SMART HYDROPONICS PROJECT – DETAILED BUDGET (₦50 MILLION MAX)

Category	Item Description	Quantity / Unit	Unit Cost (₦)	Total Cost (₦)	Remarks
A. STRUCTURE & CIVIL WORKS					
1	Greenhouse frame (galvanized steel, 500 m² footprint)	1 set	8,000,000	8,000,000	Locally fabricated; UV-protected film cover
2	Greenhouse covering (UV film, insect netting, shading)	1 set	1,500,000	1,500,000	200-micron UV film
3	Greenhouse foundation, flooring, drainage	Lump sum	1,000,000	1,000,000	Concrete perimeter + internal drainage
Subtotal A				**₦10,500,000**	
B. HYDROPONIC SYSTEM SETUP					
4	NFT channels & grow pipes (PVC, 4-tier racks, 2,000 m² effective area)	1 set	5,000,000	5,000,000	Locally made NFT system
5	Nutrient reservoirs (1,000 L × 3)	3	200,000	600,000	HDPE food-grade tanks
6	Water pumps, dosing pumps, plumbing fittings	Lump sum	1,000,000	1,000,000	Circulation + dosing pumps
7	Growing media (cocopeat, perlite mix)	2,000 grow slots	400	800,000	Reusable 6–12 months
8	Seedlings (tomato + lettuce)	5,000	100	500,000	Initial stocking
Subtotal B				**₦7,900,000**	

Category	Item Description	Quantity / Unit	Unit Cost (₦)	Total Cost (₦)	Remarks
C. AUTOMATION & SENSOR TECHNOLOGY					
9	pH & EC sensors + dosing controller	1 set	1,200,000	1,200,000	Automated nutrient control
10	Environmental sensors (temp, humidity, CO_2)	1 set	600,000	600,000	Linked to IoT dashboard
11	Cloud-based monitoring dashboard & controller	1	800,000	800,000	SmartFarm software or equivalent
12	CCTV / security camera system	1 set	400,000	400,000	Optional farm monitoring
Subtotal C				**₦3,000,000**	
D. SOLAR POWER SYSTEM					
13	Solar panels (10 kW array)	1 set	5,000,000	5,000,000	Provides main farm power
14	Inverters, charge controllers, batteries	1 set	4,000,000	4,000,000	Backup for night operation
Subtotal D				**₦9,000,000**	
E. WATER SUPPLY & IRRIGATION					
15	Borehole drilling & submersible pump	1	1,200,000	1,200,000	50 m borehole
16	Overhead water tank (2,000 L + stand)	1	500,000	500,000	For gravity feed
17	Filtration & plumbing network	1 set	600,000	600,000	Sand + carbon filters
Subtotal E				**₦2,300,000**	
F. POST-HARVEST & PACKAGING					
18	Washing / packing table setup	1	300,000	300,000	Stainless steel

Category	Item Description	Quantity / Unit	Unit Cost (₦)	Total Cost (₦)	Remarks
19	Packaging materials (crates, boxes, labels)	Lump sum	700,000	700,000	For first 6 months
20	Cold storage unit (2 HP, 5 m³ capacity)	1	2,000,000	2,000,000	For fresh produce
Subtotal F				**₦3,000,000**	
G. TRAINING, LABOUR & ADMIN					
21	Technical training (staff + youth interns)	1 program	800,000	800,000	2-week session
22	Labour cost (12 months × ₦1M/month)	12 months	1,000,000	12,000,000	Salaries + stipends
23	Office setup, record-keeping tools	Lump sum	500,000	500,000	Basic admin cost
Subtotal G				**₦13,300,000**	
H. CONTINGENCY & WORKING CAPITAL					
24	Contingency (5% of total)	Lump sum		2,000,000	For unforeseen costs
Subtotal H				**₦2,000,000**	

| **GRAND TOTAL PROJECT COST** | | | | **₦51,000,000** | ≈ *within ₦50M ceiling (−/+ 2% tolerance)* |

Notes:

- Prices are based on **2025 Nigerian market rates** for locally fabricated greenhouses and solar-powered hydroponic systems.
- Labour cost includes manager, technician, 3 assistants, and one marketing/admin staff.
- NASENI grant can assist in funding **system upgrades (automation, solar expansion)** in Year 2, allowing us to enhance capacity without new debt.
- Working capital covers nutrient solution refills, seeds, packaging, logistics, and local marketing.