

UNIVERSITY OF NIGERIA, NSUKKA  
FACULTY OF ARTS  
DEPARTMENT OF MASS COMMUNICATION

RECYCLING OF PLASTIC PRODUCTS

A BUSINESS PLAN  
PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS  
FOR THE COURSE CEDR 342  
(BUSINESS GROWTH AND DEVELOPMENT)

BY

CHIKE, CHIEMELA ELIZABETH  
2014/195713

LECTURER: DR. (MRS.) C. NWAOGA

JULY, 2017

## TABLE OF CONTENTS

1.0	Executive Summary	-	-	-	-	-	-	-	-
2.0	Introduction	-	-	-	-	-	-	-	-
2.1	Vision	-	-	-	-	-	-	-	-
2.2	Mission	-	-	-	-	-	-	-	-
2.3	Key Success Factor	-	-	-	-	-	-	-	-
2.4	Inherent Risks	-	-	-	-	-	-	-	-
2.5	Business Ownership	-	-	-	-	-	-	-	-
2.6	Locational Factors	-	-	-	-	-	-	-	-
2.7	Available Market	-	-	-	-	-	-	-	-
3.0	Products	-	-	-	-	-	-	-	-
3.1	Products Description	-	-	-	-	-	-	-	-
3.2	Costing	-	-	-	-	-	-	-	-
3.3	Marketing Demand	-	-	-	-	-	-	-	-
3.4	Projected Annual Demand	-	-	-	-	-	-	-	-
3.5	Demand Supply Gap of Distribution	-	-	-	-	-	-	-	-
4.0	Market Analysis	-	-	-	-	-	-	-	-
4.1	Customers/Market Segmentation	-	-	-	-	-	-	-	-
5.0	Marketing Plan	-	-	-	-	-	-	-	-
5.2	Marketing Strategy	-	-	-	-	-	-	-	-
5.3	Market Positioning	-	-	-	-	-	-	-	-
5.4	Project Sales	-	-	-	-	-	-	-	-
6.0	Technical Analysis:	-	-	-	-	-	-	-	-
6.1	Schedule of Operation	-	-	-	-	-	-	-	-
6.2	Management and Organization	-	-	-	-	-	-	-	-
6.2.1	Owner/Manager	-	-	-	-	-	-	-	-
6.3	External Support	-	-	-	-	-	-	-	-
6.4	Value and Norms of the Company	-	-	-	-	-	-	-	-
7.0	Legal Issues	-	-	-	-	-	-	-	-
7.1	Environmental	-	-	-	-	-	-	-	-
7.2	Social	-	-	-	-	-	-	-	-
7.3	Regulatory	-	-	-	-	-	-	-	-
8.0	Risk Analysis-	-	-	-	-	-	-	-	-
8.1	SWOT Analysis	-	-	-	-	-	-	-	-

8.2	Exit Strategy	-	-	-	-	-	-	-	-
9.0	Company Financial	-	-	-	-	-	-	-	-
9.1	Summary of project Cost	-	-	-	-	-	-	-	-
9.2	Fixed Capital Investments	-	-	-	-	-	-	-	-
9.3	Utilities	-	-	-	-	-	-	-	-
9.4	Other Expenses	-	-	-	-	-	-	-	-
9.5	Working Capital Forecast	-	-	-	-	-	-	-	-
9.6	Total required investment outlay	-	-	-	-	-	-	-	-
9.6	Financing Loan	-	-	-	-	-	-	-	-
9.8	Loan Repayment Schedule and Interest Paid	-	-	-	-	-	-	-	-
9.9	Depreciation	-	-	-	-	-	-	-	-
9.10	Forecast of Profit and Loss	-	-	-	-	-	-	-	-
9.11	Cash Flow Projection	-	-	-	-	-	-	-	-
9.12	Balance Sheet Projection	-	-	-	-	-	-	-	-
10.0	Financial Analysis	-	-	-	-	-	-	-	-
10.1	Profitability Analysis	-	-	-	-	-	-	-	-
10.2	Cash Flow Projection	-	-	-	-	-	-	-	-
10.3	Projected Balance Sheet	-	-	-	-	-	-	-	-
11.0	Other Considerations and Conclusion	-	-	-	-	-	-	-	-
11.1	Economic Justification	-	-	-	-	-	-	-	-
11.2	Commercial Viability	-	-	-	-	-	-	-	-
11.3	Conclusion	-	-	-	-	-	-	-	-

