GEORGIA NETWORK *for* ELECTRIC MOBILITY

GEORGIA STATE OF E-MOBILITY 2026

POWERING THE NEXT ERA OF MOBILITY

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INTRODUCTION

In last year's Georgia State of Electric Mobility 2025 report, our inaugural whitepaper and first edition in this annual series, we framed the market as one defined by rapid acceleration and the early stages of a dramatic reordering in the global automotive industry, as electric vehicles began to scale and reshape competitive dynamics. That underlying trajectory remains intact. What has fundamentally changed over the past year is the structure of the market itself.

Over the past two decades, electric mobility has unfolded across three distinct phases, each addressing a different constraint within what has become a complex, once-in-a-generation transformation across energy, mobility, and infrastructure systems.

The first phase, spanning roughly from 1995 to 2015 globally and more specifically from 2010 to 2016 in the United States, was defined by cost reduction along the battery cost curve. Beginning with early lithium-ion development and scaling through consumer electronics, and later accelerating with EV-driven manufacturing, battery costs fell dramatically, from over $1,000 per kilowatt-hour to below $150 per kilowatt-hour. This sustained cost decline was the foundational breakthrough that enabled commercial-scale viability and set the stage for everything that followed (BloombergNEF, 2023; IEA, 2024).

The second phase, emerging around 2018 and continuing through the early 2020s, was defined by manufacturing scale and early market adoption. What had previously been a niche segment driven by early adopters and a small number of breakthrough companies such as Tesla and BYD scaled into a global production system. Automakers scaled capacity, supply chains matured, and EV sales began to grow at double-digit rates year over year. This phase marked the transition from technological viability to commercial reality, resulting in more than 80 million electric vehicles in operation globally today. It also reshaped the geography of the industry, with Georgia and the broader Southeast Battery Belt emerging as leading hubs for EV and battery investment. More broadly, the Southeast Battery Belt accounted for over 50 percent of total U.S. EV and battery-related investment during this period, reflecting a structural shift toward new centers of production and supply chain development, a dynamic that was central to last year's 2025 edition (International Energy Agency, 2024; BloombergNEF, 2024; Federal Reserve Bank of Atlanta, 2024).

> **THE QUESTION IS NO LONGER WHETHER ELECTRIC VEHICLES CAN BE PRODUCED AT SCALE, BUT WHETHER THE SYSTEM CAN SUSTAIN THAT SCALE UNDER REAL-WORLD CONDITIONS.**

We are now entering a third phase of the electric mobility transition. While first-order dynamics such as battery costs and manufacturing capacity continue to improve, the transition is increasingly shaped by more complex, system-level challenges. As tax credits, incentives, and subsidies are phased out across the United States, Europe, and China, and as global competition intensifies around critical minerals and automotive market share, new constraints are emerging. At the same time, second-order dynamics, including charging infrastructure, grid readiness, and overall consumer experience, are becoming key drivers of market differentiation, shaping competitive advantage and determining consumer adoption and retention.

> **AS THIS TRANSITION EVOLVES, THE DEFINING CHALLENGE SHIFTS FROM INNOVATION TO EXECUTION UNDER SYSTEM-LEVEL FRICTION.**

The question is no longer whether electric vehicles can be produced at scale, but whether the system can sustain that scale under real-world conditions. The next era of mobility will be defined by system integration. Electric mobility operates at the intersection of energy systems, infrastructure, manufacturing, workforce development, and consumer behavior, all of which must function in coordination across different timelines, regulatory structures, and economic incentives. That coordination is proving increasingly difficult to maintain. Infrastructure deployment has not kept pace with vehicle growth in many markets, grid capacity constraints are becoming more visible, particularly alongside rising energy demand from sectors such as data centers, and workforce pipelines remain fragmented. Capital and production capacity in some markets are beginning to shift toward adjacent applications such as battery energy storage systems (BESS), as OEMs and battery manufacturers respond to revised demand forecasts and seek to protect margins. This reallocation is contributing to increased volatility across manufacturing capacity, workforce demand, and supply chain planning. As policy support evolves, demand is becoming more sensitive to pricing, reliability, and overall user experience.

