

Operational management at pepsi cola company commerce essay



At present new product decision is taken by the top management. Demand for new product is investigated by production manager- terms of raw material, machinery operations, and quality. Fro this purpose he can get guidance from constructions. Finance department evaluates financial viability. Sample production is conducted. Response from buyer in terms of satisfaction and company's ability to meet the requirement helps in deciding to produce new product.

Process Design:

In the company process is continuous supply of concentrate is critical but process can be automated. Process is flexible and production on plant can be changed within one hour. Production on plant can be changed within one hour. Production is of large scale and covers a wide area for the distribution of the product.

Facility Design and Layout:

Facility design and physical layout of plant, supporting facilities and building is provided by the parent company that is PEPSI COLA International. Transportation costs with the plant is minimum. Physical layout provides maximum utilization of available space by optimizing costs.

Inventory:

Company is not using the quantitative methods for calculating economic order quantity, reorder point, safety stock and annual inventory cost. The company does not give importance to control inventory cost. Lead time is usually 2 days an in an exceptional case it can be up to 4-5 days. this also

one reason that EOQ, ROP, lead time are calculated using qualitative techniques, by estimates of experienced managers.

Martial Requirement Planning:

Company produces beverages and uses Sugar, Carbon Dioxide, Ammonia and concentrate as raw material. Soft drink is a seasonal product. Most of the sale is done during summer season. Concentrate is bought from the franchiser PepsiCo. Sugar is bought directly from the sugar manufacturers of the area. CO₂ is prepared within the premises, which is enough for the full capacity of two plants. When during summer 4 plants are in working, CO₂ is purchased from the outside suppliers.

Company Profile:

Pepsi co. is in fact a corporation listed in the New York Stock Exchange USA. It is the owner of globe products like Pepsi Cola, Tropicana, Mirinda etc. Being owner of the products they give the rights of manufacture of its products to different countries. All over the world, the products are standard. If you buy a Pepsi from a remote area like Talamba and from Washington D. C., you will find absolutely same taste and color. Because Pepsi Co. has strict quality standards. And the franchisees have to follow these standards. Otherwise they have to face penalties from the real owners of the product. In Pakistan there are 10 units of Pepsi cola are working. Each unit has its own license of production. And each unit has its own territory in which it can sell its products. No unit can interfere in the area of other unit.

Brief History:

The company was introduced in 1967 as a (Pvt.) Limited company. It started its production in 1968. In the early stages it was famous with the name of 7-up factory. Because 7-up was its first product. The other brands were introduced after 7-up. Pepsi Cola, Marinda and Green Marinda have been different products of Shamim and Co. Since its introduction. At present 7-up, Pepsi Cola and Marinda are being produced.

Company Characteristics:

Shamim & Co. is the biggest soft drink manufacturing unit in Pakistan with its four plants having full capacity of 50, 000 crates per day. Company covers area of Southern Punjab including Sahiwal, Mianwali, Rajan Pur, Bahawalnagar and Khan Pur.

Departmentalization:

There are six departments in the company, which are production, Marketing, Finance, Sales, Shipping administration and personnel.

In each deptt. there is a manger which is responsible for the working of his department to the general manager. A manager has an assistant manager. After Ass. A manager their are Shift Incharge in production and supervisors in sales. They control the activities of operatives.

Product Planning:

Shamim and company works under licensee of Pepsi Co., as explained earlier. At present Shamim and Company does not possess the ownership of any product. All of its products are originally owned by Pepsi Co. New York.

Franchiser gives concentrate and sets quality standards for its products.

Company just follows these standards and produces beverages.

Uptill now the company has not produced any product of its own and there is no concept of product planning in future as well, because the management considers it a very theme to introduce a new brand of their own. In the brand like Pepsi Cola and 7-up are selling in the market like hot cakes. Meanwhile the people in Pakistan are reluctant to purchase Pakistan branded beverages and we don't find any successful domestic brands of soft drinks in Pakistan. That's why the management does not have any motivation to do product planning.

In a dynamic market the company may expand, add or relocate new facilities, which means that location decisions are made the life of a company.

Location decisions are important due to following reasons.

- Competition.
- Cost.
- Hidden effects.

Factors that effect the location decisions are

- Market related factors.
- Tangible Cost factors.

- Transportation.

- Labor availability and costs.

- Energy availability and costs.

- Water availability and costs.

- Site and construction cost.

- Taxes.

- Intangible Factors.

- Legal regulation.

- Community attitude.

- Expansion potential.

- Living conditions.

