# VK INDUSTRIES LIMITED

**PROJECT DOCUMENT ON ESTABLISHMENT**

**FOR**

**HARDWOOD TIMBER MANUFACTURING AND PROCESSIG PLANT AND ALLIED PRODUCTS**

**AUGUST 2023**

# 1.0 EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

The building and construction industry has been growing very fast and is creating increased demand for timber. Encouraged by these positive developments, **VK INDUSTRIES LIMITED** is dedicated to providing quality hardwood timber and related products to the woodworking industry.

VK Industries Limited, intends to establish a factory for processing of quality timber and other related products and enable the company to venture into the export and local market as well. This report is therefore about the financial and economic viability of establishing VK Industries Limited, at Plot No. 225 Block "I" at Diar Area in Muheza District – Tanga

## 1.2 THE PROJECT

The project envisages establishing a company to timber processing and allied products with modern andbigger machinery and equipment in order to produce up to date and quality furniture. Timber Products sets the standard for product quality, innovation, and environmental stewardship in the wood products industry. The company dream is to become the largest material suppliers in the domestic kitchen cabinet industry, as well as one of the largest manufacturers of hardwood plywood in Tanzania. In addition, the company plan to offer a comprehensive array of other wood products, from hardwood lumber and veneer to softwood products, laminates, and particleboard. Furthermore, Timber Products is a fully integrated manufacturer. The company plan to control every step of production to ensure our products have high levels of quality, craftsmanship, and sustainability.

## 1.3 SAWMILLING

To ensure high-quality products resulting from hardwood timber manufacturing and processing, VK Industries Limited, experienced and well-trained production technicians use the latest available technology, including band saw, twin band saw, a multi-blade rip, optimizing machine, cut off saw. Steaming

The hardwood timber manufacturing and processing continues with steaming. The beechwood timber is steamed right after it is sawn, and before it has a chance to be exposed to accidental air-drying. After steaming, the white sapwood becomes much darker, looking at times almost as dark as the heartwood. The heartwood, when heated, also changes color, becoming a little bit darker. These color effects develop throughout the lumber and not just at the surface. Steaming is a process to improve sapwood's appearance and becoming more critical nowadays as log diameters are smaller, meaning more timber with a higher percentage of sapwood.

During steaming process, the beech lumber takes on a distinctive pink color. After steaming, the hot lumber is removed from the steaming chamber, stickered, air-dried, and afterward loaded into a dry kiln room.

## 1.3 DRYING

VK Industries Limited, longtime kiln drying expertise and the right equipment make us hardwood timber leaders, including difficult to dry, thick timber. With over 1,700cubm of kiln drying capacity and massive air-dry lumber storage warehouses, VK Industries Limited, can deliver large quantities of export-ready hardwood timber just in time.

For hardwood timber manufacturing and processing, we employ the latest grading technology: scanners, optimizing machines along very experienced technicians in order to maximize the yield and to deliver high-quality products to our customers. We continually invest in the most efficient and precise computer-aided equipment to ensure maximum production output while retaining quality

## 1.4 THE MARKET

Hardwood timber is an essential item in every building. The demand for Timber in Tanzania as measured by the growth of the building and construction industry is enormous. Also, the recent development of construction activities in Tanzania has also increased the demand oftimber and its allied products. The introduction of the factory willgreatly enhance the production of various furniture products and construction services to enable the company venture into both locally & exports market as well.

## 1.5 ESTIMATED CAPITAL COST

The fixed capital cost of the project is currently estimated at approximately **US$ 500,000.00 million** as summarized below:

| **Investment** | **Local** | **Total Costs** |
|---|---|---|
| Land Buildings | 50,000.00 | 50,000.00 |
| Plant & Machinery & Equipment | 350,000.00 | 350,000.00 |
| Motor Vehicles | 50,000.00 | 50,000.00 |
| Working Capital | 50,000.00 | 50,000.00 |
| **Total Costs** | **500,000.00** | **500,000.00** |

## 1.6 FINANCING PLAN

The above fixed capital cost is planned to be financed as follows:

US$

| **Investment** | **Local** | **Foreign** | **Total Costs** |
|---|---|---|---|
| Foreign Equity | | 500,000.00 | 500,000.00 |
| Total Costs | | 500,000.00 | 500,000.00 |

## 1.7 MANAGEMENT AND STAFF

The company will employ about 11 people of various skills.

