

Sphera Process Safety Report Shows Safety-Related Challenges Continue to Intensify, AI Emerges as a Pivotal Enabler

In its 10th edition this year, Sphera's 2025 Process Safety Report reveals process safety must now evolve from visibility to resilience

CHICAGO, IL, UNITED STATES, November 4, 2025 /EINPresswire.com/ -- A new report by [Sphera](#)[®],

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Paul Marushka, Sphera's CEO and president

a leading provider of integrated sustainability and operational risk management software, data and consulting services, highlights the challenges companies are facing in 2025, including aging facilities, a less-experienced workforce and rising operational pressures.

Since Sphera first [launched](#) the Process Safety Report in 2016, a decade of benchmarking has shown steady technological progress, but limited impact where it matters most: reducing the number of incidents. During this time, the market has seen shifts to cloud-based solutions and away from single-purpose applications towards connected platforms.

The 10th edition of the report, which includes insights gathered from 300 senior process safety professionals across the United Kingdom, United States, Canada, Germany, Australia and New Zealand, outlines the strides process safety technology has made in the past decade. Process safety management has matured, with many organizations having reduced their loss-of-containment hazards, and additional growth is expected as more companies prioritize safety.

“Today, the process safety industry stands at a crossroads. Aging infrastructure, workforce attrition and increasing operational complexity are pushing traditional safety solutions to their limits,” said Paul Marushka, Sphera's CEO and president. “Our newest Process Safety Report shows that leadership in this area is more critical than ever. Leaders must move beyond endorsing safety initiatives to owning them, ensuring that digital systems and AI tools are being carefully embedded to support operational decision-making. Applied with discipline and oversight, AI can provide predictive insight, reduce data overload and play a pivotal role in

overcoming these challenges.”

Key takeaways from the report include:

Digital adoption is expanding: 64% of the respondents say technology is already helping their business today, 33% see strong future potential. 47% are already using live risk data.

AI adoption is accelerating: 42% of the respondents are using or planning to use AI, with 24% improving safety programs and 29% connecting risk data across assets. Yet one in three organizations still lack in-house AI expertise.

Third-party partnerships drive maturity: 55% of organizations use third-party solution providers for process safety management. These companies are also more advanced by using AI (52% compared to 29% managing safety in-house) and report greater confidence in risk management.

Confidence in major accident hazard exposure is decreasing: The share of organizations who are “very confident” about reducing their exposure dropped from 35% in 2024 to 27% in 2025, while 9% still report no confidence at all.

The report notes that while basic risk assessment software is widespread, systems that can predict major accident hazards, connect data across assets and proactively control risks have not yet been universally adopted. Integrating AI in process safety management is the next frontier. While AI use for standalone process safety management improvements (24%) is growing, connecting risk data across assets — where siloed data has traditionally been a barrier — is a bigger opportunity.

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About the Process Safety Survey

Since 2016, the Sphera Process Safety Report has provided a telling snapshot of the state of process safety and operational risk management. The 2025 report presents comprehensive insights gathered from 300 senior process safety professionals across the United Kingdom, United States, Canada, Germany, Australia, and New Zealand. Participants represent



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organizations with annual turnover exceeding \$500 million. The majority of respondents (197) come from asset-intensive sectors such as chemicals, food and machinery manufacturing, mining, oil and gas, construction, and utilities— where process safety risks are most pronounced.

About Sphera

Sphera is the leading provider of integrated sustainability and operational risk management software, data and consulting services focusing on Environment, Health, Safety & Sustainability (EHS&S), Process Safety, Product Stewardship and Supply Chain Risk Management. For more than 30 years, we have served 8,500 customers and a million-plus users in 100 countries to help companies keep their people safe, their products sustainable and their operations productive. Learn more about Sphera at <https://sphera.com/>. Follow Sphera on [LinkedIn](#).

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