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2026 IN FOCUS: 5 TRENDS THAT WILL RESHAPE THE DEVELOPMENT OF SOFTWARE-DEFINED VEHICLES

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2026 in Focus: 5 Trends That Will Reshape the Development of Software-Defined Vehicles

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2025 was a big year for the automotive industry. An ever-evolving global landscape, finally free of the worst supply chain issues, is now instead complicated by a new spate of challenges posed by tariffs and regulations. It's enough to keep even the most stoic vehicle program managers awake at night.

Despite all that turmoil, the industry made huge strides in the software-defined vehicle (SDV) space. New cars like [BMW's iX3](#) showed the power of rethinking the software stack, while increased partnerships between brands like [Rivian and Volkswagen](#) showed that even the mighty have a lot to learn from the upstarts.

Things are set to just keep on evolving in the year ahead. 2026 will surely see yet more shifts in the global marketplace, and software will be at the heart. Here are five trends that the folks at [QNX](#) and [Vector](#) see as key to watch in the coming year.

Trend 1: Accelerating Innovation in the Application Layer

When it comes to developing applications for deployment in a massively complicated environment, the sort of thing the modern vehicle has become, it's helpful to think of software as existing in layers. On the lowest levels, you have hardware abstraction and the operating system, the software that exists to interact directly with the ECU hardware and manage access to the vehicle's underlying systems. This has traditionally been [QNX's](#) area of expertise, alongside partners like [Vector](#) working at the deeply embedded ECU level.

One step above that, you have what's called the middleware, software that helps myriad applications and devices seamlessly talk to each other. This is the area where [Vector](#) has made a name for itself.

And then, sitting on top of all that, is the application layer. This is the software that creates the experiences you might actually see or feel from behind the wheel, whether it be a button you can press on a touchscreen or a knob you twist to modify vehicle behavior.

2026 is expected to be a year when car manufacturers shift to focus on that topmost layer. This could free them from the trenches of the lower levels of software development that have mired entire teams of coders who'd much rather be writing great user experiences. Indeed, [QNX's](#) recent study, "Under the Hood: SDV Developer Report," shows that 80 percent of embedded automotive software developers worldwide support this shift.

To this end, [QNX](#) and [Vector](#) have teamed up to develop [Alloy Kore — the Foundational Vehicle Software Platform](#), which will relieve teams of software developers from the intricacies of software integration and maintenance. Instead, they can stay focused on writing code that will surprise and delight.

Trend 2: Higher-Performance Computing

Many of today's everyday vehicles offer horsepower and torque figures achieved only by the most elite supercars not that long ago. Increasingly, the digital performance of these cars is accelerating at an even greater rate. More powerful user experiences plus increasingly capable active safety and driver assistance systems have an ever-greater need for computing horsepower. With the future demand for things like onboard artificial intelligence and self-driving, tomorrow's cars will need to be more powerful still.

Advanced, multi-core processors from brands like Qualcomm and NVIDIA aren't just for smartphones and graphics cards. They're increasingly running at the core of modern cars, creating rolling high-performance computers (HPC) that are evolving far faster than the typical five-year new vehicle development cycle.

As new chips with more cores hit the market, car manufacturers will need to scale up quickly. That's where solutions like [QNX's](#) Software Development Platform 8.0 can help, enabling quick and reliable interfacing with the latest processors without having to rewrite everything every time.

Trend 3: Expanding Automotive Ecosystems

Parts sharing is nothing new in the automotive world. Manufacturers have long tried to save time and money by collaborating on everything from door handles all the way up to entire platforms. That spirit of sharing will continue into the digital realm in 2026 with expanded support for partnerships and collaboration.

In [QNX's](#) recent "Under the Hood: SDV Developer Report," 93 percent of automotive software developers said that cross-industry partnerships are vital to their current projects. This is a reflection of the growing complexity of the technology integration landscape. Manufacturers are increasingly relying on partners to help address everything from regulation and certification to integration and deployment.

Relying on cross-industry partnerships like this will again free automaker software teams from worrying about technical details and expand beyond small-scale, in-house solutions. By adopting standard development ecosystems and working with well-established providers, automakers can not only decrease development times but refocus on the bigger goal of delivering compelling experiences to their customers, a principle also embraced by [Vector](#) as a leading ecosystem provider for Software-Defined Vehicles and Systems.

