MubOn Case Study 2025

Smart Shared-Charging Infrastructure for Inclusive Electric Mobility in Colombia

1. Executive Summary

MubOn is addressing one of the main barriers to electric mobility in Colombia: limited, costly, and unevenly distributed charging infrastructure. While EV adoption is accelerating, the traditional one-user-one-charger model remains expensive, underutilized, and inaccessible for many urban users, especially those in multifamily buildings and shared commercial environments. MubOn's response is a shared, technology-enabled charging model that turns isolated charging points into a connected, higher-performing infrastructure network.

Its differentiated approach combines smart charging hardware, cloud-based software, user-facing booking and payment tools, and centralized operational management. This integrated model improves charger utilization, lowers installation cost per user, and expands access to EV charging across residential, commercial, and fleet settings. Compared with traditional private charging systems that often operate below 15% utilization, MubOn's shared model is estimated to reach 25% to 40% utilization, while reducing upfront installation costs in residential settings by roughly 30% to 50% per user.

The case study shows that MubOn is moving from validation to scale. In 2025, the company reported $498,888 in mobilized investment, $100,000 in gross revenue, over 100 charging points deployed, more than 22,000 charging sessions, 320,000 kWh of energy delivered, 7,000 monthly downloads, 800 monthly active users, and access enabled for more than 1,100 users. These results suggest that MubOn's model is not only technically viable, but also commercially promising and increasingly relevant for inclusive urban mobility.

Beyond economics, MubOn positions itself as an infrastructure enabler for a more inclusive energy transition. By concentrating demand into shared assets, the company increases energy throughput per installed unit, expands charging access beyond high-income early adopters, and supports emissions reduction through more efficient infrastructure deployment. Its ESG integration, ecosystem engagement, and transition toward an asset-light financing model further strengthen its fit for blended finance and long-term scale.

Overall, the case study presents MubOn as a company that is not simply installing chargers, but building a scalable, accessible, and financially viable shared-charging platform for Colombia and, potentially, other Latin American markets facing similar infrastructure gaps.

1. Background and Problem Analysis

Colombia's electric mobility transition is no longer constrained by demand for EVs, but by the lack of charging infrastructure that is accessible, scalable, and economically viable. The real bottleneck is not only the limited number of charging points, but also the inadequacy of the dominant one-user-one-charger model, which remains costly, underutilized, and poorly suited to dense urban environments such as multifamily housing, shared commercial properties, and fleet operations. As a result, the challenge is not simply to install more chargers, but to deploy charging infrastructure in a way that expands access, improves asset utilization, and supports a more inclusive and financially sustainable transition to electric mobility.

Colombia is undergoing one of the fastest electric mobility transitions in Latin America. Driven by national decarbonization targets, fiscal incentives, and increasing consumer demand, electric vehicle (EV)

adoption has accelerated significantly in recent years. More than 48,000 electric and plug-in hybrid vehicles are already in circulation, with projections surpassing 55,000 in the short term and continued exponential growth expected across the region.

However, this transition is constrained by a structural bottleneck: the limited availability of charging infrastructure. While vehicle adoption grows rapidly, charging points remain scarce and concentrated in major urban centers. Colombia currently has fewer than 250 public charging stations, creating significant gaps in accessibility.

This imbalance generates multiple barriers: range anxiety for users, high installation costs in residential buildings, slow electrification of corporate and logistics fleets, and limited access in peri-urban areas. As a result, infrastructure, not demand, is the primary constraint to scaling electric mobility.

Addressing this gap is essential for Colombia to meet its Nationally Determined Contributions (NDCs) and advance global goals such as SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities), and SDG 13 (Climate Action).

2. The Solution.

MubOn was created in response to a clear market failure: EV charging infrastructure in Colombia was being deployed as isolated, high-cost assets serving individual users, leaving much of the installed capacity underutilized while excluding large segments of the urban population from access. Emerging from pilot experience under DeepSea, the company reframed charging not as a standalone hardware sale, but as a shared infrastructure model powered by integrated software, real-time operations, and centralized management. By combining IoT-enabled charging stations, a cloud-based platform, mobile access, and predictive maintenance into one unified system, MubOn transforms charging into a shared, data-driven network that improves utilization, lowers cost per user, expands access across residential, commercial, and fleet environments, and creates a more scalable foundation for electric mobility.