These dynamics are not temporary disruptions. They are structural signals of a market adjusting from early acceleration to operational complexity and mainstream adoption. This shift is already reshaping global industry dynamics, with Chinese manufacturers, most prominently BYD, continuing to gain global market share as traditional incumbents face increasing pressure. At the same time, even leading EV manufacturers are adjusting to a more constrained environment, with forecasts being revised, margins tightening, and expansion strategies increasingly shaped by infrastructure readiness and policy conditions. Despite these constraints, growth remains strong. In 2025 alone, more than 1.7 million electric vehicles were added in the United States and over 20 million globally, with the global fleet expected to exceed 115 million vehicles in operation by the end of 2026 (International Energy Agency, 2025). Expectations of sustained exponential growth have proven overly optimistic. The market is now entering a phase of maturation, where growth continues, but is increasingly shaped by structural constraints and the adoption pathway varies significantly across regions, segments, and use cases. As this transition evolves into a more complex phase, the defining challenge is no longer innovation alone, but the ability to execute despite system-level friction.

DIVERGENT EMERGING MODELS FOR ADOPTION GROWTH

The global electric mobility transition is not converging along a single trajectory. Early expectations assumed a relatively uniform path characterized by sustained, exponential growth in EV adoption across major markets. What is emerging instead is a more complex and differentiated reality shaped by differences in scale, system readiness, and underlying market conditions. A central distinction is the difference between volume and adoption. The United States has approximately 7 to 8 million electric vehicles in operation as of early 2026, within a total vehicle fleet of roughly 290 million. Norway, by comparison, has approximately 1 million electric vehicles in operation within a national fleet of just over 3 million vehicles. In absolute terms, the United States has significantly more electric vehicles. In relative terms, Norway has achieved far deeper penetration. This is a structural distinction in how the transition is playing out in differing market archetypes and the differing regional strategies required (International Council on Clean Transportation, 2024).

Large, high-volume markets scale differently. The size of the existing vehicle base, the geographic distribution of infrastructure, and the diversity of consumer needs all contribute to a slower rate of percentage adoption, even as total volumes increase. Smaller, more coordinated markets can and have achieved rapid adoption when policy, infrastructure, and incentives are aligned over time. Norway provides a clear example of what sustained policy alignment, high fuel costs, and consistent infrastructure investment can achieve. There is substantial value in understanding that pathway. However, the most relevant comparison for the United States in terms of adoption pathways is likely China. Both are large, complex markets operating at scale, where adoption is shaped by industrial policy, product availability, pricing dynamics, and infrastructure deployment across diverse regions. China has achieved higher adoption rates than the United States, but through a model defined by manufacturing scale, rapid product iteration, and a coordinated industrial strategy (International Energy Agency, 2024; BloombergNEF, 2024).

These differences are producing distinct market archetypes that are not converging toward a single global model. High-volume markets such as the United States and China are driving the majority of global production, supply chain development, and capital allocation. High-adoption markets such as Norway demonstrate what is possible when system-level alignment is achieved, but under conditions that are not easily replicated at a larger scale. As the market moves beyond early adopters, this divergence is becoming more pronounced. Adoption is increasingly shaped by affordability, infrastructure reliability, and overall user experience, all of which vary significantly across markets. The transition is therefore best understood not as a single pathway, but as a set of parallel trajectories defined by differing system conditions and constraints.

DIVERGING ADOPTION PATHWAYS ACROSS MARKETS

As the market matures, regional adoption pathways are diverging rather than converging. Differences in policy, infrastructure, industrial strategy, and consumer behavior are producing distinct technology mixes across major markets.

