

REF: WIML/BSE/IP/SEPTEMBER-2023

Date: 12th September, 2023

To,
Corporate Relations Department
BSE Limited
Phiroze Jeejeebhoy Towers,
Dalal Street, Mumbai-400 001

BSE Scrip Code: 538970

Script ID: WARDINMOBI

Ref: Wardwizard Innovations & Mobility Limited ("Company")

Sub: Investor Presentation

Dear Sir/Madam,

We hereby enclose an Investor Presentation "Wardwizard Innovations & Mobility Limited Investor Presentation Q1 FY24."

We request you to take the same on your record.

Thanking you,
For Wardwizard Innovations & Mobility Limited,

Deepakkumar Mineshkumar Doshi
Chief Financial Officer

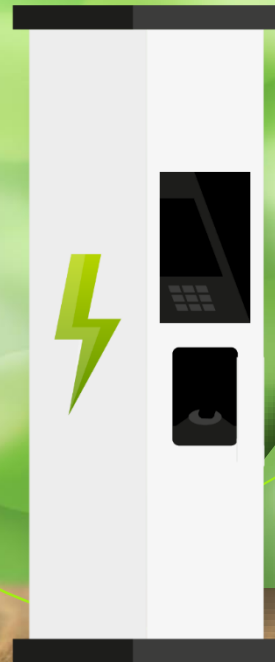


ward
wizard

Innovations & Mobility Limited

Wardwizard Innovations & Mobility Limited

Investor Presentation Q1 FY24



Joy e-bike

Joy e-rik

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Company Overview



Wardwizard Innovations & Mobility Limited (Wardwizard, The Company) is a prominent manufacturer of Electric Two-wheeler Vehicles in India, operating under the brand name Joy e-bike. The Company has one of the broadest product lines of any EVscooters and motorcycle company

With a focus on sustainable and eco-friendly transportation solutions, The Company is dedicated to producing high-quality electric vehicles that are both affordable and efficient.

Wardwizard is also India's first Electric Vehicle Manufacturer to be listed on the Bombay Stock Exchange (BSE) with the core business of EV Manufacturing.

Through its dedication to sustainable transportation and innovation, Wardwizard is helping to pave the way for a cleaner, greener future in India and beyond.



10+
Models under Joy
e-bike



3
Models under Joy
e-rik



750+
Dealers



25+
Company Owned
Retail Outlets



700+
Employees



70,000 Sq. Ft.
Manufacturing
Facility



36,500
EV Units Sold
in FY23



2 wheeler :
Capacity of
1,20,000 units with
1 shift annually



3 wheeler :
Spread across
20,000 Sq. Ft.



65+
Showroom
Distributors



FY23
Revenue - ₹ 238.92 Cr
EBITDA - ₹ 19.57 Cr
PAT - ₹ 9.47 Cr



Q1 FY24
Revenue - ₹ 37.89 Cr
EBITDA - ₹ 4.78 Cr
PAT - ₹ 1.74 Cr



Vision

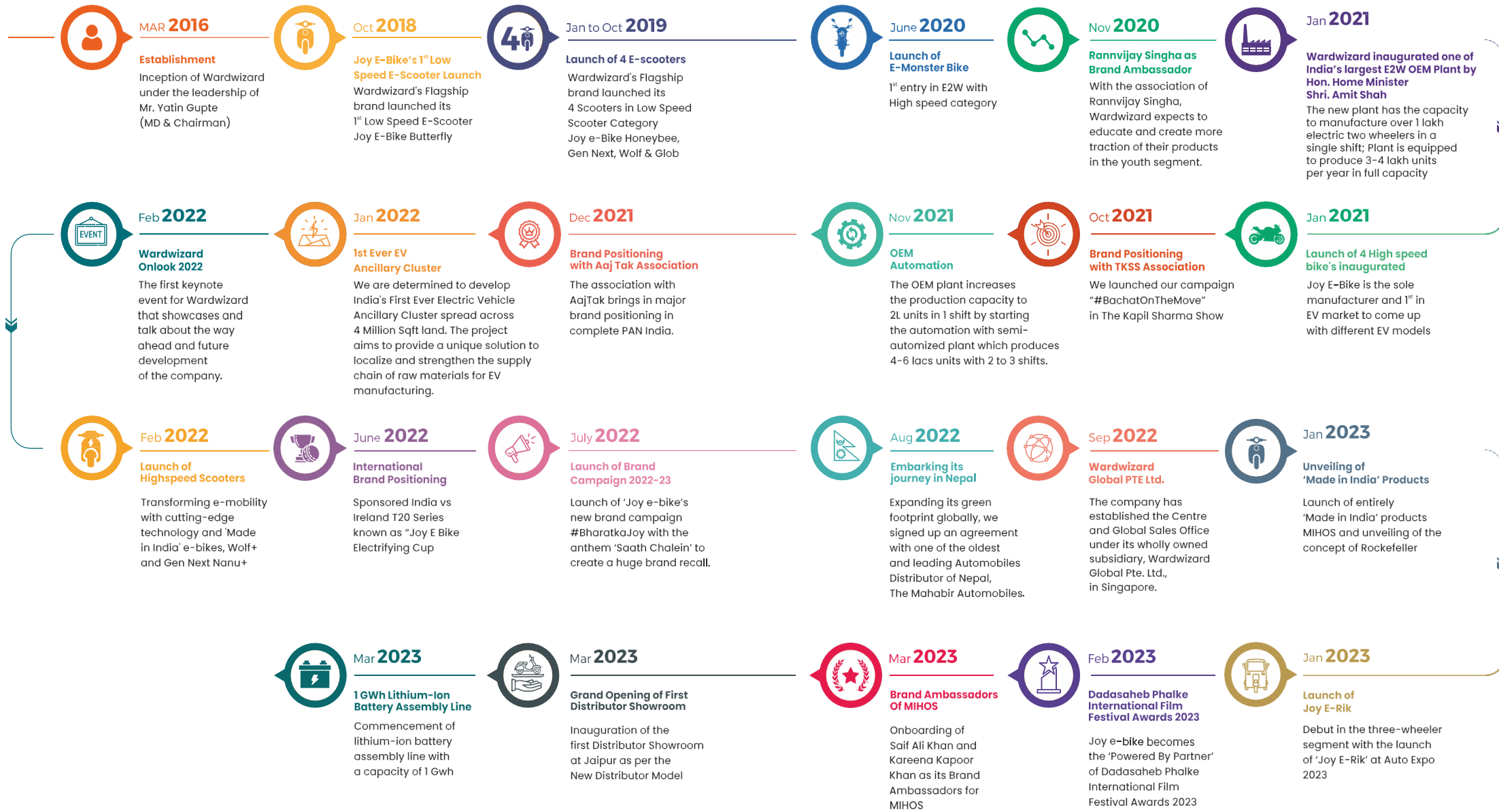
To Empower 55,000 Enterprises For
Prosperity



Our Values

Teamwork
Empowerment
Customer Satisfaction
Growth

Our Journey



State of the Art Manufacturing Facility



Located **Vadodara** Gujrat



Close Proximity To The **Vendors**



Spread Across **70,000 Sq Ft** for 2 Wheeler
Spread Across **20,000 Sq Ft** for 3 Wheeler



1 Semi-automatic Assembly Line



Annual Capacity Single Shift **1,20,000**
Units PA for 2 wheeler



A **2** wheeler Is Produced Every **150** Seconds
After First Vehicle Is Completed



Best Electric Vehicle Manufacturing CEO - Mr. Yatin Gupte by M & A Global Awards



The Economic Times Most Promising Business Leader Of Asia 2020 -2021

ward wizard | JOY e-BIKE

Innovation for a Cause!

Mr. Yatin Gupte, Chairman & MD, Wardwizard Innovations & Mobility Ltd. is facilitated with the "Most Enterprising business leader promoting innovation and environmental conservation" award at The House of Commons, London, UK by Asian UK Business Meet & Awards 2022

YATIN GUPTA
MD & Chairman,
Wardwizard Innovations & Mobility Ltd.

Awards & Accolades



Major Events of this Quarter

Power Couple Saif Ali Khan and Kareena Kapoor Khan Join Hands as Brand Ambassadors of Joy e-bike.



Associated with Gramin Sevikas
and UNDP to Deliver **200** Electric
Two Wheelers, Building the
Communities around Ranchi
Airport.

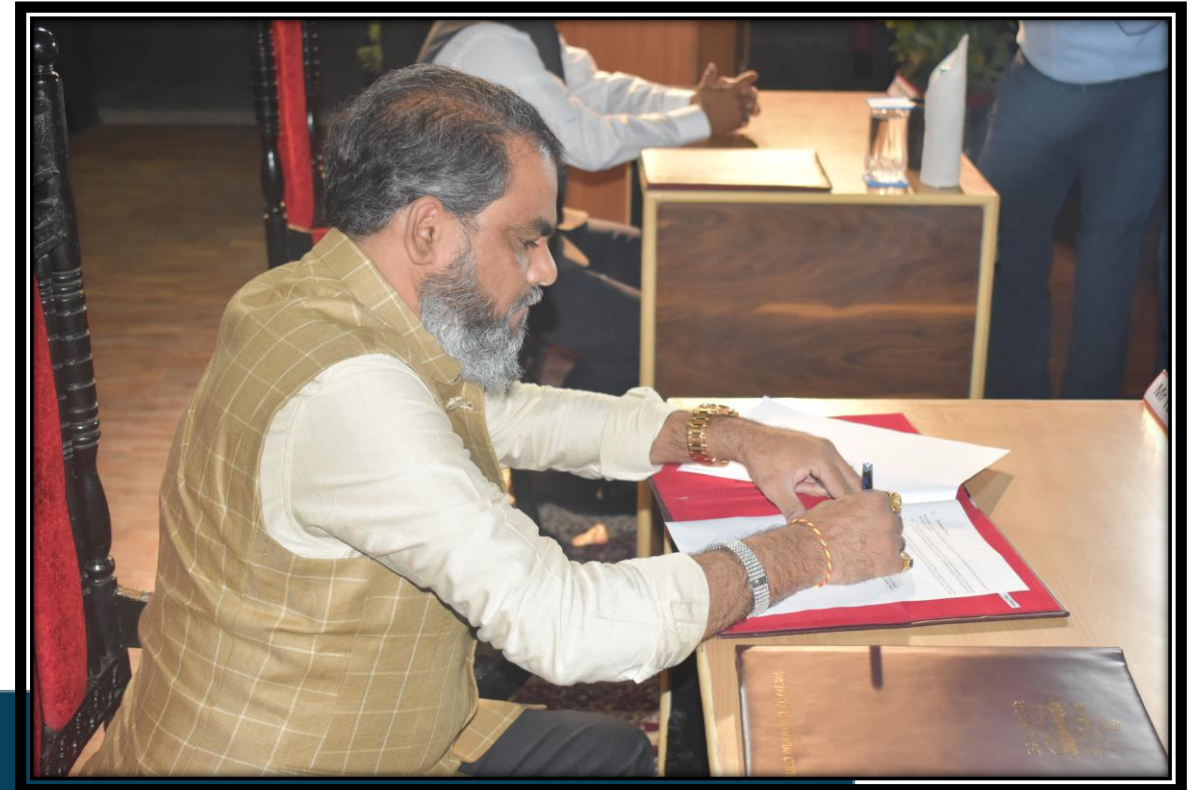


Major Events of this Quarter



Displayed entire range of electric two & three wheelers at the 4th edition of Green Vehicle Expo in Bengaluru.

Major Events of this Quarter



Established EV Centre of Excellence for Skill Development of Defence Personnel in Dogra Regimental Centre, Ayodhya Cantt in Faizabad, Uttar Pradesh.



Management Overview





Yatin Sanjay Gupte
Chairman & Managing
Director

- Mr. Gupte currently serves as Chairman and Managing Director for Wardwizard, and founded and WardwizardGroup in 2016
- He has 15 years of experience working in sales & marketing, business development, client servicing, renewals, and operations (including 11 years of work experience in insurance)
- He has an Honorary Doctorate in Social Service and earned his Master's in Business Administration (M.B.A Exe.) in Insurance & Risk Management from Bhartyiya Shiksha Parisha, Uttar Pradesh



Sanjay Mahadev Gupte
Executive Director

- Mr. Gupte currently serves as Executive Director for Wardwizard
- He previously worked as a General Manager of Marketing with Poggen-AMP Nagar Sheth Powertronics Ltd.
- He is a National Apprenticeship Certificate course holder in the Trade of Machinist IN Mumbai G.K.W Ltd.



Sheetal Mandar Bhalerao
Non-Executive – Non-Independent Director

- Mrs. Bhalerao currently serves as Non-Executive, Non-Independent Director for Wardwizard
- She also currently serves as a Managing Director of Wardwizard Food and Beverages Limited
- She was previously the CEO of Yeppy Foods and the Account and Finance Director of JZ Hospitality
- She obtained her Master's in Business Administration (M.B.A) in Human Resources and Services from the University of South Australia



**Bhargav
Govindprasad Pandya**
Non Executive –
Independent Director

- Mr. Pandya currently serves as Non-Executive Independent Director for Wardwizard
- He previously worked for 11 years as an Officer and Sr. Manager in the Foreign Exchange department at Baroda Main branch, the Alkapuri branch, the International Business branch Baroda, and Anand Main Branch
- He received a Bachelor of Commerce (B.Com), Bachelor of Laws (LLB.), Inter CWA., and CAIIB(I)



Avishek Kumar
Non Executive –
Independent Director

- Mr. Kumar currently serves as Non Executive Independent Director
- He also currently serves as a Director of Datakrew, CEO and Founder and Director of Sunkonnect
- He obtained his Bachelor of Engineering from R.V. College Microelectronics from Nanyang Technological University, and Doctor Computer Engineering from the National University of Singapore



**Preyansh Bharatkumar
Shah**
Non Executive –
Independent Director

- Mr. Shah has over 15 years of experience in Corporate Compliance Management, he has established himself as a prominent figure in the field.
- He is a Fellow member of the Institute of Company Secretaries of India (ICSI) and holds a Bachelor of Commerce degree, a Post-Graduate Diploma in Business Administration, and a Bachelor of Laws degree.



Mrs. Rohini Abhishek Chauhan
Non Executive –
Independent Director

- Mrs. Chauhan has a total of nine years of experience in the field of Company Secretarial Practice.
- She has worked as an Assistant Company Secretary at Jindal Hotels Limited for four years, where she gained experience in corporate and securities law.
- She also has four years of experience in Secretarial Practice as a Company Secretary in Practice.
- She is a Associate member of the Institute of Company Secretaries of India (ICSI) and Commerce Graduate



DR. JOHN JOSEPH
Additional Non-Executive
Independent Director

- He has academic qualifications in M.V.Sc (Master of Veterinary Science), LLB and Post Graduate Diplomain Alternate Dispute Resolution.
- He has more than 39(Thirty Nine) years of experience in the field of Central Excise and Customs and retired as Specialsecretary to Government of India and Chairman/member CBIC.He is one of the distinguished personalities who has proven Integrity by serving as Whole-time Director GST Network (GSTN) Government of India and also has experience of Directorship in Corporates.



