

Critica Metals (T) Ltd
Mhukuru Phase 1 Coltan and Tin Processing Plant
Business Plan for EPZ Licensing and TISEZA Certificate of Incentives

1. Executive Summary

Critica Metals (T) Ltd is a **100% Tanzanian-owned** private company established to develop, process and export critical minerals from Tanzania. The Company is developing the Mhukuru Coltan and Tin Project, located in Mhukuru Village, Songea District, Ruvuma Region.

Phase 1 of the project involves the establishment of a 20 tonnes per hour gravity-based mineral processing plant designed to produce export-grade coltan and tin concentrates. The plant will process ore sourced from Critica's own mining licences as well as from surrounding artisanal and small-scale miners.

The project is designed as a 100% export-oriented mineral beneficiation facility, producing concentrates for international markets including Asia and Europe. The Phase 1 investment totals approximately USD 360,000, including imported processing equipment, infrastructure development, installation and initial operating capital.

The plant is expected to produce approximately 20 tonnes of concentrate per month, equivalent to approximately 240 tonnes annually, depending on ore grades and recovery rates.

The project will create approximately 35 direct jobs and support additional livelihoods through the artisanal mining supply chain.

The Mhukuru project represents the first stage of Critica Metals' broader strategy to establish a critical minerals processing platform in Tanzania, contributing to the country's industrialization and export diversification objectives.

2. Strategic Context and Alignment with National Development Priorities

The Mhukuru project aligns strongly with the objectives of **Tanzania Development Vision 2050**, which emphasizes:

- industrialization and value addition to natural resources
- export growth and foreign exchange generation
- development of domestic processing capacity
- increased participation in global supply chains.

By establishing a domestic mineral processing facility for tantalum, niobium and tin-bearing ores, the project contributes to increasing the value of Tanzania's mineral resources prior to export.

The project also supports the formalization of **artisanal and small-scale mining supply chains**, improving market access and livelihoods for mining communities in southern Tanzania.

Through phased expansion, the project has the potential to evolve into one of the **early export-oriented mineral beneficiation hubs for critical minerals in Tanzania**.

3. Company Overview

Company:

Critica Metals (T) Ltd

Ownership:

100% Tanzanian-owned private company

Business focus:

- exploration and development of critical mineral deposits
- mineral beneficiation and processing
- export of tantalum-niobium and tin concentrates
- aggregation of production from artisanal and small-scale miners.

The company's long-term objective is to develop a **Tanzanian-based critical minerals value chain**, beginning with concentrate production and progressing toward downstream refining.

4. Project Location and Mineral Rights

Project location

Mhukuru Village

Songea District

Ruvuma Region

United Republic of Tanzania

Mining rights status

The project area is supported by mining licences currently held by project shareholders:

- One **Primary Mining Licence (PML)** currently held by Nathaniel Rodrick Kombe (a shareholder and director), in the process of transfer to the project entity.
- One **Prospecting Licence (PL)** currently held by Nathaniel Rodrick Kombe.
- One additional **Prospecting Licence application** submitted in the name of Critica Metals (T) Ltd.

Land associated with the licence area is currently being **acquired for project development**, and the mining rights will ultimately be consolidated under the project entity.

5. Project Description

The **Mhukuru Phase 1 Processing Plant** will be a modular gravity-based mineral processing facility with a capacity of **20 tonnes per hour**.

The plant will process pegmatite-hosted ore containing tantalum, niobium and tin minerals.

Processing will include:

- ore crushing and screening
- gravity concentration
- magnetic separation
- drying and packaging of mineral concentrates.

The plant avoids the use of chemical reagents, minimizing environmental impact.

The facility is designed as a **scalable modular plant**, allowing expansion in future phases.

6. Production Capacity

Phase 1 processing capacity:

20 tonnes per hour

Assuming:

- 10 operating hours per day
- 25 operating days per month

Annual ore throughput is estimated at:

approximately 60,000 tonnes per year

Under base-case assumptions, the plant is expected to produce approximately:

20 tonnes of concentrate per month

Equivalent to:

240 tonnes per year

Actual production will depend on ore grades, recovery rates and concentrate specifications.

7. Feedstock Strategy

Feedstock for the plant will be sourced through two primary channels.

Own Mining Operations

Ore will be produced from Critica's mining licences within the Mhukuru project area.

Artisanal and Small-Scale Miners

The company will also purchase ore and concentrates from artisanal miners operating in surrounding pegmatite zones.

This model provides:

- a reliable feedstock supply
- formalization of artisanal production
- improved livelihoods for local mining communities.

8. Market Overview

Global demand for critical minerals such as tantalum and tin continues to increase due to their use in:

- electronic components and capacitors
- aerospace alloys
- advanced materials
- energy transition technologies.

Processing capacity for tantalum and tin concentrates is concentrated in Asia, creating strong demand for export-grade concentrates from emerging producing regions.

The Mhukuru project is positioned to supply these international markets with responsibly sourced concentrates from Tanzania.

9. Pricing Assumptions

Concentrates are typically sold based on:

- contained metal content
- payability factors agreed with buyers
- prevailing international prices.

For planning purposes, indicative pricing assumptions are based on approximately:

USD 70 per kilogram of concentrate, depending on grade and market conditions.

10. Indicative Revenue Snapshot

Item	Estimate
Annual concentrate production	~240 tonnes
Indicative price	~\$70/kg
Estimated annual revenue	~\$16.8 million

Actual revenues will depend on concentrate grade, payability and prevailing international market prices.

11. Capital Investment Plan

Equipment

Processing plant equipment (FOB)

USD 160,000

Additional Capital Expenditure

Item	Cost (USD)
Freight and insurance	25,000
Port clearance and inland transport	15,000
Civil works and foundations	40,000
Electrical installation	25,000
Water supply system	10,000
Plant installation and commissioning	20,000
Site camp, office and security	15,000
Initial spare parts	10,000
Working capital	40,000

Total Phase 1 Investment

USD 360,000

12. Employment and Economic Impact

Phase 1 operations will create approximately **35 direct jobs**.

Position	Number
Plant operators	12
Technicians	6
Mining personnel	8
Administration	3
Security and support	6

Indirect employment through artisanal supply chains is expected to support **50–100 additional livelihoods**.

13. Environmental Management

The plant will utilize **gravity-based mineral processing technology**, avoiding chemical reagents.

Environmental management measures include:

- water recycling within the processing circuit
- controlled tailings management
- compliance with national environmental regulations
- environmental approval through the relevant regulatory authorities.

14. Implementation Schedule

Activity	Timeline
Equipment shipment	April 2026
Plant installation	May 2026
Commissioning	June 2026
Commercial production	June–July 2026

15. Future Phased Expansion

The Mhukuru project will be developed in phases.

Phase 2 – Processing Expansion

Expansion of processing capacity to approximately **60 tonnes per hour**, establishing a regional mineral beneficiation hub processing ores from both company mines and artisanal miners.

Estimated investment: **USD 3–5 million**

Phase 3 – Advanced Mineral Beneficiation

Development of downstream processing facilities capable of producing **tantalum and niobium oxides**, increasing domestic value addition before export.

Estimated investment: **USD 15–25 million**