YOGI POLYPACK INDUSTRIES LIMITED

FEASIBILITY STUDY

FOR

THE ESTABLISHMENT

OF

POLYPROPYLENE (PP)

AND

HIGH- DENSITY POLYETHYLENE (HDPE)

PACKAGING PRODUCTS

MAY 2021

Prepared by:
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Pongwe Industrial Area,
TANGA

1.0 EXECUTIVE SUMMARY

Yogi Polypack Industries Limited is a private limited company which is intending to carry the business of manufacturing of polypropylene (pp) and high- density polyethylene (HDPE) packaging products. The promoters having seen the immerse opportunities in the area of packaging products, they have decided to venture on the manufacturing of PP&HDPE packaging products to invest in Tanzania as a limited liability company ,the sum of **USD 8,000,000 (United States Dollars Eight** Million),to be funded by the promoter and the term loan from local banks , for a packaging facility, with an installed capacity to produce initially 45 million bags per annum and can be increased to 72 million bags per annum .

1.2 PROMOTERS/ SPONSORS

The project is sponsored by Yogi Polypack Industries Limited of Tanga region. The promoters are successful businessmen with various establishments, including a Garage in Tanga. Promoters are having an experience of over 10 years in various business activities. The sponsors' aim is to be able to utilize strong product quality, production capabilities, service delivery, skilled labour and market knowledge to take advantage of the growth in market opportunities, in order to become one of major manufacturers of PP/HDPE Bags, and other Polypropylene products in Tanzania. The company aims to capitalize on sustained market growth in the industry, by establishing PP/HDPE products line, to meet the market demand. PP/HDPE Bags are currently used in the packing of most of Tanzania's commodities including

products from both agricultural and manufacturing sector This business plan is intended to establish the technical feasibility, utility and economic viability of the project.

1.3 LOCATION

The industry is located at Plot No 646 and 647, Block N, Pongwe Industrial Area, Tanga City, Tanzania.

The Project:

The project entails establishing production facilities for Polypropylene /HDEP Packaging bags, which needs to be manufactured to meet the market demand. The company also will also import trucks and 4WD cars for administrative and sales supervision operations. The aim is to produce quality PP/HDPE Packaging for sale to local and for export to the regional market. The bags are sold principally to industries who require it for their packaging needs and to agents appointed in various parts of the country as channels of distribution for small market consumption

1.2 The company

Yogi Polypack Industries Limited is a newly registered limited liability company, incorporated in Tanzania under the companies' Act, 2002 under Certificate of Incorporation no: 150904846 dated 21 25/02/2021. All the shareholders and directors of the company are Tanzanian and are well experienced businessmen with a strong financial back up and sound financial track record.

Shareholder		**Shares**
Shareholders and Directors		
1.	Harshil Mukesh Lal	29%
2.	Shruti Harshil Lal	51%
3.	Rahul Mukesh Lal	20%

1.3 Capital Investment Plan and Sourcing of Funds

Yogi Polypack Industries Limited proposes to invest **USD 8.0 million** for this project

The breakdown of the relevant costs is as shown below:

Item	**Amount**	**Total**
Land & Building	1,400,000	1,400,000
Plant	4,100,000	4,100,000
Vehicles	100,000	100,000
Furniture and Fitting	20,000	20,000
Pre-operation Expense	380,000	380,000
Others	-	-
Initial work capital	2,000,000	2,000,000
Total	**8,000,000**	**8,000,000**

Financing

The total investment cost of the project is planned to be financed by the shareholders retained earnings and shareholders contribution equity. The shareholders will seek for the loan if the need arises.

	Amount	Total
Owners' Equity	**1,600,000**	**1,600,000**
Long term loan	**6,400,000**	**6,400,000**
Grand Total	**8,000,000**	**8,000,000**

1.4 Financial Profitability:

Based on a set of assumptions given here in the project, it demonstrates a profitable trend in its future operations. The project's Income Statement and Cash flow indicate that Yogi Polypack Industries Limited would be able to recoup the planned investment funds for its investment programme within the first four years. This indicates that the project is financially and economically viable.

