1

Focus on Reducing the Vehicle Development Time

Reducing Vehicle Development Time From 4-5 YEARS To 18-24 MONTHS

Vertically Integrated Supply Chain

Batteries, chips and software produced in-house for tight control, reducing reliance on suppliers and shortening lead times.

Digital engineering & simulation

Chinese automakers rely on computer simulations and AI to reduce physical prototypes, saving time.

Iterative Design

Iterative validation and quick refinement cycles through Over The Air (OTA) updates reminiscent of software development.

Modular Architectures

Modular vehicle platforms let various models share core components, reducing development effort and accelerating new variants to market.

Globally Coordinated Workforce

Companies coordinate design and engineering across time zones to enable near-continuous work, minimizing idle time.

Relevant Use Cases

For the **Omoda** 5 export model, Chery redesigned suspension, steering, brakes and traction control for European roads in just six weeks before shipping vehicles

Zeekr's engineers in China hand off their work at the end of each day to teammates at the company's design centre in Sweden, allowing development to continue for up to 20 hours a day.

In December 2025, **BYD** rolled out its 15 millionth New Energy Vehicle. Notably the last 5 million vehicles were produced in 13 months , indicating rapid output

In September 2025, **Leap Motors** Launched the B10 in Europe at the IAA Mobility Show in Munich, achieving a Time To Market of 18 months

Key Focus 2026

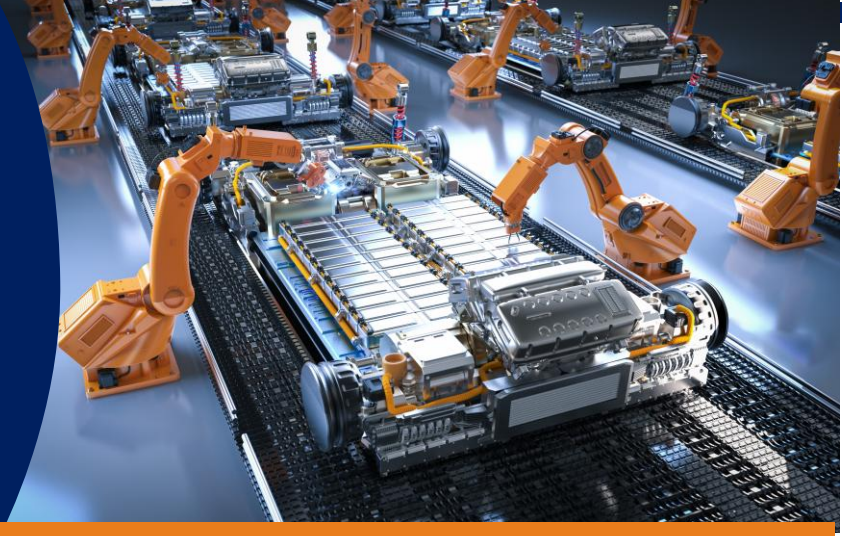
Adopt Digital twins & AI simulation to shorten cycles without sacrificing quality.

Leverage standardized architectures which support multiple models and over-the-air updates.

Tailor existing models rapidly to local needs to achieve shorter time to enter a new market

2

Policy Realignment Leading to Resurgence of Traditional Powertrains



Policy Realignment

The EU U-Turn

- The European Union rolled back its planned ban on combustion vehicles from 2035, shifting to a more flexible target framework that still enables multiple powertrain pathways alongside BEVs.
- The goal now is to achieve 90% CO2 reduction from 2021 levels, with the remaining gap expected to be addressed through compliant low-carbon measures.

US Shift

- The Trump administration has rolled back Electric Vehicle Incentives and paused EV Charging Infrastructure spending, reducing near-term certainty around subsidy-backed demand.
- The focus has shifted to more fossil fuel production, which will favor ICE vehicles and encourages OEMs to keep hybrids and efficient combustion programmes active ow-carbon measures.

Relevant Use Cases

Ford has terminated several pure EV models including the Ford F-150 lightning , A large three row electric SUV which was planned and is pivoting towards Extended Range Electric Vehicles and Hybrid in 2026

Stellantis has cancelled its all-electric RAM 1500 electric pickup. In 2026, It is also terminating PHEV variants of Jeep SUV's and Chrysler minivan and focus instead on the hybrid and EREV variants of them

General Motors is investing $888 million in the Tonawanda Propulsion plant in New York to build the Sixth generation V8 engines , which was originally announced to produce electric vehicle drive units

Key Focus 2026

Prioritize efficient hybrids and downsized combustion engines to meet regional rules and sustain profits.

Engage regulators and develop e-fuels and green steel to comply with 90% CO_2 cuts and low-carbon mandates.

