BUSINESS PLAN

1. Executive Summary

The business proposes the establishment of aluminium Recycling Centre through using a rotary aluminium smelting furnace in The Federal Polytechnic, Ilaro, Nigeria. The furnace will recycle used aluminium materials from homes, markets places and industries and turn it into high-grade ingots. The project addresses Nigeria's commitment to stop importation of aluminium, reduces environmental waste, support manufacturing and create employment.

2. Business Description

Name: Federal Polytechnic Ilaro-Aluminium Recycling Centre (FPI-ARC)

Location: The Federal Polytechnic, Ilaru, Nigeria

Mission: To provide sustainable, high-quality recycled aluminium ingots for industrial use

Vision: To become a leading aluminium recycling centre in Ogun State and among tertiary institutions in Nigeria

3. Market Analysis

i. Demand: High demand from foundries, construction, automotive, and packaging industries

ii. Supply: Abundant scrap from industrial zones, scavengers, eateries in Ogun and Lagos

iii. Competitors: Recyclers (small-scale)

iv. Opportunity: Limited industrial-scale recyclers, strong ESG and circular economy push

4. Product & Services

i. Main Product: Aluminium ingots (90–95% purity)

ii. By-products: Dross (sold to cement/steel industries)

iii. Services: Scrap collection partnerships, logistics, and quality testing and certification

5. Technical Plan

i. Furnace Type: Rotary furnace with pollution control

ii. Capacity: 0.3–0.5 ton/day

iii. Inputs: Mixed aluminium scrap, fluxes, energy (LPG)

iv. Outputs: Standardized ingots for industrial resale

6. Marketing and Sales Strategy

i. Target Customers: Foundries, manufacturers and packaging industries

ii. Promotion: ESG branding, government partnerships, advertisement

7. Operations Plan

i. Site: 1,000–2,000 m² land in The Federal Polytechnic, Ilaro, Ogun State

ii. Staffing: 6–10 employees (operations, admin, QC)

iii. Workflow: Scrap sourcing → pre-treatment → smelting → testing → packaging → delivery

8. Management and Organization

i. Founder/CEO: Project team

ii. Key Roles: Operations Manager, QC Technician, Procurement Officer, Finance/Admin

iii. Advisors: Experts in metallurgy, recycling, and compliance

9. Financial Plan

i. Startup Costs: ₦92M–₦235M (equipment, land, setup)

ii. Monthly OPEX: ₦7.5M–₦20.5M

iii. Revenue Potential: ₦180M–₦360M/month

iv. Break-even: 18–30 months

v. Funding Need: ₦150M (grant or low-interest loan)

10. Risk Analysis

i. Market Risks: Scrap price volatility, competition

ii. Operational Risks: Equipment downtime, regulatory delays

iii. Mitigation: Long-term scrap contracts, maintenance plans, compliance audits

11. Sustainability and Impact

i. Environmental: 95% energy savings vs. primary aluminium, reduced landfill waste

ii. Social: Job creation, local training, community engagement

iii. Governance: NESREA and Federal Ministry of Environment compliance, transparent reporting