

CBRI INDUSTRIAL PARK ASSETS LIMITED

Business Plan
for
Manufacturing of Construction nails

Prepared by:
CBRI INDUSTRIAL PARK ASSETS LIMITED

1.0. EXECUTIVE SUMMARY

1.1 Project Overview

This project involves the establishment of a Construction Nail Manufacturing Plant to produce different sizes of steel nails used in the construction, furniture, and general fabrication industries. The plant will utilize high-speed wire drawing and nail-making machines to convert mild steel wire rods into finished nails.

Objectives

- Establish a modern, automated nail manufacturing facility in Tanzania.
- Substitute imported nails with locally produced high-quality products.
- Supply to domestic construction, hardware, and export markets in EAC and SADC.
- Generate employment and contribute to industrialization goals (aligned with Tanzania's Vision 2025)

Construction nails are essential for building and carpentry projects. They are available in various types, each suited for specific applications, including framing, roofing, siding, and more. Common nails, with their thick shank and wide head, are suitable for general construction and framing, while box nails, with their thinner shank, are better for securing thinner pieces of wood. Other types include finish nails for trim work, and specialized nails like roofing nails and masonry nails for specific tasks.

Here's a more detailed breakdown:

- **Common Nails:**

Have a thick shank and a wide head, making them strong and suitable for framing and other rough work. Often used with dimensional lumber like 2x4s. Can be prone to splitting wood due to their thickness. Sinker nails are a

variation with a slightly narrower shank and a head designed to be driven flush with the surface.

- **Box Nails:**

Have a thinner shank than common nails, making them less likely to split wood.

Often galvanized to prevent rust, making them suitable for outdoor use.

Specialized Nails:

- **Framing nails:** Similar to common nails, used for framing and structural assemblies.
- **Roofing nails:** Designed for securing roofing materials like shingles and felt.
- **Masonry nails:** Made of hardened steel and used to fasten wood to concrete, brick, or other masonry.
- **Siding nails:** Used for attaching wood and fiber cement siding. Joist hanger nails: Used to attach joist hangers to wood studs.
- **Finish nails:** Small and thin, designed to be driven below the surface for a clean finish.
- **Brad nails:** Very thin, ideal for delicate trim work and molding.
- Duplex nails: Feature a double head and are used for temporary structures like scaffolding or concrete forms.
- **Concrete nails:** Specifically designed for driving into concrete.

1.2 Key Considerations When Choosing Nails

- **Material**

Nails can be made from various materials like steel, stainless steel, copper, and more, each with its own properties and suitability for different environments and applications.

- **Size**

Nails come in various lengths and diameters, and the appropriate size depends on the thickness and type of material being fastened, as well as the load the nail needs to support.

- **Coating**

Coatings like galvanization help protect nails from corrosion, especially in outdoor or damp conditions.

- **Head type**

Round, flat, checkered, and other head designs are suited for different purposes and may impact how the nail is driven and how it looks on the surface.

Show all

The proposed project is intended to reduce shortage of good and affordable construction nails available in the country.

The project detailed designs have been carried out by reputable local consultants.

Project document presents a proposal by CBRI INDUSTRIAL PARK ASSETS LIMITED, a locally registered company with Certificate of Incorporation No. 156852996 issued on 19th July, 2022. The project promoters are confident of mobilizing financial resources through loan and equity.

This study will be used as a guiding tool and will be presented to TIC for obtaining certificate of incentives to facilitate smooth implementation of the project.

1.2 Location

The project will be located at **Plot No. P65845 and P65846 Kisarawe II, Kigamboni District, Dar es Salaam Region- Tanzania.**

1.3 The Sponsors

CBRI INDUSTRIAL PARK ASSETS LIMITED will be sponsoring this project. The Company is currently jointly owned by two investors;

Name	Shares %	Nationality
LIDONG LIU	50	Chinese
JIAYI XIAO	50	Chinese

1.4 Objective of Study

The purpose of this study is to work out the technical and commercial details and financial viability of a project.

