MERCURY

# Advanced HAZOP Leadership & Strategic Risk Governance Program

5 – 9 July 2027
Cape Town (South Africa)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

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**Ref:** 121327_1072547 **Date:** 5 – 9 July 2027 **Location:** Cape Town (South Africa) **Fees:** 5300 Euro

## Introduction:

HAZOP Leadership & Management is an advanced, strategy-driven program focused on building elite capability to lead, govern, and optimize HAZOP studies in complex, high-risk industrial environments. This program goes far beyond technical methods. It develops leadership depth, facilitation mastery, risk intelligence, governance control, and organizational integration of HAZOP as a core risk management function. Participants will gain the mental models, behavioral skills, analytical frameworks, and executive-level competencies necessary to lead multi-disciplinary teams, challenge assumptions, manage bias, escalate critical findings, and embed HAZOP outcomes into real operational decision-making, design processes, and corporate risk strategies.

## Target Audience:

- HAZOP Team Leaders and Chairpersons.
- Process Safety Engineers and Risk Engineers.
- Operation and Maintenance Managers.
- Project Managers in high-risk industries Oil & Gas, Power, Chemical, Mining, Pharma.
- HSE Managers and Safety Directors.
- Engineering Consultants and Process Designers.
- Asset Integrity and Reliability Managers.
- Quality and Compliance Officers.
- Technical Authority Holders.
- Senior Supervisors and Plant Managers.

## Training Objectives:

This advanced training program is to:

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- Build world-class leadership capability in HAZOP facilitation and governance.
- Strengthen strategic risk-thinking and systems analysis.
- Align HAZOP practices with corporate safety and operational excellence strategies.
- Establish high-performance team dynamics under risk-focused environments.
- Develop advanced decision-making skills in the face of uncertainty and ambiguity.
- Enable integration of HAZOP outputs into design, operations, and management systems.
- Eliminate common leadership failures in HAZOP execution.
- Promote proactive hazard intelligence in complex systems.
- Lead complex multi-disciplinary HAZOP studies confidently and professionally.
- Design and structure robust HAZOP frameworks for any industrial system.
- Influence stakeholders and challenge unsafe assumptions effectively.
- Manage dominant personalities, silence bias, and group dynamics.
- Identify hidden, systemic, and cascading hazards.
- Prioritize risks using both qualitative and quantitative methods.
- Align HAZOP outcomes with operational, engineering, and executive strategies.
- Convert HAZOP findings into actionable and measurable safety improvements.
- Establish long-term HAZOP governance structures in their organization.
- Mentor future HAZOP leaders and build internal capability.

## Targeted Competencies:

- Strategic Risk Assessment & Systems Thinking.
- Advanced HAZOP Facilitation & Governance.
- Leadership in High-Risk Environments.
- Critical Decision-Making Under Pressure.
- Behavioral Safety & Cognitive Bias Management.
- Root Cause Thinking & Failure Pattern Recognition.
- Stakeholder Influence & Technical Communication.
- Risk Escalation & Crisis Leadership.
- Compliance Leadership & Regulatory Alignment.
- Continuous Improvement & Performance Governance.

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## Course Content:

### Unit 1: Advanced HAZOP Foundations & Strategic Leadership Frameworks

- Evolution of HAZOP from technical task to strategic leadership tool.
- Differences between traditional HAZOP and leadership-driven HAZOP.
- Role of leadership in preventing catastrophic system failures.
- Strategic vs operational thinking in hazard analysis.
- System complexity and non-linear risk behavior.
- Human factors and leadership accountability in hazard generation.
- Understanding HAZOP as a governance and decision-making instrument.
- Integration of HAZOP into enterprise-wide risk frameworks.
- Mapping leadership styles to HAZOP effectiveness.
- Ethical leadership in hazard identification and risk disclosure.
- Responsibility boundaries: Chair vs Organization vs Team.
- Leadership positioning to prevent normalization of deviation.

### Unit 2: HAZOP Process Architecture, Design & Methodological Mastery

- Designing a high-performance HAZOP structure for complex systems.
- Node-definition strategies for large-scale, high-interaction systems.
- Advanced guideword application in sophisticated processes.
- System layering: physical, digital, human, and environmental nodes.
- Integration of P&ID, cause-and-effect diagrams, LOPA, and Bowtie.
- Designing adaptive and scalable HAZOP frameworks.
- Using modular HAZOP models for mega projects.
- Managing uncertainty and data gaps within sessions.
- Ensuring consistency, traceability, and analytical depth.
- Validation frameworks to test the robustness of conclusions.
- Assigning credibility levels to HAZOP findings.
- Pre-HAZOP intelligence gathering systems.

### Unit 3: High-Performance Team Leadership & Cognitive Influence in HAZOP

- Psychological dynamics of high-risk decision groups.
- Managing power dynamics, conflict, silence, and dominance.
- Breaking hierarchy barriers during technical discussion.
- Cognitive bias types in risk analysis confirmation, availability, optimism bias.
- Neuro-leadership approaches to enhance critical thinking.
- Questioning models to unlock deeper insights.
- Listening credibility and framing risk language.
- Creating psychological safety in HAZOP workshops.
- Behavioral triggers of under-reporting hazards.
- Techniques for activating passive participants.
- Managing resistance and organizational politics
- Leadership communication protocols for high-stakes findings.

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## Unit 4: Advanced Risk Evaluation, Escalation & Decision-Making Systems:

- Building advanced severity and likelihood models.
- Dynamic risk ranking in evolving conditions.
- Combining qualitative judgment with quantitative tools.
- Scenario-based escalation modeling.
- Predictive vs reactive risk interpretation.
- Escalation protocols to senior management and regulators.
- Decision-making thresholds in unacceptable risk scenarios.
- Strategic acceptance vs elimination vs mitigation.
- Impact mapping safety, environment, reputation, finance.
- Regulatory alignment and catastrophic risk indicators.
- Integration of AI and digital analytics into HAZOP decisions.
- Post-incident forensic integration into future HAZOPs.

## Unit 5: Governance, Integration & Organizational Transformation through HAZOP

- Creating HAZOP governance frameworks.
- Policy, procedure, and protocol development.
- Embedding HAZOP into the project lifecycle and MOC.
- KPIs for HAZOP effectiveness and leadership performance.
- Audit systems for HAZOP quality and integrity.
- Continuous improvement loops and knowledge management.
- Building internal HAZOP leadership academies.
- Maturity models: from reactive to predictive organization.
- Digitization & smart documentation of HAZOP outputs.
- Cross-functional integration Engineering, HSE, Operations, Maintenance.
- Creating legacy systems to prevent knowledge loss.
- Driving safety culture through leadership visibility.