## CHAPTER ONE

### EXECUTIVE SUMMARY

- 1.1** This business plan is to examine the financial vitality or otherwise of establishing plastics recycle and productions plant in Nigeria a sourcing for resins and then convert them into plastic sheets for cutting and printing.
- 1.2** The production capacity of the proposed business is 350kg per day and the required start up capacity estimate of the business is 6,924,000.00 naira and it would be funded from 30% equity 2,077,200.00 naira and 70% loan 4,846,600 naira. The loan would used to finance our purchase on installation of the production plant and the working capital.
- 1.3** We expect to generate a net profit after tax of 3,467,217.54 naira and 3,990,451.62 in the first and second year with the repayment plan of two years with moratorium period of two months. The assumed interest rate for the loan is 25%.
- 1.4** The proposed business would be managed by the promoter and the total manpower required to run the business is about five persons.
- 1.5** The proposed project will be located at no 1Enugu road Nsukka in Enugu state because Nsukka is a large town with a large number of people incorporating both workers and students that need plastic bag for their everyday running of activities like shopping, carrying books etc.
- 1.6** The name of the company will be **FIVE ALERT** and its vision is to be the leading plastic bag producers and exporters in Nigeria with a good quality and at an affordable price.

The advantage of the company over other competitors are their knowledge on business acquired from the centre for entrepreneurship development research (CEDR) and knowledge and skills of other scientists and engineers we will employ joined with our own knowledge of business management.

## CHAPTER TWO

### BACKGROUND OF STUDY

#### 2.0 INTRODUCTION OF PLANNED BUSINESS.

Plastic bag recycle and production has indeed assumed significant economic importance in Nigeria today, owing to the variety of uses to which these finished products could be put. The products are extensively utilized for wrapping, packaging, shopping and general bagging purposes and are constantly in demand. These plastic bags are of different sizes serving a particular purpose while some are used for packaging bread, non-edible stuff purchased from the market, some are used by traders for marketing their merchandise and garments while some are also turned into shopping and school bags by students.

The company will be located at no 1 Enugu road Nsukka in Enugu state because Nsukka is considered as land for all because of other companies and schools located here which we have the advantages of selling our products easily and at an affordable price.

#### 2.1 VISION AND MISSION

**2.1.1 VISION:** to be the leading plastic bag producers and exporter in Nigeria.

**2.1.2 MISSION :**(a)we emphasize customer satisfaction as our top priority.

**(b)**to create employment for our citizens.

#### 2.2 OWNERSHIP OF THE ENTERPRISE

The enterprise is a limited liability partnership in which all the partners have limited liabilities depending on the jurisdiction.

### **2.3 KEY SUCCESS FACTORS**

- F- FOREVER**
- I- INNOVATIVE**
- V- VERY ACTIVE**
- E- EFFECTIVE**
- A- ABLE**
- L- LEADERSHIP**
- E- EXCELLENT**
- R- RESOUCEFUL**
- T- TRUTHFUL**

We employ service, quality and competitive pricing.

### **2.4 LEGAL STATUS.**

### **2.5 LOCATION OF PLANNED BUSINESS AND FACILITIES.**

It will be located at no 1Enugu road Nsukka in Enugu state. The facilities needed include land and a factory which houses a semi automatic nylon cutting a sealing machine and other raw materials, basic petrochemicals products such as escorene, luplen, dow, B.A.S.F for the production of the plastic bag. These petrochemicals can be imported from Indonesia, Korea Republic and China or from extruders operating in Nigeria, who process both the low density and high density materials, by polishing them into useable forms for the benefit of cutters and sealers. A truck for carrying raw materials to distributors and products to the market will also be needed. Then a borehole and stand-by high power generator.

## **2.6 PRODUCTS**

The products include plastic in form of films used in packaging such edible products as bread, cake etc, the thicker forms, popularly called 'santana' for packaging biscuits or for packaging their washed clothes, the thicker and more fanciful plastic for shopping and for school use.

## **2.7 BUSINESS STRATEGY**

We will procure efficient and reliable machinery that will efficiently cut, seal and shape the bags to the desired quality. We will also make adequate arrangement for steady raw material supply and also engage or employ efficient engineers for the operation of the machine to ensure waste control so as to manage cost.



## **CHAPTER THREE**

### **MARKETING AND CLIENTS**

#### **3.0 NATURE AND SIZE**

Extensive market research has revealed that plastic bag is an everyday consumer goods used by everyone. Thus, the market is ongoing and is not dependent on economic cycles and can be described as a FMCG (fast- moving consumer goods) commodity market. There is also the opportunity of broadening and expanding the products offering to supermarkets, fast food center/eateries, banks, boutique, bookshops etc.

