

SIGNWAREHOUSE LIMITED

A BUSINESS PLAN FOR SETTING UP A PLANT FOR MANUFACTURE OF PACKAGING MATERIALS AT NYAMHONGOLO INDUSTRIAL AREA, MWANZA

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1.0. EXECUTIVE SUMMARY

1.1 Introduction

This report represents an objective analysis of the overall viability of establishing a proposed project for setting up and operating a plant for production of packaging materials using state-of-the-art technology. The proposed project will be located at Plot No: 505 Block "A" Nyamhongolo Industrial Area on rented premises. The project is being promoted by Messrs. Signwarehouse Limited, a well established company incorporated under the Companies Act (2002)) with Certificate of Incorporation No. 60331 dated 15th May 2007 having its registered office in Mwanza. The company is also registered with TRA under Tax Identity Number (TIN) 106-288-690. The company Business is based in Mwanza City along Makongoro - Airport Road.

The company currently owns and operates a factory for signage making and printing of advertising and promotional materials for major industries and institutions around the Lake Zone. Its major service products are road signs, road information boards, bill boards, banners, sign boards and advertising materials. As a strategy to expand its business, the company has of late decided to diversify and invest in the manufacture of industrial packaging materials. The objective is to exploit the unfolding opportunities in demand for quality packaging materials to cope with the ongoing expansion of the industrial sector nationwide.

1.2 Project Concept

The project entails establishing facilities for the manufacture of packaging materials at Nyamhongolo Industrial Area in Mwanza. The products will accommodate packaging and branding of all kinds of products and services including food and beverage, medical and personal care products packaging and branding.

The capital expenditure will be extended for four years, involving procurement of various types of packaging and labeling machinery and equipment including. Other major capital expenditure will be in the procurement of utility vehicles including light truck and a single-cabin pick-up.

1.3 Business Plan Objectives

The objectives of this Project Plan are three fold. The major focus of this Plan is to establish and ascertain the technical and commercial viability of establishing plant for production of industrial packaging and labeling materials in Mwanza to cater for the whole of Lake Zone. The proposal is based on market demand for this particular service, which is currently for a large extent served from Nairobi, Dubai and as far as China and other East countries. Details on current and potential market on the products have been done so as to determine reliability of the market.

Second and Third are to facilitate the application for Tanzania Investment Centre (TIC) Certificate of Incentives to access exemptions on duties, VAT

deferments and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997) for the Project; as well as to facilitate application for Industrial Licence

1.4 Sponsors

The proposed packaging project is being promoted by SignWarehouse Limited, a private company incorporated in the United Republic of Tanzania currently operating in Mwanza Region, Tanzania. The main directors are Mr. William Henry Mgaya and Mrs. Fredrica Mgaya. The company currently owns and operates a factory for printing of advertising, promotional materials and sign making for major industries and institutions around the Lake Zone. The current company business is based in Mwanza City along Makongoro - Airport Road. The directors and shareholders of the company are experienced business people.

1.5 Location and Infrastructure

The project will be located at Plot No: 505 Block "A" Nyamhongolo Industrial Area on rented premises. The area is well established with water and electricity connections, as well as tarmac road (Mwanza/Musoma Road).

1.6 Estimated Investment Cost and Proposed Financing

The total project cost is estimated at US\$ 423,500-. The promoters have already been granted TShs 300,000,000/= (equivalent to US\$ 129,590-) by DTB Bank at an interest rate of 18% p.a for purposes of financing procurement of plant machinery. The loan is repayable in 60 months excluding 6-months moratorium period. The bank has likewise extended an overdraft facility of TShs 200,000,000/= (equivalent to US\$ 86,303-) for 12 months (renewable) at an interest rate of 22% p.a to finance working capital requirements. Total bank financing adds to 51% of total project cost. The remaining US\$ 207,517- (49%) will be financed by owners' equity and directors' loans.

(IN US\$)

S/N	Item	Cost
1	Land and Buildings (rehabilitation and partitioning of factory building)	21,000
2	Plant Machinery and Equipment	200,000
3	Motor Vehicles	52,000
4	Furniture and Fittings	18,000
5	Contingencies	12,500
6	Add: Pre-Operational Expenses	15,000
	Sub total	318,500
7	Add: Initial working Capital	105,000
	GRAND TOTAL	423,500

1.7 Collateral Security

The project promoters have offered as security to both bank loans First Legal and continuous mortgage over property with Title No. 20507 LR Mwanza located on Plot No. 1365 Block "A" North Buswelu I.N.O. Fredrica Mgaya (director); Title No. 24787 LR Mwanza Plot No. 256 Block "B" Ilemela I.N.O Edward Barnabas Njau; Specific Debenture over the machinery to be procured; fixed and floating debenture over all current and future assets of the company; personal, joint and several guarantees of Mr. William Mgaya and Fredrica Mgaya (directors); and, personal guarantee of Mr. Edward Barnabas Njau.

1.8 Selection of Technology

Packaging and labeling machinery and equipment to be procured for the project will include STY-G Model 850mm 8 Colour Rotogravure Printing Machine, QFJ-1100 Model Vertical Automatic Slitting & Rewinding Machine, ZF-J50 Central Sealing Machine, FA-350 Model Bottom Cutting Machine, FJ-50x800 Model PVC Shrink Film Blowing Machine, and QDF Model 850mm High Speed Dry Lamination Machine. All the machinery and equipment will be sourced from the China. The promoters have identified the suppliers to be /s Wenzhou Qiangda Printing Machinery Co. Ltd.

1.9 Production and Capacity Utilization

The proposed project facilities will have a capacity to produce the following major products per annum:

The proposed plant will produce the following major products:

- ❖ PVC Compound Granules to be used as an intermediate input in the production of PVC Shrink Film;
- ❖ PVC Shrink Film;
- ❖ BOPP Film.

The three intermediate products will be used to produce various:

- ❖ Food and Beverage Packaging;
- ❖ .Medical Packaging; and
- ❖ Personal Care Products Packaging.

Build-in production capacity is estimated at 80 tons per month equivalent to 960 tons per annum. Capacity utilization has been estimated at only 50% in year one, rising to 60% in the second year before stabilizing at 75% from year three onwards.

1.10 Raw Materials Requirements and Availability

Raw materials will include PVC Compound Granules, PVC Shrink Film and BOPP Film. PVC Compound Granules will be produced locally as a semi-finished product to be utilized as a raw material in the production of PVC Film and BOPP Film. These will further be used in the production of food and

beverage packaging, medical packaging, and personal care products packaging. Consumables will include dye ink, solvent ink for solvent printer, one way vision rolls, flex rolls, vinyl rolls, photo paper, laminating film, solution water, etc.

Supplies of bulky or big quantities of raw materials have so far been guaranteed from M/S SINOTEC DIGITAL COL LTD and other suppliers in China. The prices will be quoted competitively with any would be strong competitor so as to control the market shares already won by the business.