It is expected that the project will be completed within a 1-year term and the company will apply to be exempted from paying import duty and VAT on Capital goods and deemed capital goods. The project will contribute significantly towards the tourism sector and construction sector.

1.5 Target Market

Construction firms, hardware stores, carpentry workshops, furniture makers, and export markets (Kenya, Uganda, Rwanda, DRC).

1.6 Production Capacity

- Production capacity: **8,000 tons of nails per year.**
- Product range: 1" to 6" nails.
- Operating days: 300 per year (3 shifts).

2.0 Industry and Market Analysis

2.1 Industry Overview

Tanzania's construction sector is growing at **7–10% annually**, driven by public infrastructure projects, housing, and industrial development. The demand for nails and fasteners has increased proportionally, with most nails currently imported from China, India, and Kenya.

2.2 Market Demand

- Estimated annual demand in Tanzania: **30,000 – 40,000 tons**.
- Imports account for over **80%** of total supply.
- The domestic market offers significant substitution potential.

2.3 Target Customers

- Hardware wholesalers & retailers
- Construction & real estate companies
- Furniture manufacturers
- Export traders to EAC region

2.4 Competitive Advantage

- Local production ensures faster delivery and lower logistics costs.
- Price competitiveness vs imported products.
- Quality assurance via tensile strength and rust-proof finishing.

3.0 **Technical Description**

3.1 **Raw Materials**

- **Main Input:** Mild Steel Wire Rods (5.5mm – 6.5mm diameter)
- **Auxiliary Inputs:** Lubricants, cutting oil, packaging materials, galvanizing zinc (for coated nails).

3.2 **Production Process**

- **Wire Drawing:** Steel wire rods drawn to required nail diameters using wire drawing machines.
- **Straightening and Cutting:** Wire cut into nail-length sizes.
- **Nail Forming:** Heads and points formed using nail-making machines.
- **Polishing:** Nails are polished to remove burrs.
- **Galvanizing (optional):** Nails coated with zinc for rust resistance.
- **Packaging:** Nails are sorted and packed into 25–50 kg bags or boxes.

3.3 **Machinery & Equipment**

- Equipment
- Wire Drawing Machine
- Nail Making Machines (Various Sizes)
- Polishing Drum
- Nail Cutter & Header Units
- Zinc Coating Line
- Air Compressors & Tools
- Power & Control Panel
- Packaging Machine

- Quality Testing Equipment
- Installation & Spares

3.4 Utilities Required

- **Power:** 300–400 kVA
- **Water:** 3 m³/day
- **Compressed Air:** For nail header machines
- **Factory Space:** 2,000 m²

4.0 Project Management and Manpower requirements

4.1 Organizational Structure

- Managing Director
- Production Manager
- Sales & Marketing Manager
- Procurement Officer
- Accountant
- Quality Control Supervisor
- Machine Operators
- Technicians & Helpers
- Administrative & Support Staff

4.2 Employment Generation

Approx. **80 direct jobs** and **200+ indirect jobs** (transport, packaging, distribution).

5.0 Marketing and Sales Strategy

- Establish distribution network with major hardware wholesalers.
- Sign long-term supply contracts with construction companies.
- Brand development for “Made in Tanzania” quality nails.
- Participation in trade fairs (e.g., Tanzania Building Expo, Dar Construction Fair).
- Offer bulk discounts and credit to hardware chains.

6.0 Financial Analysis

6.1 Key Assumptions

- Production capacity utilization: 70% Year 1, 85% Year 2, 100% Year 3 onward.
- Selling price (average): USD 1,100 per ton.
- Raw material cost: USD 600 per ton.
- Annual growth rate in demand: 5%.

7.0 Risk Analysis and Mitigation

Risk	Mitigation Strategy
Fluctuating steel prices	Long-term contracts with suppliers
Power interruptions	Standby generator
Imported nail competition	Focus on quality, pricing, and branding
Technical downtime	Skilled maintenance team & spare parts stock
Currency fluctuations	Maintain USD-based sales for export portion

7.1 Monitoring and Evaluation

The Management has full commitment to ensuring good use of the resourced and sustainable environment and wellbeing of the community

with which they do business. Thus, the management philosophy is through business process. Managers will strive to ensure compliance to standards and safety of products and customers they serve.

