Scaling AI across HVAC

NetOlink AI

Revolutionizing HVAC Systems with NetOlink's TARA platform

By Akshay MAkar

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CEO of Net0link

Akshay Makar

Why Must Him?

- 1 time Entrepreneur, Former CEO of a Solar Thermal Startup
- Responsible for $4.8 million of Gross Solar Heat Projects. Initiated from Scratch
- Forbes Asia, Forbes India 30-under-30, GreenBiz 30-under-30, EG Fellow, BP Young Entrepreneur of the Year.

CTO of Net0link

Jayesh Gupta

Why Must Him?

- Masters in Nuclear Engineering, Worked at IISc Bangalore
- 9+ years of experience in CFD, Physics & Mathematical Modelling, Digital Twin, Data Science worked with IoT & AI Companies like Smart Joules and Bert Labs
- Leading Development of AI and Technology at Net0link

NetOlink: Competitive Advantage

NetOlink AI differentiates itself from Existing players in several key ways:

Features	Carrier	Enlogs	75F	NetOlink
Core Technology	Primarily a hardware-based HVAC manufacturer. Offers IoT & AI-driven controls, but AI plays a supporting role in efficiency improvements.	IoT-based automation (possibly rule-based)	IoT-driven smart building automation	**Generative AI-driven HVAC optimization**
AI Approach	Uses IoT-based predictive analytics for fault detection & efficiency improvements. AI mostly assists hardware performance tuning.	Standard AI/IoT automation (likely sensor-based rule engines)	Cloud-based predictive analytics, focuses on comfort & automation	**Self-Adaptive AI: Learns from 1,500+ data points/min, integrates thermal dynamics, airflow, and ASHRAE standards**
Implementation Time	Requires hardware upgrades for full AI optimization, Upto 12 weeks for AI-enabled HVAC retrofitting.	Unknown (likely 6+ months for full-scale retrofitting)	6-12 months (Retrofitting needed for sensor/controller installation)	**4-6 week (plug & play, m hardware modification)**
Fault Detection & Optimisation	Uses AI-powered anomaly detection, Identifies faults but requires human intervention for adjustments.	Likely reactive alerts without generative adaptation	Sensor-based predictive analytics, does not dynamically self-adjust HVAC parameters	**Proactive root-cause analysis with LLMs & predictive maintenance**
Energy Savings	15-25% energy reduction in optimized HVAC systems, Hardware-dependent efficiency (e.g., chiller efficiency improvements).	Unknown but likely lower efficiency due to rule-based automation	10-20% HVAC cost reduction	**Upto 30% reduction in HVAC costs**
Market Focus	Large-scale commercial & industrial HVAC markets, Focus on hardware sales & maintenance contracts.	Generalized building automation, logistics, and energy management	Smart buildings (offices, malls, hotels, mixed-use spaces)	**Commercial real estate, Pharma, FMCG**
Business Model	Traditional hardware sales + maintenance contracts, Sells equipment & after-sales services	Likely SaaS-based or project-based automation services	Hardware sales + Subscription-based analytics	**SaaS + Energy Sharing + Carbon Credit**
ROI Timeline	1.5-2 years ROI (due to hardware investments).	Likely 3+ years for full returns	2-3 years (primarily software-driven insights)	**SaaS < 12 months**

Why HVAC is Deadly Market?

Energy Waste

Buildings waste 40% of HVAC energy due to poor optimization (DOE, US)

Missed Sustainability Goals

Building's HVAC accounts for 29% of global building emissions (UNEP)

Lost Revenue

Competitors forfeit $12B/year in untapped commercial/industrial HVAC SaaS

Why Competition can't Scale?

Challenge	Market Need?	Current Market Reality?
AI Mode	80-90%	20-30%
Implementation time	4-6 weeks	06-12 months
Facility Acqusition	100+/year	<5-8/year

Sources: DOE, UNEP, McKinsey HVAC Market Analysis 2023.

HVAC Control Crisis: Why Market is Failing to Scale?

Severe AI Underperformance

- **Initial AI Mode**: Only 20-30%
- **Peak Performance**: Stalls at 50-60%
- **Result**: Higher operational costs, Excess carbon emissions.