2.1 Origin of MubOn

MubOn was founded in 2024 in Cali, Colombia, as a spin-off of DeepSea Developments, following a series of pilot projects that exposed a critical structural inefficiency in EV infrastructure deployment. During these early implementations, the team observed that most charging solutions were designed as individual systems, high-cost installations serving a single user, often remaining idle for most of the day. At the same time, other potential users lacked access entirely.

This mismatch revealed a fundamental problem: the existing model was both economically inefficient and socially exclusive. Infrastructure was underutilized, costly to deploy, and inaccessible to the majority of urban residents, particularly those living in multifamily buildings.

MubOn was created to address this failure by rethinking charging infrastructure as a shared, networked system, one that increases utilization, reduces costs, and expands access simultaneously.

2.2 The MubOn Solution

MubOn delivers an integrated solution that combines smart hardware, digital platforms, and operational management into a unified system. Its charging stations are IoT-enabled and connected to a cloud-based

platform (MubOn Cloud), which allows real-time monitoring, user authentication, payment processing, and predictive maintenance.

Rather than deploying isolated chargers, MubOn enables shared access across residential buildings, commercial properties, and fleet environments. Users can locate, book, and pay for charging services through a mobile interface, while property owners and operators manage infrastructure through centralized dashboards.

This model transforms charging infrastructure into a shared, data-driven network, increasing efficiency, reducing costs, and enabling scalability.

3. Methodology and Approach

At the heart of MubOn's model is an approach that treats charging infrastructure not as a fixed installation, but as a continuously optimized system. Through the integration of deployment, digital intelligence, and stakeholder coordination, MubOn has built a methodology that improves efficiency, reliability, and market fit over time. This operating logic helps explain why the company's solution is not only technically functional, but strategically positioned to scale.

MubOn's approach integrates infrastructure deployment with digital optimization and ecosystem engagement. The company operates across the full lifecycle of charging infrastructure, from design and installation to operation and performance monitoring.

A key feature of the model is its data-driven optimization. By tracking energy delivery, user behavior, and utilization patterns, MubOn continuously improves system efficiency and reliability.

At the same time, the company actively engages with stakeholders, including property developers, fleet operators, utilities, and regulators, to align infrastructure deployment with market needs and regulatory frameworks.

4. Business Model

What differentiates MubOn's business model is that it treats EV charging not as a hardware sale, but as a shared infrastructure platform with stronger economics. By shifting from exclusive-use chargers to multi-user access, the company increases revenue per asset, reduces installation cost per user, and creates a more scalable model across residential, commercial, and fleet segments. Combined with platform revenues and an asset-light scaling strategy, this makes MubOn's approach not only operationally effective, but increasingly attractive as a financially viable infrastructure play.

MubOn's business model is built on a combination of charging services, platform management, and infrastructure deployment, supported by a transition toward an asset-light structure.

Unlike traditional models that require high upfront investment per user, MubOn's shared infrastructure approach significantly improves economic performance. Individual charging systems typically operate at low utilization rates, often below 15%, due to exclusive use. In contrast, MubOn's shared model increases utilization to an estimated range of **25% to 40%**, allowing multiple users to access the same asset and generating higher revenue per charging point.

This efficiency translates into lower costs and stronger unit economics. In residential buildings, shared systems reduce upfront installation costs by approximately **30–50% per user**, as electrical infrastructure is distributed rather than duplicated. In commercial environments, charging stations can be monetized through pay-per-use models, creating new revenue streams while improving customer experience.

Current operational data indicates that semi-fast charging stations can generate approximately **$300 per month per unit**, with revenue potential increasing as utilization grows. This model is applicable across multiple segments, including residential buildings, commercial properties, and fleet operators, each benefiting from improved cost efficiency and operational optimization.