1.5 The Implementation Plan:

It is planned that the project will take 3 years from the time Yogi Polypack Industries Limited commences implementation of the establishing project to the time the plant commences commercial services. Yogi Polypack Industries Limited shall appoint a team comprising of a competent building contractors, mechanical engineers and chemical engineers in order to achieve the set implementation time.

1.6 Developmental Linkages:

Upon completion of the Implementation programme the PP/HDPE Products manufacturing plant shall be capable of creating the following:

- ♦ Promote increased availability of quality packaging and other PP/ HDPE products for the local industries and for export;
- ♦ Generating foreign exchange through exports
- ♦ Create employment for the local indigenous people;
- ♦ Promote inter-regional trade through exports to neighboring Democratic Republic of Congo; Uganda and Burundi just to mention a few.
- ▪ Enable the creation of forward linkages between production and distribution sector.
- ▪ Encourage diversification of packaging away from a narrow range of conservative pp packaging.
- ▪ Building of genuine and efficient import substitution industries so as to reduce the import bill, especially PP/HDPE bags.
- ▪ Create self – sufficiency in packaging sector.
- ▪ Lay the foundation for the development of other industries.

2.0 THE SPONSORS

2.1 Introduction

The project is promoted by Yogi Polypack Industries Limited of Tanga. This is a limited liability company that was incorporated and registered in Tanzania under the Companies Act, 2002 under Certificate of Incorporation no: 150904846 dated 21/02/2021

	Shareholder	**Shares**
1.	Harshil Mukesh Lal	29%
2.	Shruti Harshil Lal	51%
3.	Rahul Mukesh Lal	20%

Yogi Polypack Industries Limited mission is to operate its dedicated assets and capabilities as a moving pipeline and to offer a safe, reliable and cost-efficient source of quality PP/HDPE packaging products in the country to both its corporate and retail customers. In this case business development would focus on growing with these clients by providing active participation into planning and distribution strategies of the clients mainly corporate clients such as grain companies, sugar processing plants and possibly cement manufacturing plants whom it has identified as its potential clients.

2.0 THE PROJECT

2.1Project Description

The project aims at establishing facilities of manufacturing various Polypropylene/ high- density polyethylene bags, for sale to local market and for export to the regional market. The major objectives of this project are in line with the Government's long-term strategy of rehabilitation/establishment and the development plan that of the building an independent, integrated, self-sustaining national economy, with a processing, distribution and marketing system to increase supply country widely and for exports. The project will carry Importation of Polypropylene/high-density polyethylene packaging Products making plant and Importation of trucks, and 4WD motor vehicles for administrative and sales supervision operations.

2.2Location

The industry is located at Plot No 646 and 647, Block N, Pongwe Industrial Area, Tanga City, Tanzania. The site is well accessed by a tarmac road making it reachable throughout the year. The site is served with electricity, water and telephone. It has a large factory compound that can allow extensive future expansion of factory buildings.

2.3 Plant Production Capacity

On completion Yogi Polypack Industries Limited shall be able to produce PP&HDPE Bags from 45 million bags per annum and can be increased to 72 million bags per annum.

2.4Source of Raw Materials:

Raw material inputs comprise imported PP/HDPE granules, master batch coloring and inks for labelling. Polypropylene granules can be procured from a variety of sources within 4-5 days reach the port of Tanga. Raw materials have been and will be imported from Saudi Arabia, U.A.E, and other Middle Eastern countries to be converted to polypropylene bags. Master batch is also readily available from sources in Kenya, Europe, the Middle East and South Africa. Printing inks are available locally from a range of sources. All inks will be procured locally. Chemicals such as Pigments, Dyestuffs, oxides, barytes, alumina, hydrates, ores, gypsum, feldspar, mica, Lime, limestone, Woven Packaging Fabrics, Woven bags and fabrics are often used as an industrial packaging material

