JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Advanced Safety Culture Maturity and Bow-Tie Risk Training Course

18 – 29 October 2027
Geneva

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

Advanced Safety Culture Maturity and Bow-Tie Risk Training Course

Ref: 769_29023 **Date:** 18 – 29 October 2027 **Location:** Geneva **Fees:** 11000 GBP

Safety culture maturity and bow-tie risk is a 2-week advanced training course for HSE managers, operations leaders and safety culture champions, who build a culture maturity and barrier improvement plan for one operating site. Organisations that run hazardous operations need evidence that behaviour supports their critical controls, not just written procedures. Jupiter Prime Training links culture measurement directly to safety culture maturity and bow-tie risk work.

Why Safety Culture Maturity and Bow-Tie Risk Matters Now

Three forces shape this subject today. Boards and clients ask for proof that major hazards are controlled, while contractor-heavy workforces and leaner supervision make behaviour harder to observe. At the same time, investigations keep finding that barriers existed on paper but failed in practice because people normalised shortcuts. An organisation that links culture to barriers can direct leadership attention where it reduces risk; one that treats culture as posters loses that signal. The course draws on ISO 45001 occupational health and safety management systems and IEC 61882 hazard and operability HAZOP studies.

Who Gains Most from Safety Culture Maturity and Bow-Tie Risk

- Leaders responsible for HSE strategy and the site safety management system
- Operations leaders who own production risk and frontline supervision
- Safety culture champions who run surveys, observations and engagement
- Process safety engineers who maintain hazard registers and barrier records
- Human factors and training leads who shape procedures and competence

A site leadership group that attends together, combining operations and HSE members, gains most, because it can agree one maturity rating and one set of barrier owners.

Safety Culture Maturity and Bow-Tie Risk Capabilities

Participants move from measuring how people perceive safety to showing which critical barriers that perception weakens or strengthens.

- Assess a site against a culture maturity ladder using observable indicators — for the site leadership group
- Design and interpret a safety climate survey with focus group follow-up — for workforce representatives
- Apply a just culture decision tree to reported events — for line managers and HR partners
- Build a bow-tie for a major hazard with rated preventive and mitigative barriers — for process safety owners
- Weigh human factors in barrier reliability and procedure design — for maintenance and operations supervisors

- Specify culture interventions tied to barrier indicators — for senior leaders approving resources

Key Safety Culture Maturity and Bow-Tie Risk Terms

- Safety climate — A snapshot of how workers currently perceive safety priorities, usually measured through surveys at a point in time.
- Culture maturity ladder — A staged model describing how an organisation's beliefs and practices about safety develop from reactive to generative.
- Just culture — An approach that separates honest error from at-risk and reckless behaviour so people report hazards without fear.
- Bow-tie diagram — A risk picture showing threats leading to a top event on one side and consequences on the other, with barriers between.
- Escalation factor — A condition, such as fatigue or poor maintenance, that weakens a barrier and makes it less likely to work.
- Performance shaping factor — Any influence on human reliability, including workload, shift pattern, procedure quality and the working environment.

Safety Culture Maturity and Bow-Tie Risk Day by Day

Day 1: Culture as a Risk Control

- Safety Culture Definitions — Separating Culture from Climate and Compliance
- ISO 45001 Worker Participation Clauses — Where Culture Enters the System
- Culture Failure Case Reviews — Lessons from Refinery and Hospital Events
- Organisational Drift Models — Spotting Normalised Deviation Early
- Culture and Barrier Link Map — Which Controls Depend on Behaviour

Day 2: Culture Maturity Models

- Maturity Ladder Stages — Pathological to Generative Organisational Behaviour
- Maturity Indicator Descriptors — Evidence Expected at Each Stage
- Site Self-Assessment Grid — Placing Business Units on the Ladder
- Maturity Gap Profile — Prioritising Weak Cultural Dimensions
- Peer Calibration Panel — Agreeing Ratings Across Sites

Day 3: Measuring Safety Climate

- Safety Climate Survey Design — Item Selection and Response Scales
- Sampling Frontline and Contractor Crews — Representative Response Coverage
- Focus Group Protocol — Probing Survey Scores with Crews
- Climate Score Interpretation — Separating Real Shifts from Noise
- Survey Feedback Sessions — Returning Results to Workforce Groups

