

## Mooving Smart Mobility & Energy Pvt. Ltd.: Dwindling Customer Base

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### INTRODUCTION

On the evening of 2<sup>nd</sup> May 2023, Sanchit Gupta, the business lead of Mooving Smart Mobility & Energy Pvt. Ltd. (Mooving) was reviewing the list of e-rickshaw drivers enrolled with his organization and was surprised to see e-rickshaw drivers dropping out of Mooving's battery leasing and swapping services. The enrollment figures which were high during the last quarter of 2022 had now plateaued. Although the popularity and market share of e-rickshaws was soaring nationally and globally at unprecedented rates, primarily owing to their economic, ergonomic, and environmental advantages (Invest India 2022), the numbers before him were conveying a different picture altogether.

Gupta, who was a former strategy specialist and had experience in e-mobility, had joined Mooving in the year 2021. He was serving as a Business Lead at Mooving Smart Mobility and was responsible for driving growth and strategy for the Mooving Energy Network in Battery as a Service (BaaS). In his tenure, he had created a platform which served as a one-stop solution for EV users in India, with around 10,000 users and generating 5 Cr topline and with a month-on-month growth rate of 30%. He was an expert in building long-term strategies, conducting product-market fit analysis, need gap analysis to develop and scale a business.

The organization Mooving Smart Mobility & Energy Pvt. Ltd., headquartered in Gurugram, Haryana, India was setup in the year 2020 with a vision of building India's largest Electric Vehicle (EV) energy network. Having joined Mooving only a couple of months after its inception, Gupta was one of the founder leaders of the group. He had already taken Mooving to new heights under his leadership through the expansion of the company via franchises in new cities with 100+ franchise and network partners. However, to now see drivers dropping out of the company's battery leasing and swapping services was worrisome, and he was keen to understand the reasons behind the downward trend. He considered that it might be due to increased competition, as a variety of new players had entered the industry in recent years.

In order to retain the existing customers and acquire new ones, Gupta knew that Mooving needed to be at par with its competitors in terms of performance and loyalty-based rewards. To survive the competition and boost sales, he contemplated the adoption of an incentivization program for drivers and shared this idea in a proposal meeting and brainstorming session with Mooving's management team. The proposal received mixed reactions, with few supporting and others opposing the idea from an ethics standpoint—stating that such a program may overly favor some drivers while demotivating others.

Gupta considered whether the incentivization plan should be implemented at Mooving. If the company decided to move forward with the program, how should it be structured to derive maximum benefits for the organization? What types of incentives should the company provide? What should be the metric for distinguishing the drivers who qualify for incentives? Which brand promotion strategies should

Mooving adopt to retain and increase its clientele? The proposal meeting raised many questions for Gupta, and the confusion seemed to only be mounting, with no clear-cut solutions in sight. In May 2023, Gupta took it upon himself the task of coming up with strategies to assist in fending off growing competition and increasing Mooving's customer base. What should the company's next move be?

## **EV INDUSTRY IN INDIA**

An e-rickshaw, otherwise referred to as electric rickshaw, is a small three-wheeler (3W) vehicle classically mechanized by a 650-1400 Watts electric motor and predominantly rely on lithium-ion batteries (Saera Auto, June 2022). The Electric Vehicle (EV) segment in India has shown a 135% growth since 2016, heralding a unique nation-wide mobility revolution E-Amrit Portal (2022). In line with the United Nation's Sustainable Development Goal #7 of Clean and Affordable Energy, the Indian government has lent tremendous support in accelerating the development of this industry. One such step was the launching of 'E-Amrit' (Accelerated e-Mobility Revolution for India's Transportation) web portal in the year 2021 to create awareness about Electric Mobility in India. Until 2021 there were nearly 800,000 EVs registered, and 1,800 charging stations installed. In 2022 alone, India had seen a sale of 231K electric two-wheelers and 178,000 electric three-wheelers, with a 285% increase in total charging stations, expected to reach 400K by the year 2026 through robust government initiatives (E-Amrit Portal 2022). India has targeted an overall increase of 30% in EV sales by 2030, out of which electric 2-wheelers and electric 3-wheelers are likely to account for 80% of all new automobile sales (Chaudhary 2022).

