**FEASIBILITY STUDY FOR THE SETUP OF A HAND SANITIZER PRODUCTION FIRM IN**

**EKITI STATE, NIGERIA.**

**ENG 582 ASSIGNMENT**

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**NAME OF FIRM: PRECIOUS OBINAJU INDUSTRIAL COMPANY LTD.**

**Head Office: 6 Orisunmibare Street, Ikeja,**

**Lagos State.**

**Firm Site: Plot 6 Olutayo Lane, Ado-Ekiti,**

**Ekiti State.**

**ABSTRACT**

This feasibility study for the setup of a hand sanitizer firm aims at analysing the feasibility of carrying out the project stated, in order to ascertain profit and aid in the combat against the current Corona-virus pandemic.

This study was carried out through research and interactions with members of the desired market. Materials analysed included questionnaires, sales reports, and consumer reviews.

The results of this analysis showed that the execution of the stated project (setup of a hand sanitizer production firm) is feasible. Recommendations are that skilled professionals in the needed fields should be consulted and attention should be paid to specifications during the execution process.

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# INTRODUCTION

The world today is faced with a crisis known as the Corona- virus Pandemic. This pandemic is known to be spread through respiratory contact with respiratory fluids from an infected person. Hand sanitizers provide a means by which the spread of the virus can be curbed by eliminating the virus after an individual’s initial contact with an infected surface with their hands before the infected hands make contact with the respiratory pathways. Hand sanitizers are mostly alcohol based gels that can be used to kill viruses, germs and bacteria and have been found to be of great importance in the battle against the coronavirus pandemic. The benefits of hand sanitizers in whatever market it is introduced into are numerous and almost impossible to enumerate completely. These benefits include the creation of an avenue for great profits not only economically but also medically because of its role in sustaining the health standards of the general public and life preservation. Therefore this feasibility study has been carried out to analyse the feasibility of the project that involves the siting of a firm for the mass production of hand sanitizers to meet the society’s increasing demand.

# METHODOLOGY

This feasibility study was carried out through internet research and interactions with members of the desired market through which information was gathered and analysed. Pre-existing firms and modes of establishing such firms were also studied.

# RESULTS AND DISCUSSION

The results of the analysed data are discussed under their respective divisions below:

## PROJECT MANAGEMENT

The management of the project is divided into two periods: the pre-operating period and the operating period.

### Pre-Operating Period

This is described as the management of the project before the commencement of production. During this period various activities such as capital generation, land development, construction of facilities and provision of Equipment are carried out. These activities are to be professionally managed and supervised by the following companies:

|  |  |  |
| --- | --- | --- |
| S/N | COMPANY | FUNCTION |
| 1 | Peres and Fisher Investments and Stock Brokers | This Firm is concerned with the gathering of initial investments from shareholders, maintaining detailed records of funds and transactions. |
| 2 | Lawman Land Owners and Land Development Company Limited | This company is primarily involved in the mapping out of the proposed site and generation of a master plan for the firm. |
| 3 | Julius Berger Construction Company Limited | This company deals with the erection of facilities, landscaping and paving of routes and roads to and from the firm |
| 4 | R&R Machines and Equipment Cooperation | This cooperation is in charge of the supply of equipment and machines for the proposed production operations. |
| 5 | ABUAD Ventures | The venture would be in charge of the overall management of the activities carried out by the above listed companies and cooperation. They shall also be primarily concerned with staff hiring and furnishing of the firm and pre-production marketing of the product. They shall also be tasked with the responsibility of acquiring raw materials for production.  |

The activities managed by these companies may vary in duration due to various factors. An estimate of the durations of these activities and their sequence in execution are arranged in a project timeline attached.

