

Beyond Sustainability:

Why EV Insurance Needs a
New Business Model



Executive Summary

The electric vehicle revolution is no longer a future concept. It is unfolding across the roads of the United Arab Emirates today. From Dubai Taxi's transition toward cleaner mobility to increasing consumer interest in Tesla, BYD, Lucid, Polestar and other electric vehicle manufacturers, the region is witnessing a structural shift in transportation.

However, while vehicles are evolving rapidly, the insurance industry remains largely anchored in traditional models built for internal combustion engines.

Electric vehicles are not merely another category of automobiles. They represent a fundamentally different risk environment. Their architecture, repair ecosystem, software dependency, charging infrastructure and ownership behavior demand a rethinking of how insurance products are designed, priced and serviced.

This paper argues that the future of electric vehicle insurance cannot rely solely on adapting legacy motor insurance frameworks. Instead, insurers must embrace an entirely new business model centered around data, ecosystems, technology integration, and customer experience.

For insurers in the UAE, this is not only a challenge but a significant opportunity. The organizations that evolve early will define the next era of mobility protection in the region.





The UAE's EV Momentum

The UAE has positioned itself as a global leader in sustainability, smart mobility and innovation. Government initiatives including the UAE Net Zero 2050 strategy, investments in charging infrastructure and green mobility incentives are accelerating electric vehicle adoption.

Dubai's Green Mobility Strategy 2030 and Abu Dhabi's broader sustainability ambitions are creating favorable conditions for EV growth. Charging stations are increasing across malls, residential communities and fuel stations. Automotive distributors are also expanding EV portfolios at unprecedented speed.

According to the International Energy Agency, global EV sales exceeded 14 million units in 2023, accounting for nearly 18 percent of total car sales globally. The GCC market is expected to follow a similar upward trajectory over the coming decade.

Yet beneath this growth lies an important question:

“Is the insurance industry structurally prepared for this transition?”

In many cases, the answer remains uncertain.

Why EVs Change the Insurance Equation

Traditional motor insurance models were designed around decades of historical driving data, repair behavior and risk assumptions associated with petrol and diesel vehicles.

Electric vehicles disrupt many of these assumptions.

A) Battery Economics

The battery is the most expensive component of an EV and can account for a substantial portion of the vehicle's value. Minor collisions can sometimes require extensive diagnostic procedures or full battery replacement due to safety protocols.

This significantly alters repair economics and total loss ratios.

In some international markets, insurers have already reported higher average repair costs for EVs compared to conventional vehicles.

For UAE insurers, where specialized EV repair infrastructure is still developing, the financial implications could become even more pronounced.

B) Software Driven Risk

Modern electric vehicles function increasingly as software platforms on wheels. Features such as autonomous driving assistance, over-the-air updates, connected ecosystems and remote diagnostics introduce new forms of cyber and operational risk.

A software malfunction may impact braking systems, charging functionality or driving performance. Questions around liability become more complex when accidents involve autonomous or semi-autonomous technologies.

Insurance products built solely around physical damage will become insufficient in the coming years.

C) Charging Infrastructure Liability

As EV adoption grows, charging infrastructure itself introduces emerging risk categories. Questions arise around:

- Home charging fire risks
- Public charging station liabilities
- Commercial property exposure
- Electrical infrastructure failures
- Cyber vulnerabilities in connected charging networks

These risks extend beyond traditional motor insurance into property, cyber and liability domains. This convergence demands integrated protection models rather than isolated insurance products.

The Customer Is Changing Too

The EV customer profile differs meaningfully from the conventional motor customer.

EV owners are often:

- Digitally connected
- Environmentally conscious
- Experience-focused
- Data aware
- More open to subscription models
- More comfortable with app-based ecosystems

They expect seamless digital interactions, personalized services and proactive engagement.

The future EV insurance customer may ask:

- Why is my premium static if my driving behavior is measurable?
- Why can my insurer not predict maintenance issues?
- Why must claims still involve manual paperwork?
- Why is roadside assistance disconnected from charging availability?

These expectations cannot be solved through cosmetic digitalization alone. They require business model transformation.



Why the Traditional Insurance Model Will Struggle

Historically, insurers have operated through relatively stable structures:

- Annual policy cycles
- Fixed premiums
- Claims reimbursement
- Limited customer interaction between purchase and renewal

Electric mobility challenges all four assumptions.

A) Static Pricing Will Become Obsolete

Usage-based insurance models will become increasingly important. Connected EVs generate significant real-time data around:

- Driving behavior
- Distance traveled
- Charging patterns
- Battery health
- Vehicle diagnostics

This enables dynamic and behavioral pricing models.

Rather than charging customers based solely on demographics and vehicle value, insurers can assess actual risk behavior.

