



EV MAGAZINE

EDUCATE | AWARE | PROMOTE

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EV Rockstar

Uday Narang
Chairman & Founder
Omega Seiki Mobility



Tell us about the journey of Omega Seiki. How do you realize that this is your calling?

This has been a very interesting road. I was in the US and Europe for 30 years and I kept looking at how green energy and sustainability were going to drive the future in India, and many third world countries.

Twenty of the most polluted cities in the world are in India, and year by year, we see, continually, that it's getting worse. I wanted to make a difference. Green Energy Sustainability and healthy living are very important parts of my life. And I want future generations, my kids and my kids' kids to live in a much better environment. So, electric mobility, green energy, blue energy, bringing the ecosystem, and driving all this were essential. And for the last five years, I have been with my team at OSM driving that dream, that vision that we have to make India and the world a much cleaner and safer place to live. And we have worked on that by building facilities all across India, as well as we are now looking at building OSM into a global company.

Why do you believe that the last-mile delivery segment should be pure EV?

Covid-19 accelerated the delivery business, whether it be from E-commerce companies, whether it be from food companies, FMCG companies, drug companies, the beverage companies, everybody, that consumption pattern is changing more and more, whether it's in urban or rural areas online on last-mile delivery, we felt that with the higher fuel prices with the congestions with all of the effects of green energy, IC engines, that cargo space would be something where electrification will be very important. And, you know, whether you call it luck or whether you call it a step in the right direction, we are seeing huge growth, phenomenal growth in that space from all players in the last mile, we see that over the next five years 80 to 90% of the last mile will be electric.

We have heard that OSM will be going public by 2023, so what targets will OSM want to achieve before that?

We are going to be working towards that plan. Depending on the financial markets, **I've got a Wall Street background for 30 years.** You know, **we will still plan to look at this towards the end of 2023.** We at OSM **want to build an Indian global business for the India business,** we have a target of **over 20,000 vehicles that we want to sell.** You know, it's a combination of cargo as well as we're launching passengers next month. So, that's what it would be. And then obviously, we are growing businesses in Africa and Asia, and in the Gulf testing and homologation are going on even in Europe right now. So that's sort of target is what we would want to achieve.

As OSM believes in building the complete ecosystem, do you plan to venture into the segments like batteries, motors, powertrains, and controllers in the future?

We have already done joint ventures for power trains and controllers. We believe that backward integration is extremely important. Supply chains are showing dependence on China and other places, right? We are always talking about making India self-reliant India before this became popular. We are going to be doing batteries, and motors controllers, **we are going to announce over the next month about an alliance with an American company where we will be building our battery packs soon.**

How do you see the present Indian EV market, and at what stage it is right now? What do you think the EV companies should do to increase EV adoption?

I think we are at a very nascent stage. I think the growth pattern is going to be very accelerated. **"Abhi bas trailer hai, picture abhi baki hai"** !. Yeah. I think that, **over the next five years, in the two-wheelers, we will see almost 60 to 70% of vehicles being EVs.** In three-wheelers, we say up to 50 to 60 or maybe even higher. We'll see four-wheelers up to 30% of the next five years in the cargo space. So we see this area growing significantly. I think the demand is phenomenal. I think what companies like ours have to focus on is only one thing i.e quality, quality, quality, safety, giving longevity, giving customers the satisfaction that there's an ecosystem that supports that service through our dealerships being fully integrated providing financing capabilities. So, We weren't going to be we are the only company that is fully integrated into the backward chain in this in the vehicles of three two and four, in terms of financing, and again in terms of with all of our dealerships across this country and we are the first company that is exporting globally

OSM is going to be the “Tesla for Cargo” so can you share something like what all technologies, products, or innovations OSM is working on right now to achieve this title?

So, we are working with we believe that we want to be the Tesla of cargo, we are working with artificial intelligence, and robotics, we are working on autonomous vehicles, we are working on UAV and EVS working together we are working on drone technology, we are working in Korea and Thailand with our R&D centers to come up with power trains that are you know 35% more lighter, they are IP67 which can be underwater for 40 minutes, we are building lighter vehicles, we are building more safety, we are putting in you know cooling, liquid cooling for GCC markets, you name it, we are working in alliances all across the world to build products with a state of the art technology, we are working on a technology with telemetric which will be able to you know to tell the vehicle driver, what the conditions what the problems are even before the problems appear, they will tell them to go down to the service station or to our dealers to get a problem fixed upgrades. We are working on technology to give skateboard technology to our batteries. We are working on the fast-charging swap. You know we're working globally with players to give vehicles with a bigger range. It's going to expand Cardinal

As you believe in a variety of customers, so after the 2W, 3W, and now 4W, what is the next product OSM is working on or will be launching in the future?

