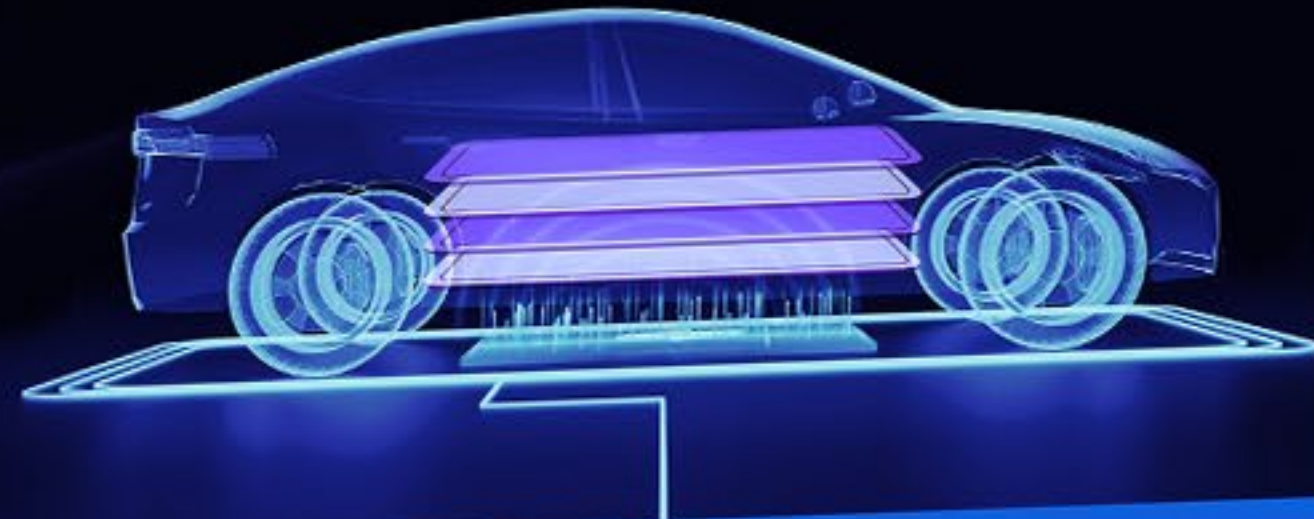


Driving the Future

Accelerating the Shift to Software-Defined Vehicle

[Download the white paper →](#)



Overview

Evolving Maturity of SDVs

Foundation of SDV Transition

Strategic Outlook

Overview

Software-Defined Vehicle A Strategic Reset for OEMs and Tier-1s

The automotive industry is undergoing a foundational shift—from hardware-defined engineering to software-first, intelligent mobility platforms. As customer expectations evolve and vehicles become extensions of digital lifestyles, Software-Defined Vehicles (SDVs) are rapidly emerging as the new standard.



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The shift to SDVs demands new capabilities, new partnerships, and a fundamentally different mindset. Those who master this transition will unlock faster innovation, new monetization streams, and deeper customer engagement across the vehicle lifecycle.



Strategic Insight

Software is no longer a support function — it is the primary driver of innovation, safety, and value.

Data Point

By 2030, over 50% of vehicles sold in mature markets will be software-defined

Strategic Outlook

Enterprises that invest now in robust, agile, and secure SDV platforms will lead in an era of intelligent, adaptive mobility.

Looking Ahead SDV Roadmap and Strategic Outlook

SDVs are not a future vision—they're a present reality. The SDV journey is not linear. It requires balancing legacy constraints with future-ready capabilities and incrementally maturing across key transformation levers—from architecture and validation to monetization and compliance. Enterprises that invest now in building robust, agile, and secure SDV platforms will be best positioned to lead in an era of intelligent, adaptive mobility.

Engineering the Software-defined Future The Role of Tech Services

As OEMs navigate the complex shift toward Software-Defined Vehicles, the role of technology service providers is evolving from engineering support partners to end-to-end transformation enablers. The SDV journey demands capabilities that span embedded systems, cloud-native architectures, digital platforms, and agile operating models— areas where global technology service providers are uniquely positioned to drive impact.



Foundation of SDV Transition

To move the needle on SDV maturity, OEMs and Tier-1 suppliers must invest in six critical transformation levers. These areas extend beyond technology—they require cross-functional alignment, organizational readiness, and platform thinking. These six levers form the foundation of the SDV transition, helping OEMs evolve from fragmented, reactive operations to proactive, software-centric ecosystems.

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01



Architect for Change

Break free from rigid ECUs—embrace flexible compute zones. Reframe system complexity as agility. Shift to zonal compute stacks that simplify orchestration, cut costs, and catalyze OTA velocity.

02



Legacy that Moves

Don't replace legacy – reinvent from within. Strategically integrate legacy systems under a virtualization gateway. Avoid rip-and-replace, preserve stability, and unlock SDV capabilities one layer at a time.

03



Drive Experience, Not Just Updates

Updates aren't just patches—they're engagement tools. Build a secure, orchestrated OTA backbone. Push compliance, enhancements, and new features seamlessly—and monetize every mile with post-sale value.

04



05



06



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Evolving Maturity of Software Defined Vehicles →

The journey toward becoming a Software-Defined Vehicle is not a binary shift—it's a layered evolution, each representing a leap in customer experience, adaptability, and business value.

While the end goal is clear, the path to full SDV maturity is complex. The challenge isn't just adopting new technology—it's about fundamentally transforming how vehicles are architected, engineered, and supported over time.

	SDV Level 0 Software Enabled	SDV Level 1 Connected	SDV Level 2 Updateable	SDV Level 3 Upgradeable	SDV Level 4 Software Platform	SDV Level 5 Innovation Platform
Customer Experience	Mechanical functions made possible with software	Information and control via connectivity	Vehicle maintenance via OTA updates	New functions via software upgrades	Car always feels new via cross-generation software updates	Full customization via ecosystem of third-party functions
Scope of Adaptability & Dynamics	<ul style="list-style-type: none">No updatesNo connectivity	<ul style="list-style-type: none">Static softwareDynamic environment	<ul style="list-style-type: none">Static functionalityDynamic software	<ul style="list-style-type: none">Static target hardwareDynamic functionality	<ul style="list-style-type: none">Singular Software ProviderDynamic Target Hardware	<ul style="list-style-type: none">Diverse software providers
Examples	<ul style="list-style-type: none">Parking assistanceAdaptive cruise control	<ul style="list-style-type: none">Live traffic informationMobile phone companion app	<ul style="list-style-type: none">Navigation updateSecurity patches	<ul style="list-style-type: none">New function in single car line	<ul style="list-style-type: none">New function delivered to all vehicle generations	<ul style="list-style-type: none">New third-party function developed in a multi-brand fleet

Source: McKinsey

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Drive Value from Data

Every byte from your fleet is a strategic asset. Harness edge-to-cloud intelligence to fuel predictive maintenance, smart charging, mobility insights—and turn insights into recurring income streams.

05



Test Before You Touch the Road

Move fast, fail safe—virtually. Integrate digital twins and CI/CD into your validation fabric. Slashing reliance on prototypes, accelerate software releases while locking in reliability.

06



Secure Every Layer, Every Day

Real-time threats need real-time defense. Embed TARA-rooted defenses across vehicle, API, and cloud. Detect threats in real time, ensure compliance, and build lasting trust with proactive resilience.

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Source: Elektrobit

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Job Title	Country

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