ELECTRIC POWERTRAIN MIX BY MARKET - INCLUDING ADOPTION ARCHETYPES (2025)

	 **NORWAY** *Fully aligned policy and infrastructure*	 **EUROPEAN UNION** *Policy-driven, adjusting to incentive changes*	 **CHINA** *Scale, industrial policy, rapid iteration*	 **UNITED STATES** *Fragmented adoption, infrastructure constraints*
ADOPTION ARCHETYPES	High Adoption	Mixed	High Volume	
BATTERY EV	~90%+	~15-20%	~25-30%	~7-8%
PLUG-IN HYBRID	Minimal	~8-10%	~10-15%	~2-3%
HYBRID	Minimal	Strong	Growing	Rapid Growth
EV SHARE OF NEW SALES	~90-95%	~25-30%	~50%+	~10%
FLEET CONTEXT	~1M EVs in ~3M total vehicles	~15-20M EVs in ~250-280M total vehicles	~30-50M NEVs in ~330M total vehicles	~7-8M EVs in ~290M total vehicles

THE END OF SUBSIDY- AND INCENTIVE-DRIVEN GROWTH

A defining feature of the early electric mobility transition was the central role of subsidies and incentives in accelerating both supply and demand. Across major markets, these mechanisms reduced upfront costs, de-risked investment, and enabled rapid expansion in manufacturing capacity and consumer adoption. The pace and structure of early growth cannot be understood without this policy support. That phase is now ending.

Across China, Europe, and the United States, subsidy and incentive frameworks are being reduced, restructured, or phased out entirely. China eliminated national purchase subsidies in 2022 and is gradually tapering tax exemptions through 2026 and beyond. European markets began scaling back direct incentives in 2023, with countries such as Germany eliminating broad subsidies and others tightening eligibility requirements (European Commission, 2024). In the United States, federal incentives have been narrowed through domestic content requirements, income caps, and sourcing constraints, while longer-term policy direction remains uncertain. At the same time, several states, including California, Colorado, New York, New Jersey, Massachusetts, Washington, and Maryland, have expanded or maintained localized incentives and regulatory frameworks, resulting in a more fragmented policy landscape rather than a consistent national approach (U.S. Department of the Treasury, 2024).

The implications of this shift extend beyond policy design. As incentives become less predictable and less uniformly available, variability increases across demand, investment, and production planning. Sudden policy changes and revisions have contributed to delayed or canceled investments, underutilized manufacturing capacity, and financial losses for firms that scaled aggressively under earlier assumptions. The reduction of consistent policy support has narrowed optionality, making it more difficult for companies to plan, allocate capital, and sequence product strategies with confidence.

These dynamics are contributing to divergence in outcomes across manufacturers. Companies with more flexible product portfolios have been better positioned to adapt. Firms such as Hyundai and Toyota, which have invested in hybrid and electrified powertrains over an extended period, have been able to pivot across technologies in response to changing demand conditions. BYD has followed a similar approach, maintaining a diversified portfolio that includes both battery electric and hybrid vehicles.

In contrast, some manufacturers with more concentrated near-term exposure to battery electric vehicles, including Ford and GM, have faced greater exposure to market volatility, reflected in financial losses, adjusted investment timelines, and portfolio recalibration (General Motors Company, 2026; McKinsey & Company, 2024). At the same time, underlying demand for electric mobility continues to grow. However, the nature of that growth has shifted. The expectation of sustained, exponential expansion has proven unrealistic. As the market moves beyond early adopters, adoption is increasingly shaped by affordability, infrastructure availability, and overall system performance. Growth is therefore becoming more measured and uneven, reflecting the transition to mainstream adoption under real-world conditions.

This marks a structural transition in the market. The electric mobility sector is moving from subsidy- and incentive-driven expansion to a more mature phase defined by economic viability, system alignment, and execution under constraint.

