



7/10/2025

# BUSINESS PLAN

COLD STORAGE & AGRICULTURAL LOGISTICS



Chukwuka Frank Egbe  
SolarVault AgriSystems

# COLD STORAGE & AGRICULTURAL LOGISTICS BUSINESS PLAN

SolarVault AgriSystems in Partnership with Newistt Limited

---

## EXECUTIVE SUMMARY

### Opportunity

#### Problem

Nigeria loses ₦3.5 trillion (\$10 billion) annually in post-harvest losses. With 40% of agricultural produce wasted during storage and transport, farmers lose half their income to spoilage. The country has virtually no cold storage infrastructure outside major cities—only 3% of perishables are refrigerated in rural areas compared to 94% in developed countries. Meanwhile, Nigeria's population is growing, food demand is rising, and the government has committed \$3.5 billion to solve this crisis.

#### Solution

SolarVault AgriSystems is a new cold storage and agricultural logistics firm that Chukwuka Egbe plans to start in partnership with Newistt Limited. We would provide solar-powered refrigeration facilities and technology-enabled supply chain management services to farmers, traders, and exporters in Southeast Nigeria. We will deliver affordable, reliable cold storage where it's needed most.

#### Market

The market for cold storage services in Nigeria is valued at \$1.2 billion and growing 8-12% annually. The market is severely underserved with minimal infrastructure outside Lagos and Port Harcourt. Among existing players, only a few large importers have cold storage, primarily for fish. The remainder are small-scale operators with unreliable grid power.

Our current niche would be Southeast Nigeria's agricultural belt where millions of smallholder farmers produce fruits, vegetables, and perishables with no storage options. By focusing on solar-powered facilities with pay-per-use pricing and ERP integration, we reduce our direct competitors to virtually zero in our target rural and semi-urban markets.

#### Competition

There are a few cold storage operators in Nigeria: ColdHubs (Port Harcourt), traditional fish cold stores in Lagos/Aba/Enugu and import warehouses. ColdHubs focuses on walk-in retail models in urban areas. Traditional cold stores serve importers and are plagued by unreliable grid power. None aggressively pursue smallholder farmers or rural markets.

All advertise reliability, but farmers need more: affordability, accessibility, and trust. Cold storage operators enter farmers' livelihoods. They need to do excellent work as well as be trustworthy partners who won't exploit vulnerable farmers.

## Why Us?

SolarVault AgriSystems's mission is to offer farmers the highest-quality cold storage services that reduce post-harvest losses and increase incomes. I focus on personalized service by offering convenience, flexible pay-per-use pricing, and rapid response. Additionally, through partnership with Newistt Limited, we have the technological expertise to install ERP systems, real-time monitoring, and mobile payment integration.

## Expectations

### Forecast

Currently, there is a ₦150-200 billion addressable market for perishable storage in Southeast Nigeria. We believe we can capture a meaningful share and build from that base. We will start with one 500-tonne facility and hire additional staff as sales grow.

### Financial Highlights by Year

Year	Revenue	Net Profit	Net Profit %
2026	₦80M	₦8M	10%
2027	₦153M	₦48M	31%
2028	₦255M	₦108M	42%

### Financing Needed

We need ₦188,000,000 (\$226,000). Funding structure: Personal/Partner equity ₦68M, Bank loan ₦90M, Government grant (NiPHaST) ₦30M.

## OPPORTUNITY

### Problem & Solution

#### Problem Worth Solving

Nigeria's agricultural sector employs 36% of the workforce and contributes 23% of GDP yet loses 40% of all produce to spoilage. Farmers harvest crops but have nowhere to store them, forcing distress sales at 50-70% below market value. Food waste reaches crisis levels while millions face food insecurity. The population is growing, food demand is rising, and climate change is making storage even more critical.

Rural areas lack electricity infrastructure. Grid power is unreliable even in cities. Without cold storage, tomatoes last 2 days, fish spoils in hours, and leafy vegetables wilt overnight. Farmers lose ₦3.5 trillion annually—equivalent to 3.5% of Nigeria's entire GDP.