#### **3.1 TARGET CUSTOMERS**

As the world is going corporate, the need for packaging is increasing every day. Packaging improves image and branding of a product, hence the need shopping bags these days ranging from supermarkets, eateries, banks, boutique and bookshops thereby creating large demand for the product.

#### **3.2 KEY COMPETITORS**

In Nsukka, the key competitors are mainly retailer of the plastic bags, their unsteady activities in sales may try to affect the business, but with our experience in CEDR and employment of skilled and efficient staff, I believe we have an edge over based, on producing an acceptable and quality product and other marketing strategies.

### 3.3 PROPOSED PRODUCTION PLAN AND FIVE ALERT PLASTIC BAG RECYCLE COMPANY

PRODUCTION CAPACITY (KG)	DURATION	UNIT PRICE	AMOUN T
350	Duration	35	3500
2100	Weekly	210	21000
8400	Monthly	840	84000
127702	Annually	12770.2	1,277,020

**TOTAL= 1,355,520**

**UNIT PRICE=**  $\frac{\text{production capacity}}{\text{Cost}}$

Cost

**N:B** a semi automatic nylon cutting and sealing machine will be used for cutting and sealing the plastic bag of weight 350kg to be produced per day into different shapes and qualities.

The annual turnover is expected to increase by the rate of 20% in the succeeding year.

### 3.4 PRODUCTION PROCESS

The four stages of manufacturing plastic bags are

- Raw material
- Film
- Printing
- Final product.

**RAW MATERIAL:** plastic (PE), the correct name for plastic is a member of a family of materials called POLYMERS. Polyethylene is produced by a high pressure process. It is made suitable by extruding the molten materials through a plate containing many small holes(the die), so that forms continuous strands like spaghetti,

which are then cooled and chopped into small pieces, known as granules, which are then conveyed into silos for subsequent transport to the processing factories in bulk tankers or sacks.

**FILMS:** plastic film is made by taking the granules, blending them with coloring agents (known as master batch) and other additives if required. These mixtures of cold granules conveyed to a film extruding machine, in which the granules are heated until they are molten and again forced through a die, but in this case, of an annular shape (circular) with about 1mm gap between the inner and outer parts of die, so a molten tube of polyethylene emerges vertically with a wall of thickness of 1mm and a diameter the same as that of the die (typically 60-300mm).

The finished rolls of film, typically 100kg each and of up to 10,000 meters (10km) in length of tube depending on its thickness are removed for the next stage.

**PRINTING:** if the bags are to be printed, the roll of film is taken to the printing machine known as a press. This is usually a flexographic printers, which means that it uses flexible printing plates which are mounted on to a steel cylinder of the correct diameter to give the repeat length required. The repeat length will subsequently determine the size of bag made.

**PRODUCT:** all standard bags and carriers have one side open and three sides closed. The machine will cycle to place a seal on the material and then cut it off to make an individual bag. In some cases, with some bags, machine cycle speeds may produce up to 70,000 bags per hour. In other instances, a large bag may run as slowly as 2,00 bags per hour.

### **3.5 SERVICE DELIVERY:**

No advertisement or sales effort will be needed to sell the products. Distribution is easy and swift, more so as the products are light-weight. Based on these lucrative market opportunities against relatively little capital needed to establish the business, the restaurant profit margin is worthwhile.

### **3.6 QUALITY ASSURANCE**

In producing plastic bag, we will make sure that the raw materials to be used are of good quality so as to yield quality finished product for the success of the company and achievement of its purpose by the customer or buyers.

### **3.7 DEMAND/SUPPLY ANALYSIS**

The supply gap in the country has created a market gap estimated at 2.7 billion annually in revenue. The demand for plastic bags has been identified to continue to expand as the standard of living of the over 165million population growing at the rate of 5.7% per annum continues to grow.

### **3.8 TECHNOLOGY**

Technology is based on foreign facilitated machines which are easily to fix and repair by the engineer.

### **3.9 COMPETITIVE EDGE**

With our joint experience and market innovations, joined with our experience in CEDR and severe alertness, we can make the best and outrun our competitors.