Lt General Jai Singh Nain (Retd)
Additional Non - Executive
Independent Director

- Lt. General Jai Singh, with 40 years in the Indian Army, has diverse leadership roles and educational credentials, including Defence Studies and Management.
- He was pivotal in shaping the Indian Army Vision 2050 and establishing a tech node in Pune for indigenous defence innovations.
- He championed sustainable practices and electric vehicles across multiple states and has served with the UN Peacekeeping Force and in Bangladesh. He's recognized for his professionalism, integrity, and visionary leadership.



Jaya Ashok Bhardwaj
Company Secretary
Compliance Officer

- Ms. Bhardwaj currently serves as Company Secretary and Compliance Officer for Wardwizard
- She is Company Secretary (CS) and completed her Graduation in Commerce (B.Com)
- She has more than 7 years of experience as Company Secretary for listed companies in the field of Company Law, secretarial matters, security law, legal matters and compliances.



Deepak Doshi
Chief Financial Officer

- Mr. Doshi currently serves as Chief Financial Officer for Wardwizard
- Prior to becoming Chief Financial Officer for Wardwizard, he was the Chief Financial Officer of Mangalam Industrial Finance Limited
- He is Chartered Accountant (CA) and completed his Graduation in Commerce (B.Com)



Sanjay Kumar Sablok
President-Operations

- Mr. Sanjay Sablok was appointed in Board Meeting Held on 04th August, 2023
- He is a seasoned professional in operations and manufacturing.
- With a background in Mechanical Engineering and a remarkable career, he has led the establishment of key greenfield plants, showcased outstanding project management skills,
- He has played pivotal roles in renowned companies like Tata Motors and Hero MotoCorp Limited.
- His expertise is a true asset to the field of operations.



Tarun Kumar Sharma
President- Marketing & Branding

- Mr. Tarun Sharma was appointed in Board Meeting Held on 04th August, 2023
- He has over 20 years in Marketing and Sales, with expertise in strategic marketing and telecom projects like 3G, 4G, and 5G. .
- An alumnus of IIM Lucknow, he has several credentials including diplomas from IHM Ahmedabad and SCDL Pune, and certifications from SP Jain and Google Squared.
- Currently, he serves as the President of Marketing & Branding, responsible for driving business growth and managing brand development and engagement strategies.



Ravidran Nambiar
President of International Business

- Mr. Nambiar currently serves as the President of International Business for Wardwizard
- He is responsible for international business strategy and development for the two flagship brands; Joy ebike and VYOM
- He received his Bachelor of Science (B.Sc) from The Maharaja Sayajirao University of Baroda



Vineet Akre
Sr. Vice President of R&D & Production

- Mr. Akre currently serves as Senior Vice President of R&D and Production for Wardwizard
- Prior to joining Wardwizard, he worked as an Assistant Vice President of Production for Hivoltrans Electricals Pvt. Ltd.
- He completed his Bachelor of Engineering (BE) from Shri Sant Gajanan Maharaj College of Engineering, Shegaon



Alok Jamdar
Vice President of
Operations (Production)

- Mr. Jamdar currently serves as Vice President of Production Operations for Wardwizard
- He has more than 30 years of experience in developing critical machined components & assemblies while being cost effective
- He graduated with a Diploma in Mechanical Engineering from the Institute of Mechanical Engineers Baroda, India



Annasaheb Kumbhar
Associate Vice President -
Factory Head

- Mr. Annasaheb Mahadev Kumbhar is a Diploma in Mechanical Engineering graduated from BTE Bombay, Maharashtra.
- Mr. Annasaheb Mahadev Kumbhar is having more than 21+ years of experience in areas of setting up of Assembly Lines, Vendor Development, Quality control, Homologation, Industrial engineering. He is associated with Company as an Associate Vice President- Factory Head and looking After Sales Services, Vendor development.
- He was previously associated with companies like Bajaj Auto limited, PARI Automation, Piaggio Vehicles private Limited, DSK Motowheels Private Limited, Benelli India.



VILAS PATURKAR
3 Wheeler head

- Mr. Vilas is a competent professional with an experience of over 34 years in the areas of R & D / Inspection, Testing, Electrical Maintenance and Quality Management
- Experienced in Electronics & Electrical components (Motor, Controller, charger & Harness) Designed of Main wiring harness for Electrical two & three wheelers for production



Sneha Shouche
Chief Marketing
Officer

- Mrs. Sneha Shouche, an MBA in Finance from C.K. Shah Vijapurwala Institute of Management, excels in financial analysis, strategic planning, and business development.
- As the CMO of Wardwizard Innovations & Mobility Limited, she drives marketing in the e-mobility sector, boosting brand visibility and business growth.
- She was the Costing and Business Development Manager at M/S J.S. CORRUPACK PVT. LTD.
- Her strategic approach consistently turns challenges into growth opportunities.



Company Overview



Low-Speed E-Scooters



GEN NEXT NANU

With a 60V 24Ah detachable Lithium-Ion battery and a 250W DC hub motor, achieve speeds of 25 kmph, handle up to 140kg, and tackle 7° inclines. Enjoy 70 km* on a full charge and smooth rides thanks to front and rear suspensions.



GLOB

Glob is available in black, blue, and rose gold. Lithium-Ion battery: 65km* range, 3-3.5hr* charge.



WOLF

Stylish everyday commuter scooter. Dual shades: White-red, Orange-silver, Black. Lithium-Ion battery for up to 65 km*, 3-3.5 hr* charge time.

High-Speed E-Scooters



GEN NEXT NANU+

IoT-powered ESCooter, "Joy EConnect", with geofencing, trip analysis, and remote ignition, boasts a 100km range* in Matte White and Midnight Black..



WOLF+

Wolf+ ESCooter: Family-friendly with ample leg space. IoT-enabled via Joy EConnect, offering geofencing, trip analysis, and remote ignition. 100km* range in Matte Black, Stardust Grey, and Deep Wine.



WOLF ECO

Eco-friendly ride reaching 46 km/h, with a 90 km range per full charge. Features hydraulic suspension and a 5-5.5 hour charge time. Supports 140 kg load. Efficiency meets convenience.



GEN NEXT NANU ECO

Gen Next Nanu scooter: Super-sleek design in black, silver, white. Lithium-Ion battery offers 65km* range with 3-3.5hr* charge time.



DELGO

With a detachable 60V 36.4Ah battery and 1500W DC hub motor, achieve 55 kmph*, support 160kg, and easily handle 7° inclines. Get up to 100 km* per charge and a smooth ride with front and rear hydraulic suspensions.

Electric Motorcycles



MONSTER

Experience dynamic power with a 72V / 33Ah Lithium-Ion battery and a 250 Watts DC Brushless Hub motor. Choose between fixed and detachable battery options for added flexibility. The motor's RPM range spans from 100 to 375, promising an exciting ride.



HURRICANE

Like a storm that glides effortlessly through the city lights Hurricane is the superbike with 75km* on a single charge and cost you just 40p/km*.



THUNDERBOLT

Thunderbolt superbike hits 110km* speeds, igniting passion. With a 200mm ground clearance and advanced hydraulic suspension, it ensures thrilling yet comfortable rides.



BEAST

The ferocious Joy EBike Superbike, named "Beast", boasts impressive speed and features. It dominates the road with a consistent 110km* range. Its hydraulic suspension guarantees an adventurous yet comfortable ride, blending thrill with luxury.



E-MONSTER

With a contemporary design that makes a "WOW" feeling and a thrilling experience like never before. EMonster is a joy to ride, goes up to 95kms* on a single charge and cost you just 23p/km*.

Product Portfolio Presence Across The Value Chain

Segment	Models	Performance	Registration	Market Segmentation
Low-Speed Electric Scooters	Wolf Gen Next Nanu Glob	Low Speed	Not Required	Rural and Semi-Urban Terrains 16 - 25 years old
High-Speed Electric Motorcycles	E-Monster Beast Thunderbolt Hurricane	High Performance	Required	Hilly Terrains Ages vary
High-Speed Electric Scooters	Wolf+ Gen Next Nanu+ Wolf ECO GenNext ECO	High Speed	Required	Urban, Hilly, and Rural Terrains 18 - 60 years old
Electric Three-Wheeler	E-Rik	High Speed	Required	High Speed Commercial Vehicle

Ex Showroom Price Range



Two wheeler ex showroom price
₹ 77,400 – ₹ 2,42,000



Three wheeler ex showroom price
₹ 3,40,000



New Launches At Auto Expo 2023 - MIHOS



Jet Black Glossy



Matte White



Satin Blue



Jungle Green



Matte Gold

MIHOS: It is designed and developed with Poly DiCycloPentadiene (PDCPD) for additional durability and flexibility to absorb maximum impact on the road.

The new-age-high-speed electric scooter further comes with smart and Intelligent features to bring maximum convenience of the rider while riding.

Range
***130Km**

Battery
Capacity
74 V

Motor Power
1,500 W

IP6
Waterproof

Charging Time
***5Hrs**

For More Details



*Under controlled conditions

New Launches At Auto Expo 2023 - E-RIK

Available colours

- Yellow
- Blue
- White
- Green



Joy E-Rik falls under L5 passenger category. The three wheeler is designed and developed by the R&D team with prime focus on promoting localization and “Make In India” initiative.

The vehicle is much more spacious and stable while driving.

[For More Details](#)

Range
80-85 Km
(Without Load)

Max Speed
50 -55 Kmph

Battery
Capacity
65 V

IP67 rated
battery pack

Standard Charging Time
3.5 - 4Hours @30 Amp
Fast Charging Time
2.5 Hours @ 40 Amp

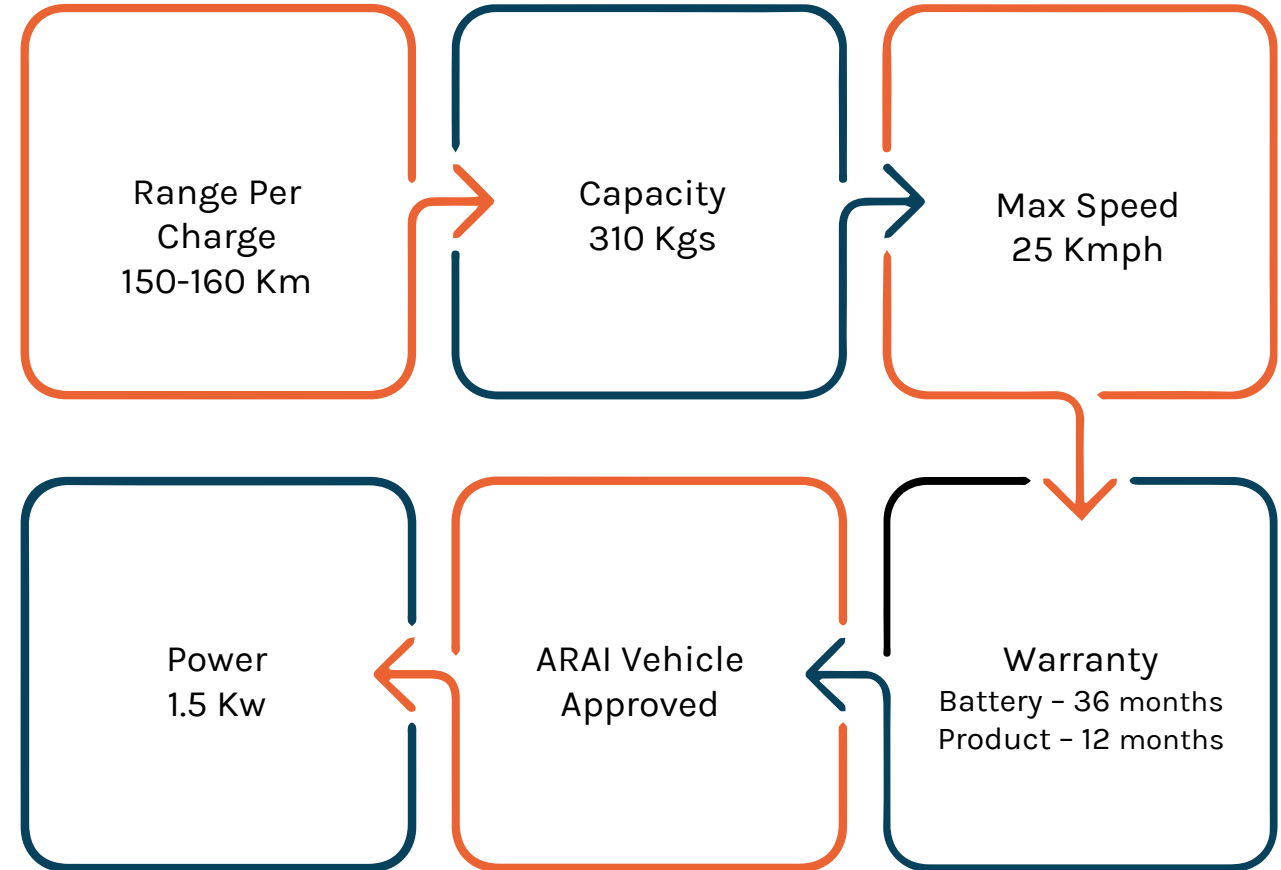
New Launches At Auto Expo 2023 – Prototype Of Rockfeller

ROCKEFELLER has a special place in the history of the Company since it is connected to the initial products of Joy e-bike. The name also highlights the intent of contributing to human well-being, which is one of the key highlights behind the development of this product, i.e. "Bike for Daily Commute" and showcases its sturdy structure. The 'E' highlighted in the name of ROCKEFELLER stands for 'Electric'.