1.11 Production Costs

Raw materials and consumables constitute about 90% of total production costs. Other major direct costs include salaries, wages and labour overhead costs; and repairs of machinery equipment. Major administrative costs will include factory building rent, motor vehicle running expenses, advertising and publicity. Salaries and Wages have been based on the prevailing scales in the private sector. There is provision of 20% to cover company contribution to NSSF (10%) and other social welfare (10%). Administrative/Overhead costs are likewise based on the prevailing rates in the market and needs of the proposed project.

1.12 Raw Materials Costs

On the average, a ton of raw materials and consumables is estimated to cost US\$ 1,750- per ton and therefore cost of raw materials will be as indicated in the table below:

Cost Item	Unit	Year 1	Year 2	Year 3 onwards
Materials Requirement	Tons	480	576	720
Cost per Ton	US\$	1,750	1,750	1,750
Total Materials Cost	US\$	840,000	1,008,000	1,260,000

1.13 Production and Revenue Estimates

Raw materials waste in the production process is estimated to be 5%. Finished products are therefore estimated to be 95% of material inputs. It is further assumed that the finished products will generate US\$ 2,500- per ton, thus the project is estimated to generate revenue per the table below:

Cost Item	Unit	Year 1	Year 2	Year 3 onwards
Finished Products	Tons	476	547.2	684
Cost per Ton	US\$	2,500	2,500	2,500
Total Materials Cost	US\$	1,140,000	1,368,000	1,710,000

1.14 The Market

The study has revealed that there is a huge demand for Product Visibility and Awareness. Major brands in the country are interested in packaging and

branding their products. A large number of companies operating in Tanzania and the Lake Zone in particular have to depend on far sources for the design of packaging and branding services from companies in Nairobi and other foreign sources. The proposal therefore serves to save foreign exchange as well as to generate foreign exchange through potential orders for such services from countries in the Great Lakes Region particularly Rwanda and Burundi.

1.15 Environmental Considerations

The project is environmentally sustainable and manageable. Neither wastes nor serious emissions are produced during the production process. Therefore, no negative environmental effects are expected.

1.16 Project Developmental Values/Benefits

Implementation of this project will lead to realization of the following development values/economic benefits.

- Creation of employment opportunities for about **15 permanent** jobs
- The project will locally produce the various packaging and branding products which are currently being imported and therefore save on foreign currency
- Contribution of revenue to the Government in form of various taxes
- The project involves transfer of technology to Tanzania from China for manufacture of packaging and branding products. Tanzanians will be trained on the job on how to manufacture the various food, pharmaceutical and personal care packaging and branding products.

1.17 Financial Projection and Evaluations

Annex II of the attached Financial Projections analyses Income Statement Projections while Annex IV deals with Break-even Analysis as summarized hereto below:

(In US\$")

Particulars	Year 1	Year 2	Year 10 onwards
Sales Turnover	1,140,000	1,368,000	1,710,000
Gross Profit from Operations	164,545	208,275	1,375,588
Net Profit/(Loss)	83,470	113,191	162,876
Net Profit/(Loss) as a percentage of t/over	7.32	8.27	9.52
Break-even Point (including cost of finance)	1.84	1.49	1.34
Equity to Total Liabilities (%)	63	41	37

- Internal Rate of Return on investment 14.26%
- The Normal Payback Period is 4 years when discounted at the assumed discount rate of 8%.
- Breakeven Point ranges between 1.19% and 1.84%

1.18 Organization and Management

The project will be managed through the Board of Directors. The Board will formulate policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the project. The day to day management of the project will be vested in the management team to be headed by a Managing Director, to be assisted by Mrs. Fredrica Mgya who will be in-charge of Operations & Finance. who is also the Principal Assistant in all affairs of the business.

Key technical personnel will include qualified and experienced graphic designers, machine operators, printers, fixers, cutters and welders. A total of 15 permanent staff will be employed by this particular project.

1.19 Project Implementation

Given that the bank loan has already been approved, the project will be implemented immediately after grant of TIC Certificate of Incentives to access exemptions on duties, VAT deferments and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997) before the arrival of imported machinery and equipment

1.20 Conclusion and Recommendations

The Business Plan reveals that the project is:

- technically feasible
- financially viable
- economically viable
- socially desirable
- environmentally friendly, sustainable and manageable

In view of the growing demand for packaging and branding material products in Tanzania and in particular the Lake Zone and the benefits associated with this project as indicated in this report, the project is strongly recommended for financing and subsequently implemented without unnecessary delays. A fast implementation is advised as TB Bank has extended support for the project by financing the project to the tune of TShs 500,000,000/= (equivalent to US\$ 215,983-) to finance procurement and installation of plant machinery as well as financing working capital requirements

It is further recommended that the project be granted a Tanzania Investment Centre (TIC) Certificate of Incentives so as to enable these project access fiscal incentives and other benefits as provided for under Tanzania Investment Act, 1997.

2.0 THE PROJECT

2.1 The Project Concept

The project entails establishing industrial packaging and branding facilities for production of packaging and branding materials in Mwanza. The major products will include:

- ❖ PVC Compound Granules
- ❖ PVC Shrink Film;
- ❖ BOPP Film;

The three intermediate products will be used to produce various:

- ❖ Food and Beverage Packaging;
- ❖ .Medical Packaging; and
- ❖ Personal Care Products Packaging.

2.1.1 Definitions

2.1.1.1 Shrink Film/Shrink Wrap

Shrink wrap, also referred to as shrink film or shrink wrap, is a versatile polymer material used for the packaging of finished goods. Heat is applied to the film - by either a conveyor heat tunnel or an electric or gas heat gun - which catalyzes the film to shrink tightly around the item placed within. Shrink wrapping is an easy process requiring two basic elements: the right kind of shrink film and heat. With just a roll of shrink film and a heating source, you have all the tools you need to waterproof, weatherproof and tamperproof just about anything, regardless of size.

2.1.1.2 BOPP

BOPP is an acronym for Biaxially-Oriented (BO) Polypropylene (PP), a favorite for personal care products, as well as bath & body and food & beverage brands. BOPP is a versatile and resilient label material available in white, opaque, metalized, or clear. Biaxially oriented polypropylene (BOPP) film is among the most favoured packaging material across the industrial spectrum. The BOPP film suitable for the food packaging industry is generally a co-extruded, heat-sealable film. BOPP constitutes two-thirds of all biaxially oriented films. BOPP film is commonly used for applications that require moisture resistance, optical clarity and high tensile strength such as: Food & Beverage Packaging.

2.1.1.3 The PVC Compound/Granule/Pellets

The PVC compound granulation process is a process of making high-polymer resin and various additives and auxiliaries into granulated plastics after metering, sticking, plasticizing, and pelletizing. Plastic granules are semi-finished products of the plastic molding processing industry and are also extruded, Injection molding, hollow blow molding, foaming and other forming and processing raw materials. These semi-finished products will be produced by

M/s SignWarehouse Ltd and used as an input in the production of shrink film/shrink wrap.

2.1.1.4 Packaging Labels

A label (as distinct from signage) is a piece of paper, plastic film, cloth, metal, or other material affixed to a container or product, on which is written or printed information or symbols about the product or item. Information printed directly on a container or article can also be considered labeling.

