

SHAHI ENGINEERING AND CONSTRUCTION
COMPANY LIMITED

BUSINESS PLAN

FOR

MANUFACTURING OF PVC PANNEL,PVC CORNER AND OTHER RELATED BUILDING PRODUCTS

1.0. EXECUTIVE SUMMARY.

SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED is a company incorporated in Tanzania under Certificate of Incorporation No. 71233 dated 15th June, 2009

The project promoters are well established business in India and Tanzania carrying out various businesses but majoring in engineering and supplying various machines. Having been in the business for over 10 years the directors are now well prepared to venture into manufacturing of PVC panel, PVC corner and other related building products.

The business plan has been prepared for SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED for manufacturing of PVC panel, PVC corner and other related products.

The implementation of this project will include following activities:

- Registration of project to TIC
- Obtaining various permit and license
- Repairing industrial building
- Ordering machines
- Recruiting

- The purchase of 2 Single Cabins Pick Up
- Purchase of 2 heavy trucks
- Purchasing 2 light trucks
- Purchasing of machines and equipments
- Equipping the company with relevant facilities

The proposed project is estimated to cost about US\$ 1,200,000. The project sponsors will prove 30% of this investment and the remaining 70% will be sourced from financial institution.

1.1 THE PROJECT PROMOTERS

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

Share Holders	% of Share	Nationality
Ravinder Pal Singh	90	India
Maninder Singh	5	India
Angrej Singh	5	India

1.2 LOCATION

The project head office will be located at District Ilala, Ward Kipawa, Postal code 12106, Street Kipawa, Road Kipawa, Plot number 435, Block Number B, Dar es Salaam region, Tanzania

1.3 OBJECTIVE OF STUDY

The purpose of this study is to work out the technical and commercial details and financial viability of a factory for manufacture of PVC panel, PVC corner and other related products to be used in construction sector

2.0 OVER VIEW OF PVC

Polyvinyl Chloride (PVC) piping is the most widely used plastic piping material. PVC pipe is manufactured by extrusion in a variety of sizes and dimensions and generally sold in 10' and 20' lengths. PVC pipe is available in both solid wall and cellular core construction. Cellular core construction involves the simultaneous extrusion of at least three layers of material into the pipe wall: a solid outer layer, a cellular core intermediate layer, and a solid inner layer.

Polyvinyl chloride (PVC) pipe is made from a plastic and vinyl combination material. The pipes are durable, hard to damage, and long lasting. They do not rust, rot, or wear over time. PVC is a polar polymer with strong intermolecular forces; therefore, it is rigid at room temperature. On the other hand, when a plasticizer is added upon fabrication, flexible PVC products are obtained. This versatility is a major advantage of PVC

PVC pipes are used for a variety of purposes e.g. water supply schemes, spray irrigation, deep tube well schemes and land drainage schemes. PVC slotted and corrugated pipes are ideal systems for drainages of water from land where water logging is inevitable. It is widely used by various utility services now-adays too. The usage of PVC pipes also depends upon the size of these pipes too. It is manufactured in different sizes having innumerable usage value.

2.1 THE CHIEF ADVANTAGE OF PVC

- Resistance to corrosion
- Light weight
- Toughness
- Rigidity
- Economical in laying, jointing and maintenance
- Ease of fabrication

The PVC pipes are much lighter than cast iron or A. C. pipes. Because of their lightweight PVC pipes are easy to handle, transport, and install. Solvent cementing techniques for jointing PVC pipe lengths is cheaper, more efficient and far simpler. PVC pipes progressively replacing conventional pipes like G.I., Cast Iron, Asbestos Cement or Stone-ware. PVC pipes are light in weight, rates for use under pressure, easy to install, low frictional loss, low on maintenance cost,

and have low frictional loss. PVC pipes do not become pitted or tuberculated and are unaffected by fungi and bacteria and are resistant to a wide range of chemicals

3.0 MARKET POTENTIAL OF BUILDING MATERIALS IN TANZANIA

Tanzania in recent years has witnessed growth in the construction industry. This includes both private projects such as residential and commercial real estate as well public projects such as construction of roads, railways, bridges, water systems, telecommunications, and air transport networks to name a few.

There has been a consistent, yearly increase in government spending on infrastructure this past decade which has acted as a stimulant for continued inflows of investments in the construction industry. The infrastructure sector has been the key beneficiary of 2021–22 budget as Tanzania commences the third phase of country's Five-Year Development Plan (FYTDP III).

