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Evolution of Process Safety Dashboard

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ABSTRACT

In March 2025, we paused to remember the 15 lives lost and 180 seriously injured in the BP Texas City explosion. This significant incident changed the course of Process Safety globally, and led to the creation of the American Petroleum Institute's Recommended Practice (RP) 754 for Process Safety Performance Indicators.

Today, the industry faces unprecedented challenges with the overwhelming amount of data, digital tools, platforms, and AI. It is critical for Process Safety leaders to be grounded in the foundations of good performance management, creating metrics that matter and taking action to deliver meaningful risk reduction.

This presentation covers the journey of Origin's Process Safety Dashboard, created in 2015. This tool was designed to collate over 100 leading metrics across eight Risk Control areas to improve Process Safety Performance. In 2020, the vendor ceased support of the original dashboard, prompting Origin to build a new product leveraging years of experience and modern software architecture. This presentation details the journey from implementing the original dashboard to addressing the challenges in developing the new tool.

Additionally, a case study will demonstrate how metrics from the dashboard prompted a review and change in the underlying Management of Change business process. Attendees will gain insights into the role of governance in driving strategic initiatives for continuous improvement.

KEY WORDS

Process Safety, Process Safety KPI, Process Safety Dashboard, Management of Change, Metrics that Matter, KPI into Action, New Technologies, Continuous Improvement.

BIOGRAPHY

Nicole Shambrook is a Chartered Chemical Engineer with IChemE and has 18 years of experience leading Process Safety across Petroleum Refining at BP and Ampol, Ammonia Manufacturing at Incitec Pivot, and CSG and Power Generation at Origin Energy. Nicole particularly enjoys being on-site and engaging with front-line leaders and operators. She is passionate about ensuring the industry learns from Process Safety Incidents to maintain a strong industry presence in Australia. Nicole is focused on making Process Safety practical and translating themes from leading and lagging indicators into meaningful actions to improve Process Safety outcomes 1.

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