## Our Solution

SolarVault AgriSystems's focus is to meet the demands of Nigeria's millions of smallholder farmers. We provide solar-powered cold storage facilities with 500-1,000 tonne capacity, located in rural and semi-urban agricultural zones. Our facilities offer:

- Affordable Pay-Per-Use Pricing: ₦500-800 per crate per week (vs traditional cold stores at ₦2,000+)
- 24/7 Reliable Power: 100% solar with battery backup—no grid dependence
- Technology Integration: Newistt's ERP platform provides real-time inventory tracking, temperature monitoring, and mobile payments
- Accessible Locations: Near farming communities, not just urban centers
- Flexible Terms: Daily, weekly, monthly storage with no long-term commitments

We estimate 80% of revenues will come from smallholder farmer cooperatives and 20% from agricultural traders, processors, and exporters in Year 1. Though farmer cooperatives will be crucial initially, we know future growth comes from expanding to institutional clients and government contracts under the NiPHaST program.

## TARGET MARKET

### Market Size & Segments

#### Industry Overview

Many factors are contributing to Nigeria's cold storage opportunity: government regulation (NiPHaST \$3.5B investment), demographics (200M+ population, 40M+ farmers), economic growth, and technology adoption. The Federal Government's focus on food security and agricultural transformation is creating unprecedented opportunities.

Labor and infrastructure shortages remain challenges. According to industry reports, finding qualified cold chain technicians and reliable power remain obstacles. However, solar technology and international training programs are helping address these gaps.

#### AGRICULTURAL PRODUCTION FORECAST

**FRUITS & VEGETABLES** Nigeria produces 16.9 million tonnes of fruits and 24.3 million tonnes of vegetables annually. Production continues to grow as government promotes agricultural diversification away from oil dependency. Tomato, pepper, onion, and leafy vegetable farmers represent our primary market. There is potential for significant impact—reducing waste from 40% to under 10% could save ₦2.8 trillion annually.

**ANIMAL PRODUCTS** Fish farming, poultry, and livestock production are growing sectors. These highly perishable products require immediate refrigeration. Cold storage can extend fish shelf life from 2 days to

3 weeks, and poultry from 3 days to 2 months. We are looking at strong demand in this sector, particularly around fish farming clusters in Anambra and Ebonyi states.

**EXPORT CROPS** Nigeria's agricultural exports currently earn \$2 billion annually but could reach \$10 billion with proper infrastructure. Export-quality produce requires cold chain from harvest to port. Ginger, sesame, cocoa, cashew, and fresh produce exporters represent high-value customers willing to pay premium rates for reliable storage.

## **MARKET SEGMENTS**

### **Segment 1: Smallholder Farmer Cooperatives (60% of revenue)**

- 8+ million farmers in Southeast Nigeria organized into cooperatives
- Produce fruits, vegetables, tubers for domestic markets
- Currently have zero cold storage access
- Price-sensitive but will pay for proven value
- Need education and trust-building

### **Segment 2: Agricultural Traders & Aggregators (25% of revenue)**

- Market women associations, wholesale distributors
- Buy from farmers, sell to urban markets
- Currently lose 30-40% to spoilage in transit
- Willing to pay for storage that enables price arbitrage
- Existing relationships and networks

### **Segment 3: Food Processors & Exporters (10% of revenue)**

- Companies requiring consistent supply of quality produce
- Export-oriented businesses needing cold chain to port
- Higher prices, longer-term contracts
- Quality and reliability paramount

### **Segment 4: Government & Institutional (5% of revenue)**

- State agricultural programs, school feeding initiatives
- Federal commodity boards, strategic reserves
- NiPHaST program contracts
- Long procurement cycles but stable revenue

## GEOGRAPHIC FOCUS

**Phase 1 (Year 1-2):** Enugu State—test and refine model

**Phase 2 (Year 3):** Anambra, Ebonyi States—proven replication

**Phase 3 (Year 4-5):** Imo, Abia, Cross River—regional dominance

## CONCLUSION

Demographics and Nigeria's agricultural potential are driving cold storage demand. As the economy diversifies from oil, agriculture is gaining investment. After decades of neglect, government and private sector are building infrastructure.

Millennials and returning diaspora professionals are entering agribusiness, demanding modern solutions. The strengthening focus on food security is increasing government spending. International development partners are providing grants and concessional financing.

Baby Boomers' retirement savings are flowing into agricultural investments. The Affordable Care Act equivalent in Nigeria is creating health-conscious consumers demanding fresh, quality produce.

Inexpensive capital is flowing into agriculture, especially export-oriented and technology-enabled ventures. Areas with government presence in agriculture are faring better than purely commercial areas.

These are opportune times for agribusiness infrastructure, and there is cause for optimism. While labor shortages or economic downturns could slow growth, current trajectories show this opportunity has years of runway.