Projects to be financed by the government under the plan include the construction of the Standard Gauge Railway (included in the TZS 1.19 trillion allocated for railways), construction of Julius Nyerere Hydropower Project (2,115 MW) (included in TZS 2.34 trillion allocated to power projects), strengthening Air Tanzania Company Ltd, and

construction of Crude Oil Pipeline Project from Hoima (Uganda) to Chongoleani, Tanga (Tanzania), and the Busisi bridge in Mwanza.

As of 2020, construction contributed 14.4 percent to the country's GDP.

3.1 LEADING SUB SECTOR

Real Estate

Tanzania's real estate sector contributed 3.1 % to the country's real GDP with USD 1.5 billion in 2019, compared to USD 1.2 billion in 2015, an increase of 25%. The large residential housing market is dominated by individual homebuilders who account for over 70% of the total supply. Housing demand is increasing by about 200,000 units annually, with the current housing deficit estimated at about 3 million units, according to Tanzania Ministry of Lands, Housing and Human Settlements Development.

Commercial real estate is also on the rise as the country emerges as a middle-income economy. Dar es Salaam is the main area of office and retail activity with a retail stock of 153,000 sqm. The main premium malls are Mlimani City Mall in Mwanza, Aura Mall in Upanga, and Mkuki Mall in Kisumu.

The formal retail sector in Dar es Salaam remains undersupplied presenting investors with an opportunity for growth.

Transport

Tanzania transport consists of surface transport (road and railways), inland waterways (lakes and rivers), air transport and sea transport. It is estimate that the sector contributed 8.1% percent to the country's GDP in 2018 with USD 3.8 billion.

Improving the transportation infrastructure is a key priority for the Government of Tanzania. Improving the nation's roads, ports, railways and airport infrastructure is critical for the country to improve its internal and external trade and commercial activities as Tanzania strives to become a middle-income country.

Institutions such as World Bank and African Development Bank continue to support Tanzania in achieving its infrastructure development goals through provision of grants and credits.

Roads:

According to Tanzania's 2025 Development Vision, the government has prioritized development of road networks which is the most widely used form of Transport carrying over 90% of passengers and 75% of cargo in the country.

The road network in Tanzania currently comprises 86,472 kilometers of roads, of which 12,786 kilometers are trunk roads, 21,105 kilometers are regional roads and the remaining 52,581 kilometers are district, urban and feeder roads.

Tanzania National Roads Agency (TANROADS) is managing the national road network of about 33,891 kilometers, comprising 12,786 kilometers of trunk and 21,105 kilometers of regional roads.

Rail:

This is another important mode of transport linking regions within and outside Tanzania. Tanzania railway is operated by two railway systems, Tanzania Railway Corporation and Tanzania Zambia Railways (TAZARA).

The new standard gauge railway is under construction to replace the old inefficient meter gauge railway system. The railway system will link Tanzania with neighboring countries of Rwanda and Uganda and through these two, to Burundi and the Democratic Republic of the Congo, as part of East African Railway Master Plan.

Up until February 2020, the government of Tanzania was using locally generated funds and short-term temporary loans to fund the construction of the first two phases of this standard gauge railway project.

In February 2020, the government received a syndicated loan worth US\$1.46 billion, towards the completion of the first two phases of the national SGR. The financing package has Standard Chartered as lead arranger and the Export Credit Agencies of Denmark and Sweden, as major funding sources. The combined contract value for the first two phases is US\$2.35 billion with US\$950 million worth of funding to be organized by the Tanzania Ministry of Finance and the remaining US\$1.45 billion by Yapı Merkezi.

Air:

The government has also made effort to develop the air transport in the country through constructing of new airports and terminals. In 2019, the AfDB approved a USD 272.12 million loan to Tanzania for the construction of a new international airport in the capital Dodoma. The new airport will be built in the district of Msalato, 12 kilometers from the capital Dodoma. The new facility is expected to handle at least 50,000 aircrafts and one million passengers per year.

Ports:

Tanzania Ports Authority (TPA) is implementing several major projects as outlined in the National Ports Master Plan (PMP). The study laid out long term strategy for Tanzanian Ports to create capacity for the expected demand. One of

countries, Hence the project is not expecting to face operational problem.

Tanzania market is supplied by imported products from Asia based on the quality of products which will be supplied by SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED the company's products is expected to have a good market in Tanzania and other countries

It is quite gratifying to note that the Government of Tanzania realizes the role of manufacturing sector for its economic and social development, and as a result has developed fiscal and non fiscal incentives which are very instrumental in improving the business and investment environmental in the manufacturing sector.

