



Safety assurance

February 2026

Overview and regulatory landscape



Safety assurance is divided into two key areas: Occupational Health & Safety and Process Safety Management

Safety overview

Occupational Health & Safety (OHS)

- Protecting workers from injuries, illnesses and unsafe working conditions
- Covers multiple industries, such as manufacturing, services, retail, construction, logistics, etc.
- Deals with day-to-day workplace risks, such as slips, ergonomics, electrical, Personal Protective Equipment (PPE) and noise

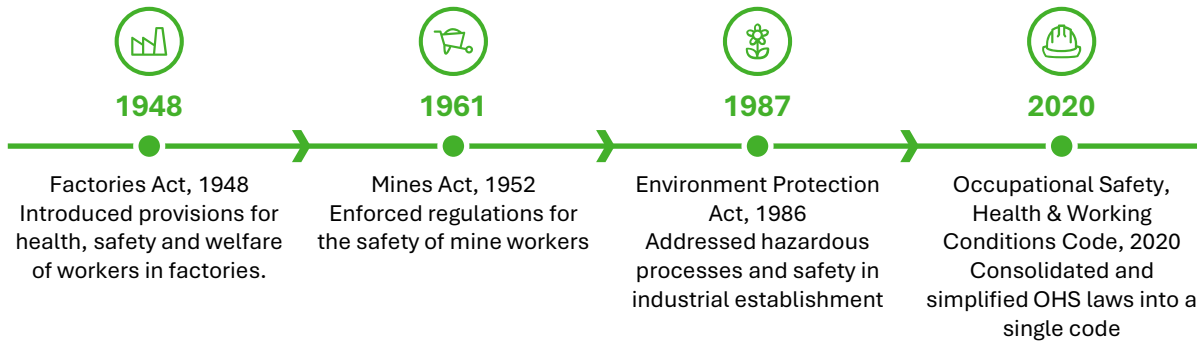
Process Safety Management (PSM)

- Focuses on preventing catastrophic incidents such as explosions, fires, toxic releases.
- Applies mainly to high-hazard industries such as oil & gas, chemicals, refineries, pharma and fertilisers
- Deals with technical integrity and engineering controls of hazardous processes

Regulatory landscape

OHS framework

- Historically, OHS requirements were defined through multiple laws. The Occupational Safety, Health and Working Conditions (OSHWC) Code, 2020 modernises this landscape by consolidating 13 earlier laws into a single statute. Implementation is still in progress, as central and state governments finalise detailed rules.



PSM

- India does not have a single unified PSM standard, but PSM elements are distributed across multiple regulations such as Factories Act, 1948; MHISC Rules 1989 etc. Global industry standards may not be regulatory but are practically mandatory. Key standards include CCPS Guidelines, ISO 45001 and API Standards.

Risks, implications and challenges



A poorly designed safety framework can expose an organisation to several risks. Companies currently face certain challenges in establishing strong safety compliance.

Key risks / implications...



Reputational

- Image issues: Negative media coverage and reduced community trust
- Investor and shareholder concerns: reduced investor confidence, leading to higher cost of capital or exit
- Talent and employee: Difficulty attracting skilled workers with increased attrition and decline in employee trust



Finance

- Accident and incident costs: Medical expenses, insurance premium hikes, asset repair/replacement
- Legal and penalty costs: Fines under OSH Code and other regulations, and litigation costs due to civil/criminal cases
- Downtime and productivity loss: Unplanned shutdown and overtime payments



Operational

- Process disruptions: Machine breakdowns, downtime and supply chain disruptions
- Lower overall equipment efficiency (OEE): Caused by incidents, stoppages and corrections
- Workforce efficiency: Low morale, high attrition in hazardous roles



Compliance

- Criminal liability for company officers in cases of fatality or negligence
- Civil claims by injured workers or affected communities
- Suspension or cancellation of licenses/permits

Challenges being faced...



