AFRINOVA FOOD LIMITED

BUSINESS PLAN

FOR

PROCESSED AND PACKAGED

(SAUSAGES) MEAT

PREPARED FOR

AFRINOVA FOOD LIMITED.

DAR ES SALAAM

1.0. **EXECUTIVE SUMMARY**.

AFRINOVA FOOD LIMITED is a company registered in the country under the Companies Act 2002 and bears Certificate of Incorporation **No. 178484028** issued on the day of **3rd October 2024.**

The project promoters are well-established businesses in Spain and Dubai majoring in food processing, particularly meat processing, and packaging. Having been in the business for over 15 years the directors are now well prepared for the establishment and operation of large processed and packaged meat in Tanzania as they see a very bright future in the meat industry

This document has been prepared to serve as a business plan for guidance for **AFRINOVA FOOD LIMITED** for the processed and packaged meat project. The implementation of this project will comprise the following activities: -

- Knives; the most basic equipment commonly found in a meat processing plant are knives used to cut meat
- **A meat saw;** these are large, stainless-steel saws with a fine-toothed blade that can quickly butcher whole animals into smaller pieces.
- **Meat grinders;** a popular type of meat processing plant equipment that help cut, mix, chop, or mincemeat into smaller pieces. Grinders create ground meat products that can be turned into patties, sausages, or sold as-is for consumers to use as they please
- **Slicers**; used for slicing meat products into various thicknesses. A slicer can create deli meat, bacon, steaks, pork chops, and more. It will create evenly-sized slices of whatever you desire at a rapid pace, and automated systems help ensure that employees stay safe.

- **A smoke curing oven;** is a piece of equipment used in a meat processing plant that isn't cheap, especially when buying a high-quality oven. Smokers allow the plant to create smoked and cured meat products, such as ham, bacon, and jerky.
- **Meatball, Patty, and Sausage Machines**; specialized machines that can create these types of specialty products by the hundreds in just a matter of minutes.
- **Coolers and Freezers;** Meat cannot stay at room temperature or it will spoil, which makes storing it at the correct temperature crucial. Coolers and freezers are basic equipment in a meat processing plant that is necessary, regardless of the size or type of meat products you make. They keep products at the appropriate temperature to prevent spoiling, which can result in the growth of harmful bacteria.
- **Meat Mixers;** Meat mixers are used to mix meats and spices. These types of mixers are essential for mixing large batches of ground meats for meatballs, sausages, patties, and other prepared meat products.
- **Floor Drainage;** Something that is often overlooked, but is a crucial piece of equipment in a meat processing plant, is a floor drain system. Drainage systems are vital to processing plants, as they help maintain a clean and sanitary processing area.
- There are also machines designed to stuff and tie sausage casings faster than the average human.
- Canned meat processing machines
- Packaging machines
- Refrigerated cars
- Light trucks
- Pick up etc.
- Equipping the company with relevant facilities

The proposed project on completion is estimated to cost about US$ **5m**. **50%** of this investment owners' equity and cash generated from bus business the rest of **50%** will be sought from foreign and local banking institutions.

COST STRUCTURE

PARTICULAR	
Land and Buildings	1,500,000.00
Machinery & Equipment	2,000,000.00
Motor Vehicles	380,000.00
Furniture & Fixtures	50,000.00
Pre expenses	50,000.00
Others	20,000.00
Working Capital	1,000,000.00
TOTAL	5,000,000.00

1.1 THE PROJECT PROMOTERS

The shareholders of this project are all entrepreneurs with a diverse professional and business backgrounds. The company is owned by 2shareholders, namely: -

Name	**Shares %**	**Nationality**
Mr. Wang Tiesen	71	China
Mr. Huang Ping	29	China

1.2 Location.

The project head office will be located at **Plot No.24804 KISARAWE II KIGAMBONI TEMEKE DAR ES SALAAM**

2.0 Business Overview

2.1 Description of the Business

The National Bureau of Statistics (NBS) released the Agriculture, Livestock and Fisheries Census for 2019/20, which shows that the East African nation has an estimated 33.9 million cattle. Out of the number, smallholder farmers own 33.8 million cattle and large scale farmers had 143,183 cattle.

