



Learn automotive engineering best practices for ADS and ADAS

Introductory Training on Autonomous Vehicle Safety

Executive Overview Training Based on the ISO 21448:2022 Standard

This half-day training session introduces concepts of safety of the intended functionality (SOTIF) and management of the SOTIF life cycle for executive managers based on the state-of-the-art ISO 21448:2022 standard.

The goal is to apprise managers and responsible engineers of the implications of ISO 21448:2022 processes and work products for their company. The session begins with an introduction explaining why SOTIF is needed for complex systems such as advanced driver assistance systems (ADAS) and automated driving systems (ADS). The session draws comparisons of ISO 21448:2022 against functional safety and the ISO 26262 standard. It briefly explains how existing functional safety and systems engineering processes can be tailored for management of SOTIF activities. Following that is a high-level discussion of key concepts from the standard. This training is broken into two parts separated by a short break. Time is reserved at the end of the session for Q&A.

Training topics

- Management of SOTIF activities
- Four quadrant scenario categories
- Hazard identification and risk evaluation
- Acceptance criteria and validation targets
- Overview of analysis methods for triggering conditions and functional insufficiencies
- SOTIF verification and validation
- Functional modification and achievement of SOTIF
- Operation phase activities

Note: An optional two-hour workshop can be added to the session in case the team has implementation questions related to their organization's system or processes. A UL Certified Autonomy Safety eXpert will lead the workshop and answer the questions.



Objectives

Upon completion of this training, you will understand how to:

- Apply the fundamentals of SOTIF according to the ISO 21448:2022 framework
- Add SOTIF dimension to your safety culture
- Identify how ISO 26262 and ISO 21448:2022 complement each other
- Build or tailor SOTIF processes in your organization
- Begin development of SOTIF work products in your product development team
- Interact with your customers, suppliers, employees, and stakeholders on the main activities contained within the ISO 21448:2022 standard for SOTIF
- Assist your organization as it implements ISO 21448:2022 processes for safety management

Target audience

- Engineering managers
- Directors and VP-level executives
- Senior/principal engineering staff
- Engineers and developers
- Sales and purchasing personnel

Why choose kVA by UL Solutions?

Our team's expansive knowledge of the automotive product development life cycle sets us apart in functional safety and autonomous vehicle safety. From defining acceptance criteria and validation targets to specifying SOTIF modifications, the engineers at kVA by UL Solutions are leaders in applying the ISO 21448:2022 standard. The team has several publications in the areas of acceptance criteria definitions, scenario-based testing, and machine learning safety.

Expert trainers — kVA by UL Solutions training courses provide an in-depth overview of the methodologies used in the ISO 21448:2022. Our trainers are experienced automotive engineers who have designed and validated real-world automotive systems at major automotive companies worldwide.

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

For more information, email: kvasales@ul.com or visit kvausa.com.