Ineffective policies

- Policies tend to be overly generic and not risk-based
- Need for a proactive approach in policy design. Current safety risk management policies are predominantly reactive
- Poor communication and low awareness of safety policies
- Roles and responsibilities are not clearly defined



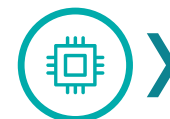
Process and reporting gaps

- Hazard identification and risk assessments not integrated into daily operations
- Incident reporting culture is poor; under-reporting is common
- Lack of standardised contractor onboarding, competency checks and compliance monitoring



Cultural resistance and behavioural barriers

- Safety is often seen as a compliance requirement rather than a core business value
- Inconsistent leadership buy-in leads to weak accountability issues
- Lack of “safety ownership” among middle management and supervisors



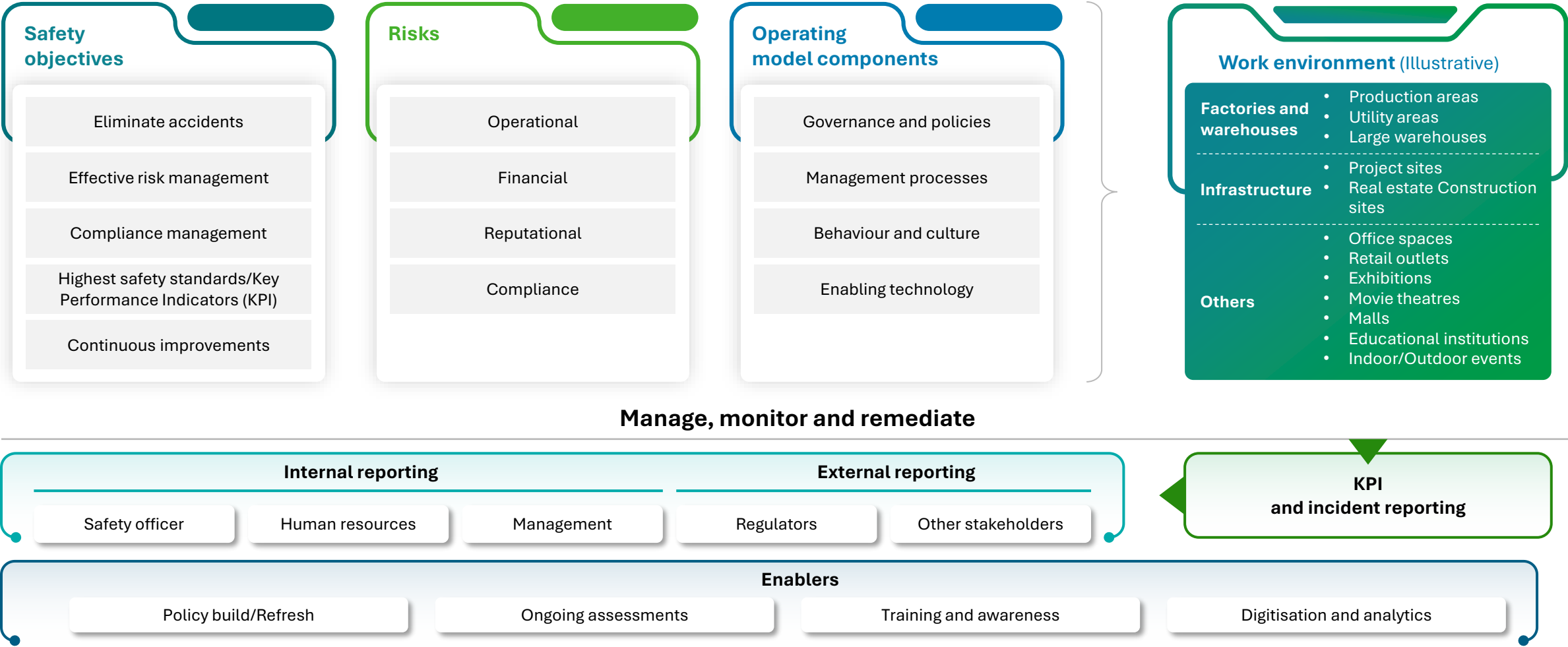
Technology and system fragmentation

- Low adoption of digital safety solutions (dashboards, IoT, sensors, e-permits)
- Limited budgets for safety automation, especially in small and medium enterprises
- Manual logs would result in a lack of real-time data and insights.

Safety framework



We utilise our Safety Governance Framework in supporting organisations with their safety needs



How can we help?