E-Cart / Garbage





E Loader – L5

Regenerative
Braking

IP 67 Rated
Battery Pack

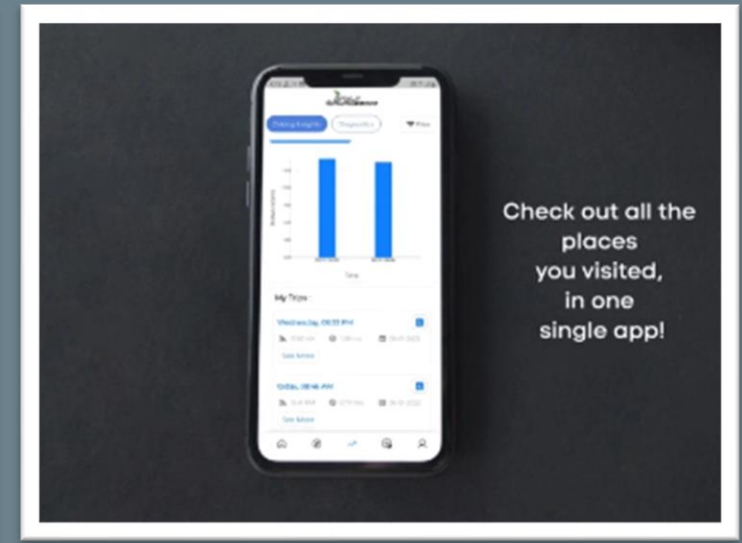
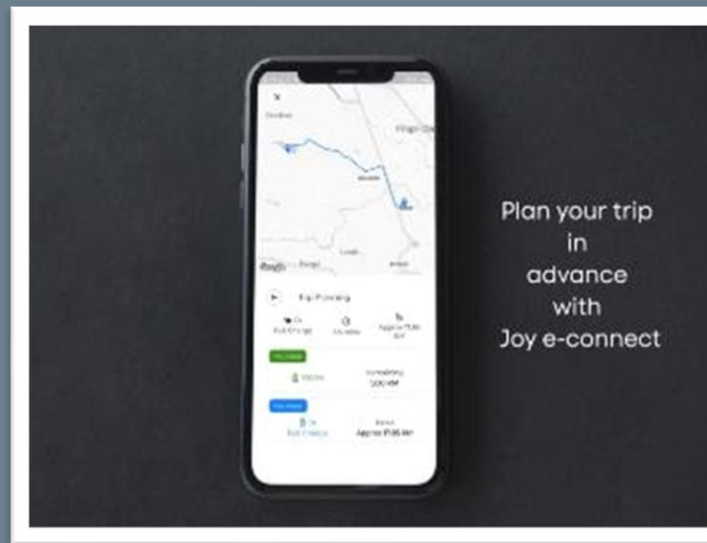
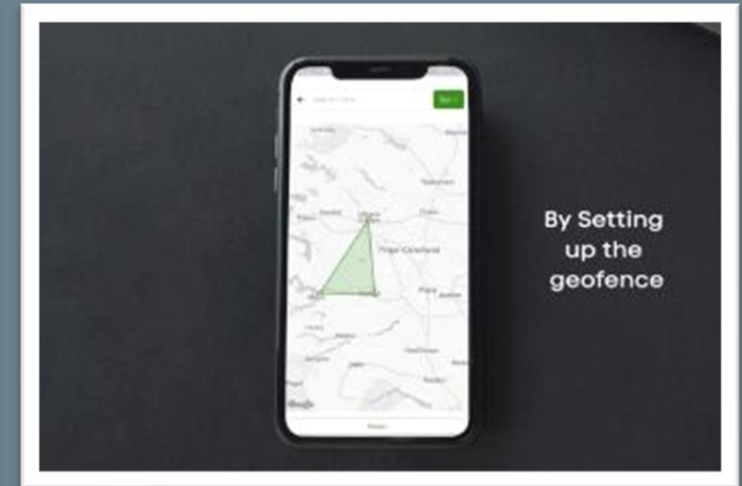
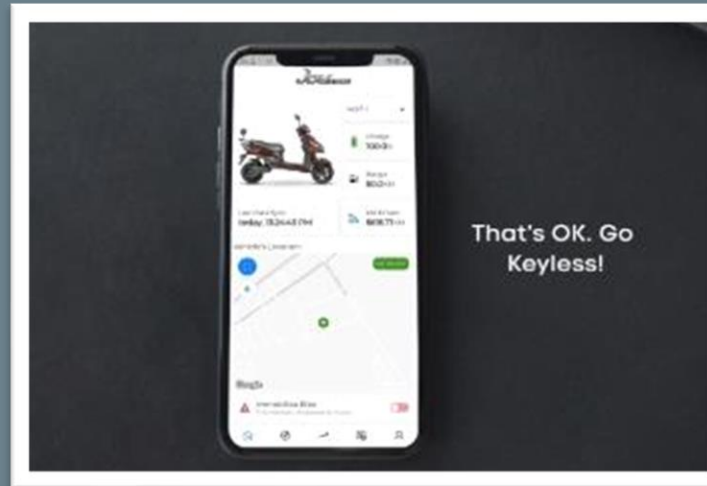
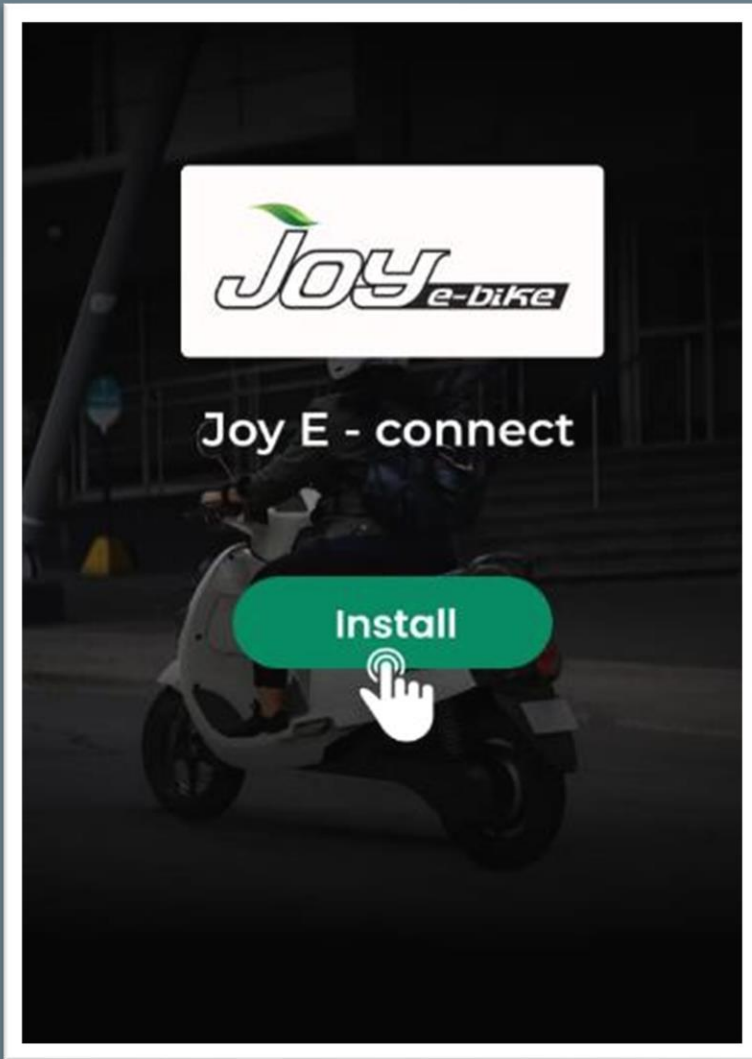
Combi Drum
Break Front &
Rear

IOT Smart
features

Max Speed
50 Kmph

Digital
Cluster

Revolutionize Your Ride with Joy E – Connect



Take Control of Your Ride with Joy E-Connect: Smart, Secure, and Connected!

Increasing Dealer Network

State	Urban Area	Rural Area	Total
Gujarat	44	137	181
Maharashtra	48	78	126
Rajasthan	37	47	84
Madhya Pradesh	23	57	80
Chhattisgarh	9	10	19
Delhi/Haryana	47	29	76
Uttar Pradesh	50	39	89
Bihar/Jharkhand	23	28	51
Odisha	3	16	19
West Bengal	15	12	27
Karnataka	3	4	7
Grand Total	302	457	759

State	No. of Dealers
J&K	6
Punjab	13
Uttar Pradesh	89
Rajasthan	84
Gujarat	181
Maharashtra	126
Kerala	1
Karnataka	7
Goa	2
Himachal Pradesh	2
Chandigarh	2
Delhi/ Haryana	76

State	No. of Dealers
Uttarakhand	14
Bihar/ Jharkhand	51
Assam	1
Chhattisgarh	19
Odisha	19
West Bengal	27
Madhya Pradesh	80

International	No. of Dealers
Nepal	1



750+
Dealers



Presence In **50+**
Cities
In **19** States &
Union Territories



55,000 +
Satisfied
Customers



4 Zonal Offices
1 Branch Office



65+
Showroom
Distributors

Company Owned Retail Outlets



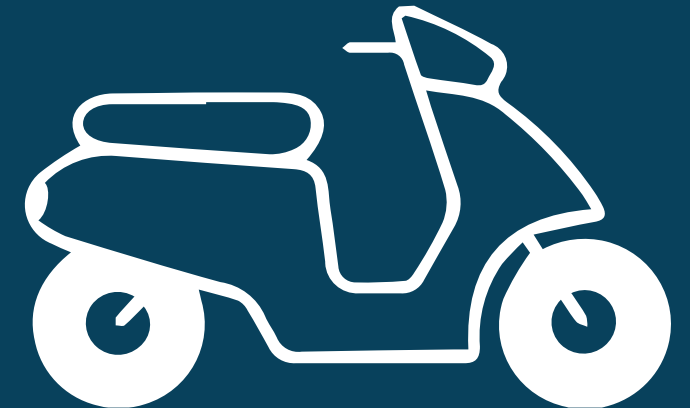
Joy e-bike Exclusive Showrooms are present

25+ different locations



Reach
20,000

Lead
170 +



Highlights Of All The Events



MCCIA – Pune

April 2nd to 05th, 2022



Business Jatra

November 11th & 12th, 2022



EV Expo -Kolkata

April 20th to 24th, 2022



EV Expo BIEC – Bangalore

May 06th to 08th, 2022



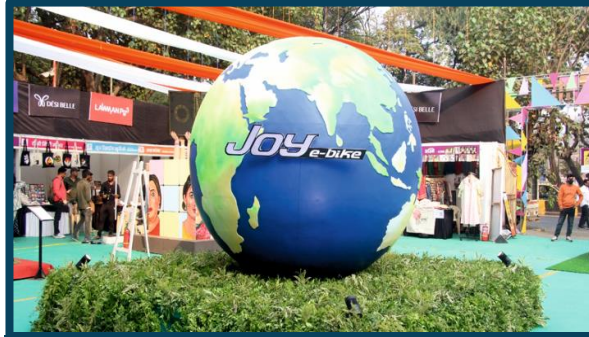
Bombay Exhibition Centre - Mumbai

May 26th to 28th, 2022



**Auto Expo –
Noida**

January 11th to 18th, 2023



**Shri Chhatrapati
Shivaji Art Festival**

February 2nd to 5th, 2023



**Advantage Maharashtra
Expo Aurangbad**

January 5th to 8th, 2023



**VCCI Expo –
Vadodara**

January 27th to 30th, 2023



Media Test Drive of E-Rik

March 24th and 25th, 2023



Global Business Summit

February 17th and 18th, 2023



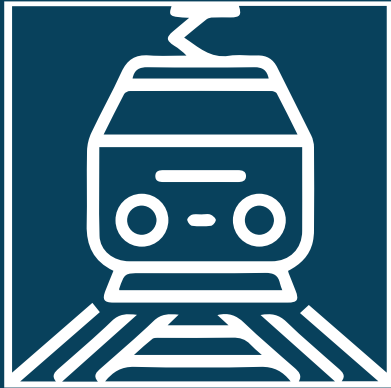
Test Drive of Mihos

February 28, 2023

Engaging Marketing Techniques To Create Brand Awareness



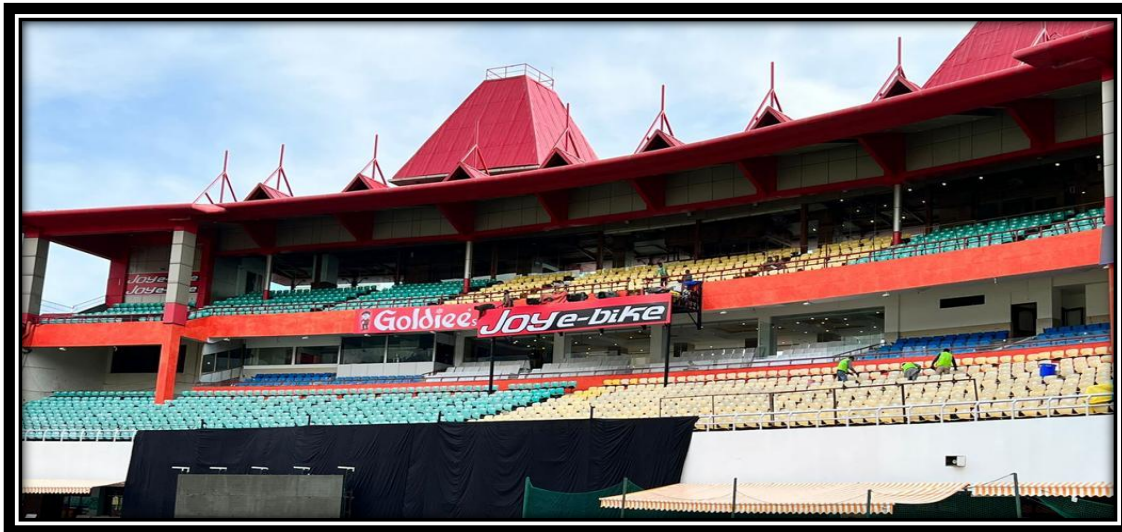
At Auto Expo
2023



Marketing in Indian Railways



Stadium Branding



Approx Reach

3Cr+



Approx
Reach

37.2 Cr+



Approx Reach | **1 Cr+**



1

Fitisan , Vadodara
August 15,2022



APPX. Reach : 70,000 +

2

Real Kabaddi League, Jaipur
September 21 to 30,2022



APPX. Reach : 3L +

3

Thomso, IIT Roorkee, Uttarakhand
October 15, 16 and 17,2022



APPX. Reach : 30,000 +

4

Vadodadra Marathon, Vadodara
January 8,2023



APPX. Reach : 1.2L +

5

LVP Heritage Garba, Vadodara
September 26 to October 5,2022



APPX. Reach : 70,000 +

Film Festival (DPIFF) Awards 2023



Strength

- Enactment of stringent emission and fuel economy norms.
- Increasing consumer demand due to awareness of environmental concerns.
- Ongoing technology upgradation and significant R&D
- Attempt in reduction of prices of batteries to lower the cost of Evs.
- Good Financial position
- Model in Low speed and High Speed
- Availability of Skill manpower
- Plant location near to the city
- Good Team of Product Development
- The dealer count to more than 750+ pan India



Opportunities

- Part quality need improvements
- High Unit cost
- System need to be strengthen.
- Insufficient EV charging infrastructure
- Skill manpower in staff need strengthen
- High initial investments of EV charging infrastructure
- New Product development process need to be strengthen
- Limited B2B interaction for expansion of infrastructural capacity
- No localised value chains



Weakness

- Government promotion for EV vehicle
- EV market is growing
- Exploring into 3W EV vehicles
- Can enter 4W EV car or Bus Business also
- Continuous research and development (R&D)
- Growing demand for EVs in the automotive sector in the passenger category



Threats

- Competitors are more in nos and increasing regularly
- Competitor are coming in lower price range
- Fragmented market
- Risk of safety / credibility issues of the products
- Low level of financing options
- Emissions due to high volume electricity generation





Industry Overview



EV Mobility Market Overview & Government Initiative In India

The Indian government has planned US\$ 3.5 billion in incentives over a five-year period until 2026 under a revamped scheme to encourage production and export of clean technology vehicles.