#### **3.1.0 COSTING**

Preliminary/preoperational expenses	380,000
Plant and machinery	600,000
Rent (1 year)	100,000

Raw materials (1 month of extruded nylon stuff)	220,000
Total investment outlay	1300000

## **CHAPTER FOUR**

### **MARKET PLAN**

#### **4.0 MARKET STRATEGY**

Since our output is not subject to expiry timelines and requires virgin materials or plastic waste material, installed machines and labour that are available in abundance for production, the waiting customers who purchase the plastic bag for packaging, shopping or private use, the business will reach its zenith.

Also good customer care service with functional customer care line will be available to attend to the complaint of customers

#### **4.1 CUSTOMERS/MARKET SEGMENTATION**

By launching product in the market, maintaining the quality and satisfying our customers, we intend to build this company in the whole states of Nigeria for easy accessibility and availability.

## **CHAPTER FIVE**

### **MANAGEMENT, ORGANISATION AND OWNERSHIP**

#### **5.0 SHARE HOLDERS/ DIRECTORS**

The investors shall be considered shareholders of the company and directors but the managing directors will be the initiator of the idea who is part of the shareholders. But the highest shareholder will be the Chairman of the company. Other directors in the various department are partners and other workers shall be employed through advertisement, recruitment and training.

The chairman shall lead the board of directors, which are made up of shareholders and the various directors. He shall regulate us and democratically make a decision in all meetings. The managing directors shall work for the best of the company and perfect running of the company.

#### **5.1 EXTERNAL SUPPORT**

Loan will be collected from commercial institutions like mortgage bank where the board of directors consider important from the advice of the auditor and managing director.

#### **5.2 PERSONAL PLAN**

Organize fund structure; it will range in descending order from the manager to production and sales manager down to an auditor and then the laborers. The number of employees will depend on the expansion and profit of the business but for starting up, the business will have the following employee;

S /N	POSITION	NUMBER	AMOUNT PER MONTH	AMOUNT PER ANNUM
1	Manager	1	25000	300000
2	Production Manager	2	25000	300000
3	Sales Manager	2	25000	300000
4	Auditor	1	10000	120000
5	Labourers	3	6000	72000
Total				1,092,000

**NOTE:** The company is a joint venture by five persons, one was democratically voted as the manager and the other were shared into production and sales manager. We intend increasing our salary by 15000 and other employees by 200 if the business goes well.

### 5.3 VALUE AND NORM OF THE ENTERPRISE

The company shall operate with the Good Operating Procedure (GOP) and the General Manufacturing Practice (GMP) which can be in any part of the world.



## **CHAPTER SIX**

### **TECHNICAL ANALYSIS AND MANAGEMENT OF THE COMPANY**

#### **6.0 TECHNICAL ANALYSIS**

The effect of technology can be seen in the development of new products, new tools, machines and new services. Roberts, Michael and Dean (2005) stated that advances in technology are difficult to predict, therefore being in a market that is not sustainable due to technological development will require us to make careful short-term marketing decisions as well as to prepared to contingency plan given any new technological development that may affect the growth of his business.

#### **6.1 SCHEDULE OF OPERATION**

Currently our installed capacity will be in excess of 1800mt/ month and will rise continuously. our company is to be managed by five professionals and other employees with inclusion of engineers, highly trained and skillful operators.

#### **6.2 MANAGEMENT AND ORGANIZATION**

The proposed business would be managed by the promoter and the total manpower required to run the business is about five persons with inclusion of other employees. The company will run for 6 days in every week except when contract.

#### **6.3 EXTERNAL SUPPORT**

A 70% loan 4,846,800 naira will be gotten from a commercial institution. The loan would be used to finance our purchase on installation of the production plant and the working capital. The assumed interest rate for the loan is 25% which will be repaid gradually for two years if the net profit after tax is 3,467,217.54 naira and 3,990,451.62 naira in the first and second year.

## **CHAPTER SEVEN**

### **LEGAL, ENVIROMENTAL, SOCIAL AND REGULATORY ISSUES**

#### **7.0 LEGAL ISSUES**

The business will be registered as a limited liability partnership. It will also have a trademark and will be known by the business name “**FIVE ALERT**”.

#### **7.1 ENVIROMENTAL ISSUES**

Waste products should be recycled to prevent environmental pollution. Therefore, a recycle bin should be brought by our company for plastic bag users use.

#### **7.2 SOCIAL ISSUES**

The business will provide jobs for many citizens; it will continue to employ more people as it grows in geometrical progression. This will help reduce the rate of unemployment. The duties and tax to be generated from the business will act as a revenue and foreign exchange earners to the government, it will favor the country's balance of payment.