It is alleged that limited availability of building materials produced within Tanzania is the major causes of importation of low-quality products in Tanzania. It is in view of this that, SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED has resolved to assist by providing a solution to stimulate manufacturing sector by increasing supplies and productivity.

SHAHI ENGINEERING AND CONSTRUCTION has major objectives as following: -

- To promote manufacturing in Tanzania

- To bring new technology and technical know-how in the country in the course of its business transactions.
- To provide extra employment to more people in the sector.
- To manufacture building materials of high quality

3.2 MARKET AND MARKETING ASPECTS

The market survey carried out reveals that the current demand for PVC panel, PVC Corner, HDPE pipes, PVC fittings, PPR, conduits are higher than local production. There is wide gap between supply and demand and therefore, business opportunities exist for setting up additional manufacturing facilities to satisfy the market requirement. With local production, country will save huge amount of foreign earnings which otherwise could be used for importing other essential needs at present.

3.3 THE PRODUCTS

The main products of the proposed project consist of :

- PVC panel
- PVC corner
- PVC/HDPE pipes
- PVC fittings
- PPR
- Conduits and other steel products

3.4 SUPPLY POSITION

Apparently, there is limited production of PVC products of the quality targeted by the company. State of the art technology to be employed will enable the company produce very high-quality plastic products

3.5 COMPETITION

Due to the limited and insufficient supply as aforementioned, no stiff competition is foreseen. However, production of sub-standard products or selling at prohibitive prices will immediately shift customers to substitute products.

3.6 DISTRIBUTION

The company expects to establish its own show rooms to facilitate distribution of its products. This will include setting up of a special unit which will be provided with resources to enable it efficiently undertakes the distribution function of the company. The company will also consider appointing wholesalers in regions and districts level and

3.7 PROMOTION

Appropriate promotion means will be employed after consultations with promotion experts to enable the company properly promote its products

3.8 SUSTAINABILITY

The project sponsors having studied market conditions are convinced that the project will be able to operate undisturbed. The growing demand for quality products locally gives them assurance of a steady market.

3.9 QUALITY CONTROL SYSTEM

The required quality control gadgets will be employed such as digital calipers for measuring the thickness of pipes, chamfering unit, pressure test unit, socketing machine and industrial weighing scale, to take weight of HDPE pressure pipe rolls etc

3.10 ENVIRONMENT PROTECTION

The company intends to make environment friendly, the company plan to re-recycle at least 50% of PVC specially in making conduit pipes. By using re-cyclable PVC, the company will save the country's environment in particular and global environment in general.

4.0 RAW MATERIALS AND OTHER PRODUCTION INPUTS

4.1 PVC RESINS AND HDPE GRANULES

The Polyvinyl Chloride, which is commonly known as PVC resin and HDPE Granules are available from many worldwide sources, the major competitive sources are

Korea, Middle East and South Africa which has established a distribution company in D ar es Salaam

4.2 CHEMICALS

Other major raw materials require are; PVC Stabilizers, calcium carbonate, chemicals and colors, packaging materials etc, these are cheaply available from China, India and other sources

4.3 WATER

In extrusion process water is required for cooling; water is normally recycled by pumping from a water pool to production machinery and draining it back to the pool

4.4 POWER

The sources of energy for the proposed project will be electric power, power is consumed in large quantities and is among the higher cost elements after PVC resin and HDPE Granules, a standby generator has been budgeted for to avoid inconveniences caused by unreliable and poor power supply

5.0 PROJECT MANAGEMENT

SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED will be under the Management of Managing Director to be appointed based on qualification and will be assisted by managers.

Under this management, SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED is expected to grow steadily from small to medium company producing high quality products serving domestic to neighboring states.

The company will have a team of qualified and experienced functional managers in the areas of operations/Marketing, workshop Finance and Administration. Other senior and middle level staff will be available for the start up and subsequent operations of the company, the total number of employees are expected to be 30 among them 5 will be foreigners

5.1 PROJECT MANAGEMENT POLICY

The day-to-day operations will be managed by the Managing Director, to be assisted by Manager of Production and Technical Manager who will be the overall in charge of production, a sales & marketing Manager whose major responsibility will be marketing and sales, financing and administration Manager who will take care all matters related to finance resources and human resources of the company

Employment	Foreign Skilled	Local Skilled	Local Unskilled	Total
Women		5	5	10
Men	5	10	10	25
TOTAL	5	15	15	35

5.2 CAPACITY

The company is planning to install machines of production capacity of 75,000 units of various PVC estimated to be sold at US\$ 8 wholesale price.