## 1.8 PROFITABILITY AND LIQUIDITY

Detailed financial projections are contained in the variousAppendices attached to this report.

## 1.9 DEVELOPMENT VALUES

The project is considered to have the following developmentaspects:

1.9.1 The project will produce high quality timber which is in high demand.

1.9.2 The project is of import substitution nature as well as export oriented.

1.9.3 Manpower to be employed by the project will be about 11people.

## 1.10 CONCLUSION AND RECOMMENDATION

Since the project as presented in this report is profitable, financially and economically viable, its implementation is highly recommended.

# 2.0 BACKGROUND INFORMATION

## 2.1 THE COMPANY

### 2.1.1 Company Name and Address

VK Industries Limited,

P.O. Box 23, Muheza - Tanga

### 2.1.2 Corporate Status

Private Limited Liability Company incorporated in Tanzania to manufacture all types of wood for furniture and those from steel products and pillows with view of producing quality products and trade in a wide range of furniture for local and export market

### 2.1.3 Incorporation

Incorporated and registered in Tanzania on 8th May, 2023 underCertificate of Incorporation No. **165465776**

### 2.1.4 Shareholders and Shareholding

| Name and Address | Nationality | % Shareholding |
|---|---|---|
| Vivek Kumar Bhagat Sachin | Indian | 90 |
| Sambhaji Desai | Indian | 10 |
| Total | | 100 |

# 3.0 MARKET

## 3.1 Introduction

To date, there are more than 300 small furniture units throughout the country most of which are privately owned. There are also about 20 medium scale furniture manufactures which produce high quality standard and luxurious wood and metal furniture mainly for the domestic market. The local furniture units of Tanzania stand out tobe the best furniture stores in Africa designing and delivering world class home and office essentials irrespective of big or small projects. With the latest technologies in access with skilled craftsmen, the furniture companies offer a customized solution to accentuate every living space.

### 3.2 The Product

Timber retail and trade is an important part of the global economy. The timber industry is comprised of the production, distribution, and retail of furniture for residential and commercial use. Be it in homes, offices, schools, or even outdoors, there are pieces of furniture to be seen almost everywhere. Timber products also includes complementary products such as, mattresses, pillows and home furnishings. Furniture can be categorized as residential house, office, school, and hotel and hospital furniture. Furniture can also be categorized according to the material used as either wooden, metal or plastic furniture and can either be luxurious or standard furniture. The company intends to produce high quality timber and other allied products .

### 3.3 Demand for timber

Timber is an essential item in every building, be it residential, office, hotel, school, hospital etc. The furniture market in Tanzania is more institutionalized as opposed to individuals. Most institutions, private or public, provide furnished housing for their middle and senior executives. Also, these institutions place orders from time to time to replace old and dilapidated furniture for their staff or to caterfor an establishment.

In this group, the Government and public sector stands out prominently e.g., Ministry of Education through the extensive network of schools, colleges and other higher learning institutions, Ministry of Defense and National Service, Ministry of Health.

Also, the recent development of construction activities in Dodoma has also increased the demand of furniture's and its allied products.The parastatal and private companies also require lots of domestic and office furniture e.g., Banks, Insurance Companies, The HarborsAuthority, The National Provident Fund, etc. As part of the fast- moving consumer goods (sector, the furniture market tends to riseand fall based on world economic trends.

During a recession, the industry tends to be negatively impacted as consumers cut back on non-essential spending, putting off home redecoration and renovation projects due to lower disposable incomes. This happened most recently during the 2020 coronaviruspandemic. The import and export of furniture is also impacted by such events, however trade values have been growing steadily in recent years.

