

Independent Safety Assessment of Railway Systems

Reduce time-to-market and development risks of safety-critical
products and solutions

criticalsoftware.com
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We are CMMI Maturity Level 5 rated.
For a list of our certifications & standards
visit our website.



Independent Safety Assessment of Railway Systems

SAFETY ASSESSMENT SERVICES FOR RAILWAY EMBEDDED SYSTEMS

The most common method of demonstrating the safety of railway systems (such as locomotive control systems and track signaling systems) is to carry out an Independent Safety Assessment (ISA).

ISA complies with the functional safety requirements of IEC 61508 and the specific railway standards EN 50126, EN 50128 and EN 50129.

OUR SERVICES

We offer a full spectrum of ISA-related activities to the railway industry. We assume responsibility for all the deliverables we commit to.

Our engineers are highly experienced in all relevant methods in the railway ISA domain.

We deliver:

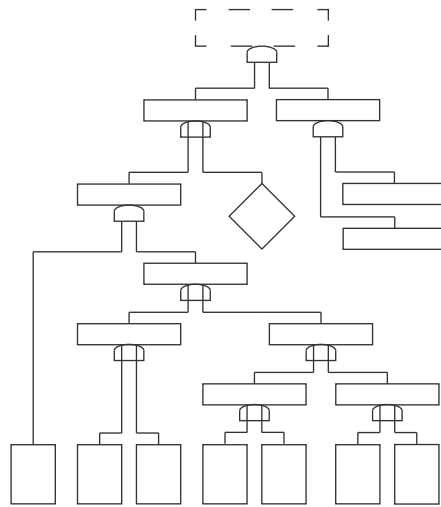
- Functional safety analysis services.
- Reliability, Maintainability, Availability and Safety (RAMS) tailored services.
- Independent verification & validation services, including system testing up to SIL-4.

We deliver complete ISA services tailored to fit the needs of different systems. In the RAMS domain we determine SIL, RAMS

analysis and RAMS predictions through RBD, FTAs, FME(C)As, HA/HAZOPs, HSIA and HDA (among other system-specific activities).

We have developed more than 2,000,000 high-integrity lines of source code and we have wide experience in developing safety-critical embedded real-time railway applications and implementation according to EN 5012x standards.

FAULT TREE ANALYSIS



BENEFITS

- More than 10 years experience in ISA and RAMS safety-critical applications.
- Close team integration: deployment and integration of Critical Software engineers with clients' teams and on clients' premises, if needed.

- Execution of ISA-related activities, allowing clients' engineers to concentrate on creating value and focus on core development activities.
- CMMI level 5 mature processes: Critical Software operates to stringent requirements, using Key Performance Indicators.
- Optimisation for efficient execution and effective delivery.
- Risk-sharing: clients' success is Critical Software's success.
- Experienced RAMS engineers reduce the risks associated with high integrity applications.

ABOUT CRITICAL SOFTWARE

Critical Software provides systems and software services for safety, mission and business-critical applications. We work closely with our clients, helping them to meet the most demanding standards for performance and reliability.

We were founded in 1998, with NASA our very first client. Today, we work across many international industries and have offices across the globe.