## COMPETITION

### Current Alternatives

#### Existing Cold Storage Operators

**ColdHubs (Port Harcourt-based):** Solar-powered walk-in cold rooms in markets. Limited Southeast presence. Focus on urban retail, not rural farmers. Small capacity (5-10 tonnes per unit).

**Traditional Fish Cold Stores (Lagos/Aba/Enugu):** Serve importers bringing frozen fish from China/Norway. Grid-powered (unreliable). Expensive rates (₦2,000+ per crate/week). Not accessible to farmers.

**Import Warehouses:** Multinational companies (Nestle, Unilever) have private cold storage. Not available to external customers.

**Home Freezers:** Some traders use domestic freezers. Tiny capacity, expensive electricity, unreliable power.

## Indirect Competitors (Farmer Default Behaviors)

- **Quick-sale at low prices:** Farmers sell immediately post-harvest at 30-50% below peak prices
- **Traditional preservation:** Sun-drying, smoking (reduces quality and value)
- **Acceptance of loss:** Farmers accept 40% waste as "normal"

## Our Advantages

Partnering with Newistt to tackle this problem, this was a strategic decision to deliver services to farmers that were second to none. As a professional with international training in the male-dominated agribusiness infrastructure sector, my competitive edge comes from combining global best practices with local partnerships.

I bring cold chain management, supply chain optimization, and renewable energy knowledge that neither ColdHubs nor traditional operators possess. Both government agencies and development banks actively seek partnerships with internationally trained professionals for NiPHaST contracts.

My technical skills in ERP integration, combined with Newistt's proven IT platform, create a defensible competitive advantage. The Southeast Nigeria agricultural belt is booming with new initiatives including agricultural export zones and farmer financing programs. My technical skills in data-driven agriculture and technology-enabled logistics will be invaluable assets for the next decade.

Factor	Us	ColdHubs	Traditional Stores
Power Source	Solar + battery	Solar	Grid (unreliable)
Location	Rural/semi-urban	Urban markets	Urban only
Target Customer	Farmers	Market traders	Importers
Capacity	500-1,000 tonnes	5-10 tonnes	200-500 tonnes
Technology	ERP, mobile app, IoT	Basic	Manual
Pricing	₦500-800/crate/wk	₦800-1,200	₦2,000+
Accessibility	24/7	Market hours	Limited

## Keys to Success

SolarVault AgriSystems's keys to success include:

- **Reliable solar power** providing 24/7 operation regardless of grid
- **Affordable pay-per-use pricing** accessible to smallholder farmers
- **Strategic partnership** with Newistt providing technology backbone
- **International training** bringing global best practices to local context
- **Growing and maintaining referral network** through excellent service
- **Focus on farmer education** building trust and adoption
- **Rapid expansion** into underserved rural markets before competitors

## EXECUTION

### Marketing & Sales

#### Marketing Plan

SolarVault AgriSystems's focus is to build trust and adoption among smallholder farmer cooperatives in Southeast Nigeria. We will establish relationships through agricultural extension services, NGO partners, and community leaders. We believe 80% of Year 1 revenues will come from farmer cooperatives and 20% from trader referrals and institutional business.

Though farmer cooperatives will be crucial during Year 1, we know the future is diversification into processors, exporters, and government contracts. The table below estimates total market potential:

Segment	Annual Storage Need	Market Size (₦)	Our Year 3 Share
Farmer Cooperatives	800,000 tonnes	₦112B	2%
Traders/Aggregators	200,000 tonnes	₦28B	5%
Processors/Exporters	100,000 tonnes	₦28B	3%
Government/Institutional	50,000 tonnes	₦14B	8%
TOTAL	1.15M tonnes	₦182B	2.5%

#### Sales Plan

We plan to leverage relationships built through my international expertise and Newistt's existing business networks. Our sales strategy targets the fastest-growing agricultural cooperatives—young farmers and women's groups who embrace technology.

To gain new clients we will:

- **Community Outreach:** Field sales team conducts farmer cooperative meetings, demonstrations
- **Social media:** Facebook, WhatsApp groups targeting young farmers and agricultural associations
- **Radio Advertising:** Local language programs on farming radio shows
- **Partnership Sales:** Commissions to agricultural extension officers, NGOs, microfinance institutions
- **Free Trials:** First week free for cooperative leaders to experience service
- **Referral Program:** One free week for every new cooperative referred

**Our well-trained sales team will:**

- Conduct post-harvest handling training workshops
- Demonstrate ROI calculations showing income gains
- Provide mobile app training and ongoing support
- Build long-term relationships, not just transactions



## Sales Targets:

- **Year 1:** 500 farmer clients, 80% facility utilization, ₦80M revenue
- **Year 2:** 1,200 clients, 2nd facility opened, ₦153M revenue
- **Year 3:** 3,000 clients, 3 facilities, ₦255M revenue

## OPERATIONS

### Technology

The services rendered by SolarVault AgriSystems cover the cold chain in its entirety from harvest to market delivery.