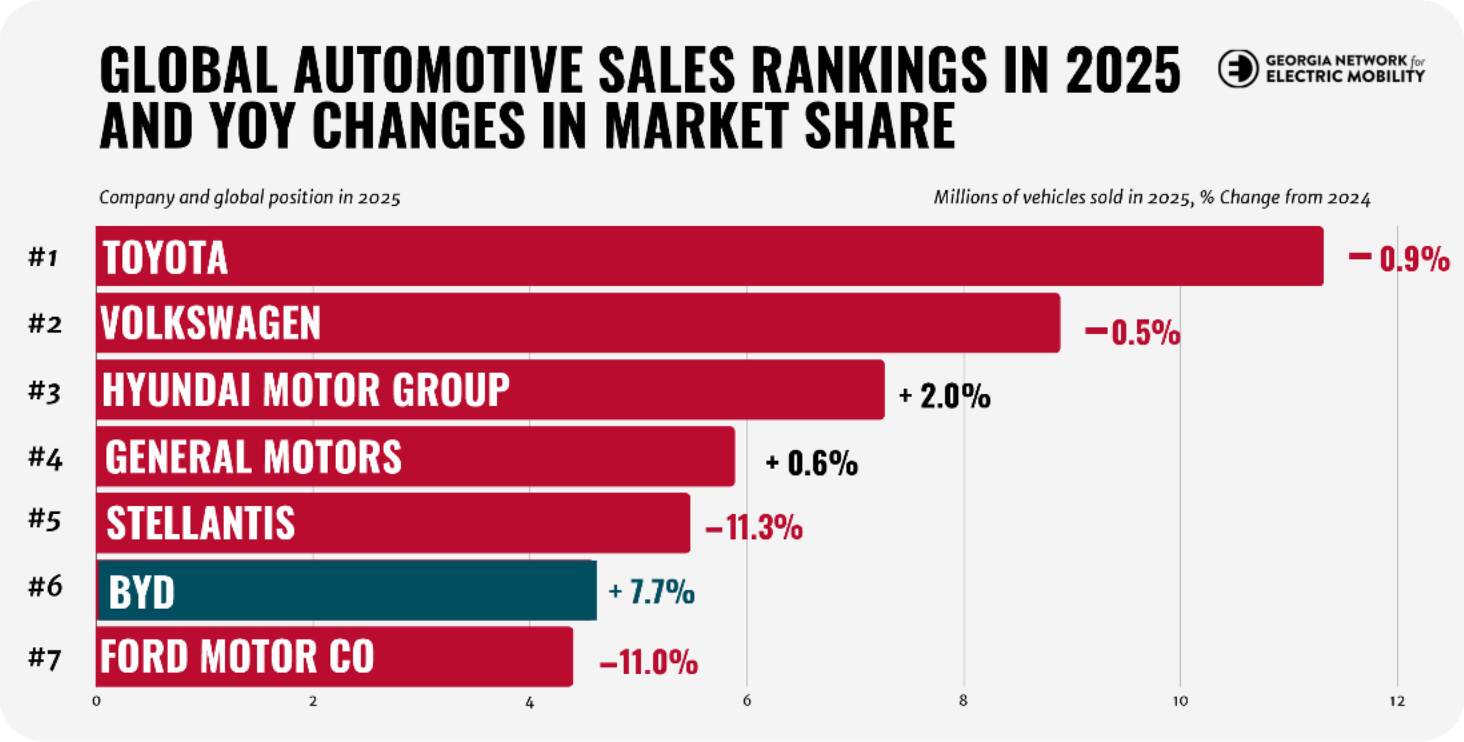
GLOBAL EV POLICY SHIFT OVERVIEW (2022 - 2027)

REGION	 NORWAY	 EUROPEAN UNION	 CHINA	 UNITED STATES	
				FEDERAL	STATE LEVEL
POLICY DIRECTION	Gradual normalization of EV tax advantages	Reduction or elimination of direct incentives	End of direct subsidies; reduction of tax exemptions	Restructured incentives with tighter eligibility	Targeted expansion in select states (CA, CO, NY, NJ, MA, WA, MD)
TIMING	Adjustments 2023 - 2027	Major cuts 2023 - 2024; continued tightening through 2026	Subsidies ended 2022; tax benefits reduced 2026 - 2027	Changes began 2023; constraints tightening through 2025 - 2026	Ongoing, varies by state and funding cycles
MARKET IMPACT	Transition toward market driven adoption	Greater price sensitivity and uneven adoption	Increased price competition and demand variability	Reduced effective access to incentives	Fragmented adoption driven by geography

Source: Adapted from International Energy Agency (2023, 2024); European Commission (2024); U.S. Department of the Treasury (2024); BloombergNEF (2024).