Poor Adaptation to system changes

- IOT/AI system performance degrades after:
  - Equipment Replacement
  - Emergency Repairs
  - Maintenance Procedures
- Increase Manual Intervention leading to declining AI-mode Performance

Insufficient Root cause Analysis

2 critical missing components:

- Physics based understanding of HVAC system
- ASHRAE standards Compliance mechanism

Implementation Bottlenecks

- **Client Growth**: <40 facility/decade
- **Hardware Retrofitting Disruptions**: 6-12 months downtime
- **High Costs**: $500K+ upfront investment

TARA: World's 1st Generative AI HVAC Engineer

Physics-First Intelligence

Deep HVAC Expertise: Integrates thermal dynamics, airflow patterns, and ASHRAE standards to optimize performance.

- **Self-Adaptive AI**: Processes 1,500+ data points/minute, achieving 90-95% autonomous operation (vs. industry's 20-60%).

Generative AI- Proactive Problem Solving

ProActive & Autonomous Root-Cause Analysis: Diagnoses issues, priorities repairs, self-corrects in real-time, reducing downtime by 85% using Physics + Pre-trained insights of HVAC Industry expert

- **LLM Driven Insights:** Uses weather forecasts, utility tariffs, and grid data to make smarter energy decisions.

Compliance & Adaptability

ASHRAE-Compliant: Ensures regulatory adherence while maximizing efficiency.

- **Minimum Hardware Retrofitting**: Plug-and-play software integrates with existing BMS, cutting implementation time by 80%.

TARA's Unmatched Capabilities

Feature	Competitors	TARA
Fault Detection	Reactive alerts	Proactive root-cause analysis
Energy Optimization	Static rules	Dynamic, AI-driven adjustments
ROI Delivery	3-5 years	<12 months

Measurable Outcomes

40% Lower Emissions

Achieves net-zero compliance for corporate/industrial Buildings

Up to 30% Energy Savings

Cuts HVAC costs by automating load balancing and peak shaving.

Zero Downtime

Reduces maintenance disruptions by 90% through predictive alerts

Why is this Game Changer?

Proprietary Algorithms
TARA uses domain-specific language models to interpret HVAC data like a human engineer

Generative Action Plans
Automatically drafts repair workflows, negotiates energy contracts, and forecasts savings.

Pilot Client
Pilot clients saw $108k/year savings and 25% faster decarbonization.

8	1
Total Facilities	Acutal Implementation

Sources: Pilot client data (NDA-protected), DOE benchmarks, McKinsey HVAC SaaS projections. Net0link AI trademarks apply.

Scalability & Market Domination: Why NetOlink Wins

Scale Now

Minimum Hardware Modification

Software-first approach slashes hardware retrofitting costs, cutting implementation time by 80%

- Industry avg: 6–12 months → NetOlink: < 4-6 weeks

Strategic IoT Partnerships

Pre-integrated alliances with HVAC Manufacturers and BMS giants including Siemens, and Honeywell ensure enterprise-grade infrastructure at scale

Rapid ROI Delivery

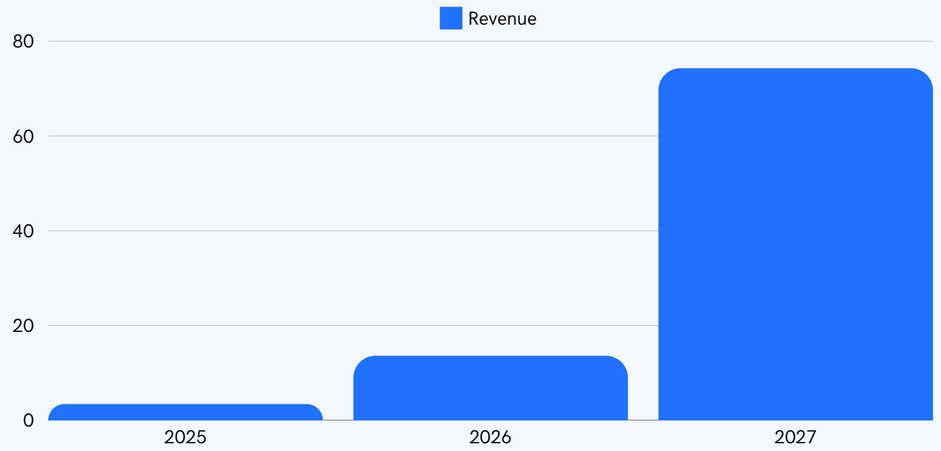
Plug-and-play deployment delivers energy savings in 2-4 weeks (vs. competitors' 6+ months).