We are working on tractors for a service. I am working very aggressively with our R&D centers on making agriculture electric. We want to build tractors where tractors for service can be given to all of our India and a large part of the world is agriculture, the third world which we want to make a change on and that would disrupt not just the industry, but we'll help our farmers.

We have seen a lot of your interviews; you are always so energetic. What's the source of your energy and enthusiasm?

The biggest source of energy is green energy and sustainability, the green energy and sustainability for our future generations, our kids, and our kids to give them a better life. A better living condition is giving me all the energy. Number two is the huge amount of young men and women that are on this journey with me at OSM. They give me unlimited energy, the r&d, the drivers, the technology players, the marketing staff, the PR team, the digital media team, all of them, all men and women of this organization give me energy. And lastly, it is for something bringing a change to India that drives me to thank you



CELLSTRAT

The AI Disruption

CELLSTRAT AI LAB PROVIDES AI SOLUTIONS FOR **THE EV INDUSTRY**



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ENHANCE END-USER EXPERIENCE



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CELLSTRAT AI LAB

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EV Milestones



TATA AVINYA

"The Indian Answer TESLA"

Technology Platform for Electric Mobility showcases the Tata AVINYA EV concept—built on pure EV architecture

PRAVAIG

Bengaluru based EV Startup PRAVAIG to supply batteries to European Forces



Bharat Electronics Limited to set up LiB packs for Electric Trucks of Triton (US based EV Company)

nexcharge
Exide Leclanche Energy
Private Limited

Nexcharge Begin Mass Production of Li-ion battery at its Gujarat Plant



CELLSTRAT

The AI Disruption

How AI Solutions will re-shape the face of EV Industry?

In the electric vehicle industry, AI solutions will play a critical role. Everybody, from the battery maker to the EV manufacturer to the Charging Solution Manufacturer, firms that manage EV fleets, and the end user, will rely on the AI-based solution.

All India EV spoke to CellStart AI Lab to understand the current situation and future prospects, and the following is a transcript of our conversation.

What role does data play in the EV industry?

The role of data has a significant impact on every industry. The sustainable growth of data in the EV domain has a significant impact on conducting insightful research. Car manufacturers, governments, and charging infrastructure providers are leveraging data to provide optimal EV services.

Right data enables predictive analytics and data intelligence. The tech integration aims at achieving high battery efficiency and operational reliability. EV industry ecosystem comprising OEMs, battery pack manufacturers, electric fleet managers, and electric vehicle makers are leveraging predictive analytics tools. Data science & AI tools remarkably improve their end product performance and help in receiving better ROI at every stage of the product life-cycle.

Leveraging data has the potential to unlock, the system-level understanding of how these industries function. And analyzing the real-world data helped in better understanding mapping charging networks, optimizing transportation networks, transportation utilities, etc.

The data analytics based on renewable energy forecasting methods enable better regulation and dispatch planning. The data collected from sensors and in-built trackers are helping in estimating customer behavior analysis, demand forecasting, and energy generation optimization.

How AI and ML solutions are going to enhance the security solution of EVs?

Mere demand optimization and predictive energy consumption/ response for energy in vehicles itself can help greatly in securing EVs. Some Cyber Security issues that affect electric vehicles are:

- Commercial charging stations:** Through commercial charging stations, hackers can easily copy ID badges and use them for different transactions. They do this by rewiring charging requests and disabling charging points.
- Mobile apps:** Mobile apps are also a target for cybercriminals because they can access electric vehicles through mobile phones. WiFi networks are also susceptible to hacking. Once hackers are in, they can disable a vehicle's alarm and gain control over other systems.
- Command and control server:** Through the command-and-control servers, hackers can attack an entire fleet of vehicles. They can do all kinds of sabotage a company's fleet, including annoying consumers to pay their bills and repetitively honking horns. The worst that could happen is that hackers can go as far as putting drivers' safety at risk
- DDoS (Distributed Denial-of-Service) attacks:** It is a malicious attempt to disrupt the normal traffic of a targeted server, service, or network by overwhelming the target or its surrounding infrastructure with a flood of Internet traffic. Cybercriminals can use unprotected physical communication links, and app vulnerabilities to deliver DDoS attacks, ransomware, and trojan viruses.

