



Case Study

EBOOST - ASSIST Partnership

The expansion of charging station is shaping the EV's landscape in Vietnam

Funded by P4G

May 2025



Table of Content

1. Background and problem analysis	2
2. Solution	3
3. Defined methodology	4
4. Business model:	5
5. Results:	7
6. Challenges and solutions:	8
7. Lessons learnt:	9
8. Recommendations:	10
9. Annex 1:	10

1. Executive summary

EBOOST, in partnership with ASSIST and supported by P4G during the grant period from April 2024 to September 2025, is accelerating Vietnam’s electric vehicle (EV) transition by building the country’s largest **open charging network**. Addressing a critical infrastructure gap, EBOOST’s open-access model enables both two-wheeler and four-wheeler EV users—across multiple brands—to charge conveniently and reliably, supporting Vietnam’s 2050 net-zero target and reducing urban air pollution.

With P4G’s catalytic support—ranging from funding and due diligence to technical assistance and policy engagement—EBOOST achieved significant milestones during the grant period:

- Expanded to **320 locations** and **2,500+ charging points** nationwide
- Increased registered users from **881 to over 4,000**
- Boosted annual recurring revenue from **US\$10,000 to US\$50,000**
- Raised **US\$1.65 million** in total investment, including **US\$600,000** in debt financing during the P4G period
- Achieved annual CO₂ emissions reductions from **4.8 tonnes to 75 tonnes**

P4G’s involvement enhanced EBOOST’s credibility, attracted strategic partners, and supported engagement with policymakers.

Looking ahead, EBOOST aims to scale its integrated charging ecosystem, expand marketplace services, and further develop its IoT-enabled platform to serve a rapidly growing EV market in Vietnam and Southeast Asia. By combining infrastructure, technology, and strategic partnerships, EBOOST is driving cleaner transport, improved air quality, and inclusive access to sustainable mobility solutions.

2. Background and problem analysis

Vietnam is facing alarming levels of urban air pollution. Based on the global Air Quality Index (AQI), levels between 150 and 200 are considered harmful; major cities like Hanoi and Ho Chi Minh City frequently report daily AQI readings between 122 and 178. According to the 2016 Environmental Performance Index (EPI), Vietnam ranked 123rd globally for air quality, with projections suggesting further decline (Hansen, 2016). A key contributor to this issue is the dominance of gasoline-powered vehicles, which are responsible for up to 70% of urban emissions (Nguyen & Phan, 2019). Motorcycles alone made up 91% of the national vehicle fleet in 2020 (Tran, Le & Posada, 2022), underscoring the scale of fossil fuel dependency in transportation.

To address these challenges and achieve its 2050 net-zero emissions target, Vietnam is implementing policies to promote green transport. Measures include proposed restrictions on gasoline vehicles within Hanoi's Ring Road 1 and Ho Chi Minh City's plan to convert 400,000 motorcycles used for delivery purposes to electric models starting in 2026. However, the widespread availability of EV charging infrastructure remains a critical gap. A 2024 study by KPMG in Vietnam and Chợ Tốt Xe emphasized that access to charging stations significantly influences consumer decisions, particularly among those hesitant to adopt EVs (KPMG in Vietnam and Chợ Tốt Xe, 2024). While VinFast currently dominates Vietnam's EV market, its charging network is exclusive to VinFast users, leaving other brands with limited options. To ensure an inclusive and scalable EV transition, the development of a publicly accessible, brand-agnostic charging ecosystem is essential.

3. Solution

EBOOST is building Vietnam's largest open, scalable EV charging network, integrated with connected services to accelerate electric mobility. We provide accessible charging for multiple EV brands, addressing the gap left by closed, manufacturer-specific networks and supporting the country's net-zero 2050 target.

Charging Infrastructure – We develop and operate smart charging stations nationwide, including two-wheeler (e2W) stations, four-wheeler (e4W) slow AC, and fast DC stations. Our stations are strategically located in coffee shops, residential complexes, shopping malls, offices, and industrial parks to ensure maximum convenience and coverage.

Technology – We design, assemble, and quality-control our chargers in-house, integrating both hardware and software. Our open charge point protocols and customer app enable users to find nearby stations, pay seamlessly, and manage their entire charging session online.

Ecosystem – We collaborate with OEMs to provide charging solutions, use data for mobility prediction, calculate carbon credits, and create advertising opportunities through our network.

By combining infrastructure, technology, and partnerships, we are removing one of the biggest obstacles to Vietnam’s EV transition.



