

# ISO 26262 Process Deployment Advisory Service

Model-Based Design for developing high-integrity embedded systems requires a well-defined process and rigorous verification and validation. Functional safety standards are emerging that describe the development and verification objectives and measures for simulation, modeling, code generation, and tool qualification. For automotive companies, the primary functional safety standard emerging is ISO 26262.

MathWorks consultants are already helping engineers worldwide make this transition and can help you migrate your existing process—whether based on manual methods or Model-Based Design—to a process framework for using Model-Based Design with ISO 26262 featuring the items listed below.

The ISO 26262 Process Deployment Advisory Service can educate you on the ISO 26262 standard, identify gaps in your current processes, provide a road map to a more optimized ISO 26262 process framework using Model-Based Design, and assist with deployment of that road map.

## This service will help you:

### Perform key activities advised by ISO 26262, including:

- Requirements traceability
- Requirements-based testing and coverage of models
- Model standards checking using Simulink® Model Advisor
- Reviews, static analysis, and inspection of software and model architecture
- Test case generation and design analysis using Simulink Design Verifier™
- Tool configuration and code generation including AUTOSAR using Embedded Coder™
- Software-in-the-loop and processor-in-the-loop testing of generated and compiled code
- Tool qualification using IEC Certification Kit (for ISO 26262)
- Generation of work products needed for ISO 26262 compliance

### Plan and execute the transition:

- Transform your company's development process while gaining efficiency improvements
- Identify and execute a phased approach to achieving the gains

### Educate your organization:

- Learn the fundamentals of the ISO 26262 standard and the value it brings
- Learn how to fully leverage Model-Based Design to maximize the benefits
- Become self-sufficient by building a center of expertise for Model-Based Design

## A typical deployment service follows four steps:

- 1. Familiarization with Existing Processes and Tools**  
Review your current embedded software development process, tools, application, determined ASIL level (A-D), and required Tool Confidence Levels (TCLs).
- 2. Gap Analysis**  
Based on the knowledge gained in step 1, perform a gap analysis to identify current challenges and process efficiency improvements, training, and changes necessary for an ISO 26262 process framework using Model-Based Design. Develop an actionable road map that includes a phased approach to achieve the recommended improvements.
- 3. Targeted Instruction**  
Provide instruction to fill the specific gaps identified in step 2. Discuss ISO 26262 fundamentals and the TÜV SÜD certified process framework for using Model-Based Design with ISO 26262. Use Model-Based Design and tool automation to perform key development activities, with specific tools and topics based on a list of prioritized needs.
- 4. Hands-On Deployment Support**  
Apply the knowledge gained in step 3 to a specific project. Assistance can be provided in a wide range of areas including modeling, simulation, code generation, verification, validation, and certification. Certification and compliance assistance includes tasks such as preparing customized ISO 26262 method tables for ISO-compliant workflow documentation, or generating ISO 26262 tool qualification artifacts by tailoring the IEC Certification Kit documentation templates.

The ISO 26262 Process Deployment Advisory Service is conducted by senior MathWorks consultants who are experienced in organization-wide adoption and deployment of Model-Based Design. MathWorks clients include leading companies from the aerospace, defense, automotive, and industrial automation industries. To discuss your specific requirements, contact MathWorks Consulting Services.