China is the dominant exporter of furniture and the United States leads for imports. The exact demand for furniture is difficult to quantify due to the unorganized nature of the building and construction industry. Due to rising living standards and a higher income, consumers are replacing their furniture more frequently. In 2019, the Furniture market realized a total worldwide revenue of US$1,417 billion, representing an annual growth of 3.9% comparedto 2018

### 3.4 Supply of Furniture

The supply of furniture in Tanzania is mainly from small (cottage) and medium scale furniture industries. Their work process is essentially based on hand tools although the medium sizes workshops occasionally have wood and metal working machinery. Mass standardized production is done by just a few furniturefactories which are a source of constant frustration especially for institutions attempting to procure furniture in large quantities. Determination of installed capacity of the furniture in the country is also difficult due to the large number of furniture types which can be produced from the same unit at various times.

Because of the rather low technical development of the furniture industry in the country, even the most important productivitycoefficients are not known because they have never been determined. Consequently, each manufacturer decided on his ownway of measuring capacity. Large portion of the furniture used in residential buildings is supplied by family and cottage manufacturing

units which usually do not keep production/sales data and cannot easily be contacted.

### 3.5 Demand/Supply Gap

It is evident from the above explanation that the supply of furniture in Tanzania has always been lagging behind its demand. However, as noted above available supply statistics do not include the majority of family and cottage manufacturing units. Nevertheless, there is a shortage of furniture in Tanzania. This is also indicated by the fact that carpenters in this country are always busy with more orders than they can produce.

### 3.6 Conclusion and Recommendation

Analysis of the market shows that there is a high market potential for good quality timber in Tanzania. The company can exploit it easily and therefore establishment of the project has to be carried out as soon as possible. Many organizations/parastatals, government institutions prefer and can afford quality standard furniture. It is therefore recommended that the company should emphasize on production of quality standard timber for all type of furniture.

## 4.0 THE PROJECT

### 4.1 PROJECT DESCRIPTION

The company Intends to establish a plant to produce all types of timber for locally and export markets. The plant will produce 200 pieces of quality timber for furniture per month which will be able to competein the local and foreign market. The Furniture market is divided intoseven segments: Living Room and Dining Room Furniture, Bedroom Furniture, Kitchen Furniture, Plastic and Other Furniture, Office Furniture, Lamps and Lighting ,and Floor Covering. The main products to be manufactured will include all types of Joinery, furniture and wood including wardrobe, cupboards, desks, cabinets chairs, furniture, wooden components products and Ready- to-assemble (RTA) furniture and pillows . Ready-to-assemble (RTA) furniture comes flat-packed and are assembled on site.

### 4.2 INSTALLED CAPACITY AND PRODUCTION

The project is expected to produce the following 2400 various pieces of furniture per year. The production will be on the basis of single shift per day. The main products to be manufactured will include all types of household furniture and wood including wardrobes, cupboards, kitchen units' chairs, safes, hospital furniture, wooden components, pillows etc.

## 4.3 RAW MATERIALS

There are various raw materials and components that are commonly used in the manufacture of furniture. Most of the raw materials are available from local dealers and manufacturers.

Substantial amount will be imported to give international standard to furniture.

Timber is a significant investment in the process of building a home. Understanding what makes a quality piece of furniturerequires a deep dive into what raw materials can be used and what are the benefits of these materials. Raw materials like wood, cane, metal, leather, and fabrics are most commonly used for contemporary furniture though one is only limited by one's imagination while being creative.

**Wood**

Wood is a most popular choice for furniture due to its strength, durability, and organic appearance. Good quality wooden furniture can last for generations if carefully maintained. The choice of the wood being used is decided bythe type of furniture, the design and the budget. Hardwood like Teak and oakwood are dense and therefore more durable.They also lend themselves well to carving and finer detailing. Softer woods on the other hand, ensures better workability, and is therefore not suitable for furniture that is in heavy use areas. Engineered wood such as plywood and particle boardare made by combining thin layers of wood with adhesive,

hence the terms teak ply, oak ply etc. however has poordurability over time.