Charging stations supporting both electric cars and electric motorbikes

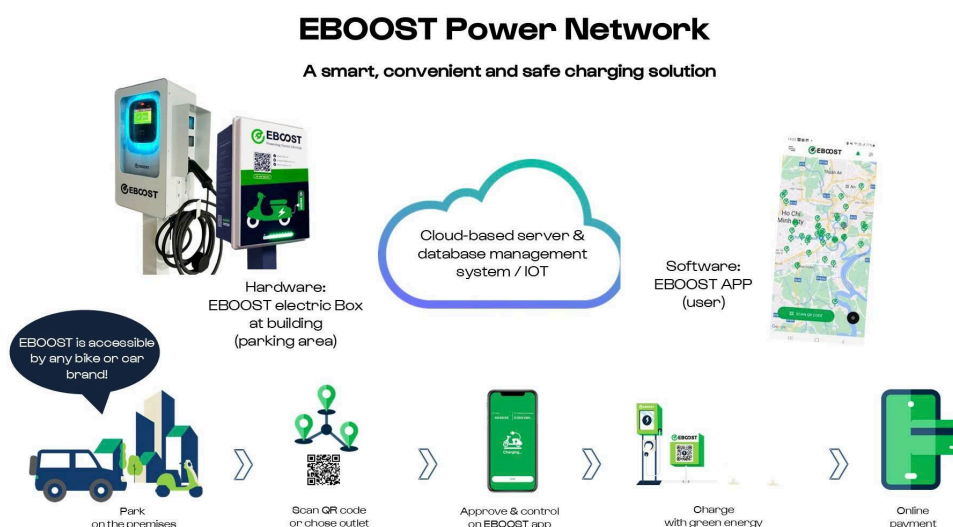
4. Defined methodology

EBOOST was founded by **Stefan Kaufmann**, whose professional background combines expertise in robotic microengineering with operational management experience in global companies. Initially, EBOOST entered the Vietnamese market by designing and selling its own electric bicycles. However, through market engagement, we quickly identified a critical barrier to

Vietnam's EV transition: existing charging systems were insufficient in coverage, reliability, and accessibility—particularly for users of different EV brands.

Recognizing this gap, we pivoted our focus to building an **inclusive, safe, and user-friendly charging ecosystem**. The innovation of EBOOST lies in offering not only physical charging solutions but also a seamlessly integrated technology platform based on **Internet of Things (IoT)** connectivity. This approach connects three core components:

1. **EBOOST Charger (Hardware)** – Our chargers are designed, assembled, and quality-controlled in-house to ensure safety, durability, and compatibility with multiple EV types. Equipped with IoT-enabled sensors, they monitor performance, detect faults in real-time, and optimize charging speed to protect vehicle batteries.
2. **EBOOST CMS (Cloud Management System)** – Serving as the digital backbone, the CMS enables remote monitoring, predictive maintenance, load balancing, and data analytics. This allows us to manage a distributed network of chargers efficiently while providing operators with actionable insights on usage patterns and energy consumption.
3. **EBOOST App (User Application)** – The mobile application offers a smooth customer experience, enabling users to locate available stations, start and stop charging sessions, make cashless payments, and track their charging history. Its intuitive interface lowers the barrier for first-time EV users and fosters confidence in the charging process.



By integrating these components into a connected system, EBOOST delivers a **scalable, interoperable, and data-driven charging solution** that addresses both infrastructural and user-experience challenges in Vietnam’s EV transition.

5. Business model:

Our business model is built on **three diversified revenue streams** that enable scalability, long-term growth, and resilience in the evolving electric mobility market.

1. Integrated Charging Business

We generate revenue directly from EV users through charging events at our stations. From this revenue, we pay the electricity fees to our location partners and share a commission based on agreed terms. We secure multi-year exclusive contracts with high-traffic locations such as residential complexes, commercial buildings, malls, and industrial parks. This ensures network stability and facilitates rapid expansion while maintaining mutually beneficial relationships with our partners.

2. Franchise Model

We sell EBOOST chargers for both public and home use, complemented by our “operation as a service” offering for partners who prefer to outsource station management. As EV adoption accelerates and demand for charging services increases, this revenue stream is expected to grow significantly. Our robust, locally designed hardware and software infrastructure ensures franchise partners can deliver a high-quality user experience while benefiting from our brand and operational expertise.

3. Marketplace Services

Our technology platform creates value beyond charging. We collaborate with OEMs to integrate charging solutions into their EV offerings, deliver targeted advertising and promotions via our app and stations, monetize carbon credits, and provide big data insights for after-sales services.

Through this multi-pronged model, we are not just operating a charging network — we are building an interconnected ecosystem that accelerates EV adoption, monetizes user engagement, and supports Vietnam’s sustainable mobility transition.

6. Results:

EBOOST has demonstrated significant business growth and commercial traction, establishing itself as a leading climate-tech startup in Vietnam's emerging electric vehicle (EV) sector. By the end of 2024, the company achieved approximately **US \$50,000 in annual recurring revenue**, up from **US \$10,000** prior to P4G support, reflecting a sustained upward trajectory.