### Our services include:

**Consulting services:** Harvest planning, post-harvest loss assessments, cold chain design, feasibility studies for cooperatives

**Storage services:** Pay-per-use cold storage, temperature-controlled compartments, 24/7 access, security and monitoring

**Technology services:** ERP platform (Newistt), mobile app for bookings, real-time temperature monitoring, IoT sensors, mobile money integration, inventory management

**Transport services:** Refrigerated truck collection from farms, cold transport to markets, intercity cold logistics

**Value-added services:** Sorting and grading, packaging materials, market linkages, buyer connections, farmer training programs

### Milestones & Metrics

#### Milestones Table

Milestone	Due Date	Budget	Responsibility
Business Registration (CAC)	Month 1	₦500K	Chukwuka Egbe
Land Lease Secured	Month 2	₦5M	Chukwuka Egbe
Loan Approval (DBN/NIRSAL)	Month 3	₦90M	Finance Manager
Facility Construction Complete	Month 6	₦70M	Facility Manager
Solar & Equipment Installation	Month 7	₦38M	Technical Team
ERP Platform Launch	Month 8	₦5M	Newistt
Soft Launch (Pilot Customers)	Month 9	₦2M	Chukwuka Egbe
Full Commercial Launch	Month 10	₦3M	Sales Team
Break-Even Achievement	Month 20	-	All
2nd Facility Opened	Month 30	₦150M	Chukwuka Egbe

### Key Metrics

Our key performance indicators are:

- **Facility utilization rate** (target: 80%+ by Month 12)
- **Customer acquisition cost** vs lifetime value
- **Farmer cooperative partnerships** signed
- **Post-harvest loss reduction** (customer testimonials)
- **Revenue per tonne stored**
- **Customer retention rate** (target: 85%+)
- **Referral rate** (customers bringing new customers)
- **Mobile app downloads and active users**
- **Social media engagement** (Facebook, WhatsApp)
- **Average storage duration** (longer = better price arbitrage for farmers)

## COMPANY

### Overview

#### Ownership & Structure

SolarVault AgriSystems is a Limited Liability Company (LLC) registered with the Corporate Affairs Commission (CAC) of Nigeria. The company is structured as a strategic partnership:

- Chukwuka Egbe: Majority shareholder, Managing Director (operations, strategy, international partnerships)
- Newistt Limited (Terry Akuchu Tohlah): Minority shareholder, Technology Partner (ERP platform, IT systems, business networks)

### Team

#### Management Team

Chukwuka Egbe is an engineer with both local and international experience as an Electrical Engineer and Business Data Analyst. He is currently pursuing an Executive MBA (EMBA), specializing in supply chain management, agricultural technology, and international business. Through the EMBA program, he is acquiring expertise in

- Cold chain logistics and post-harvest management
- Supply chain optimization and ERP systems
- Business Strategy

- Financial modeling and project management
- International best practices in food storage and distribution

My international training combined with deep understanding of Nigerian agricultural challenges positions me to lead this venture. I will be responsible for overall strategy, operations, government relations, and farmer partnerships.

Terry Akuchu Tohlah - Technology Director & Partner (Newistt Limited) Terry is the Managing Director of Newistt Limited, an established IT solutions and ERP consultancy firm in Enugu. With 8 years of experience in enterprise software implementation, Terry brings:

- Proven ERP platform development and customization
- Existing business networks across Southeast Nigeria
- IT infrastructure and systems integration expertise
- Local market knowledge and operational experience

Terry will lead technology development, ensuring our ERP platform provides seamless booking, payment, monitoring, and reporting for customers.

To be hired - Facility Manager Experienced cold storage operator responsible for day-to-day facility operations, maintenance, quality control, and staff management.

To be hired - Finance Manager Chartered Accountant responsible for financial management, government relations, grant applications, loan compliance, and reporting.

To be hired - Sales & Farmer Relations Manager Agricultural extension background, responsible for farmer cooperative partnerships, customer acquisition, training programs, and community engagement.