Universal AI Engine

One platform adapts seamlessly to hotels, hospitals, factories, and offices — no niche limitations. ASHRAE variation introduced as per Building type, size and utilisation of HVAC

3 Year Goal: Agreesive Growth Trajectory

2025	2026	2027
6 Facility	24 Facility	125 Facility
Entry Market	Validation	Mass Adoption



25x Revenue Increase from 25-27 (Projected)

Net0link Business Model: Triple-Engine Revenue Machine

1/ Recurring SaaS Revenue: Scaleable, Predictable & Profitable

Tier	Facility Size	Monthly Price	Annual Price	Installation
Basic	50-200k sq ft	₹1.99L	₹21.5L	₹8.65L
Pro	200-700k sq ft	₹4.32L	₹46.74L	₹12.98L
Enterprise	700k+ sq ft	₹7.79L	₹84.14L	₹25.97L

Why it scales?

- 90% Gross Margins: Software-driven model with minimal incremental costs.
- Client Lock-In: 5-year avg. contract term + upsell to higher tiers.

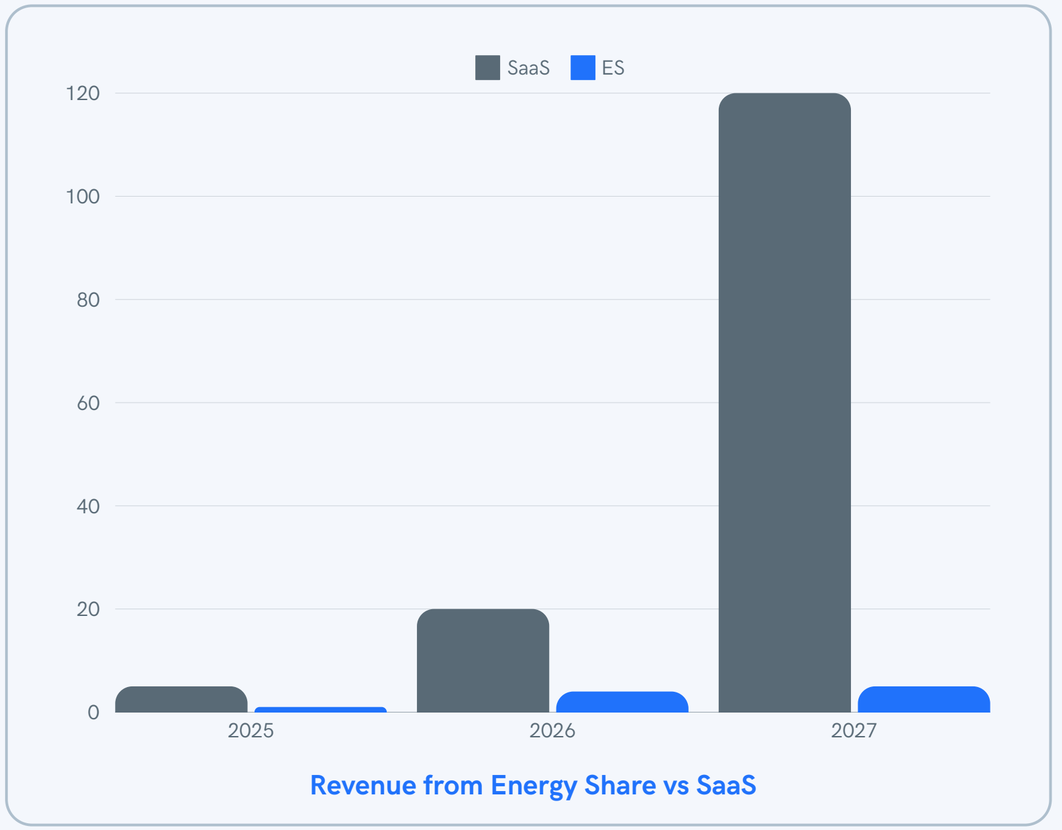
2/ Energy Sharing Model: Qucik On-boarding, Gain Trust

- **70% of Client Savings**: Net0link retains majority share while clients gain risk-free upside.
- **Proven Transition**: Clients like Coca-Cola's Enrich Agro shift to SaaS for 5 other projects after 10-year energy-sharing success.
- **Case Study**: ₹6.27Cr Total Revenue from Coca-Cola (Energy Savings + Carbon Credits).

