

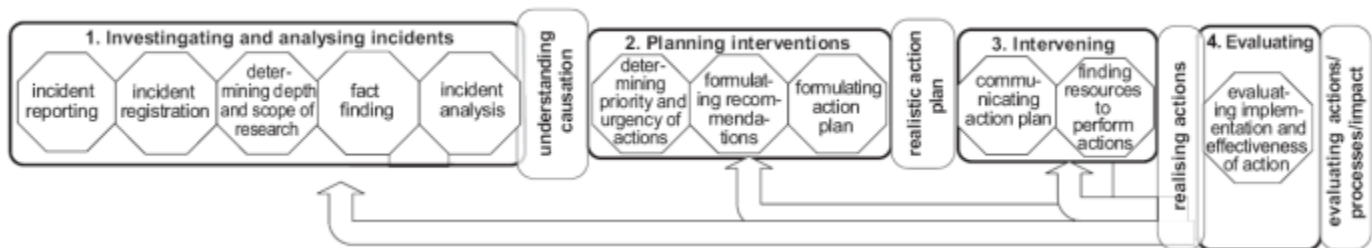


Title: Investigation Quality / Sharing and Application of Learnings

Problem Statement:

Operators of hazardous installations with high risk potential inevitably find that something goes wrong at some point that leads to an incident¹. Operators strive to prevent incidents from occurring, and to minimise their consequences when they do, but incidents with unwanted consequences can and do occur. After an incident, Operators must carry out a well-performed incident investigation to understand causes, to share the lessons learned and to prevent similar incidents from occurring in the future. However, after an incident, there is always pressure on Operators to restart production and potentially convince themselves that the incident occurred simply due to “bad luck”, therefore, not requiring any particular changes to avoid reoccurrence. This can be reinforced by poor incident investigation, which fails to reveal some of the underlying reasons for the incident and hence does not reveal how to strengthen the barriers to prevent reoccurrence, e.g. through implementation of new or revised procedures, design changes, increased competencies of personnel, etc.

Although the quality of the investigation is extremely important, it must be considered that it is just one part of the ‘learning from incidents’ process. A complete learning process should also contain the model below²:



For the most part, sufficient guidance for conducting investigations exists. For example, the International Association of Oil and Gas Producers has published Report 552, Components of Organizational Learning from Events. This document describes components an organization should consider if it wants to improve how it learns from operating experience to reduce risk and prevent incidents. However

- better implementation of established guidance across industry is required;
- incident investigations should better incorporate consideration of human factors; and
- improved sharing and systematic application of learnings from incident investigations across industry is required.

¹Event or chain of events which cause, or could have caused, injury, illness and/or damage (loss) to assets, the environment or third parties (Source: ISO 17776:2000, Petroleum and natural gas industries – Offshore production installations – Guidelines on tools and techniques for hazard identification and risk assessment.). This definition includes both accidents and near misses.

² Drupsteen, L., Groeneweg, J. and Zwetsloot, G.I., 2013. Critical steps in learning from incidents: using learning potential in the process from reporting an incident to accident prevention. International journal of occupational safety and ergonomics, 19(1), pp.63-77.

The changes we expect to see:

In order for Operators to appropriately learn from incidents and then reduce risk and prevent future incidents, the following is required:

- Investigations with sufficient rigour that uncover root causes and contributing factors of the incident.
- Impediments within the industry to the implementation of guidance for conducting investigations of incidents are identified and then actioned.
- Operators industry wide set clear priorities as to which incidents, including near-misses, are worthy of investigation.
- To move towards the structural inclusion of human factors in incident investigations, thus enabling Organizational and Human Performance imperatives to be fulfilled.
- Learnings from incidents are more broadly shared across the industry and communicated throughout operator organizations.
- More thematic analysis of incident investigation results is performed and shared across the industry.
- Operators industry wide systematically apply learnings by determining and prioritizing actions to be taken, and follow up to confirm that desired results have been achieved.
- Organizations embrace a 'learner mindset', as opposed to a 'culture of blame'.

Industry Association(s) invited to lead the change / develop the solution:

- International Association of Oil and Gas Producers (IOGP) / International Association of Drilling Contractors (IADC)

Key performance indicators:

- Incident trends, including incident recurrence;
- Root causes and contributing factors categorization (direct and underlying relationships);
- Percentage of incident investigations performed according to the procedures; and
- Investigation recommendation prioritization and implementation rates.