2.1.1.5 Packaging Design

The Company's goal is to design a product, which conveys its message by itself, even without external marketing. We will be designing consumables and consumer goods for our customers of the cosmetics industry, the food and non-food sectors.

2.1.1.6 Design Strategy

Starting from customers' idea, we will build a holistic frame for the customers' brand through market analysis, innovation research and target group needs. With a view on the essentials we will develop strategies and concepts to establish customer's brand for product's long-term prospects on the market. When the concept is right, the basis for a successful company is laid. Every design artwork will be matched and reviewed with the concept to keep the customers' brand straight and powerful.

2.1.1.7 Corporate Design

This term describes the visual and aesthetic expression of the values and positioning of a company or brand. Determined by a high level of recognition, a consistent image is communicated whose significance is crucial for sustainable persistent success. Corporate design is the core of visual information about a company / brand.

2.2 Packaging and Branding/Labeling

2.2.1 Packaging

Packaging is the planning, creating, manufacturing, wrapping, boxing, or bottling of goods for consumer, industrial, and military markets. Wikipedia defines packaging as the science, art and technology of enclosing or protecting products for distribution, storage, sale, and use. Packaging also refers to the process of designing, evaluating, and producing packages. Packaging can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells.

2.2.2 Package Labeling

Marketing - Packaging and labels can be used by marketers to encourage potential buyers to purchase a product. Package graphic design and physical

design have been important and constantly evolving phenomena for several decades. Marketing communications and graphic design are applied to the surface of the package and often to the point of sale display. Most packaging is designed to reflect the brand's message and identity on the one hand while highlighting the respective product concept on the other hand.

2.2.3 Branding/Positioning

Packaging and labels are increasingly used to go beyond marketing to brand positioning, with the materials used and design chosen key to the storytelling element of brand development. Due to the increasingly fragmented media landscape in the digital age this aspect of packaging is of growing importance.

2.2.4 Functions of Packaging

- Market the product
- Provide information about the product
- Protect the product against damage and unsanitary conditions
- Contain the product, especially liquids
- Simplify transportation

2.2.5 Three Levels of Packaging

There are three distinct levels of product packaging: primary, secondary, and tertiary.

2.2.5.1 Primary Packaging

Primary Packaging refers to the materials that make direct physical contact with your product. This level of packaging is often called the retail or consumer packaging of an item. Primary packaging serves two important purposes. The first is to provide ample protection for your product, whether that means keeping out moisture with barrier protection or cushioning against impact. The second purpose of primary packaging is usually to inform the customer and provide details about that product's uses and features. This second purpose often allows us to classify product labels as primary packaging, such as the nutrition facts label often attached to food containers.

There are many examples of primary packaging you can explore, but two of the most common would have to be cans for beverages and pill blister packs. Both of these packaging items represent primary packaging as they are the direct materials containing the product. Pill blisters and cans are often put into other boxes or cartons to create bundles of products, which leads us to the next level of packaging below.

2.2.5.2 Secondary Packaging

This is another level of protection that is commonly used for protection, bundling, and marketing purposes. The secondary packaging of a product often combines multiple items together, such as the box that holds multiple cans of soda together in one convenient pack. The soda cans would be your primary

packaging and the box that keeps them together is considered the secondary level of packaging.

Secondary packaging is visually enticing to help attract customers to your product. This level of packaging will typically be printed with high quality images, logos, and other branding material. The secondary packaging is what your customers see first when shopping in store, so it can make a huge difference in your sales numbers. The more attractive your secondary packaging, the more likely a customer is to buy your product. When a company decides to rebrand their packaging, it's often the secondary packaging that gets the most attention.

2.2.5.3 Tertiary Packaging

This is different from both primary and secondary packaging because it's not usually seen by the end user. There is no need for visual appeal with tertiary packaging because its main goal is to provide protection during shipping and storage, although, some companies choose to use minimal marketing at this level. Tertiary packaging also provides a convenient way to move inventory quickly with easy handling.

Tertiary packaging could be anything from a large box that combines smaller containers holding your products to a full pallet setup with corner board and stretch wrap keeping multiple products bundled together. This level of packaging should be optimized to combine products as tightly as possible and to provide all the protection the products will need during travel. Shipping and storage environments can present harsh conditions, so tertiary packaging is where you beef up your protection to make sure products make it to their final destination without a scratch.

2.2.3 The Proposed Products

This project is mainly involved in the second level of packaging, i.e. protection, bundling, and marketing purposes. It is involved with visual enticing to attract customers with packages printed with high quality images, logos and other branding materials. The project will produce according to customer's orders and requirements. Some of the products will include:

- ❖ **Biodegradable Bags**

Biodegradable bags are a great alternative to regular bags. Made from 100% natural materials, they decompose naturally when discarded. In maintaining our environmental policy

- ❖ **Carrier Bags**

We will manufacture high quality carrier and shopping bags which will be custom made by branding them with the respective company's name and message. We provide products of all sizes specifically designed for your intended purpose of use.

❖ Cling Film

Our Cling Film Wrap will specifically be designed to preserve food products at both freezer and room temperatures. It will be produced in the highest standards of hygiene; and will be available in various sizes and roll lengths. Our industrial cling film wrap is best suited for mass consumption.

❖ Garments and Clothes Packaging

These poly films will be customized as per customers' requirement. Will be specifically designed and produced for packaging garments and clothing material. Both plain/printed options will be made available

❖ Industrial Films

We will specialize in the manufacturing of industrial films. Our production will range from heavy duty shrink wrap to detergent packaging and industrial pallet wraps.

❖ Plain and Printed Pouches

These pouches will be made for consumable products, examples of which stem from milk pouches to bakery & food packaging. We will use 100% Food Grade Materials in conjunction with international health and safety regulations.

❖ Any other plastic packaging, with or without printing.

We will provide flexible plastic packaging services for many industrial & domestic uses. Products that we will cater for include: Bread Bags / Confectionery Items, Salt Packaging; Maize/Rice/Sembe Packaging Paper Napkin Packaging, Laundries, Bakeries etc.

2.3 Technical Aspects

2.3.1 Ownership

The proposed packaging and branding project is being promoted by SignWarehouse Limited, a private company incorporated in the United Republic of Tanzania under Certificate of Incorporation Number 60331 issued on 15th May 2007 for the sole purpose of carrying out promotion, advertizing and product branding activities.

The directors and shareholders of the company are as shown here below:

Name	Nationality	Number of Shares	Per Cent Shareholding
William H. Mgya P.O. Box 336 Mwanza	Tanzanian	500	50%
Mrs. Fredrica William Mgya P.O. Box 1577 Mwanza	Tanzanian	200	20%
Rawson William Mgya P.O. Box 336 Mwanza	Tanzanian	100	10%
Janeth William Mgya P.O. Box 336 Mwanza William Mgya	Tanzanian	100	10%
Catherine William Mgya P.O. Box 1577 Mwanza	Tanzanian	100	10%
Total		1,000	100

The main directors are Mr. William Henry Mgya and Mrs. Fredrica Mgya. The company currently owns and operates a factory for printing of advertising, promotional materials and sign making for major industries and institutions around the Lake Zone. The current company business is based in Mwanza City along Makongoro - Airport Road. The directors and shareholders of the company are experienced in product promotion, advertisement/branding and graphic design, particularly the Managing Director who has been in this business for over 20 years now.

