LIKWAA RESOURCES COMPANY LIMITED

Business Plan

For

Lithium processing project

Location of The Project: Sambalu village, Sambalu Ward, Ikungi District, Sigida region

1.0 Executive Summary

LIKWAA RESOURCES COMPANY LIMITED is a company incorporated in Tanzania with Certificate of Incorporation No: 164532763 dated 22nd March 2023. The location of the business will be at **Sambalu village, Sambalu Ward, Ikungi District, Sigida region** the area is strategically located nearby raw materials deposits available

Business Background of Promoters

The Shareholders are Chinese and Tanzania investors who have vast experience in the mining industry; they have been in the sector for more than 10 years in China and Tanzania, now planning to set up a lithium processing plant in the Dodoma region.

Shareholders	%of Shares	Nationality
Edward Vedasto Byoma	50	Tanzania
Xu Zhicheng	20	China
Zeng Xiancheng	20	China

2.0 Legal Status & License

It is proposed to operate the business through the legal entity of a limited liability company called LIKWAA RESOURCES COMPANY LIMITED with Certificate of Incorporation **No.** 164532763 dated 22nd March 2023

The company is planning to apply for and get government approval to operate such business in Tanzania. Such as:

- Certificate of incentives
- Industrial license

- Business license
- Osha
- TBS
- Nemc etc.

2.1 Value Proposition, Mission & Vision

VALUE PREPOSITION

- To produce high-quality lithium
- . Latest technology producing at cheaper cost.
- Environmental sustainability and responsible mining activities.

2.1.0. Mission

To create values and improve lives through sustainable and responsible extractive activities.

2.1.1Vision

We will be recognized and respected for exceptional economic, environmental, and social performance.

2.2 Corporate Objectives

The Company's prime objective is to create shareholders' value through participation in the discovery, development, and processing of lithium.

The Company seeks to attain cash flow through the acquisition or discovery of high-quality mineral deposits and concentrating it within its key region of interest.

The Company will achieve these objectives by:

- Focusing on a Geological province with demonstrated strong mineral endowment.
- Seeking to acquire advanced mineral (Lithium) projects in low-risk areas where undervalued opportunities are available.
- Buying ores from artisanal miners to further the production quantity of lithium.
- Applying advanced exploration techniques and concepts to enhance the likelihood of exploration success.

To support the achievement of these objectives, the Company will;

- Endeavour to recruit and retain high-caliber personnel.
- Adding value to the minerals by adopting advanced techniques and concepts of crushing lithium rocks.
- Seek to maximize in-ground expenditure as a proportion of the total budget, and
- Recognize and value the interest of all stakeholders that do business with the company

3.0 **The Industry**

3.1 Lithium Market Segmentation

The market is segmented by;

Type: (a) Metal

(b) Compound (Carbonate, Chloride & Hydroxide)

(c) Alloy.

Traditional Application:

(a) Battery

(b) Lubricant

(c) Aluminum smelting

(d) Air Treatment

(e)Medical

(f) Glass & ceramics

(g) Metallurgical(iron and steel coating)

(h) Polymer

(i) Others.

End-User Industry:

(a) Industrial

(b) Consumer Electronics

(c) Electric Vehicle

(d) Energy Storage

(e) Medical.

Geography:

Asia-Pacific,

North America,

Europe,

South America,

The Middle East and

Africa

3.2 Market Overview

The market for lithium is anticipated to register a CAGR of over 10% during the forecast period.

Key factors driving the market growth include the accelerating demand for electric vehicles, growing usage and demand from portable consumer electronics, increasing demand from the glass-making industry, and many others.

The growing adoption of electric vehicles (EVs) is driven by rising concerns for the environment, as these vehicles help reduce carbon emission levels. Governments across the world are implementing stringent emission norms to control and reduce carbon emissions, thereby augmenting the growth of the market.

