



From car to cloud—accelerating the future of software-defined vehicles

How Deloitte and Red Hat are helping create a new model for cloud-based automobile software development and management

As digital tools and devices permeate our daily routines, the automotive industry has seen growing demand for:

- Dynamic vehicle functionality and operations
- Driver assistance features that improve safety and reliability
- In-cabin personalization that adjusts to occupant preferences
- Connected applications that offer location-based services

This demand is driving a transition from traditional hardware manufacturing models to cloud-based, software-defined development cycles, but automakers face challenges in adopting a software-defined vehicle (SDV) model, including:

- Managing unfamiliar processes
- Sourcing hard-to-find skillsets
- Addressing potential quality, security and safety issues

To help the industry succeed in this transition, Deloitte and Red Hat have designed a pre-integrated, multi-vendor solution for SDVs that combines Deloitte's deep industry experience and engineering capabilities with Red Hat's In-Vehicle Operating System to help automotive manufacturers develop:



A streamlined SDV lifecycle that can help **enhance** defect management, bug fixes, and updates



Faster time-to-market with scalability and a **future-ready** infrastructure



Accelerated development cycles that compress test phases



A solution that **manages complexity** and **quality risks** for automakers and suppliers



Improved risk management and regulatory compliance

This pre-integrated solution also encompasses:

- **Red Hat OpenShift**, the platform that offers a secure DevOps environment where applications can be developed and deployed via over-the-air updates directly to a vehicle.
- **Red Hat Ansible Automation Platform** and **Red Hat Quay** for image security capabilities in SDV development, which minimizes manual processes, saves time and cost, and accelerates the development and deployment cycles while reducing error.

Deloitte's portfolio of SDV capabilities also includes:

- Systems engineering, DevSecOps, validation and verification, virtualization and modern engineering, all of which are supported by Generative AI capabilities that can provide spec-to-code generation, test case coverage, and intelligent vehicle diagnostics
- Strategic operational services that help automakers and suppliers create high-quality software-defined products that adhere to regulatory standards and innovate on unified issue management, version and variant traceability, intelligent vehicle debugging, and line of code impact analysis

As alliance partners for more than 10 years, Deloitte and Red Hat are well-positioned to collaborate with automotive OEM leaders to accelerate implementation and maximize value of software-defined vehicle systems and solutions and help them prepare for an exciting future.

READY TO GET STARTED?

Learn how Deloitte can help guide your SDV transformation using Red Hat cloud-based technologies.

Contact us today.

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