### Operating Period

During the operation of the firm, various departments are to be setup for the general running of the firm’s day to day affairs for optimum output. These departments are highlighted in the table below with a brief description of their respective duties, lead personnel and time allocation for a single batch production of 1000 units of Hand Sanitizers:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S/N | DEPARTMENT | DESCRIPTION | LEAD PERSONNEL | FUNCTION | DURATION |
| 1 | Materials Department | This department is in charge of material tracking, storage, and distribution within the firm. The department also ensures that there is constant supply of raw materials for production. | Materials Manager | To coordinate the activities of the materials department of the firm.To provide reports on the stock, input and withdrawals of the warehouse | 45 min |
| 2 | Production Department | This department handles the step by step processes of converting the raw materials to finished product. | Production Manager | To supervise the activities of the production floorTo provide detailed accounts on production | 4hrs 20min |
| 3 | Quality Assurance Department | This department ensures that the finished product doesn’t stray beyond the set standard range of properties and dimensions. | Quality Assurance Officer | To ensure that each product conforms to the laid down standard and requirements of the firm.To advice the production department on lapses in quality of product. | 45 min |
| 4 | Maintenance Department | This department ensures that all equipment and facilities are kept in optimum functional condition within the firm. | Maintenance Manager | To schedule and delegate maintenance checks and operations within the firm.To ensure optimum functionality of firm’s facilities and equipment | 0-2 hrs. |
| 5 | Marketing and Transportation Department | This department is in charge of the sales and distribution of the finished product of the firm | Marketing and Transport Officer | To serve as a mode of communication between the target market and the production floorTo convey materials and products from one place to another. | 0 |
| 6 | Accounting Department | The accounting department handles funds. Financial records, funds allocation and calculations involving returns on investments and other money related affairs | Chief Accountant | To generate reports on income and expenditure of the firm and communicate to the administrative departmentTo evaluate the effects of demand and supply on the finances of the firm. | 0 |
| 7 | Administrative Department | This department is in charge of the overall management, supervision and decision making in the firm. It helps in relating the activities of one department to the other. It ensures that the relationships between the departments are monitored and flow smoothly. They also serve to protect the interests of the shareholders. | Administrative Manager | To serve as the primary decision maker of the firm.To ensure smooth flow of information between the various departments.To supervise the activities of the other departmentsTo stand as the representative of the firm in giving general report to share holdersTo create and maintain partnership between companies, firms and industries. | 30min |

**ADMINISTRATIVE DEPARTMENT**

**ACCOUNTING DEPARTMENT**

**MATERIALS DEPARTMENT**

**PRODUCTION DEPARTMENT**

**MAINTENANCE DEPARTMENT**

**QUALITY ASSURANCE DEPARTMENT**

**MARKETING AND TRANSPORTATION DEPARTMENT**

**ORGANISATION CHAT FOR HAND SANITIZER PRODUCTION FIRM**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WEEK** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
| **PHASE 1** | Gathering of Initial Investments on Stock Market |  | **ASSESMENT OF PROJECT PROGRESS AND REVIEW OF FUNDS ALLOCATION** |  |
| Presentation of plans and budgets by companies |
|  | Review and approval of plans and budgets |  |
| Disbursement of funds and plans initiation |
| **PHASE 2** |  | Construction of facilities |
| Purchases of supplies and equipment |
| Marketing of proposed product |
|  | Submission of reports for evaluation |
| **PHASE 3** |  | Completion of uncompleted tasks |  |
|  | Installation of equipment |  |
| Furnishing of firm |
| Employment of labour |  |
|  | Testing of facilities and equipment |
| Quality Assurance Procedures |

**Project Timeline for Pre-Operating Period**

## LABOUR

For the smooth running of the hand sanitizer production firm, a minimum total of 16 staff are required. These staff are to be distributed as follows:

|  |  |  |
| --- | --- | --- |
| **Job Title** | **No. Required** | **Job Distribution** |
| Pharmacists | 5 | The Pharmacists are the primary producers of the product. They work on the construction of the initial chemical formula for the desired hand sanitizer constitution. Pharmacists are the major quality assurance and control personnel. Minimum qualification requirement for these positions is a B.Sc. in Pharmacology |
| Chemists | 3 | The chemists are in charge of material handling and storage. They also contribute to the construction of the initial chemical formula for the desired hand sanitizer constitution. Minimum qualification requirement for these positions is a B.Sc. in Chemistry |
| Maintenance Engineers | 2 | The Maintenance Department ensures that the facilities and equipment remain in optimum working condition for production. Minimum qualification requirement for these positions is a B.Eng. in Mechanical, Mechatronics or Electrical Engineering |
| Accountants | 1 | The Accountant handles the keeping and balancing of financial records. Minimum qualification requirement for this positions is a B.A in Accounting |
| Human Resource Professional | 1 | Human Resources handle the staff concerns and well-being. They are in charge of hiring and recruitment. Minimum qualification requirements for this position are, a B.Sc. or B.A in any discipline and a Diploma in Human Resource Management and Control |
| Marketers | 3 | The marketers make direct contact with the members of the desired market. The collect information on the needs and wants of the market and its opinion on the existing alternatives to the product. They are also primarily responsible for the increase in popularity of the product in the market. Minimum qualification requirement for these positions is a B.A in Marketing |
| Economist | 1 | The Economist is to work with the marketing department to advise the firm on market viability, optimum supply of product, estimates for profit or loss generation, and economic viability of the product. Minimum qualification requirement for this position is a B.A in Economics. |
| Cleaners | 3 | Cleaners are to ensure that the entire firm is always clean and meet up to the WHO sanitation standards for the production of Hand Sanitizers. Minimum qualification requirement for these positions is an SSCE. |
| Drivers | 2 | Drivers are to facilitate the movement of raw materials and products to and fro between the firm and the market. Minimum qualification requirements for these positions are an SSCE and drivers’ licence.  |

