HAASTRUP OLUWADOYINSOLA MERCY

15/ENG06/032

MECHANICAL ENGINEERING

MEE 582

FEASIBILITY STUDY

1. **SUMMARY OF THE PROJECT**
2. Name of firm: Mercy Haastrup Limited
3. Location:

Head office: No 3B Usuma close off Gana Street Maitama, Abuja.

Plant Site: Dikko Street, Idu industrial layout, Idu, Abuja

1. Project description:

This project is to set up a ventilation production firm in Abuja. The major reason to set up this firm is to meet the needs of Covid-19 patients undergoing treatments who are unable to breathe properly. The market projection is towards Afe Babalola University Ado-Ekiti community specifically ABUAD teaching hospital. All ventilators used currently are being imported from the USA and so on. This firm will also reduce cost of transportation as shipping fee will be eliminated.

1. Assumptions:

Market share

Globally, there is an increase in market share as the demand for ventilators grow yearly due to various factors such as the increase in number of lung related diseases, and now the rapid increase of end stage covid-19 patients across the globe. The increase in these numbers and the need for survival would drive the demand for ventilators hence increasing the market revenue and shares of major competitors. The market share is fluctuating and is not being dominated by a particular firm as international brands such as HOFFRICHTER having about 45%, ResMed Europe having 33% and so on.

Prices

Due to the recent outbreak of the covid-19 virus there is a surge in the demand for ventilators for survival of patients but this has been made difficult as importation of raw materials has been paused so an alternative is to source for them locally at reasonable prices.

Investment cost

The investment costs such as construction cost, cost of land, equipment, processes and so on has been carefully studied and the project can be carried out successfully.

Sources of funding

1. Initial capital
2. Loan from banks
3. Contributions from family members and well wishers
4. Investors
5. Summary of findings and conclusions
6. Market feasibility

Since investors are mostly attracted to businesses with high return on investment and lower risk this business fits the requirement as there is a higher demand for the product than ever and hence ABUAD can venture into this industry and thrive as there is excess demand over supply and there shall be competitive market position to obtain.

1. Technical feasibility

After much research it has been verified that the project technical data has been sourced for and a reasonable amount of ventilators can be produced at a minimum cost. The cost incurred from building the facilities, buying and renting some equipment, studying the process involved in ventilator production, observing the method and channels of distribution and quality of the product has been shouldered and can be financed adequately.

1. Financial feasibility

This is also feasible as the initial capital requirements, sources of financing, the total project cost and the financial statement has all been guaranteed. Also the financing of the management team and qualifications has been looked into while at the same time offering attractive salaries as the rival competitors. In conclusion, the profit to be generated from the business outweighs the initial capital investment.

1. **GENERAL INFORMATION**
2. Management of the Project

Pre-operating period

It is important to fulfil the pre operating conditions necessary to make a plant fully functional before even looking at its processes. For the success of a company preparation is very vital as it includes planning from little details to important stages. One must have a good decision making skills to determine if the scheduled activities to be carried out are feasible. A group of engineers have been hired to determine the best and fastest course of action in order to complete the necessary facilities, an accounting firm Brian and Shane limited has been hired to make sure the check books are balanced as this ensure that the adequate monitoring of funds within the company. The marketing team in charge of running ads are also in place in order to boost sales once the operation is fully functional, a reliable transportation company for moving raw materials to site has been contacted, Kings Guard Security Company has been hired for protection against street hoodlums while construction is going on.

Management during the operating period

This organization is in form of a single proprietorship business organization. In order of hierarchy the structure of the company will be

GENERAL MANAGER

ASSISTANT GENERAL MANAGER

ENGINEERING MANAGER

SALES MANAGER

ACCOUNT MANAGER

MARKETING MANAGER

Roles

General Manager

The major role of the general manager is to oversee daily business operations. Also, he is in charge of developing and implementing growth strategies, evaluating performance and productivity. Finally, researching and identifying growth opportunities.

