

Transforming automotive safety and security

Accelerate time-to-market with functional safety designs and compliance services

Benefits

- Enable your company's processes and product safety management to be compliant with ISO 26262, ISO 21434 and ASPICE
- Prepare your organization for the autonomous market boom
- Increase your engineers' value by facilitating knowledge transfer of safety standards, requirement skills and analysis methods
- Develop product safety features for system loss analysis, hazard and risk assessments and threat analysis
- Speed time-to-market using Siemens co-development services for autonomous architecture or safe ADAS
- Advance your product technical ability using Siemens global services in AI and cybersecurity

Summary

Today's manufacturing challenge is to design and build products that meet higher safety and security standards so you can compete globally. These products are required to conform to many international standards and regulations.

With the fast-growing autonomous market, companies are desperate to continuously improve their safety and security knowledge and technology skills, which are needed to support new vehicle development and be competitive and compliant.

To satisfy your business needs in an environment of rapid technical advancements in automotive standards, you need a streamlined organization for processes, design and test data flow.

How would you change your organization? Would you like to address it using a complete transformation program or would you prefer to address individual safety challenges with a discrete project? Let us help you develop a viable path to success.

Siemens Engineering and Consulting Services, which is part of the Xcelerator™ portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software, delivers in-depth knowledge and experience in automotive standards and solutions that cover multiple implementation areas: Safety Of The Intended Functionality (SOTIF), lifecycle process, system loss analysis, safety analysis, hazard analysis and risk assessment (HARAs), cybersecurity, dependent failure analysis (DFA) and qualitative and quantitative analysis.

Siemens can perform a gap analysis to compare industry best-in-class, recommend areas of improvement and develop a tailored roadmap toward a future state that is both value-based and realistic.

Siemens can support your autonomous vehicle or advanced drive assistance systems (ADAS) needs with a co-development engagement in advance concept development, system hardware and software, cybersecurity and artificial intelligence (AI) development, from architecture to validation.

The following service offerings can be delivered individually or as a package:

- International Organization for Standardization (ISO) 26262, ISO 21434, Automotive Software Process Improvement Capability determination (ASPICE) gap analysis and process transformation
- ISO 26262 knowledge transfer
- Safety analysis seminars
- Architectural co-development
- AI workshops and cybersecurity services

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Gap analysis and process transformation

Siemens starts with a gap analysis service that reviews your organization for ISO 26262, ISO 21434, and ASPICE compliance.

Our process transformation provides a detailed evaluation of your organization, people and technology level, focusing on streamlining processes, data flow and work activities. Upon completion, your management can review the recommended safety transformation with Siemens experts, who can help you plan the required improvements and projects.

Safe and Secure organizations align to international standards and regulations

Global automotive transformation begins with knowledge transfer to your organization from senior management to engineers. Our training will be tailored to your organization to cover required compliance topics or provide one of our comprehensive certified professional functional safety engineering seminars.

Siemens professional training addresses needs at different project levels. The training sessions cover safety requirements writing techniques, different levels of understanding in ISO 26262, ISO 21434, developing system HARA with loss analysis, cybersecurity, SOTIF and more. We teach you how to derive the functional safety metrics with training in qualitative and quantitative analysis and dependent failure analysis. Siemens safe and secure training delivers a comprehensive list of skills that will help any organization achieve compliance.

Start with a project

Our global automotive transformation service is designed to help you implement a project and gain confidence using a co-development model. A project will be identified to support your existing or new product go to market faster. These projects also help you rapidly gain knowledge in the safe and secure development process.

Siemens supports all autonomous vehicle and ADAS development levels, including vehicle, system, hardware and software as well as cybersecurity and AI. Together we will define deliverables per phase with clear success factors and entry/exit criteria. If necessary, training plans are recommended for key experts to obtain the required knowledge and skill sets to support future projects.

Prerequisites

- The participation of senior management and key experts
- The customer shares primary processes and areas of challenge
- Commitment to automotive transformation, streamlining and the need for action

Duration

Typical safety task duration for each activity will depend on the scope of the project. The following are directional:

Seminars in ISO 26262 and ISO 21434:

- Four days each with one optional day for certified examination

Process gap analysis and benchmark:

- Approximately six to eight weeks

Process transformation or co-development:

- A few weeks off-site for study and analysis followed by a review of the plan face to face at customer location

Safe project co-development:

- A few weeks to several months, depending on the scope of the selected safe project

Deliverables

Onsite presentation of the deliverables typically include:

- The current state of your organizational environment that supports safe practices and processes
- An executive presentation highlighting details of value, cost, proposed changes and timelines
- Formal training material for all safe training modules
- Proposal for a safe project with specific, measurable results for product performance and efforts

For more information, please contact SAFETY.plm@siemens.com or the services manager in your country.

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