During the P4G grant period, EBOOST secured **US \$600,000 in debt financing**, increasing its cumulative investment to **US \$1.7 million**. This achievement was facilitated by P4G's comprehensive support, including due diligence packages, technical assistance from vetted third-party provider Savant, and strategic guidance to address operational gaps. P4G's branding and endorsement boosted investor confidence, while its National Platform provided valuable leverage for engagement with the government.



Commercial expansion has been substantial. EBOOST's **brand-agnostic charging network** now spans **320 locations** and over **2,500 charging points**, with strategic partnerships established with industry leaders such as **BYD, GRAB, and HSBC**. This network addresses Vietnam's critical EV infrastructure gap and has attracted more than **4,000 registered user accounts**.

On the customer experience front, the **EBOOST App**—serving both two-wheel (e2W) and four-wheel (e4W) users—has been upgraded with IoT-based infrastructure, ensuring smooth operation, real-time connectivity, and full compliance with OCPP standards for interoperability.

across hardware brands. P4G funding played a central role in these upgrades. A customer testimonial highlights the value: *“It’s convenient and easy to use—just plug in and leave it for charging, even for aged people. It’s becoming more comprehensive, with features like a shade over the station for safety in the rain. My experience with EBOOST is satisfaction.”* (EBOOST, 2024)

The company’s expansion has yielded measurable climate impact, with **annual carbon emissions reductions** increasing from **4.8 tonnes CO₂e** before P4G to **75 tonnes CO₂e** after. With supportive government policy driving rapid EV adoption, these avoided emissions are expected to grow substantially.

Combining financial growth, technical innovation, strategic partnerships, and proven environmental benefits, EBOOST is well-positioned to accelerate Vietnam’s EV transition and expand into the broader regional market. P4G has been instrumental in this progress—funding key technological developments, supporting market expansion for both B2B and B2C segments, and collaborating with the P4G National Platform to navigate Vietnam’s evolving EV policy environment. This integrated support enables EBOOST to compete effectively in a dynamic market while delivering long-term social and environmental gains.

7. Challenges and solutions:

EBOOST’s expansion has been constrained by gaps in Vietnam’s EV policy framework, particularly at the implementation level. Two core challenges stem from incomplete or unclear regulations:

1. Absence of Standards for EV Charger Installation in Buildings

Currently, no unified regulations or technical standards govern the installation of EV charging stations across different building types. Securing permissions often proves costly and time-consuming, and in some cases, building partners refuse installation due to safety concerns. EBOOST addresses this through a case-by-case approach, tailoring solutions for each site. While effective in the short term, this is not a sustainable

long-term model. To address the root cause, EBOOST actively advocates for the issuance and adoption of national installation guidelines.

2. Policy-Implementation Gap

Vietnam is in a policy transition phase, with several supportive high-level directives in place but lacking operational clarity at lower administrative levels. For example, *Decision 14/2025/QĐ-TTg* on electricity pricing for EV charging represents a significant step forward; however, unclear implementation procedures have delayed deployment, particularly of DC charging stations. EBOOST engages directly with relevant government agencies to close these gaps, while continuing to develop and refine its products to be market-ready once policies are fully operational.

8. Lessons learnt:

Commercialization

Vietnam's EV market is still in its early stages, creating scalability challenges. Continuous product refinement is essential to be market-ready as awareness and adoption grow. The successful launch of our upgraded charging app underscored the need for scalable, reliable digital infrastructure supported by data analytics to anticipate and meet future demand.

Investability

P4G support boosted our credibility with partners and funders, but we learned that securing a committed local investor is critical for deepening our market presence and strengthening government relationships—key to accelerating growth beyond the grant period.

Enabling Environment

Navigating Vietnam's evolving EV policy framework demands persistence, clear communication, and strong networks. We recognized the need for a dedicated, experienced contact point for government engagement. Leveraging the P4G National Platform will remain essential for addressing regulatory gaps that directly affect our operations.

Environmental and Social Impact

Our charging solutions have a measurable impact on air quality and public health through

CO₂ reductions. They also provide quality livelihood support for EV drivers and delivery workers, though these social benefits have yet to be fully quantified. We plan to develop a robust methodology to capture both environmental and social impacts.

9. Recommendations:

Commercialization

- Adapt to local conditions early: Develop flexible, location-specific deployment strategies to navigate diverse building requirements, local regulations, and infrastructure constraints.
- Invest in future-ready tech: Build scalable, reliable digital platforms from the start, using data analytics to anticipate demand and guide product evolution.
- Form strategic alliances: Partner with OEMs, fleet operators, and property owners early to accelerate market entry and establish trust.

