

DYNAMIC INTERNATIONAL PVT LIMITED

BUSINESS PLAN

FOR

**ESTABLISHMENT OF PLANT FOR
PRODUCTION OF DOLOMITE BLOCKS**

1.0 EXECUTIVE SUMMARY.

DYNAMIC INTERNATIONAL PVT LIMITED is a company registered in Tanzania under Certificate of Incorporation **No. 162623834** issued on **16th January 2023**.

The project promoters have sufficient knowledge and experience in mineral exploration, exploitation and financing, **DYNAMIC INTERNATIONAL PVT LIMITED**, promoters of the project are well established business carrying out various businesses but majoring in mining businesses. Having been in the business for over 15 years the directors are now well prepared for establishing production of dolomite blocks for export.

The business plan has been prepared for **DYNAMIC INTERNATIONAL PVT LIMITED** for the production of dolomite blocks for export. The implementation of this project will include the following activities:

- Registration of project to TIC
- Obtaining various permits and license
- Ordering machines and other project equipment
- Installation of machines
- Recruiting

The proposed project is estimated to cost about US\$ **5m** to be sourced partially from foreign financial institutions and shareholders' equity

1.2 THE PROJECT PROMOTERS

The shareholders of this project are individuals with diverse professional and International business backgrounds. The company is owned by three shareholders, namely: -

S/N	NAME	% of ownership	Nationality
1	Jitendra Poonia	50	India
2	Nitin Jain	50	India

1.3 LOCATION.

The project head office will be located at Kwedikwazu Area, Kabuku Ward, Hadeni District, Tanga Region Tanzania.

1.4 OBJECTIVE OF THE STUDY

The purpose of this study is to work out the technical and commercial details and financial viability of a plant for mineral processing.

1.5 Overview of the Mining Sector

Tanzania is among the countries having abundant mineral resources. The database indicates that the minerals found in Tanzania are grouped into the following major categories

- Metallic Minerals, which include gold, iron ore, nickel, copper, cobalt, and silver.

- Gemstones, which include diamonds, tanzanite, ruby, garnets, pearl etc.
- Industrial Minerals, which include limestone, soda ash, gypsum, salt and phosphates;
- Energy source Minerals, such as coal and uranium; and.
- Construction minerals, such as aggregates, gravel, sand and dimension stones.

Tanzania has a great potential particularly for gold, base metals, diamonds, ferrous minerals and a wide variety of gemstones, including the world-renowned Tanzanite (blue zoisite) occurring in the Proterozoic metamorphic rocks of the Usagaran and Ubendian Systems.

Other gemstones mined in the country include ruby, rhodolite, sapphire, emerald, amethyst, chrysoprase, peridot and tormaline. Recently, a major alluvial occurrence was discovered in the southern region of Ruvuma, Mtwara and Lindi. Varieties include chrysoberyl, spinels, sapphire, garnets, zircons and diamonds.

Coal, uranium, and various industrial minerals such as soda, kaolin, tin, gypsum, phosphate and dimension stones are plentiful. Coal resources similar in quality to the Gondwana coals of southern Africa occur in the Ruhuhu and Songwe-Kiwira basins in Limestone and dolomite-good resources of high purity

occur in the white marble deposit of the Morogoro Region. Potential for dimension stone and refractory grade limestone is therefore excellent.

A variety of clays - bentonite, kaolin and fullers earth - in sizeable deposits have been identified and are only scantily exploited. The Pugu kaolin deposit located some 30 kms West of Dar es Salaam has a great potential for development.

Evaporates and saline deposits of economic significance are associated with the rift valley lakes. Investigations of the Soda ash deposits at Lake Natron revealed a potential recovery of over one million tonnes a year.

Graphite occurs in high-grade gneisses mainly in the Usagaran system. Sufficient reserves have been identified at Merelani, northern Tanzania, for a 40 year operation at a mining rate of 15,000 tonnes per year of high grade flake graphite of 97-98% purity.