Financially speaking, Indian EV market is expected to be valued at \$2bn by 2023 and \$300bn by 2030 (Stranger 2017). EV adoption in India would necessitate an estimated annual battery capacity of 158 GWh by the year 2030, presenting significant investment opportunities in both, product-based and supplemental sectors, catering to equipment manufacturing, battery manufacturing, infrastructural upgrades, supply chain, and customer service (Gupta 2020). EV economics have become favorable with declining battery/vehicle costs and enticing consumer incentives, including subsidies on registration, reduced road tax, and other privileges (E-Amrit Portal 2022). Eyeing a 50% increase in earnings and a 13–16-month investment return period, this is an especially lucrative prospect for drivers of electric three-wheelers (Khan et al. 2022).

Moreover, the EV narrative can push the country forward on its commitment towards reducing the emission intensity per unit gross domestic product by 33-35% over 2005 levels by the year 2030, as per the 2015 Paris agreement (E-Amrit Portal 2022). A 5% modal shift to e-rickshaws was estimated to reduce emissions by 6.3% and help India save nearly 1GT of carbon dioxide (CO<sub>2</sub>) emissions by the year 2030, compared to the current scenario (Kumar 2022). As a result, the annual Green House Gas (GHG) emission would be remarkably reduced to 3-6 tonnes of CO<sub>2</sub> per three-wheeler (Bagul et al. 2021). The consequent reduction in pollution would translate into distinct ecological and public health benefits.

Since the passing of the Motor Vehicles Amendment Bill 2015 by the Indian Parliament, e-rickshaws have been recognized as a legal mode of public transport and have come to dominate the Indian roads (Sivaraman 2015). India is also observing a shift from Lead-Acid batteries to Lithium-ion (Li-ion) batteries due to their limitations such as high toxicity, rusting caused in the vehicle, heavy-weight, and relatively shorter life span (Exhibit 1). Li-ion batteries are mostly used in electric light motor vehicles because of their light weight, good high-temperature performance, and low self-discharge rate.

Despite the prominence and significant advantages of electric motors and batteries, the EV Industry also posed certain concerns. On extremely rare occasions, charging Li-ion batteries inside homes might pose challenges with respect to fire and safety. According to a 2022 article published in Economic Times, the Indian government recognized this problem and emphasized battery swapping with interoperability as a solution to increase usability of Li-ion batteries, wherein the battery dimensions, their weight, the connector, charging protocol and safety practices would be the same (Ghosh 2022). This would enable the battery packs to be swapped or charged at any facility and used in any vehicle (Exhibit 2). With respect to cost, although electric vehicles offer long-term savings in terms of lower operating costs and reduced maintenance requirements, the high initial cost may deter potential buyers from making the switch. Moreover, in regions with limited charging infrastructure, the adoption of electric vehicles becomes more challenging, potentially creating disparities in the availability of EVs between urban and rural areas. However, for the greater good of general public, further awareness was needed to be promulgated among the masses regarding the benefits of EVs over ICE vehicles to achieve deeper immersion of this technology in the mobility sector and in our daily lives. This very agenda was adopted by Mooving (SAR) group.