2.3.2 Production Technology: Selection of Plant and Machinery

There will be various types of machines required for this project. Packaging and labeling machinery and equipment to be procured for the project will include

- ❖ STY-G Model 850mm 8 Colour Rotogravure Printing Machine;
- ❖ QFJ-1100 Model Vertical Automatic Slitting & Rewinding Machine,
- ❖ ZF-J50 Central Sealing Machine,
- ❖ FA-350 Model Bottom Cutting Machine,

- ❖ FJ-50x800 Model PVC Shrink Film Blowing Machine, and
- ❖ QDF Model 850mm High Speed Dry Lamination Machine.
- ❖ Miscellaneous machines and equipment

All the machinery and equipment will be sourced from the China. The promoters have identified competent suppliers to be M/s Wenzhou Qiangda Printing Machinery Co. Ltd of China. The choice of this technology is based on the following attributes:

- ❖ The competitiveness of the price,
- ❖ Assured quality of the plant and related machinery,
- ❖ Reliability and appropriateness of the production technology,
- ❖ Expected back-up and after sale service provided by the suppliers during and after plant installation,
- ❖ Previous experience of the machinery procured under the Promotion and Advertizing project of the company.

2.3.3 Estimated Investment Cost and Financing Plan

The total project cost is estimated at US\$ 423,500-. The promoters have already been granted TShs 300,000,000/= (equivalent to US\$ 129,590-) by DTB Bank at an interest rate of 18% p.a for purposes of financing procurement of plant machinery. The loan is repayable in 60 months excluding 6-months moratorium period. The bank has likewise extended an overdraft facility of TShs 200,000,000/= (equivalent to US\$ 86,303-) for 12 months (renewable) at an interest rate of 22% p.a to finance working capital requirements. Total bank financing adds to 51% of total project cost. The remaining US\$ 207,517- (49%) will be financed by owners' equity and directors' loans.

(IN US\$)

S/N	Item	Cost
1.0	Land and Buildings	
1.1.	Rehabilitation and Partitioning of factory building)	21,000
2.0	Plant Machinery and Equipment	
2.1.	STY-G Model 850mm 8 Colour Rotogravure Printing Machine	95,000
2.2	QFJ-1100 Model Vertical Automatic Slitting & Rewinding Machine	9,300
2.3	ZF-J50 Central Sealing Machine	6,400
2.4	FA-350 Model Bottom Cutting Machine	7,400
2.5	FJ-50x800 Model PVC Shrink Film Blowing Machine	42,000
2.6	QDF Model 850mm High Speed Dry Lamination Machine	21,000
2.1.7	Miscellaneous machines and equipment	18,900
	Sub total	200,000

3.0	Motor Vehicles	
3.1	Single Cabin Pick-up	25,000
3.2	Light Truck	27,000
	Sub total	52,000
4	Furniture and Fittings	18,000
5	Contingencies	12,500
6	Add: Pre-Operational Expenses	15,000
	Sub total	318,500
7	Add: Initial working Capital	105,000
	GRAND TOTAL	423,500

2.3.4 Collateral Security

The project promoters have offered as security to both bank loans First Legal and continuous mortgage over property with Title No. 20507 LR Mwanza located on Plot No. 1365 Block "A" North Buswelu I.N.O. Fredrica Mgaya (director); Title No. 24787 LR Mwanza Plot No. 256 Block "B" Ilemela I.N.O Edward Barnabas Njau; Specific Debenture over the machinery to be procured; fixed and floating debenture over all current and future assets of the company; personal, joint and several guarantees of Mr. William Mgaya and Fredrica Mgaya (directors); and, personal guarantee of Mr. Edward Barnabas Njau.

2.3.5 Production and Capacity Utilization

The proposed project facilities will have a capacity to produce the following major products per annum:

The proposed plant will produce the following major products:

- ❖ PVC Compound Granules to be used as an intermediate input in the production of PVC Shrink Film;
- ❖ PVC Shrink Film;
- ❖ BOPP Film.

The three intermediate products will be used to produce various:

- ❖ Food and Beverage Packaging;
- ❖ .Medical Packaging; and
- ❖ Personal Care Products Packaging.

Build-in production capacity is estimated at 80 tons per month equivalent to 960 tons per annum. Capacity utilization has been estimated at only 50% in year one, rising to 60% in the second year before stabilizing at 75% from year three onwards.

2.3.6 Raw Materials Requirements and Availability

Raw materials will include PVC Compound Granules, PVC Shrink Film and BOPP Film. PVC Compound Granules will be produced locally as a semi-finished product to be utilized as a raw material in the production of PVC Film and BOPP Film. These will further be used in the production of food and beverage packaging, medical packaging, and personal care products packaging. Consumables will include dye ink, solvent ink for solvent printer, one way vision rolls, flex rolls, vinyl rolls, photo paper, laminating film, solution water, etc.

Supplies of bulky or big quantities of raw materials have so far been guaranteed from M/S SINOTEC DIGITAL COL LTD and other suppliers in China. The prices will be quoted competitively with any would be strong competitor so as to control the market shares already won by the business.

2.3.7 Raw Materials Costs

On the average, a ton of raw materials and consumables is estimated to cost US\$ 1,750- per ton and therefore cost of raw materials will be as indicated in the table below:

Cost Item	Unit	Year 1	Year 2	Year 3 onwards
Materials Requirement	Tons	480	576	720
Cost per Ton	US\$	1,750	1,750	1,750
Total Materials Cost	US\$	840,000	1,008,000	1,260,000

2.3.8 Production and Revenue Estimates

Raw materials waste in the production process is estimated to be 5%. Finished products are therefore estimated to be 95% of material inputs. It is further assumed that the finished products will generate US\$ 2,500- per ton, thus the project is estimated to generate revenue per the table below:

Cost Item	Unit	Year 1	Year 2	Year 3 onwards
Finished Products	Tons	480	576	720
Cost per Ton	US\$	1,750	1,750	1,750
Total Materials Cost	US\$	840,000	1,008,000	1,260,000

2.3.9 Production Costs

- ❖ Salaries and Wages have been based on the prevailing scales in the private sector. There is provision of 20% to cover company contribution to NSSF (10%) and other social welfare (10%).
- ❖ Administrative/Overhead costs are based on the prevailing rates in the market and needs of the proposed project.