We assist companies in strengthening safety through the following solutions:

Governance and policies

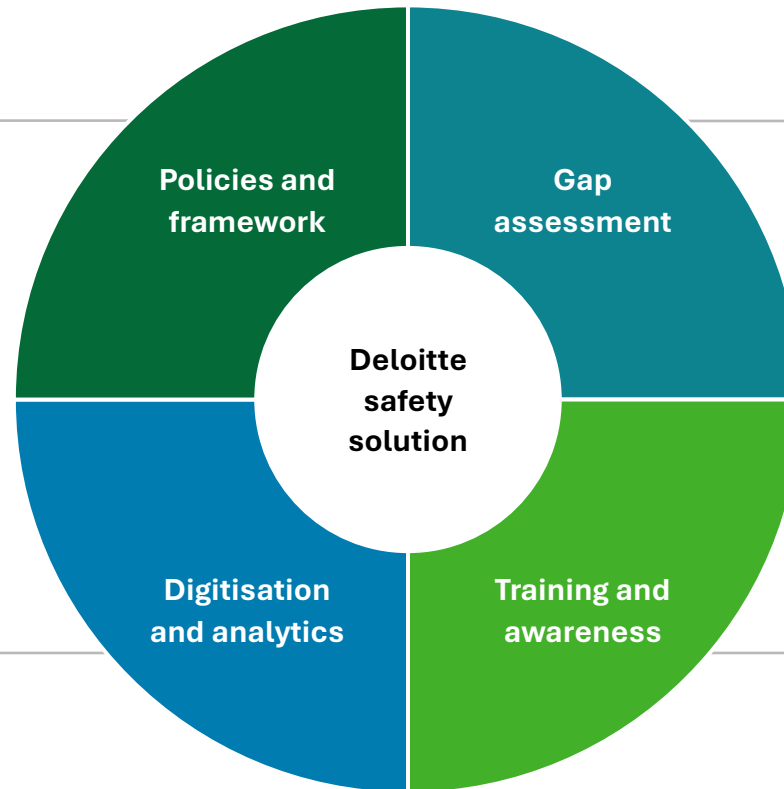
The **governance structure** to manage the safety function.

- Assess/refresh roles and responsibilities, ownership and accountability for safety activities
- Assess/refresh the safety policies, manuals and monitoring framework
- Advise on progressive enforcement strategies to promote sustained safety compliance

Enabling technology

Use systems to **assess safety activities and risks**

- Enable digitisation of the incident reporting framework
- Support predictive analytics to identify safety risks.
- Assess ERP and HRMS integration controls.
- Assess audit trail and user access controls



Management Processes

Processes to manage safety risks across the Safety value chain

- Assess if safety norms are robust and compliant
- Assess safety management system alignment with international standards.
- Recommend enhancements to strengthen the process safety culture

Behaviour and culture

Tone at the top, appropriate training and awareness to promote a **positive risk culture**

- Assess the risk culture, specific training needs and improvement areas
- Develop standardised training materials, including course content, workshops, and reference guides
- Deliver training programmes through identified channels

How can we help?



Our comprehensive safety solution offerings tailored to the needs of the organization:



Policies and framework

- Assess/refresh the existing policies with forward-looking, industry-specific safety frameworks aligned with global best practices
- Draft clear roles and responsibilities, ownership and accountability for the safety function
- Assess/refresh the safety procedures, manuals and monitoring framework, which includes key operational controls such as Permit-to-Work System, Lockout/Tagout (LOTO) standards, safety critical equipment management, etc.
- Advise on policy and procedures rollout and communication strategies
- Advise on progressive enforcement strategies to promote sustained compliance and continuous improvement



Gap assessment

- Assess existing Safety Management System (SMS) frameworks against international standards such as ISO 45001 etc.
- Identify gaps in current governance, policies, procedures, hazard identification, risk assessment and operational controls
- Evaluate system maturity and effectiveness in managing occupational and process safety risks
- Recommend enhancements to strengthen governance, regulatory compliance and process safety culture
- Advise on global best practices and tools to improve system robustness and reduce risk exposure
- Use the safety assessment tool for reporting and dashboarding