Investability

- Secure a strong local anchor investor: A local partner can open doors with government authorities, strengthen market presence, and increase operational agility.
- Leverage credibility from global partners: Use relationships with reputable international funders to attract additional investors and demonstrate proven impact.
- Enabling Environment
- Prioritize policy engagement: Allocate dedicated resources or personnel for government relations to navigate evolving regulations and maintain continuous dialogue.
- Use national and industry networks: Engage with platforms like P4G National Platform or industry associations to amplify advocacy and address policy gaps collectively.

Environmental & Social Impact

- **Quantify both environmental and social benefits:** Develop clear metrics for emissions reduction, air quality improvement, and the socio-economic benefits for EV drivers and delivery workers.

- **Communicate impact effectively:** Use data-backed evidence in outreach and fundraising to strengthen your value proposition and policy influence.

10. Annex:

Financial Metrics	BEFORE P4G	After P4G	Notes
Revenue	\$10,000	\$50,000	Total revenue
Gross Profit	\$5,600	\$27,500	Revenue minus cost of goods sold (COGS)
EBITDA	-\$350,000	-\$600,000	Earnings before interest, taxes, depreciation, and amortization
Net Income	-\$375,000	-\$650,000	Profit after all expenses and taxes
Operating Expenses	\$357,000	\$600,000	Total expenses for operations
Cash Flow	N/A	N/A	Net amount of cash inflow/outflow
Number of Consumers	881	2,500	Number of clients
Number of Offtake Agreements	100	350	Number of purchase agreements signed
Client Growth Ratio YoY	200%	90%	Increase of clients in the last year
Gross Margin Ratio	44%	45%	Gross Profit / Revenue x 100
Gross Ebitda Ratio	N/A	N/A	Ebitda / Gross Profit x 100
Debt-to-Equity Ratio	N/A	N/A	Describe financial leverage in the last FY
Customer Acquisition Cost (CAC)	\$10	\$15	Cost of acquiring a new customer
Lifetime Value (LTV)	N/A	\$545	Total revenue expected from a customer
Investment Achieved	\$400,000	\$1,650,000	Investment achieved through equity, debt and mixed instruments

ESG Metric	Before P4G	After P4G	Notes
Carbon Emissions (tonnes CO2e)	4.8	75	Total CO2 emissions in the last FY
People positively affected	574	2500	These are individuals directly and indirectly positively affected by climate resilience or adaptation related to the climate business commercial partner product or solution.
Jobs created	800	100	Jobs created outside of the commercial partner
Gender Diversity (% female employees)	43%	38%	Percentage of female employees
Compliance and Risk Management	Describe	Following policies have been implemented: ESMS, O&HS, AntiBribery, Crises Mgmt, Ext Audit, HR policy	Compliance Report (Laws and Regulations) Risk practices (processes and responsibilities) Risk management documentation (identification, mitigation and control) Audit policies (internal - external)
ESG Reporting and Transparency	Every 6 months, we issue ESG report	Every 6 months, we issue ESG report	Frequency of ESG reporting (# reports per year), Adherence to Standards (GRI, SASB, TCFD) Clear governance structure Integration with financial reporting
Board Diversity	0%	0%	%of Women of the board members

Reference

1. **Nguyen, T.H. and Phan, T.T.H.** (2019) *Urban transport in Vietnam: A perspective from environmental pollution*. *European Journal of Engineering Research and Science*, **4**(9), pp. 117—. Available at: <http://dx.doi.org/10.24018/ejers.2019.4.9.1525> (Accessed: 25 July 2025)
2. **Hansen, A.** (2016) ‘Driving Development? The Problems and Promises of the Car in Vietnam’, *Journal of Contemporary Asia*, **46**(4), pp. 551–569. doi:10.1080/00472336.2016.1151916
3. **Tran, D.-S., Le, H. and Posada, F.** (2022) *Two-wheelers in Vietnam: A baseline analysis of fleet characteristics and fuel consumption in 2019 and 2020*. Washington, DC: International Council on Clean Transportation. Available at: <https://theicct.org/publication/2w-lvs-vietnam-asia-baseline-feb22/> (Accessed: 25 July 2025).
4. **KPMG in Vietnam and Chợ Tốt Xe** (2024) *Driven by Voltage: Navigating the EV Landscape in Vietnam* [online]. Ho Chi Minh City: KPMG in Vietnam. Available at: <https://kpmg.com/vn/en/home/insights/2024/07/the-ev-landscape-in-vietnam.html> (Accessed: 25 July 2025)
5. **EBOOST** (2024) *Hệ thống trạm sạc EBOOST củng cố quyết định sử dụng xe điện* [YouTube video], *EBOOST*. Available at: <https://www.youtube.com/watch?v=H0Da-FB9WI4> (Accessed: 14 August 2025).