The following will be the major production cost items:

(IN US\$)

S/NO:	COST ITEM	YEAR 1	YEAR 2	YEAR 3 onwards
1	Raw Materials and Consumables	840,000	1,008,000	1,260,000
2	Labour	48,600	50,400	63,000
3	Labour Overhead Costs	9,700	10,080	12,600
4	Water Supply	300	350	388
5	Electricity	1,035	2,075	3,100
6	Repairs & Maintenance (Furniture, Fittings and Office equipment)	500	800	1,000
7	Repairs & Maintenance (Machinery & Equipment)	5,000	7,500	9,000
8	Repairs & Maintenance (Civil Works)	500	800	800
9	Motor Vehicle Running Expenses	5,200	5,200	5,200
10	Advertising & Publicity	2,800	3,300	4,700
11	Rent	6,000	6,000	6,000
12	Licences, Fees and Authorizations	1,500	1,500	1,500
13	Postages and Telecommunications	1,800	1,800	1,800
14	Travelling	4,200	4,200	4,200
15	Insurance	2,200	2,200	2,200
16	Auditors and other Professional Fees	1,600	1,600	1,600
	TOTAL COST	930,935	1,105,425	1,388,588

❖ Corporate Tax is fixed at 30% of taxable profits.

2.3.10 Location and Infrastructure

The project will be initially located at Plot No: 505 Block “A” Nyamhongolo Industrial Area. The area is a well established industrial area with water and electricity connections, as well as tarmac road. The area is about 17 kms from Mwanza City Centre, along the Mwanza/Musoma Road.

2.3.11 Environmental Aspects: Emissions and Controls

Manufacturing process of the proposed packaging and branding materials will produce neither wastes nor any serious emissions. Therefore, no negative environmental effects are expected. The project is therefore environmentally friendly, sustainable and manageable.

2.3.12 Implementation Schedule

Given that the bank loan has already been approved, the project will be implemented immediately after grant of TIC Certificate of Incentives to access exemptions on duties, VAT deferments and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997) before the arrival of imported machinery and equipment.

Assuming that processing of TIC Certificate of Incentives will on the average take two weeks, importation and installation of machinery plant will be completed by November, 2020. Trial production is expected to commence by December 2020 before undergoing full commercial production by January, 2021.

3.0 THE MARKET

3.1 The Products

The envisaged products of the proposed project are:

- ❖ PVC Compound Granules
- ❖ PVC Shrink Film;
- ❖ BOPP Film.

The three intermediate products will be used to produce various:

- ❖ Food and Beverage Packaging;
- ❖ .Medical Packaging; and
- ❖ Personal Care Products Packaging.

To be more specific, the project will be involved and specialize in the production of all kinds of secondary level packaging and branding, i.e. protection, bundling, and marketing purposes. It is involved with visual enticing to attract customers with packages printed with high quality images, logos and other branding materials. The project will produce according to customer's orders and requirements. Some of the finished products will include:

- ❖ Biodegradable Bags
- ❖ Carrier Bags
- ❖ Cling Film
- ❖ Garments and Clothes Packaging
- ❖ Industrial Films
- ❖ Plain and Printed Pouches
- ❖ Any other plastic packaging, with or without printing.

The company will provide flexible plastic packaging services for many industrial & domestic uses. Products that we will cater for include: Bread Bags / Confectionery Items, Salt Packaging; Maize/Rice/Sembe Packaging Paper Napkin Packaging, Laundries, Bakeries etc.

3.2 Market Survey on the Packaging and Labeling Material Products

The fundamental question in the survey of market data for the products is whether the products can be sold and also whether they may continue to be sold in the future. This question centres on the level of demand for these products. The starting point is to establish whether there are enough companies with effective demand in the target market area. The second equally important issue is to focus on analysis of all marketing factors required in establishing a viable market. All these have been done.

Product packaging plays a very important role in consumer decisions. A product's packaging communicates many things, from what the product can do for your customers to your company's values. Some would argue that the packaging is as important as the product itself because it's a crucial marketing and communication tool for your business. The market demand for the products

therefore cuts across almost all industrial products. Major advantages of packaging and labels are as outlined under;

3.2.1 Product Differentiation

There are thousands of products on the market vying for your customers' attention. To succeed, one's brand packaging has to stand out and look different from your competitors. Not only is the design relevant to the name of the product, it's also eye-catching and highly different from what many of its competitors offer.

3.2.2 Packaging Colors

The colors used in product packaging play a key role in consumer buying decisions. Consumers' brain reacts to colors in different ways, so it is important for the producer to choose its packaging colors accordingly. It's important to study the target demographic before deciding on a color scheme for your product packaging.

3.2.3 Marketing Tool

Product's packaging is a helpful marketing tool through in-store advertising. Branded products are easily recognized, so designing packaging with your logo front and center helps consumers remember your product next time they are shopping. Packaging conveys a message about your product to the consumers.

3.2.4 Brand Recognition

Packaging creates brand recognition. Take a moment to think about some of your favorite brands. They all have one thing in common: they are memorable. Over the decades, brands like Coke have made minor changes to their packaging and stayed true to their original look. Keep in mind that recognizable brands should not change a thing because many successful brands that changed their logo, colors or packaging have seen a sort of backlash from shoppers after making a big change.

3.3 Target Market

The market under focus here in the Lake Zone includes major industries operating in Mwanza, Shinyanga, Mara and Kagera regions. Naturally, to maximize business profits, all businesses and companies worldwide have practically to market their products in different forms of advertising techniques. Such advertising materials will have to be designed and produced by our specialists for these companies. This target market includes Beverage and Bottling companies, Food Processing Companies, Manufacturing Companies, Telecommunication companies and all other companies and institutions involved in production, advertisement and branding of their products or services.

Under this market, the promoters have already targeted and made contacts with Breweries Companies, Water Bottling Companies, Serengeti Breweries Ltd, and other manufacturers in consumer products in the Zone. These include:

3.3.1 Beverage and Bottling Companies (40% of Sales) including:

- ❖ Nyanza Bottling Co Ltd (Coca-Cola)
- ❖ SBC Bottling Company Ltd (Pepsi-Cola)
- ❖ Serengeti Breweries Ltd (Mwanza)
- ❖ Tanzania Breweries Ltd (Mwanza)
- ❖ Jambo Water Bottling Company (Shinyanga)

3.3.2 Telecommunications Industry (35% of Sales) including:

- ❖ Airtel
- ❖ Vodacom
- ❖ Tigo
- ❖ Halotel

3.3.3 Others Manufacturers of Consumer Products and Service Providers (25%)

- ❖ Small Industries
- ❖ Traders
- ❖ Shop Keepers
- ❖ Walk-in Customers.
- ❖ Private and Public Institutions

The other target market markets are in Rwanda and Burundi who obtain their advertising materials in Kenya.

The absence of any such facility in the Lake Zone also provides an opportunity for M/s SignWarehouse Limited to flourish in this business. The lack of quality products available in the Lake Zone is expected to help the promoters penetrate the market easily with their quality and competitively priced products.

3.4 Competition

Competition in this industry is so far not a threat to be taken seriously. Demand is high and the government through Tanzania Bureau of Standards (TBS) has been urging for the private sector to manufacture packaging materials. TBS says that the demand for packaging materials among Small and Medium Enterprises in the country is very high while production is low. The Institution says that due to lack of packaging materials more than 60 per cent of the packaging facilities are imported from outside the country. This is an opportunity for the private sector to tap and ensure that they invest in packaging materials to fill the gap. For years poor packaging has been cited as one of the factors which causes most small entrepreneurs fail to compete in both local and international markets.

