Crew Resource Management for Control Rooms and Bridge Teams: Non-Technical Skills in Practice

7 – 11 June 2027
London - Central London four-star



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Introduction:

Crew resource management decides whether a control room, bridge or operations crew catches a drifting process, a missed call-out or a fatigued colleague before it becomes an incident. Many serious operational events trace back to breakdowns in communication, leadership, situational awareness and decision making rather than to equipment faults, yet crews are rarely trained in these non-technical skills together. This Core Concept course builds those skills for control room operators, shift supervisors, bridge teams and operations crews through structured tools and simulated scenarios. Participants finish with a Crew Resource Management Playbook and Scenario Debrief Record for a case crew.

Course Objectives:

- Explain crew resource management principles and the non-technical skills categories that shape crew performance in control rooms, on bridges and in field operations
- Maintain and rebuild situational awareness on shift by recognising loss cues and applying threat and error management countermeasures
- Apply closed-loop communication, structured call-outs and graded assertiveness to challenge unsafe actions across rank differences
- Conduct pre-shift briefings and shift handovers that transfer plant or vessel status, open actions and forecast threats without gaps
- Lead a crew through upsets by distributing workload, managing fatigue and choosing a decision route that fits the time available
- Produce a Crew Resource Management Playbook and facilitate a scenario debrief using behavioural marker observations

Target Audience:

- Control room and panel operators responsible for monitoring and controlling continuous processes, grids and networks
- Shift supervisors and crew leaders responsible for coordination, handover and escalation on shift
- Bridge watchkeeping officers and navigation teams responsible for passage execution and collision avoidance decisions
- Field and outside operators responsible for carrying out control room instructions during normal and abnormal operations
- Operations trainers and simulator instructors responsible for crew competence assessment and scenario debriefs

Course Outline:

Day 1: Crew Resource Management Origins and Non-Technical Skills

- CRM Evolution From Flight Deck to Bridge, Control Room and Maintenance Teams
- Accident Patterns Driven by Communication, Leadership and Decision Breakdowns
- Non-Technical Skills Categories: Situational Awareness, Decision Making, Teamwork, Leadership and Workload
- Operations Crew Structure: Shift Supervisor, Panel Operator, Field Operator and Officer of the Watch
- Crew Non-Technical Skills Self-Assessment Using a Behavioural Marker Checklist

Day 2: Behavioural Markers, Situational Awareness and Threat and Error Management

- NOTECHS-Style Behavioural Marker Systems for Observing Crew Performance
- Three-Level Situational Awareness Model: Perception, Comprehension and Projection
- Situational Awareness Loss Cues: Fixation, Ambiguity, Distraction and Unresolved Discrepancy
- Threat and Error Management Model: Threats, Errors and Undesired Operational States
- Error Trapping Countermeasures: Cross-Checks, Monitoring Duties and Stop-Work Triggers

Day 3: Crew Communication, Assertiveness, Briefings and Shift Handover

- Closed-Loop Communication: Call-Out, Read-Back and Verification
- Structured Message Formats for Abnormal Reports and Escalation Calls
- Graded Assertiveness and Challenge-and-Response Phrasing Across Rank Gradients
- Shift Handover Protocol: Face-to-Face Briefing, Status Board and Open Actions Log
- Pre-Shift and Pre-Task Briefing Agenda With Threat Forecast and Role Allocation

Day 4: Leadership on Shift, Workload, Fatigue and Decisions Under Pressure

- Authority Gradient, Shift Leadership Styles and Followership on Watch
- Workload Distribution During Upsets: Task Shedding, Delegation and Prioritisation
- Crew Fatigue Recognition on Night and Extended Watches: Warning Signs and Mutual Monitoring
- Time-Critical Decision Routes: Recognition-Primed, Rule-Based and Analytical Choices
- Stress, Tunnel Vision and Crew Recovery Techniques During Abnormal Operations

Day 5: Simulated Crew Scenarios, Debriefing and the CRM Playbook

- Simulated Control Room Scenario: Process Excursion With Communication Breakdown
- Simulated Bridge Team Scenario: Restricted Visibility Passage and Traffic Conflict
- Structured Scenario Debrief Facilitation Using Behavioural Marker Observations
- Crew Resource Management Playbook Drafting: Call-Out, Handover, Briefing and Escalation Standards
- Playbook and Scenario Debrief Record Presentation and Peer Challenge

Skills You Will Gain:

- Situational Awareness Management
- Closed-Loop Communication
- Graded Assertiveness
- Shift Handover Practice
- Threat and Error Management
- Crew Workload Distribution
- Time-Critical Decision Making
- Behavioural Marker Debriefing

Why Attend This Course:

- Return with a Crew Resource Management Playbook and Scenario Debrief Record written for a case control room or bridge team
- Rehearse call-outs, challenges and handovers in timed scenarios and receive observer feedback on each
- Recognise the early signs that a crew is losing the picture and intervene before an upset escalates
- Compare crew practice with peers from oil and gas, power, utilities, marine and transport operations

Conclusion:

Operational incidents rarely begin with a single fault; they grow when crews lose the picture, stay silent or hand over incomplete information. The course moves from crew resource management origins and non-technical skills categories, through behavioural markers, situational awareness and threat and error management, to closed-loop communication, assertiveness, briefings and shift handover, then to leadership, workload, fatigue and decisions under pressure. The final day runs simulated control room and bridge scenarios and produces a Crew Resource Management Playbook and Scenario Debrief Record ready for use on shift.