3.3 Key Market Trends

- Electric vehicles have been increasingly used in most developed economies, and are fast replacing traditional vehicles. Lithium batteries can be categorized into two segments, namely, disposable and rechargeable. Disposable lithium batteries use lithium in the metallic form, as an anode, and these batteries have a long life (high charge density) compared to other standard batteries.
- Lithium is used in high-energy density, rechargeable lithium-ion batteries in full-electric, plug-in hybrid, and hybrid vehicles (EVs, PEV, and HEVs), respectively. Due to the growth in EV technology, as well as concerns over increased carbon dioxide pollution from the combustion engine and rising fuel costs, lithium has been put into widespread use in EV batteries.
- The major regions in which the production of electric vehicles is prominent include European countries, such as Norway, Iceland,

Sweden, and, Belgium among others, it is estimated that Norway accounted for almost one–third of the total market share in 2018.

This is expected to see a sharp surge in the coming year, due to the environment-viable nature of electric vehicles, over other/diesel-based cars in the automotive sector.

- Lithium-ion battery used in electric vehicles has a rechargeable nature and commendablelife time. Moreover, EVs can also be used rapid charging points that can top up the batteries to 80% capacity in around 30minutes. All the aforementioned factors have helped electric vehicles gain popularity.
- Some of the major manufacturers of EV battery are Tesla, Nissan, General Motors, Volkswagen, and BMW, among others.
- All the aforementioned factors are expected to drive the global market during the forecast period.

Asia –Pacific Region to Dominate Market

- Asia-Pacific region is the largest consumer of lithium globally with majority of the consumption coming from China.
- Rise in technological development and increasing need for cleaner energy sources have brought Li-ion batteries on the forefront across various industries, as well as end-use sectors.
- Japan is one of the prominent regions for the lithium battery market, along with China, and Korea, occupying a 96% market share in terms of battery capacity shipment.
- Energy economies are expected to increase the consumption of lithium in various end-use products.

- Owing to the increasing population, the increase in regional acceptance of solar thermal and solar electric technologies (renewable heat) in energy countries, such as Pakistan, Bangladesh, Nepal, Sri Lanka, Cambodia, Laos, etc., are expected to increase consumption of lithium in energy storage, in the coming years

3.2 Market strategy

To ensure customer specification/design is fully understood, face-to-face sales and service are required. By offering expert advice it will be possible to identify customer needs and find solutions to offer quality products at as low a price as possible.

3.4 Advertising

An overall marketing budget has been agreed to ensure the target market are made aware of the product and its unique selling points. In terms of advertising, there will be limited, but focused ads and editorial placed in a selection of relevant trade journals.TV, Newspapers, and Radio

3.5 Personal Selling

The principal marketing tool that will be employed by

LIWAA RESOURCES COMPANY LIMITED will and personal selling. Cold calling, comprising of telesales and customer visits, will be the main thrust of the sales effort. Sales calls will emphasize the advantages of using an Irish-based supplier (including low-cost production and unparalleled lead times

4.0 Building an efficient lithium ore processing plant

An effective lithium ore processing plant mainly includes a crushing line, grinding line, beneficiation line, and some auxiliary equipment.

The most commonly used production equipment is a crusher (jaw crusher, impact crusher, cone crusher), ball mill, flotation machine or magnetic separator, etc. Fote Machinery can provide a set of Lithium ore beneficiation equipment, which are well received in the world market. We aim for creating more wealth for customers. How to choose an efficient beneficiation method needs to be determined according to the ore properties and actual needs.

The first step is to conduct a mineral test

It is recommended to conduct a lithium mineral test before the separation and production.

At the same time, customers can customize the most effective and scientific beneficiation process and equipment based on the ore properties and investment budget to avoid waste of resources.

Crushing production line

First, lithium ore goes through a crushing and grinding process in turn to produce a uniform fine particle size.

- When crushing, use a jaw crusher for primary crushing, and then use a cone crusher for fine crushing.
- When grinding, use a ball mill

4.1 Processing From Minerals

Extraction of lithium from spodumene, lepidolite, petalite, amblygonite, and eucryptite requires a wide range of processes. Because of the amount of energy consumption and materials required, lithium production from mining is a much more costly process than brine extraction, even though these minerals have a higher lithium content than saltwater.

Of the five minerals, spodumene is the most commonly used for lithium production. After it is mined, spodumene is heated to 2012 degrees Fahrenheit and then cooled to 149 degrees. It's then crushed and roasted again, this time with concentrated sulfuric acid.1Ultimately, sodium carbonate, or soda ash, is added, and the resulting lithium carbonate is crystallized, heated, filtered, and dried.