7.2 Aspect 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 construction sector gives them assurance of a steady market. The peace and tranquility that exists in Tanzania is another aspect of assured business sustainability.

7.3 Environmental and Social Impact

- Minimal emissions (mostly mechanical process).
- Noise control measures for machines.
- Proper waste wire recycling.
- Job creation and skill development for youth.

8.0 Project Investment Cost

The estimated capital investment cost of the project is US \$4,000,000.

CBRI INDUSTRIAL PARK ASSETS LIMITED COST STRUCTURE US

Land and Buildings	700,000
Machinery & Equipment	1,800,000
Motor Vehicles	250,000
Furniture & Fixtures	20,000
Pre exp	50,000
Others	50,000
Working Capital	1,130,000
TOTAL	4,000,000

8.1 Financing pattern

The project will be financed Foreign Equity US \$3,000,000 and Foreign Loan US \$1,000,000

8.2 Project operating costs

In order to realize its intended objective, the project will have to meet the operating costs which have been budgeted to be 70% of total revenue.

9.0 Financial Analysis

9.1 Projected Profit and Loss Statement

The Income and Expenditure Statement show the projected income for the 5-year period. The position depicted is that the project earns profit throughout its life. Accumulated after tax profits grow from US \$ **1,022,700** in first year to US \$ **6,097,078** in the 5th year.

9.2 Projected Cash Flows

This is shown in the financial statements. The project has a positive end of year cash flow from 1st US\$ **1,321,700** to the 5th year US \$ **7,112,078**

9.3 Projected Balance Sheet

The projected Balance Sheet of the project is shown in the financial statements under same heading. Owner equity of the project increases from US\$ **1,000,000** in the first year of operation to US \$ **7,097,078** in the 5th year.

9.4 Projected payback period

Total investment is US \$ **4,000,000**, cash accumulation in year 4 is US\$ **4,109,780** which is more than the initial investment, the project payback period is exactly 4 years only.

9.6 Projected loan repayments

The loan borrowed from financial institution is expected to be fully paid within 5 years of projection operation.

10.0 Economic Aspects

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

- The project is an ideal option for utilization of the investment opportunities in construction nail manufacturing to bridge the gap of importation where almost 80% is being imported
- The project will increase economic multiplier effects among construction stakeholders.
- The project will create direct employment for **50** direct people on permanent contract basis and indirect employment of **100** people.
- It will create more business opportunities to local suppliers and transporters, which will also have a trickledown effect in the environmental issues.
- It will generate substantial revenue to the government in the form of corporate tax; value added tax and pay as you earn.

11.0 Implementation

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

Activity	Duration	Timeline
Feasibility Study & Approvals	2 months	Month 1–2
Land Acquisition & Design	2 months	Month 3–4
Machinery Procurement	4 months	Month 5–8
Construction & Installation	4 months	Month 7–10
Recruitment & Training	1 month	Month 10
Commissioning & Trial Production	1 month	Month 11
Commercial Production Start	Month 12	

8.0 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 TISEZA and be granted the Certificate of Incentives.

CBRI INDUSTRIAL PARK ASSETS LIMITED PROJECTED INCOME & EXPENDITURE STATEMENT (US\$)

	1	2	3	4	5
Revenue	8,800,000	9,240,000	9,702,000	10,187,100	10,696,455
Operating Expenses:	7,040,000	7,392,000	7,761,600	8,149,680	8,557,164
Profit before Depreciation & Interest	1,760,000	1,848,000	1,940,400	2,037,420	2,139,291
Interest	240,000	192,000	144,000	96,000	48,000
Depreciation	59,000	59,000	59,000	59,000	59,000
Gross Profit	1,461,000	1,597,000	1,737,400	1,882,420	2,032,291
Tax (30%)	438,300	479,100	521,220	564,726	609,687
Profit After Tax	1,022,700	1,117,900	1,216,180	1,317,694	1,422,604
Accumulated Profit	1,022,700	2,140,600	3,356,780	4,674,474	6,097,078