Operations Planning:

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Location Design

Location of manufacturing operations can have a great impact on operating cost, profit and price at which products are offered. As far as location is concerned the company's strategy consists of selecting the location from which the potential market will be served. The location of facility involves the commitment of resources to long range plan.. Location of industry is selected on the basis of

- Availability of raw material on cheap prices and maximization of profits.
- Proximity to potential customers.

µ In plant location objective is to minimize the sum of all costs, not only today's but long term costs.

There may arise four questions for facility aspects.

1. Types of facilities needed.
2. Location of facilities.
3. Design / Layout of facilities.
4. Capacity planning.

Company Location:

Shamim and company is located near MDA chowk Multan in province of Punjab. The site of company is not of some strategic value. Because Shamim and Co. covers a large area of Southern Punjab. So there is no importance of site with reference to the other cities of this area. Any way; site of the company is considerable for Multan.

Process Design and Facility Layout

Having done the location selection company design a building, select the appropriate process technology and equipment and arranges it in away so that it has greatest potential to meet the strategic demand of organization. The type of operations to be performed in a facility, influence the facility's needs and layouts. Equipment involved effects the layout. Facilities must be designed for the efficient operations in the organization.

Layout for Operations:

Facility is designed in numerous ways to support this work to be done within each facility numerous factors must be considered. Amount of available space and its shape. Design objective is very imprint. some of layouts are:

- Retail layout.
- Office layout.
- Distribution and ware house layout.
- Manufacturing layout.

Manufacturing Process:

In Shamim & Co. manufacturing process is as follows;

Water Extraction:

Raw water is extracted from the sources. It is treated to remove its hardness. Here water is tested in lab to check it harness. If water has some Co_3 or Hco_3 it is drained and again soft water is used in the preperation of syrup.

Preperation of Syrup:

Syrup is prepared with sugar, concentrate and water. this syurup is heated upto 90 C to get it pasturized. this hot syrup is colled down and stored in the tanks. Here lab testing of syrup is done to check its quality standard.

Production:

Syrup is sent to Carbo Cooler. During flow of syrup from tanks to Carbo Coolers, Ammonia and Carbon Dioxide are mixed in the syrup.

In production process empty is feeded from on side. This empty is washed and light check is done to see quality of washing.

From Carbo Cooler syrup goes to the Filler. At filler syrup is filled in the empty bottles, and Cap Crown is fixed on the bottols. Here and operater looks after the filling process. He can increase, derease or even stop production speed accordingly.

Filled bottols are tested in lab. by taking samples. Light check is done to check the level of syrup in bottles and chek some solid partieals. The overfilled or underfilled bottols are separated. If some partical is found in some bottlol it is also separated.

After light check bottols passed under a printer and code is printed on the bottoles, with this code the date of manufactering and shift time can be identified.

When all checking process is done the bottlols are cased in the crates.

The whole process of manufactaring is automatic. It required a little supervision. Raw material is put from one side and filled bottles come out of the process.

Support Facilities:

Support facilities are carried out in such a way that the direct operations can function smoothely. support facilities are essential for operations. Some of departments to be considered in layour are

- Inventories, material and suppliers.

- Tool room.
- Inspection and quality control.
- First aid.
- Maintenance.
- Safety and security.
- Clerical and bookkeeping.
- Tube well.
- Airconditioning plant.
- Transformer.
- Equipment for work shop.
- Bailing press.
- Parking facility.
- Canteen.
- Emergency situation analysis.

Issuance of Different Items:

When production department requires a particular item from inventory, they fill the requisition slip. One copy is kept at the store and a carbon copy is kept by the production deptt.

This slip includes the quantity issued, stock register page number, item code, This slip is signed by the production manager. Inventory items are issued on these slip.

Control of Inventory:

At the end of each month, store prepares a monthly consumption report.

This report includes the detail of all the inventory items which were consumed by the production deptt. of Shamim & Co. during the month.

In this way the inventory is controlled in the Shamim & Company.

Quality Control:

The quality control should

1. Define specific product and service quality level requirements.
2. Determine the relationship of design and process characteristic to output quality and related process requirement.
3. Determine methods, personnel and equipment for measuring quality.
4. Measure and record the quality achieved.
5. Trigger corrective processes when actual quality varies from the acceptable quality.

Specification of quality requirements begins in market research continue as part of the product design activity, and culminates in the quality specification and design subsystem output. That output defines the

specific product or service attribute that effect the quality and must be assured.

The Quality Specification And Design Subsystem

The activities of this subsystem are integral part of the product design activities, its objectives are to be determine that the new design output

1. Will meet the customer need.
2. Will operate under end use conditions.
3. Can be produced or provided given the organizations capabilities.
4. Will function with the specified level of reliability interms of minimum means time between failure.
5. Will require less than a specified amount of maintaince hours and material costs operating hour.
6. Can be required within a certain time frame.