To prevent cyber-attacks, as well as return attacks if the system has been previously breached, a lot of information and monitoring is required. This means that the security teams need to not only identify any potential attackers but also how they may attack and what their motivations are. Only then can an effective response take place if an attack does occur.

Machine learning can aid with data collection, and pattern recognition and make calculated predictions about many of these questions. It can help with establishing behavioral profiles of any potential attacker. This not only aids network security teams in the data processing aspects but also in providing a way to stop an attack once it has been initiated. ML could also aid in the detection of anomalies in the systems of other automobile networks, not just the ones which are being monitored.

The machine-learning database can draw upon information about any form of malware that's been detected before. So, when a new form of malware appears -- either a tweaked variant of existing malware or a new kind entirely -- the system can check it against the database, examining the code and blocking the attack on the basis that similar events have previously been deemed as malicious.

How EV companies can use data to enhance the end-user experience and how Cellstrat is going to help EV companies, with their solution?

AI is being continuously and increasingly being used by industries and which in turn is dependent on data. CellStrat is interacting with EV companies to solve many problems/ provide a better experience to consumers in some of the following ways that come to mind:

- Understanding driver behavior - each driver wishes to maximize the battery life so rides appropriately.
- Distance predictions based on current battery charge left
- Alert / State of Health of battery
- Charging patterns - how much the user charges and what time they charge.
- Alerts to Family members (e.g., the kid is riding an ev and parents need alerts)
- AI provides a realistic driving-range estimation and optimizes energy conservation
- Manage EVs and power-generation interactions
- AI provides a cost-and time-effective approach to discovering low-cost and high-performing battery materials
- Predict the future life of the battery and improve performance
- To update the software over the cloud, saving users a trip to the service center
- Save time with feature discovery and testing for predictive and prescriptive models.

What role CellStrat AI Lab is going to play in the EV Industry?

CellStrat being an AI-centric company is already getting attention from EV manufacturers and has active interactions going for the development of AI solutions for their EVs in production. CellStrat is starting to work in AI solving some of the above-listed use cases to give a better experience to their consumers and AI edge to these companies.

CellStrat is an AI Product and R&D firm serving global AI customers via an innovative AI SAAS platform! CellStrat Hub platform allows thousands of global AI teams and developers to learn, develop and launch AI quickly and efficiently (AI Developer Tools and AI APIs on the Cloud).

CellStrat does cutting-edge research in advanced AI domains such as Computer Vision, NLP, Reinforcement Learning, Graph Networks, Artificial General Intelligence, etc., and operationalizes these projects as AI SAAS services on the Cloud. CellStrat is backed by a team of 250+ AI Scientists and 15000+ AI communities globally.



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AI Solution for the EV Industry

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New Product Launch



Odysse Launches **V2** and **V2+**
Electric Scooters in India

Tata Motors unveils
the new **Nexon EV**
Max and **ACE EV**
Version of its Popular
Mini-Truck



Kia Motors to roll out
entry-level **EV SUV** for
the global market from
India

Joint Ventures



TACITA SRL and **Okinawa Autotech** have signed MoU to set up a new company in India and will manufacture Electric 2 Wheelers.

Hyundai Motors India and **Tata Power** have collaborated for installing Electric Vehicle Charging Station Network across India.



Ather Grid and **Magenta ChargeGrid** have signed MoU to design and install Electric Vehicle Charging Station Network across India.



Hero Electric and **Statiq** have joined Forces to Install the EVC infrastructure network in North India.