Tanzania continued to rank second in Africa with the number of cattle behind Ethiopia with an average of 60.39 million cattle.

The census results show that 3.1 billion litres of cows' milk and 53.1 million litres of goats' milk were produced in the 2019/20 agricultural year.

2.2 Sausage and Retort Pouch Packaging

Canned meat products are prepared by hermetically sealing (preventing the escape or entry of air) the product in a container (usually tin coated steel cans) and thermally processed to destroy spoilage microorganisms. Canned meat products also called thermally processed products may be grouped into two categories: sterilized products and pasteurized products. Sterilized products must be heated to reach an internal temperature of at least 101 °C (heating temperature of 121 °C) and are shelf-stable. In commercially sterile canned meat products, all viable microorganisms including spores be either destroyed or rendered dormant. Canned products are processed in retort cooker that operates under 12–15 psi pressure. Recently metal cans have been replaced by retort pouches i.e., laminated multi-layer, flexible pouches which can withstand high temperature and pressure processing. These laminated pouches act as barrier to gases and moisture. Foil-laminated retort pouches costs less and are lighter in weight enabling easy distribution and marketing with faster processing time.

2.3 Meat Sausage Operations

Sausage meat products include whole muscles, meat stews, luncheon meat, sausages, sauces with meat pieces, and paste products. Meat canning essentially includes three main operations: can filling, exhaustion, and heat treatment. Heat penetration is affected by the solid: liquid ratio as well as the distribution of solid within the can. Solid materials packed loosely are heated faster than closely packed material. In general, 30% of the can volume must be a liquid (brine or sauce) in order to allow good heat transfer. When pastes are filled in the can, it is important to ensure the absence of air bubbles, as heat transfer is less efficient in air and may create sterilization problems. Headspace, approximately 0.5% of the total can volume, must also be taken into consideration in thermal calculations.

Exhaustion is carried out by evacuation of air from the headspace and the bulk of the food. Exhaustion is necessary to achieve good heat penetration and the desired sterilization temperature. Air exhaustion also reduces the risk of promoting the growth of aerobes, particularly if the product is pasteurized, as are some luncheon meats. Exhaustion is generally carried out by vapor injection or by conveying the cans on a belt into an exhaustion chamber or tunnel in which they are heated at 85–95 °C, removing 90% or more of the air in the headspace; in both cases, the cans are then immediately closed. When the cans are cooled, partial vacuum is produced by condensation of the water vapor.

2.4 Sterilization

The majority of canned meats are “commercially” sterilized; that is, they are processed to the point at which all microorganisms and most of their spores have been killed. This permits more or less an indefinite storage life in the can, at ambient temperature, provided it is kept sealed. However, such product is markedly different from freshly cooked meat or pasteurized meat, exhibiting

strong “cooked flavor” and substantially altered physical structures. In the early days of canning, meat products were heated in an open water bath; under this condition, the temperature of the cans failed to attain 100°C, and a long processing time was necessary to achieve commercial sterility. Increasing the boiling point of the water by adding salts such as calcium chloride made possible a great reduction in the processing time. By 1874 a controllable pressure steam retort had been invented, and between 1920 and 1930 information on the heat resistance of bacterial spores and on heat penetration into cans permitted the preparation of time–temperature processing schedules to control the canning process instead of relying on empiricism (Howard, 1949).

Although the pH is generally on the acid side of neutrality, meat is regarded as a low-acid food. Since the most lethal food-poisoning organism, C. botulinum, has a lower limit of growth at pH 4.5, all foods such as meat, which support its growth, are given heat treatment sufficient to destroy it. At 100°C, the botulinum toxin is destroyed in 10 min. The presence of curing ingredients, notably sodium nitrite, in products such as canned hams makes them less liable to harbor C. botulinum. Because certain thermophilic bacteria capable of withstanding very severe heat treatment could be present, a degree of thermal processing that can seriously affect the meat and lower its nutritive value and flavor is required to achieve sterility. Therefore, sanitary measures to avoid initial contamination are essential to control these organisms.

