

Your Controls Exist **on Paper.**
Do They Hold Under **Pressure?**



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Protect. Transform. Sustain.



Energy organisations invest heavily in PSM (Process Safety Management) — yet catastrophic events keep occurring. The problem is not missing controls. It is the **gap between policy and practice** when conditions are abnormal, systems are degraded, and pressure is highest.

32

worker **fatalities** reported by IOGP members in 2024 — across 21 separate incidents

+5

more deaths than 2023 — despite sustained PSM investment and improving personal safety rates

Source: IOGP Safety Performance Indicators – 2024 Data, International Association of Oil & Gas Producers. Available at: www.iogp.org/bookstore/product/iogp-safety-performance-indicators-2024-data/

3,700+

alarms in ~12 hours at BP-Husky Toledo

Source: U.S. Chemical Safety and Hazard Investigation Board (CSB), Final Report: BP-Husky Toledo Refinery Fire, June 2024. Available at: <https://www.csb.gov/us-chemical-safety-board-issues-final-report-into-fatal-2022-fire-at-bp-husky-refinery-near-toledo-ohio/>



THE ROOT PROBLEM

1 WHY PSM FAILS IN PRACTICE

1 Limited Leader Visibility

Senior forums focus on lagging metrics and audit completions — not real-time control health. Impairments are normalised before leaders see them.

2 Diffused Accountability

When conditions degrade, “no one owns the call.” Escalation defaults to schedule pressure — not risk ownership.

3 Values Tested Under Pressure

Production and cost pressure quietly redefines what is “tolerable.” Bypasses persist. Deferrals become backlogs.

THE REQUIRED SHIFT

2 FROM COMPLIANCE TO EVIDENCE

Strengthening process safety requires a deliberate move away from activity completion toward demonstrated control effectiveness—especially in the conditions where catastrophic risk accumulates most. Our framework focuses on four levers to control risk in daily operations:

- **Governance & Operating Model:** Clear decision rights and escalation pathways to drive the right choices.
- **Standards, Process & Systems:** Practical requirements that define what “effective” looks like in the field.
- **Organisation & Capabilities:** Line ownership and coaching so crews can identify degraded controls and act early.
- **Leadership & Culture:** Visible behaviors that reinforce challenge and risk-based decisions under pressure.



FIELD EVIDENCE

3 TWO REAL ORGANISATIONS

CASE 01

LARGE PROCESS FACILITY

Strong audits, high scores — yet a latent catastrophic scenario with offsite impact went undetected

GAP Leadership had no decision-ready view of control effectiveness across all operating scenarios

FIX Targeted reassessment of dominant scenarios; tightened field verification; coached leaders to challenge normalisation

Key lesson:

Apparent compliance can mask rising catastrophic exposure.

CASE 02

REFINING & PETROCHEMICAL COMPLEX

100% verification completion — yet dashboards showed administrative gaps, not control health

GAP Control owner roles were oriented to verification counts, not actual effectiveness

FIX Shifted focus to evidence of effectiveness; introduced a visibility tool for risk-based leader decisions in degraded conditions

Key lesson:

Completion dashboards are not assurance — prove controls hold on demand.



THE PRACTICAL APPROACH

5 STEPS TO CLOSE THE GAP

4

The Practical Path: 5 Steps to Close the Gap
Strengthening process safety requires a deliberate move away from activity completion toward demonstrated control effectiveness—especially in the conditions where catastrophic risk accumulates most.

- 1** Define Catastrophic Scenarios: Identify a concise set of severe, credible scenarios that dominate exposure for your asset or site.
- 2** Specify Critical Controls & Standards: Define what "effective" looks like, what degraded looks like, and who is accountable.
- 3** Give Leaders Line-of-Sight: Use a small set of measures—impairments, backlogs, exceedances—in plain operational language.
- 4** Establish Trigger–Action Escalation: Define triggers when controls degrade and drill the required actions at every level.
- 5** Test in Abnormal Conditions: Concentrate independent assurance on critical controls and prove they hold under real pressure, not just on paper.

WHAT SUSTAINABILITY IMPROVEMENT ACTUALLY REQUIRES

1

VALUES UNDER PRESSURE

Leaders prioritise harm prevention when cost, schedule, or production pressure rises — consistently and visibly

2

CRITICAL CONTROLS THAT MATTER

Concise controls for severe scenarios — with verifiable standards and unambiguous ownership

3

DECISION-LED ROUTINES

Every forum makes control status visible and drives real choices on deferrals, resourcing, and abnormal operations

4

ENABLED ESCALATION

Frontline raises concerns early. Leaders invite, listen, and act — treating escalation as risk management

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About dss+

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