Basemetals are found in a belt running from Kagera through Kigoma to Mbeya, Ruvuma and Mtwara regions: recent evaluations have so far outlined contained resources of 500,000 tonnes nickel, 75,000 tonnes copper and 45,000 tonnes cobalt.

Gold and diamonds have always been the mainstay of the

country's mineral production. In fact Tanzania has been a significant diamond producer for several decades, with the bulk of production coming from the Mwadui area where commercial production began in 1925. But gold is the resource currently offering one of the best areas for investment.

The current perceived opportunities range from former mines in the Archaean Greenstone belts around Lake Victoria, Proterozoic rocks, and conceptual grass root plays in the Karoo and younger rocks. The investigation has mainly been focused on the greenstone belts around Lake Victoria with particular attention on the shear-hosted gold mineralization associated with banded iron formations (BIF), tufts, and volcano-sedimentary exhalations. Several "world-class" gold deposits have already been discovered in the Lake Victoria Goldfields and are at different stages of development. These deposits have reached various stages of development.

1.6 Dolomite Overview

Dolomite is an anhydrous carbonate mineral composed of calcium magnesium carbonate. An alternate name used for dolomite is dolomitic rock or dolostone. Dolomite has a wide range of applications in various industries but the primary application is found in the steel & iron industry and construction sector.

Dolomite is found worldwide in the form of bedrocks but the primary deposits are found in the Midwestern U.S., Ontario, Canada, Switzerland, Pamplona, Spain, and Mexico. Dolomite is used in the refractories as a fluxing material. It is also used in the water purification and sludge treatment industries such as desalination plants and RO plants. Dolomite is used as a rich source of calcium and magnesium in the pharmaceutical as well as animal feed industry.

Dolomite is generally used in paint as a filler. Dolomite is a hard mineral, thus it imparts very good scrub resistance to the paint. It is a white extender, which does not temper the paint color and gives opaqueness to the paint film. It is easy to disperse due to its hydrophilic nature same as calcium carbonate. Dolomite is slowly gaining the market with better consistency and quality with more equivalent grades than calcium carbonate in the paint industry. Dolomite also has the ability to grow in volume over time, allowing it to compete with calcium carbonates in a wider spectrum of goods.

Dolomite is becoming more popular in the paint industry as a result of these factors. In the paper and pulp manufacturing sector, dolomite has been used in paper and cardboard production by adding it to cellulose in different proportions. Dolomite increases the whiteness of paper due to which there is

a lesser requirement for additional optical brighteners. This makes it cost-effective as well as environmentally friendly. Dolomites help to keep less water and increase the amount of drawn water, thereby increasing the production speed. These advantages of dolomite over calcite are driving the global dolomite market growth.

Dolomite has a variety of applications in various industries. It is used as a filler in the glass and ceramic industry. Dolomite is also used as a source of magnesium oxide for making magnesium metal and for chemical uses, such as the common laxative milk of magnesia. Dolomite is used in some types of cement and as mineral specimens. Crushed dolomite aggregates are used for the construction of concrete mixtures.

Global Dolomite Market, By Product:

- Agglomerates
- Calcined
- Sintered
- Global Dolomite Market, By End-use:
 - Iron & Steel
 - Construction Materials
 - Glass & Ceramics
 - Water Treatment
 - Agriculture
 - Others

Global Dolomite Market, By Region:

- North America- U.S.
- Canada
- Europe- Germany
- U.K.
- France
- Italy
- Spain
- Russia
- Rest of Europe
- Asia Pacific- China
- India
- Japan
- Australia
- South Korea
- ASEAN
- Rest of Asia Pacific
- Latin America- Brazil
- Mexico
- Argentina
- Rest of Latin America
- Middle East & Africa

By Country/Region:

- Middle East
- Africa

The top 3 importers of Dolomite are India with 38,221 shipments followed by the United States with 34,718 and Italy at the 3rd spot with 5,847 shipments. 22 Mar 2023

Dolomite is used as a source of magnesia (MgO), a feed additive for livestock, a sintering agent and flux in metal processing, and as an ingredient in the production of glass, bricks, and ceramics. Dolomite serves as the host rock for many lead, zinc, and copper deposits.