Tailor product mixes to local demand; build resilient supply chains amidst tariff and geopolitical uncertainty.

3

Collaboration Between Legacy Automakers and Chinese OEMS

Key Drivers for Partnerships between Legacy Automakers and Chinese OEMs

Overcoming Technology Gap

Chinese OEMs are strong in digital integration, introduction of smart features and rapid software updates which can help legacy automakers offer a more modern ownership experience.

Cost Efficiency

Access to China's more mature EV supply chain including batteries and power electronics can help legacy automakers to improve procurement efficiency and reduce production costs.

Accelerated EV Development

Chinese OEMs have shorter product development lifecycles, helping legacy automakers to bring vehicles to the market faster, leveraging existing platforms and engineering capabilities.

Market Access

Western brands seek to regain share in China and expand into emerging markets, while Chinese OEMs want global footholds. Partnerships help achieve synergies towards these mutual goals.

Relevant Use Cases

Volkswagen and Xpeng have partnered to develop two VW branded EV's for the Chinese market, leveraging Xpeng's software and platforms, incorporating advanced safety and ADAS

In January 2026, reports suggest that **Ford** is in talks to buy batteries from BYD, which will be used in Ford's EV manufacturing facilities outside the US

Stellantis has partnered with Leapmotors to create a joint venture called Leapmotors International to, to expand rapidly in Europe through affordable models such as T03 and C10, helping boost Stellantis's EV offering in the market

Key Focus 2026

Co-develop platforms, software and batteries to cut time-to-market and lower costs.

Leverage partner networks to enter new regions and localize production (e.g., Poland, Brazil).

Share investment and regulatory risk; navigate trade tensions and protect intellectual property.

4

Rising Demand for Affordable Cars

Key Drivers for Rising Demand for Affordable Cars

Soaring Prices

In the US, the sale price of an average vehicle reached $48,641 in January 2025, an increase of 30% since the same time in 2019.

Average new car prices rose more than 60% between 2001 and 2020

Economic Strain

High interest rates, inflation and waning subsidies make financing difficult.

A lack of affordable models causes many potential buyers to delay buying.

EV Affordability Gap

EVs remain more expensive than ICE vehicles in Europe and the U.S., while two-thirds of EVs sold in China are cheaper than ICE alternatives.

More affordable EVs are expected as battery prices drop.

Price War

Chinese OEMs have been introducing costs effective cars including Electric Vehicles into the European Market

This is forcing European OEMs to develop sub $30K vehicles as well

Relevant Use Cases

Skoda is launching the Epic in 2026 , a subcompact SUV battery electric vehicle positioned around 25,000 Euros , aimed at budget-oriented EV buyers in Europe

Hyundai is expected to launch the Ioniq3, a subcompact electric hatchback in Q3 of 2026, priced around 30,000 Euros to compete in the affordable EV segment

GM is expected to reintroduce the Chevrolet Bolt in the US market in early 2026. The price is expected to be under $30,000 making it one of the most affordable EV's in the US market

Key Focus 2026

Accelerate development of EVs under $20k and maintain a portfolio of low-cost ICE/hybrid models

Simplify designs, localize manufacturing and optimize supply chains to reduce costs and improve accessibility.

Offer innovative financing (subscriptions, leasing) and advocate supportive regulations (e.g., small EV category).

5

Increased Investments in Automotive Cybersecurity

Automotive Cybersecurity – Need of the Hour

Attacks are increasing

Auto cyber events impacting millions of vehicles jumped from 5% (2023) to 19% (2024).

148 publicly disclosed attacks were reported in Q1 2025, indicating the need for cybersecurity.

Ecosystem is complex

Even with strong internal defenses, large OEM firms are vulnerable because of their complex interconnected ecosystems. (e.g.: BMW data breach at supplier site in 2025).

Operational disruptions

Cyber-attacks would cause significant operational disruptions for OEMs. E.g.: JLR reported a ~$570m loss in Q2 FY26, largely driven by its 2025 cyber incident.

Mandatory Regulations

UN vehicle cybersecurity + software-update regulations (UN 155 & 156) will drive cybersecurity investments from OEMs.