Investment flow into EV start-ups in 2021 touched an all-time high, increasing nearly 255% to reach Rs. 3,307 crore (US\$ 444 million).

The EV market in India is estimated to reach Rs. 50,000 crore (US\$ 7.09 billion) by 2025.

The Indian automotive electric two-wheeler industry grew by more than 300% in 2022 and is expected to cross 50% market share by 2023, with connected two-wheelers and high-speed electric vehicles driving the growth.

In 2022, EV sales reached a new high of 10,54,938 units surpassing 1 Mn mark for the first time with 4.7% market share in overall automobile sales.

A report by India Energy Storage Alliance estimated that the EV market in India is likely to increase at a CAGR of 36% until 2026. The projection for the EV battery market is forecast to expand at a CAGR of 30% during the same period.



EV Mobility Market Overview & Government Initiative In India

The Indian government is working to create an integrated EV mobility ecosystem with a low carbon footprint and high passenger density with an emphasis on urban transportation reform.

Mahindra & Mahindra has tied up with three electric vehicle infrastructure partners to offer charging solutions for its range of passenger electric vehicles.

There is a need to set up proper charging infrastructure for EVs in India, and various public sector firms, ministries and railways have come together to create infrastructure and to manufacture components.

The Government approved FAME and plans to cover all vehicle segments and all forms of hybrid & pure EVs. FAME-I was extended until March 31, 2019. In February 2019, the Government of India approved FAME-II scheme with a fund requirement of Rs. 10,000 crore (US\$ 1.39 billion) for FY20-22.

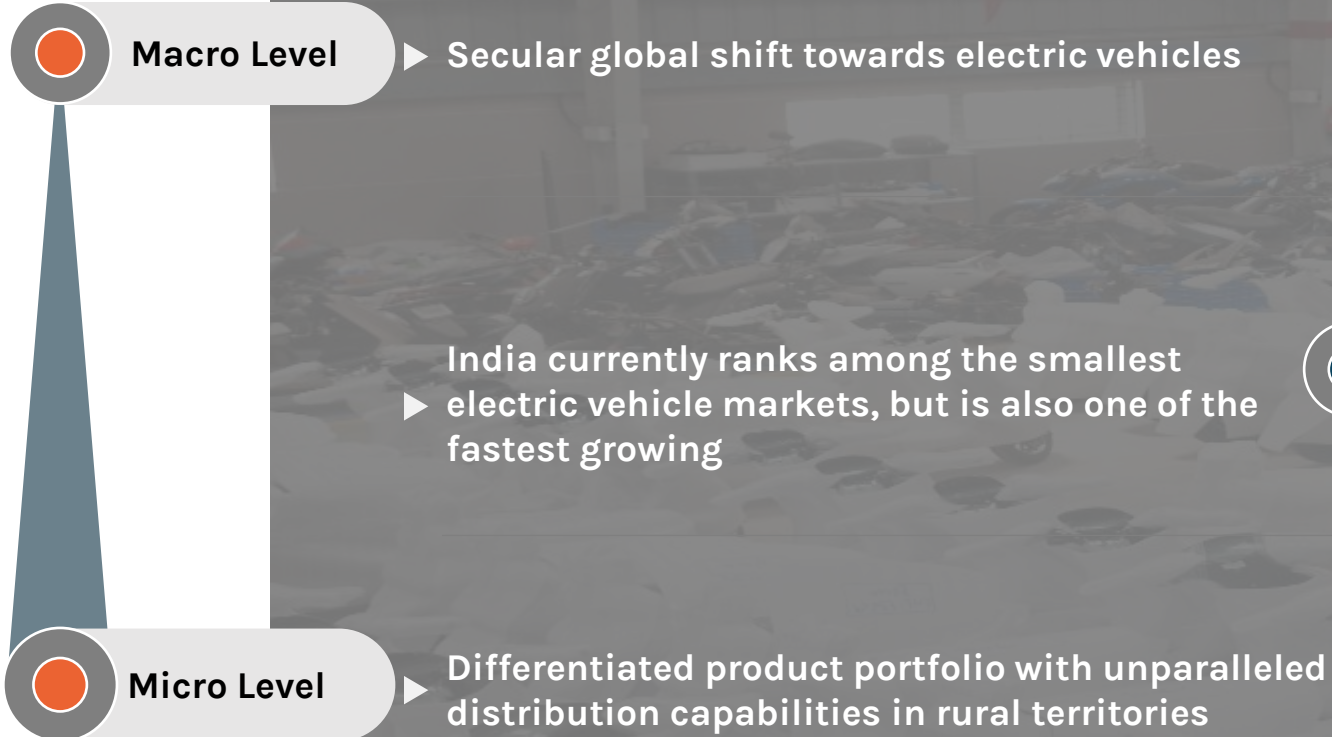
In the year 2021, India's spending on electrical architecture development, such as battery development, electrification, e-motors and power electronics, came up to Rs. 48,215 crores (US\$ 6.39 billion).

The Union Budget 2023 has eliminated custom duties on machinery used for producing lithium-ion cells for EV batteries. This step is expected to lower the cost of EVs in India.

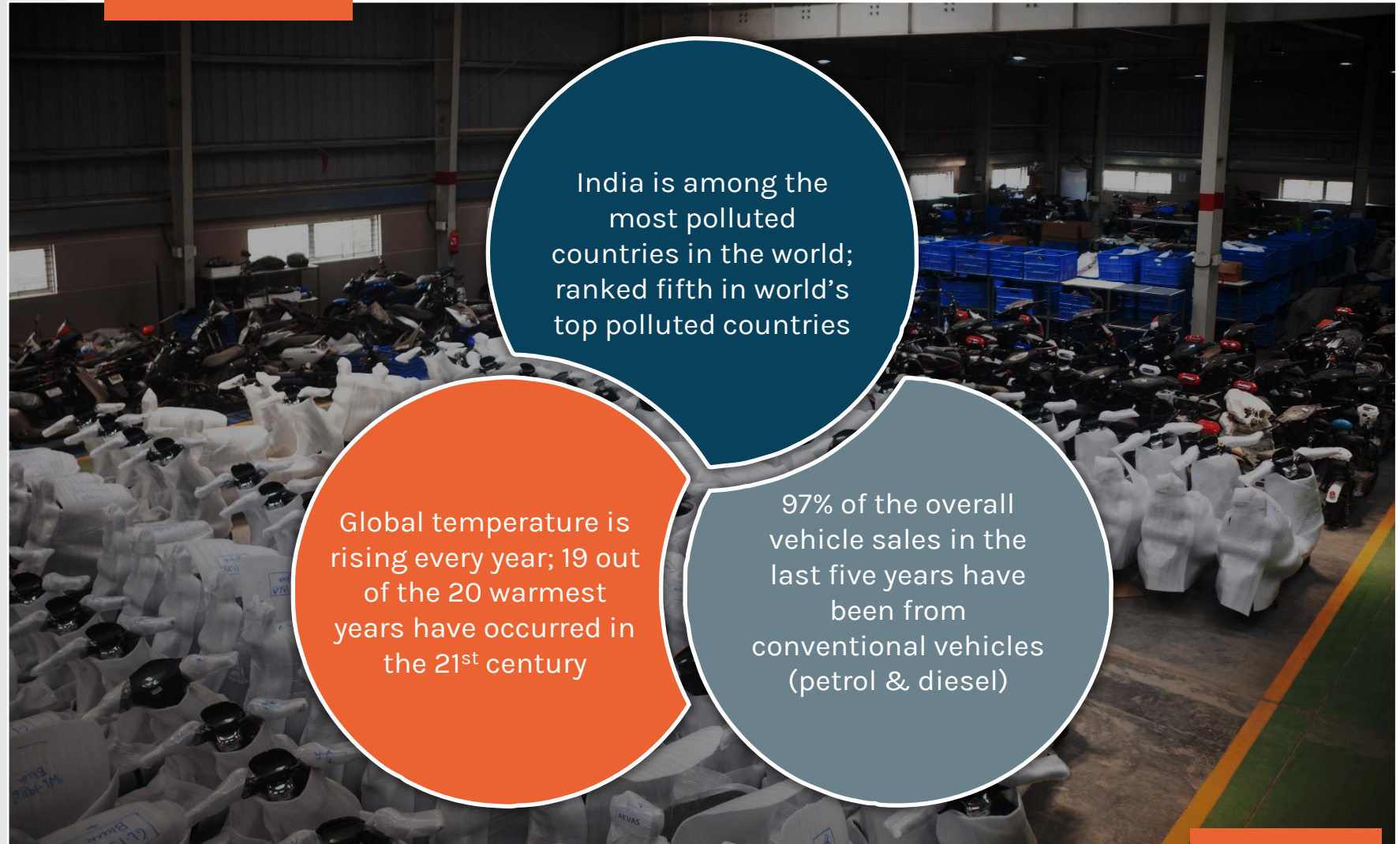
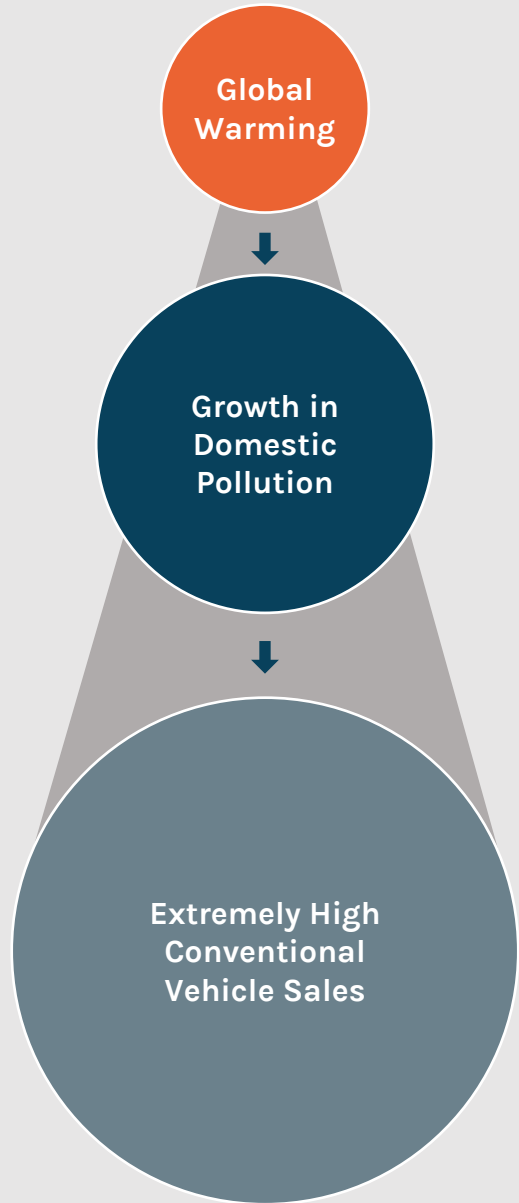
Electric vehicle (EV) manufacturers are discussing a battery decoupling policy with the government, aiming to separate the battery from EVs and create a nationwide battery-swapping system. This can significantly reduce EV costs, given that batteries contribute to 40-50% of an EV's price. Such a policy could further boost India's EV sales, which already surpassed one million units in FY22-23.



Multi-Dimensional Growth Opportunity



India's Electric Vehicle Market: Small but Mighty in Growth!