4.2 **Turning Lithium Into Metal**

Converting lithium into metal is done in an electrolytic cell using lithium chloride. The lithium chloride is mixed with potassium chloride in a ratio of 55% to 45% in order to produce a molten eutectic electrolyte.

Potassium chloride is added to increase the conductivity of the lithium while lowering the fusion temperature.

When fused and electrolyzed at about 840 degrees Fahrenheit, chlorine gas is liberated while molten lithium rises to the surface, collecting in cast-iron enclosures. The pure lithium produced is wrapped in paraffin wax to prevent oxidization. The conversion ratio of lithium carbonate to lithium metal is about 5.3 to 1.

4.3 Global Lithium Production

The top five countries for lithium production in 2018 were Australia, Chile, China, Argentina, and Zimbabwe. Australia produced 51,000 metric tons of lithium that year, the latest for which figures are available. Total global production, excluding the U.S., amounted to 70,000 metric tons.

The companies that produce the most lithium are Albemarle, Sociedad Quimica y Minera de Chile, and FMC.

5.0 Management & Organizational Structure

All aspects of the operations will be managed by the shareholders for the initial three years; there will be a requirement of **110.** Among 10 employees will be primarily in production. The administration, marketing, and finance functions will be managed by the key managers i.e. the promoters. The accountancy function will be outsourced initially. Books

will be kept manually during year one but it is intended to invest in a computerized software accountancy package (e.g. Sage)

The summary of employees is as following

Gender	Foreign Skilled	Local Skilled	Local Unskilled	Total
Women	5	10	20	35
Men	15	30	40	75
TOTAL	**20**	**40**	**60**	**110**

5.0 Project's Investment Capital

The estimated capital investment cost of the project is US $ 500,000.

LIKWAA RESOURCES COMPANY LIMITED COST STRUCTURE

PARTICULAR	
Land and Buildings	1,000,000.00
Machinery & Equipment	4,000,000.00
Motor Vehicles	2,000,000.00
Furniture & Fixtures	5,000.00
Pre expenses	20,000.00
Others	35,000.00
Working Capital	3,000,000.00
TOTAL	10,060,000.00

6.0 Financing Pattern

The project will be financed by equity of US$ 6,060,000 and a loan of US$4,000,000

6.1 Price

Metal.com reported lithium spodumene concentrate (6%, CIF China) average price of USD 4,120/t, as of May 24, 2023

6.2 Production Capacity

5000MT per year

8.0 Financial Analysis

7.0 Aspects of Project Sustainability

The project sponsors having studied market conditions and the infrastructure in Tanzania are convinced that the project will be able to operate undisturbed. The growing demand for lithium-quality products global market gives them assurance of a steady market. The peace and tranquility that exist in Tanzania is another aspect of assured business sustainability.

7.1 Monitoring And Evaluation

The monitoring and evaluation tools will be applied in running this project as well, the project sponsors are determined to cooperate fully with the government and other stakeholders for smooth business running.

8.1 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.

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

8.2 **Financial Statements:**

8.3 Projected Profit and Loss Statement

The Income and Expenditure Statement shows the projected income for the 5 years period. Accumulated after-tax profits grow from. US $ 1,932,910 in the first year to US $ 19,710,002 the 8th

8.4 **Projected cash flows**

This is shown in the financial statements. The project accumulated cash grow from US $ 2,261,610 in the 1st year to US $ in the 5t 21,059,602 in 8th year

8.5 Projected Balance Sheet

The projected Balance Sheet of the shareholder's Equity increases from US$ 6,060,000 in the first year of operation to US $ 25,770,002 in the 10th year.

9.0 **Economic Aspects**

Implementation of this project will have the following social and economic values

- The project will involve the transfer of technology.
- The project will create employment for **110** people on a permanent contract basis as well as on a temporary basis.
- It will create more business opportunities for local suppliers.
- It will generate substantial revenue for the government in the form of corporate tax, value-added tax, and pay-as-you-earn.
- The project will earn substantial amounts of foreign exchange.