3.5 Marketing Strategies

Promotion of business activities is a function of targeting appropriate key market strategies. To achieve that, management of the project will concentrate on implementing the following strategies as a deliberate move to promote business success.

3.5.1 Advertisement

Apart from putting posters at different places of each of the four Lake Zone municipalities/cities to indicate agents for these products, the mass media will frequently be used. The Mass Media include the Radio, Television and the Daily Papers.

3.5.2 Organized Visits

Visits to existing and potential customers and other companies around the Lake Zone to introduce the company services and seek to obtain orders

3.5.3 Sales Agents

Advertising agents for this company will be appointed from far away districts

3.5.4 Pricing Strategies

Pricing is first a function of cost of production of the products. It is then followed by a process of refining it by considering prices of similar product services that may be offered by competitors.

Current local prices charged for these products are too high compared to the quality of the products - which is considered poor. M/s SignWarehouse Limited is coming with all in-house production with latest and most modern machines; and yet, the company plans to charge very competitive prices.

3.5.5 Supply of Raw Materials

Two major raw materials: PVC Shrink Film and BOPP Film will be produced in-house using PVC Compound Granules which will likewise be produced in-house.. Most of the other raw materials and consumables will be imported.

Supply of bulky or big quantities of raw materials is guaranteed from the identified Suppliers, M/S SINOTEC DIGITAL COL LTD and other Chinese suppliers. The prices will be quoted competitively with any would be strong competitor so as to control the market share estimated above 40% in the Lake Zone.

4.0 ORGANISATION AND MANAGEMENT

4.1 Board of Directors

The project will be managed through the Board of Directors. The Board will formulate policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the project.

4.2 Management

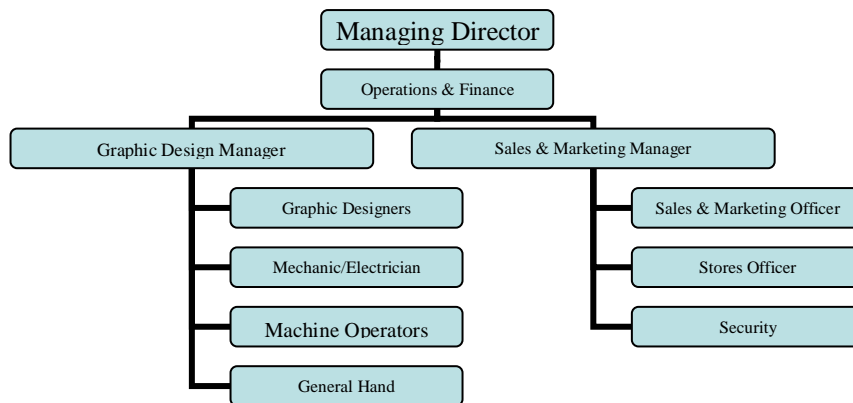
The day to day management of the company will be vested in the management team to be headed by a Managing Director, Mr. William Mgaya, to be assisted by Mrs. Fredrica Mgaya who will be in-charge of Operations & Finance who is also the Principal Assistant in all affairs of the business.

Investing in this project requires specific qualities of human capital and organization structure. The first requirement is skill and knowledge in Graphic Design. First and foremost, Mr. William Mgaya (the majority shareholder and Managing Director) is a qualified Graphic Designer with a BSc. in Graphic Designing. He has ample experience in the business, having worked for M/S Advert International as a Graphic Designer of the company for five years, and thereafter as an agent of graphic designing companies in Dar es Salaam. Having accumulated the requisite experience in this line of business, he decided to go formal and establish his own plant for production of promotion and advertizing materials in Mwanza. The company has since been able to do good business and now proposes to expand and diversify into the packaging industry.

Other key technical personnel will include qualified and experienced graphic designers, machine operators, printers, fixers, cutters and welders. A total of 15 permanent staff will be employed by this particular project.

4.3 ORGANISATION CHART

Following is the proposed organization chart of the proposed project in Tanzania.



5.0 DEVELOPMENT VALUES/BENEFITS

As mentioned earlier on in this report that implementation of this project will lead to realization of the following development values/economic benefits.

- Creation of employment opportunities for about 15 permanent jobs;
- It will save foreign exchange used by local companies to procure such services from outside, particularly in Kenya, Dubai and the Far East;
- Contribution of revenue to the Government through payment of corporate and local taxes;
- It will serve to generate foreign exchange since the project is targeting to exploit the potential markets of Rwanda and Burundi;
- Timing of establishing the project is in line with the current government efforts in promoting industrialization. The packaging materials will therefore facilitate packaging and branding of the various products that will be produced.
- The project involves transfer of technology to Tanzania from China for the production of packaging materials. Tanzanians will be trained on the job on how to produce these products.

6.0 FINANCIAL ANALYSIS

6.1 Financial Assumptions

The estimated capital cost and basic operating assumptions are summarized in the financial projections as shown in Annex I I to VI. In the financial analysis the following major assumptions have been taken into considerations:

- ❖ By taking into consideration repayment period of the DTB Bank term loan and gradual increase in plant production capacity, the financial projections are for 10 years.
- For convenience and stability, all financial figures have been quoted in United States Dollar at US\$ 1 = 2,315/= .TShs.
- Total capital investment cost is estimated at US\$ 423,500- as summarized under Annex I
- ❖ DTB Bank has granted a long term loan of TShs 300,000,000/= (equivalent to US\$ 129,590-) to finance procurement and installation of machinery plant equipment at interest rate of 18% (assumed to be equivalent to 8% in US\$) repayable in 5 years with a moratorium period of 6 months;
- ❖ DTB Bank has further granted TShs 200,000,000/= (equivalent to US\$ 86,393-) to finance initial working capital at the interest rate of 22% (assumed to be equivalent to 10% in US\$) per annum.

- ❖ The project promoters will contribute US\$ 207,517- in form of equity contribution and directors' loans.
- Depreciation of fixed assets and amortization of the pre-operational expenses rates used are as follows:

Land	0.00%
Civil Works/ Structures/Buildings.....	5.00% on straight line basis
Plant and Machinery.....	12.50% on straight line basis
Furniture/Equipment and Fittings.....	12.50% on straight line basis
Motor Vehicles.....	20.00% on straight line basis
Pre-operational Expenses	20.00% on straight line basis

The plant is to operate for 12 hours per shift/day. The actual Capacity Utilization is projected at only 50% during the 1st year, 60% in the 2nd year, 75% in the 3rd and subsequent years.

- The project is expected to generate revenue at the tune of US\$ 1,548,000- per annum at full commercial production from year three onwards while raw materials and other consumables are estimated to cost US\$ 1,260,000-.
- Direct production costs shown under Annex II are based on current rates.
- Salaries and Wages have been based on the prevailing scales in the private sector. There is provision of 20% to cover company contribution to NSSF (10%) and other social welfare (10%).
- ❖ Administrative/Overhead costs are based on the prevailing rates in the market and needs of the proposed project.
- ❖ Corporate Tax is fixed at 30% of taxable profits.
- ❖ The project will be granted a Tanzania Investment Centre (TIC) Certificate of Incentives and therefore enjoy a 50% capital investment allowance on all capital goods and Import/Excise Duty and VAT exemption on the machinery plant.

