

Corporate Overview

Kenexis is a leading process safety consulting engineering firm that offers specialized technical safety services for both new and existing facilities. We provide comprehensive solutions for industries managing risks associated with chemicals and stored energy, including performance-based fire and gas mapping and detailed risk analysis.

Our expertise lies in assessing the risks of processes and materials under control or containment. We quantify hazards, establish risk reduction targets, and ensure that these targets are met through tailored solutions. Using a risk-based approach, we design and implement equipment, maintenance, and testing procedures that align with the specific needs of each application, balancing safety with cost-effectiveness.

In addition to our consulting services, we offer a full range of training, engineering support, and technical software designed to enhance the capabilities of process safety departments.

Founded in 2004, Kenexis is a privately held company headquartered in Columbus, Ohio, with a satellite office in Houston, TX.

Core Engineering Services

Kenexis offers a range of preventative services, both locally and remotely, to facilitate various hazard assessments, including HAZID, HAZOP, LOPA, FMEA, QRA, SIL Verification, and Functional Safety Assessments. We also specialize in developing Safety Requirements Specifications, complete with all necessary documentation, Test Plans, and Testing Optimization.

Process Hazards Analysis (PHA)

- HAZOP (Hazard and Operability Studies)
- LOPA (Layer of Protection Analysis)
- Hazard Identification (HAZID) / Preliminary Hazards Assessment
- Bowtie Analysis
- Quantitative Risk Assessments (QRA)

Safety Instrumented System Lifecycle Services

- Safety Instrumented Function (SIF) Definition and Development
- Safety Integrity Level (SIL) Target Selection
- Conceptual Design Development / SIL Verification Calculations
- Safety Requirements Specification Development



Corporate Overview

- SIS Test Plan Development
- SIL Verification & Validation – Site Acceptance Testing
- Functional Safety Assessments

Fire & Gas Mapping

- Identification of Equipment and Hazards Requiring Detection
- Risk Analysis (Grading) for Coverage Performance Targets
- Gas Dispersion Modeling
- Computational Fluid Dynamics
- Fire and Gas Detection Coverage Assessment
- Detection Technology Assessment
- Fire and Gas Detector Layout Development
- Fire and Gas System Requirements Specifications

Focused Quantitative Risk Analysis

- Fault Tree Analysis
- Event Tree Analysis
- Human Reliability Assessment
- Gas Dispersion Modeling
- Explosion Modeling
- Fire Modeling
- Quantitative Risk Reduction Strategies

Training

Kenexis offers flexible process safety training options, including recorded online sessions with testing, live online instructor-led classes, and in-person training either at your site or ours.

Our training programs cover key process safety engineering topics such as:

- Process Hazards Analysis (PHA)
- Layer of Protection Analysis (LOPA)
- Safety Instrumented System Design
- Fire & Gas System Design



Corporate Overview

Process Safety Software

The Kenexis Integrated Safety Suite (KISS) is a collection of software tools designed for process industry safety professionals to assess plant risks and design engineered safeguards like fire and gas systems and safety instrumented systems. It includes Open-PHA[®] for HAZOP, Layer of Protection Analysis, and other hazard and risk assessment studies. The suite also features tools for detailed analysis and design tasks, including fault tree analysis, bowtie analysis, auditing, safety instrument system lifecycle management, and fire and gas mapping.

The Kenexis Integrated Safety Suite (KISS) includes:

- *Fire & Gas Mapping*
Effigy™ follows the ISA TR84.00.07 guidance on evaluating fire, combustible gas, and toxic gas system effectiveness.
- *SIS Lifecycle Management*
Vertigo™ is designed for ISA/IEC 61511 SIS Lifecycle Management and SIL Verification.
- *Fault-tree Analysis*
Arbor™ is an intuitive tool for developing complex system reliability models for fault-tree analysis.
- *PHA, HAZOP, & LOPA*
Open-PHA[®] facilitates HAZOP, LOPA, and Security PHA Review studies. The desktop version is free, and the cloud version provides enhanced features.
- *Validation & Auditing*
Open-Audit™ supports OSHA 1910.119 Process Safety Management-based audits.

Newsletter

Stay informed by subscribing to our monthly Process Safety newsletter. Each issue features an article on process safety and a one-hour webinar announcement on the same topic. We respect your privacy and do not share subscriber information with outside parties.

Research

Kenexis continues to collaborate with organizations and universities to advance research aimed at reducing the risks associated with chemicals and stored energy, contributing to the growing awareness and safety in the industry.

