

# Concrete Batching Plant Project Plan

## 1. Executive Summary

This project proposes the establishment of a Large-scale concrete batching plant to supply high-quality ready-mix concrete to the fast-growing construction market in Tanzania (Dodoma).

The plant will produce standardized concrete grades for:

- Residential construction
- Commercial buildings
- Infrastructure projects (roads, bridges, industrial parks)

The facility will adopt modern automated batching technology, ensuring:

- Consistent quality
- Efficient production
- Cost control
- Environmental compliance

The objective is to become a reliable supplier of ready-mix concrete to contractors, developers, and government infrastructure projects.

## 2. Business Objectives

### Short-term (2 month – 6 month)

- Establish plant infrastructure and operations
- Secure supply contracts with 3–5 construction companies
- Reach 70–80% capacity utilization

### Medium-term (6 month – 2 year)

- Expand production capacity
- Introduce specialized concrete products (high-strength, waterproof, fast-setting)
- Build regional distribution network

### Long-term

- Become a leading regional concrete supplier
- Expand into cement products and precast components

## 3. Market Analysis

### Industry Overview

Tanzania is experiencing strong growth in:

- Urban housing demand
- Government infrastructure projects
- Industrial construction

This creates high demand for ready-mix concrete.

### Target Customers

- Real estate developers
- Construction companies
- Government contractors
- Industrial project owners

### **Competitive Advantage**

- Consistent quality control
  - Fast delivery logistics
  - Competitive pricing
  - Strategic plant location near construction zones
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### **4. Project Location**

The plant will be located in WIA, Dodoma or nearby logistics corridor, ensuring:

- Easy access to raw materials (cement, aggregates, sand)
  - Efficient transport routes
  - Close proximity to major construction sites
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### **5. Production Plan**

#### **Plant Capacity**

- Initial capacity: 100-120 m<sup>3</sup>/hour
- Daily output: 1000-1200 m<sup>3</sup>/day (For 10 hours use)

#### **Main Equipment**

- Concrete batching plant system
- Aggregate bins and conveyor systems
- Water and admixture dosing systems
- Control system (automated PLC)
- Weighbridge
- Concrete mixer truck
- Loader truck
- Pump

#### **Raw Materials**

- Cement
  - Sand
  - Aggregate
  - Water
  - Concrete admixtures
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### **6. Technology and Process Flow**

#### **Process Flow**

1. Raw materials delivered and stored
2. Materials weighed by batching system
3. Mixed in automated mixer
4. Quality inspection
5. Loaded into concrete mixer trucks
6. Delivered to customer sites

#### **Quality Control**

- Laboratory testing (compressive strength, slump)
- Batch monitoring system

- Standardized mix design
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## 7. Environmental and Safety Compliance

The project will comply with Tanzania environmental and industrial regulations, including:

- Dust collection systems
- Wastewater recycling
- Noise control measures
- Safe chemical storage

Worker safety measures:

- PPE equipment
- Safety training
- Equipment operation protocols

## 8. Organization and Management

### Management Structure

- General Manager
- Production Manager
- Quality Control Engineer
- Procurement Officer
- Logistics Manager
- Finance & Administration

### Staffing Plan

Estimated 20–35 employees depending on plant scale.

## 9. Logistics and Distribution

- Fleet of concrete mixer trucks
- Optional pump trucks for high-rise projects
- Delivery radius: 0–50 km

Efficient dispatch system will ensure:

- On-time delivery
  - Reduced waiting time
  - Customer satisfaction
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## 10. Financial Plan

### Estimated Initial Investment

Detail is shown in the table

### Revenue Projections

- Average selling price: tzs 250,000 – tzs 305,000 per m<sup>3</sup>  
(Exact price depends on the distance)
- Monthly production (target): 10,000 – 20,000 m<sup>3</sup> (Assume 25 days operation)
- Estimated Revenue: tzs 25,000-tzs 38,500 per m<sup>3</sup> (Exact price depends on selling price)

- Monthly revenue: tzs 250,000,000- tzs 770,000,000

#### **Profitability**

- Payback period: Depends on actual production (Estimated: 6-12 month)
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### **11. Risk Analysis**

#### **Key Risks**

- Fluctuation in cement prices
- Fuel and logistics costs
- Competition from local suppliers
- Construction market cycles

#### **Mitigation Strategies**

- Long-term supplier contracts
  - Fuel cost optimization
  - Diversified customer base
  - Flexible pricing strategy
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### **12. Implementation Timeline**

<b>Phase</b>	<b>Duration</b>
Feasibility & Licensing	1 months
Land Acquisition & Site Prep	1–2 months
Equipment Transportation	1–2 months
Installation & Testing	Within 1 months
Trial Production	1 month
<b>Total Timeline</b>	<b>2–4 months</b>

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### **13. Conclusion**

The establishment of a concrete batching plant in Tanzania is a highly viable investment due to:

- Strong construction demand
- Infrastructure expansion
- Limited supply of high-quality ready-mix providers

With efficient management, modern equipment, and strong logistics capability, the project is expected to deliver stable cash flow and long-term profitability.