



Digital Risk Management

Process Safety Monitoring Solution

Accelerate Your Transition to a Digitalized Process Safety Lifecycle

Most organizations recognize IEC 61511/ISA-84 as the global best practice for functional safety management. The challenge is in finding the most effective way to fully comply with these standards over the operation and maintenance phases, which comprise 99% of the asset lifecycle. Traditionally, the front-end engineering work from risk assessment to SIS design has been document-based using one-seat calculators and other one-off, disparate solutions that make it nearly impossible to leverage while the plant is running.

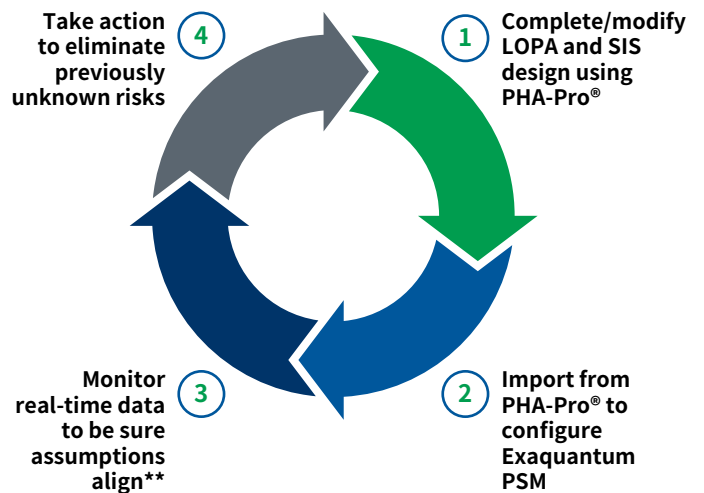
If Sphera PHA-Pro® software is being used for the Process Hazard Analysis (PHA) and the Layer of Protection Analysis (LOPA), then the initial investment for the safety digital twin has been made. Yokogawa and Sphera have teamed up to allow PHA-Pro® to directly configure Yokogawa's Exaquantum Process Safety Monitoring (PSM) environment. This forms the foundation for the Functional Safety Management Plan in the LOPA, saving significant configuration and training costs.

IEC 61511 Edition 2 – Does your business comply with this key new requirement?

Clause 16.2.9:

Discrepancies between expected behavior and actual behavior of the SIS shall be analyzed and, where necessary, modifications made such that the required safety is maintained.

4 Steps to Digital Risk Management



API RP-754 Tier 3 & 4 Performance Indicators

- Demand rate
- Initiating cause association
- Spurious trip rate
- On-time testing
- Process safety time
- Device failures
- Time in bypass
- Bypass counts

** The key assumptions to monitor for effective risk management are identified in the LOPA and set the basis for the SIS design. The process data is pulled from the process historian and maintenance management systems. When real-time process data no longer aligns with the LOPA, action can be taken to eliminate risks to the business.

Benefits of Yokogawa's Digital Risk Management



Realize rapid ROI through integrated safety monitoring



Minimize resources to configure and train



Eliminate risks from ad hoc, unsustainable implementations



Sustain Functional Safety Management over the full asset lifecycle



No need to reinvent document management, MoC and other work processes



Integrate with any DCS and SIS (supplier agnostic)

Expected Behavior

Actual Behavior

Risk Mitigation



 sphera™

YOKOGAWA 

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