10.0 Implementation

Project implementation is expected to be relatively very short once the project has been approved

	ACTIVITY	**PERIOD**
1	Processing TIC Certificate of Incentive	July 2023
2	Ordering of plant and machinery and Vehicles	August –July 2025
3	Arrival of Plant, Machinery and Vehicles	September 2023
4	Assembling and fixing machines	Sept-Nov 2023
5	Testing machines	January -2024
6	Commercial production	April -2024

11.0 CONCLUSION AND RECOMMENDATIONS

The project is technically feasible, financially viable, and economically sound, provided the sponsors will manage it efficiently.

It is recommended that the project be approved by Tanzania Investment Centre and be granted the TIC Certificate of Incentives with its associated

privileges and benefits as provided for under the Tanzania Investment Act, 2022

LIKWAA RESOURCES COMPANY LIMITED PROJECTED INCOME & EXPENDITURE STATEMENT

-	1	2	3	4	5	6	7	8
Revenue (	20,600,000.00	21,630,000.00	22,711,500.00	23,847,075.00	25,039,428.75	26,291,400.19	27,605,970.20	28,986,268.71
Operating Expenses:	17,510,000	18,385,500	19,304,775	20,270,014	21,283,514	22,347,690	23,465,075	24,638,328
Gross Profit Before Interest and Depreciation	3,090,000	3,244,500	3,406,725	3,577,061	3,755,914	3,943,710	4,140,896	4,347,940
Interest	320,000	320,000	320,000	320,000	-	-	-	-
Depreciation	8,700	8,700	8,700	8,700	8,700	8,700	8,700	8,700
Gross Profit	2,761,300	2,915,800	3,078,025	3,248,361	3,747,214	3,935,010	4,132,196	4,339,240
Tax (30%)	828,390	874,740	923,408	974,508	1,124,164	1,180,503	1,239,659	1,301,772
Profit After Tax	1,932,910	2,041,060	2,154,618	2,273,853	2,623,050	2,754,507	2,892,537	3,037,468
Accumulated Profit	1,932,910	3,973,970	6,128,588	8,402,440	11,025,490	13,779,997	16,672,534	19,710,002

LIKWAA RESOURCES COMPANY LIMITED PROJECTED CASH FLOW US$

SOURCES:		1	2	3	4	5	6	7	8
Profit before interest and depreciation	-	3,090,000	3,244,500	3,406,725	3,577,061	3,755,914	3,943,710	4,140,896	4,347,940
Equity	6,060,000								
Loan	4,000,000								
Total Sources	**10,060,000**	**3,090,000**	**3,244,500**	**3,406,725**	**3,577,061**	**3,755,914**	**3,943,710**	**4,140,896**	**4,347,940**
Applications:									
Capital expenditure	7,005,000		-	-	-	-	-	-	-
working Capital &Others	3,055,000								
Cash	-	2,261,610	2,369,760	2,483,317	2,602,553	2,631,750	2,763,207	2,901,237	3,046,168
Tax	-	828,390	874,740	923,408	974,508	1,124,164	1,180,503	1,239,659	1,301,772
Subtotal	**10,060,000**	**3,090,000**	**3,244,500**	**3,406,725**	**3,577,061**	**3,755,914**	**3,943,710**	**4,140,896**	**4,347,940**
Total applications	**10,060,000**	**3,090,000**	**3,244,500**	**3,406,725**	**3,577,061**	**3,755,914**	**3,943,710**	**4,140,896**	**4,347,940**
Accumulated cash		2,261,610	4,631,370	7,114,687	9,717,240	12,348,990	15,112,197	18,013,434	21,059,602