Quality Assurance:

Quality assurance is the title given to those management activities and systems required to provide assurance that the over all quality controlled task is being carried out. The quality assurance system is the aggregate quality management system. It interfaces with other general management system performong similar functions relative to the organizations financial personnel facilities and marketing policies and capability.

a) Proper use of the product and the conditions under which use is dangerous and unadviceable.

b) Document the product liability planning and procedures as well as the result of all tests and inspections.

Process Quality Planning & Control Subsystem:

This subsystem concerns the what, where, when, who of quality control during operations. It frequently involves major expenditure for personnel, equipment, inspection and testing activity.

The objectives of this subsystem are to be.....

1. Determine the process attribute and characteristic to be measured.
2. Determine the methods of measurement and develop detailed instructions describing the measurement process.
3. Determine, select and train the personnel required to implement the quality control procedures.
4. Measure and record operational quality in terms of the number of defects and seriousness of defects and causes of defect.

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Measurement And Documentation

Product quality must be measured on both quantitative and qualitative basis, and the measurements must be recorded. Quantification of the qualitative aspects occurs when defects are classified into categories such as critical

major, and minor, which were describe earlier. A classification such as this one of the inputs to the organization's as greater measure of quality.

Product or services that do not meet the desired quality standards generate two types of required corrective actions

1. The disposition of the defective product or service.
2. An analysis of the cause of the defeciciencies.

MAJOR COMPETITOR :

COCA COLA:

QUALITY CONTROL PROCESS)Æ (COCA COLA)

A Tour through Our Scientific Manufacturing Processes

The Coca-Cola Company ensures the supreme quality of its beverages by employing globally accepted and validated manufacturing processes and Quality Management Systems. Let us now take you through the processes and Quality Assurance Programs followed by our world-class manufacturing facilities in India

Testing Source Water For Plant Site Selection

The site for our manufacturing plants are finalized only after the source water has been tested for all requirements of potable water. The analysis is always conducted by independent third party accredited laboratories. The source water is then properly protected and re-tested periodically to ensure that it conforms to international standards.

The water is then drawn through sealed pipelines into the storage tanks placed in secured water treatment areas of the manufacturing plant.

Water Treatment – Know the Chemistry Of Purity

The first step in the process of manufacturing soft drinks is to disinfect the water using globally approved chlorination procedures. This ensures that all micro-organisms including pathogens are destroyed. It also removes organic and inorganic impurities caused by oxidation of heavy metal ions.

The second step is the filtration at the molecular level, which is achieved either by coagulation/flocculation or reverse osmosis. Contaminants commonly removed by this process include:

Dirt, clay and any other suspended matter in the water.

Microbial matter (including bacteria, yeast, moulds, virus, protozoa).

Heavy metals and compounds which may cause an off-taste.

The third step to stop potential contaminants is water purification using granular activated carbon filters. The granular activated carbon, with its large and porous surface area, ensures effective removal of trace levels of organic compounds (including pesticides and herbicides), colour, off-taste and odour-causing compounds using the principle of absorption.

The last step is polishing filtration, which is passing water through high efficiency 5-micron filters to ensure every drop of treated water is free from any activated carbon fines and is safe for use in beverages.

The Purity Of Our Sugar Is Crystal Clear

Our sugar selection process is as stringent as our water purification process.

The sugar, bought from high-grade authorized mills, is cleaned with a globally acclaimed carbon treatment process. A purified sugar syrup is created which is then blended with the soft drink concentrate.

Carbon Dioxide Meeting International Purity Standards

We procure carbon-dioxide, meeting international purity standards, from authorized suppliers. The gas then goes through stringent quality control checks before it used in the beverage.

All the three primary ingredients used in beverage, the syrup, treated water and carbon-dioxide, are blended as per The Coca-Cola Company's specifications.

The Automated Bottling Process

We use a fully automated process to recycle the glass bottles returned from the market. These bottles are sanitized at high temperatures with specially formulated cleaning agents. They are then transported to the filler after a thorough visual inspection. After they are filled, in a high-speed automated filling machine, the bottles are capped/crowned, date coded and packed into crates/cartons.

The complete manufacturing process has a well defined and structured Quality Control and Assurance Program.

All the manufacturing facilities employ qualified, experienced and trained professionals for manufacturing and testing of our products.

All the bottling facilities follow the Good Manufacturing Practices requirements as applicable to the food industry. All manufacturing equipment fulfil the stringent requirements of GMP and sanitary design.

The entire Quality Management system of each plant is documented, managed and continually improved through a world-wide accepted system of TCCQS (The Coca-Cola Quality System).