Sterilized canned meats suffer considerable change in the process due to protein denaturation and aggregation by heat. The texture of canned meat after sterilization can be mushy, and marked deterioration in aesthetic appeal and eating quality often occurs. The color of canned meats will tend to resemble that of the cooked commodity, since the high temperatures will change the red

pigment (myoglobin-Fe2+) to its oxidized form, which appears brown (metmyoglobin-Fe3+). Moreover, since meat (especially pork) contains appreciable quantities of thiamin (vitamin B1) and ascorbic acid (vitamin C) and they are destroyed by heat, the nutritive value of canned products will be more or less reduced. The loss of such labile nutrients will be exaggerated if the cans are subsequently stored for long periods at high ambient temperatures. Sterilized meat processing under exceeding high temperatures (≥121°C) and pressure has a characteristic “overcooked” flavor resulting from chemical reactions of lipids and proteins. Nevertheless, sterilized meat is readily digestible, which may be a benefit for some consumers.

An alternative process to allow commercial sterility with minimal concomitant damage to the meat content had been developed in the 1980s that utilizes heat-sterilizable flexible bags (retort pouches) instead of cans. These are produced from multiple laminates, which are hermetically sealable. A typical four-ply laminate for this purpose could consist of 12 μm polyester/12 μm Al foil/12 μm polyester/70 μm polyolefin (Paine and Paine, 2012). The retort pouch offers several advantages: the thermal process time tends to be significantly shorter than that for metal or glass containers (which minimizes loss of quality in the product); the shelf life is comparable to that of a frozen product without the need for a frozen chain for storage and distribution; there is less container/product interaction; and, by permitting “boil-in-the-bag,” the retort pouch speeds preparation and serving (Paine and Paine, 2012).

2.5 Meats and seafood

Aluminum sausage properly protected against interior corrosion are especially satisfactory for canned meats and seafood products. The problem of black iron sulphide staining of the container or of the product does not exist with aluminium. However, the tendency of aluminum to bleach some pigments is

what causes the pinkish colour of shrimp to turn muddy grey and produce a hydrogen sulphide-like odour. The use of citric acid or lemon juice to lower the pH of the product to 6.0–6.4 reduces these problems significantly. The development of organic coating systems exceptionally effective in blocking the direct contact of aluminium with the product may solve this problem.

Shallow drawn aluminium cans are being used for canned tuna, sardines, crab meat, lobster, and oysters. When crab or lobster is packed in aluminium cans, there is no need to line the cans with parchment paper to avoid discolouration of the product. Sardines prepared in tomato sauce and mustard sauce should not exceed 3% total acidity, expressed as acetic acid. Tomato sauce and mustard sauce are corrosive products that can attack lacquered metal containers.

Other processed foods marketed in shallow drawn cans include potted meats, luncheon meats, corned beef hash, boned chicken, chilli con carne, chilli with beans, and dehydrated soups. These products, as well as Vienna sausages and pet foods, are also sold in DRD cans with or without easy-open lids.

2.6 Uses for Meat Extract

Meat extract is a common flavoring additive for soups, stews, sauces, casseroles, canned meat items, pot pies, bouillon and bouillon cubes, gravies, and other items where meat flavoring improves the products. The flavor of meat extract makes it a desirable additive to a variety of products. The percentage of meat extract needed for flavoring varies widely, depending upon the food to which it is being added, but generally falls in the range 5–25%. Its desirable flavor and aroma may enhance the flavor of some products at even lower concentrations. Although yeast extract is used as a substitute, chefs and food connoisseurs prefer the characteristic flavor and aroma that meat extract imparts to other foods.