The recruitment procedure of each of these job titles entails the applicants submitting their applications and curriculum vitae through approved channels and undergoing a laid down screening process. The selected applicants are then to undergo a training course on the overall running of the firm and first aid. Their knowledge at the end of the training period is to be tested by selected professionals on their understanding of the course with respect to their prospective positions.

Every staff of the company is entitled to a staff office to either be personal or shared depending on position and qualification. All health expenses of staff related to work hazards and accidents are to be covered by the firm and a pension plan is to be set up by the firm for all employees according to position.

All legal matters of the firm are to be handled by ADETIFA CHAMBERS AND ASSOCIATES.

## ECONOMIC ANALYSIS

### Market Study

This study is carried out through close observation of the student population of the university and market research using questionnaires and person-to-person approach. Information, charts and values were collected from interaction with wholesalers, retailers and the final consumers (students) of the hand sanitizer product. This provided adequate information on the market.

Over the span of the past 10 years, the major consumers of hand sanitizers within Afe Babalola University i.e. the target market, were medical facilities and medical personnel within the university. An estimate of 13,000 litres of hand sanitizers were consumed yearly at a price of ~~N~~15,000 per litre. Due to the current pandemic, the demand rate of the product has increased to 200% of its original value. As sensitization on the importance of hand sanitizers spread, the demanded units are projected to increase by another 100% to take the estimated demand of the product to about 26,000 litres yearly. It has been observed that a slight increase or decrease in the price of the product has insignificant effect on the demand for the product. The consumption of the product has expanded to accommodate, lecturers, students, hostels, colleges, security, cleaners and medical facilities and personnel.

Majority of the universities’ hand sanitizer supply over the past 10 years has been from a US based imported brand, marketed and distributed by Lagos based companies. The dominant brand in use is Purell. With no true means of comparative measure between our proposed product and Purell hand sanitizers, supply estimates were made without existing brands consideration. With a direct production cost of ~~N~~2,800 per litre and an indirect production cost of ~~N~~1,000 per litre and a sales price of ~~N~~21,000 per litre the supply rate is estimated to be about 27,000 litres yearly with a possible growth rate of 30% yearly over the period of the next 10 years. The major factor considered in estimating this growth rate is the increased available capital and the increasing rate of demand of the project. It is important to note that with effectiveness of marketing programmes and strategies, the estimated demand and supply figures may increase respectively.

The proposed product has a competitive advantage over goods in the current market because of the rather large difference in distance between proposed firm’s site and the Purell distribution company in relation to the target market. This factor reduces transportation cost in getting the product to the final consumer and increases accessibility to the product. Secondly, the prices of Purell have increased drastically in the wake of the pandemic to about ~~N~~28,000 per litre which provides an avenue for monopoly of the market with our products sales price of ~~N~~21,000 per litre.

### Marketing Programmes and Strategies

Currently the only marketing strategies that have been put in place for existing versions of the product are person-to-person referrals and media publications and advertisement.

The proposed marketing strategy for the proposed project includes a ban against the sale of competitive products within the target market. This is made possible by the firm’s relationship with the governing body of Afe Babalola University. A price discount is also to be implemented on the purchase of a certain number of units which would cost the firm an estimate of approximately ten thousand naira (~~N~~ 10,000) monthly. Sensitization programmes are also to be scheduled within the university community to raise awareness on the role of hand sanitizers in combating the spread of the pandemic. The organization of these sensitization programmes and its implementation would cost approximately one hundred and fifty thousand naira (~~N~~150,000). Lastly, media publications and advertisements shall be set up to expand the range of the market at an average cost of fifteen thousand naira (~~N~~15,000) per media outlet.