Assistant General Manager

The Assistant General Manager (AGM) helps the General Manager to ensure that day to day business operations run smoothly. The Assistant Manager will draw up weekly schedules, order merchandise, and assist the General Manager with training, recruiting, promotions and planning.

Engineering Manager

Confers with management, production, and marketing staff to discuss project specifications and procedures. Also, coordinates production of ventilators making detailed plans to accomplish goals and directing the integration of technical activities.

Marketing Manager

They are in charge of all the sales and they manage all the distribution channels. They ensure that the product is of standard quality through good quality control procedures. They control the price, demand and supply of the hand glove as their goal is to achieve maximum profit with minimum cost.

1. Services:

They are in charge of goods, production and distribution and they strive to ensure that the customers stay happy at all times. They are in charge of producing high quality product while keeping good customer relations.

1. Labour

The labourers hired are highly skilled in the art of production which most finishing their education at a tertiary level. The recruitment program goes on every 2 years and trainees are recruited for 6 months while being trained in various field of application. The company has a good labour compensation, such as paying for overtime and health benefits.

1. Firms to be hired
2. AIICO insurance
3. Azcentral limited
4. Halogen security company
5. Andela
6. Status and timetable of project

The project is in progress as production is growing strong and workers work around the clock 8am-5pm. The tapping period and production of rubber is at its peak from September to January and that’s when production is at its highest.

1. **MARKET DEMANDS**

A. Market Study

1. Demand
2. The use of ventilators has been on the rise for the last 10 years and the major consumers are Hospitals but they are also used in home care,.
3. For the next 10 years ventilators consumption is projected to be on a rise as the valuation of the industry will exceed 2 billion USD by 2030 and this is due to the increase in the number of respiratory problems across the globe, the rise in research and development activities by major competitors to manufacture high quality ventilators increase in the ageing population as they are more susceptible to chronic diseases.
4. Supply
   1. The supply for the last 10 years has been on the rise due to the factors listed above

Ventilators are imported and sold to major hospitals in Nigeria only a few of them can afford it because of the high cost.

For Elizabeth producing ventilators;

1. The supply is set to be increasing gradually as chronic respiratory diseases is increasing in Nigeria
2. The factors affecting the production would be low power supply since most production firms relies on diesel generators. Also, unstable government policies.

Competitive position considering imported and/or substitute products

The selling price would be around N 2,000,000 considering the fact that import tariff would affect those importing the ventilators, which would make most people buy from Elizabeth and we are also considering flexible mode of payment for organizations who don’t have to money once.

1. Marketing Program

1. Description of the present marketing practice and competitors

Business to business marketing strategy is being used. Marketing practices and strategies have been put in place in order to be ahead of the market and such includes; Paid advertising, relationship marketing, internet marketing, transactional marketing.

The competition is high as every rival firm are striving to be the best but with the development of an R and D department and the creation and improvement of our products our firm is set to be a driving force in the industry.

1. The sales and marketing teams are in charge of the selling organization, terms of sale, channels of distribution, location of sales outlets, transportation and warehousing arrangements and their corresponding costs. E-commerce medium would also be used thus, reducing cost. Location of sales are in at least a state in each geo political zone in Nigeria and delivery would be free. Warehousing cost vary depends on the location.
2. Promoting and advertising plan, including costs.

The marketing team is in charge of this aspect as they are driven towards increasing brand exposure and sales through targeted advertisement which costs about N1,000,000 annually. Promotions are carried out with discounts.

**By the product type, the market is primarily split into**

By Application

Resuscitation, Mouth-To-Mouth, Anesthesia, Oxygen

By Type

Facial, Oral, Nasal Pillow

The features that are covered in the report are the technological advancements that are made in the Ventilation Masks market, the sales made in the global market, the annual production, the profit made by the industry, the investments made by the manufacturers and the initiatives that are taken by the government to boost the growth of the market.