

CERTIFICATION BODY EXPERIENCE · TÜV RHEINLAND

How a T2-qualified toolset makes certification assessment more efficient and focused.

When TÜV Rheinland assessed the safety case for Amazon's Proteus autonomous mobile robot, the core technical review stayed focused.

Because the evidence arrived standardized and structurally traceable, assessors could concentrate their scrutiny where it mattered. **This is what the review process can look like when the underlying evidence is consistent and connected from the start.**

AT A GLANCE	
INDUSTRY	Advanced Robotics / Autonomous Mobile Robots
APPLICATION	Certification assessment of the technical file for an AI-driven autonomous system
STANDARDS	IEC 61508-3, with ISO 13849 within the assessed scope. ASAP tools T2-qualified by TÜV Rheinland.
SOLUTIONS	ASAP Platform (T2-qualified authoring, traceability, and reporting) with the Validation module (auto-generated, assessor-ready reports)
OUTCOME	Standardized, traceable evidence supported an efficient assessment. The Safety Requirements Specification and Safety Concept were reviewed in detail, and software source-code reports were spot-checked.

Standardized evidence One connected, traceable technical file across the program	Focused review Safety specifications reviewed in detail, source-code reports spot-checked	6 wks Typical review cycle for a program of comparable complexity	T2 ASAP tools qualified under IEC 61508-3 by TÜV Rheinland
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The assessor's problem

Certification bodies do not slow programs down out of caution for its own sake. They slow down because the evidence forces them to.

A typical technical file for a complex autonomous system arrives as a patchwork: spreadsheets, Word documents, exports from legacy safety tools, and manually assembled traceability matrices. Before an assessor can evaluate whether the system is safe, they have to evaluate whether the documentation is trustworthy. That means auditing the toolchain that produced it, tracing requirements to their evidence by hand, and flagging every gap for follow-up.

Traceability gaps are a leading cause of assessor follow-up questions. Each round of questions adds time. For AI-driven systems, where safety guarantees are probabilistic rather than deterministic, the review burden compounds further.

The result: a six-week review cycle is standard, and multiple rounds of questions are *common*.

What changed with the ASAP Platform

For the Proteus program, the technical file was authored, maintained, and generated inside the ASAP Platform, the functional safety platform within Fennec's Advanced Safety Acceleration Program. Three things shaped the assessment.

01 The tools were already trusted

Fennec's ASAP tools are qualified by TÜV Rheinland as Tool Class 2 (T2) offline support tools under IEC 61508-3:2010, Clause 7.4.4. Assessors did not have to qualify the tools that produced the evidence before evaluating the evidence itself. That layer of work was settled before the file arrived.

02 Traceability was structural, not assembled

ASAP maintains live connections between hazards, safety requirements, and test evidence as a property of the system. The gaps that normally trigger rounds of follow-up were prevented at the source rather than caught in review.

03 Reports arrived in a standardized, verified format

Fennec's Validation module documented safety data throughout the program and generated assessor-ready reports as evidence accumulated. Assessors received a consistent evidence package in a format they had built familiarity with over the course of the program.

A different kind of review

Because the ASAP Platform's connected architecture let TÜV Rheinland build familiarity with the outputs throughout the program, the documents that reached final review were already standardized and traceable. Standardized evidence does not remove the assessor's judgment. It makes the process more efficient: less time spent reconstructing how the evidence was produced, more time on the substance of the safety argument.

The depth of review varied by document, as it should. TÜV assessors reviewed the Safety Requirements Specification and the Safety Concept in detail, line by line. For the software source-code reports, the standardized format supported spot-checking. As on any program of this scope, the assessment included working meetings and an open-items list. The difference was that the consistent structure of the evidence kept the review focused and moving rather than stalled on reconstructing traceability.

Why this matters for certification bodies and NRTLs

Assessor time is a scarce resource, and the backlog of autonomous systems awaiting certification is growing. When evidence arrives standardized and structurally traceable from a qualified toolset, assessors spend their expertise where it matters: on judgment calls, edge cases, and the substance of the safety argument, not on reconstructing traceability by hand.

A focused, well-structured assessment is not only faster for the manufacturer. It is a cleaner, more defensible assessment for the certification body, with a complete, machine-maintained audit trail behind every conclusion.

Key standards & qualifications: IEC 61508-3 T2-qualified · ISO 13849 within the assessed scope · TÜV Rheinland

QUALIFICATION REFERENCE

Fennec's ASAP tools are qualified by TÜV Rheinland Industrie Service GmbH (Cologne) as Tool Class 2 (T2) offline support tools under IEC 61508-3:2010, Clause 7.4.4, each at a specific assessed version: Hazard Analysis and Safety Concepts, report 968/INS 870.00/24 (2024-09-17); Validation, report 968/INS 870.01/25 (2025-08-26, v0.4.129); Requirements and Systems Design, report 968/INS 870.02/25 (2025-12-08, UI 0.1.201 / UI 0.0.128); Reliability, report 968/INS 870.05/26 (2026, UI 0.5.181). Qualification applies within the assessed scope. Correct selection and application of the tools remains the responsibility of the user.