

Electric Two-Wheelers

ANMD-MRS16-153 · E-Mobility & Autonomous Transport Technologies

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Electric two-wheelers — scooters, motorcycles, mopeds and cargo bikes — are the highest-volume, fastest-electrifying segment of road transport, transforming urban mobility across Asia and beyond. Spanning fixed-battery and swappable designs, they offer affordable, clean mobility where two-wheelers dominate. This decision-grade study sizes the global market three ways — value, units and vehicles — across vehicle type, battery format and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Electric two-wheelers deliver outsized urban-emissions, noise and air-quality benefits per dollar, while raising battery-safety and end-of-life questions.

Mapped Sustainable Development Goals:

SDG 7	SDG 9	SDG 11	SDG 12	SDG 13
Affordable & Clean Energy	Industry, Innovation & Infrastructure	Sustainable Cities & Communities	Responsible Consumption & Production	Climate Action

Measurable sustainability outcomes assessed:

- Outsized urban-emissions and air-quality benefits per dollar
- Affordable, accessible clean urban mobility
- Battery fire-safety and critical-mineral sourcing as material risks
- End-of-life recycling and informal-sector labour assessed

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

53 Chapters	9 Report Parts	7 Regions Covered	40+ Country Markets
2025–32 Forecast Horizon	4 Forward Scenarios	25+ Companies Profiled	5 SDGs Mapped

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Asia Pacific dominates the market; Europe grows on urban mobility; Latin America and Africa emerge via swappable models; other regions assessed on their own merits.

- The highest-volume, fastest-electrifying road-transport segment
- Scooters, motorcycles, mopeds and cargo bikes
- Fixed-battery and swappable architectures
- Battery fire-safety, recycling and informal labour as material risks

MARKET OVERVIEW

From petrol scooter to swappable electric fleet — where battery swapping removes range and charging barriers in dense cities.

Electric two-wheelers are the highest-volume EV segment. Demand is driven by urban air-quality rules, fuel-cost savings, local manufacturing and battery-swapping models across Asia Pacific, Europe and emerging markets. The market is read three ways — value, units and vehicles — and forecast under four scenarios, each region reported separately.

- **Asia Pacific dominates the market** — China and India, where vast two-wheeler fleets, policy support and local manufacturing — including Ola Electric Mobility Limited, Ather Energy Limited and TVS Motor Company Limited — drive electrification at scale
- **Europe grows on urban mobility** — Italy, France and Germany, anchored by shared-mobility, e-moped and cargo-bike adoption in congested cities
- **Battery swapping is the differentiator** — swap networks remove range and charging-time barriers, accelerating adoption in dense, high-utilisation markets
- **Vehicle type segments the value** — scooters, motorcycles, mopeds, swappable and cargo designs, each with distinct economics

REGIONAL OUTLOOK

Across seven reporting regions, the report separates leading markets from high-growth and emerging ones — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Country Markets & Drivers
Asia Pacific	Market leader	China, India, Vietnam, Indonesia — fleet scale, manufacturing, policy
Europe	Urban-mobility growth	Italy, France, Germany — shared mobility, e-mopeds, cargo bikes
Africa	High-growth frontier	Kenya, Nigeria, Rwanda — swappable models, boda-boda electrification
Latin America	Emerging	Brazil, Colombia — fuel savings, ride-hailing fleets
Middle East	Emerging	UAE — delivery fleets, urban mobility
North America	Niche	United States — micro-mobility, urban niches

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
• Urban air-quality & emissions rules • Fuel-cost savings vs petrol • Local manufacturing & policy support • Battery-swapping & fleet models • Affordable urban & last-mile mobility	• Battery cost & range limits • Charging / swap-infrastructure gaps • Quality, safety & fire-risk concerns • Financing & affordability barriers • Fragmented standards & informal market

SEGMENTATION SNAPSHOT

By Vehicle Type	Electric scooters · electric motorcycles · electric mopeds · swappable-battery · cargo e-two-wheelers
By Battery Format	Fixed-battery · swappable-battery · removable / portable
By Application	Passenger · commercial · two-wheeler / micro-mobility
By End User	OEMs · fleet operators · charge-point operators · consumers
By Business Model	Hardware sales · software / subscription · services
By Scale	Consumer · fleet · OEM / industrial-scale

TECHNOLOGY & APPLICATION FINDINGS

Where the category is differentiating fastest — the technology and application fronts that separate leaders from followers:

- **Two-wheeler / micro-mobility** — scooters, motorcycles and mopeds electrify personal and shared urban transport
- **Commercial** — cargo and delivery e-two-wheelers and swap fleets serve logistics and ride-hailing
- **Passenger** — affordable e-two-wheelers extend clean mobility to mass-market commuters

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The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans Indian EV-native players, established two-wheeler OEMs, and dominant Chinese volume manufacturers. Deal activity — capacity expansions, swap-network roll-outs and new-model launches — signals a market consolidating around scale and swappable ecosystems.

Representative players profiled in the full report:

Ola Electric Mobility Limited · Ather Energy Limited · TVS Motor Company Limited · Hero MotoCorp Limited (Vida) · Yadea Group Holdings Ltd. · and 20+ further profiled players.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a conditional investment view.

KEY QUESTIONS THIS REPORT ANSWERS

- How large is the global electric two-wheeler market, and how fast will it grow to 2032?
- Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- Which technologies and architectures reshape the addressable market and the cost curve?
- Who leads, and where is the competitive and patent white space?
- Is the investment case bankable — and under what conditions?
- How does the category align with the SDGs and disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate and natural-capital intelligence and a decision-ready bankability view in a single architecture.

- **Triangulated sizing** — every market read three ways so value, volume and the physical-unit views reconcile rather than conflict.
- **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, conditional investment view.

WHO SHOULD BUY THIS REPORT

OEMs, fleet and mobility operators, swap-network providers, investors, lenders and policymakers, and strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.