These economics are reinforced by strong market fundamentals. The rapid growth of EV adoption in Colombia, combined with the limited availability of charging infrastructure, creates a significant and immediate market opportunity. At the regional level, projections of over 20 million electrified vehicles in Latin America further highlight the long-term scalability of the model.

Compared to traditional individual charging systems, MubOn's shared model fundamentally improves asset performance. While private chargers are often underutilized and serve a single user, MubOn's infrastructure distributes usage across multiple users, increasing revenue generation per asset while lowering the cost per user. This shift, from ownership to access, is what enables both stronger unit economics and broader market adoption, making the model more scalable and financially attractive for investors.

5. Results and Impact

MubOn's early results suggest that its model is not only technically functional, but commercially credible and increasingly impactful. Across revenue generation, user adoption, energy delivery, and access expansion, the company is beginning to show that shared charging infrastructure can perform as both a viable business and an enabling platform for electric mobility.

MubOn's results reflect its transition from pilot-stage validation under DeepSea to its first full year of independent operations in 2025. To ensure consistency in measurement, baseline figures correspond to activities conducted under DeepSea prior to June 2024, while current performance reflects MubOn's standalone operations in 2025. Long-term targets are set for 2030, positioning the company within a clear growth and impact trajectory.

5.1 Financial and Business Performance

In 2025, MubOn mobilized **$498,888 in total investment**, including **$61,666 in commercial capital** and **$437,222 in non-commercial funding**, demonstrating strong alignment with both private investors and climate-focused funding sources.

The company generated **$100,000 in gross revenue**, marking its transition from pilot-stage validation to early commercialization. This revenue is primarily driven by charging services and platform usage, with a growing contribution expected from infrastructure scaling and increased utilization rates.

Operationally, MubOn has strengthened its investment readiness through **three due diligence processes** and **15 investor presentations**, building a pipeline for future capital raising. In parallel, the

company has contributed to **three regulatory or policy developments**, supporting the evolution of the EV ecosystem in Colombia.

From a market adoption perspective, the MubOn platform has reached **7,000 monthly downloads** and **800 active monthly users**, defined as users who interact with the platform at least once per month. This reflects early but consistent user traction and validates demand for shared charging solutions.

Importantly, these results are supported by improving infrastructure performance. With estimated utilization rates between **25% and 40%**, MubOn's shared model significantly outperforms traditional individual charging systems, which typically operate below **15% utilization**. This higher utilization directly translates into improved revenue per asset and stronger unit economics.

5.2 Environmental Impact

By 2025, MubOn's network delivered approximately **320,000 kWh of energy**, enabling the displacement of fossil fuel consumption through electric mobility.

This energy delivery supports thousands of charging sessions and reflects a growing shift toward electrified transport. Based on average EV energy consumption, this volume corresponds to an estimated **1.5 – 2 million kilometers of electric driving enabled**, contributing to measurable reductions in transport-related emissions.

MubOn's environmental impact is particularly relevant when compared to traditional infrastructure models. While individual charging systems often result in low utilization and duplicated electrical capacity, MubOn's shared model concentrates demand into fewer, more intensively used assets. With over **100 charging points deployed** and more than **22,000 charging sessions completed**, the company demonstrates how shared infrastructure can deliver higher environmental impact per installed unit.

In the Colombian context, where public charging infrastructure remains below 250 stations nationwide, MubOn's contribution represents a meaningful expansion of accessible charging capacity. By increasing utilization rates and optimizing energy delivery, the model reduces emissions not only through electrification, but also through more efficient infrastructure deployment.

5.3 Social Impact

MubOn's model directly addresses one of the main barriers to EV adoption: access to charging infrastructure.

By 2025, the company has enabled access to charging services for over **1,100 users**, many of whom would otherwise lack the ability to install private charging systems. Its deployments across **multifamily residential buildings and more than 25 commercial locations** have expanded access in both living and working environments.

This expanded access translates into behavioral change. Users who previously relied on internal combustion vehicles are able to transition toward electric mobility, supported by reliable and accessible charging infrastructure. Platform data shows increasing repeat usage and engagement, indicating growing user confidence and integration of EV charging into daily routines.