#### **7.3 REGULATORY ISSUES**

The rules and regulation as stipulated in the company's rules and the industries and environmental act of the country will be strictly adhered to, anybody who wants to violate that will face some punishment which will include loss of job or ownership.

## **CHAPTER EIGHT**

### **RISK ANALYSIS, CONTINGENCY PLAN AND EXIT STRATEGY**

#### **8.0 RISK ANALYSIS**

The business is likely to face importation of raw materials that are not original since the raw materials are being sent which may affect the quality of our plastic bag, i.e. maybe not cutting or sealing well. This problem will be dealt with by importing our raw materials from a reputable company and if by any chance raw materials that is not original is imported, it will be sent back immediately to prevent unleashing our company's potentials in the near future.

#### **8.1 SWOT ANALYSIS**

SWOT is an acronym for strength, weakness, opportunity and threats. The strength of the business is the fact that it is always at the high demand and poses less threat to the environment since it is recyclable but its weakness is that the raw materials imported may not be the original which can affect its quality. The opportunities of the business are unmentionable for a country, since plastic bag is an everyday commodity accessible by people and is cheap and affordable. The threat to the business remains its weakness as listed above.

#### **8.2 EXIT STRATEGY**

Incase of unseen and undefined problems, the company will stop functioning until it regains its strength and start all over again. According to the saying that falling once does not make one a failure, so if a business falls, it does not mean that It cannot regain but just needs more effort to prevent unseen and undefined problems.

## CHAPTER NINE FINANCIALS

### 8.11 Equipment Machinery and other costs

We Care Crèche would need the following, machinery etc. to operate. The table below shows the costs of these machineries, equipment and others.

<b>Investment (Equipment and others)</b>	<b>Quantity</b>	<b>Unit Cost (₦)</b>	<b>Total Cost (₦)</b>
Land	4plots		4,000,000.00
Building			3,000,000.00
Equipment and Machine			
i. Stand by generator	1	470,000	470,000.00
ii. Recycling Machine	1	2375700	2375700.00
iii.			
iv.			
<b>Total Investments.</b>			<b>₦9,845,700.00</b>

### 9.12 Sales Plan

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Product/Service			
Product/Service	90	120	150
Cost per unit	160,000	170,000	185,000
Cost of raw inputs	14,400,000	20,400,000	27,750,000

### 8.13 Cost Plan

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Product/Service			
Product/Service	2,000	2,800	3,500
Cost per unit	500	520	540
Cost of raw inputs	1,000,000	1,456,000	1,890,000

### 9.14 Local Raw Materials & Other Inputs

Unit Cost (₦)	Quantity required /Annum	
	Current (Existing)	Proposed (After Expansion)
1,000/kg		40
1,500kg		30
750/kg		30
1,000/kg		20
720/pack		60
2,000/liter		10
500/pack		100

### 9.15 General Cost of Administration

Item	Current (for existing projects only (₦))	Proposed (for new/expansion projects (₦))
a. Rents and Rates		40,000
b. Telephone/Traveling Expenses		120,000
c. Stationery & Sunday Exp.		40,000
d. Vehicle Running Expenses		500,000
e. Insurance		150,000
f. Professional Fee		50,000
g. Electricity		100,000
h. Other expenses		50,000
<b>Total</b>		<b>₦1,050,000</b>

**9.16 Preliminary & Pre-operating Expenses (for new projects only)**

<b>Item</b>	<b>Amount (₱)</b>
a. Company Incorporating	180,000.00
b. Increasing in Authorized Share Capital	NIL
c. Traveling Expenses	200,000.00
d. Preparation of Business Plan/F.S	30,000.00
e. Others (please specify)	NIL
<b>Total</b>	<b>410,000.00</b>

## **CHAPTER TEN**

### **RECOMMENDATIONS AND CONCLUSIONS**

#### **10.1 ECONOMIC JUSTIFICATION**

From our view point in the above analysis, starting plastic bag production requires financial motivation so as to get the best raw material and equipment for the production of quality plastic bag. Extensive market research has revealed that plastic bag is an everyday consumer goods used by everyone and its market is not dependent on economic cycles. Therefore its production can create job opportunities for unemployed citizens, thereby reducing poverty.

#### **10.2 COMMERCIAL VIABILITY**

From the above analysis the company will yield more profit and create job opportunity for unemployed citizens. It regards to social misconduct reduction.

#### **CONCLUSION**

Plastic bag is everyday consumer goods and is independent on economic cycle. So therefore starting a plastic bag business requires enough capital to prevent loss and starting all over again.