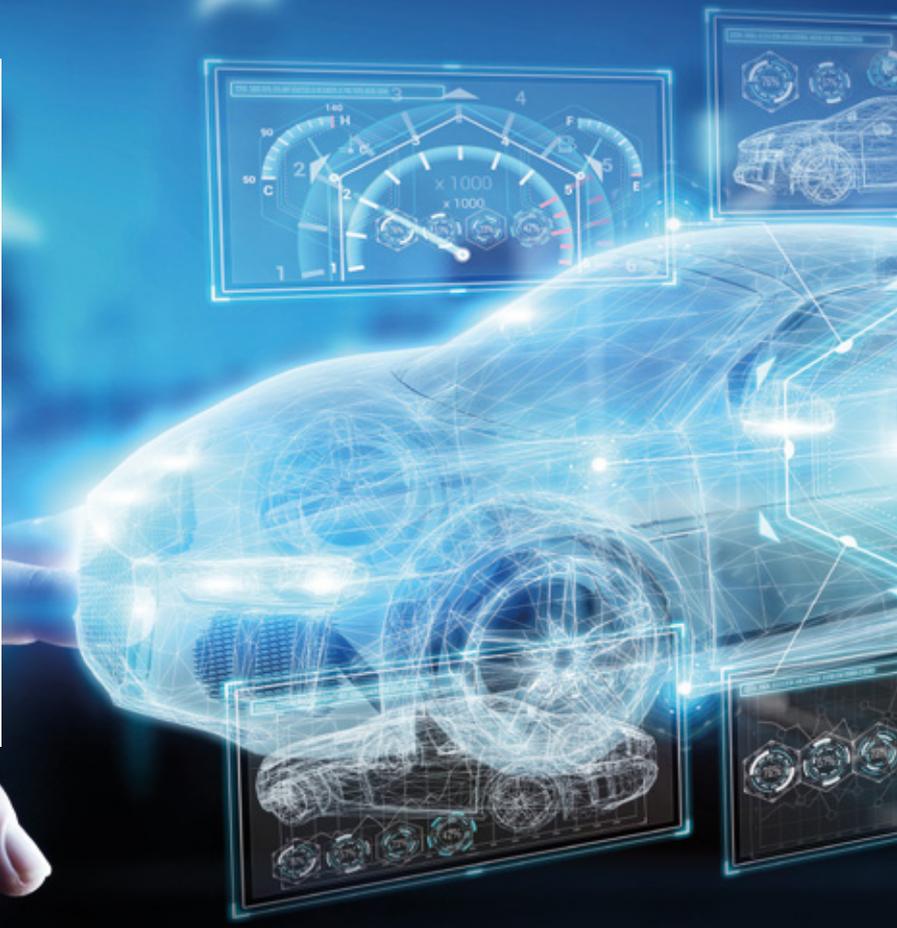




Add value.
Inspire trust.

Assessment of automotive software updates

Ensure regulatory and standard
compliance.



Your challenges

The introduction of UN Regulation 156 will make the approval of software updates mandatory for all vehicles with such capabilities. The regulation covers requirements for vehicle and component software updates, but also for a Software Update Management System (SUMS). Automotive manufacturers must therefore maintain a certified SUMS which must be assessed and renewed at least every three years.

For EU type approval, the European Union's General Safety Regulation (GSR) requires software update compliance with the UN Regulation 156. The UN regulation's requirements harmonise with the upcoming ISO 24089 standard "Road vehicles – Software update engineering". Both UN Regulation 156 and ISO 24089 require security and safety to be enforced across the entire automotive software update mechanism.

This will have a significant impact on the automotive industry, including manufacturers and relevant suppliers.

Without the implementation, operation and maintenance of a SUMS, manufacturers cannot gain type approval for software-update enabled vehicles and will not be able to sell them in European markets. Manufacturers and suppliers must therefore provide evidence that the requirements for the vehicle and the components are implemented according to the UN regulation.

Why is the assessment of automotive software updates important?

An efficient and systematic assessment by an independent third-party is necessary to identify a manufacturer's level of conformity to the UN Regulation 156 and ISO 24089 standard. Our assessment verifies your organisation's ability to develop and maintain a safe and secure software update mechanism and associated processes. Additionally, you can ensure that a component, or even the entire vehicle can perform software updates safely and securely – giving you the required evidence to gain EU type approval.

How can we help you?

Our TÜV SÜD experts can help you understand the requirements and how they affect your products and systems. We support you to identify compliance gaps in your processes and how they can be closed. Furthermore, we can assist you in ensuring that your software update processes fulfil UN Regulation 156 and ISO 24089 requirements, so you can achieve certification of your SUMS, which can be provided by TÜV SÜD's Technical Service.

Our software update assessment services

TÜV SÜD's expert assessment of automotive software updates and SUMS identifies if your organisation's processes provide a suitable and sustainable framework for your software update mechanism. Our assessment determines whether you fulfil the SUMS requirements of both UN Regulation 156 and ISO 24089.

Our assessment ensures that:

- Manufacturers and suppliers implement appropriate organisational governance to produce components or vehicles capable of processing safe and secure software updates.
- The specific requirements for updates and over-the-air updates are implemented correctly.
- Software version identification is possible.
- All required processes and documentation are produced in accordance with the ISO 24089 standard and the impending UN regulation.

Our assessments are flexible and can be adapted to fit your organisation's needs, by assessing the entire organisation or covering specific departments. This can also be applied in the early implementation stages and allows for efficient re-assessment, so that changes in your organisation or processes can be reflected quickly. Our detailed technical report includes a performance analysis and recommends how to close existing gaps.

TÜV SÜD'S ASSESSMENT FOR SAFE AND SECURE AUTOMOTIVE SOFTWARE UPDATES

- Is in line with current standardisation and regulation
- Evaluates your processes or products and identifies gaps
- Shows improvement possibilities to achieve conformity
- Provides evidence for EU type approval

Your business benefits

- **Minimise risk** – by ensuring your processes, vehicles and components fulfil all software update requirements so that they receive type approval and can be sold on the market.
- **Minimise time to market** – by improving the efficiency of your software update and type approval processes.
- **Increase customer trust** – by working with TÜV SÜD's international network of technical experts and demonstrating your dedication to accurately assessing automotive software updates.

Why choose TÜV SÜD?

TÜV SÜD is an independent third-party service provider with over a century of automotive expertise. Our experts are actively involved in the latest cybersecurity and software update engineering standards development activities (ISO/SAE 21434 and ISO 24089), providing our clients with the most up-to-date knowledge of current and future requirements.

TÜV SÜD also participates in relevant UNECE committees, developing regulations on cybersecurity and software updates (UNECE WP.29 GRVA). Our systematic and holistic assessment reports enable you to design and verify safe and secure automotive components for connected and automated vehicles with update capabilities.

Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Through more than 25,000 employees across over 1,000 locations, the company adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

Related services

TÜV SÜD provides the following related services:

- Cybersecurity assessment for automotive components
- Automotive Cybersecurity Management System Assessment
- Cybersecurity assessment for connected and automated vehicles