

## Functional Safety Lifecycle Services

### SAFE AND SECURE

#### **FUNCTIONAL SAFETY SERVICES**

The effective implementation of functional safety standards, practises and processes is increasingly important in ensuring that Safety Instrumented Systems are appropriately specified, designed installed and maintained. IEC 61508 and the process sector specific functional safety standard IEC 61511 promote the concept of the safety lifecycle and experience shows that engaging experts early in the design process has a positive impact on projects.

#### **EXPERTS THROUGH EXPERIENCE AND CERTIFICATION**

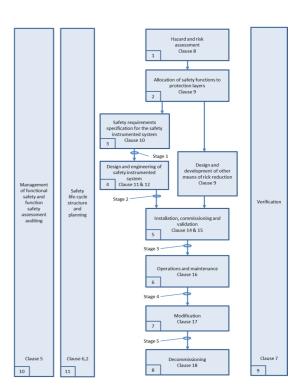
**SELLA CONTROLS** have over 40 years' experience in the specification, design, installation and modification of safety critical control systems. Our experience spans multiple industry sectors including Oil and Gas, Petro-chemical and Nuclear. We can support you by providing expert led Functional Safety services across the entire lifecycle including:

- Functional Safety Management
- HAZOP / CHAZOP / FMEA Facilitation
- SIL Determination (LOPA, Risk Graph FTA)
- Safety Requirements Specification
- Full Loop SIL Verification
- Proof Test Procedure Development
- HIPPS Dossier Management
- Independent Functional Safety Assessment

Our involvement gives you access to our combined functional safety knowledge, competency and our TÜV Rheinland Certified Functional Safety Expert (FS-Expert, SIS, #260).

Our history and pedigree make **SELLA CONTROLS** the logical choice for all your Functional Safety needs.







# Functional Safety Lifecycle Services

LIFECYCLE PHASE AND SERVICES	
Phase 1 – Hazard and risk Assessment	HAZOP / HAZID Facilitation CHAZOP Facilitation Failure Mode and Effect Analysis SIL determination Study List Development
Phase 2- Allocation of Safety Functions	<ul> <li>SIL determination studies using the following methods:</li> <li>Risk Graph Calibration and Facilitation</li> <li>Layers of Protection Analysis</li> <li>Fault Tree Analysis</li> </ul>
Phase 3- Safety Requirements Specification	Safety Requirements Specification (SRS) Development Software SRS Development User Requirements specification Development
Phase 4 – SIS Realisation	SIS Design and Build Full Loop SIL Verification Formal Prior Use Assessments HIPPS Dossier Development
Phase 5 – Operation and Maintenance	Proof Test Procedure Development Periodic evaluation of SIL targets Periodic evaluation of achieved SIL
Functional Safety Management	Corporate FSM development Full Safety Management Plan Development Competency Framework Development Functional Safety Document Templates
Functional Safety Assessments:	Stage 1-4 FSAs via our independent TUV Rheinland certified Functional Safety Expert.