Metric	Year 0-5	Year 6-10
Net0link Rev/year	₹73.1L	₹43L
Total Revenue	₹3.65 cr	₹2.15 Cr cr

3/ Carbon Credit Monetization: Sustainability as Profit

- **10.7K Tons CO2 Saved**: Coca-Cola project generates ₹46.4L in carbon credits ($5/ton).
- **Market Edge**: Integrates carbon trading into core platform, capturing $261B global carbon market (BloombergNEF).



Revenue from Energy Share vs SaaS

Why Net0link Dominates?

1. **95% from SaaS by Year 3:** Net0link will Scale our SaaS to Grow Quick
2. **20x Facility Growth in 36 Months** – From Startup to global dominance.
3. **Dual Impact**: Every 1.5M kWh saving = 1,800 Tons CO2 Eliminated.
4. **Growth Leadership**: 125 facility by 2027 = 8% of $12B HVAC SaaS TAM.
5. **Unlocking Potential**: SaaS locks clients → Energy sharing scales trust → Carbon credits monetize sustainability.

Sources: Internal projections, McKinsey HVAC SaaS TAM analysis, partner agreements.

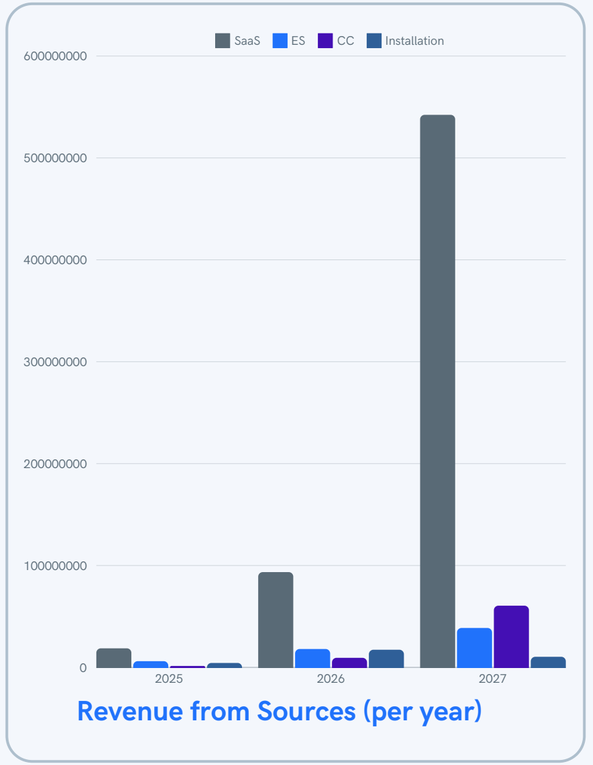
NetOlink Growth Trajectory

Explosive Market Penetration

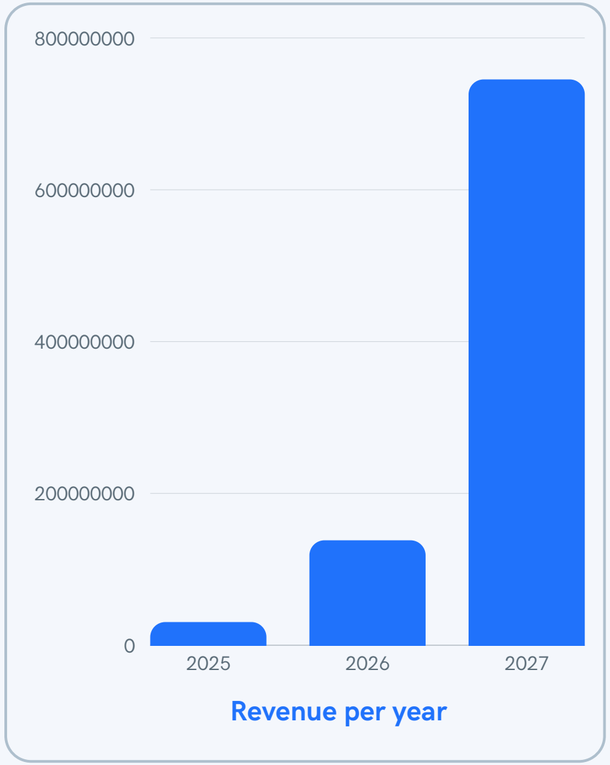
Metric	2025 (Year 1)	Monthly Price	Annual Price
Facility	6 facility	24 facility	125 facility
Energy Saved	5.7M kWh	22.8M kWh	118.75M kWh
CO2 Reduced	5415 tons	21,660 tons	112,813 tons
Revenue	₹3.06 Cr	₹13.82 Cr	₹74.54 Cr

Cumulative Impact:

- 20x Facility Growth (6 → 125).
- 172,377+ Tons CO2 Avoided = Removing 37,000 cars from roads for a year.
- **₹91.42 Cr** Total Revenue with 539% YoY Growth.