STABILIZATION AT THE TOP

The period of rapid reordering within the global automotive industry, driven by the rise of electric vehicles and EV-native competitors, has begun to stabilize. In 2024, BYD, a China-based automaker with a primarily electric and plug-in hybrid portfolio, grew over 40 percent year over year, gaining significant global market share and entering the top tier of global manufacturers as incumbents lost share. This marked the first time a primarily EV-focused automaker ranked among the global top 10 by sales, signaling a clear inflection point in competitive dynamics (Reuters, 2026).



Source: Adapted from Toyota Motor Corporation; Volkswagen AG; Hyundai Motor Company; General Motors Company; Stellantis N.V.; BYD Company Limited; Reuters (2026)

Last year in 2025, the pace of that reordering moderated. BYD continued to grow, reaching approximately 4.6 million vehicles sold globally, but at a slower rate of roughly 7 to 8 percent year over year. This deceleration reflects a broader shift in market conditions rather than a reversal of competitive position. As the transition progresses beyond early adopters, growth becomes more difficult to sustain at the same pace. As a result, competitive outcomes are becoming more differentiated. The market is no longer characterized by rapid displacement of incumbents, but by ongoing competition under tighter economic and system constraints.

This stabilization continues this trend of market maturation. Growth remains positive, but it is distributed across a broader set of firms and shaped by the ability to meet mainstream expectations. Competitive advantage is increasingly determined by execution across pricing, infrastructure integration, and overall user experience rather than by early-mover momentum alone.