2.6 Why is meat Sausage?

It Lasts Longer. A long shelf life might be the biggest benefit of canned meat. Under proper storage conditions, some canned meats have an expected shelf life of up to five years or longer. Not only is this great for the bargain shopper, but also for those who enjoy a variety of meats!3 Mac 2022

2.7 How does sausage meat stay fresh?

When foods are canned, they are sealed in metal cans or in jars and heated to 100°C (212°F) or higher for enough time to kill the bacteria and other microorganisms living in the food. All microorganisms in the food are now dead, and so cannot feast on the sugars or other nutrients, multiply, and cause spoilage

3.0 Critical Success Factors of the Business are:

- Availability of market: From the information gathered during market survey, Dares Salaam is the largest region in Tanzania in term of population. Also, according to statistics six persons out of ten eat meat on daily basis. Furthermore, it was gathered that more than 8,000 mixture heads of cattle, sheep, goat and ram were slaughtered daily in Dr es Salaam with close to 6 Million Dar es Salaam residents to supply. So clearly we can see that the market share is huge.
- Financial capacity to undertake the project, the shareholders of the company are capable starting implementing the project without waiting for loan
- Technical know-how: The staffing will be done with full attention on those with professional and technical acumen.
- High turn-over.

- Favorable government policies on agriculture development and other related sectors
- Foreign market availability
- Uncompromising commitment to the quality of the end product and creativity.
- Successful niche marketing: the project needs to find the quality-conscious customer in the right channels, and the need to make sure that customers can easily seek for the services provided by the project.
- On time delivery that will make customers feel better about the quality, not worse and also flexibility of term of payment

4.0 Marketing Plan

4.1 Description of Product

The product is processed and packaged of various kilograms depending of the market needs. The uniqueness of the packaged mea is due to the fact that the product is from our production farm (Quality Assurance) compared to some meat marts that source for their raw material from public abattoirs. Furthermore, the benefits of our product to our prospective and amiable customers are:

- Affordability of our product and constant availability
- Thorough screening of our product to ensure consumer safety
- High nutrient content
- Discounts and customer care services

4.2 Target Market

The markets we are targeting local whole sale and foreign market whole sale especially in Middle East

5.0 Summary and Conclusion

The Business Plan should be given an opportunity to be implemented as conceived in this presentation.

6.0 Financial Appraisal

The company's financial projections have been prepared over the period of 8 years.

7.0 Implementation

It is expected that the project will be implemented as soon as all license and approval been in place, which is estimated to be completed within 4 months

8.0 Assumptions

The financial projections to determine the viability of the project by **AFRINOVA FOOD LIMITED** are based on the following key assumptions:

- Importation of machine and equipment start immediately after approval, license and permit in place.
- The company market will be for local and foreign markets.
- Financial calculations are based on current market prices and costs are assumed constant throughout the operating period under review on the assumption that if operation costs change, selling prices will change proportionally to preserve the profit margins.
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9.0 Financial and Economic Analysis

9.1 Projected Revenue

For projection purposes, it is assumed that the economic life of the project is 8 years, and that revenue from business commence from the first year of operation

9.2 Projected Profit and Loss Statement

The Income and Expenditure Statement shows the projected income for the 5 years period. The position depicted is that the project earns profit throughout its life. Accumulated after tax profits grow from negative US $ **4,978,015** in first to **US $ 28,854,174** in 5th year

9.3 Projected Cash Flows

This is shown in the Projected Cash Flows Statement. They indicate that the project will meet its entire financial obligation, the net cash flow in the first year rise from **US$ 5,786,565** and grow up to **US$ 31,396,924.65** in 5th year**,**

9.4 Projected Cash Flows

This is shown in the Projected Balance Statement rise from US**$ 1,645,000** and grow up to **US$ 30,499,174** in 5th year**,**

10.0 Projected payback period

Total investment is US **$ 11,645,000.00 ,** cash accumulation in year 3 is **$12,267,590**. Which is **US$ 622,590** more than the initial investment costs

11.0 Economic Advantages

On the basis of the above account the analysis has overwhelmingly proved that the project is financially sound and techno-economically viable.

