

Process Safety Forum

Knowledge Exchange Note #007 – Issued on 27th November 2025

Process Safety Improvement Plans

This knowledge exchange note is shared in order to promote learning and improve safety. You should seek appropriate guidance regarding the relevance, accuracy, and completeness of this alert to your circumstances prior to implementation.

Theme

Leadership, Management Systems, Risk Management, Learning Organisation

Summary of Issue

How can organisations develop and embed Process Safety Improvement Plans (PSIPs) that drive sustainable improvement in the management of Major Accident Hazard (MAH) and Process Safety (PS) risks?

This Knowledge Exchange seeks to reinforce the need for this essential aid to maintaining process safety in high hazard operations, and to highlight a structured approach to this critical aspect of process safety management.

This topic has been discussed at PSF and also through the Offshore Sector's 'Step Change in Safety' programme whose Process Safety Leadership Workgroup developed this framework. **The information presented below on PSIPs is equally applicable to process safety management in both onshore and offshore installations.** It reflects an ongoing need across COMAH and all high-hazard industries for structured, risk-based improvement planning, aligned with the expectations of the Regulators, and the Principles of Process Safety Leadership.

Process Safety Improvement Plans

A Process Safety Improvement Plan (PSIP) is a structured framework that enables an organisation to plan, implement, and track targeted improvements in process safety and Major Accident Hazard management. It provides a bridge between policy-level commitments (such as the Corporate Major Accident Prevention Policy MAPP or CMAPP) and frontline operational activity.

The PSIP concept recognises that process safety improvement should be targeted, resourced, and visible — not reactive. When executed well, it becomes a central tool for leadership engagement, workforce participation, regulator assurance, and continuous improvement. While the principles of a PSIP may be generic, it is important to recognise that the PSIP for each establishment should be tailored to the needs of the plant and operations, identify targeted actions and improvements, with progress towards achieving them monitored by senior management.

Developed through cross-industry collaboration, the 8-Step PSIP Model set out below offers a practical roadmap that can be tailored to company maturity and scale.

The 8 Steps to a Process Safety Improvement Plan

1. Leadership and Accountability

- Ensure executive sponsorship, to underscore the PSIP's importance and align it with leadership's strategic goals.
- Position the PSIP within the documented cycle of MAH management and the Leadership calendar, aligning with top process safety and MAH risks.
- **HOW?** - Define leadership roles in driving the PSIP cycle and outline its integration within the broader Management of Major Accident Hazards (MAH).

2. Stakeholder Engagement

- Empower site and office personnel, including workforce reps, supply chain, HR, and partner reps, in PSIP development, tracking, and improvement.
- **HOW?** - Use graphics and visuals to make PSIP progress accessible to the workforce, ensuring regular updates. Involve all stakeholders in the initial build and ongoing review process.

3. Gather inputs to PSIP – using a Risk-Based Approach

- Prioritise initiatives based on risk, understanding outputs from audits, incident investigations, KPIs, regulator feedback, observations, and formal gap assessments against the Principles of Process Safety Leadership.
- **HOW?** - Cast a wide net initially, then focus on high-priority areas for each plant to maintain manageable, impactful actions.

4. Tactical and Strategic Balance

- Develop a rolling plan with increased granularity for immediate deliverables (e.g., monthly actions) while maintaining a strategic, multi-year perspective. Balance short-term, planned tasks with aspirational improvements, addressing both immediate needs and long-term goals.
- **HOW?** – Establish criteria to justify resource allocation and demonstrate the rationale for prioritising certain initiatives over others.

5. Measurable Outcomes and Continuous Improvement

- Embed measurable outcomes that provide visible evidence of progress, such as reductions in MAH risks. For example, this could be in the form of leading and lagging indicators.
- **HOW?** – Integrate continuous improvement processes with regular PSIP reviews and updates, incorporating feedback from audits, assessments, and new insights.

6. Integration and Performance Alignment

- Integrate PSIP into the operating rhythm of the business.
- **HOW?** – Link PSIP deliverables to goals and performance expectations for action owners, embedding process safety improvement into role responsibilities for team members.

7. Detailed Action Plan

- Define goals and specify key success factors guiding actions and outcomes.
- **HOW?** – Create time-bound actions with designated owners, sponsors, and resources linked to business and HSE plans.

- Establish clear linkages between identified gaps and PSIP actions, with an audit trail tracing back to initial findings and reviewing effectiveness of corrective actions.

8. Review PSIP Effectiveness

- Self-verification against guidance to monitor performance and delivery of the PSIP.
- **HOW?** – use checklists with graduated progress indicators/level of maturity to benchmark progress against the eight steps at regular intervals e.g. annually. Consider benchmarking with other operators and incorporating industry best practice.
- Establish clear linkages between assessment of PSIP effectiveness and the regular cycle of MAH management, in support of CMAPP (or equivalent) commitments.

Considerations for Implementation

- Senior Leadership Team endorsement is essential — the PSIP must be recognised as a leadership tool, not an optional regulatory recommendation.
- Visible ownership by action sponsors and discipline leads ensures accountability and continuity.
- Workforce engagement is crucial to sustain awareness and improve the effectiveness of actions.
- Integration with existing systems (e.g., risk registers, KPI frameworks) avoids duplication and ensures traceability.
- Peer benchmarking through networks such as Step Change in Safety or the PSF can accelerate maturity.

Final Thoughts

A well-designed PSIP transforms improvement from reactive to systematic. It connects leadership ambition to workforce action and provides regulators with transparent evidence of progress.

As one PSF member put it, 'Process Safety Improvement Plans turn aspiration into disciplined delivery.'

The approach aligns with the HSE's expectation of continuous improvement, supports MAPP and CMAPP commitments, and reinforces the Process Safety Leadership Group (PSLG) Principles of Process Safety Leadership by ensuring that process safety remains a visible, measurable, and shared objective across the organisation.

Further reading – previously circulated PSF documents and guidance:

1. [The Principles of Process Safety Leadership](#), October 2025
2. [Process Safety Leadership, Findings of Energy Division Inspection Programme](#), February 2025
3. [COMAH Strategic Forum Managing the risks that can destroy your business: Edition 2](#), October 2025
4. [Introduction to human factors & work psychology](#)
5. Rail Safety and Standards Board [Taking Safe Decisions](#), July 2025

The Process Safety Forum has been set up to provide an industry association platform whereby initiatives, best practice, lessons from incidents and process safety strategy can be distilled and shared across sectors, to influence our stakeholders (including the Regulators), and to drive the process safety management agenda. The Process Safety Forum consists of representatives from across industry, refer to the website for details

The website is www.p-s-f.org.uk.