Veneers are thin panels of wood glued onto core panels. The variety of veneers available in the market these days allows one's creativity to take flight. They work well for the craft ofmarquetry that allows creation of patterns on surfaces. Whilesolid wood can warp, veneers tend to be more stable. In today's world veneers have become popular as they use less wood to make a piece of furniture.

## 4.3 PRODUCTION PROCESS

### 4.3.1 INTRODUCTION

The processes used in the manufacture of timber include the cutting, bending, molding, laminating, and assembly of such materials as wood, metal, glass, plastics, and rattan: In the production process for furniture also design and fashion trends playan important part. The processing of furniture usually follows this order;

i) Raw material storage, preparation including saw milling and kiln drying of timber;

ii) Machining process

iii) Cutting and welding process

iv) Painting where applicable

v) Assembling and upholstering

vi) Finishing, storage and packing.

### 4.3.2 FURNITURE PROCESSING

1)A basic preliminary in all furniture production is the provision of working drawings. In a firm of any size there is a special departmentwhere full-size drawings are prepared from small-scale drawings provided by the designer. A sample piece is made to check the design and cutting problems. Cutting lists are prepared; the cost ofmaterials, fittings, finish, etc. are figured and an estimate of machining and assembly time worked out.

a) The timber is selected which has already passed through the seasoning kiln and converted to standard thicknesses. The wood passes to the machine shop, where it is sawed to size, planed, molded, grooved, or rebated as required.

b) When a number of parts must be cut exactly alike, they are clamped in forms having the proper contour and are then brought in contact with high-speed rotating knives that shapethe part to proper size as the form rides against a guide on hand or automatic shapers and routers. After the rough carving, the pieces are machine sanded and finished by a hand carver.

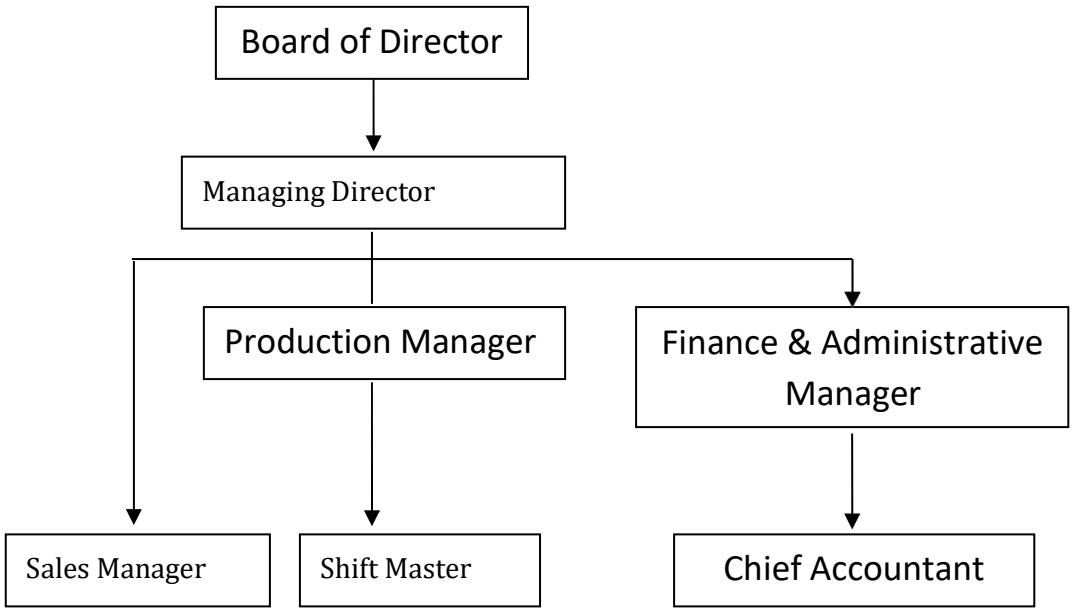
c) Finally, the work passes to the assembly shop where frames are put together, gluing and assembling is done. After the glue has set, the parts may be returned to the machine department for machining that could not be performed before assembly, such as sanding the joints and shaping the edges.

d) Then it returns to the assembly department for final assembly. Air-driven clamps are used when the design permits, otherwise, the piece is pressed by hand clamps. Unless electronically cured glues are used, clamps must be applied long enough to ensure a good bond.

e) The completed article is cleaned to remove excess glue, inspected, and hand sanded. Finally, staining and spray polishing is done and fittings added ready to be sent for sale.