Automobile manufacturing companies **Volkswagen** and **Mahindra & Mahindra** (M&M) have announced a partnership to explore the use of Modular Electric Drive Matrix electric components for Mahindra's new "**Born Electric Platform**"





BYD India partners with **ChargeZone, Volttic,** and **Indipro** for boosting EVC Infrastructure in India

SUN Mobility and **Greaves Electric Mobility** have signed MoU for the Development of Battery Swapping Technology



Tata Power and **NAREDCO** have signed MoU to install 5000 EV Charging Station across Maharashtra

Tata Motors, Lithium Urban Tech have signed MoU for deploying 5000 XPERS T EV across India



Hero Electric have partnered with **ReayAssist** to offer service to B2B customers and also have joined hands with **RevFin** to provide financing solution to EV Customers

Other EV Updates

- ION Energy Advances electronics business unit, Maxwell, is being acquired by Endurance Technology Ltd for \$40 M (INR 308 Crore) in all-cash transaction. ●

- Triton EV has acquired AMW Motors Manufacturing Facility of 3.7 Million Square Feet in Bhuj, Gujarat. Triton EV has signed MoU with Gujarat Govt. to set up EV Truck Manufacturing Hub ●

- Toyota Group to invest INR 4800 crores to make Electric Vehicle components in India. ●

- Electric Bus manufacturer PMI Electro is planning to start manufacturing commercial EV plant in Maharashtra ●

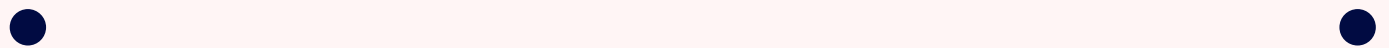
- **Ather Energy** raises \$128 million in Series E Funding round from NIIFL's SOF, Hero MotoCorp ●

- **Electric One** and **Ipower Batteries** have joined hands to set up 500 Battery Check-ups and replacement centers across India ●

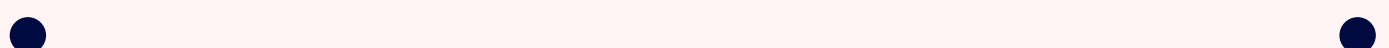
- **WardWizard** is planning to start its own lithium-ion battery manufacturing for its EV's at its EV ancillary cluster ●

- **Mahindra Electric** to supply 500 Treo e-rickshaws to back pollution-control drive in Amritsar ●

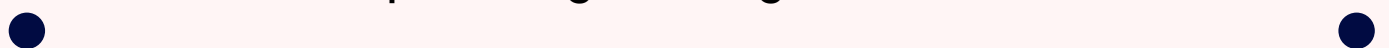
- XFC Battery innovator StoreDot live demos EV battery cell capable of 100 miles in 5 mins charge ●