The main wholesale distributor of the product is to be ABUAD Ventures. As a partner in the project, their warehousing resources would be available at no cost to the firm and the product will be sold through their retail outlets within the university in the various hostels and at the mall. Transportation of the product is to be done using the company vehicles with a fuelling cost of about thirty thousand naira (~~N~~30,000) monthly.

Lastly, the product is to be packaged to fit its desired target customers made of the students. Particular consideration and attention will be given to portability, ease of use, physical attractiveness and appeal, and its fusion with modern technology. Also, guidelines for use and storage would be boldly displayed on the container.

The proposed product will not only affect the economy of Afe Babalola University by reducing the expenditure on transportation and generating income but will also benefit the nation’s economy through the various tax payments and getting the nation one step closer to a self-sufficient economy. Other benefits to the nation include jobs creation and patronage of indigenous companies and suppliers.

## TECHNICAL FEASIBILITY

The proposed products are hand sanitizers. Hand sanitizers are mostly alcohol based gels that can be used to kill viruses, germs and bacteria. The proposed chemical constitution of the product is 80% ethanol, 1.45%glycerol, 0.125% Hydrogen Peroxide and 18.415% water. Because of its rich alcohol base it is highly flammable. Hand sanitizers are used as instant substitutes to hand washing practices in the absence of proper hand washing facilities or in urgent situations.

The manufacturing process for hand sanitizers involves first the distillation of water required for the process. Secondly, ethanol, hydrogen peroxide and glycerol are then mixed together according to the desired concentrations and chemical formulas. Distilled water is then added to the mixture to dilute it. The solution derived is to be covered immediately to prevent evaporation. After a specified period of time, the solution would be mixed and then dispensed into their packaged containers. It’s advisable that the solution be stored and let to rest for 72 hours before use.

An alternative to ethanol for this process is Isopropyl alcohol but it was considered not suitable because of its level of unavailability and its flammability. Aside from the basic hand sanitizer production chemicals, gelling agents, fragrances and perfumes are usually introduced into the solution by other companies before packaging. This practice although being a great marketing strategy has been warned against by the World Health Organisation (WHO) because of individual allergies and reactions to these ingredients.

With the proposed initial firm size and capital, the firm is expected to produce eight hundred and seventy (870) 100ml units of hand sanitizers daily which amount to about eighty-seven (87) litres daily. The firm is expected to run for a minimum of 8 hours daily to produce this volume. With due consideration to public holidays, estimated number of staff, sick days and production down time, excluding weekends, the firm is expected to be fully operational for a minimum of two hundred and fifty-five (255) days annually which amounts to a minimum of two thousand one hundred and eighty-five (22,185) litres annually . With consideration given to start-up and technical factors such as equipment and facilities depreciation, an estimate of two hundred and thirty-two thousand, five hundred (232,500) litres of hand sanitizers is projected as the total overall supply from the firm at the end of 10 years.

### Firm Machinery and Equipment

For the execution of the manufacturing process and production of the estimated product quantity with optimum efficiency, the production process is projected to be partially automated with the inclusion of machinery and sensors. The list of machines to be involved in the production of hand sanitizers include:

1. Water Distiller: this provides the water required for the process.
2. Calibrated Dispensers: this releases a specified volume of the stored chemical or solution into a container.
3. Mixer: this is a preferably glass container that uses an inbuilt paddle to mix the hand sanitizer solution.
4. Sealer: this seals/corks the final product in its final packaging
5. Conveyor: this moves the containers for final packaging from the point of initial loading through the dispensers, sealers and down to the quality control station before it is finally packaged.

The above machines are to be automated with the introduction of timers, and position and volumetric sensors but an allowance for manual control in the case of technical problems arising shall be provided to reduce production downtime. The materials and solution will flow through the system with the aid of supply channels or supply ducts. The machine layout involves 4 rows as shown below

DISPENSER

DISPENSER

DISPENSER

DISPENSER

WATER DISTILLER

ETHANOL STORAGE VESSEL

GLYCEROL STORAGE VESSEL

HYDROGEN PEROXIDE STORAGE VESSEL

MIXER

DISPENSER

SEALER

SUPPLY CHANNELS

CONVEYOR

BELT

**MACHINERY LAYOUT FOR HAND SANITIZER PRODUCTION.**

Additional equipment to be used includes an alcoholmeter, gas chromatographer and titrimetric evaluator. These are equipment that would be used by quality control to ascertain that the alcohol and hydrogen peroxide concentrations conform to that already stipulated in the chemical formula.