## **HISTORY OF MOOVING**

Mooving was a Gurugram-based start-up founded in 2020 with a vision of enabling e-mobility by being a trusted brand and building India's largest EV energy network. It was incubated under the aegis of SAR Group's E Mobility Platform. The parent business of Mooving, SAR group, had a 35-year legacy of developing strong brands, including Luminous (later sold to Schneider), Livguard, Livfast, and Livpure. Leveraging over three decades of experience from SAR Group in Battery & Electronics manufacturing, Mooving was accelerating the evolution of Smart Batteries, Smart Energy, Intelligent Swap Stations, and Subscription Ready Vehicles, made for Indian customers and Indian road conditions. With a mission to meet EV adoption and business transportation needs, Mooving focused on electric two-wheeler/ three-wheeler and associated clients. The idea behind the inception of Mooving was to be the leader in the space with a hyper-focus on enabling Risk-Free EV Ownership through their platform offering Vehicle as a Service and Battery as a Service.

With more than 1000 distributors and 25,000 dealers, it had a Pan-India network. It, perhaps, was the only team with an entirely integrated e-mobility solution. The purpose of an integrated e-mobility solution was to bring together electric vehicles, charging infrastructure, energy management systems, and smart grid technologies to create a comprehensive ecosystem for electric mobility. By addressing the challenges related to charging convenience, grid stability, and energy optimization, these solutions paved the way for a sustainable and efficient transition to electric transportation thereby promoting a greener future. As a part of Mooving's integrated e-mobility solution, first was, Mooving- India's smartest energy network for electric vehicles. Second was Lectrix- In-house manufacturing of Electric two-wheelers (e2W) and three-wheelers (e3W) (Exhibit 3). Third, Livguard – A leading battery brand with in-house manufacturing of Lithium batteries and a strong dealer and service network.

The company operated under two separate business verticals. The Mooving Logistics (ML) vertical worked on the Vehicle as a service (VAAS) model, providing consumers with either the vehicle or both: the vehicle, and the battery. The consumer could choose from electric two-wheeler/ three-wheeler options. Mooving Energy Network (MEN): This vertical worked on the Battery as a service (BAAS) model, providing batteries to drivers on a leasing or swapping basis. This was done through two types of franchisee partners: (1) company owned, company-operated (COCO) franchisees - They

were limited in number and were available only in a few cities; and (2) franchisee owned, franchisee-operated (FOFO)—they were available across multiple states and cities. Mooving had achieved the target of providing over 5,00,000 battery swaps in 25 cities and powering over 30 million kilometers of distance traveled using their batteries and vehicles. Mooving had also provided 15,000 batteries into leasing and had generated more than 2000 job opportunities (Mooving 2022). Mooving aspired to be the “Happiest EV Company”.

### **Marketing**

From time to time, Mooving organized various marketing campaigns with twin objectives. First, to create awareness among the people about electric vehicles. Second, to generate leads from the locals of that area. Mooving’s aim was to encourage easy adoption of Electric Vehicles, justifying its tagline: “EV Made Easy”. With this perspective, Mooving had been actively organizing campaigns involving discussions over tea popularly known as “Chai-pe-Charcha”, that was arranged in different areas that had a high engagement rate of people who drove two-wheelers (2W) and three-wheelers (3W) (Exhibit 4). On average, from each such campaign, the company was able to generate 1000-1100 leads, which were then sent to the calling center team for further processing.

The marketing team of Mooving had also organized several promotional campaigns such as distribution of water bottles, seat covers for e-rickshaws and t-shirts printed with Mooving’s logo. The Marketing Team worked hard to distinguish Mooving as one of the top producers of battery swapping and subscription services for electric 2W and 3W. Additionally, the business used social media channels like Whatsapp and LinkedIn to market leasing and swapping plans. To raise awareness among the public, the marketing team created eye-catching visual representations for each subscription and leasing plan in the form of posters and booklets. These adverts were created in a way that a person may comprehend them simply by glancing at them. Before the COVID-19 pandemic, Mooving employed various marketing strategies to raise awareness, educate the public, and promote the benefits of electric vehicles. Through awareness campaigns, test drives, public relations activities, branding efforts, partnerships, and digital marketing, it aimed to overcome misconceptions, address infrastructure challenges, and encourage the wider adoption of electric vehicles.