#### Personnel Table

Position	2026	2027	2028
Managing Director ( <b>Chukwuka Egbe</b> )	₦6M	₦6.5M	₦7M
Technology Director (Terry - part-time)	₦2.4M	₦3M	₦3.6M
Facility Manager	₦2.4M	₦2.5M	₦2.6M
Finance Manager	₦2.4M	₦2.5M	₦2.6M
Sales/Farmer Relations Manager	₦2.4M	₦2.5M	₦2.6M
Cold Room Technicians (2)	₦2.9M	₦3M	₦3.1M
Security Guards (3 shifts)	₦2.2M	₦2.3M	₦2.4M
Drivers/Logistics (2)	-	₦2.4M	₦2.5M
Additional Facility Staff	-	₦3.6M	₦7.2M
Sales Team (field officers)	-	₦3.6M	₦7.2M
<b>TOTAL PERSONNEL COSTS</b>	<b>₦22M</b>	<b>₦31.9M</b>	<b>₦42.8M</b>

# FINANCIAL PLAN

## Forecast

### Key Assumptions

Our key assumptions are:

- **Agricultural production continues growing** as government prioritizes food security
- **Farmers need reliable storage** to avoid distress sales and spoilage
- **Solar technology** eliminates grid power dependency
- **Government support** through NiPHaST program provides financing and contracts
- **Technology adoption** increases as young farmers and cooperatives embrace mobile apps
- **Climate change** makes cold storage increasingly essential, not optional
- **Export markets** require cold chain infrastructure, creating premium customer segment

### Revenue by Month - Year 1

#### Assumptions:

- Facility opens Month 10 (after 9-month construction/setup)
- Ramp-up: Month 10 (30%), Month 11 (50%), Month 12+ (80%)
- Average rate: ₦700/crate/week
- Facility capacity: 25,000 crates
- Transport: 50 trips/month @ ₦75,000

Month	Storage Revenue	Transport Revenue	Total
Jan-Sep	₦0	₦0	₦0
Oct	₦15.8M	₦3.8M	₦19.6M
Nov	₦26.3M	₦5.6M	₦31.9M
Dec	₦42M	₦5.6M	₦47.6M
TOTAL (3 months)	₦84.1M	₦15M	₦99.1M

**Note:** Year 1 revenue reflects only 3 months of operations (Oct-Dec).

## Expenses by Month - Year 1

Category	Jan-Sep (Setup)	Oct-Dec (Operations)	Total Year 1
Salaries & Wages	₦11M	₦11M	₦22M
Facility Rent/Lease	₦1.7M	₦0.8M	₦2.5M
Maintenance & Repairs	₦2M	₦6M	₦8M
Marketing	₦4M	₦2M	₦6M
Utilities & Fuel	₦1M	₦2M	₦3M
Insurance	₦3M	₦1M	₦4M
Admin & Overhead	₦3M	₦2M	₦5M
Depreciation	₦9M	₦3M	₦12M
TOTAL EXPENSES	₦34.7M	₦27.8M	₦62.5M

## Net Profit (or Loss) by Year

Metric	2026	2027	2028
Revenue	₦80M	₦153M	₦255M
Direct Costs	₦40M	₦68M	₦102M
Gross Margin	₦40M	₦85M	₦153M
Gross Margin %	50%	56%	60%
Operating Expenses	₦32M	₦45M	₦58M
Operating Income	₦8M	₦40M	₦95M
Interest on Loan	₦8.1M	₦7.2M	₦6M
Depreciation	₦12M	₦18M	₦25M
Taxes	₦0	₦0	₦0
Net Profit	₦8M	₦48M	₦108M
Net Profit %	10%	31%	42%

## FINANCING

### Use of Funds

#### Startup Expenses:

Item	Cost (₦)	Cost (\$)
<b>Land &amp; Infrastructure</b>		
Land lease (3 years prepaid)	₦5,000,000	\$6,000
Cold room construction (500T)	₦60,000,000	\$72,000
Solar system (50kW + batteries)	₦30,000,000	\$36,000
Office building	₦10,000,000	\$12,000
<b>Equipment</b>		
Refrigerated truck (1 unit)	₦25,000,000	\$30,000
Forklifts, pallets, tools	₦8,000,000	\$9,600
<b>Technology</b>		
ERP system & mobile app	₦5,000,000	\$6,000
IoT sensors, CCTV, computers	₦3,000,000	\$3,600
<b>Working Capital</b>		
Operating expenses (9 months)	₦25,000,000	\$30,000
Marketing & customer acquisition	₦5,000,000	\$6,000
<b>Legal &amp; Administrative</b>		
Business registration, licenses	₦3,000,000	\$3,600
Insurance (first year)	₦4,000,000	\$4,800
Contingency (10%)	₦17,000,000	\$20,400
<b>TOTAL STARTUP CAPITAL</b>	<b>₦200,000,000</b>	<b>\$240,000</b>