Day 4: Leadership Behaviours and Just Culture

- Leadership Behaviour Observation Tool — Field Visits and Conversations
- Just Culture Decision Tree — Error, At-Risk and Reckless Choices
- Speak-Up Channels — Protecting People Who Report Hazards
- Recognition Practices — Reinforcing Hazard Reporting over Silence
- Supervisor Coaching Prompts — Turning Observations into Dialogue

Day 5: Human Factors in Operations

- Human Error Taxonomy — Slips, Lapses, Mistakes and Violations
- Performance Shaping Factors — Fatigue, Workload and Shift Patterns
- Procedure Usability Review — Writing Steps Crews Actually Follow
- Error Traps in Maintenance Tasks — Removing Conditions That Invite Failure
- Human Factors Checklist for Change — Assessing Task Redesign

Day 6: Operational Risk Assessment Methods

- Hazard Identification Techniques — Task, Process and Facility Levels
- Risk Matrix Calibration — Consistent Likelihood and Severity Ratings
- HAZOP Under IEC 61882 — When Deviation Studies Feed Bow-Ties
- Major Accident Hazard Register — Selecting Events for Barrier Analysis
- Risk Tolerability Judgement — Reducing Risk as Far as Practicable

Day 7: Building Bow-Tie Diagrams

- Top Event and Hazard Framing — Defining the Loss of Control
- Threat and Consequence Lines — Mapping Causes and Outcomes
- Preventive and Mitigative Barriers — Distinguishing Controls by Function
- Escalation Factors and Their Controls — Why Barriers Degrade
- Bow-Tie Facilitation Session — Running a Cross-Functional Build

Day 8: Barrier Health and Human Performance

- Barrier Criticality Rating — Which Controls Carry the Most Weight
- Barrier Owner Assignment — Accountability for Each Critical Control
- Human-Dependent Barriers — Testing Reliability of Operator Actions
- Barrier Performance Standards — Verification Tasks and Frequencies
- Leading and Lagging Barrier Indicators — Dashboards for Operations Leaders

Day 9: Linking Culture Findings to Barriers

- Culture Signals in Barrier Failures — Reading Incident Patterns
- Incident Learning Reviews — Tracing Failed Barriers to Behaviours
- Contractor Interface Risks — Shared Barriers Across Organisations
- Management of Change and Culture — Protecting Barriers During Change
- Culture Improvement Priorities — Choosing Interventions with Barrier Payoff

Day 10: Practising the Culture Maturity and Barrier Improvement Plan

- Maturity Assessment Findings — Applying the Ladder to a Case Site
- Climate Survey Results — Interpreting a Sample Data Set
- Bow-Tie for a Selected Major Hazard — Building and Rating Barriers
- Just Culture and Leadership Actions — Assigning Owners and Measures
- Culture Maturity and Barrier Improvement Plan — Presenting to Peer Panel

Applying Safety Culture Maturity and Bow-Tie Risk After the Course

- Run a maturity self-assessment with one site leadership group and calibrate ratings against observed evidence
- Facilitate a bow-tie build for one major hazard and assign named owners to its critical barriers

Safety Culture Maturity and Bow-Tie Risk Questions FAQ

What is safety culture maturity and bow-tie risk practice and why does it matter now?

It connects how mature an organisation's safety culture is with how reliable its critical barriers are. It matters now because investigations repeatedly find barriers that existed on paper but failed through normalised behaviour.

Which roles gain most from safety culture maturity and bow-tie risk training?

HSE managers, operations leaders and safety culture champions gain most. Process safety engineers and human factors leads also benefit, because they see how behaviour data changes barrier ratings.

How does safety culture maturity and bow-tie risk training differ from a safety leadership course?

It measures culture and links it to barriers rather than focusing on personal leadership style. You work with maturity ladders, climate surveys and bow-tie diagrams, then connect the findings in one plan.

What do you bring back from safety culture maturity and bow-tie risk training?

You bring back a culture maturity and barrier improvement plan for one site, with a maturity rating, survey interpretation, a rated bow-tie and owned actions your leadership group can adopt.

Safety Culture Maturity and Bow-Tie Risk: The Way Forward

The culture maturity and barrier improvement plan first informs which critical barriers receive leadership attention and resources next quarter. Operations leaders, barrier owners and HSE managers use it to align field visits, survey follow-up and verification tasks. After its first use, repeat the climate survey and revisit the maturity rating to see whether barrier indicators moved with it.