2.0. **PROJECT DETAILS**

2.1 **How to process dolomite rock?**

Before establishing a dolomite processing plant, Mineral Testing is done to understand the dolomite properties.

2.1.0 Crushing and screening dolomite rock

The crushing and screening process is to obtain dolomite blocks. Dolomite blocks can be directly used as sand and gravel products in the construction industry, and can also be ground or calcined to obtain other products.

2.1.1 Processing of dolomite

Because dolomite is brittle and has high hardness (harder than limestone), it is easy to scratch with iron, so it needs two-stage crushing by a jaw crusher and a cone crusher.

2.1.2 Crushing and screening dolomite rock

- Coarse crushing: After mining, large dolomite rock enters a jaw crusher for coarse crushing.
- Fine crushing: Then the dolomite rock enters a cone crusher for fine crushing. It is crushed into dolomite blocks of small particle size to achieve sufficient dissociation of the useful material of the ore.
- Screening: The crushed dolomite blocks enter a vibrating screen for screening. Qualified materials are directly used as sand and gravel aggregates, or continue to be processed. However, unqualified dolomite will return to the cone crusher for further crushing.

Dolomite processing equipment used in the crushing process:

- Jaw crusher
- PE Jaw Crusher
- PEX Jaw Crusher
- Cone crusher
- Single-cylinder Cone Crusher
- Symons Cone Crusher
- Hydraulic Cone Crusher
- Circular Vibrating Screen

- High Frequency Vibrating Screen

2.1.3 Grinding and classifying dolomite rock

The grinding process is to obtain the dolomite powder needed in the market, mainly including 200 mesh, 325 mesh, 425 mesh, and 800 mesh.

Grinding and classifying dolomite rock

- Grinding: The crushed dolomite is transported from the bottom up to the silo by a bucket elevator and then sent to a grinding machine for grinding by an electromagnetic vibrating feeder.
- Classifying: After grinding, the dolomite powder is classified by a classifier. Qualified dolomite powder, such as 250 mesh, can produce glass, ceramics, magnesium fertilizer, etc. 600 mesh can produce toothpaste and soap. The unqualified powder will return for regrinding.
- Dust collecting: Fine dolomite powder enters a pulse dust collector. The collected powder is sent to the finished product silo. The system has a 99% dust collection rate and low noise, so it is environmentally friendly.

Grinding machines have unique features.

- Raymond Mill
- Ultrafine Mill

2.1.3 Calcinating dolomite rock

The crushed dolomite is calcined in a rotary kiln, which is used for producing refractory materials, magnesium alloys, cement, etc.

Dolomite is calcined at 1500°C to obtain magnesia-calcium raw materials, such as dolomite sand, magnesia-calcium sand, and magnesia-calcium iron sand. Then it is made into refractory materials.

Dolomite rock is calcinated to produce magnesium alloys:

Dolomite rock - Preheating - Calcining - Cooling - Mixing and grinding - Briquetting - Refining magnesium - Magnesium alloy.

Crushed rocks for the construction industry

Crushed rocks for the construction industry

The most common use for dolomite is the crushed rocks. The white dolomite stone is crushed and sized for use as a road base material, a sand and gravel aggregate in concrete and asphalt, railroad ballast, rip-rap, or fill.

3.0 **PROJECT MANAGEMENT**

DYNAMIC INTERNATIONAL PVT LIMITED will be under the Management Director who has experience in managing various businesses.