#### Sources of Funds

#### Capital Structure:

Source	Amount (₦)	Amount (\$)	% of Total
Personal Investment ( <b>Chukwuka Egbe</b> )	₦28,000,000	\$33,600	14%
Newistt Limited (Partner Equity)	₦40,000,000	\$48,000	20%
Bank Loan (DBN/NIRSAL)	₦90,000,000	\$108,000	45%
Government Grant (NiPHaST)	₦30,000,000	\$36,000	15%
Angel Investor/Development Fund	₦12,000,000	\$14,400	6%
<b>TOTAL FUNDING</b>	<b>₦200,000,000</b>	<b>\$240,000</b>	<b>100%</b>

#### Loan Terms:

- Amount: ₦90 million
- Interest Rate: 9-11% per annum (DBN concessional rate)
- Term: 5 years
- Moratorium: 12 months (interest-only during construction)

## STATEMENTS

### Projected Profit & Loss

	2026	2027	2028
<b>Revenue</b>	₦80,000,000	₦153,000,000	₦255,000,000
<b>Direct Costs</b>			
Storage Operations	₦25,000,000	₦42,000,000	₦63,000,000
Transport Operations	₦10,000,000	₦18,000,000	₦27,000,000
Technology Platform	₦5,000,000	₦8,000,000	₦12,000,000
<b>Total Direct Costs</b>	₦40,000,000	₦68,000,000	₦102,000,000
<b>Gross Margin</b>	₦40,000,000	₦85,000,000	₦153,000,000
<b>Gross Margin %</b>	50%	56%	60%
<b>Operating Expenses</b>			
Salaries & Wages	₦22,000,000	₦31,900,000	₦42,800,000
Maintenance & Repairs	₦8,000,000	₦12,000,000	₦18,000,000
Marketing & Sales	₦6,000,000	₦9,000,000	₦12,000,000
Utilities & Fuel	₦3,000,000	₦5,000,000	₦7,000,000
Insurance	₦4,000,000	₦6,000,000	₦8,000,000
Rent (land lease)	₦2,500,000	₦2,500,000	₦2,500,000
Admin & Overhead	₦5,000,000	₦8,000,000	₦12,000,000
<b>Total Operating Expenses</b>	₦50,500,000	₦74,400,000	₦102,300,000
<b>EBITDA</b>	₦29,500,000	₦78,600,000	₦152,700,000
Depreciation & Amortization	₦12,000,000	₦18,000,000	₦25,000,000
Interest Expense	₦8,100,000	₦7,200,000	₦6,000,000
<b>Profit Before Tax</b>	₦9,400,000	₦53,400,000	₦121,700,000
Income Tax (0% - Pioneer Status)	₦0	₦0	₦0
<b>Net Profit</b>	₦9,400,000	₦53,400,000	₦121,700,000
<b>Net Profit Margin</b>	12%	35%	48%

### Projected Balance Sheet

	Starting	2026	2027	2028
<b>ASSETS</b>				
<b>Current Assets</b>				
Cash	₦45,000,000	₦28,400,000	₦65,800,000	₦142,500,000
Accounts Receivable	₦0	₦13,300,000	₦25,500,000	₦42,500,000
Inventory (spare parts)	₦0	₦5,000,000	₦8,000,000	₦12,000,000
<b>Total Current Assets</b>	₦45,000,000	₦46,700,000	₦99,300,000	₦197,000,000
<b>Fixed Assets</b>				
Land & Buildings	₦75,000,000	₦75,000,000	₦150,000,000	₦225,000,000
Equipment & Vehicles	₦36,000,000	₦36,000,000	₦60,000,000	₦90,000,000
Solar & Refrigeration Systems	₦33,000,000	₦33,000,000	₦66,000,000	₦99,000,000
Technology & Software	₦8,000,000	₦8,000,000	₦12,000,000	₦18,000,000
Less: Accumulated Depreciation	₦0	(₦12,000,000)	(₦30,000,000)	(₦55,000,000)
<b>Net Fixed Assets</b>	₦152,000,000	₦140,000,000	₦258,000,000	₦377,000,000
<b>TOTAL ASSETS</b>	₦197,000,000	₦186,700,000	₦357,300,000	₦574,000,000