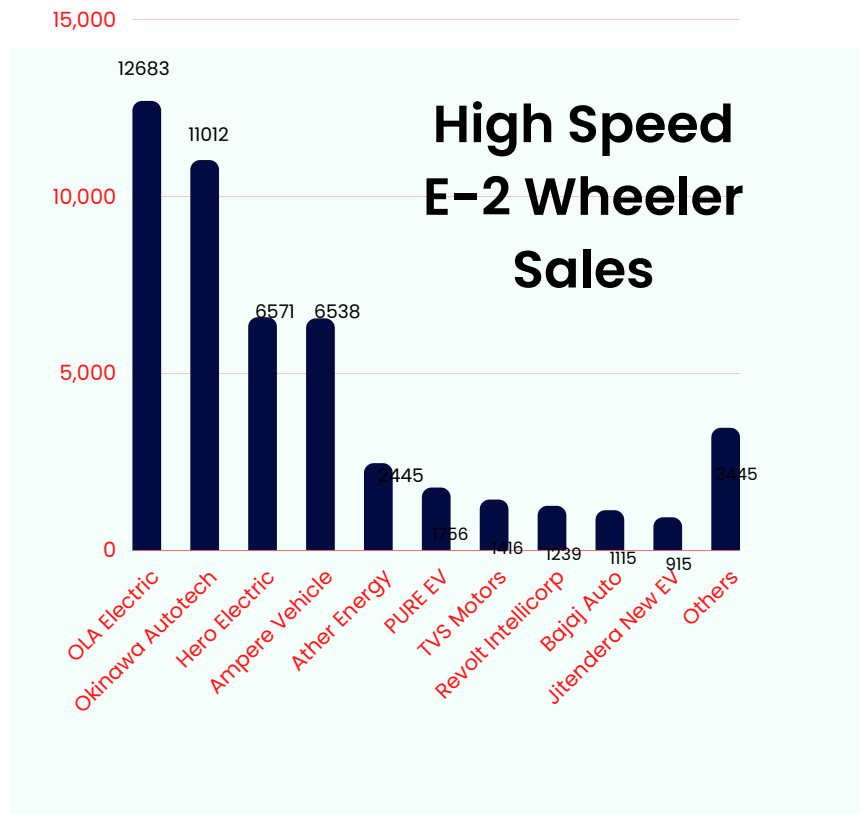
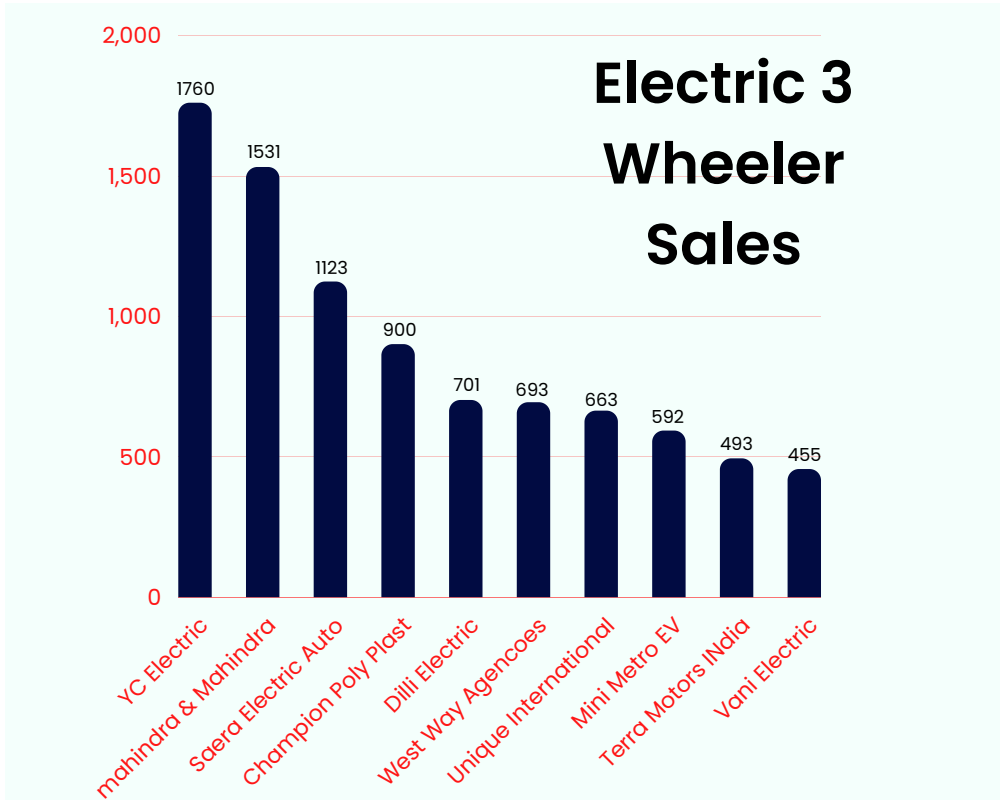
- Zypp Electric raises USD 1m in debt funding from Northern Arc ●