2.5 THE PRODUCTS

The packaging bags a are available mostly in HDPE (High Density Polythene) and PP (Polypropylene. Woven polypropylene/HDPE bags or simply woven PP/HDPE bags are considered to be the toughest packaging bags, widely used to pack building materials, grains, milling products and sugar. Depending on end use these are either laminated, or supplied without lamination. These materials are valuable for

applications in many different industries. HDPE/PP oriented strips are becoming increasingly popular in the world & have caught the eye of many end users for their requirement of packing materials. They have become popular on account of their inertness towards chemical, moisture & excellent resistance towards rotting & fungus attack. They are non-toxic. Lighter in weight & have more advantages than conventional bags. HDPE woven sacks are much stronger & can withstand much higher impact loads because of HDPE strips elongation at break is about 15-25% as compared to 30% of Jute. These sacks are much cleaner & resist fungal attack. These sacks have many advantages over other conventional sacks materials & are quite competitive in price. HDPE/PP Woven bags ideally suitable for Building Materials, Cement, fertilizers, Urea, Potash, plastic, polymers, plastic pellets, etc. Food grains: Rice, Wheat, Pulses, Tea, Coffee, Beans, Peanuts, Sand, Sugar

2.6 The process

The process of manufacturing PP woven bags involves mixing raw materials starting with PP or HDPE pellets and other additives, extruding the raw materials into a yarn PP resin is heated with feeler of CaCo3 and pigment, melted and extruded as a flat film. The plastic weaving device is composed of multiple equipment and processes, with simple process flow, easy to control its process parameters. Devices are used in different steps of plastic woven products manufacturing. The production process of plastic woven products is mainly divided into plastic granulation, flat wire drawing, circular weaving, coating /

lamination, printing, cutting, sewing and packaging. Colouring ingredients are added to the resin during processing, in order to impact the final colouring to the finished product.

3.0 MARKETING ASPECTS

3.1 THE INDUSTRY

The packaging industry falls under the packaging sector of the International Standard Industrial Classification. Tanzania has a huge demand for PP/HDPE bags.

Unfortunately, Tanzania produces much below its requirement. This is due to the fact that the bags from neighbouring countries like Kenya do compete at an effective price in the local market. Given an average bag imports from the neighboring countries, there is a gap of total demand required by Tanzanians and local supplies hereof. As of recent is importing substantial requirements from the neighboring Countries

3.2 MARKET RESEARCH AND PLANT CAPACITY

3.2.1 Demand and Market Study

PPP&HDPE bags are used for packing various products from manufacturing and agriculture sectors, etc. The packaging of agricultural and industrial products is essential for their preservation, conservation, transport, handling and sale and provides one of the best methods for the avoidance of contamination and maintaining of the hygienic conditions. Yogi Polypack Industries Limited situated in Tanga, Tanzania intends to be one of the leading manufacturers of PP/HDPE Woven sacks in East Africa. It intends to have specialization in producing quality PP&HDPE sacks in various sizes and grades, both printed and plain to cater to wide range of market needs in industrial and agriculture sector. The installed capacity for various bags exceeds

3.7 million bags per month and can be increased to 6 million bags per month.

3.2.2 The factory will be strategically located at Tanga and within close proximity to factories of cement, building materials, sugar, coffee, agricultural commodities, tarpaulin, mosquito nets etc. The bags will be used for packaging of products from these factories like cement, building materials, any variety of flour, sugar, tea, coffee including all food commodities, any type of agricultural products, tarpaulin and mosquito nets. Cashew crop down south of Tanzania also needs to be packed and exported. Tea, cocoa & various cash crops rotation round the country and even exports, demands a huge quantity of reliable PP&HDPE bags. The bags will also have potential markets through exports to different countries primarily neighboring countries, SADC and also the entire globe. With the increase of agriculture and industrial activities will mean a lot of bags will be required to pack them.