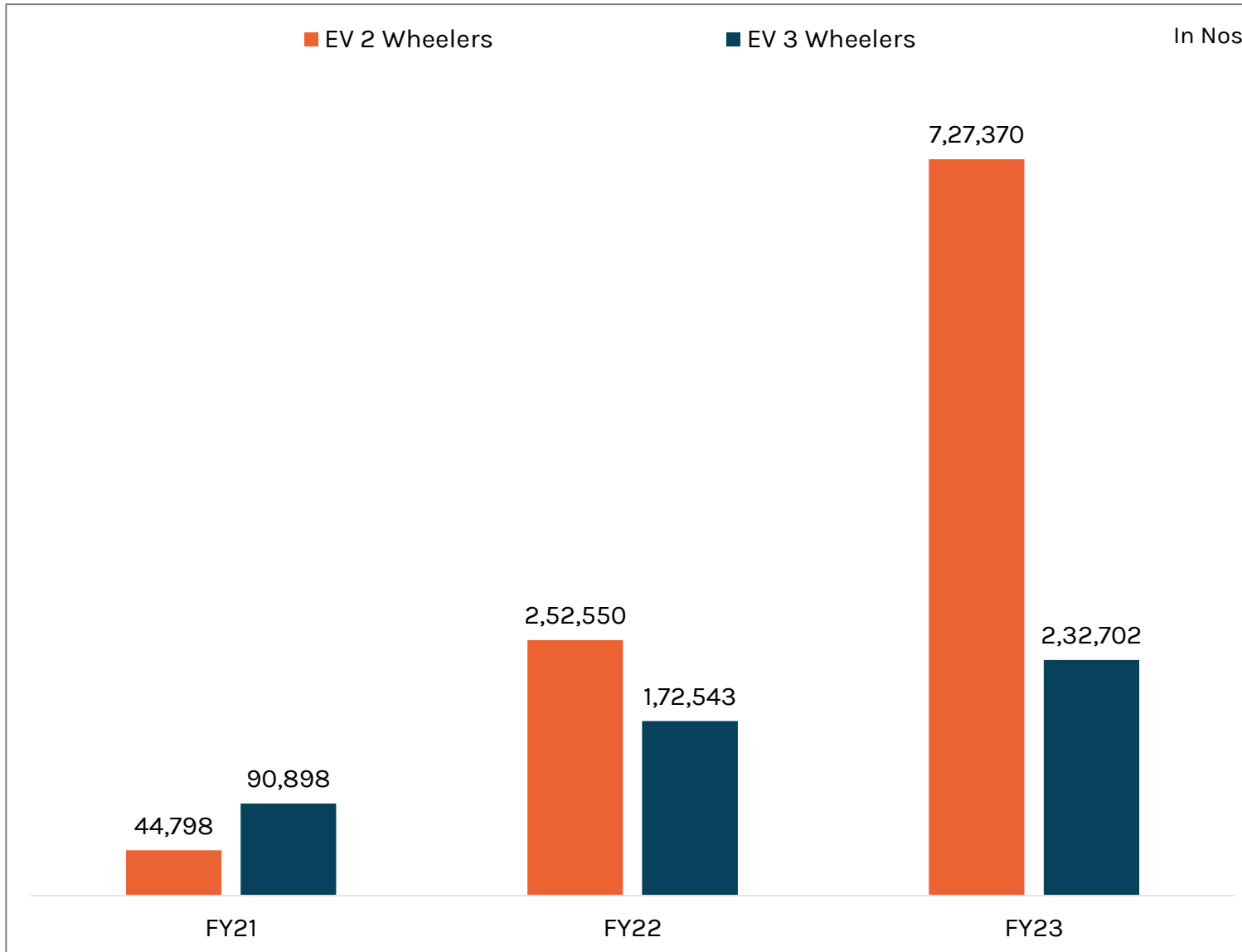


State Government Incentives To Promote EV Adoption

State
2 Wheeler
3 Wheeler
4 Wheeler

State	Gujarat and Assam	Delhi	Kerala	Maharashtra	Manipur	Odisha
2 Wheeler	₹ 10,000/kWh	Demand Generation Incentive: Up to ₹ 30,000 Purchase Incentive: ₹ 5,000/kWh up to ₹ 30,000	--	₹ 5,000/kWh up to ₹ 10,000 for the first 100,000 electric 2-wheelers	₹ 10,000/kWh up to ₹ 1,50,000 for the first 3,500 electric 2-wheelers	15% up to ₹ 5,000
3 Wheeler	₹ 10,000 /kWh	Purchase Incentive of ₹ ₹ 30,000 Interest subvention of 5% on loans and/or hire purchase scheme for the purchase	25% of the EV up to ₹ 30,000	₹ 5,000/kWh up to ₹ 30,000 for the first 15,000 electric 3-wheelers autos ₹ 5,000/kWh up to ₹ 30,000 for the first 10,000 electric 3-wheelers goods carrier	₹ 4,000/kWh up to ₹ 5,00,000 for the first 200 electric 3-wheelers	15% up to ₹ 12,000
4 Wheeler	₹ 10,000 /kWh	Purchase Incentive of ₹ 10,000 /kWh up to ₹ 1,50,000 for the first 1000 e-cars	--	₹ 5,000/kWh up to ₹ 1,50,000 for the first 10,000 electric 4-wheelers cars ₹ 5,000/kWh up to ₹ 1,00,000 for the first 10,000 electric 4-wheelers goods carrier	₹ 4,000/kWh up to ₹ 15,00,000 for the first 2,500 electric 4-wheelers	15% up to ₹ 1,00,000

Growing Electric Vehicle Sales In India



FY21 - FY23 CAGR by Segment

Electric 2 Wheelers 303%
Electric 3 Wheelers 60%

2-wheeled electric vehicles are the fastest growing segment within India's dynamic electric vehicle market

Electric Vehicles vs. Internal Combustion Engines (ICE)

EVs Are Simpler:

EVs have fewer components and live 3.5 times longer than ICE vehicles

EVs Are More Powerful:

EVs can offer full torque at zero RPM, whereas ICE vehicles can only operate in a certain RPM range. Thus, at lower speeds, EVs are more powerful

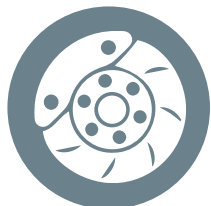
EVs Have Begun to Make Economic Sense:

Electric vehicles have a significantly higher upfront cost, as compared to ICE vehicles, largely on account of battery costs. On the other hand, the operating costs for an EV are much lower. Thus, Total Cost of Ownership (TCO) is an important economic comparison between ICE vehicles and EVs



Moving Parts

ICE 150	150
EV 24	24



Wearing Parts

ICE	24
EV	11

	Electric Vehicle	ICE
Cost of Purchase (₹)	1,04,167	91,500
Operating Cost	₹ 0.15/km	₹ 1.97/km
Maintenance Cost	No Maintenance cost	--
Downtime	No Downtime	--
Impact on Environment	Eco friendly	--

External Drivers

The EV industry's future looks promising due to supportive policy measures, climate change mitigation efforts, cost benefits, and expanding infrastructure.

Policy Initiatives

- Government offers EV tax credits, funds EV infrastructure, enforces anti-pollution regulations, and promotes Indian EV production via "Make in India".

Awareness of Climate Change

- Teens and youngsters are increasingly aware of climate challenges, leading to a rising demand for low-emission vehicles among the general public.

Cost of Ownership

- Rising fuel prices, advancements in battery tech, simpler EV designs, and a lower total cost of ownership compared to ICE vehicles highlight the shift towards EVs.

Charging Infrastructure

- Enhanced charging infrastructure with government involvement, innovations in wireless charging and relaxed guidelines for operating stations are accelerating EV adoption.

Key Differentiators

Electric two-wheelers offer variety for all ages in affordability, speed, and design. eBikes come with smart features like anti-theft and regenerative braking, are tailored for Indian roads, include a tech-savvy mobile app for analytics, and the company ensures quality after-sales service.

The company's R&D focuses on adapting EVs to India's roads and climate, with a manufacturing capacity for **2 wheeler** - Capacity of 1,20,000 units with 1 shift annually and for **3 wheeler** - Scalable upto 4-6 lakhs in 2-3 shifts per annum with automation.

Their ancillary cluster manufactures all EV components in India, reducing import dependence. It's the country's first and largest, supporting the Make-in-India initiative.

The company's ancillary unit is strategically located on the Vadodara-Ahmedabad highway, facilitating logistics. With a strong dealer presence in semi-urban and rural areas, they cater to a broad rural market. To enhance logistics, they're expanding with new units in South and Eastern India.

Strategies KPIs And Goals

Maharashtra is a key market with 125+ touch points. The Company has total 180+ dealers in Gujarat and entered the new market of North East (Assam) by adding 1 new dealers in FY2023, taking the dealer count to more than 750+ pan India. The company envisages this number to cross 2000 in the coming years

Wardwizard has established India's first EV Ancillary cluster in Gujarat, by aligning its objectives to the 'Make in India' initiative. The Company has started the operations of a lithium-ion battery assembly line with a capacity of 1 GWh/year.

The year 2022-23 witnessed three new product launches - Mihos, Rockefeller (Prototype) & E- Rik. MIHOS and E - Rik are the two new completely 'Made-in-India' vehicles of Joy e-bike and Joy e-rik respectively

SPEEDING AHEAD TO 2024

To have a country wide presence, for both high-speed and low speed product categories across India, the Company plans to increase the presence in more cities as well as overseas.

BUSTING COMMON ELECTRIC VEHICLE MYTHS

MYTHS

FACTS

Electric vehicles are uneconomical

Electric vehicles are more economical when you take fuel and maintenance costs.

It takes too long to charge

Cars park 90% of the time for home charging. In India, fast chargers can refill EVs from 20% to 80% in 30 minutes.

Electric Vehicle batteries will only last a few years

EV batteries have a multi-year lifespan and can be repurposed for energy storage after vehicle use.

The Emission impacts of an electric vehicle are more than a petrol or diesel vehicle

EVs generally have a lower carbon footprint than petrol and diesel cars, even considering charging and battery production.

Electric vehicles have very low range

The range of electric vehicles is enough for the typical daily mileage of the average Indian driver.

Electric vehicles are slow and have bad performance

EVs outperform petrol and diesel cars due to higher efficiency and better acceleration.

India's electricity grid is not suited for electric vehicles

EVs reduce life-cycle CO2 emissions, even with India's current grid mix.

India's electric vehicle charging stations are not enough

India has 934 public charging stations, but you can also conveniently charge EVs at home if you install a charger.

Electric vehicles get damaged in waterlogged areas and are dangerous to charge in the rain

An intact EV has water ingress protection, ensuring its electrical components are sealed and safe from hazards.

Joy *e-bike* | **Joy** *e-rik*

The Way Forward



Future Growth Drivers



To Have PAN India Presence



Enhance Distribution Channel Strategy



Strengthening Position In Key Markets



Double Dealership Network



New Product Launches



Develop India's First EV Cluster



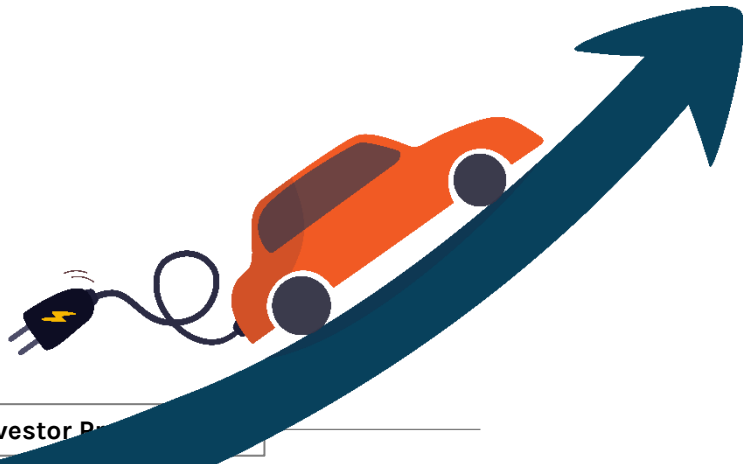
Capacity Expansion



Improve Margins



Exploring Export Opportunities



- Wardwizard Innovations and Mobility Ltd. will restructure its distribution-dealer model. They will establish **150** 'Distributor Showrooms' at the district level to strengthen relationships with Taluka-level Dealers.
- The company plans to promote high-performing taluka dealers to District Distributors through new distribution models, adding to its **750+** touch-points nationwide.
- Due to the high demand of the vehicles, the company has decided to pre-schedule the advancement of the distribution model. This will bridge the demand and supply gap and enhance the customer experience.
- With over **10+** models in its portfolio spanning high and low-speed categories, the company has established a robust presence in **55+** major Indian cities and aims to expand its reach across the nation.



Inauguration Of Distributor Showroom - Jaipur



Wardwizard has expanded its network by inaugurating a new distributor showroom, Dreamz EV World, in Jaipur at Mangalam Radiance Airport Plaza. This will help to reshape distribution-dealer model, emphasizing stronger relationships with taluka-level dealers. The 3,500 sq ft showroom is fully equipped for sales and service, displaying a range of electric two-wheelers and three-wheelers, including the new MIHOS scooter and the Joy e-Rik. The Company has over 750+ touchpoints across India.

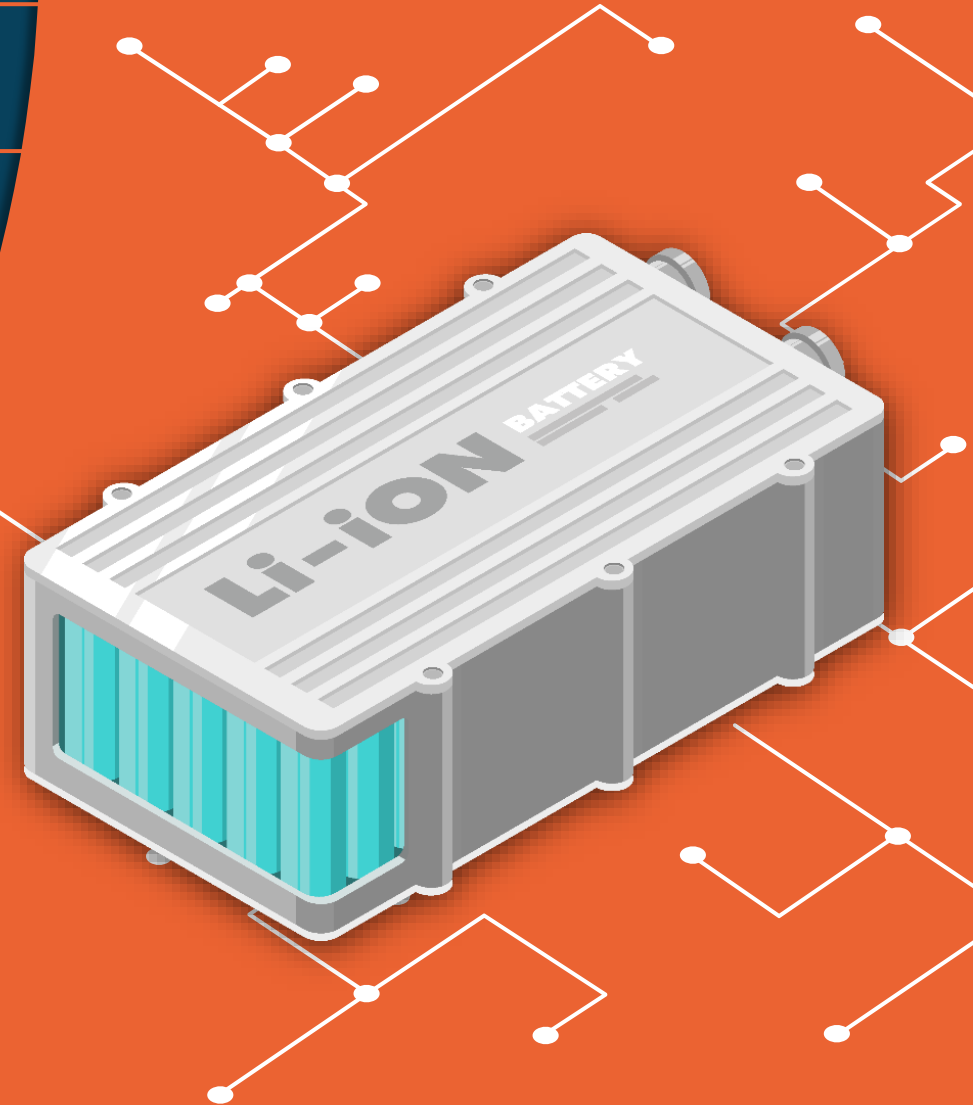


Inauguration Of Distributor Showroom - Jaipur



In-house Battery Assembly Line

- Wardwizard has commenced the operations of a lithium-ion battery assembly line.
- This assembly line has a capacity of 1 GWh/year and is part of Wardwizard's Phase 1 development under the 'Make in India' initiative.
- Under the phased development plan of the EV ancillary cluster, the battery assembly line is a strategic move on the part of the company.
- The company's vision is to ensure the highest quality standards where they can have direct control on the quality and standards of their battery packs.
- Furthermore, the company has taken a step to solidify its contribution to the existing EV ecosystem.
- The company further envisages scaling the capacity of their battery assembly, R&D operations and production of electronic components in the EV Ancillary Cluster



Steps taken to Improve Battery Safety

Stringent Quality Control

Assigning a company representative at the manufacturing site to establish rigorous quality control measures, ensuring early detection and resolution of any potential defects or issues throughout the process.