These machines and equipment are to be supplied by R&R Machines and Equipment Cooperation. These machines to be supplied are covered by a 7 year warranty within which the cost of repairs or replacement of a failed machine or equipment is to be covered by the supplying cooperation. The machines have been guaranteed by the cooperation to perform optimally and have been tested by their research team. Delivery and logistics for these supplied items are also to be covered by the cooperation. The cooperation has highlighted a list of basic faults and failures that may occur within the first 15 years of running the machinery and a corresponding training program shall be organised for the proposed maintenance personnel. All spare parts and equipment required to rectify these faults and failures shall also be provided by the cooperation for a price that will be captured in the supplier’s quotation attached on the following page.

The agreed payment and supply arrangement with the cooperation stipulates that 75% of the quoted cost would be paid in advance, after which the cooperation is required to supply the machines and equipment as well as install and test-run them. After the test run and satisfactory operation of the supplied items, the 25% balance shall be paid and a delivery certificate signed.

### Firm Land, Layout and Structure

The factors considered in the choice of the desired firm’s site include: land availability, the distance between the raw materials market (chemical market) and the site, distance to the target market, and eco-friendly location for the firm’s waste disposal.

The firm is to be structured such that the alcohol fumes are isolated in the main manufacturing chamber in the left wing of the firm while personnel and administrative offices are to be in the right wing. This is to ensure the health and safety of staff and also reduce the spread of fire in the case of an accident. The storage room of the firm is to be located in-between these wings to serve as an escape route in the case of an emergency. At the left end of the storage room a passage way is to be provided to lead to the loading area. The quality assurance labs would be located within the manufacturing chamber. This firm layout aids in ensuring that paper and the alcohol fumes are almost 100% isolated from each other and the flow of materials is uninterrupted and with little distance for transportation from storage to their desired location. Also, the effect of the layout on storage entails that the need for the flammable raw materials can always remain within controlled temperatures during handling.

The firm’s site would be large enough for the inclusion of other buildings as the need for expansion arises. The current firm’s proposed building shall also be structured in such a way that with the purchase of new machines and equipment, the right wing can be converted to another

**R&R Machines and Equipment Cooperation**

Plot 14Giwa Industrial Estate,

Ikeja, Lagos.

Phone: 0802 820 7496

Prepared by: Pepple Ibim

**QUOTE**

|  |  |
| --- | --- |
| Date | 21 / 2 / 2020 |
| Quote # | 583490 |
| Customer ID | 356 |
| Valid Until | 20 / 2 / 2021 |

|  |
| --- |
| Customer |
| Precious Obinaju Industrial Company Ltd.6 Orisunmibare Street, Ikeja, Lagos.0909 432 9876 |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | UNIT PRICE | QTY. | AMOUNT |
| Water Distiller | 480,000.00 | 1 | 480,000.00 |
| Single Nozzle Automated Dispensers | 10,000.00 | 4 | 40,000.00 |
| Multiple Nozzle Automated Dispensers | 30,000.00 | 1 | 30,000.00 |
| Glass Mixer | 300,000.00 | 1 | 300,000.00 |
| Sealer | 155,000.00 | 1 | 155,000.00 |
| Storage Tanks | 45,000.00 | 3 | 135,000.00 |
| Electric Conveyor | 420,000.00 | 1 | 420,000.00 |
| Plastic Ducts | 800.00 | 100m | 80,000.00 |
| Maintenance Equipment | 35,000.00 | 2 | 70,000.00 |
| Spare Parts | 75,000.00 | 3sets | 225,000.00 |
| Alcoholmeter | 5,000.00 | 2 | 10,000.00 |
| Gas Chromatographer | 150,000.00 | 2 | 300,000.00 |
| Titrimetric Evaluator | 400,000.00 | 1 | 400,000.00 |
| Labour  | 3,000.00 | 8hrs | 24,000.00 |
| Logistics | 60,000.00 | - | 60,000.00 |
| Client Discount | 10% | - | 272,900.00 |
| TOTAL | **2,456,100.00** |

|  |
| --- |
| TERMS AND CONDITIONS |
| 1. Customer will be billed after indicating acceptance of this quote
2. 75% of payment will be due prior to delivery of service and goods
3. Please fax or mail the signed price quote to the address above.
 |

Customer Signature and Date

manufacturing chamber. This ensures that in the need for expansion, only the inclusion of an administrative building will have a significant effect on the firm’s supply.