CBRI INDUSTRIAL PARK ASSETS LIMITED PROJECTED CASH FLOW US\$

SOURCES:		1	2	3	4	5
Profit before interest and depreciation	-	1,760,000	1,848,000	1,940,400	2,037,420	2,139,291
Equity	1,000,000					
Loan	3,000,000					
Total Sources	4,000,000	1,760,000	1,848,000	1,940,400	2,037,420	2,139,291
Applications:						
Capital expenditure	2,770,000	-	-	-	-	-
working Capital & Others	1,230,000					
Cash	-	1,321,700	1,368,900	1,419,180	1,472,694	1,529,604
Tax	-	438,300	479,100	521,220	564,726	609,687
Sub total	4,000,000	1,760,000	1,848,000	1,940,400	2,037,420	2,139,291
Total applications	4,000,000	1,760,000	1,848,000	1,940,400	2,037,420	2,139,291
Accumulated cash		1,321,700	2,690,600	4,109,780	5,582,474	7,112,078

CBRI INDUSTRIAL PARK ASSETS LIMITED PROJECTED BALANCE SHEET US \$

Fixed Assets		1	2	3	4	5
Opening balance	-	2,770,000	2,711,000	2,652,000	2,593,000	2,534,000
Total Long-term Assets	-	2,770,000	2,711,000	2,652,000	2,593,000	2,534,000
Less depreciation	-	59,000	59,000	59,000	59,000	59,000
Closing balance	-	2,711,000	2,652,000	2,593,000	2,534,000	2,475,000
Working capital	1,230,000	1,230,000	1,230,000	1,230,000	1,230,000	1,230,000
Accumulated cash	-	1,321,700	2,690,600	4,109,780	5,582,474	7,112,078
Total assets	1,230,000	5,262,700	6,572,600	7,932,780	9,346,474	10,817,078
Financed by						
Equity	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Accumulated profit	-	1,022,700	2,140,600	3,356,780	4,674,474	6,097,078
Total equity	1,000,000	2,022,700	3,140,600	4,356,780	5,674,474	7,097,078
Long term loan	3,000,000	2,400,000	1,800,000	1,200,000	600,000	-
Total debts	3,000,000	2,400,000	1,800,000	1,200,000	600,000	-
Total equity and debts	4,000,000	4,422,700	4,940,600	5,556,780	6,274,474	7,097,078

CBRI INDUSTRIAL PARK ASSETS LIMITED PROJECTED LONG TERM LOAN REPAYMENT

Year	Principle	Loan Interest (8%)	Total Amount Paid	Loan Balance
1	600,000.00	240,000.00	840,000.00	3,000,000.00
2	600,000.00	192,000.00	792,000.00	2,400,000.00
3	600,000.00	144,000.00	744,000.00	1,800,000.00
4	600,000.00	96,000.00	696,000.00	1,200,000.00
5	600,000.00	48,000.00	648,000.00	600,000.00

CBRI INDUSTRIAL PARK ASSETS LIMITED PROJECTED FIXED ASSETS US\$

NAME OF ASSETS	1	2	3	4	5
Land And Buildings	700,000	686,000	672,000	658,000	644,000
Machinery, Tools & Equipment	1,800,000	1,782,000	1,764,000	1,746,000	1,728,000
Motor Vehicles	250,000	225,000	200,000	175,000	150,000
Furniture & Fixtures	20,000	18,000	16,000	14,000	12,000
Total	2,770,000	2,711,000	2,652,000	2,593,000	2,534,000
DEPRECIATION	1	2	3	4	5
Land and buildings	14,000	14,000	14,000	14,000	14,000
Machinery tools & Equipment	18,000	18,000	18,000	18,000	18,000
Motor Vehicles	25,000	25,000	25,000	25,000	25,000
Furniture & Fixtures	2,000	2,000	2,000	2,000	2,000
ANNUAL DEPRECIATION	59,000	59,000	59,000	59,000	59,000