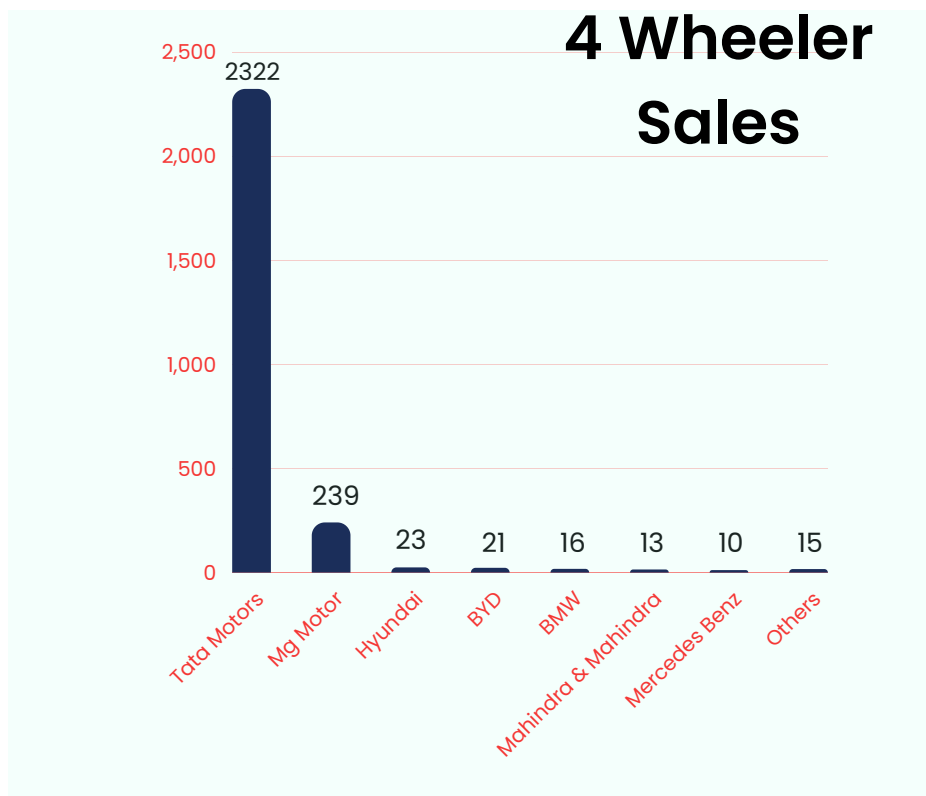
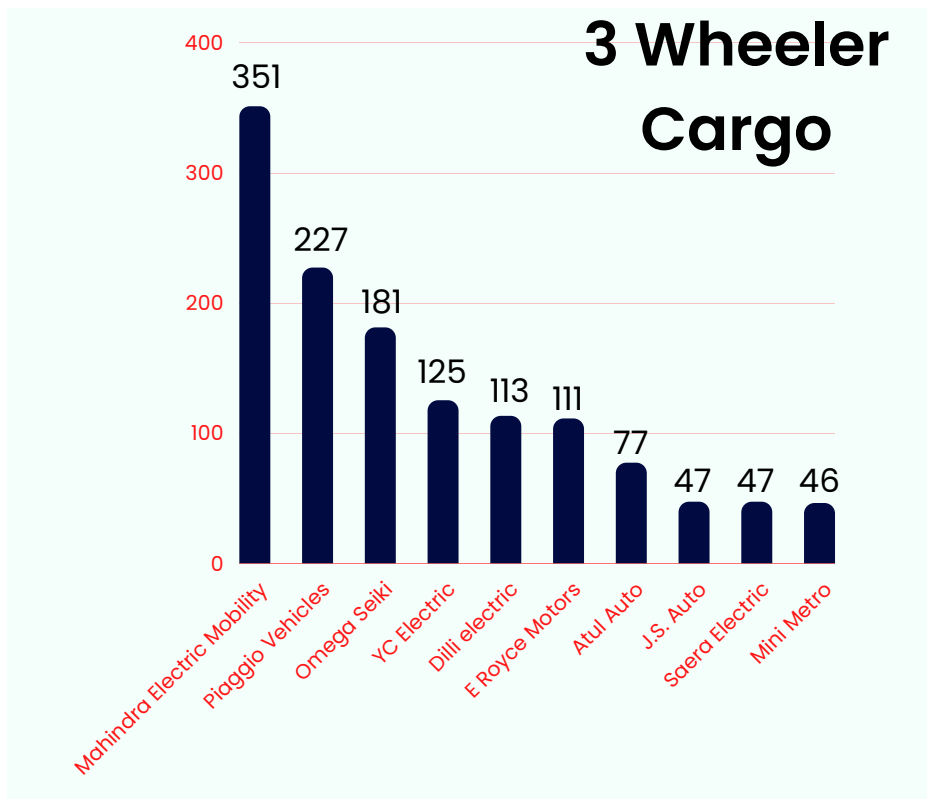


- MoEVing raises an additional USD 5 million as part of its seed round to push its growth agenda ●



EV Sales - Apr 22







All India EV is an independent platform developed & managed by a few EV enthusiasts with the prime objective of educating people about the EV ecosystem, making them aware about what's all happening in the EV industry & promoting the EV industry

To collaborate with us, you can reach us on business@allindiaev.com



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