In addition, MubOn contributes to local economic development through the creation of specialized roles in installation, maintenance, and digital operations. These emerging roles represent part of the broader transition toward green jobs in the energy and mobility sectors.

In this context, “individuals positively affected” refers to users who gain direct access to charging infrastructure, while behavioral change is reflected in the shift from fossil-fuel-based transport to electric mobility enabled by that access.

5.4 Governance and ESG Integration

As MubOn has scaled, it has transitioned from informal impact tracking during its pilot phase to a more structured ESG framework aligned with international standards.

The company is actively integrating environmental, social, and governance indicators into its operations, including metrics related to energy delivery, emissions reduction, access to infrastructure, and user adoption. These indicators are tracked through its digital platform, enabling real-time monitoring and continuous improvement.

Gender inclusion and diversity are also emerging priorities, with efforts to increase balanced participation in both technical and leadership roles. This reflects a broader commitment to building an inclusive clean energy workforce.

This evolution toward structured ESG reporting has strengthened MubOn’s credibility with investors, partners, and public stakeholders, positioning the company for participation in blended finance mechanisms and impact-driven investment opportunities.

5.5 Impact & Customer Validation

MubOn’s real-world implementations demonstrate the practical value of its model across different contexts. Mubon Smart Mobility Solutions for EV+1

In a residential complex in Cali, the installation of shared charging stations significantly improved convenience for residents, eliminating dependence on limited public infrastructure. The presence of charging facilities increased the attractiveness of the property, contributing to higher perceived value and reinforcing its positioning as a sustainable living environment.

In a commercial automotive center in Medellín, MubOn’s solution enabled the property to integrate charging services into its operations. Through real-time monitoring and tariff-based usage, the infrastructure became a new source of revenue while improving service offerings for customers and employees. The availability of reliable charging also encouraged greater adoption of electric vehicles among users.

These cases demonstrate that MubOn’s model enhances property value, generates new income streams, and improves user experience, while validating its scalability across different market segments.

6. Challenges and Solutions

MubOn's trajectory makes clear that scaling EV charging infrastructure is not only a technical challenge, but a regulatory, financial, and behavioral one. The company has had to confront fragmented standards, high capital costs, low market awareness, and regional deployment constraints—barriers that often prevent promising infrastructure models from reaching scale. Rather than treating these as external obstacles, MubOn has responded by building solutions around them, turning implementation challenges into a core part of its operating strategy.

MubOn's growth has been shaped by regulatory, financial, and market challenges. The absence of standardized building codes for EV infrastructure and limited awareness among property developers have slowed adoption.

To address these barriers, MubOn has actively engaged with regulators, industry associations, and certification bodies, contributing to the development of enabling frameworks and increasing awareness of shared charging models.

Challenge	**Description**	**MubOn's Solution**
Regulatory gaps	Limited guidance on shared charging	Participating in national technical committees
High CAPEX	Residential buildings face upgrade costs	Shared charging + revenue sharing model
Cultural resistance	Users unfamiliar with EV charging	Community education programs
Geographic expansion	Technical capacity varies by region	Local technician network + training

7. Lessons Learned

MubOn's experience shows that scaling EV charging in emerging markets is not simply a matter of installing more infrastructure, but of building the right model around it. Shared access, user education, predictive operations, ESG credibility, and strong local partnerships have all emerged as essential enablers of growth. Together, these lessons help explain why some charging solutions remain fragmented and limited, while others can evolve into scalable platforms for inclusive electric mobility.

MubOn's implementation process has generated critical insights for scaling electric mobility infrastructure in emerging markets.

First, the company confirmed that **shared charging is essential for equitable EV adoption**. Individual home charging solutions are not viable for the majority of urban residents in Colombia, particularly those living in multifamily housing. By contrast, shared infrastructure significantly reduces installation costs, increases utilization rates, and enables access for a broader segment of the population. This model is not

only more efficient—it is foundational to ensuring that the energy transition is inclusive rather than limited to high-income users.