3.2.4 SUPPLY

With the current technology of block bottom bags in rising demand for packaging whereas supply being very limited because only 2 factories are present in Tanzania, there is a huge gap for the availability of product in the market which is currently being fulfilled by importation into Tanzania. The machines to be installed will be the best in the world with capacity to produce initially 45 million bags per annum and can be increased to 72 million bags per annum Therefore, since there is an untapped potential for the products and unsatisfied

demand in the Tanzania market and in neighboring countries, other African countries and the entire globe, the intended project will not face any marketing problems

3.2.3 Demand Supply Gap

Demand for PP &HDPE product is not met at fully and the gap will increase tremendously if the existing capacity is not enhanced and new capacity built. Assuming the demand will continue to increase at the average growth rate of the population, and supply will increase by an average of 15% annually, the demand-supply gap in the next 10 years will not be met. From the above information, it is apparent that there is demand that is not attended. Yogi Polypack Industries Limited, intends to be successfully functioning at full capacity trying to fill this demand supply gap

3.3 SALES AND MARKETING

Sales and marketing of packaging products, will be the responsibility of the productions/operations manager. Primary distribution will be through appointed agents/distributors to distribute all over the country, depending on effective demand in the respective places. However, with estimated increased transport fleet, other regions with no capable agents/distributors will be accessed, thereby allowing a bigger mass of undertaking and individuals to use the product. For the key industries they will be allowed to make a direct procurement from

the factory. The agents will be supplied by the factory in order to avoid unnecessary hiking of prices.

4.3.1Distribution

Production will be sold at the factory, where both wholesale and retail customers would be served. The company will also have distribution trucks, which would carry the product to various depots, especially in Dar es Salaam where the market is concentrated. This would be a strategy to increase sales.

4.3.2MARKETING STRATEGIES:

Yogi Polypack Industries Limited management team shall take pro-active marketing and promotional strategy to ensure that the company achieves high turnover of sales through sales made to corporate customers. In order to achieve optimal business turnover management shall design and implement the following strategies;

I) Distribution of Sales

Distribution of brochures to wholesale agents.

ii) Door to Door Sales

Senior marketing staff of the company shall physically visit factories with samples of the PP/HDPE Products for display to solicit big sales.

iii) Advertisement

These would include the local media namely; local television, Radio commercials and Newspaper advertisements etc.

5.0 MANAGEMENT

5.1 MAN POWER REQUIREMENTS

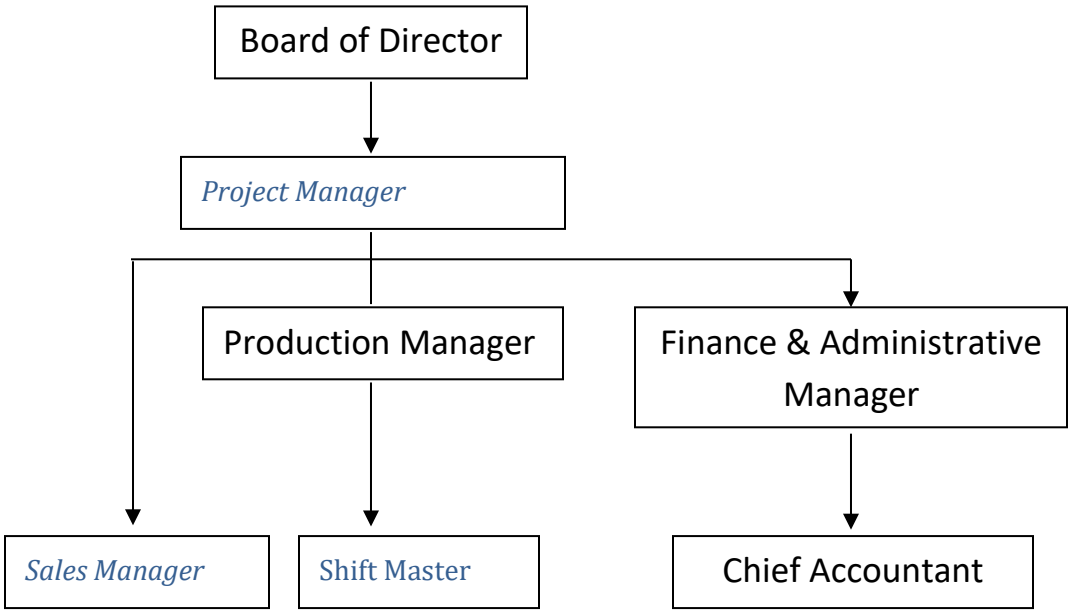
Considering the establishment of the new PP/HDPE plant, the following new employment openings shall be made:

Position	No. of People
Financial Controller	1
Plant Manager	1
Stores & Logistics Manager	1
IT Manager	1
Accounts Assistant	1
Commercial Assistant	1
HR & Admin Assistant	1
Procurement Assistant	1
Stores Assistant	1
Logistics Assistant	1
Production Assistant	1
Maintenance Assistant	1
Machine Operators	176
Total permanent employees	**188**

The company intends to employ 38 permanent staffs and Approximately 200 seasonal laborers shall be employed as and when required. The company will also employ 10 expatriates' staff. In house training shall be provided by competent technician trainers to the operators and staffs. Trainers shall train on all the aspects like machine operations, trouble shooting, maintenances etc. The trainers represent the company supplying the machine from Austria, Germany and India

5.2 Organization Structure

The organization structure of the project is as follows:



6.0 CAPITAL INVESTMENT COSTS

Yogi Polypack Industries Limited intends to invest in Tanzania a sum of USD 8,000,000/- (United States Dollars Eight Million), which will be financed by personal shareholders' contribution, retained earnings and the term Loan which will be sought from Banks. The plant will have an installed capacity to produce initially 45 million bags per annum and can be increased to 72 million bags per annum. Following is the projects investment plan and sources of financing:

6.1 The breakdown of the relevant costs is as shown below:

Item	**Amount**	**Total**
Land & Building	1,400,000	1,400,000
Plant	4,100,000	4,100,000
Vehicles	100,000	100,000
Furniture and Fitting	20,000	20,000
Pre-operation Expense	380,000	380,000
Others	-	-
Initial work capital	2,000,000	2,000,000
Total	**8,000,000**	**8,000,000**

Machinery and equipment costs are based on quotation from supplier. It should be noted that duty and sales tax have not been included.

6.2 Financing

The total investment cost of the project is planned to be financed by the shareholders retained earnings, shareholders contribution equity and the term loan.

	Amount	Total
Owners' Equity	1,600,000	1,600,000
Long term loan	6,400,000	6,400,000
Grand Total	**8,000,000**	**8,000,000**

7 .0 PROJECT FINANCIAL VIABILITY

7.1 Assumptions and considerations

A set of cost and operating assumptions of the proposed project appears in present summary of financial analysis as projected. The financial analysis indicates that the proposed project would be a profitable venture.

7.2 Projected Profit and Loss Accounts

The project is expected to make a post-tax profit of US$ 1.34 m from the fourth year of operation. Retained earnings are expected to rise to 5.13. million at the end of the 10^{th} year of operation.

7.3 Projected Cashflows

The projected cashflows show that the project would be able to honor its financial obligations as they fall due throughout the project's economic life and still remain with reserve of cumulative cash that could be re-invested in the project. Accumulated cash balances rise to US$ 8.08 million at the end of the ten-year.

8.0 DEVELOPMENTAL ASPECTS

Upon completion of the Implementation programme the PP/ HDPE Product manufacturing plant shall be capable of creating the following:

- Promote increased availability of quality packaging material for the local industries and for export
- Generating foreign exchange through exports of at least 40% of its annual production
- Create employment for the local indigenous people

Promote inter-regional trade through exports to neighboring Democratic Republic of Congo, Uganda and Burundi just to mention a few.