## 5. Organization Structure

The organization structure of the project is as follows:



## 6.0 FINANCIAL ANALYSIS

### 6.1 REVENUE ASSUMPTIONS

The basic assumptions underlying the projected production and sales revenue are detailed below:

6.1.1 Basic Assumptions

6.1.2 The installed production capacity of the furniture factory is approximated at 2,400 various pieces of furniture per year. The practical operation of a furniture factory is a single shift whose capacity is determined at the assembly section.

6.1.3 We estimate capacity utilization to increase from 50% ,60% 70%, 80% and 100%.

6.1.4 The revenue and operating cost assumptions have been projected as constant prices; it being assumed that any substantial cost increase will be offset by a corresponding increase in the selling price. The operating cost have been taken to be 75% of the total revenue

### 6.2 OPERATING COST ASSUMPTION

**Utilities**

Utilities comprise electricity, water, fuel, oil and gas. The cost of utilities is estimated on the following basis.

**(a) Electricity and Water**

Electricity is used for running the various machinery as well as for general lighting while water is for general human consumption and cleaning.

**(b) Fuel, Oil and Gas**

Fuel is mainly needed for motor vehicle running while oil is used for lubrication purposes as well as in transmission and hydraulic systems. Gas is used in the various welding processes.

## 7.0 CONCLUSION & RECOMMENDATION

### 7.1CONCLUSION

From the financial and economic evaluation of the project, the following conclusion can be drawn:

7.1.1 The Proposed project is commercially attractive and financially viable. The project will create additional employment opportunitiesto **.....**people.

7.1.2 Foreign exchange savings through import substitution and earnings through exports are substantial.

## 8.0 RECOMMENDATION

Since the project meets the main objectives creating self- sufficiency in basic consumer needs from locally available raw materials while earning foreign exchange, its early implementation is strongly recommended.

# FINANCIAL PROJECTIONS

| PROJECTED INCOME STATEMENT | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR5** |
| Sales Revenue | | | 725,000 | 870,000 | 1,044,000 | 1,252,800 | 1,503,360 |
| Cost of Sales | | | 145,000 | 145,000 | 145,000 | 145,000 | 145,000 |
| **Gross Profit** | | | **580,000** | **725,000** | **899,000** | **1,107,800** | **1,358,360** |
| **Operating Expenses** | | | | | | | |
| Administrative Overhead | | | | | | | |
| Costs | | | 51,800 | 52,318 | 52,841 | 53,370 | 53,903 |
| Motor Vehicle running | | | 20,000 | 20,200 | 20,402 | 20,606 | 20,812 |
| Salaries and Wages | | | 43,800 | 44,238 | 44,680 | 45,127 | 45,578 |
| Depreciation | | | 54,900 | 55,449 | 56,003 | 56,564 | 57,129 |
| Utility Costs | | | 23,000 | 23,230 | 23,462 | 23,697 | 23,934 |
| Insurance | | | 12,500 | 12,625 | 12,751 | 12,879 | 13,008 |
| Interest on Loan | | | 8,600 | 8,686 | 8,773 | 8,861 | 8,949 |
| **Total Expenses** | | | **142,800** | **144,228** | **145,670** | **147,127** | **148,598** |
| **Profit before Tax** | | | **437,200** | **580,772** | **753,330** | **960,673** | **1,209,762** |
| Tax (30%) | | | 131,160 | 174,232 | 225,999 | 288,202 | 362,929 |
| **Profit After Tax** | | | **306,040** | **406,540** | **527,331** | **672,471** | **846,833** |

