



Learn how to implement ISO 24089

Introduction to the assembly and deployment of software update packages on both an organizational and project level.

Now that the electric automotive sector is maturing, consumers are demanding faster results, and manufacturers need to know whether their software update packages are compliant to ISO 24089, Road Vehicles – Software Update Engineering, as soon as possible. They also need to understand how regulation changes impact their products so they can take the necessary corrective actions to stay compliant.

kVA by UL Solutions' trainers are knowledgeable in the practical application of ISO 24089. We understand the engineering processes and analyses required to successfully implement consumer software updates. Software developers and automotive cybersecurity engineers would benefit from our training offering for this subject.

Our comprehensive course equips participants with an understanding of the critical building blocks of software update management systems, with a strong emphasis on applying ISO 24089 to successfully perform software update activities. The training leverages exercises and case studies to enhance learners' understanding of the principles behind a safer and more secure software update management system.

Why this course is needed

As the automotive industry continues its trajectory toward more software-centric and software-defined vehicles, the ability to perform software updates on vehicles and their components becomes more critical. Vehicle and component manufacturers can't afford costly and time-consuming recalls every time there is a need to perform critical software updates to enhance vehicle functionality and maintain safety and security. To this end, ISO 24089 defines the requirements to which vehicle and component manufacturers must adhere in order to perform software update engineering activities.

Training topics

- Overview, background and need for software updates
- Automotive software update mechanisms
 - Update via physical methods
 - Wireless/over-the-air (OTA) updates
 - The update framework (TUF)
 - Uptane – Securing Software Updates for Automobiles
- ISO 24089 deep dive
 - Organizational processes
 - Software update project processes
 - Infrastructure functions
 - Vehicle and vehicle system functions
 - Software update package assembly
 - Software update campaign
- Case study – Applying ISO 24089 principles and requirements in real life



Why choose kVA by UL Solutions?

We are a technical and management consulting group focused on functional safety, automotive cybersecurity and autonomy safety. Our experts apply safety principles and processes from leading industry standards and other methodologies to vehicle product development. Automotive leaders turn to us for training, consulting and safety expertise.

Our in-depth understanding of both the theoretical and practical aspects of functional safety and cybersecurity helps our customers build safer, more efficient products. Our experienced trainers understand the engineering processes and analyses required to successfully implement functional safety. Product development engineers, safety assurance personnel, quality and reliability professionals, and their managers attend our training events.

Expert trainers: kVA by UL Solutions training courses provide an in-depth overview of the methodologies used in the ISO 24089 standard. Our trainers are experienced automotive engineers who have designed and validated real-world automotive systems at major automotive companies worldwide.

Advisory support: Our services span autonomous vehicles, connectivity of electronic modules and infotainment, semiconductors, cybersecurity, and robotics.

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