Trend 4: Software Factories

Over the 110-plus years since Henry Ford introduced the assembly line to the automotive world, global OEMs have evolved vehicle manufacturing into an art form. Highly automated assembly plants literally handle the heavy lifting of putting a vehicle together, enabling rapid, repeatable deliveries.

It's time to bring that same level of perfection to the task of building a car's software and, just as crucially, keeping it updated for the lifetime of the vehicle. A software factory is a transformative approach because it standardizes development across tools, processes, and teams, enabling faster delivery, higher quality, and seamless collaboration for globally distributed software projects. Additionally, relying on an "everything-as-code" approach, where all parameters and configurations are stored alongside the application source, enables easier, more comprehensive automation and AI integration.

The software factory approach, with its increased use of automated development tools and utilities, will help distributed software teams achieve more continuous development and deployment, improving the speed and reliability of their deliverables. [Vector's Software Factory](#) exemplifies this approach, providing the processes, tools, and automation needed to accelerate development cycles. This will prove vital not only in getting software-defined vehicles on the road, but also in providing them with timely updates after their release.

Trend 5: More AI, Earlier on the Road

Artificial intelligence is shaking up everything right now, and that certainly includes the automotive landscape. More manufacturers are building increasingly sophisticated AI capabilities into their vehicles, but in 2026, those manufacturers should also lean into using AI to develop the software that powers those machines.

This includes shifting away from proprietary databases and putting everything that's possible into code. Developers should be able to train their own agents with their own systems and integrate them into tools and even broader pipelines, creating workflows that optimize the entire software development process.

That said, it's important for organizations to maintain human control within that chain. As safety-critical machines subject to complex levels of regulation and governance, human expertise and judgment remain irreplaceable.

Leading the Way

The transition to SDVs hasn't been easy. Automotive OEMs were long considered lagging behind other industries due to their reliance on dated embedded systems and legacy software practices. However, with the increased adoption of everything from modern engineering methodologies to HPC architectures, the automotive industry is now leading the way globally when it comes to the rapid development and integration of complex platforms in a safety-critical environment. That rapid evolution will continue in 2026, when new tools, techniques, and partnerships will push the industry even further into the future.

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About Vector

[Vector](#) has been a leading partner in the development and networking of embedded electronics for over 35 years. With more than 4,500 employees at 32 locations worldwide, the company supports manufacturers and suppliers in industries such as automotive, MedTech, IoT, and aerospace. A comprehensive ecosystem of tools, cloud services, a professional software factory, and engineering services forms the foundation for building safe and high-performance embedded systems. Driven by a passion for technology, Vector develops solutions that ease engineers' demanding tasks and is actively engaged in education, research, and social responsibility.

About QNX

[QNX](#), a division of [BlackBerry](#), enhances the human experience and amplifies technology-driven industries, providing a trusted foundation for software-defined businesses to thrive. The business leads the way in delivering safe and secure operating systems, hypervisors, middleware, solutions, and development tools, along with support and services delivered by trusted embedded software experts. QNX technology has been deployed in the world's most critical embedded systems, including more than 275 million vehicles on the road today. QNX software is trusted across industries, including automotive, medical devices, industrial controls, robotics, commercial vehicles, rail, and aerospace and defense. Founded in 1980, QNX is headquartered in Ottawa, Canada.

About MotorTrend

[MotorTrend](#) has chronicled the auto industry's past, present, and future since 1949, catering to in-market shoppers and enthusiasts through authoritative, entertaining storytelling, world-class photography, and engaging video presentations. In addition to in-depth coverage of the latest in automotive technology, reporting on breaking news, and features on the biggest personalities, MotorTrend reviews hundreds of new cars every year, leveraging objective testing and the team's extensive expertise. Its renowned MotorTrend Car of the Year, SUV of the Year, and Truck of the Year awards are also internationally recognized as among the most prestigious in the industry. Follow MotorTrend on [X](#), [Instagram](#), [Facebook](#) and [LinkedIn](#).

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