This creates fairer pricing and improved underwriting precision.

B) Claims Must Become Predictive

The future of claims management will shift from reactive settlement towards predictive intervention.

Artificial intelligence and telematics may soon enable insurers to:

- Detect accidents instantly
- Predict battery degradation
- Recommend preventive maintenance
- Identify unsafe driving behavior
- Reduce fraud through behavioral analysis

Claims departments will increasingly become risk prevention centers.

This represents a fundamental operational shift.

C) Insurance Will Become Embedded

The future EV insurance ecosystem may not begin with the insurer at all. Protection products could increasingly be embedded within:

- Vehicle purchase journeys
- Manufacturer ecosystems
- Mobility subscriptions
- Charging platforms
- Fleet management systems

OEM partnerships will therefore become strategically important.

The insurer of the future may operate less as a standalone seller and more as an integrated ecosystem partner.

The Rise of Ecosystem Insurance

Electric mobility creates opportunities for ecosystem driven insurance models.

No single stakeholder can solve the future of EV protection independently. Collaboration between the following becomes essential:

- Insurers
- Automotive manufacturers
- Charging providers
- Technology companies
- Regulators
- Repair networks
- Reinsurers

This interconnected model allows insurers to move beyond transactional policies towards continuous customer engagement.

For example:

- Charging data can inform risk scoring
- Vehicle diagnostics can support proactive servicing
- AI models can improve underwriting
- Integrated roadside assistance can improve customer experience

The insurance company becomes part of the mobility journey rather than merely a financial fallback mechanism.

Opportunities for UAE Insurers

The UAE offers a uniquely favorable environment for EV insurance innovation.

A) Strong Digital Infrastructure

The UAE's advanced digital ecosystem enables insurers to experiment with:

- Embedded insurance
- Real-time underwriting
- Artificial intelligence
- Telematics
- Smart mobility integrations

This creates a significant competitive advantage compared to less digitally mature markets.

B) Progressive Government Vision

The UAE government has consistently demonstrated ambition around innovation and sustainability.

This provides insurers with an opportunity to align with national priorities including:

- Smart cities
- Green mobility
- Net zero ambitions
- Artificial intelligence adoption

Insurers that actively participate in this transformation will strengthen both commercial relevance and brand positioning.

C) New Revenue Streams

EV insurance may unlock entirely new protection categories including:

- Battery warranty extensions
- Charging infrastructure insurance
- Cyber protection for connected vehicles
- Subscription mobility insurance
- Shared mobility coverage
- Fleet electrification advisory services

This expands insurance from a defensive industry into an enabling industry.

The Human Side of Transformation

Technology alone will not solve the future of EV insurance.

Talent transformation is equally important.

Insurers will require:

- Data scientists
- EV repair specialists
- AI professionals
- Cyber risk analysts
- Digital experience experts

Traditional underwriting knowledge must evolve alongside technological capability.

The insurance workforce of the future will look fundamentally different from today. Leadership teams must prepare accordingly.



Conclusion

The shift towards electric mobility represents one of the most significant transformations the insurance industry has faced in decades.

This is not simply about insuring a different type of car.

It is about rethinking:

- Risk
- Pricing
- Customer relationships
- Claims management
- Ecosystem collaboration
- Technology integration

The insurers that treat EVs as a minor product variation may struggle to remain competitive in the coming decade.

Those that embrace a new business model will help shape the future of mobility itself. In the UAE, the opportunity is particularly significant.

The nation has already established itself as a global leader in innovation, infrastructure and sustainability. Its insurance sector now has the opportunity to evolve alongside that vision. The future of EV insurance will not be defined solely by premiums and policies.

It will be defined by intelligence, connectivity, experience and trust.

And perhaps most importantly, by the willingness to evolve before the market forces change upon us.



About the Author



Ahmed Nasef

Chief Executive Officer, United Fidelity Insurance Company
Insurance Executive | Board Leader | Transformation Strategist

Ahmed Nasef is the Chief Executive Officer of Fidelity United and a seasoned insurance executive with more than two decades of experience across the Middle East and North Africa. Throughout his career, he has held senior leadership and board-level positions with leading global and regional insurers, including Chubb, AXA, RSA, and Liva Group.

Prior to joining Fidelity United in 2024, Ahmed served as Deputy CEO for RSA Middle East and later as Group Chief Commercial Lines & Reinsurance Officer at Liva Group, overseeing operations across multiple GCC markets.

Today, he leads Fidelity United's transformation agenda, focused on sustainable growth, operational excellence, customer-centricity, and long-term value creation. Under his leadership, the company continues to strengthen its position as a modern insurer for the future.

Ahmed holds an MBA from the University of Warwick and is an Associate of the Chartered Insurance Institute.

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