BACK TO PEPSI :

The latter units are approved on a variance basis:

Many organizations establish a material review board, consisting of engineering, manufacturing quality control, marketing and a customer representative to review proposed rework of defective parts that are out side

the standards of blueprints qualifications. Approval by all the members must be received before rework can proceed.

Purchase Of Raw Material:

Direct raw material for the products include the following items.

- i) Sugar
- ii) Concentrate
- iii) Treated water
- iv) Empty bottle
- v) Amonia and Carbon Dioxide.

From above items only concentrate is provided by the franchiser. All other raw material is purchased by the company itself.

Sugar Quality Testing:

Purchase of sugar is a critical step in the purchase of raw material. When sugar bags are arrived at the plant that time it has to pass through a strict quality check. In fact sugar quality is very very important in the production of the beverages.

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Water Treatment Tests:

The company has installed four tubewells to meet the requirement of water. The extracted water is then treated for the use in the final processing. At different staged of treatment tests include:

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1 Upper tap tests.

2 Sand filter and carbon purifier test.

3 Water softness test.

For this purpose the company has prepared forms for the record of these tests which are signed by the shift incharge after each shift. If he observed some abnormality he stops supply from one container and provides the required water through other container. The company has two containers for the supply and storage of treated water. The closed container is then sanitized and washed back. The sanitation and washing back of containers is also done at regular basis, after ten days.

Syrup Testing:

After mixing water, sugar and concentrate it is treated at 900 C and then it is stored in the tanks. This is called simple syrup. This syrup is tested in the lab. This syrup goes into carbo cooler. Here Ammonia and Carbon Dioxide are mixed in the syrup. This is called finished syrup. The finished syrup is also tested in the lab. If chemist finds any deviation from the standards, the syrup is drained before any further processing.

Finished Bottle Tests

When the bottles are filled at filler, the chemist take sample after every half hour. If any deviation from the standard is found the whole batch is drained before going in market.

A microbiological test is also taken by the chemist after a week of production. If any kind of germs growth is found the stored bottles are declared rejected.

Forecasting:

Planning and control for operations require an estimate of the demand for the product for the service that an organization expects to provide in the future. Numerous methods for the art and science of forecasting have been developed and reported in the literature. The field of forecasting is full of instances at both government and individual firm levels. For short term decisions, we need forecasting methods that are relatively inexpensive to install and maintain and that can be adapted to situations involving a large number of items to be forecast.

For immediate range plans, useful forecasts will probably be aggregated by product types. Detailed forecasts for each individual item may not be necessary. Since the relative frequency of forecasts is lower and the number of different product types for which forecasts are made is smaller than in the case for the short term decisions, forecasting methods that require modest cost and effort could be employed.

Demand Forecasting By Shamim & Company:-

In fact Shamim & Company is a product focused company which highly emphasizes on the production of the products. Due to the environment of the market and continuously changing demand, the management relies on qualitative methods. As the company has a seasonal business so the demand is high in the months of April, May, June, July and August. This is the

peak season for the company. So for the forecast of the next demand the company sees the data of sales of the same month and the trend is observed.

MATERIAL REQUIREMENT PLANNING

Materials related decisions must be coordinated to make efficient use of resources. Both the necessary material inputs and the necessary capacity must be available before transformation can be performed to know when materials will be available before it can accurately schedule use of capacity. It has to have some idea what capacity will be available before it can know when materials will be needed. Large companies that buy large quantities of items over extended period can sometime exert enough pressure on suppliers to obtain material almost when they want them. Companies that do not make large purchases may have to fit their schedules to the dates on which material can be obtained, or purchase with sufficient lead time so that material will be available when the companies need them.

Continuous manufacturing operations usually involve all aspects of materials management. Regardless of the way a company may be organized, several material functions probably are performed by some organizational structure of a company and assignments of responsibilities depend on the capabilities of employee and the need of the organization as perceived by its decision maker.

MATERIAL REQUIREMENT PLANNING OF SHAMIM & COMPANY

There are two major raw materials for products of Shamim & Company.

These are concentrate and sugar. Other raw material include raw water, empty bottles, Ammonia gas, Carbon Dioxide gas, caustic soda, chemicals for laboratories, and stationary items.

RECOMMENDATIONS

Formula the Pepsi should adopt is three way of telling customers

= Tell them you are cool.

= Tell them in a big way.

= Keep telling this to them.

Pepsi forgot that people don't drink cola they drink can, so they have to make innovations for their cans and promotional marketing.

They also failed to adhere to its commitment to export 50% of its production in india, so they should concentrate on what they said.

Pepsi began exporting products such as tea rice and shrimp.

An agricultural research center should be establish.