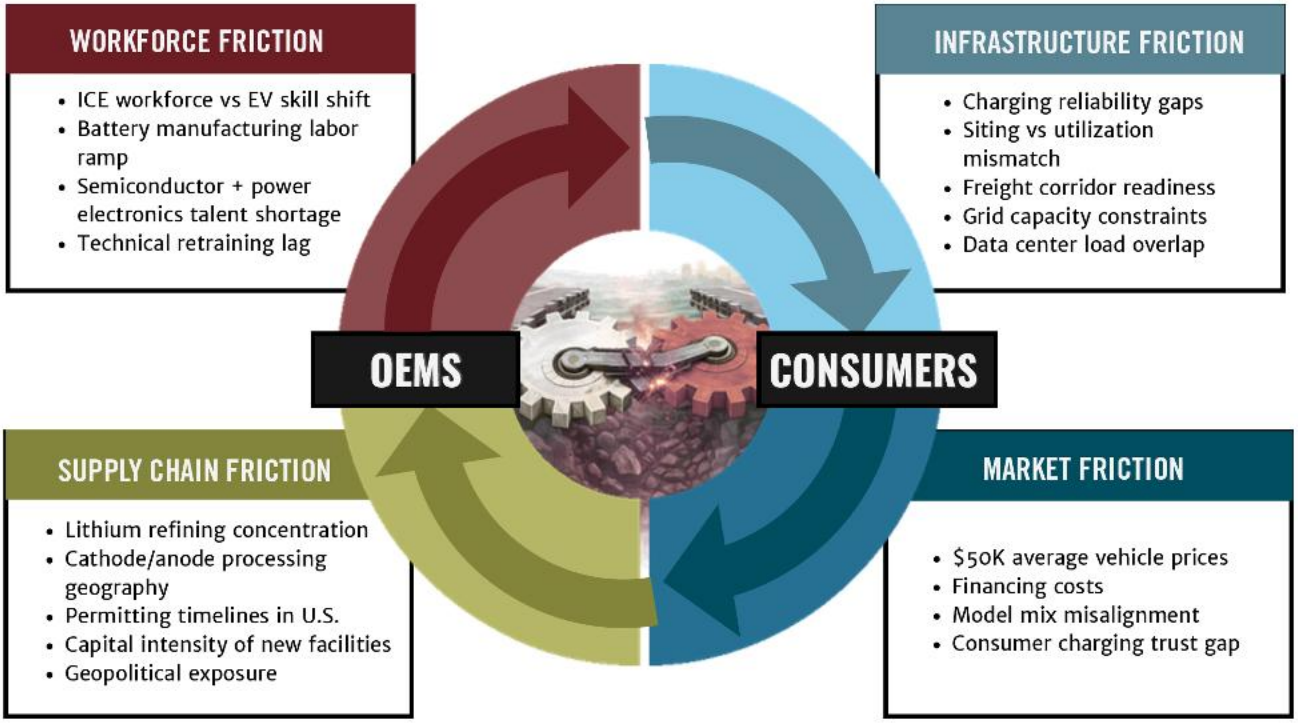
SYSTEM FRICTION AND CAPABILITY RISK: THE END OF EASY TAILWINDS

As the transition advances, the primary constraints are increasingly systemic. The limiting factor is not the vehicle itself, but the broader system within which it operates. What is emerging is a set of persistent and interacting frictions that influence the pace and stability of market development. These frictions can be understood across four dimensions: infrastructure, market, supply chain, and workforce.

Infrastructure friction reflects the gap between vehicle adoption and charging availability, reliability, and grid readiness. While deployment continues to expand, performance and consistency remain uneven across regions. Market friction reflects increasing sensitivity to price, financing, and total cost of ownership as incentives evolve and consumers evaluate electric vehicles under more market-driven conditions. Supply chain friction reflects constraints in manufacturing capacity, access to critical minerals, and capital allocation. This includes the growing reallocation of investment toward adjacent applications such as battery energy storage systems, as firms respond to revised demand forecasts and prioritize margin stability. Workforce friction reflects misalignment between training pipelines, labor demand, and actual workforce movement across sectors (International Labour Organization, 2023; Brookings Institution, 2024).

These frictions are interconnected and reinforce one another. Infrastructure gaps can slow adoption, which in turn affects production planning and investment decisions. Production uncertainty influences capital allocation, which shapes workforce demand and mobility. Labor shifts toward sectors with more stable demand signals, including utilities and construction, can further constrain capacity within the electric mobility ecosystem. This dynamic is not the result of a single bottleneck, but of a system adjusting unevenly across multiple dimensions.

The implications for long-term capability are significant. When workforce, capital, and infrastructure fall out of alignment, capacity can erode over time. Rebuilding that capacity if needed will require coordinated investment, sustained demand, and aligned incentives, conditions that are not always present simultaneously. The transition is therefore increasingly shaped by the ability to maintain alignment across these systems, rather than by technological progress alone.



GEORGIA'S NEXT PHASE: NAVIGATING VOLATILITY AND SYSTEM FRICTION

As the electric mobility transition enters a more complex and uneven phase, Georgia's role is also evolving. The state has established itself as a leading hub for electric vehicle and battery manufacturing, supported by more than $30 billion in announced investments and its central position within the Southeast Battery Belt. However, the combined effects of subsidy phase-outs, demand variability, and shifting capital allocation are introducing greater uncertainty into production planning, facility utilization, and workforce demand. Investment timelines are less predictable, and the sequencing of manufacturing, infrastructure deployment, and workforce readiness has become more tightly coupled. In this environment, misalignment across systems results in measurable impacts on cost, utilization, and delivery timelines.

These conditions place greater emphasis on execution. Sustained competitiveness will depend on the ability to maintain alignment across infrastructure, workforce, supply chains, and market demand as conditions evolve. Where alignment is achieved, capital is deployed more efficiently, capacity is utilized more effectively, and growth can be sustained. Where it is not, friction emerges in the form of delays, underutilized assets, and constrained workforce pipelines.