5.3 PROJECT OPERATING COSTS

In order to realize its intended objective, the project will have to meet the operating costs estimated to be 60 of total revenue.

6.0 FINANCIAL ANALYSIS

6.1 CONSIDERATIONS AND ASSUMPTIONS:

The corporate tax charged is 0% of the profits for 8 years. Capital investment allowance is 50%. The capital assets are exempted from custom duty and Value Added Tax. The straight-line method to depreciate the project's capital items has been applied.

Revenues have been conservatively estimated based on experience of the promoters and trends in the industry.

6.2 PROJECT'S INVESTMENT CAPITAL

The estimated capital investment cost of the project is US\$ 701,000.

**SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED COST
STRUCTURE**

PARTICULAR	US\$
Land and Buildings	50,000.00
Machinery & Equipment	200,000.00
Motor Vehicles	80,000.00
Furniture & Fixtures	2,000.00
Pre exp	5,000.00
Others	4,000.00
Working Capital	360,000.00
TOTAL	701,000.00

For the project to be a reality a total investment amounting to US \$701,000. is needed

6.2.1 Land and Building (industrial premises): US\$50,000

The project has identified and secured long term lease to accommodate machineries and also to be used as project office.

6.2.2 Machinery and Equipment: US\$ 200,000

Some US\$200,000 is anticipated to be spent on the purchase of different types of machines, working tools and equipments accommodating new technology

6.2.3 Motor Vehicles:US\$80,000

The project will need 1 truck, 1 Land Cruiser, and 1 double cabin pick. These vehicles will be used to facilitate project business and double cabin pick up for administrative purposes.

6.2.4 Furniture: US\$2,000

This investment cost item has been estimated to cost US \$70,000. It will consist of office furniture such as tables, chairs, telephone, fax, machines, file cabinets, sofa chairs etc.

6.2.4 Pre-Operational Expenses: US\$ 5,000

They cover things like company registration, expenses spent in exploring the viability of the project, especially the market/client identification exercise. Also included under this item are issues like consultancy fees, legal fees and recruitment and training costs of personnel.

6.2.5 Initial Working Capital: US\$360,000

Assumptions for working capital requirements have been estimated that it will cost US\$360,000. This will involve purchasing of raw materials, daily operating costs etc.

6.3 FINANCING PATTERN

Project will be financed by US\$300,000 and the remaining 401,000 contribution from company shareholders and cash flow from business

6.3 PROJECTED REVENUE

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

SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED

PROJECTED REVENUE LTD

	1	2	3	4	5	6
Revenue	600,000	630,000	661,500	694,575	729,303	765,768

6.4 PROJECTED PROFIT AND LOSS STATEMENT

The Income and Expenditure Statement shows the projected income for the 6 years period. The position depicted is that the project earns profit throughout its life. Accumulated after profits grow from. US\$147,560 in first year to US \$ 1,064,181 in the 6th year

SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED
PROJECTED INCOME & EXPENDITURE STATEMENT (US\$)

	1	2	3	4	5	6
Revenue	600,000	630,000	661,500	694,575	729,303	765,768
Operating Expenses:	360,000	378,000	396,900	416,745	437,582	459,461
Profit before Depreciation & Interest	240,000	252,000	264,600	277,830	291,721	306,307
Interest	18,000	13,500	9,000.00	4,500.00	-	-
Depreciation	11,200	11,200	11,200	11,200	11,200	11,200
Gross Profit	210,800	227,300	244,400	262,130	280,521	295,107
Tax (30%)	63,240	68,190	73,320	78,639	84,156	88,532
Profit After Tax	147,560	159,110	171,080	183,491	196,365	206,575
Accumulated Profit	147,560	306,670	477,750	661,241	857,606	1,064,181

6.5 Projected Cash Flows

This is shown in the financial statements. The project has a positive end of year cash flow from year 1st, i.e., US\$176,760 of operation to the 6th year i.e., US\$ 1,176,381

SHAHI ENGINEERING AND CONSTRUCTION COMPANY LIMITED

PROJECTED CASH FLOW " US\$"

SOURCES:		1	2	3	4	5
Profit before interest and depreciation	0	240,000	252,000	264,600	277,830	291,721
Equity	401,000					
Loan	300,000					
Total Sources	701,000	240,000	252,000	264,600	277,830	291,721
Applications:						
Capital expenditure	332,000	-	-	-	-	-
working Capital &Others	369,000					
Cash	0	176,760	183,810	191,280	199,191	207,565
Tax	-	63,240	68,190	73,320	78,639	84,156