<b>LIABILITIES</b>				
<b>Current Liabilities</b>				
Accounts Payable	₦0	₦8,000,000	₦12,000,000	₦18,000,000
Short-Term Debt (current portion)	₦0	₦18,000,000	₦18,000,000	₦18,000,000
Accrued Expenses	₦0	₦3,000,000	₦5,000,000	₦8,000,000
<b>Total Current Liabilities</b>	₦0	₦29,000,000	₦35,000,000	₦44,000,000
<b>Long-Term Liabilities</b>				
Long-Term Debt	₦90,000,000	₦72,000,000	₦54,000,000	₦36,000,000
<b>Total Liabilities</b>	₦90,000,000	₦101,000,000	₦89,000,000	₦80,000,000
<b>EQUITY</b>				
Paid-In Capital	₦107,000,000	₦107,000,000	₦107,000,000	₦107,000,000
Retained Earnings	₦0	(₦21,300,000)	₦32,100,000	₦153,800,000
Current Year Earnings	₦0	₦0	₦129,200,000	₦233,200,000
<b>Total Equity</b>	₦107,000,000	₦85,700,000	₦268,300,000	₦494,000,000
<b>TOTAL LIABILITIES &amp; EQUITY</b>	₦197,000,000	₦186,700,000	₦357,300,000	₦574,000,000

### Projected Cash Flow Statement

	2026	2027	2028
<b>Cash Flow from Operations</b>			
Net Profit	₦9,400,000	₦53,400,000	₦121,700,000
Depreciation & Amortization	₦12,000,000	₦18,000,000	₦25,000,000
Changes in Working Capital:			
(Increase) in Accounts Receivable	(₦13,300,000)	(₦12,200,000)	(₦17,000,000)
(Increase) in Inventory	(₦5,000,000)	(₦3,000,000)	(₦4,000,000)
Increase in Accounts Payable	₦8,000,000	₦4,000,000	₦6,000,000
Increase in Accrued Expenses	₦3,000,000	₦2,000,000	₦3,000,000
<b>Net Cash from Operations</b>	₦14,100,000	₦62,200,000	₦134,700,000
<b>Cash Flow from Investing</b>			
Purchase of Fixed Assets	(₦152,000,000)	(₦136,000,000)	(₦144,000,000)
<b>Net Cash from Investing</b>	(₦152,000,000)	(₦136,000,000)	(₦144,000,000)
<b>Cash Flow from Financing</b>			
Capital Contributions	₦107,000,000	₦0	₦0
Loan Proceeds	₦90,000,000	₦0	₦0
Government Grant	₦30,000,000	₦0	₦0
Loan Repayments	₦0	(₦18,000,000)	(₦18,000,000)
Interest Paid	(₦8,100,000)	(₦7,200,000)	(₦6,000,000)
<b>Net Cash from Financing</b>	₦218,900,000	(₦25,200,000)	(₦24,000,000)
<b>Net Change in Cash</b>	₦81,000,000	(₦99,000,000)	(₦33,300,000)
Cash at Beginning of Period	₦0	₦28,400,000	₦65,800,000
<b>Cash at End of Period</b>	₦81,000,000	₦28,400,000	₦32,500,000



## Key Financial Ratios

Ratio	2026	2027	2028	Industry Benchmark
Profitability				
Gross Margin %	50%	56%	60%	45-55%
Net Profit Margin %	12%	35%	48%	10-25%
Return on Assets (ROA)	5%	15%	21%	8-15%
Return on Equity (ROE)	11%	20%	25%	15-25%
Liquidity				
Current Ratio	1.6	2.8	4.5	>1.5
Quick Ratio	1.4	2.6	4.2	>1.0
Efficiency				
Asset Turnover	0.43	0.43	0.44	0.3-0.5
Inventory Turnover	8x	8.5x	8.5x	6-10x
Days Sales Outstanding	61 days	61 days	61 days	45-60 days
Leverage				
Debt-to-Equity Ratio	1.18	0.33	0.16	<1.0
Debt Service Coverage	1.6	3.5	7.5	>1.25
Interest Coverage	3.6	10.9	25.3	>3.0

## APPENDIX

### Break-Even Analysis

#### Fixed Costs (Annual):

- Salaries & wages: ₦22,000,000
- Rent/lease: ₦2,500,000
- Insurance: ₦4,000,000
- Marketing: ₦6,000,000
- Admin overhead: ₦5,000,000
- Depreciation: ₦12,000,000
- Interest: ₦8,100,000 **Total Fixed Costs: ₦59,600,000**

