

IQZ

Institut für Qualitäts- und Zuverlässigkeitsmanagement GmbH

We cut your corporate risks



Your customer demands an extended warranty period? You are facing challenges with respect to functional safety or warranty management? You need safety and reliability analyses? If so, IQZ is your competent partner.

The IQZ is one of the leading consultancy companies when it comes to the integrated implementation of safety and reliability beyond a product's life-cycle. Our experts not only come up with the necessary processes with your help but also fill these with the latest state-of-the-art methods. Our spectrum of clients ranges from SMEs in mechanical engineering through to DAX-30 companies from the aerospace industry.



Ihr Qualitäts-Zulieferer.

Institut für Qualitäts- und Zuverlässigkeitsmanagement GmbH

www.iqz-wuppertal.de

Our services / your benefits

- » Process advice and organisation
- » State-of-the-art portfolio of methods
- » Experience in interdisciplinary and international projects
- » Close cooperation with universities (e.g. Bergische Universität Wuppertal, HAW Hamburg, HWR Berlin)
- » Broad-based network and involvement in numerous committees (VDI, VDA, COG Deutschland, Maschinenbaunetzwerk Bergisch Land)

Priority fields

- » Quality management
- » Reliability management
- » Functional safety
- » Warranty management
- » Risk management
- » Risk simulation
- » Spare parts management
- » Site-Specific risk assessment
- » Machine reliability



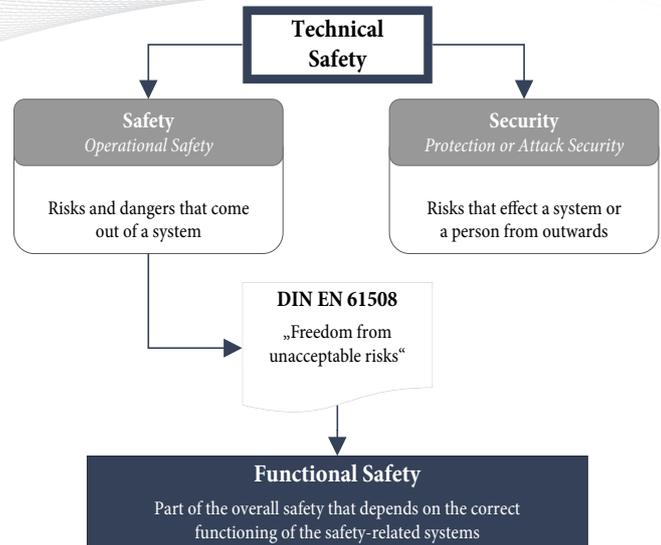
FUNCTIONAL SAFETY

*What does "functional safety" mean for technical products and the associated life-cycles?
How can I integrate functional safety in my corporate processes? What demands are made?*

Functional safety is regarded as that part of the overall safety of a technical system that depends on the correct and perfect functioning of the safety-related system.

The field of functional safety generally covers the requirements of a component or system to perform its safety-related task correctly in accordance with the risk to be covered. This also has to take place in the event of internal errors or failures – or a correspondingly defined safe status has to be assumed.

The complex of functional safety has become increasingly important in all technical fields over the past years and decades.



A basic safety standard exists for the field of functional safety, DIN EN 61508, which deals with the functional safety of safety-related electrical, electronic and programmable electronic systems. Its origins lie in plant engineering and in the process industry. The term "safety-related" hereby applies for every programmed system in which an error (on its own or in combination with other errors) can lead to personal injury or death, to devastating damage to the environment or the destruction of material assets.

The introduction of DIN EN 61508 marked the establishment of an interdisciplinary guideline for all safety-related systems. Sector-specific derivatives of the meta-standard have in the meantime been derived for several sectors. The IQZ has many years of experience in numerous projects for all safety integrity levels, particularly in the automotive sector.

<u>Medical devices</u> DIN EN 60601	<u>Nuclear engineering</u> DIN EN 61513
<u>Railway applications</u> DIN EN 5012x	<u>Road vehicles</u> ISO 26262
<u>Process industry</u> DIN EN 61511	<u>Electric drives</u> DIN EN 61800
DIN EN 61508 Meta-standard	
<u>Agricultural machinery</u> ISO 25119	<u>Medical devices software</u> DIN EN 62304
<u>Manufacturing industry, sector machine safety</u> DIN EN 62061 / DIN EN ISO 13849	<u>Electrical equipment of furnaces</u> DIN EN 50156

Our services

- » Organisation of workshop and trainings, generalised (DIN EN 61508) and for specific branches (e.g. ISO 26262 or ISO 13849)
- » Process organisation and integration in existing development processes
- » Drafting of important documents (safety plan, proof of safety, DIA etc.)
- » Performance of analytical methods relevant for functional safety

Portfolio of methods

- » FMEA
- » FMEDA
- » Fault tree analysis
- » Reliability block diagrams
- » Markov models
- » Hazard analysis and risk assessment