Key Cyberattack Incidents Highlights

Cyberattack on **JLR** systems caused manufacturing and retail operations to be severely disrupted. JLR reported $**230 million as cyber-related recovery costs** in Q2 FY26

Stellantis detected unauthorized breach on a 3rd party service provider platform that supports its North American customer service operations

Breach at **Hyundai AutoEver** IT systems exposed customer names, SSNs and driver's license details of up to **2.7 million vehicle owners**

Everest group claimed theft of **600,000** lines of **BMW's** internal documents (such as audit reports, engineering designs) via data breach at its external supplier site in U.S

Key Focus 2026

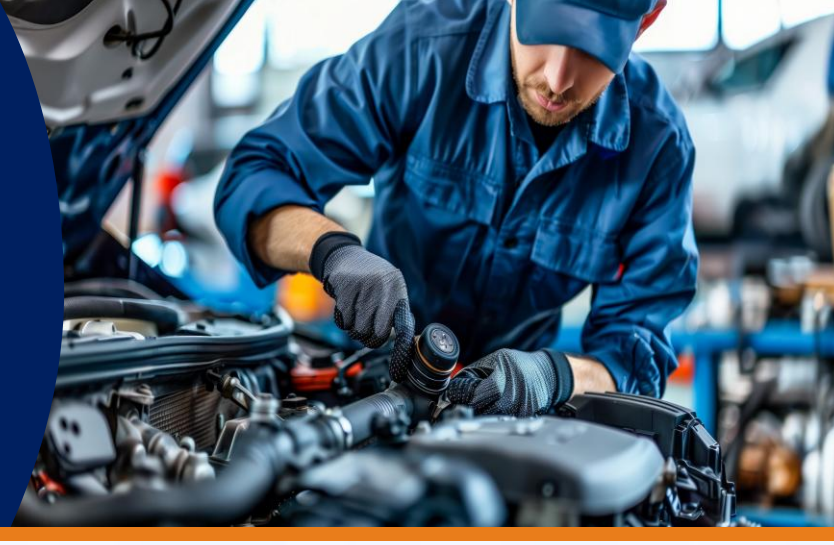
Prioritize to secure manufacturing plants from disruptive threats; implement tested fallback protocols for production outages.

Strengthen third-party ecosystem security; reinforce supplier controls, audits, and continuous monitoring.

Adopt AI-led detection/response while tightening security basics (identity, data, access) for resilient defense.

6

Aftermarket Resurgence Driven by an Ageing Vehicle Parc



Strategies for Capturing Aftermarket Value

OEM & Tier 1 Ecosystem

OEMs and Tier-1 suppliers are broadening their aftermarket footprints to address the ageing vehicle population.

In the US, average age of passenger cars has increased to 14.5 years in 2025

Value & Economy Parts Portfolios

Lower-priced, OE-backed parts lines address cost-sensitive owners of older vehicles (in the EU, average age has increased to 12.3 years), while preserving quality assurance and brand trust.

Lifecycle Extension & Remanufacturing

Remanufactured and exchange programs reduce total cost of ownership, and support circular-economy objectives.

TCO in the US averages around $1,468 each year and is increasing.

Digital & Network-Led Service Models

Expanded independent-work shop networks, digital parts catalogues, and bundled service offers improve reach and convenience for ageing-parc customers.

Relevant Use Cases

p

Motrio positions Renault to capture multi-brand aftermarket demand and lifecycle revenue as Europe's vehicle parc ages, without diluting its core OEM brand.

OEM-led value programs such as **Stellantis Eurorepar, Ford Motorcraft, Volkswagen Economy & Classic Parts, and Toyota Value Line** are explicitly targeting 5–15+ year-old vehicles with affordable, OE-approved repair solutions.

Tier-1 initiatives including **ZF REMAN and Bosch eXchange** are scaling remanufactured and exchange components, balancing cost competitiveness with reliability and sustainability.

Key Focus 2026

Value and remanufactured parts portfolios across powertrain, electronics, and wear-and-tear

Emphasis on lifecycle monetization through service contracts, extended warranties, and digital aftermarket platforms

Positioning the aftermarket as a resilience lever amid market volatility and electrification transition

7

Mitigating Rare Earth Materials Supply Risk

Issues with Rare Earth Materials Supply & the Automotive Industry

Dependency on China

China controls around 70% of rare-earth mining, 85% of refining capacity and nearly 90% of magnet production, resulting in global industries depending on China for supply.

Export curbs & uncertainty

China introduced export licenses for rare-earth elements, magnets and assemblies in April and October 2025, creating supply uncertainty and hindering production

Limited Alternatives

Automakers and suppliers are developing low-to zero rare-earth motors, but most solutions and new mines are years from large-scale production

Digital & Network-Led Service Models

Carmakers are stockpiling magnets, lobbying governments for diversification, and investing in domestic supply and recycling to ensure production continuity

Relevant Use Cases

Stellantis partnered with Niron Magnetics in October 2025 to develop electric motors for cars using magnets which are devoid of rare-earth elements

General Motors signed a multi-year deal with Noveon Magnetics to secure US-made neodymium-iron-boron magnets for its SUVs and truck with deliveries commencing in July 2025

BMW is developing low-to-zero rare-earth motors to cut reliance on China. The upcoming iX3 SUV is expected to be powered by motors which generate their magnetic field through electric current than permanent magnets

Key Focus 2026

Alternative Motor Technology

Accelerate development of magnet-free motors and novel alloys to

Secure & Diversify Supply

Invest in domestic mining, refining and magnets; sign long-term contracts with regional suppliers.