#### Variable Costs per Crate:

- Power (solar maintenance): ₦50
- Labor (handling): ₦80
- Maintenance: ₦20 **Total Variable Cost: ₦150/crate**

**Revenue per Crate:** ₦700/week average = ₦2,800/month

**Contribution Margin:** ₦2,800 - ₦600 (monthly variable) = ₦2,200/crate/month

**Break-Even Volume:**

- Annual: ₦59,600,000 ÷ ₦2,200 = 27,090 crate-months
- Monthly: 2,258 crates occupied continuously
- Utilization: 2,258 ÷ 25,000 capacity = **9% minimum utilization**

**Expected Year 1:** 80% average utilization = 20,000 crates = **8.9x break-even**

**Sensitivity Analysis**

**Scenario 1: Pessimistic (50% utilization)**

- Revenue: ₦50M (Year 1)
- Net Profit: ₦4M
- Break-even: Month 22

**Scenario 2: Base Case (80% utilization)**

- Revenue: ₦80M (Year 1)
- Net Profit: ₦9.4M
- Break-even: Month 18

**Scenario 3: Optimistic (100% utilization)**

- Revenue: ₦100M (Year 1)
- Net Profit: ₦15M
- Break-even: Month 15

**Key Sensitivities:**

- **10% price reduction:** Net profit decreases by 25%
- **20% volume increase:** Net profit increases by 40%
- **15% cost overrun:** Break-even delayed by 3 months
- **Interest rate +3%:** Net profit decreases by 8%

**Risk Mitigation Strategies**

**Market Risk - Low Adoption**

- Mitigation: Free trials, farmer education, cooperative partnerships
- Contingency: Diversify to traders/processors if farmer uptake slow

### **Operational Risk - Equipment Failure**

- Mitigation: Preventive maintenance contracts, backup generators, insurance
- Contingency: Emergency repair fund (₦5M reserve), vendor rapid response agreements

### **Financial Risk - Cash Flow Constraints**

- Mitigation: Prepayment discounts, working capital reserve (₦25M)
- Contingency: Credit line arrangement, partner capital injection option

### **Regulatory Risk - License Delays**

- Mitigation: Early applications, government relations specialist
- Contingency: Soft launch with pilot customers while awaiting approvals

### **Competitive Risk - New Entrants**

- Mitigation: Rapid expansion, strong farmer relationships, technology moat
- Contingency: Price flexibility, superior service differentiation

### **Exit Strategy**

#### **5-Year Growth to Exit Options:**

##### **Option 1: Strategic Acquisition**

- Target buyers: Large agricultural companies, cold chain multinationals, development finance institutions
- Estimated valuation (Year 5): ₦2-3 billion (10-15x EBITDA)

##### **Option 2: Franchise/Licensing**

- License business model to regional operators
- Royalty income stream while maintaining equity

##### **Option 3: IPO/Public Offering**

- List on Nigerian Stock Exchange
- Maintain operational control while providing liquidity

##### **Option 4: Private Equity Investment**

- Partial exit for founders, capital for aggressive expansion
- Target: 40-60% stake sale

## CONCLUSION

SolarVault AgriSystems addresses a ₦3.5 trillion national crisis with a proven, scalable, technology-enabled solution. The combination of my international EMBA training from Trinity Western University, Newistt's local IT/ERP expertise, renewable energy independence, and affordable pay-per-use pricing positions us for success in a market with minimal competition and massive government-backed demand.

With ₦200 million startup capital, we project:

- **Profitability within 18 months**
- **₦255 million revenue by Year 3**
- **48% net profit margin by Year 3**
- **42-48% IRR over 5 years**
- **Significant social impact:** reducing post-harvest losses by 83%, increasing farmer incomes by 50%, creating 100+ jobs

The timing is ideal with:

- NiPHaST \$3.5 billion government commitment
- Minimal competition in rural markets
- Strong farmer demand
- Proven technology (solar + cold storage)
- Clear path to profitability and scale

We are ready to execute immediately upon my return from Canada with my EMBA degree in 06/30/2027.

Prepared by:

Chukwuka Frank Egbe

07/10/2025

ChukwukaEgbe@zoho.com

In Partnership with:

Terry Akuchu Tohlah, Managing Director

terry.akuchu@newistt.com

Newistt Limited, Enugu, Nigeria