

**NAME: AJAIYEoba IFEOLUWA FEJIRO**

**MATRIC NO: 18/LAW01/023**

**DEPARTMENT: LAW**

**BUSINESS PLAN ON THE PRODUCTION OF ALUMINIUM BOTTLES THROUGH  
THE USE OF C2C TECHNOLOGY**

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**Prepared by:** Business Makers Consultancy

**For:** ALUMIX Manufacturing Company Limited

**Note:** All the data and information provided in this document are to be kept confidential.

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## **A BUSINESS PLAN FOR ALUMIX MANUFACTURING COMPANY LIMITED**

### **Executive Summary**

ALUMIX Manufacturing Company Limited is an aluminium drinks bottles manufacturing company of over twenty years experience in the industry. Due to excess demand from soft-drink producers for aluminium bottle-cans for packing beverages, the management of the company took a decision to introduce production of aluminium bottles using the Coil-to-Can (C2C) technology in a bid to bridge the gap between the demand and supply of the product. This new hybrid technology makes high-volume bottle-can manufacturing less expensive, faster and more sustainable than existing processes.

### **Introduction**

ALUMIX Manufacturing Company Limited is the name of the company, established to produce aluminium bottles. It is located at No. 24, Okpanam Road, Obodogba, Asaba, Delta State, Nigeria. The Obior family, a wealthy family of aluminium merchants in the area, owns the business.

### **Description of the Venture**

ALUMINIX Manufacturing Company Limited is set to produce 5ml, 10ml, 50ml, 100ml, 250ml, 500ml, 1 litre, 5 litre and 10 litre aluminium bottles. The target market for these products are producers of soft drinks, essential oils, perfumes, fragrances, pesticides and insecticides, and pharmaceuticals. The product can be manufactured in a way to suit the purpose for which it will be applied and can be made to the specification of the customers.

### **Industry Analysis**

Coil-to-Can (C2C) aluminium bottles technology is relatively new in Nigeria with only a few Nigerian companies having adopted it for use in manufacturing aluminium bottles for packaging products. Among its competitors in the industry are GZ Industries, Alucan Packaging Ltd. and Aba Can Manufacturing Company. Aluminium drinks bottles and cans are more preferable to glass and plastic bottles. They can easily be recycled. ALUMINIX sources its raw materials from Brazil and Aluminium Smelter Company of Nigeria (ALSCON). The demand for aluminum cans by beverage bottlers is well above the supply in the market.

## **Market Analysis**

The key markets for our product are small and medium scale beverage bottling companies located in the South-South and Southwest regions of Nigeria. These areas are densely populated and provide a large market for the beverage companies in the areas. There are many companies that emerge at a fast rate and have demand for aluminium cans for packaging new sodas and juices they produce.

## **Strategic Human Resource Planning**

Coil handlers, cupping press, washers, dryers, canbrushers, bodymakers, coaters and shapers will be needed to manufacture aluminium bottle cans. Two attendants each will be employed to man the coil handler, the cupping press and the bodymaker and one attendant each for the canbrusher and washer. There will also be one attendant each to man the coaters and shaper. A manufacturing manager, who will coordinate the use of workers and machines in the production process, dividing his time between the office and the production area, will oversee the pin-chain accumulator. He is also to ensure the safety of all persons working in the manufacturing plant or department. There will be an accounts officer who will keep record of all financial transactions that take place in the company. A sales or marketing officer will be responsible for the marketing of the aluminium bottle cans to prospective customers and will keep record of sales.

## **PROJECTED STAFF STRENGTH OVER A THREE-YEAR PERIOD AND PROJECTED TOTAL COMPENSATION PACKAGE PER ANNUM**

<b>TITLE</b>	<b>YEAR 1</b>	<b>YEAR 2</b>	<b>YEAR 3</b>	<b>NAIRA</b>
Manufacturing Manager	1	1	1	400,000
Sales/Marketing Officer	1	1	2	350,000
Account Officer	1	1	1	300,000
Coil Handler Operator	2	2	2	200,000
Bodymaker Operator	1	1	1	150,000
Canbrusher Operator	1	1	2	150,000
Washer Operator	1	1	1	150,000
Dryer Operator	1	1	1	150,000
Coater Operator	1	1	1	150,000

Shaper Operator	1	1	1	150,000
Cleaner	2	2	2	70,000
Security	2	2	3	70,000

### **Production Plan**

The line starts with a coil handler that handles rolls of aluminium body stock, which go into a cupping press that punches the sheets into blanks that are drawn and redrawn into shallow cups. The cups then enter a bodymaker, where they are shaped into cans, then ironed and trimmed. Next is a canbrusher that brushes the surface to give the final package more elegance. After brushing, cans are washed to remove any aluminum fines and then are dried. A pin-chain accumulator allows cans to accumulate. The next step is application of an internal liner that prevents chemical reactions between the aluminum can and its contents. After, cans are carried through a dryer, then a pin-chain conveyor follows. Decorating is a two-step process. First, a coater applies a basecoat primer to the cans, after which a second prints the cans using a dry-offset process. An overvarnish makes inks shine and provides the can surface with abrasion-resistance. The last major process on the line is shaping.

### **Marketing Plan**

The currently existing companies in Nigeria cannot meet the demand for aluminium bottle cans. With the adoption of the C2C technology, our company will be able to produce a larger volume of cans in a shorter period compared to the quantity produced with other older technologies like the impact extruded bottles. The C2C technology allows for the manufacture of aluminium bottles at weights 30–40% below the weight of impact extruded bottles at 2 to 4 times the manufacturing speed. We will visit manufacturers of beer, soft drinks, wine, and other liquids and educate them on the ecology-friendly process of manufacturing our bottlecans. Beverage marketers choose aluminium bottlecans for many reasons, including the fact that they are resealable, recyclable and durable. The bottle itself serves as the label and bottles can also be shaped in a variety of ways. This will be the essence of all advertisements published on our product in addition to pictures of our facility. A tour of our facility will also be given to all interested persons or companies.