Training and awareness

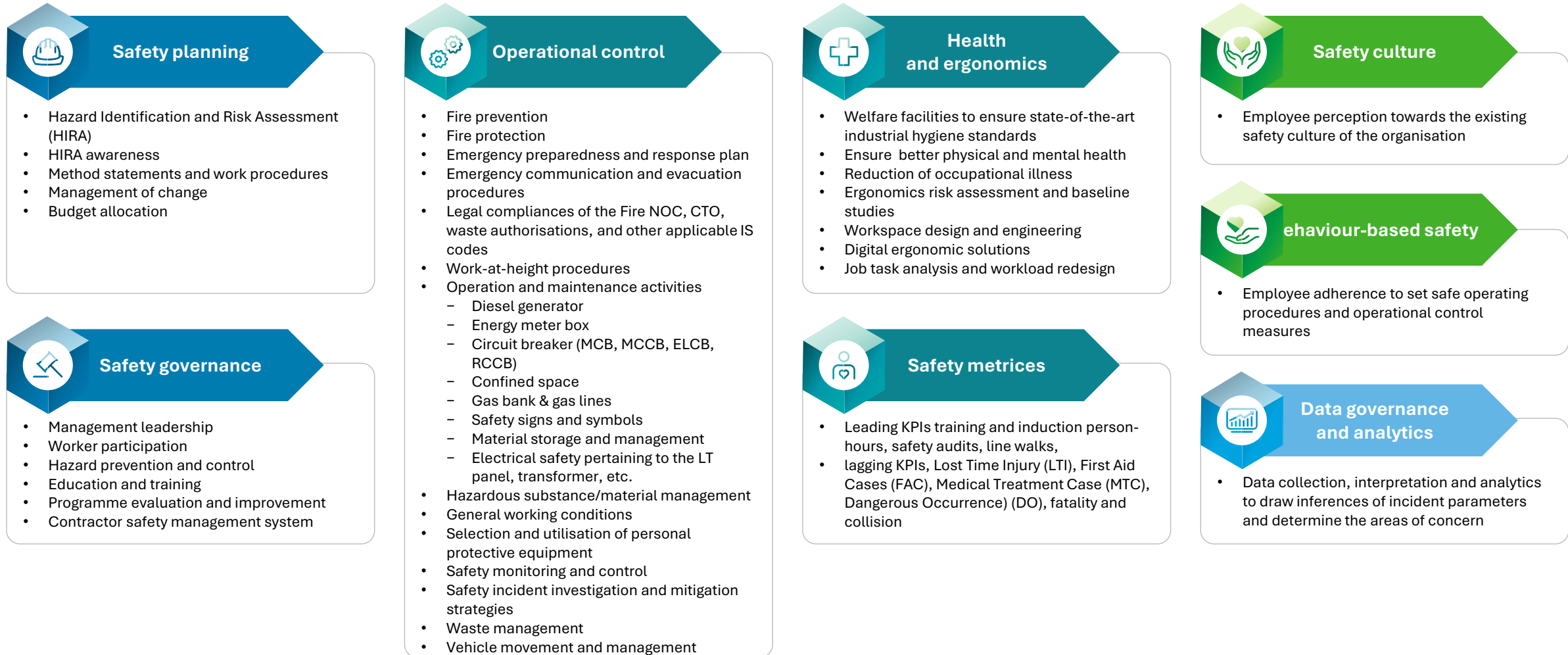
- Conduct training needs analysis across departments and operations to identify competency and capability gaps
- Advise to help design a targeted training strategy and curriculum aligned with organisational goals, operational requirements and role-based competencies
- Develop standardised training materials, including course content, workshops, reference guides and e-learning modules
- Deliver training programmes through identified channels such as classroom sessions, on-the-job training and digital platforms
- Measure effectiveness and continually improve by capturing feedback, assessing outcomes and refining content and methods



Digitisation and analytics

- Defining process for collection and interpretation of data
- Assess and enable the digitisation of the incident reporting framework and workflow alignment with ISO 45001
- Corrective and Preventive Actions (CAPA) assignment and tracking
- Help support predictive analytics to identify high-risk areas, worker behaviour patterns and accident probability modelling
- Assess role-based access controls, data encryption and backups, adherence to data privacy guidelines, governance oversight dashboards for CXO and Board reporting.
- Verify ERP/HRMS integration controls linking worker data, shift records, contractor onboarding and competency validation.
- Assess the availability of automated audit trail and regulatory evidence repository.

Work on operating model components is executed on the following domains



Benefits of the solution



Our dedicated effort with clients have resulted in a safer work environment



Compliance with regulations

Adhering to safety regulations and standards to avoid legal penalties and fines

Cost saving

Reduction in workplace incidents reduces the direct and indirect costs such as medical expenses, cost of restoration, rehiring and retraining, compensation, etc.