6.2 Analysis of Financial Results

Following are highlights of the financial projections and analysis:

Annex II - Income Statement Projections

Operations of the project will generate profit right from the first year onwards. The company posts net profit of US\$ 83,470- during the first year of operations. The profitability position improves significantly during the subsequent years to US\$ 158,869- in year five (5) and reaches the peak of US\$ 162,876- during the 6th year.

Annex III - Cash flow Statements

The projected Cash flow Projection from operating activities indicates that the project will generate enough cash to service the directors' loans and meet other financial obligations. Annual Profit increases from US\$ 83,470- in year one to US\$ 158,869- by the 5th year of operation. Retained Earnings during the same period increases from US\$ 83,470- to US\$ 662,412- before reaching US\$ 1,476,792- in year ten (10). This is a positive indication that the project is liquid enough to meet its cash requirements to support its trading operations.

Annex IV - Projected Balance Sheet

The balance sheet indicates a favourable state of affairs of the project throughout the projected period. The net fixed assets as reflected in the security cover adequately cover the term loan and director's loans. The security cover is above the normal rate of 1.25 required by the Bank of Tanzania. Debt/Capital ratio ranges between 0.37 and 0.64. Similarly, current liabilities are well covered by the current assets, the ratio ranging from 0.63 to 0.76

The company net-worth increases from US\$ 207,517- at the end of construction period to US\$ 1,684,309- by end of the 10th year, a growth of over eight (8) fold which shows a significant growth in the value and profitability of the company.

Annex VI- Internal Rate of Return (RR)

The Discounted Cash flow yields an Internal Rate of Return (IRR) of 14.26%, which is well above the assumed cost of capital at 8%. This confirms the financial viability of the proposed project.

Key Financial Ratios

- Debt Service Coverage Ratio- ranges between 2.45 and 28.30. This is well above 1.0, another indicator that the project will comfortably service interest and principal repayments as and when they fall due.
- Return on Investment (ROI) is positive during the first year. It increases over the years as the loan liability is reduced

Payback Period

The entire investment of US\$ 423,500- is estimated to be recovered in about - four (4) years at zero discount rate, and five years when discounted at the cost of capital at 8%. This is a clear demonstration that the project has a reasonable return of return on investment.

Breakeven Analysis

Highest breakeven is estimated 6.37 during the first year of operation and the lowest breakeven ratio is 5.56 during theth andth years. The breakeven point declines as the loan is reduced over the years.

The management will strive to achieve higher capacity than the breakeven point at -----% and -----%.

Sensitivity Analysis

From the analysis carried out on changes of some key factors to show their effect on profitability and IRR, the project shows to be more sensitive to changes in selling price than changes in decline in capacity utilization and increase in direct production costs ??????.

7.0 RISK AND SECURITY ANALYSIS

Risk analysis can be looked from the strengths and weaknesses of the project as follows:

7.1 Strengths

- The project will generate substantial foreign exchange to the country by exporting locally produced products to the neighbouring countries. Likewise, it will save the outflow of foreign currency as it will substitute imports, and at the same time generate foreign exchange as some of its products will be exported to neighbouring countries.
- Sponsors are currently engaged in a similar business of production of advertising and promotional materials. Therefore they have wide experience and knowledge in the marketing of the products, and have already secured a good number of customers in their target market.
- Sponsors will bring in state-of-the-art production machinery and equipment, produce quality goods (aiming at international standards) compared to what is already in the market, and at the same time charge very competitive prices compared to the existing weak competitors in their target market. They already have the production expertise and management through their current line of business.
- The project will make available in the market a product that is in very high demand, especially now that the government is putting much effort in the promotion of the industrial sector.
- The project is strategically located for easy delivery of raw materials and distribution of its products.
- The project will create employment opportunities for about 15 people in Mwanza. This is in line with the government policy for poverty reduction in the area.

7.2 Challenges

The project depends on raw materials mainly from abroad. Therefore should there be unforeseen logistic problems like breakout of wars in the supplying countries or along the supply route, the local road or railway being washed away by rains or drastic increase in the transportation costs like hiking in fuel, the project profitability will be adversely affected.

7.3 Opportunities

The project has a captive market for all the packaging products that will be produced as local production (Lake Zone) is a negligible fraction of demand. The demand is currently being met by expensive imports whose price includes over 40% taxes on cif value or deliveries from Dar es Salaam. This factor guarantees the project a strong and predictable market and therefore cash flow to meet its operational and loan obligations in time and in full, holding all other factors constant.

8.0 CONCLUSION AND RECOMMENDATIONS

Analysis of the project confirms that the project is:

- Technically feasible,
- Financially and Economically viable,
- Socially desirable
- Environmentally sound, manageable and sustainable.

A timely financing and implementation of the project is therefore highly recommended in order to realize the anticipated benefits outlined in this study/report.

Provided all other economic factors remain substantially the same, it is strongly recommended that the project be implemented with immediate effect. It is further recommended that applications for Industrial Licence and Environmental Impact Assessment for the proposed plant be submitted forthwith. It is further recommended that an application for TIC Certificate of Investment Incentives be submitted to Tanzania Investment Centre with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

FINANCIAL PROJECTIONS

ANNEX 1: INVESTMENT SUMMARY

INVESTMENT SUMMARY	IN USD
Rehabilitation and Partitioning of Factory Buildings	21,000
STG-G 850mm 8 Color Rotogravure Printing Machine	95,000
GFJ-110 Model Vertical Automatic Siting & Rewinding Machine	9,300
ZF-J50 Central Sealing Machine	6,400
FA-350 Model Bottom Cutting Machine	7,400
FJ-50X800 PVC Shrink Firm Blowing Machine	42,000
QDF Model 850mm High Speed Dry Lamination Machine	21,000
Miscellaneous machinery and equipment	18,900
Single cabin Pick up	25,000
Light Trucks	27,000
Furniture and fittings	18,000
Continues	12,500
Subtotal Fixed Assets	303,500
Current Asset	
Pre operational expenses	15,000
Initial working capital	105,000
Sub total current Assets	120,000
Total Investment	423,500
Cash	207,517
Loan	215,983
Total Equity	423,500

Net Earnings before Tax & Interest		150,147	190,051	242,736	242,736	242,736	242,736	242,736	242,736	242,736	242,736	2,275,834
Interest Paid (Bank Loan)		17,279	14,333	11,153	7,717	4,007	-	-	-	-	-	54,489
Tax (30%)		49,398	62,527	79,860	79,860	79,860	79,860	79,860	79,860	79,860	79,860	750,806
Net Earnings		83,470	113,191	151,723	155,159	158,869	162,876	162,876	162,876	162,876	162,876	1,476,791

