

Process selection and design



Whether it is the manufacture of a good or the provision of a service, every company must make choices about how best to combine inputs – resources such as land, labour, capital, and convert them into outputs, all the way through a sequence of processes (Thompson & Machin, 2003). This procedure is formally known as a process.

In order to get a competitive boundary in the outputs produced, it is crucial for organizations to be familiarized with the methodology of the process; i. e. how it works. In the case of Elephant House, the process ensures that soft drinks are manufactured, bottled and packaged according to the desired requirements, and that quality remains a key factor throughout the entire production process.

The processes carried out at Elephant House are both manual and automated, and are mainly involved for testing liquids, making the soft drinks, and bottling and packaging the soft drinks. The testing of liquids is carried out manually, while the rest of the operations are automated.

The step-by-step process for producing bottled soft drinks include, clarifying the water, filtering, sterilizing and dechlorinating the water, mixing the ingredients, carbonating the beverage, testing the liquid, filling and packaging the product, and checking the quality.

In operational terms, Elephant House engages in single-stage types of processes, as activities within the processes are analyzed together.

Process Selection

Process selection is the strategic decision of selecting which kind of production processes to have in the production plant (Chase, et al., 2007). The basis of process selection depends on the characteristics of the product, volume of production, availability of resources, etc. Elephant House ensures that their processes are of the best standards available, and that the processes have the ability to meet the necessary requirements, at the required time. When selecting a particular process, the organization at first assures the design requirements of their products, such as quality, flexibility and reliability, in order to ensure the excellence of the final product. While ensuring that daily production requirements are met, the company also guarantees that any machinery and equipment is utilized to their full capacity, thus reducing the operator and machinery idle time. The company also makes certain that a minimum amount of resources are utilized at the maximum capacity in order to reduce costs. Thinking about the future prospects, Elephant House ensures that the selected processes are flexible enough to accommodate and changes in design, in the long-run.

Process Flow Structure

Elephant House considers both aspects of Process Flow Structure and Process Flow Design, when selecting their processes. The general types of process flow structures are job shop, batch shop, assembly line and continuous. In the context of Elephant House, the process flow structure in use follow a mixture of batch shop and continuous processes of production. The processes follow a predetermined series of step, where the flow remains to be continuous. Since there are several ranges of soft drinks being

produced, the different varieties are produced in batches, in relatively high volumes.

When considering the factors affecting the selection of processes, the operations manager described that the volume of demand expected and the number of products produced have a significant effect. This enables the organization to decide how many products should be produced at different periods of time. The next factor which affects process selection is the costs of production. Elephant House takes into consideration both the fixed and variable costs associated with the production system. Since Elephant House is both product-focused and process-focused, they face varying costs depending on the level of investment they formulate. The level of investment is another factor that has an impact on process selection. The company invests a large amount of money in its machinery and capital as most of their processes are automated. The company also invests in training their employees and in the processes of developing new products.

Process Flow Design

According to Elephant House, there are certain factors which influence the process flow design. For example, the nature of demand is one factor. The organization ensures that the processes are designed in order to keep pace with the demand fluctuations. The company identifies flexibility as another influencing factor. Since the company is both product-focused and process-focused, it is necessary for them to sustain the ability to shift from one product model to another, without any difficulties. The degree of automation is also an influencing factor, as the organization relies heavily on machinery

and tooling to carry out their processes. They ensure that they have the controlling power which enables the automatic functioning of the machinery, thus increasing efficiency.

In order to pre-determine the process flow design, Elephant House uses two tools. One of the tools is known as assembly chart, where the order of assembly of the products is shown, and the second tool being a process flowchart, which presents the events that occur to the product as it proceeds through the production process.

Process Analysis

In order to thoroughly analyze their processes, Elephant House evaluates the performance of individual activities as well as, evaluates the overall performance of the process. By analyzing their processes, the company is able to understand how the process works as individual attention is given to each activity and the entire process is observed as a whole. By such observations, the company is also able to identify any problems associated with the process and determine how the process can be improved.