Revenue from Sources (per year)



Revenue per year

Revenue Acceleration: Dominating the HVAC SaaS Market

- Year 1 (2025): ₹3.06 Cr – Proving the Model
- Year 2 (2026): ₹13.82 Cr – 453% Growth
- Year 3 (2027): ₹74.54 Cr – 539% Growth
- 10-Year **LTV: ₹801.24 Cr** (Projected, 10 year Period).

Source	2025 (Year 1)	2026 (Year 2)	2027 (Year 3)
SaaS Subs.	₹1.87 Cr	₹9.35 Cr	₹54.23 Cr
Energy Share	₹60.92 L	₹1.80 Cr	₹3.87 Cr
Carbon Credit	₹14.06 L	₹93.76 L	₹6.06 Cr
Installation	₹43.29 L	₹1.73 Cr	₹10.39 Cr

Sources: Internal projections, McKinsey HVAC SaaS TAM analysis, partner agreements.

Market Dominance: Capturing India's $13B+ HVAC Efficiency Goldmine

Total Addressable Market in India (TAM): $13.24B

Segment	Market Size	Growth Driver
Commercial Real Estate	$7.26B (₹60K Cr)	21.6% CAGR – Urbanization & smart buildings
Pharmaceutical	$5.72B (₹47.2K Cr)	9% CAGR – Global compliance & cold-chain demand
FMCG Bottling	$0.89B (₹7.3K Cr)	12.1% CAGR – Sustainability mandates

Why India?

- 14.5% HVAC market CAGR until 2028 (vs. global 6.5%).
- 114,586Cr (13.24B) TAM ripe for AI-driven disruption.

SAM: $6.54B

NetOlink's Focus:

- Commercial Buildings: $3.63B (₹30K Cr) – Offices, malls, hotels.
- Pharma: $2.85B (₹23,625 Cr) – Labs, warehouses, manufacturing.
- FMCG Bottling: $0.36B (₹2,934 Cr) – Energy-intensive cooling systems.

Strategic Edge:

- AI-Powered HVAC: 40% efficiency gains for high-energy users.
- Regulatory Tailwinds: India's net-zero 2070 goal forces ESG compliance.

SOM: $458M+

Phase	Timeline	Market Penetration	Markets
Startup	2025-27	2% of SAM, Revenue Potential: ₹1,131 Cr	Majorly India while scaling in South East Asia & Middle-east
Scale-up	2028-2030	5% of SAM, Revenue Potential: ₹2,828 Cr	Scale-up in US & EU

- **TAM** $13.24 B
- **SAM** $6.54 B
- **SOM** $458 Million

Sources: India HVAC Market Report 2025, Govt. of India Net-Zero Roadmap, Frost & Sullivan Analysis.

NetOlink's Market Sweet Spot: Where High Growth Meets Uncontested Demand

The Sweet Spot Equation:

1. High-Growth Sectors + 2. Acute Pain Points + 3. NetOlink's Unmatched Edge

Segment	Market	CAGR	NetOlink's Leverage
Commercial building	$7.26B	21.6%	AI-driven smart buildings (40% cost reduction)
Pharmaceutical	$5.72B	9%	Cold-chain compliance + carbon credits
FMCG Bottling	$0.89B	12.1%	Energy-sharing model (70% savings capture)

Why this is Sweet Spot?

1. **Commercial Real Estate:**
   - $7.26B TAM with 21.6% CAGR - Largest and one of fastest-growing segment.
   - 40% Energy Waste in HVAC (DOE) → NetOlink's AI cuts costs by upto 30-40%.
   - Regulatory Push: India's Energy Conservation Building Code (ECBC) mandates efficiency.

2. **FMCG Bottling:**
   - **On-going Success**: Coca-Cola case study - ₹6.27Cr revenue, 10.7K tons CO2 saved.
   - **Scalable Model**: 70% energy-sharing revenue aligns with client sustainability goals.