LIKWAA RESOURCES COMPANY LIMITED PROJECTED BALANCE SHEET

Fixed Assets	**1**	1	2	3	4	5	6	7	8
Opening balance	-	**7,005,000**	**6,844,500**	**6,684,000**	**6,523,500**	**6,363,000**	**6,202,500**	**6,042,000**	**5,881,500**
Total Long-term Assets	**-**	**7,005,000**	**6,844,500**	**6,684,000**	**6,523,500**	**6,363,000**	**6,202,500**	**6,042,000**	**5,881,500**
Less depreciation	**-**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**
Closing balance	**-**	**6,844,500**	**6,684,000**	**6,523,500**	**6,363,000**	**6,202,500**	**6,042,000**	**5,881,500**	**5,721,000**
Working capital	3,055,000	3,055,000	3,055,000	3,055,000	3,055,000	3,055,000	3,055,000	3,055,000	3,055,000
Accumulated cash	-	2,261,610	4,631,370	7,114,687	9,717,240	12,348,990	15,112,197	18,013,434	21,059,602
Total assets	**3,055,000**	**153,000**	**153,000**	**153,000**	**153,000**	**153,000**	**153,000**	**153,000**	**153,000**
Financed by									
Equity	6,060,000	6,060,000	6,060,000	6,060,000	6,060,000	6,060,000	6,060,000	6,060,000	6,060,000
Accumulated profit	-	1,932,910	3,973,970	6,128,588	8,402,440	11,025,490	13,779,997	16,672,534	19,710,002
Total equity	6,060,000	7,992,910	10,033,970	12,188,588	14,462,440	17,085,490	19,839,997	22,732,534	25,770,002
Bank Loan	4,000,000	3,000,000	2,000,000	1,000,000	-	-			
Total debts	**4,000,000**	**2,000,000**	**2,000,000**	**1,000,000**	**-**	**-**			
Total equity and debts	**10,060,000**	**9,992,910**	**12,033,970**	**13,188,588**	**14,462,440**	**17,085,490**	**19,839,997**	**22,732,534**	**25,770,002**

LIKWAA RESOURCES COMPANY LIMITED PROJECTED PAYBACK PERIOD

Year		Profit After Tax	Depreciation	Total Cash Flow	Accumulated Cash Flow
1		1,932,910	**160,500**	**2,093,410**	2,093,410
2		2,041,060	**160,500**	**2,201,560**	4,294,970
3		2,154,618	**160,500**	**2,315,118**	6,610,088
4		2,273,853	**160,500**	**2,434,353**	9,044,440
5		2,623,050	**160,500**	**2,783,550**	11,827,990
6		2,754,507	160,500	**2,915,007**	14,742,997
7		3,037,468	160,500	**3,197,968**	17,940,966
8		3,189,646.12	160,500.00	**3,350,146**	21,291,112

LIKWAA RESOURCES COMPANY LIMITED PROJECTED LONG-TERM LOAN REPAYMENT

Year	principle	Loan Interest (8%)	Total Amount Paid	Loan Balance
1	1,000,000	320,000	1,320,000	4,000,000
2	1,000,000	320,000	1,320,000	3,000,000
3	1,000,000	320,000	1,320,000	2,000,000
4	1,000,000	320,000	1,320,000	1,000,000
5	1,000,000	320,000	1,320,000	-

LIKWAA RESOURCES COMPANY LIMITED PROJECTED PROJECT VALUE

PARTICULAR	
Land and Buildings	1,000,000.00
Machinery & Equipment	4,000,000.00
Motor Vehicles	2,000,000.00
Furniture & Fixtures	5,000.00
Pre expenses	20,000.00
Others	35,000.00
Working Capital	3,000,000.00
TOTAL	10,060,000.00

LIKWAA RESOURCES COMPANY LIMITED PROJECTED FIXED ASSETS VALUE

NAME OF ASSERS	**1**	**2**	**3**	4.00	5.00	6	7	8
Land And Buildings	1,000,000	980,000	960,000	940,000	920,000	900,000	880,000	860,000
Machinery, Tools & Equipment	4,000,000	3,960,000	3,920,000	3,880,000	3,840,000	3,800,000	3,760,000	3,720,000
Motor Vehicles	2,000,000	1,900,000	1,800,000	1,700,000	1,600,000	1,500,000	1,400,000	1,300,000
Furniture & Fixtures	5,000	4,500	4,000	3,500	3,000	2,500	2,000	1,500
Total	**7,005,000**	**6,844,500**	6,684,000	6,523,500	6,363,000	6,202,500	6,042,000	5,881,500
DEPRECIATION	**1**	**2**	**3**					
Land and buildings	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Machinery tools & Equipment	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Motor Vehicles	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Furniture & Fixtures	500	500	500	500	500	500	500	500
ANNUAL DEPRECIATION	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**	**160,500**