

# ISO 26262 Functional Safety for Autonomous Driving

by [Nick Clark](#) | Published April 25, 2026

## ISO 26262 Frame

ISO 26262 (Road vehicles — Functional safety) is the dominant automotive functional-safety standard internationally. ASIL classification (A through D, with D the most stringent) drives structural requirements on hardware fault metrics, software development rigor, and integrated-system safety analysis.

L3+ autonomous-driving classification typically pushes critical functions to ASIL-D, which requires structurally-distinct safety mechanisms, diagnostic coverage above 99%, and demonstrably bounded latent fault rates.

## Where the Standard Touches Architecture

ASIL-D safety analysis is structural rather than procedural. Hazard analysis and risk assessment (HARA), Safety Goals derivation, Functional Safety Concept, and Technical Safety Concept all generate architectural requirements that must be visible in the implementation.

Stage-gated commitment, reversibility classification, post-actuation verification, and harm-minimization deviation are architectural primitives that produce structurally-supported ASIL-D compliance evidence.

## **Architectural Mapping**

Each ASIL-D-relevant actuation admits through composite admissibility (functional-safety, cybersecurity, regulatory). Reversibility classification supports HARA analysis structurally. Stage-gated commitment supports the Functional Safety Concept's mode-decomposition requirements.

## **Standard Evolution and Architecture**

ISO 26262's emerging revision and emerging ISO PAS 21448 SOTIF (Safety Of The Intended Functionality) integration both push toward structurally-supported safety architecture. Operators that adopt the architectural substrate gain compliance-evidence advantage.