## **Organisational Plan**

The company is a limited liability company, meaning that the company is a legal entity separate from its owners. The company can sue and be sued in its own name. This arrangement is preferable to customers and makes for a good organisational structure. All machine operators report to the manager on a weekly basis and the manager reports to the owners on a bi-weekly basis.

## **Assessment of Risks and Problems**

Through research, experts gathered that the following may pose potential risk to the manufacturing process: supply of raw materials, competition, rate of labor turnover and most especially, power supply. To guard against scarcity of raw materials, we have situated our plant in Delta State that has aluminium deposits in commercially exploitable amounts. Also, the adoption of the C2C technology will allow for the use of post-consumer recycled aluminium content. This can be gathered from local recycling companies, the ALSCON and our suppliers in Brazil. On the issue of competition, our location is a viable one as there are not many of such companies in the South-South region. Also, having been in the business for two decades now, we fully understand the needs of our customers and are tirelessly pursuing it. As to the problem of labour-turnover, the business, being a family one, will employ the services of family members to hold key offices while other operators will be employed from the local community. Staff welfare will be a top priority to ensure the happiness of every worker. The problem of power supply can be resolved by the purchase of a 100 KVA generator to service the whole plant and adjoining offices.

## **Financial Plan**

*Proforma Manufacturing, Trading, Profit and Loss Account for one relevant year of the two years' plan.*

### **YEAR ONE**

<b><u>Raw Materials &amp; Components</u></b>	<b>N'000</b>
Opening Stock	-
Purchases	22,450
Carriage on Purchase	<u>550</u>
	23,000

Closing stock		<b><u>(800)</u></b>
Issued to production		22,200
Direct labour		490
Other direct expense		<u>60</u>
Prime cost		22,750
<b><u>Work Overheads</u></b>		
Rates	150	
Insurance	250	
Heat, light, power	1,750	
General repairs in the factory	400	
Miscellaneous	<u>200</u>	
Work cost of production		<u>2,750</u>
		25,500
<b>Works Cost of finished goods output</b>		<b>N</b>
Transferred from manufacturing account		25,500
Opening stock of finished goods		<u>-----</u>
Total cost of produced goods		25,500
Closing stock		<u>-----</u>
Cost of goods to be sold		25,500
Sales		<u>32,450</u>
Gross profit		6,950
Administrative / selling expenses	1350	
Rent	400	
Distribution expenses	550	<u>2,300</u>
Profit before interest and tax		4,650
Interest on loan		<u>850</u>
Net profit before tax		3,800
Taxation		<u>700</u>
Profit after tax		

3,100

***Proforma Balance Sheet for Year One***

<b><u>Fixed Assets</u></b>	N (Costs)	N (Dep)	N
Machines and equipment	<u>5,000</u>	<u>1,200</u>	3,800
<b><u>Current Assets</u></b>			
Closing Stock (raw materials)		450	
Debtors		2,550	
Cash		<u>1,800</u>	4,800
<b><u>Current Liabilities</u></b>			
Creditors		1,200	
Loan		3,100	(4,300)
Working capital			<u>500</u>
			<u>4,300</u>
Financed by:			
Capital			1,200
Net profit			<u>3,100</u>
			<u>4,300</u>

**Evaluation, Recommendation and Conclusion**

In order to make an objective and scientific recommendation and conclusion, the financial statement will be analysed using financial ratios.

**(A) Liquidity Ratio**

$$(a) (i) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}} \quad \text{Year 1} \quad \frac{4800}{4300} = 1 : 1.1$$

$$(ii) \text{ Acid Test Ratio} = \frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities}} \quad \text{Year 1} \quad \frac{4800 - 800}{4300} = 1 : 0.93$$

**(B) Profitability Ratio**



$$(i) \text{ Gross Profit Margin} = \frac{\text{Gross profit} \times 100}{\text{Sales}} \quad \text{Year 1: } \frac{6950 \times 100}{32,450} = 21.4\%$$

$$(ii) \text{ Net Profit Margin} = \frac{\text{Profit Before Interest and Tax (PBIT)} \times 100}{\text{Sales}} \quad \text{Year 1: } \frac{4650 \times 100}{32,450} = 14.3\%$$

With yearly improvement in government-provided infrastructure, the profit made by our company will increase. Thus, financiers should not be discouraged about the little profit we are expecting to make in our first year.

### **(C) Long Term Solvency, Efficiency and Stability Ratio**

$$(i) \text{ Fixed Interest Cover} = \frac{\text{PBIT}}{\text{Fixed interest}} \quad \text{Year 1: } \frac{4,650}{850} = 5.5 : 1$$

$$(ii) \text{ Return on Total Assets} = \frac{\text{PBIT}}{\text{Total Asset}} \times 100 \quad \text{Year 1: } \frac{4,650}{8,600} \times 100 = 54.1\%$$

$$(iii) \text{ Total Assets Turnover} = \frac{\text{Sales}}{\text{Total Assets}} \quad \text{Year 1: } \frac{32,450}{8,600} = 3.7 : 1$$

The analysis of the present market situation shows that the aluminium production by ALUMINIX Manufacturing Co. Ltd. is feasible and the products can survive any unforeseen or existing competition. It has a reasonable chance of success.

The viability and feasibility of the project has been tested from the above evaluation. Financial analysis reveals that this proposed project is not only profitable but also viable, feasible and sustainable. This project is thus recommended for funding.

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