As a part of their Corporate Social Responsibility Activities, during the outbreak of Covid-19, Mooving tightened containment measures, including introduction of body temperature screening at the office entry, and ensured quarantine for infected people. They adopted various employee-friendly measures including vaccination support, on-demand salary advance access, mask and sanitization allowances to all the employee, and emergency medical support like end-to-end hospital facility, free oxygen cylinder and free PPE kit (Exhibit 5).

### **Competitors**

EV sales had grown from a meager 1% of the market share to almost 54 per cent in the last decade (Dennis 2021). Mooving had been consistent in contributing to this growth by competing in terms of offering competitive pricing and a variety of offers and discounts. The global EV market was expanding, and people were becoming more aware of the benefits of clean and renewable energy, hence, the competition in the sector was also increasing. The competition was not just against EVs, but petrol, diesel and CNG vehicles also that acted as secondary competitors against the company.

Although there were many players in the EV industry, Zypp was Mooving's closest competitor. Its business strategy was to adopt a B2B (business-to-business) model with the objective of providing carbon-free last-mile deliveries for small-town retailers, global e-commerce companies, and delivery managers. The firm used IoT and AI-enabled high-performance and low-maintenance scooters to transport groceries, medicines, meals, and e-commerce goods from source to destination. Zypp promoted their electric two-wheelers as an alternative to traditional petrol/diesel vehicles for efficient and cost-effective last-mile delivery. The organization leverages partnerships, used digital marketing and industry collaborations to increase its brand visibility. Zypp's primary customer base included delivery service providers, food delivery companies, and e-commerce platforms. They catered to businesses seeking eco-friendly and economical transportation options for their delivery operations.

Another prominent competitor of Mooving was Ather Energy. It was India's 5<sup>th</sup> largest electric 2-wheeler manufacturer, offering premium electric scooters with advanced features and performance. They focused on building a strong brand identity and positioning themselves as pioneers of electric mobility. They have employed digital marketing strategies, and engagement activities with enthusiasts through community events, and emphasized technology-driven features. Ather targeted tech-savvy urban consumers who valued performance, technology, and sustainability. Their electric scooters catered to individuals seeking premium electric vehicles with advanced features and connected riding experience.

Battery Smart was another close competitor of Mooving. It validated the growing usage and acceptance of battery swapping as an innovative clean mobility solution that offered a 40% reduction in the upfront investment borne by consumers (ET Auto 2022). Through their extensive network of partner swap stations, Battery Smart was creating the largest network of battery switching stations in India, offering Li-ion batteries to three-wheeled electric rickshaw drivers on a pay-per-use basis.

## **Customers**

The individuals making money on a daily-wage basis to meet their ends, i.e., the working poor, made up the majority of Mooving's customers, particularly the rickshaw drivers and delivery personnel. Most of the new customers claimed to have learned about the business through word-of-mouth and Mooving's marketing initiatives, while the remaining claimed to have learned about it directly, owing to their firms' connections with Mooving. The company's enrollment journey began by raising awareness about the advantages of Li-ion batteries over lead-acid batteries. They aimed to educate e-rickshaw drivers about the benefits and encourage them to consider switching to Li-ion battery-powered vehicles. Various promotional campaigns such as "Chai Pe Charcha," exhibitions, and other marketing initiatives were launched to generate leads and attract potential drivers.

Interested drivers were provided with the opportunity to contact Key Account Executives (KAEs) who were responsible for providing detailed information about the available plans and vehicle costs. The KAEs guided the drivers through the process, explaining the different plans tailored to meet their specific requirements. Additionally, they presented a return-on-investment calculation deck to help drivers assess the financial aspects of the transition. To further assist drivers in making an informed decision, they were offered the chance to book a test ride.