Second, MubOn learned that **infrastructure deployment must be accompanied by user education and engagement**. Early installations showed that lack of familiarity with EV charging created hesitation among users. Through targeted onboarding, training, and awareness efforts, users quickly gained confidence, which translated into higher utilization rates and stronger adoption. Behavioral change proved to be directly linked to understanding and trust.

Third, the experience demonstrated that **a strong ESG-driven strategy is a key enabler of growth**. By tracking indicators such as energy delivered, emissions avoided, access to infrastructure, and inclusion metrics, MubOn strengthened its credibility with municipalities, private partners, and investors. This has been particularly important in unlocking partnerships and positioning the company for blended finance opportunities.

Operationally, MubOn also confirmed that **predictive maintenance is critical to long-term performance**. Through IoT-enabled monitoring, the company is able to anticipate technical issues before they occur, reducing downtime, lowering operational costs, and ensuring a reliable user experience. This reliability is essential for building trust in electric mobility systems.

Finally, MubOn found that **local partnerships are fundamental to scaling deployment**. Collaborating with local technicians, property managers, and community stakeholders accelerates installation processes, reduces friction, and increases user acceptance. These partnerships are especially important in underserved areas, where local knowledge and trust are key to successful implementation.

8. Recommendations

The next phase of electric mobility in Colombia will depend not only on better technology, but on better enabling conditions. MubOn's trajectory makes clear that shared charging infrastructure can work, but scaling it will require governments, investors, and industry stakeholders to address the policy, financing, and deployment gaps that still constrain the market. This chapter outlines the priority actions needed to move EV charging from isolated projects to a coordinated and scalable infrastructure system.

MubOn's experience highlights a set of targeted actions that can accelerate the deployment of EV charging infrastructure in Colombia and similar markets.

For governments, the priority is to **establish clear regulatory frameworks that enable shared charging infrastructure**. This includes integrating EV charging requirements into building codes for new developments, defining technical standards for shared residential charging, and streamlining permitting processes. Expanding fiscal incentives and financing mechanisms for EV infrastructure—particularly in residential and commercial settings—would significantly reduce barriers to adoption and crowd in private investment.

For investors, there is a strong opportunity to **support scalable, blended finance models that combine infrastructure and digital platforms**. MubOn's experience shows that EV charging can become a revenue-generating asset when utilization is optimized. Supporting asset-light structures and special purpose vehicles (SPVs) can accelerate deployment while reducing risk. Investors should also prioritize

companies that integrate ESG metrics into their operations, as these are better positioned to align with climate finance and impact investment criteria.

For industry stakeholders, including real estate developers, property managers, and corporate actors, the key recommendation is to **integrate EV charging infrastructure into planning and operations from the outset**. Incorporating shared charging systems into building design reduces retrofitting costs and increases property value. At the same time, adopting standardized ESG reporting practices and leveraging digital platforms for infrastructure management can improve efficiency, transparency, and long-term performance.

Together, these actions can help transition EV charging infrastructure from a fragmented, high-cost system into a scalable, accessible, and financially viable ecosystem.

9. Role of P4G Support

The role of P4G in MubOn's trajectory has been catalytic. More than funding a pilot, the grant helped transform MubOn from a promising concept into an investable and commercially active company by enabling real-world validation, early revenue generation, stronger investor readiness, and deeper ecosystem engagement. In that sense, P4G did not simply support MubOn's growth—it helped the company cross the critical threshold between experimentation and scalable market entry.

The P4G grant has played a catalytic role in MubOn's transition from pilot-stage validation to early-stage commercialization. At a critical moment in the company's development, the support enabled MubOn to move beyond initial testing under DeepSea and consolidate its operations as an independent, scalable business.

Through P4G support, MubOn was able to refine and validate its business model under real market conditions, deploying charging infrastructure in residential and commercial environments while integrating its hardware and software platform into a unified operational system. This validation phase was essential in demonstrating both the technical feasibility and the economic potential of the shared charging model.

Beyond technical development, the grant directly contributed to MubOn's commercial traction. It enabled the company to initiate revenue-generating operations, reaching **$100,000 in gross revenue in 2025**, and to build a pipeline of infrastructure projects across multiple use cases, including multifamily housing and commercial locations. This early revenue generation was critical in validating demand and strengthening the company's market positioning.