Improved brand image

Improved safety record enhances the company's reputation among clients, partners and investors

Continual improvement

Periodic safety assessment and performance monitoring have contributed to the continual improvement of the safety framework



We believe we are well suited to support you



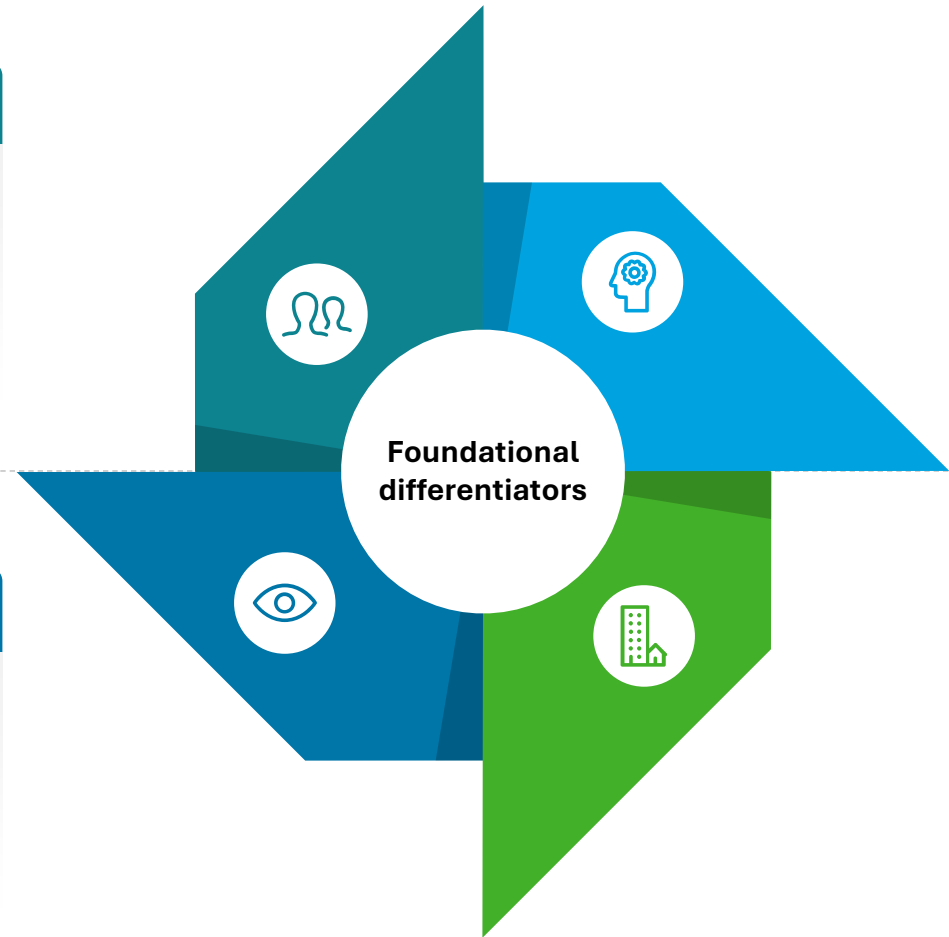
We are uniquely positioned to deliver projects with a flexible, integrated approach. We will combine our expertise, proven methodology and innovative tools and techniques to serve you.

Experienced team

- A team that brings experience in safety assurance services with specialisation in ISO 45001:2018, ISO 14001:2015, Health Safety & Environmental Engineering, Fire and Life Safety Audits
- Established alliances with leading safety firms for skillsets and tools

Eye for detail

- Professionals trained in safety compliances, site assessments, internal audits and performing specific audits
- Experienced in process improvement and governance-related engagements



Our innovative technology

- To initiate and deliver all assessments.
- Implement audit checklists, dashboard creation, sharing audit evidence and reporting.

Oversight structure

- Experience in establishing and operating a Project Management Office for large engagements.
- Well-managed, experienced delivery teams for performing and reporting on the reviews performed.