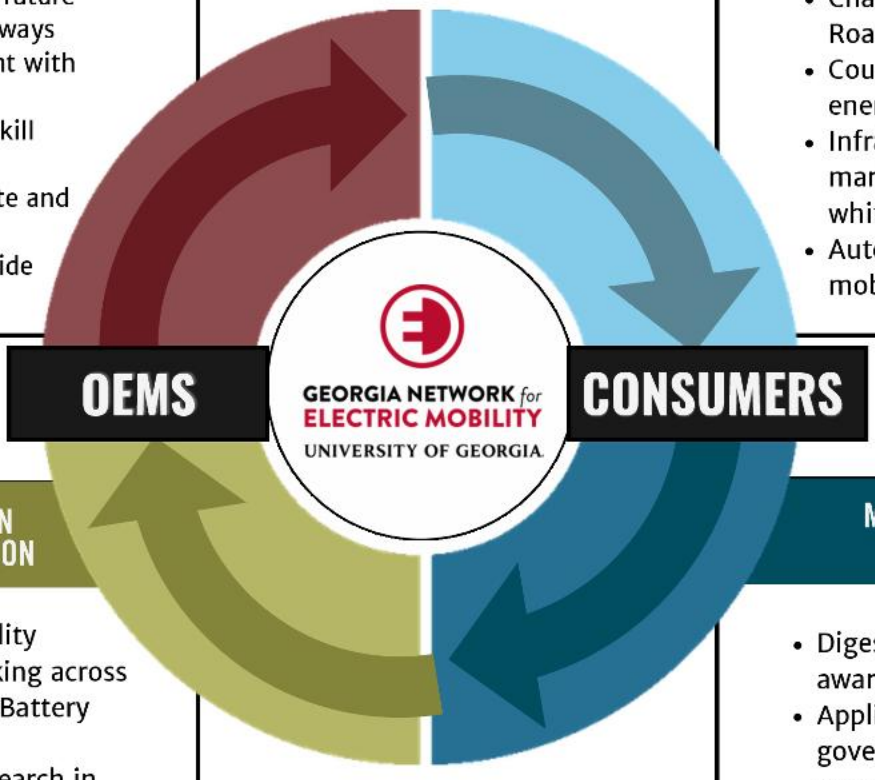
Within this context, the Georgia Network for Electric Mobility operates as a statewide coordination platform focused on identifying and addressing system-level gaps that affect industry performance.

WORKFORCE ALIGNMENT ENGINE

- Defined EV, AV, and future mobility career pathways
- Curriculum alignment with employer demand
- Industry-informed skill mapping
- Support for certificate and training program development statewide

INFRASTRUCTURE & DEMAND FORECASTING

- Charging Infrastructure Roadmap
- County-level charging energy gap analysis
- Infrastructure forecasting, market intelligence and whitepapers
- Autonomous and future mobility



SUPPLY CHAIN TRANSFORMATION

- Ecosystem visibility investment tracking across Georgia and the Battery Belt
- NDA covered research in critical minerals, battery manufacturing
- Factory of the future

MARKET & REGIONAL COORDINATION

- Digestible insights and EV awareness programming
- Applied pilots with local governments and communities
- Industry collaboration
- Global research partnerships

Our mandate is to support and improve alignment across the key dimensions where fragmentation creates risk, including infrastructure readiness, workforce availability, supply chain visibility, and market development. This includes aligning workforce development with employer demand and evolving skill requirements; supporting infrastructure planning and demand forecasting to improve charging deployment and grid readiness; enhancing visibility across supply chains and manufacturing capacity; and facilitating coordination across industry, government, and research partners to improve market clarity and execution.

As the transition matures, competitive advantage will be determined by the ability to operate through variability while maintaining capacity, cost discipline, and alignment across systems. Georgia's position within the Battery Belt provides a strong foundation, but long-term leadership and economic competitiveness will depend on its ability to coordinate across these systems and support industry execution at scale.