3. **Pharma:**
   - **Critical Compliance**: Cold-chain demand + WHO/GMP standards → AI ensures 24/7 precision.
   - **Carbon Credits**: Pharma's $2.85B SAM offers untapped carbon revenue.

Dominance In Sweet Spot

Low Competition

Legacy players lack AI + multi-revenue integration.

Triple Engine Monetization

SaaS + Energy Sharing + Carbon Credits

First Mover Advantage

125 facility by 2027 = High HVAC SaaS market capture

Sources: India HVAC Market Report 2025, Coca-Cola Enrich Agro Case Study, DOE Energy Waste Data.

NetOlink Traction: Securing Market Leadership with Blue-Chip Partnerships

Proven Client Success: Coca-Cola Bottling Partner (Enrich Agro)

1. **Deal Structure:**
   a. **10-Year Energy Sharing Agreement:** 85% revenue share for NetOlink (Years 1-5), 50% split (Years 6-10).
   b. **Rohtak Site Impact:**
      i. Annual Energy Savings: 1,313,091 kWh (₹86 lakh saved) (Audited by BEE certified Auditor, Verified and Approved by Customer)
   c. **NetOlink Revenue:**
      i. Years 1-5: ₹73.1 lakh/year → ₹3.65 Cr total.
      ii. Years 6-10: ₹43.0 lakh/year → ₹2.15 Cr total.
   d. **Expansion:** LOI for 5 additional Coca-Cola sites within 6 months on SaaS model

Strategic Significance:

- **Proof of Scalability:** Transitioning from energy-sharing to SaaS model post-success.
- **Carbon Credits:** 10.7K tons CO2 reduction → ₹46.4 lakh in additional revenue.

Pipeline Momentum: Dominating Key Verticals

Client	Stage	NetOlink's Leverage
IHCL Properties	Feasibility Study	Targeting 15 luxury hotels, Starting with Vivanta by Taj, Dwarka (₹12Cr+ ARR potential)
JLL	Advanced Talks	328 million square feet of office assets in India. Targeting 3% by 2027
Leading Indian Airport	Advanced Talks	Opportunity for 26% energy reduction for terminal HVAC
Top 2 Pharma Companies	Advanced Talks	Cold-chain compliance + carbon credits

Why Investors Should Care?

De-Risked Growth:

- 10-year contracts ensure recurring revenue (as discussed in Growth Trajectory Slide)
- Coca-Cola LOI validates replicability across 5+ sites.
  - Diversified Pipeline:
- Hospitality (IHCL) + Aviation (Airport) + Pharma + Real Estate (JLL).
  - Market Validation:
- 85% revenue share in Year 1-5 signals client trust in NetOlink's tech.

NetOlink: Unique Moat & Long-Term Revenue Potential

1. Physics-First AI Platform (TARA):

Generative AI + HVAC Expertise

Integrates thermal dynamics, airflow patterns, and ASHRAE standards, enabling human-like decision-making. Competitors like 75F likely rely on generic AI without domain-specific physics modeling.

Self-Adaptive Intelligence

Processes 1,500+ data points/minute, achieving 90-95% autonomous operation (vs. industry's 20-60%). Maintains performance post-equipment changes/repairs; competitors degrade

2. Speed & Scalability

Implementation in 4-6 weeks

(vs. industry's 6-12 months) due to software-first, hardware-agnostic approach. Comptition may struggle with retrofitting delays.

Facility Acquisition

Targets 100+ facilities/year (vs. competitors' <5-8/year), enabled by partnerships with Giants including Coca-Cola, JLL & IHCL and BMS giants.

3. Revenue Capital Potential

Recurring SaaS:

High gross margins with tiered pricing (₹1.99L–₹7.79L/month). Long-term client lock-in (5-year avg. contracts).

Energy Sharing:

Captures 70% of client savings, aligning incentives (e.g., Coca-Cola deal generated ₹6.27Cr revenue)

Carbon Credits:

Monetizes sustainability (e.g., ₹46.4L from Coca-Cola's 10.7K tons CO2 reduction)

4. Strategic Advantages

Proven Traction

- Coca-Cola Partnership: 10-year energy-sharing contract (₹5.8Cr guaranteed revenue) with LOIs for 5 additional sites. Validates replicability.
- Diverse Pipeline: Clients like IHCL Hotels, JLL, and leading airports/pharma firms. 75F may lack such blue-chip validation.