ANNEX III: CASH FLOW STATEMENT FROM INVESTMENT ACTIVITIES FOR TEN YEARS

(all numbers in US\$)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
CASH FLOW FROM OPERATING ACTIVITIES										
Cash receipts from Sales	1,094,400	1,313,280	1,641,600	1,641,600	1,641,600	1,641,600	1,641,600	1,641,600	1,641,600	1,641,600
Cash paid to suppliers and employees	(929,855)	(1,105,005)	(1,375,588)	(1,375,588)	(1,375,588)	(1,375,588)	(1,375,588)	(1,375,588)	(1,375,588)	(1,375,588)
Cash generated from operations	164,545	510,455	673,837	813,021	948,505	1,087,825	1,209,963	1,345,140	1,494,711	1,660,176
Dividends received*	0	0	0	0	0	0	0	0	0	0
Interest received	0	0	0	0	0	0	0	0	0	0
Interest paid	(17,279)	(14,333)	(11,153)	(7,717)	(4,007)	0	0	0	0	0
Tax paid	(49,398)	(62,527)	(79,860)	(79,860)	(79,860)	(79,860)	(79,860)	(79,860)	(79,860)	(79,860)
Net cash flow from operating activities	97,868	433,595	582,824	725,444	864,638	1,007,965	1,130,103	1,265,280	1,414,851	1,580,316
CASH FLOW FROM INVESTING ACTIVITIES										
Replacement of equipment	0	0	0	0	0	0	0	0	0	0
Proceeds** from sale of equipment	0	0	0	0	0	0	0	0	0	0
Net cash flow from investing activities	0	0	0	0	0	0	0	0	0	0
CASH FLOW FROM FINANCING ACTIVITIES										
Proceeds from capital contributed	207,517	0	0	0	0	0	0	0	0	0
Proceeds from loan	215,983	0	0	0	0	0	0	0	0	0
Payment of loan	(36,816)	(39,761)	(42,942)	(46,377)	(50,087)	0	0	0	0	0
Net cash flow from financing activities	386,684	(39,761)	(42,942)	(46,377)	(50,087)	0	0	0	0	0
NET INCREASE/ DECREASE IN CASH	484,552	393,834	539,883	679,067	814,551	1,007,965	1,130,103	1,265,280	1,414,851	1,580,316
Cash at the beginning of the period	83,470	113,191	151,723	155,159	158,869	162,876	162,876	162,876	162,876	162,876
Cash at the end of the period	568,022	507,025	691,606	834,225	973,419	1,170,841	1,292,979	1,428,156	1,577,727	1,743,192

ANNEX IV: PROJECTED BALANCE SHEET

(all numbers in US\$)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
ASSET										
Current asset	83,470	113,191	151,723	155,159	158,869	162,876	162,876	162,876	162,876	162,876
Fixed asset	303,500	309,570	315,761	322,077	328,518	335,089	341,790	348,626	355,599	362,711
Investment	120,000	122,400	124,848	127,345	129,892	132,490	135,139	137,842	140,599	143,411
Liquidity	164,545	510,455	673,837	813,021	948,505	1,087,825	1,209,963	1,345,140	1,494,711	1,660,176
TOTAL ASSET	671,515	1,055,616	1,266,170	1,417,601	1,565,784	1,718,279	1,849,769	1,994,484	2,153,785	2,329,174
EQUITY & LIABILITIES										
Equity	423,500	434,680	473,210	515,156	560,819	610,530	664,648	723,562	787,699	857,520
Reserves										
Total Own Equity	423,500	434,680	473,210	515,156	560,819	610,530	664,648	723,562	787,699	857,520
Provisions	130,125	486,090	635,729	745,215	847,734	1,004,613	1,081,985	1,167,786	1,262,950	1,368,517
Long term loan	54,094	54,094	54,094	54,094	54,094	0	0	0	0	0
Short term Liabilities	63,796	80,751	103,136	103,136	103,136	103,136	103,136	103,136	103,136	103,136
Total Equity & Liabilities	671,515	1,055,616	1,266,170	1,417,601	1,565,784	1,718,279	1,849,769	1,994,484	2,153,785	2,329,174
NET FA/CL	5.61	5.72	5.84	5.95	6.07					
CL/CA	0.76	0.71	0.68	0.66	0.65	0.63	0.63	0.63	0.63	0.63
DEBIT/CAPITAL RATIOS	0.37	0.59	0.63	0.64	0.64	0.64	0.64	0.64	0.63	0.63
ROI	19.7	26.0	32.1	30.1	28.3	26.7	24.5	22.5	20.7	19.0
BREAK EVEN POINT										
	1.84	1.49	1.19	1.21	1.23	1.26	1.28	1.31	1.34	1.36
BREAK EVEN RATIO										
	6.37	5.95	5.76	5.76	5.76	5.56	5.56	5.56	5.56	5.56
EQUITY/TOTAL LIABILITIES										
	63	41	37	36	36	36	36	36	37	37

ANNEX V: LOAN REPAYMENT SCHEDULE

Loan Data		Loan Summary	
Original Principal	215,983.00	Scheduled Payments	\$54,094
Loan Term (Years)	5	Scheduled number of payment	10
Annual Interest Rate	8.00%	Actual number of payment	10
Payments per Year	1	Total Early Payment	-
Payment	\$447,088	Total Interest	\$1,470,885

Year	Payment	Interest	Cumulative Interest	Principal	Balance
0					\$215,983
1	\$54,094	\$17,279	\$17,279	\$36,816	\$179,167
2	\$54,094	\$14,333	\$31,612	\$39,761	\$139,406
3	\$54,094	\$11,153	\$42,765	\$42,942	\$96,465
4	\$54,094	\$7,717	\$50,482	\$46,377	\$50,087
5	\$54,094	\$4,007	\$54,489	\$50,087	\$0

ANNEX VI: INTERNAL RATE OF RETURN (IRR)

IRR for the Project

(all numbers in US\$)

	Initial Investment	-423,500
Year 1	Additional Annual Net Profit	83,470
Year 2	Additional Annual Net Profit	113,191
Year 3	Additional Annual Net Profit	151,723
Year 4	Additional Annual Net Profit	155,159
Year 5	Additional Annual Net Profit	158,869
Year 6	Additional Annual Net Profit	162,876
Year 7	Additional Annual Net Profit	162,876
Year 8	Additional Annual Net Profit	162,876
Year 9	Additional Annual Net Profit	162,876
Year 10	Additional Annual Net Profit	162,876
	IRR (in 10 years)	14.26%

The IRR above indicates that the expected return on the \$423,500 initial investment after 10 years is 14.26%.

ANNEX VII: PAYBACK PERIOD

Payback Period Analysis				
	Year	Beginning Balance	Net Cash Flows	Ending Balance
Cost of investment	0.00	423,500.00	0.00	423,500.00
	1.00	423,500.00	83,470.21	340,029.79
	2.00	340,029.79	113,190.79	226,839.00
	3.00	226,839.00	151,723.31	75,115.68
	4.00	75,115.68	155,158.66	80,042.98
	5.00	80,042.98	158,868.83	238,911.81
	6.00	238,911.81	162,875.82	401,787.63
	7.00	401,787.63	162,875.82	564,663.46
	8.00	564,663.46	162,875.82	727,539.28
	9.00	727,539.28	162,875.82	890,415.10
	10.00	890,415.10	162,875.82	1,053,290.92

Payback Period =	4.00	Years
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