Under this management, **DYNAMIC INTERNATIONAL PVT LIMITED** is expected to grow steadily from a small to medium company

The company will have a team of qualified and experienced functional managers in different areas. Other senior and middle-level staff will be available for the start-up and

subsequent operations of the company, the total number of employees is expected to be **40**

3.1 PROJECT MANAGEMENT POLICY

The day-to-day operations will be managed by the Managing Director, to be assisted by the Production and Technical Director of Production who will be overall in charge of production, Business Development and Logistics Director and financing and administration Director who will take care of all matters related to financial resources and human resources of the company

Gender	Foreign Skilled	Local Skilled	Local Unskilled
Women	2	5	5
Men	3	10	15
TOTAL	5	15	20

4.0 FINANCIAL ASPECTS

DYNAMIC INTERNATIONAL PVT LIMITED COST STRUCTURE

PARTICULAR	
Land and Buildings	500,000.00
Machinery & Equipment	2,000,000.00
Motor Vehicles	500,000.00
Furniture & Fixtures	7,000.00
Pre expenses	100,000.00
Others	20,000.00
Working Capital	2,000,000.00
TOTAL	5,127,000.00

For the project to be a reality a total investment amounting to US \$ **5,127,000** is needed

5.0 FINANCING PATTERN

The project will be financed by equity US\$ 2,127,000 and loan US \$3,000,000

5.1 PRODUCTION CAPACITY

The company has estimated to produce 80,000 tons per year

5.2 SELLING PRICE

The average price is estimated to be US\$95 per ton

6.0 FINANCIAL ANALYSIS

6.1 Considerations and Assumptions:

The corporate tax charged is 30% of the profits. The capital investment allowance is 50%. The capital assets are exempted from customs duty and Value Added Tax. The straight-line method to depreciate the project's capital items has been applied.

6.2 Financial Statements:

6.3 Projected Profit and Loss Statement

The Income and Expenditure Statement shows the projected income for the 5 years period. The position depicted is that the project earns profit throughout its life. Accumulated after-tax profits grow from. US \$ **1,123,010** in the first year to US \$ **6,314,140** in the 5 year

6.4 Projected Cash Flows

This is shown in the financial statements. The project has a positive end-of-year cash flow from year1, i. e US 1,418,710 of operation to the 5th year i.e. US \$ 7,792,640

6.5 Projected Balance Sheet

The projected Balance Sheet of the projected is shown in the financial statements under the same heading. The net worth of the project increases from US\$ 2,127,000 in the first year of operation to US \$ 4,140,762 in the 5th year.

7.0 ECONOMIC ASPECTS OF THE PROJECTS

Besides the financial/monetary returns to the owners, there are other benefits to be derived for the whole country viz.

(i) Employment Opportunities

Employment and poverty reduction are among the major concern of the Central and Local Government authorities.

It is gratifying to note that the project is going to provide employment for **40** people. This is a significant contribution coming from investors.

(ii) Revenue to the Government

The Project is expected to pay a substantial annual amount in the form of corporation tax amounting and other taxes will be paid directly to the government during the project's 8 years covered under our project review.

(iii) Foreign Exchange Earning

Since the project's final products will be exported, the project will thus earn foreign currency for the United Republic of Tanzania.

8.0 CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

- (i) The project is profitable and contributes to government revenue by way of taxes.
- (ii) The project provides employment to 40 people all of whom are national Tanzanians.
- (iii) The project is an encouraging sign to prove that we have minerals value addition could be done in Tanzania.

9.0 **RECOMMENDATION**

After the foregoing economic and financial evaluation of the project, we strongly recommend that this project be implemented and be given all the support required by all the concerned Government Ministries and Agencies, including the Tanzania Revenue Authority (TRA) and the Tanzania Investment Centre – (TIC) The project deserves this support because of its viability, since it is technically feasible, economically viable and socially acceptable.