As part of the eligibility criteria, drivers were required to possess a valid driving license and be at least 18 years old. In order to proceed with the enrolment, drivers had to submit necessary documents for

the Know Your Customer (KYC) process, including identification proof, address proof, and their driving license. Upon completion of the above steps, a carefully crafted agreement was prepared between the company and the driver. The agreement outlined the terms and conditions of their partnership, ensuring clarity and mutual understanding. If the driver agreed and signed the agreement, the account was considered won, and the enrolment process moved forward. However, if the driver chose not to sign the agreement, the account was closed, and all parties involved were duly informed of the decision.

In addition to the enrollment process, the company offered training programs to newly onboarded drivers. These programs focused on familiarizing them with the operation, maintenance, and safety aspects of e-rickshaws powered by Li-ion batteries.

Long-term costs & savings, the battery life range and the environmental benefits were the three topics that the customers were most interested in. Mooving's customers expect a reliable ROI partnership, digital EV & battery management system, quality EV service and assistance, and app-based operations. The battery management system and app used to access it provides multiple facilities such as GPS tracking to track vehicles in case of theft, monitor daily distance covered, uploading of verification documents etc.

It was observed that the market was becoming more and more competitive, and Mooving's customers were switching to its competitors perhaps as a result of better leasing and swapping plans, better incentive schemes, non-receipt of referral amount, an ill experience at the service station, non-availability of batteries at the swapping stations. Investigating the driving habits and understanding the expectations of e-rickshaw drivers may be necessary to determine the causes. It might also be beneficial to differentiate the drivers on some justifiable criteria and reward them accordingly which might in turn motivate them and address the problem of dwindling customer base.

### **Way Forward**

It is well understood that the adoption of EV's is not only practical but also ecologically benign. It is the reason that the EV sector is expanding at an exponential rate. The competition is growing tremendously as well, taking into account the extensive potential that E-Mobility has in the future. With the twin objectives of suggesting strategies to fend off growing competition and to increase the customer base, Gupta, started looking for the best alternative for the business that could provide a successful incentivization program for EV drivers. The notion of offering free e-rickshaw maintenance services to the drivers in an effort to increase the efficiency of their vehicles, held a tremendous amount of promise, in his opinion. Gupta suggested this as one of the solutions while looking at several loyalty-based incentive options and started preparing a presentation for the same.

### **ASSIGNMENT QUESTIONS**

1. Should the incentivization plan be implemented at Mooving? If yes, what should be the key dimensions to focus upon, to derive maximum benefit from this program?
2. Which research instrument would be the most suitable to collect data? What relevant sample questions that Gupta can ask the drivers as part of the survey?
3. What should be the metric for distinguishing the drivers who qualify for the incentives and what types of incentives should the company provide?

4. Which promotion strategies should Mooving adopt to penetrate the market and to retain and increase its customer base?

**EXHIBIT 1: COMPARISON BETWEEN LI-ION AND LEAD ACID BATTERIES**

	<b>Lithium-ion</b>	<b>Lead Acid</b>
Charging span	4-6 hours	10-12 hours
Lifespan	10-12 hours	3-12 hours
Risk	Fire	Spilling of acidic electrolyte
Safety Equipment	Battery management system and airtight packing	Electrolyte as a gel
Self-discharge rate	0.35-2.5 per cent monthly	3-20 per cent monthly

Source: Created by the case authors based on Metaye, Romain. Lead-Acid vs. Lithium-Ion, Climatebiz, (2023), accessed February 1, 2023, <https://climatebiz.com/lead-acid-vs-lithium-ion/>.

**EXHIBIT 2: BATTERY CHARGING FACILITY**



Source: Company documents.

**EXHIBIT 3: MOOVING’S ELECTRIC TWO-WHEELERS (E2W) AND THREE-WHEELERS (E3W)**



Source: Company documents.

**EXHIBIT 4: CHAI PE CHARCHA**



10<sup>th</sup> Feb'21

Episode -2



Note: Chai Pe Charcha (discussion over tea)

Source: Company documents.

**EXHIBIT 5: VACCINATION SUPPORT AT MOOVING**



Source: Company documents.