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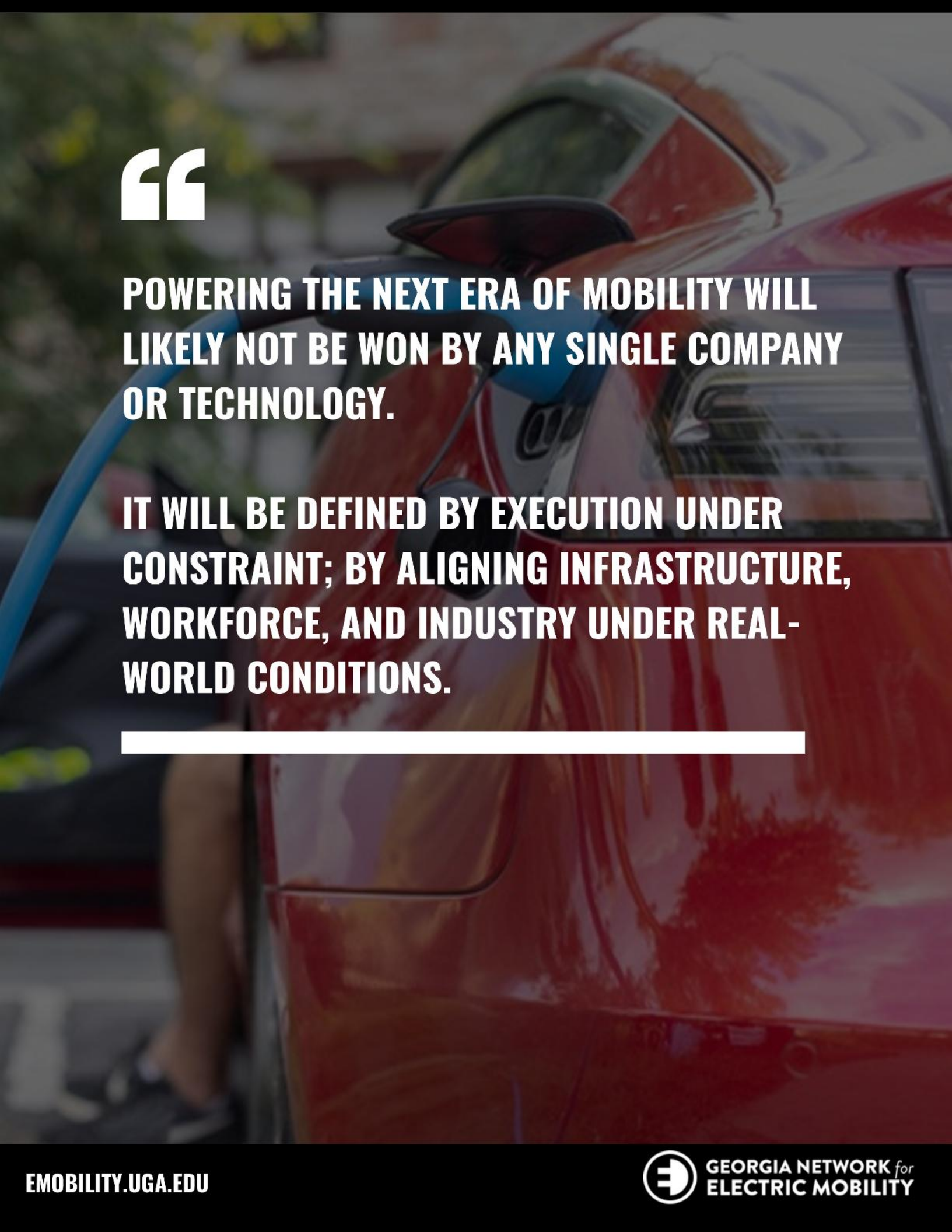
ABOUT GNEM AND THE UNIVERSITY OF GEORGIA E-MOBILITY INITIATIVE

The Georgia Network for Electric Mobility (GNEM) was established to advance the State of Georgia's leadership in electric mobility through multidisciplinary research, workforce development, community engagement, and collaborative partnerships. Aligned with the mission of the university, GNEM seeks to foster economic growth, drive technological innovation, and position Georgia as a global leading ecosystem in electric vehicle technology. This white paper serves as a strategic document, offering data-driven guidance to stakeholders, policymakers, and industry leaders on the evolving landscape of electric mobility and Georgia's emerging role. It provides a comprehensive analysis of historical trends, current opportunities, and future outlooks, establishing a foundation for strategic decision-making in electric mobility and future whitepapers related to this work.



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POWERING THE NEXT ERA OF MOBILITY WILL LIKELY NOT BE WON BY ANY SINGLE COMPANY OR TECHNOLOGY.

IT WILL BE DEFINED BY EXECUTION UNDER CONSTRAINT; BY ALIGNING INFRASTRUCTURE, WORKFORCE, AND INDUSTRY UNDER REAL-WORLD CONDITIONS.

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