve performance of the organization.