Data Collection and Monitoring

Our AI technology diligently monitors battery parameters like voltage, current, temperature, state of health, state of charge, Current limits, Protection Status, error codes, and protection status.

Higher Grade Material

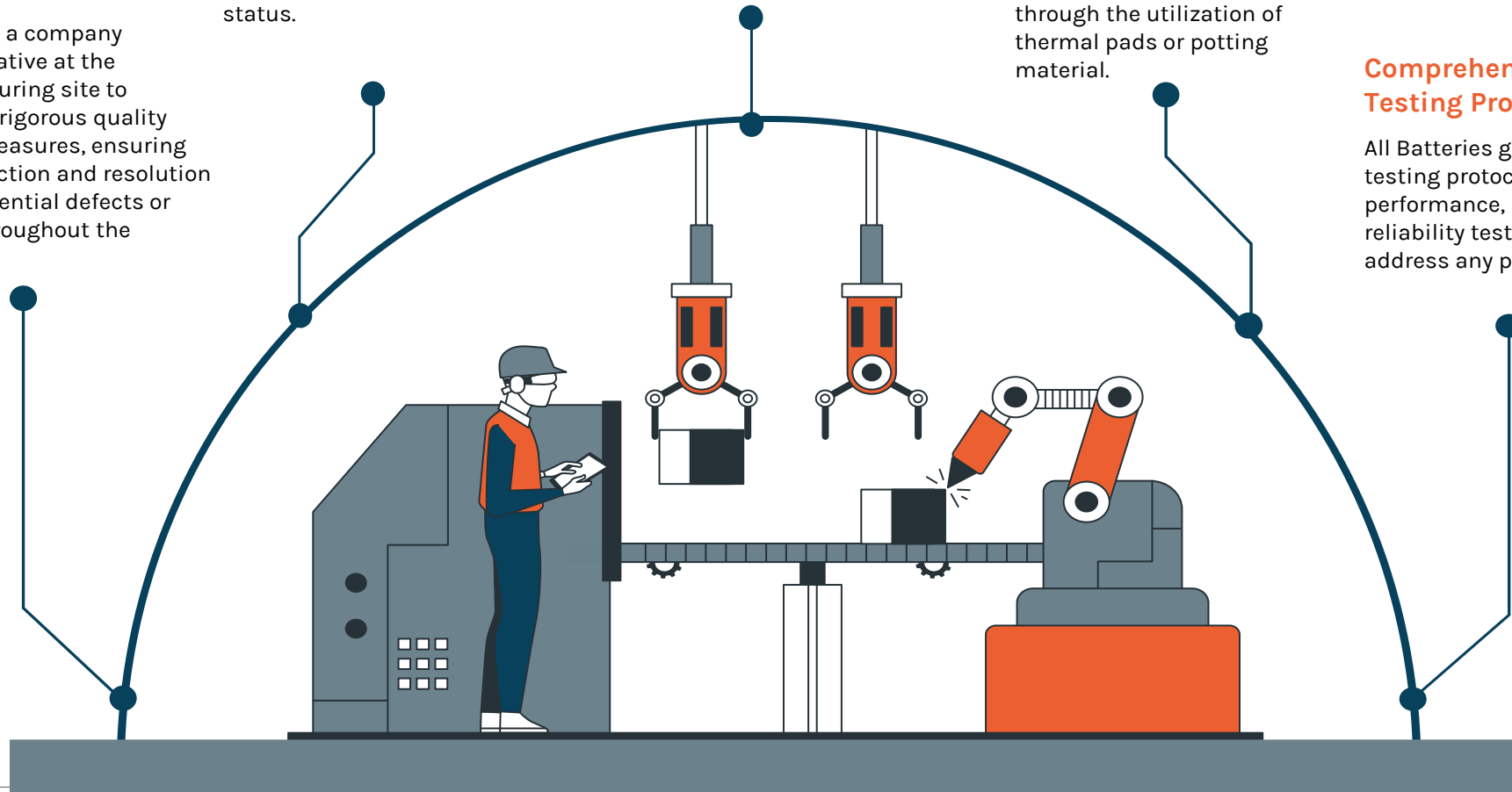
Certified cells (**IS 16893-Part 2 and Part 3**) with enhanced thermal stability and puncture resistance.

Effective Thermal Management

Implementing efficient thermal management systems within batteries ensures temperature regulation, prevents overheating, and dissipates excess heat. This is achieved through the utilization of thermal pads or potting material.

Comprehensive Testing Protocols

All Batteries go through rigorous testing protocols to check performance, safety, and reliability tests, to identify and address any potential issues.



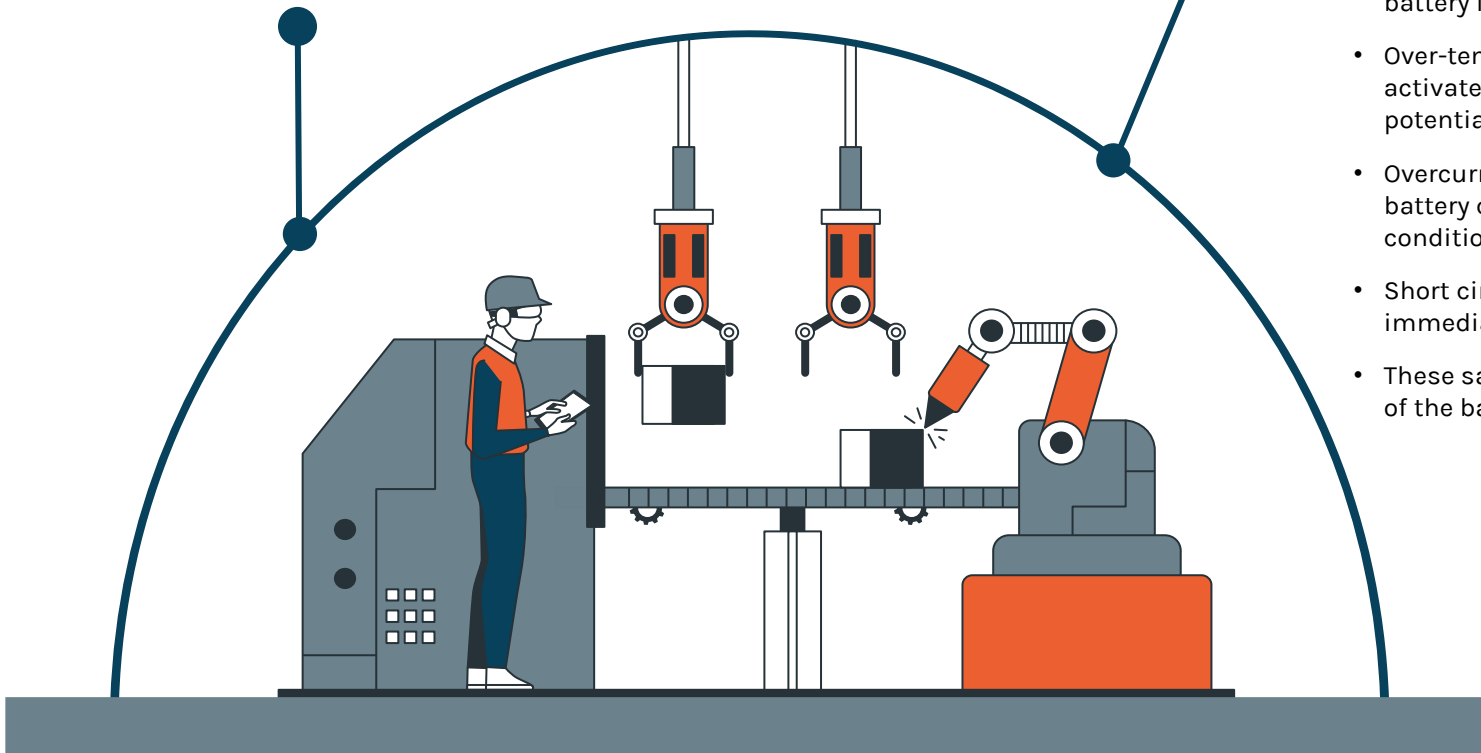
Mechanical Integrity

The battery pack is built with utmost structural integrity, guaranteeing a secure assembly. This encompasses meticulous design and construction of the pack enclosure, frame, and mounting components, ensuring precise alignment and secure attachment of battery cells and other essential components.

Smart Battery Management Systems (BMS)

Smart CAN-based Battery Management System (BMS) incorporates several crucial safety features to ensure the optimal performance and protection of the battery system

- Over-voltage protection: Safeguards the battery pack by monitoring and preventing voltage levels from exceeding safe limits, minimizing the risk of damage or failure.
- Over-charge protection: Monitors the charging process to prevent excessive charging, which can lead to battery degradation or hazardous conditions.
- Over-discharge protection: Monitors the battery's discharge levels to prevent it from reaching critically low levels, protecting against potential damage and prolonging battery lifespan.
- Over-temperature protection: Continuously monitors the battery's temperature and activates safeguards if it exceeds safe thresholds, preventing overheating and potential thermal runaway.
- Overcurrent protection: Detects and limits excessive current flow, protecting the battery cells and electrical components from damage caused by high current conditions.
- Short circuit protection: Rapidly detects and responds to short circuits, ensuring immediate disconnection of the circuit to prevent damage or safety hazards.
- These safety features collectively work to enhance the reliability, longevity, and safety of the battery system, reducing the risk of critical failures or accidents.



Steps taken to Improve Battery Safety

Protection and Safety Features

Our Battery packs incorporate appropriate safety features, such as fuses to prevent overcurrent and short circuits, Pressure Vents, silicone insulated cables to help safeguard the battery cells and the overall pack from potentially hazardous conditions.

Enclosure and Sealing

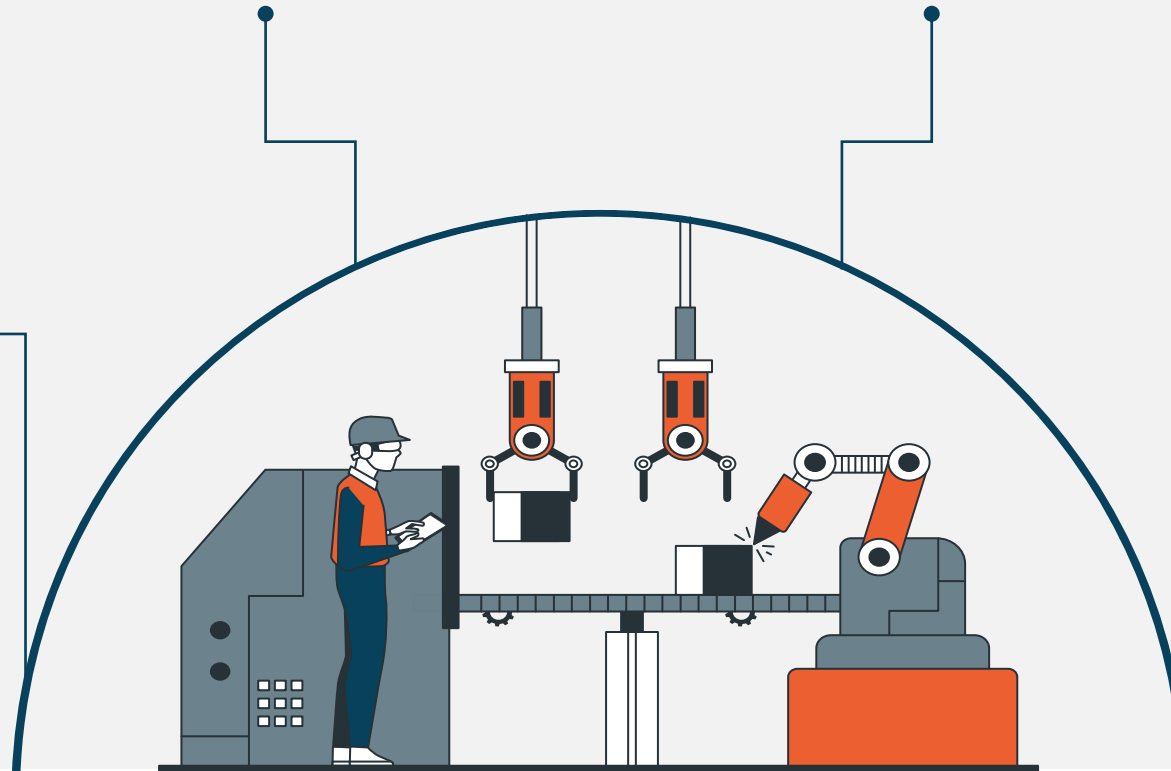
The battery pack enclosure is thoughtfully designed to safeguard against environmental factors and impacts. Through the implementation of effective sealing techniques, such as gaskets or adhesives, a secure seal is achieved, preventing the entry of contaminants and maintaining the integrity of the battery pack.

Continuous Research and Development

Our research aims to comprehend battery aging, reduce degradation, and enhance lifespan. We explore CAN communication protocols for improved BMS connectivity, data logging, and remote monitoring. Advanced data analytics and machine learning are employed to optimize battery performance through analysis of battery data.

Improved Battery Life

We have developed diverse charging profiles that allow users to select their preferred charging speeds. Improvements in Depth of Discharge (DOD) have been made to enhance cycle life, battery efficiency, health, and aging. Peak and continuous discharging currents are limited to 1C and 0.7C respectively. By implementing these current limits, we effectively mitigate temperature rise, reducing the risk of thermal runaway and significantly enhancing battery safety and longevity.





Quality Controls of New Product Development

Process Mapping is done for Design and Development phase to control the and monitor the product requirements .

Procedure is made of new part development to improve the consistency, easy to keep up-to-date, and standardize the process.



Quality Controls of Incoming Quality

Incoming Inspection Procedure

Incoming Inspection Standard

Visual Standard.

Limit Sample.

List of Instruments and their calibration plan



Quality Controls of Supplier / Vendor Management

Supplier Quality Manual Prepared for the monitoring the supplier management to control the process and performance of the supplier.

Some Key Points of Supplier Management

- PPAP Audit.
- Retro PPAP.
- Supplier System Audit.
- Supplier Process Audit.
- Supplier PDI report.
- Supplier Inspector Certificate.
- Supplier Performance Monitoring (Quality Rating)



Quality Controls of Process Quality

Process Flow Diagram
Quality Control Process

Process wise SOP made for Operator clarification.