Furthermore, the project has immense potential towards the earning of the badly needed Forex earnings. It is hereby recommended that the project be implemented. The envisaged undertaking will be viable and profitable if it is implemented early.

Full execution of the envisaged project will contribute to economic and social development in terms of employment, economic activities.

Several Social Economic benefits that will be apprehended in the course of operating this undertaking will include the following:

12.0 SOCIAL AND ECONOMIC IMPACT OF THE PROJECT

The project will have both economic and social benefits to the community and the country as a whole. The first and foremost important benefit will for increasing the standard of living for people in that particular area. The following are the benefits of the project: -

12.1 EMPLOYMENT EFFECT

The project will create employment to both skilled, semi-skilled, unskilled staff and casual labourers. The company will also create employment opportunities to locals.

The direct job to be created by **AFRINOVA FOOD LIMITED** estimated to be 30 and indirect job estimated to be 100 using the ration of 1:6 (I direct employment creates 6 indirect employment)

12.2 CONTRIBUTION TO GOVERNMENT REVENUE

The project will contribute to the Government reserve in form of taxes, payroll levy, and other taxes and duties on local. In addition, the project will have a multiplier effect in the economy as a whole.

12.3 PROJECT SENSITIVITY TO ENVIRONMENT

The environmental impact assessment is a key guide to this project. In that sense the project will do thorough research on the nature of the environment around the site and by means of national guidelines, use all means possible to keep the environment natural within the project area. No interruptions will be done unnecessarily and where necessary the highest precaution will be made.

12.4 MITIGATION MEASURES TO ENVIRONMENTAL ISSUES

Under normal circumstances the project will have no any serious negative environmental impact which will be realized in the short- or long-term periods.

- Solid Waste Management: Usually, waste management costs include both capital investment and operating costs. The latter generally comprises the cost of labor, tax and consumables, the cost of energy, in addition to other items. The operating costs assigned to waste management are usually very small, whereas capital costs have a significant share.
- Waste: No waste shall be allowed to enter into any stream that flows in the neighbourhood of the project site.
- Vibration: All measures will be taken in the project site to keep vibration well below level. (Vibration is the range of frequencies from 1 Hz to 25 kHz.)
- Dust & Noise: All efforts shall be taken to maintain low levels of dust emission and noise.

The project is therefore environmentally friendly, as it preserves it, develops it and cares for its sustainability.

13.0 Conclusion and Recommendation

The project is consistent with the governments Industrial Policy, financially and economically viable, socially desirable and environmentally friendly, hence it is recommended for approval and obtain strategic status

AFRINOVA FOOD LIMITED PROJECTED INCOME STATEMENT US$

-	**1**	**2**	**3**	**4**	**5**	6	7	8
Revenue (	4,320,000.00	4,320,000.00	4,320,000.00	4,320,000.00	4,320,000.00	4,320,000.00	4,320,000.00	4,320,000.00
Operating Expenses:	3,024,000	3,024,000	3,024,000	3,024,000	3,024,000	3,024,000	3,024,000	3,024,000
Gross Profit Before Interest and Depreciation	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000
Interest	200,000	200,000	200,000	200,000	200,000	-	-	
Depreciation	74,000	74,000	74,000	74,000	74,000	74,000	74,000	74,000
Gross Profit	1,022,000	1,022,000	1,022,000	1,022,000	1,022,000	1,222,000	1,222,000	1,222,000
Tax (30%)	306,600	306,600	306,600	306,600	306,600	366,600	366,600	366,600
Profit After Tax	715,400	715,400	715,400	715,400	715,400	855,400	855,400	855,400
Accumulated Profit	841,400	1,556,800	2,272,200	2,987,600	3,703,000	4,558,400	5,413,800	6,269,200

