



Incident investigation

Independent investigation of operational events and control failures

Operational incidents rarely occur because a single procedure failed.

They occur when operational controls degrade, human factors influence decision-making and organisational governance systems fail to detect emerging risks.

Independent incident investigation provides leadership with objective, evidence-based analysis of operational events and control failures, enabling organisations to understand why failures occurred and how similar events can be prevented.

This ensures organisations move beyond immediate causes and identify the systemic operational, human and governance factors that contributed to the event.

What we verify

Incident investigation focuses on determining how operational events occurred and why existing controls failed to prevent them. Investigations typically examine:

- Failure of operational barriers, safeguards and critical controls
- Human factors and decision-making influences
- Competence and supervisory factors
- Effectiveness of operational procedures and control systems
- Organisational governance and oversight mechanisms
- Compliance with operational and regulatory requirements
- Effectiveness of previous corrective actions and lessons learned

The objective is to determine both the immediate causes and the systemic organisational conditions that allowed the event to occur.

Industry standards and guidance

Incident investigations are conducted in alignment with recognised industry investigation guidance and root cause analysis methodologies where applicable, including:

- IOGP guidance on incident investigation and organisational learning
- ISO 45001 requirements for incident investigation and corrective action
- Energy Institute guidance on incident investigation and human factors
- Barrier failure and safeguard analysis methodologies
- Structured root cause analysis approaches such as 5 Whys, KELVIN TOPSET®, Tripod Beta and TapRooT®

These frameworks support systematic investigation processes that identify underlying causes, systemic organisational weaknesses and opportunities for operational improvement.

Our assurance activities

Independent incident investigation may involve a range of structured investigation and analytical activities, including:

- Independent investigation of operational incidents and near misses
- Evidence collection and analysis of operational events
- Barrier failure and safeguard effectiveness analysis
- Root cause and systemic causal factor analysis

- Review of organisational decision-making and supervisory oversight
- Evaluation of corrective actions and organisational learning processes
- Interviews with operational personnel, supervisors and leadership

Findings are independent, evidence-based and focused on identifying systemic improvement opportunities rather than attributing individual blame.

Where this is typically applied

Independent incident investigation is commonly applied following:

- High-potential operational incidents or near misses
- Failure of operational controls or barriers
- Significant operational disruptions
- Regulatory or partner review requirements
- Organisational learning initiatives following major events

Leadership value

Independent incident investigation provides leadership with:

- Clear understanding of how and why operational failures occurred
- Identification of systemic organisational weaknesses
- Improved effectiveness of corrective actions
- Strengthened organisational learning and risk management
- Credible investigation outcomes under regulatory or partner scrutiny

Independent. Risk-based. Operationally grounded.

MR MODUSPEC

Speak to us about independent investigation to understand operational events and strengthen system performance.

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