DYNAMIC INTERNATIONAL PVT LIMITED PROJECTED INCOME & EXPENDITURE STATEMENT US\$

-	1	2	3	4	5
Revenue (7,600,000.00	7,980,000.00	8,379,000.00	8,797,950.00	9,237,847.50
Operating Expenses:	5,700,000	5,985,000	6,284,250	6,598,463	6,928,386
Gross Profit Before Interest and Depreciation	1,900,000	1,995,000	2,094,750	2,199,488	2,309,462
Interest	240,000	240,000	240,000	240,000	240,000
Depreciation	55,700	55,700	55,700	55,700	55,700
Gross Profit	1,604,300	1,699,300	1,799,050	1,903,788	2,013,762
Tax (30%)	481,290	509,790	539,715	571,136	604,129
Profit After Tax	1,123,010	1,189,510	1,259,335	1,332,651	1,409,633
Accumulated Profit	1,123,010	2,312,520	3,571,855	4,904,506	6,314,140

DYNAMIC INTERNATIONAL PVT LIMITED PROJECTED CASH FLOW US\$

SOURCES:						
Profit before interest and depreciation	-	1,900,000	1,995,000	2,094,750.00	2,199,488	2,309,462
Equity	2,127,000					
Loan	3,000,000					
Total Sources	5,127,000	1,900,000	1,995,000	2,094,750	2,199,488	2,309,462
Applications:						
Capital expenditure	3,007,000		-	-	-	-
working Capital & Others	2,120,000					
Cash	-	1,418,710	1,485,210	1,555,035	1,628,351	1,705,333
Tax	-	481,290	509,790	539,715	571,136	604,129
Sub total	5,127,000	1,900,000	1,995,000	2,094,750	2,199,488	2,309,462
Total applications	5,127,000	1,900,000	1,995,000	2,094,750	2,199,488	2,309,462
Accumulated cash		1,418,710	2,903,920	4,458,955	6,087,306	7,792,640

DYNAMIC INTERNATIONAL PVT LIMITED PROJECTED BALANCE SHEET USD

Fixed Assets	1	1	2	3	4	5
Opening balance	-	3,007,000	2,951,300	2,891,300	2,831,300	2,771,300
Total Long-term Assets	-	3,007,000	2,951,300	2,891,300	2,831,300	2,771,300
Less depreciation	-	55,700	55,700	55,700	55,700	55,700
Closing balance	-	2,951,300	2,895,600	2,835,600	2,775,600	2,715,600
Working capital	2,120,000	2,120,000	2,120,000	2,120,000	2,120,000	2,120,000
Accumulated cash	-	1,418,710	1,485,210	1,555,035	1,628,351	1,705,333
Total assets	2,120,000	6,490,010	6,500,810	6,510,635	6,523,951	6,540,933
Financed by						
Equity	2,127,000	2,127,000	2,127,000	2,127,000	2,127,000	2,127,000
Accumulated profit	-	1,604,300	1,699,300	1,799,050	1,903,788	2,013,762
Total equity	2,127,000	3,731,300	3,826,300	3,926,050	4,030,788	4,140,762
Bank Loan	3,000,000	2,400,000	1,800,000	1,200,000	6,000,000	-
Total debts	3,000,000	1,800,000	1,800,000	1,200,000	6,000,000	-
Total equity and debts	5,127,000	5,531,300	5,626,300	5,126,050	10,030,788	4,140,762

DYNAMIC INTERNATIONAL PVT LIMITED PROJECTED PAYBACK PERIOD USD

Year	Profit After Tax	Depreciation	Total Cash Flow	Accumulated Cash Flow
1	1,123,010	55,700	1,178,710	1,178,710
2	1,189,510	55,700	1,245,210	2,423,920
3	1,259,335	55,700	1,315,035	3,738,955
4	1,332,651	55,700	1,388,351	5,127,306
5	6,598,728	55,700	6,654,428	11,781,734

DYNAMIC INTERNATIONAL PVT LIMITED PROJECTED LONG TERM LOAN REPAYMENT

Year	principle	Loan Interest (8%)	Total Amount Paid	Loan Balance
1	600,000	240,000	840,000	3,000,000
2	600,000	240,000	840,000	2,400,000
3	600,000	240,000	840,000	1,800,000
4	600,000	240,000	840,000	1,200,000
5	600,000	240,000	840,000	600,000