**References**

- [1] Bagul, T. R., Kumar, R., & Kumar, R. (2021). Real-world emission and impact of three wheeler electric auto-rickshaw in India. *Environmental Science and Pollution Research*, 28, 68188-68211.
- [2] Chaudhary, V. (June 18, 2022). EV penetration to be 30% by 2030: Study, *The Financial Express* available at: <https://www.financialexpress.com/express-mobility/vehicles/electric-vehicles/ev-penetration-to-be-30-by-2030-study/2565092/> (accessed on May 11, 2023).
- [3] Dennis, M. (2021). Are We on the Brink of an Electric Vehicle Boom? Only with More Action. *World Resources Institute*, available at: <https://www.wri.org/insights/what-projected-growth-electric-vehiclesadoption#:~:text=EV%20sales%20grew%20from%20less%20than%201%25%20of,incentives%20that%20made%20EVs%20cheaper%20than%20traditional%20vehicles> (accessed 10 October 2022).



- [4] E-Amrit Portal (2022). E-mobility at a glance. available at: <https://e-amrit.niti.gov.in/home> (accessed 30 August 2022).
- [5] ET Auto (2022). Battery Smart announces one million swaps powering 30 million emission-free km. available at:
- [6] <https://auto.economictimes.indiatimes.com/news/auto-components/battery-smart-announces-one-million-swaps-powering-30-million-emission-free-km/89617736>
- [7] Ghosh, R. (2022). Swapping is a contender in the EV charging race. But it needs to cross the interoperability hurdle. available at: <https://economictimes.indiatimes.com/prime/transportation/swapping-is-a-contender-in-the-ev-charging-race-but-it-needs-to-cross-the-interoperability-hurdle-/primearticleshow/93716041.cms> (accessed 5 March 2023).
- [8] Gupta, U. (December 9, 2020). India's 2030 electric vehicle ambition could create INR 85,900-crore battery opportunity, PV Magazine available at: <https://www.pv-magazine-india.com/2020/12/09/indias-2030-electric-vehicle-target-creates-inr-85900-crore-battery-opportunity/> (accessed on May 11, 2023).
- [9] Invest India. Electric Mobility. (2022) available at: <https://www.investindia.gov.in/sector/automobile/electric-mobility> (accessed 22 July 2022).
- [10] Khan, M. A., Bokhari, S. F., Khan, A., Amjad, M. S., Butt, A. M., & Rafique, M. Z. (2022). Clean and sustainable transportation through electric vehicles—a user survey of three-wheeler vehicles in Pakistan. *Environmental Science and Pollution Research*, 29(30), 45560-45577.
- [11] Kumar Rajiv, V. (2022). Top 5 Reasons Why Electric Vehicles Are The Future Of Driving In 2022. *Outlook Money*, available at: <https://www.outlookindia.com/business/top-5-reasons-why-electric-vehicles-are-the-future-of-driving-in-2022-news-201722> (accessed 21 October 2022).
- [12] Mooving. (2022). Scaling up rapidly. Mooving company website available at: <https://www.mooving.com/> (accessed 18 June 2023).
- [13] Saera auto (June, 2022). The insight of an E-Rickshaw, available at: <https://www.saerauto.com/blog/the-insight-of-an-e-rickshaw/> (accessed on May 11, 2023).
- [14] Sivaraman, M. (2015). E-Rickshaw Bill Passed!! Why we need to celebrate, Centre for Public Policy research, available at: <https://www.cppr.in/articles/e-rickshaw-bill-passed-need-celebrate> (accessed 8 August 2022).
- [15] Stranger C. (2017). India Leaps Ahead: India's EV Battery Market could be worth \$300 Billion by 2030. Niti Aayog, Rocky Mountain Institute Report, available at: <https://rmi.org/insight/india-leaps-ahead-transformative-electric-vehicle-battery-feebate-solutions/> (accessed 21 October 2022).