Case studies: Our work in safety across industries



Multinational bank



- Developed controls around Health, Safety and Well Being (HSW) per regulatory and internal global guidelines for a leading **Multinational Bank** in their office in Karnataka, Bengaluru
- Designed HSW controls, policies and supporting procedures to effectively comply with the requirements of their global HSW framework and applicable legal requirements
- Controls were developed across fire safety, chemical handling, waste management, electrical safety, etc.
- The controls developed were mapped in the internal controls tool with clear/defined roles and responsibilities to ensure effective risk management in the workplace

Metals and mining



- Deloitte was engaged to strengthen the client's safety governance across their corporate, business segments and operational sites for one of the **world's leading steel producers**
- A holistic OHS & PSM gap assessment across corporate, segment, and site levels using ISO 45001, CCPS, and internal standards was performed
- An enterprise-wide maturity scorecard and benchmarking were developed to highlight differences across segments and sites
- Our experience with large, multi-site, multi-segment engagements enables us to propose a structured methodology, scalable tools, and robust reporting formats

Movie theatre chain



- Conducted **Occupational Health and Safety Gap Assessment** for a **movie theatre chain** across nine of their theatres in Bengaluru and Delhi
- The assessment was focused on areas such as H&S framework, policies, fire safety, emergency response planning, COVID-19, contractor safety management and the implementation of OHS framework in place with respect to the State Fire Service Act, Disaster Management Act and other applicable IS Codes
- Improvements were suggested to safely manage non-routine activities involving contractors, periodic inspection of their firefighting facilities, risk assessments, etc., to elevate their OHS governance

Event and exhibition



- Currently reviewing and updating the current HSE framework for leading **event and exhibition** company operating out of Abu Dhabi
- Deloitte conducted a one-time gap assessment across all its group functions to identify areas of improvement in its current safety framework
- The assessment covered benchmarking from ISO standards, OSHAD safety framework and other best practices

Case studies: Our work in safety across industries



Manufacturing



- Conducted Environment, Occupational Health and Safety Gap Assessment at one of the leading **heavy vehicle axle and brake** manufacturing companies in India
- A one-time gap assessment was conducted at their manufacturing and assembly plant in Rudrapur
- The assessment covered aspects such as legal compliance related to Consent to Operate (CTO), Fire NOC, environment clearance, central ground water authority, factories rules, waste management and internal OHS procedures focused on mechanical safety, electrical safety, material handling, etc.
- Recommendations were suggested to elevate their OHS performance and promote a safe working culture

Real Estate



- Conduct quarterly **Environment, Occupational Health and Safety Assessment** at their **commercial property** (Business Park) in Gurugram
- Identified deviations in the implementation of their internal OHS code, regulatory compliance and other applicable requirements
- The assessment covers aspects such as fire and life safety, electrical safety, waste management, environmental compliance, material storage, emergency preparedness, safety reviews, etc.
- Assisted the client in the identification of safety risks and their mitigation to elevate the OHS performance

Real estate



- Deloitte was engaged to design and implement an internal safety framework for a leading **real estate developer** for their projects in Mumbai, Maharashtra
- Deloitte is working in the capacity of a project management consultant to develop and implement a safety framework at their high-rise residential and commercial projects
- Deloitte assisted the client in the identification, assessment and mitigation of safety risks and provided functional support in managing contractors and sub-contractors in the effective implementation of the internal safety framework
- Our dedicated efforts resulted in effective compliance with regulations, improved training and a sustained safety culture

E-commerce



- Conducted Environmental Risk assessment and reviewed the efficacy of the existing safety framework of a leading E-commerce organisation and its implementation at their fulfilment centres and external delivery service partner sites
- A one-time gap assessment was conducted across 20 sites to assess the efficacy and implementation of the OHS framework in place with respect to the internal Health & Safety Code, OSHA requirements, State Fire Service Act, Disaster Management Act and other applicable IS Codes
- Improvements were suggested for their docking procedures for heavy vehicles, emergency response and control and near-miss reporting

Case studies: Our work in safety across industries



Manufacturing



- Deloitte was engaged by a major Indian Steel manufacturing company with operations in **pig Iron, DRI, SMS, DI pipes, billets, and TMT rebar production** to conduct an Environment, Occupational Health and Safety gap assessment
- This assessment aimed to uncover OHS gaps across key processes, ranging from melting and casting to annealing, rolling and quenching, and provide actionable insights for improved safety and compliance
- By identifying high-risk areas, such as molten metal handling, machine safeguarding and OHS culture development, Deloitte's findings enabled the company to refine operational safety practices, align with industry standards and reinforce a safer, more sustainable production environment across all operations

Manufacturing



- Deloitte was engaged by a leading integrated producers of **Special Bar Quality (SBQ) or Alloy Steel** in India to conduct an Environment, Occupational Health and Safety gap assessment
- The objective of this assessment was to pinpoint gaps in OHS practices across critical processes, including steel melting, casting, rolling, and quenching, and to provide actionable recommendations to strengthen safety measures
- The assessment targeted high-risk areas, such as molten metal management, machine safeguarding in rolling operations, and quenching water systems
- The insights offered a roadmap for optimising safety protocols and aligning operations with industry standards and reinforced a secure and compliant work environment throughout production.