For the initial setup of the firm, the only structures required are, the manufacturing building, the water tank and the parking garage. These structures are to be made accessible by a paved road leading from the gate of the firm. After presenting the desired firm layout, plan and design to the proposed contractors, a cost estimate of erecting these structures and facilities were provided amounting to a total of nine million naira (~~N~~9,000,000). 60% of this amount is to be paid prior to the commencement of the project, while the balance is to be supplied at the completion of the project.

### Raw Materials and Material Selection.

There are three major materials in the manufacturing of the desired product. All raw materials to be used should be preferably free of viable bacterial spores. These raw materials are:

1. Ethanol
2. Hydrogen peroxide
3. Glycerol
4. Ethanol: this is easier to procure than its possible alternative isopropyl alcohol. It is also cheaper than isopropyl alcohol. Ethanol can be locally derived from sugar cane or wheat. Ethanol is the active component in the formulation.
5. Hydrogen peroxide: there are recorded difficulties in sourcing satisfactory H2O2 but is readily available in the chemical market in the vicinity of the firm. The low concentration of H2O2 is intended to help eliminate contaminating spores in the bulk solutions and recipients and is not an active substance for hand antiseptic. H2O2 adds an important safety aspect in production. Hydrogen Peroxide is corrosive in nature.
6. Glycerol: this is produced by local suppliers in most cases. Glycerol is added as a humectant to increase the acceptability of the product. Other humectants or emollients may be used for skin care, provided that they are affordable, available locally, miscible (mixable) in water and alcohol, non-toxic, and hypoallergenic. Glycerol has been chosen because it is safe and relatively inexpensive. Lowering the percentage of glycerol may be considered to further reduce stickiness of the hand rub.

The use of water is very important in achieving the desired concentration of the final product. Sterile distilled water is preferred for making the formulations, and can be provided on the firm’s premises.

### Utilities

Electricity: this utility is to be applied in the powering of the entire firm, lighting and facilities. It is to be supplied by community power supply and a supporting backup generator. The cost of connecting the power lines to the community’s power source as well as the purchase of the generator amounts to one million, seven hundred thousand naira (~~N~~1,700,000).

Water: this is the most essential utility for the running of the firm. It not only contributes to the manufacturing process but aids in human waste disposal. It is to be supplied by a borehole on the firm’s premises. The cost of drilling this borehole and laying of connecting pipes amounts to five hundred thousand naira (~~N~~500,000).

The major avenue for water disposal within the firm will involve a soak away attached to each building.

## FINANCIAL FEASIBILITY

With due consideration given to the cost of raw materials, erection of facilities, purchasing of machinery and equipment, labour, utilities, marketing and an allowance for unforeseen expenditure, a conclusion that the total cost of establishing the hand sanitizer firm and running it for a period of one year amounts to the sum of twenty-three million, five hundred and eleven thousand naira (~~N~~23,511,000). With this figure and an estimated duration of four months before a significant return of investment is observed, an estimate of sixteen million, two hundred thousand naira (~~N~~16,200,000) is projected as the initial investment required for the project.

The initial capital for the project is to be gotten through the sale of shares on the stock market. An estimate of 2.7million share units has been projected for investment in this project. With thorough evaluation by our financial and stock market analysts and market research teams, the staring share price for initial investment is to be at six naira (~~N~~6) per share and a minimum allowable investment should amount to the sum of 350 thousand naira. This method is also to be used for long term financing and need for expansion. Short term financing however shall be carried out by the accounting department through the office of management for the withdrawal of recyclable funds.

# CONCLUSION

In this feasibility report we have considered the technical feasibility, financial feasibility, market structure as well as proposed management of the project at all stages using the methods of direct market research, internet research and study of existing products. We have concluded that for the project to succeed, it is dependent on the success of capital generation, proper labour recruitment procedures and standards, credibility of labour and machinery, and supplier credibility for provision of facilities, machinery, equipment and raw materials. We are optimistic that once these variables are properly managed and put in place, the business is most likely to succeed.