Separate History

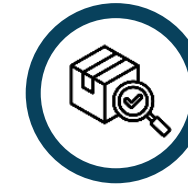
Process Audit

Torque Audit.

MSN/PSN Monitoring.

ECR/ECN, FTR .

Multiskilling 1m3s (1 man 3 stage).



Quality Controls Final Inspection & PDI

Procedure for Final inspection

Final Inspection Check sheet.

History card Traceability of vehicle.

Defect PDCA (Plan Do Check Act)

Master Audit / Stock Audit

Product Audit

Control of non-confirming product procedure

Quality Alert for any customer complaint.



Quality Management System.

Formatting of all Documents.

Procedure of all process.

5 level of documents

Manuals.

Risk Assessment.

Training Needs Identification.

EV – Ancillary Cluster



Acquired a 4 million sq. ft property for the cluster

The cluster will consist of a R&D center and a production center for the manufacturing of electric two wheelers & three wheelers

Signed MoU with Gujarat Government for the investment of ₹ 500 Cr for research and development of electric vehicles in Gujarat

The cluster will generate employment of about 6,000 jobs

Manufacturing partners will be invited to co-locate their production units and utilize state-of-the-art facilities, resources, and labor to manufacture essential components



Wardwizard's Singapore R&D Powerhouse for EV Innovation

1

Wardwizard Innovations & Mobility Ltd plans to set up its first Global R&D headquarters in Singapore.

2

Wardwizard Global Pte Ltd. will establish a global sales office and center in Singapore under its subsidiary, Wardwizard Global Pte Ltd.

3

The decision to establish the center and global sales office in Singapore is driven by the increasing demand for electric mobility and the company's commitment to developing products that prioritize holistic safety.

4

The state-of-art facility will holistically focus on research and development of two, three, and four-wheelers along with the development of technologically advanced EV products.

5

The company will expand its research focus to include cell chemistry, pack assembly, battery management systems, motors, and other components of electric vehicles (EVs).

6

In addition, the company will prioritize the enhancement of safety measures by collaborating with leading certification agencies to develop new battery standards.

7

Singapore-based company will be the technical knowledge partner at the centre.

8

The R&D headquarters will employ a talent pool of over 30 scientists and engineers to design and develop global standard products in the EV sector.

9

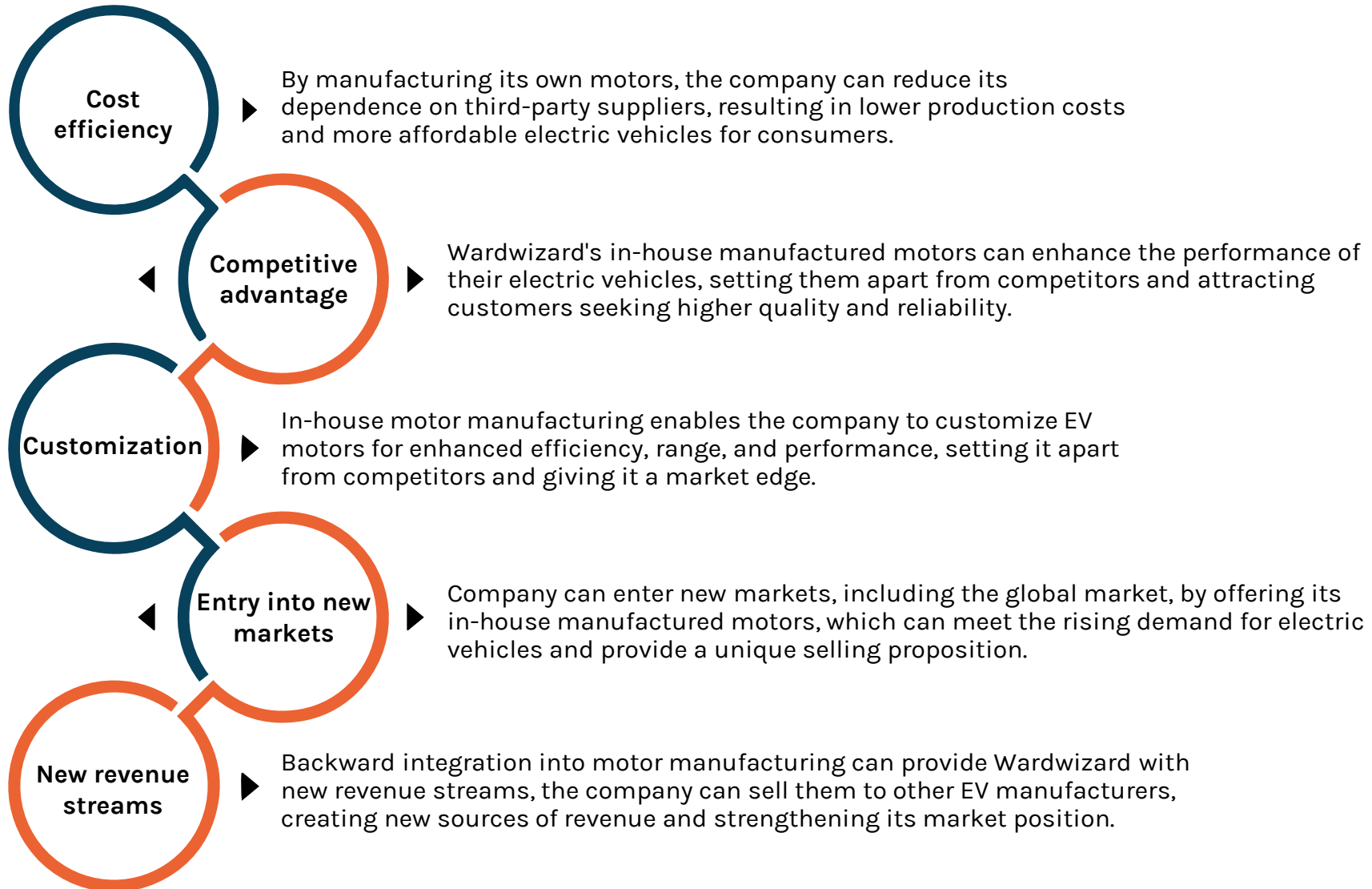
The Centre of Excellence will be headed by Mr. Lakshman Gurazada as the Director of Operations.

10

Wardwizard will collaborate with leading global research institutions and companies in battery technology across Southeast Asia.

Opportunities in EV Motor Manufacturing

Wardwizard is now looking to backward integrate into the manufacturing of EV scooter/bike motors, which presents several exciting opportunities for the company.



Wardwizard is now looking to backward integrate into the manufacturing of EV scooter/bike motors, which presents several exciting opportunities for the company.

Brushless Direct Current Motors (BLDC)

The manufacturing plant will produce Brushless DC Motors to meet Joy e-bike's own captive requirements and to supply Original Equipment Manufacturers (OEMs) in the electric vehicle industry throughout India.

BLDC motors are highly efficient and offer excellent controllability, making them a popular choice for EVs.

One of the significant advantages of BLDC motors over other motor types is their power-saving efficiency.

The main parts of a BLDC Hub Motor for EVs are the stator, rotor, Hall sensors, motor controller, gearbox (if used), and rim

The stator is the stationary part of the motor, while the rotor is the rotating part that interacts with the stator's magnetic field to produce torque and rotation

Hall sensors are electronic devices that detect the rotor's position and provide feedback to the motor controller to synchronize the motor's operation

The motor controller regulates the voltage and current delivered to the motor, controlling its speed and torque output

In some cases, a gearbox is used to increase the torque output of the motor while reducing its speed

The hub motor is mounted in the wheel rim of the EV, directly driving the wheel to provide propulsion

The motor controller receives signals from the accelerator pedal and battery management system and sends power to the motor to achieve the desired speed and torque output

BLDC Hub motors for EVs typically range in voltage from 48 volts to 72 volts, with power ratings ranging from 250 watts for low-speed e-bikes to 5000 watts for high-speed e-bikes.