| PROJECTED BALANCE SHEET | | | | | | |
|---|---|---|---|---|---|---|
| | | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 |
| Fixed Assets | | 315,000 | 260,100 | 217,800 | 175,500 | 133,200 |
| Long term Assets | | | | | | |
| Depreciation | | 54,900 | 42,300 | 42,300 | 42,300 | 42,300 |
| **Total long-term assets** | | **260,100** | **217,800** | **175,500** | **133,200** | **90,900** |
| Current Assets | | | | | | |
| Cash | | 406,100 | 684,700 | 979,050 | 1,292,735 | 1,625,723 |
| Account Receivable | | 105,000 | 110,250 | 216,535 | 421,763 | 527,628 |
| Inventory | | 214,710 | 376,383 | 438,469 | 402,292 | 467,493 |
| **Total Current Assets** | | **185,000** | **185,000** | **185,000** | **185,000** | **185,000** |
| **Total Assets** | | **445,100** | **402,800** | **360,500** | **318,200** | **275,900** |
| **Curent Liabilities** | | | | | | |
| Accounts Payable | | 84,000 | 88,200 | 92,610 | 97,241 | 102,103 |
| Other Current Liabilities | | 70,000 | 73,500 | 77,175 | 81,034 | 85,085 |
| **Subtotal Current Liabilities** | | **154,000** | **1,616,700** | **169,785** | **178,274** | **187,188** |
| **Long term Liabilities** | | | | | | |
| Long term Liabilities | | 1,820,000 | 1,820,000 | 1,820,000 | 1,820,000 | 1,820.00 |
| **Total Liabilities** | | **260,100** | **217,800** | **175,500** | **133,200** | **90,900** |
| **Net Assets** | | **820,810** | **877,633** | **951,268** | **1,044,516** | **1,157,656** |
| **Capital and Reserves** | | | | | | |
| Owners Contribution | | 780,000 | 780,000 | 780,000 | 780,000 | 780,000 |
| **Retained Earning** | | **40,810** | **97,633** | **171,268** | **264,516** | **377,656** |
| **Total Capital** | | **445,100** | **402,800** | **360,500** | **318,200** | **275,900** |

| OTHER OPERATING COST | | | | | | |
|---|---|---|---|---|---|---|
| **Other Operations Cost** | | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** |
| Motor Vehicle running expense | | 20,000 | 20,400 | 20,800 | 21,200 | 21,600 |
| Salaries and Wages | | 43,800 | 48,180 | 52,998 | 58,298 | 64,128 |
| Administrative Overhead Costs | | 51,800 | 56,980 | 62,678 | 68,946 | 75,840 |
| Utility Costs | | 23,000 | 25,300 | 27,830 | 30,613 | 33,674 |
| Interest on Loan | | 8,600 | 7,740 | 6,966 | 6,269 | 5,642 |
| Communication Expenses | | 12,800 | 14,080 | 15,488 | 17,037 | 18,740 |
| **Total Costs** | | **160,000** | **172,680** | **186,760** | **202,363** | **219,625** |

| FIXED ASSETS SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| **NAME OF ASSETS** | | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** |
| Land and Buildings | | 75,000 | 71,250 | 67,500 | 63,750 | 60,000 |
| Plant & Machines | | 254,000 | 223,200 | 92,400 | 61,600 | 30,800 |
| Motor Vehicle | | 64,000 | 46,400 | 41,400 | 36,400 | 31,400 |
| **Total** | | **393,000** | **260,100** | **217,800** | **175,500** | **133,200** |
| **Depreciation** | | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** |
| Land and Buildings | | 3,750 | 3,750 | 3,750 | 3,750 | 3,750 |
| Plant & Machines | | 30,800 | 30,800 | 30,800 | 30,800 | 30,800 |
| Motor Vehicles | | 17,600 | 5,000 | 5,000 | 5,000 | 5,000 |
| **ANNUAL DEPRECIATION** | | **54,900** | **42,300** | **42,300** | **42,300** | **42,300** |
| **CLOSING FIXED ASSETS** | | **260,100** | **217,800** | **175,500** | **133,200** | **90,900** |