AFRINOVA FOOD LIMITED PROJECTED CASH FLOWS

SOURCES:									
Profit before interest and depreciation	-	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000	1,296,000
Equity	2,500,000								
Loan	2,500,000								
Total Sources	**5,000,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**
Applications:									
Capital expenditure	3,930,000		-	-	-	-			
working Capital &Others	1,070,000								
Cash	-	989,400	989,400	989,400	989,400	989,400	929,400	929,400	929,400
Tax	-	306,600	306,600	306,600	306,600	306,600	366,600	366,600	366,600
Sub total	**5,000,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**
Total applications	**5,000,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**	**1,296,000**
Accumulated cash		935,400	1,924,800	2,914,200	3,903,600	4,893,000	5,822,400	6,751,800	7,681,200

AFRINOVA FOOD LIMITED PROJECTED BALANCE SHEET US$

Fixed Assets	**1**	1	2	3	4	5	6	7	8
Opening balance	-	**3,930,000**	**3,856,000**	**3,782,000**	**3,708,000**	**3,634,000**	3,560,000	3,486,000	3,412,000
Additions	-								
Total Long-term Assets	**-**	**3,930,000**	**3,856,000**	**3,782,000**	**3,708,000**	**3,634,000**	**3,560,000**	**3,486,000**	**3,412,000**
Less depreciation	**-**	**74,000**	**74,000**	**74,000**	**74,000**	**74,000**	74,000	74,000	74,000
Closing balance	**-**	**3,856,000**	**3,782,000**	**3,708,000**	**3,634,000**	**3,560,000**	**3,486,000**	**3,412,000**	**3,338,000**
Working capital	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000
Accumulated cash	-	1,755,355	3,589,460	5,506,252	7,509,867	9,604,644	11,675,143	13,846,148	16,122,686
Total assets	**1,070,000**	**6,681,355**	**8,441,460**	**10,284,252**	**12,213,867**	**14,234,644**	**16,231,143**	**18,328,148**	**20,530,686**
Financed by									
Equity	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Accumulated profit	-	935,400	1,924,800	2,914,200	3,903,600	4,893,000	5,822,400	6,751,800	7,681,200
Total equity	2,500,000	3,435,400	4,424,800	5,414,200	6,403,600	7,393,000	8,322,400	9,251,800	10,181,200
Bank Loan	2,500,000	2,000,000	1,500,000	1,000,000	500,000	-	-	-	-
Total debts	**2,500,000**	**1,500,000**	**1,500,000**	**1,000,000**	**500,000**	**-**	**-**	**-**	**-**
Total equity and debts	**5,000,000**	**4,935,400**	**5,924,800**	**6,414,200**	**6,903,600**	**7,393,000**	**8,322,400**	**9,251,800**	**10,181,200**

AFRINOVA FOOD LIMITED PROJECTED INVESTMENT COST US$

PARTICULAR	
Land and Buildings	1,500,000.00
Machinery & Equipment	2,000,000.00
Motor Vehicles	380,000.00
Furniture & Fixtures	50,000.00
Pre expenses	50,000.00
Others	20,000.00
Working Capital	1,000,000.00
TOTAL	5,000,000.00

AFRINOVA FOOD LIMITED PROJECTED LONG TERM LOAN REPAYMENT

Year	principle	Loan Interest (8%)	Total Amount Paid	Loan Balance
1	500,000	200,000	700,000	2,500,000
2	500,000	200,000	700,000	2,000,000
3	500,000	200,000	700,000	1,500,000
4	500,000	200,000	700,000	1,000,000
5	500,000	200,000	700,000	500,000

AFRINOVA FOOD LIMITED PROJECTEDPAYBACK PERIOD

Year	Profit After Tax	Depreciation	Total Cash Flow	Accumulated Cash Flow
1	841,400	**74,000**	**915,400**	915,400
2	1,556,800	**74,000**	**1,630,800**	2,546,200
3	2,272,200	**74,000**	**2,346,200**	4,892,400
4	2,987,600	**74,000**	**3,061,600**	7,954,000
5	3,703,000	**74,000**	**3,777,000**	11,731,000