P4G support also significantly enhanced MubOn's investment readiness. The company developed structured due diligence materials, refined its financial model, and engaged in **15 investor presentations**, positioning itself to attract both commercial and blended finance. This process has been key in advancing conversations with strategic partners and financial actors interested in scaling EV infrastructure.

In addition, the grant facilitated MubOn's engagement with the broader ecosystem, including participation in regulatory discussions and collaboration with industry stakeholders. This has contributed to the company's involvement in **three regulatory or policy developments**, helping shape enabling conditions for EV infrastructure deployment in Colombia.

Importantly, P4G support has allowed MubOn to bridge the “valley of death” between pilot validation and scalable growth. By combining technical validation, early revenue generation, investor engagement, and ecosystem positioning, the grant has laid the foundation for MubOn’s next phase: scaling its infrastructure network through partnerships, asset-light financing models, and expanded market reach.

10. Conclusion and Next Steps

MubOn has moved beyond validating a promising idea and is now showing what a scalable charging model for emerging markets can look like. Its experience suggests that shared, digitally managed infrastructure can solve one of the core constraints of electric mobility in Colombia while creating stronger unit economics and broader access at the same time. The next challenge is no longer whether the model works, but how quickly it can scale through partnerships, platform expansion, and catalytic capital.

MubOn has demonstrated that the main barrier to scaling electric mobility in Colombia is not demand, but infrastructure, and more specifically, the lack of accessible, efficient, and financially viable charging solutions. Through its shared, technology-enabled model, the company has validated that this bottleneck can be addressed in a way that improves both accessibility and unit economics.

From its origins as a pilot initiative under DeepSea to its consolidation as an independent company in 2024, MubOn has successfully transitioned into an operational platform with proven demand, growing revenues, and a validated deployment model. Its performance in 2025, reflected in energy delivered, active users, infrastructure deployed, and capital mobilized, confirms that the model is not only technically viable but commercially promising.

Importantly, MubOn has also demonstrated that EV charging infrastructure in Colombia can evolve from a fragmented, high-cost system into a scalable asset class capable of attracting private capital. The company’s early experience in structuring investment pools, combined with its transition toward an asset-light model in partnership with financial actors such as Axioma, positions it to scale beyond the limitations of its own balance sheet.

Looking ahead, MubOn’s next phase focuses on scaling both its infrastructure footprint and its platform capabilities. The company aims to expand its network across major urban centers in Colombia, increase the number of charging points in residential and commercial environments, and strengthen its role as an integrated platform for electric mobility services. This includes the development of fast-charging hubs, deeper integration with fleet operators, and continued enhancement of its digital platform to optimize utilization, payments, and user experience.

Growth projections are driven by three key assumptions. First, continued acceleration in EV adoption in Colombia and the broader Latin American market. Second, increasing utilization rates as the network expands and user behavior matures. Third, the consolidation of a platform-based business model that combines recurring revenues from charging services, software, and operational management.

Under these conditions, MubOn expects to significantly increase revenue per charging point, improve operational margins, and expand its ability to attract both equity and infrastructure capital. The long-term vision extends beyond Colombia, with the potential to replicate the model in other Latin American markets facing similar infrastructure gaps.

Beyond financial growth, MubOn's expansion has the potential to generate systemic impact. By scaling shared charging infrastructure, the company can accelerate EV adoption, reduce emissions from transport, and expand access to clean mobility solutions for a broader segment of the population. In doing so, MubOn contributes not only to climate goals, but also to more inclusive and resilient urban systems.

At this stage, the company is moving from validation to scale. The focus is no longer on proving that the model works, but on deploying it at the speed and scale required to meet market demand. Strategic partnerships, continued regulatory progress, and access to catalytic capital will be critical to achieving this transition.

MubOn is therefore positioned not just as a service provider, but as an infrastructure enabler, building the foundation for a more accessible, efficient, and sustainable electric mobility ecosystem in Colombia and beyond.