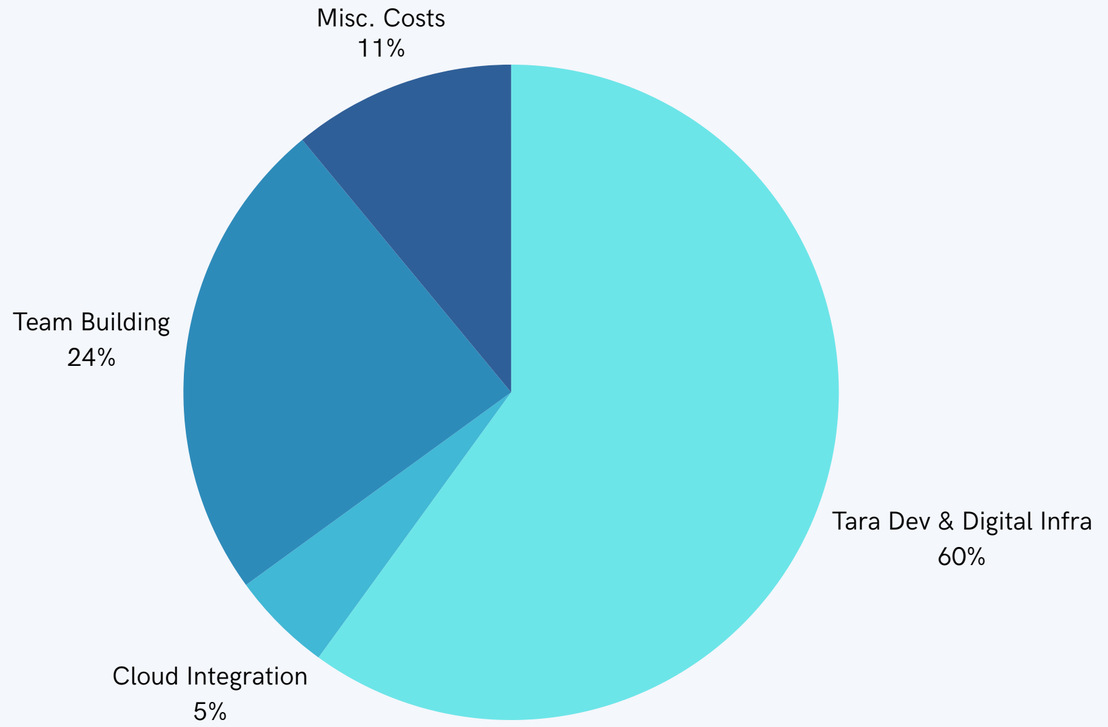
Technology Moats:

- Proprietary algorithms interpret HVAC data like human engineers, auto-generate repair workflows, and forecast savings. Competitors lack generative action plans.
- Universal AI Engine: Adapts seamlessly across building types (hotels, factories, offices), avoiding niche limitations.

NetOlink AI: Strategic Seed $250K Raise to Dominate the HVAC Efficiency Revolution

Investment Allocation

Category	Amount	% of Raise	Key Focus
Tara Dev & Digital Infrastructure	$150,745	60%	HVAC Agents, sensors, IoT & Controllers
Cloud Integration	$12,241	5%	AI models, data storage, dashboards
Team Building	$60,285	24%	Engineers, PMs, advisors
Miscellaneous Costs	$26,729	11%	Logistics, hardware, contingency



Total Raise: $250,000

Milestones to Unlock Next Round $2M Round, by 10/25 (Pre-Series A)

1. **Coca-Cola Success**: Deliver 21.8% energy savings by Q3 2025.
2. **LOI Conversions**: Convert 5 new Coca-Cola sites + 1 pharma + 1 IHCL Hotel client.
3. **Team Expansion**: Hire critical IoT and data science talent.

Why Invest Now?

1. **De-Risked**: Coca-Cola's 10-year contract guarantees ₹6.25Cr revenue (₹5.8 cr in Energy Savings + ₹45L in CC Sales)
2. **Scalable Foundation**: $250k will put us in position to scale Infra quick for scaleable growth.
3. **Massive Upside**: $2M follow-on round at 3x valuation post-Coca-Cola validation.

Sources: Coca-Cola Enrich Agro deployment, IHCL LOI, internal projections. Net0link trademarks apply.

Thank You

We are ready to assist you

Net0link AI

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