GENERAL FACTSHEET

ABB SafetyInsight™ - Sustain and improve

Managing safety systems for reliable operations

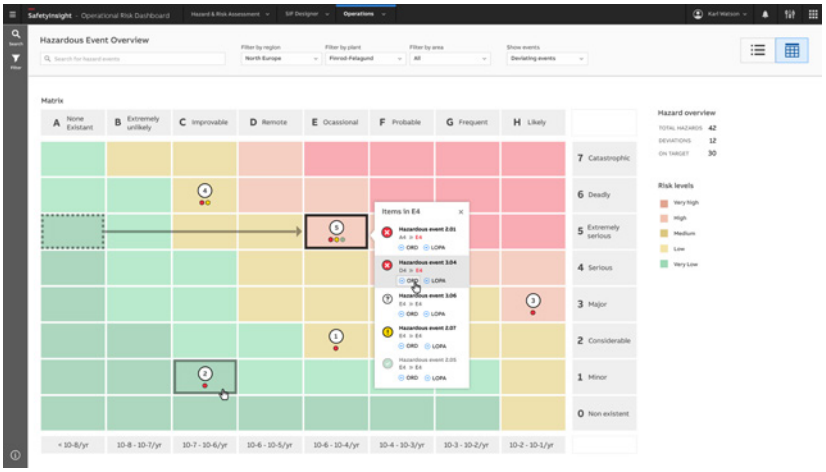


ABB SafetyInsight™ helps you better manage your safety systems throughout the life of your facilities. It utilizes early life cycle information to deliver applications that help increase productivity and reduce maintenance costs while also providing health status and decision support to ensure safety systems remain effective.

Safety Instrumented Systems (SIS) are found in almost all oil, gas and chemical facilities to protect against hazards to personnel, the environment and equipment. Before a plant can secure a license to operate, it must demonstrate compliance to SIS best practices, generally considered as following IEC 61511. This standard requires the risk of hazardous events to be reduced to tolerable levels, and any required SIS to be designed, operated and maintained to ensure the necessary level of risk reduction is continuously achieved.

SafetyInsight™ Sustain and Improve modules are a suite of Operation and Maintenance (O&M) applications that enables you to sustain safe and reliable operations and gather contextualized information to identify safety improvements and demonstrate compliance with the associated O&M clauses of IEC 61511.

Benefits

Making our customer life's easier

- Provides views to quickly:
  - Identify when operating at increased operational risk
  - Ensure operational risks are properly managed when safety / protective systems are required to be taken out of service or are in a failed state
  - Ensure safety functions maintain effectiveness throughout the life of your facility
- Automatically generates reports following a shutdown to eliminate the need to create reports manually
- Saves significant time and effort by automatically capturing actual SIF performance data for comparing against SIF design assumptions, as required by IEC 61511 (Ed 2.0)

Improving productivity

- Provides on-shore and off-shore access to the auto-generated reports minimizing lost production time by enabling faster start-up following an unplanned shutdown
- Provide views that highlight periods when operating at high risk of a production outage, enabling prioritized actions to be taken to avoid unplanned outages

Reducing maintenance

- Reduces planned maintenance efforts through the ability to reschedule proof tests using the documented evidence within the auto-generated reports
- Reduces Turn-Around (TAR) duration by using actual performance data to remove TAR activities

Features

Operational risk dashboard

- Provides a dynamic visualization of barrier health using a Bow-Tie style representation for each hazardous event.
- Displays all associated operational risks (e.g. safety, environmental, asset damage, production downtime) in a dynamic list or risk matrix
- Import tool for existing risk assessments

Demand reporting

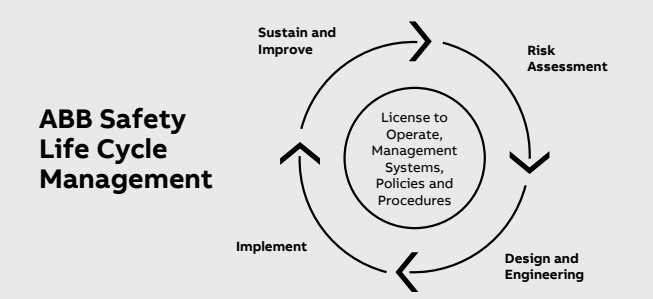
- Automatically tracks, records and reports events when a shutdown occurs compares logged events to expected shutdown behaviors and verifies that valves and other equipment went into the safe position
- Provides the initial cause of the shutdown, as well as all other associated causes and effects
- Automatically generates reports to help validate design assumptions and identify opportunities to reduce demands on safety systems

Bypass management

- Provides current and historical lists of bypassed / overridden (inhibited / blocked) equipment, including suppressed alarms, enabling historical total bypass durations to be determined
- Provides views to enhance the override risk assessment prior to and during equipment being taken out of service
- Compares approved and actual bypass durations and provides notification when exceeded

SIF Performance

- Captures actual instrumentation and equipment reliability data, with the ability to manually add proof tests and other demands not captured within operating and maintenance systems
- Collates actual demand rate data and compares against the design demand rate
- Can interface with Computerized Maintenance Management Systems (CMMS) to automatically incorporate maintenance activities recorded within systems such as SAP



Above: ABB SafetyInsight™ are the intelligent applications associated with ABB Safety Lifecycle Management solution.

Part of ABB Safety Life Cycle Management

ABB Safety Lifecycle Management provides intelligent applications, services and technology to ensure our customers can manage the risks associated with operating high hazard processes. ABB SafetyInsight™ are the software applications within ABB Safety Lifecycle Management.

The risk assessment and SIF designer modules are the next generation of ABB's Trip Requirements and Availability Calculator (TRAC), which has been used in the process industry since 2002. Integration of these engineering tools with ABB SafetyInsight™ sustain and improve modules provides the digital platform to enable the use of the engineering data to contextualize the vast amount of data being generated by Industrie 4.0 / Industrial Internet of Things (IIoT). These Actionable Insights provide decision support to operation and maintenance staff, to help ensure safety systems remain effective and provide the means to efficiently 'close the loop' to optimize the cost of safety.

Why choose ABB?

- ABB's is a world leader in providing process safety services and our operational heritage allows us to understand the practicalities of operational environments so we can offer pragmatic solutions
- ABB provides you with applications and services that support a full safety life cycle management approach, with a focus on operation and maintenance activities that reduce costs
- ABB has more than 20 global, in-country, TÜV-certified safety execution centers - more than any other company in the industry
- SIL 3 capable systems, processes and competency assurance for SIS

ABB Limited
Daresbury Park, Daresbury
Warrington, Cheshire
WA4 4BT United Kingdom
Phone: +44 (0)1925 741 111
E-Mail: contact@gb.abb.com

abb.com

Process safety/PRS284a/03/20