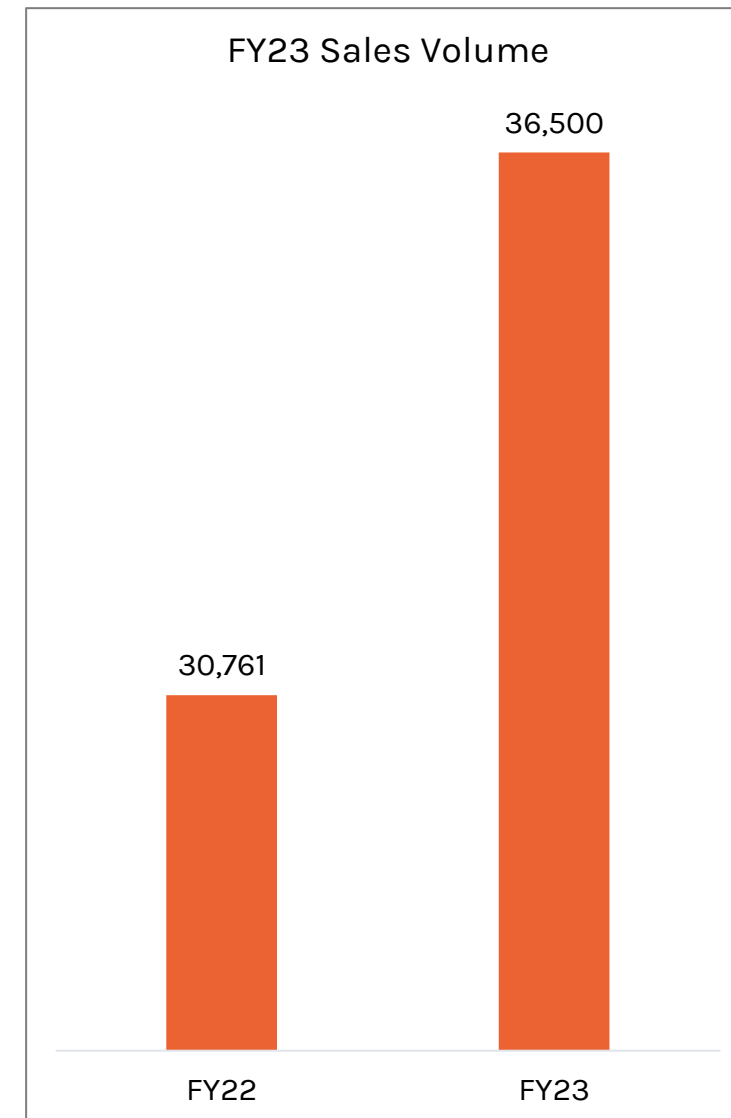
Financial Overview

Q1 FY24 Result Highlights

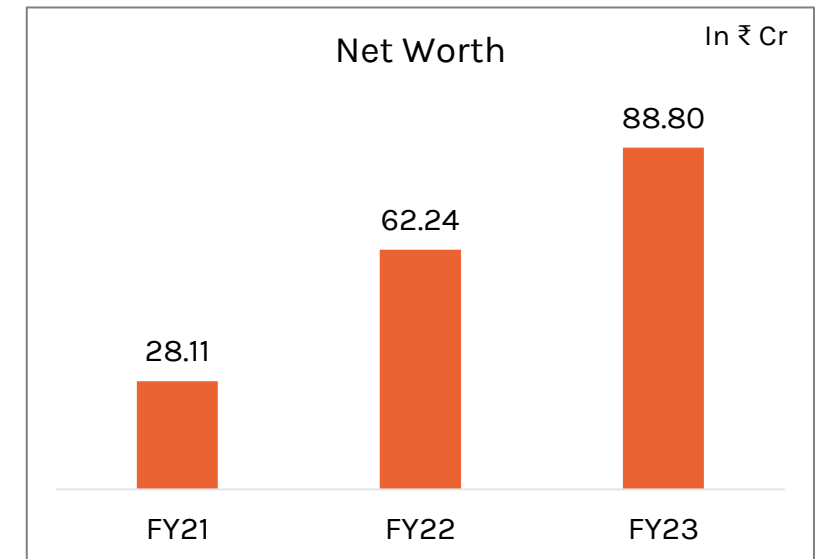
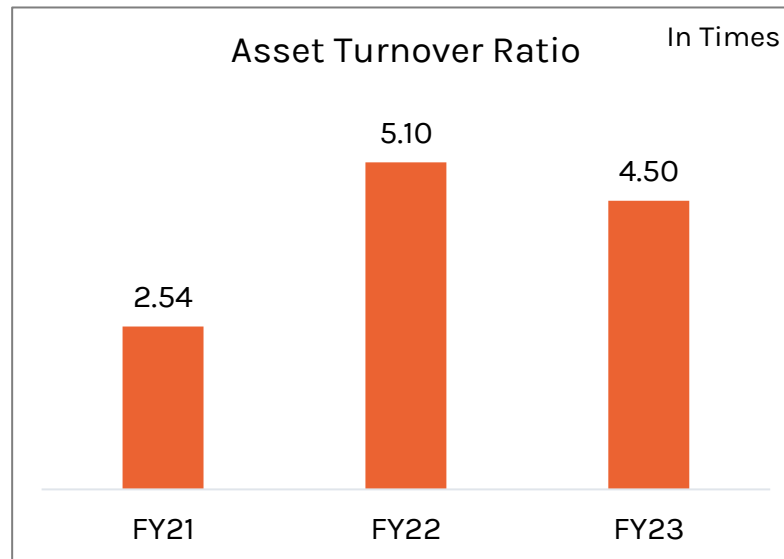
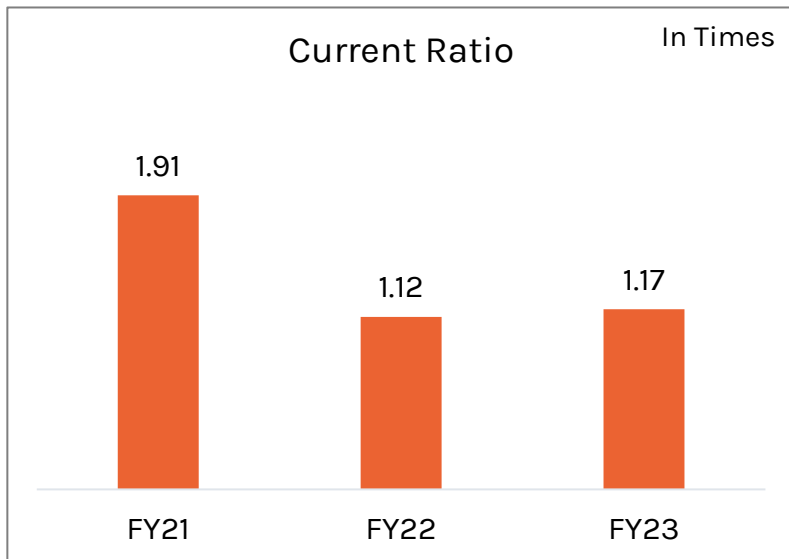
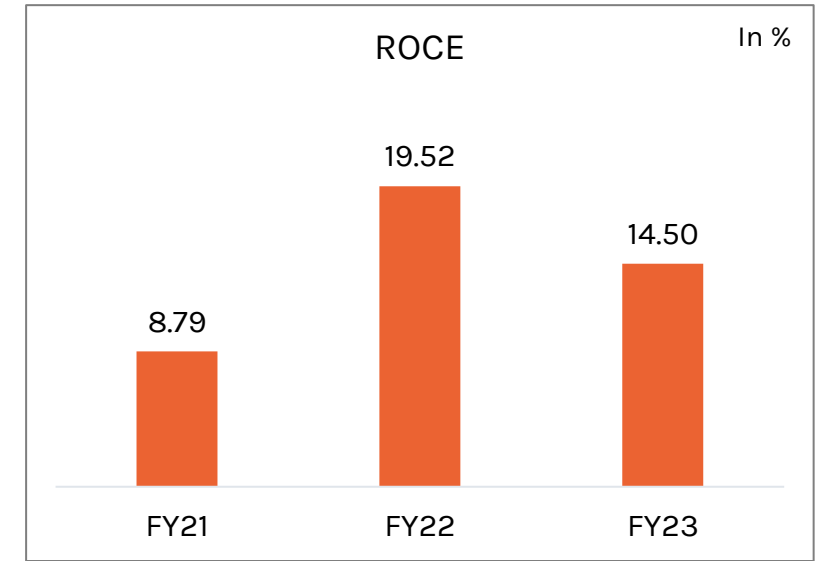
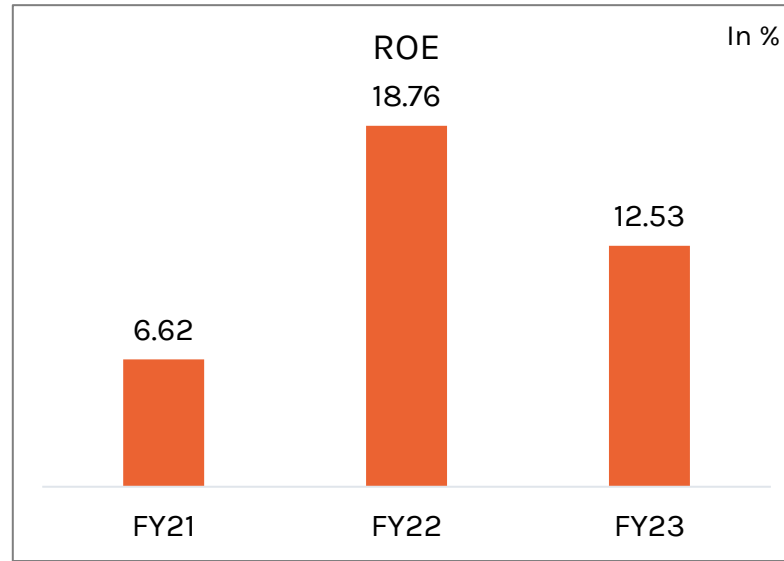
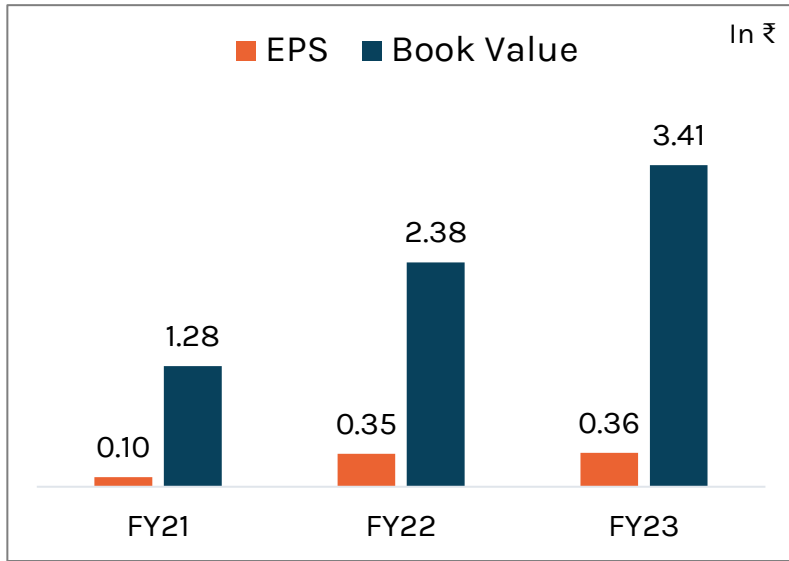
In ₹ Cr

Particulars	Q1 FY24	Q1 FY23	FY23	FY22	Y-O-Y%
Net Sales	37.87	54.66	238.93	184.56	
Other Income	0.02	0.06	0.36	0.58	
Total Income	37.89	54.73	239.29	185.14	29.25%
Expenses					
Raw Material costs	26.23	46.58	192.01	158.54	
Employee Benefit Expenses	2.42	1.91	8.44	6.13	
Other Expenses	4.47	2.58	19.27	5.99	
Total Expenditure	33.12	51.08	219.72	170.66	
EBIDTA	4.78	3.65	19.57	14.48	
EBIDTA (%)	12.61	6.66	8.18%	7.82%	35.15%
Interest	0.81	0.00	0.77	0.00	
Depreciation	1.55	0.86	4.95	2.33	
PBT	2.43	2.78	13.85	12.15	
TAX Expense (Including Deferred Tax)	0.67	0.72	4.40	3.67	
PAT	1.75	2.06	9.45	8.48	
Other Comprehensive Income	0.02	0.00	0.02	0.00	
Reported Net Profit	1.74	2.06	9.47	8.48	11.67%
NPM (%)	4.58	3.76	3.95%	4.58%	

In Nos



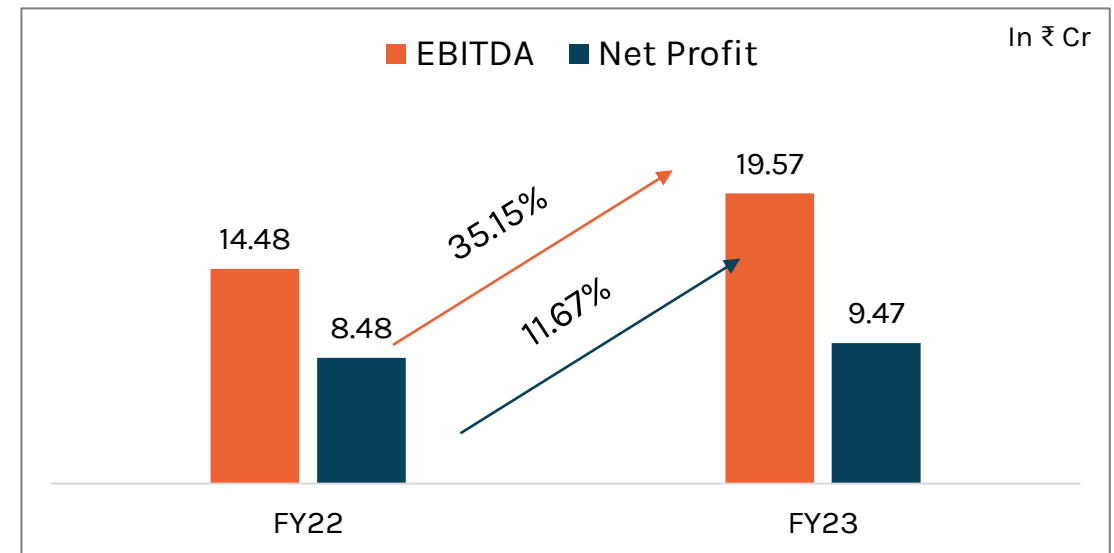
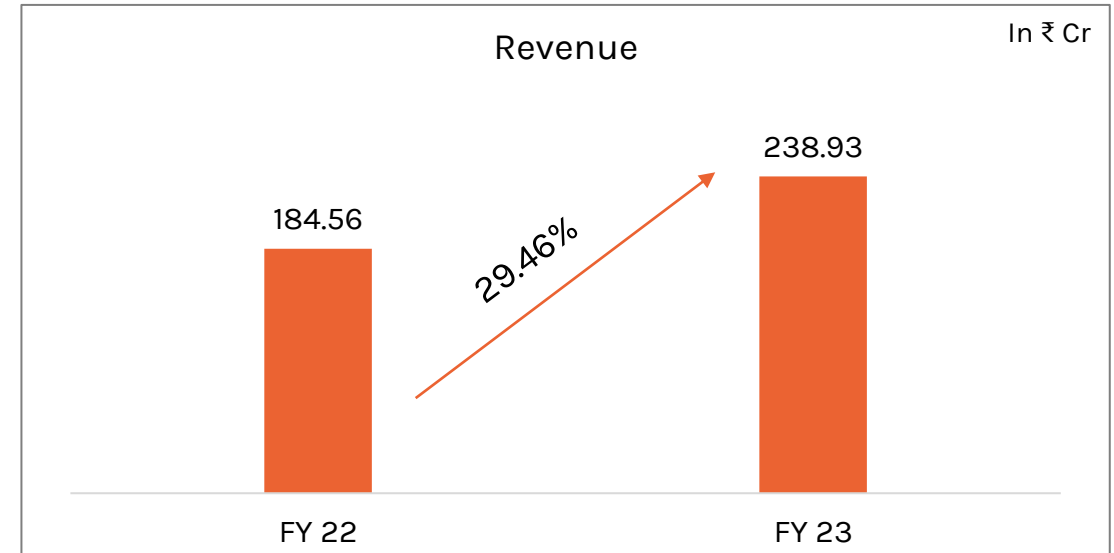
Key Financial Highlights



Profit & Loss Statement

In ₹ Cr

Particulars	FY21	FY22	FY23
Revenues	39.32	184.56	238.93
Other Income	0.05	0.58	0.36
Total Income	39.37	185.14	239.29
Raw Material Costs	31.83	158.54	192.01
Employee Costs	3.02	6.13	8.44
Other Expenses	1.41	5.99	19.27
Total Expenditure	36.26	170.66	219.72
EBITDA	3.11	14.48	19.57
EBITDA Margin	7.89%	7.82%	8.18%
Finance Costs	0.00	0.00	0.77
Depreciation	0.63	2.33	4.95
PBT	2.48	12.15	13.85
Tax	0.61	3.67	4.40
PAT	1.87	8.48	9.45
Comprehensive Income	0.00	0.00	0.02
Reported Net Profit	1.87	8.48	9.47
Reported Net Profit Margin	4.75%	4.58%	3.95%



Balance Sheet

In ₹ Cr

Equities & Liabilities	FY21	FY22	FY23
Equity	21.94	25.92	26.07
Reserves	6.17	36.32	62.73
Net Worth	28.11	62.24	88.80
Non Current Liabilities			
Long Term Borrowing	0.00	0.00	12.00
Other Long Term Liabilities	0.00	0.00	2.33
Long Term Provision	0.07	0.21	0.30
Total Non Current Liabilities	0.07	0.21	14.63
Current Liabilities			
Short Term Borrowings	0.00	0.00	0.00
Trade Payables	9.28	70.31	45.80
Other Current Liabilities	0.15	45.18	71.18
Short Term Provision	0.45	1.35	3.23
Total Current Liabilities	9.88	116.84	120.21
Total Liabilities	38.06	179.29	223.64

Assets	FY21	FY22	FY23
Non Current Assets			
Fixed Assets	15.46	36.18	53.10
Other Non Current Financial Assets	3.82	2.96	0.14
Other Non Current Assets (Including DTA)	-0.03	9.75	30.34
Total Non Current Assets	19.24	48.88	83.58
Current Assets			
Inventories	7.32	71.58	68.79
Trade Receivables	2.89	5.86	16.16
Cash & Bank Balance	2.28	17.08	11.04
Other Current Financial Assets	2.64	15.10	21.58
Current Tax Assets (Net)	0.02	-1.37	0.00
Other Current Assets	3.67	22.16	22.49
Total Current Assets	18.82	130.41	140.06
Total Assets	38.06	179.29	223.64

Stock Information

As on 11-09-2023

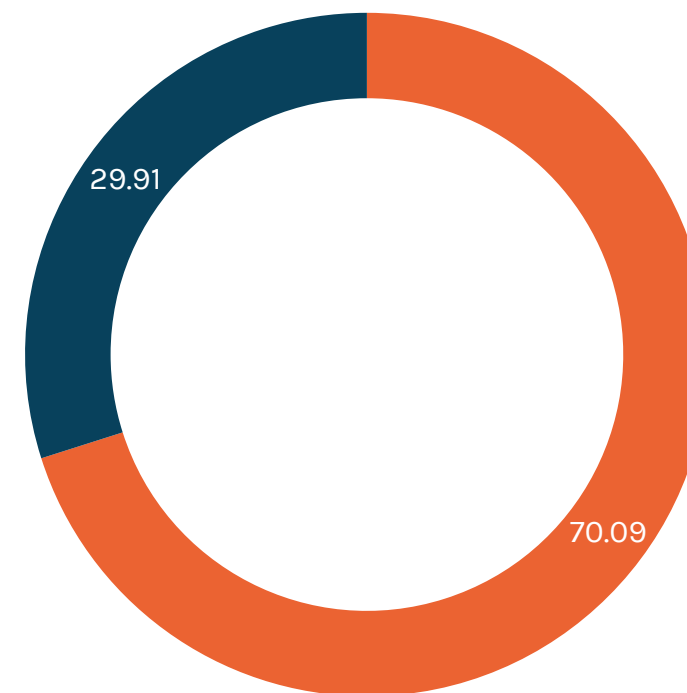
BSE Code	538970
ISIN	INE945P01024
Share Price (₹)	43.21
Market Capitalization (₹ Cr)	1,132.33
No. of Shares Outstanding	26,20,52,303
Face Value (₹)	1.00
52 Week High (₹)	78.00
52 Week Low (₹)	33.21

Corporate Actions

Corporate Action	Ex Date
Dividend ₹ 0.075	22-08-2022
Rights Issue	20-01-2022
Dividend ₹ 0.050	17-08-2021
Stock Split From ₹ 10/- to ₹ 1/-	17-03-2021
Bonus Issue 1:1	08-07-2015

Shareholding Pattern

As on 30-06-2023



■ Promoter & Promoter Group ■ Public



Mr. Deepak Doshi
Chief Financial Officer

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Thank You