Recycling & Circularity

Scale up rare-earth recycling and reclamation from end-of-life vehicles to build a circular supply

8

Acceleration of Manufacturing Nearshoring

Key Drivers for Manufacturing Near Shoring

Tariffs & Trade Barriers

The Trump administration's tariffs are forcing Global OEMs to move production from overseas to the US.

EU duties on Chinese EVs are making Chinese OEMs to plan for local production

Supply-chain resilience

Geopolitical tensions and pandemic disruptions have exposed long shipping routes.

Nearshoring will reduce supply bottle necks, uncertainties and shipping time

Proximity & Cost Advantages

Mexico offers tariff-free access under USMCA, cost-competitive labor and integrated supply chains.

Plants in Hungary or Turkey avoid EU tariffs and qualify vehicles for subsidies

Relevant Use Cases

General Motors announced plans to relocate production of the Buick Envision SUV from China to its U.S. assembly plant near Kansas City beginning in 2028.

BYD plans to produce all EVs for Europe locally within three years and is building plants in Hungary (2025) and Turkey (2026) to avoid EU tariffs

To avoid proposed 25% U.S. tariffs on Mexican imports, **Honda announced it** will produce the next-generation Civic hybrid in Indiana rather than in Mexico, starting May 2028

Key Focus 2026

Local Supply Chains

Invest in regional battery and component plants to deepen localization and reduce logistics risk.

Tariff Strategy & Compliance

Monitor trade agreements (USMCA review, EU duties) and recalibrate production

Resilient & Sustainable Hubs

Design factories with renewable energy and integrated logistics to meet

9

Increased Adoption of Humanoid Robots in Auto Manufacturing

Factors Driving the Adoption of Humanoid Robots in Automotive

- Advanced Perception and Cognition to handle complex Tasks
- Improved Operational Efficiency
- Cost Competitive over Lifecycle
- Overcome Labour Shortage and ensure safety

Relevant Use Cases

BMW partnered with Figure to pilot humanoid robots at its Spartanburg plant. Robots are expected to be integrated into body shop, sheet metal and warehouse operations in the next couple of years

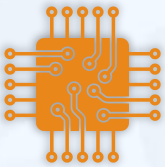
Mercedes Benz has invested in the robotic firm Apptronik and is testing robots in its factories in Germany and Hungary for shifting parts to the production line and for performing quality checks

Hyundai has announced that it plans to deploy its atlas robots at its US plant in Gorgia in 2028. The robots are initially expected to perform parts sequencing, quality tasks before being expected to do complex assembly tasks by 2030

Key Focus 2026

Expand pilot programs to mass production and drive costs down to enable large-scale adoption.

Create training programs and labor agreements to upskill workers and manage transitions.



Advance embodied AI, sensors and safety standards to ensure robots operate reliably alongside humans.

10

Extended Range Electric Vehicles To Gain Popularity

Factors Driving the Adoption of Extended Range Electric Vehicles (EREV)

Overcome Range Anxiety

EREV's generally offer a total driving range of approximately 600 miles on full charge and full tank of gas

Infrastructure Independence

EREV's reduce the dependence on charging infrastructure, relieving the stress to plan for charging along the route

Lower Purchase Price

EREV's use smaller, lighter batteries than long range battery electric vehicles, which can significantly reduce the initial cost of the vehicle

Practical Transition to EV's

EREV's combine electric vehicle benefits with ICE convenience, easing adoption

Relevant Use Cases

Xpeng is launching the EREV version of the G7 SUV in Q1 of 2026 with a total range of 1,740 Km with a full 60-liter fuel tank and completely charged 55.8kwh battery pack

Stellantis is launching the RAM 1500 REV in Q1 2026 which is expected to have a EV only range of 169 miles and around 690 miles with both the battery and fuel tank at full capacity

Volkswagen through its joint venture with SAIC is introducing its first EREV SUV, the ID.Era 9X which is scheduled for launch in China in 2026

Key Focus 2026

Improve energy density and cost to deliver 500 km+ electric-only ranges and reduce generator use.

Engineer modular architectures that accommodate EV, PHEV and EREV powertrains for diverse markets.

Align product portfolios with regional rules, tariffs and consumer preferences to optimize EREV deployment.