Manufacturing



- Deloitte was engaged to conduct Environment, Health and Safety (OHS) review of Indian conglomerate for their **Home Textile and Pipe Manufacturing division** against applicable local laws, regulatory guidelines and internal controls in place at their units in Anjar, Vapi, Hyderabad, Bhopal and Mandya.
- The assessment covered aspects such as legal compliances and internal framework around fire safety, mechanical safety, fire safety, electrical safety, working at height, chemical, emergency preparedness, etc.
- Assisted the client to develop/revise policy/procedures based on the inferences drawn from the assessment

Manufacturing



- Conducted Environment, Health and Safety Gap Assessment for a conglomerate for their **flooring and specialty solutions** division in Hyderabad, Anjar and Bharuch.
- We conduct yearly reviews for the client highlighting the areas of improvement against OHS legal regulations and industry accepted standards
- The assessment covered aspects such as mechanical safety, electrical safety, chemical handling, permit to work, incident management, fire safety, emergency preparedness and response
- Recommendations provided were able to enhance the safety performance of the organisation and mitigate the residual risks

Case studies: Our work in safety across industries



Power generation



- Evaluated the effectiveness of Environment, Health and Safety (OHS) management system of a **thermal power generation** company with key focus on safety planning, risk assessment and management & operational aspects
- A one-time safety gap assessment was conducted at six coal-fired power plants across the country to identify the lapses in the implementation of the client's internal safety control
- Improvements were suggested in controls over lifting machinery and tackles to prevent accidents

Infrastructure



- Deloitte was engaged in conducting Environment, Occupational Health and Safety gap assessment for an Indian **Engineering, Procurement and Construction (EPC)** company at their elevated metro corridor, flue-gas desulphurisation (FGD), railway, sewage treatment plant (STP), refinery and real estate sites
- The objective of this assessment was to conduct a comprehensive assessment at sample sites from each business unit and debrief the leadership
- The assessment was able to bring out the deviations in implementation and help improve the overall performance by updating operational procedures

Consumer



- Environment, Health and Safety (OHS) compliance review of an **American food production and distribution** company at an entity level and a plant located in Tamil Nadu
- The assessment covers Environment, Health & Safety aspects and compliances with various applicable laws such as factories Act 1948, State Fire Service Act, Disaster Management Act 2005, Hazardous & Other Wastes Rules 2016, State Fire Service Code, Disaster Management Act 2005, CPCB guidelines, and other applicable IS codes

Consumer



- Deloitte was engaged to review the alignment of Environment Health and Safety practices at construction sites of a **global furniture retailer** brand with their global and national code
- Deloitte conducted a one-time gap assessment at two of its under-construction stores in Bengaluru and Gurugram
- The assessment covered Environment, Health & Safety aspects and compliances with various applicable internal policies/procedures.
- To prevent accidents, Deloitte suggested to develop an additional layer of protection for identification of underground utility lines during excavation



Contact us



Anthony Crasto

Partner | Deloitte India



Peeyush Vaish

Partner | Deloitte India



Chandrashekar Mantha

Partner | Deloitte India

Acknowledgments



Rudraksh Arora

Safety | SME



Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee (“DTTL”), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as “Deloitte Global”) does not provide services to clients. Please see www.deloitte.com/about for a more detailed description of DTTL and its member firms.

This material has been prepared by Deloitte Touche Tohmatsu India LLP (“DTTI LLP”), a member of Deloitte Touche Tohmatsu Limited, on a specific request from you and contains proprietary and confidential information. This material may contain information sourced from publicly available information or other third party sources. DTTI LLP does not independently verify any such sources and is not responsible for any loss whatsoever caused due to reliance placed on information sourced from such sources. The information contained in this material is intended solely for you. Any disclosure, copying or further distribution of this material or its contents is strictly prohibited.

Nothing in this material creates any contractual relationship between DTTI LLP and you. Any mutually binding legal obligations or rights may only be created between you and DTTI LLP upon execution of a legally binding contract. By using this material and any information contained in it, the user accepts this entire notice and terms of use.

©2026 Deloitte Touche Tohmatsu India LLP. Member of Deloitte Touche Tohmatsu Limited