



HSE KPIs and Safety Performance Measurement Training: Leading Indicators and Programme Evaluation

13 – 17 December 2026

Riyadh - KAFD district five-star



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Introduction:

HSE KPIs and safety performance measurement training on leading indicators and programme evaluation is a five-day course for HSE managers, advisers and performance analysts, ending with an HSE KPI framework, dashboard and programme evaluation plan for a case company. Many organisations still judge HSE performance on injury rates that move by chance, reward low numbers that suppress reporting and fund safety initiatives without testing whether they work. Participants already compile or interpret HSE statistics at work, and the course is taught through case studies using indicator data from several sectors. CoreConcept Training Center delivers this course on evidence-based HSE performance measurement.

Course Objectives:

- Calculate and interpret lagging HSE rates such as TRIR, LTIF and severity rates, recognising when a change reflects random variation rather than real improvement
- Design leading indicators with clear definitions, data owners and thresholds, and validate them against outcome trends over time
- Measure safety climate and culture with survey instruments and maturity models, and place tiered process safety indicators alongside them where relevant
- Build HSE dashboards with control charts, RAG thresholds and data quality rules, and benchmark results internally and against peers
- Set HSE targets and supervisor and contractor performance criteria that avoid perverse incentives and protect incident reporting
- Evaluate safety initiatives and interventions with logic models and comparison designs, and report the results to management review and the board

Target Audience:

- Managers responsible for HSE performance reporting across one or more sites
 - Advisers responsible for selecting and defining HSE indicators for operational units
 - Analysts responsible for HSE data collection, dashboards and statistical trend analysis
 - Managers responsible for evaluating safety initiatives and justifying their budgets
 - Managers responsible for monitoring contractor HSE performance and scorecards
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Course Outline:

Day 1: Why Measure HSE Performance and Baseline Current Indicators

- Purposes of HSE Performance Measurement Beyond Injury Counting
- TRIR, LTIF and Severity Rate Calculation per Hours Worked
- Fatal Accident Rate and Exposure Normalisation Choices
- Random Variation in Small-Site Injury Rates Using Poisson Limits
- Current HSE Indicator Inventory and Gap Baseline Scorecard

Day 2: Leading Indicator Models, Process Safety Tiers and Culture Measures

- Input, Activity and Outcome Logic for Leading Measures
- SMART Leading Indicator Definition Sheet With Owner and Threshold
- CCPS Tiered Process Safety Event Indicators Overview
- Nordic Occupational Safety Climate Questionnaire Scoring and Interpretation
- Safety Culture Maturity Models Compared With Climate Survey Results

Day 3: Building Dashboards, Data Quality Rules and Benchmarks

- HSE Dashboard Layout With RAG Thresholds and Trend Lines
- Statistical Process Control Charts for Monthly HSE Indicator Data
- Data Quality Rules for Completeness, Timeliness and Classification Consistency
- Internal Benchmarking Across Sites, Business Units and Contractors
- External Peer Benchmarking With Normalised Rates and Shared Definitions

Day 4: Targets, Incentives, Intervention Evaluation and Accountability Criteria

- HSE Target Setting Without Perverse Incentives or Reporting Suppression
- Leading Indicator Validation by Correlation With Outcome Trends
- Logic Model and Baseline Design for Safety Intervention Evaluation
- Before-After Comparison Group Method and Kirkpatrick Evaluation Levels
- Supervisor and Contractor Safety Performance Scorecard Criteria

Day 5: Case Study: HSE KPI Framework, Dashboard and Evaluation Plan

- Case Company Injury and Near-Miss Data Diagnosis
 - Case Leading and Lagging Indicator Set Selection
 - Case HSE Dashboard Build With Data Quality Checks
 - Management Review and Board HSE Performance Report Drafting
 - HSE KPI Framework and Programme Evaluation Plan Completion
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Skills You Will Gain:

- Lagging Rate Analysis
- Leading Indicator Design
- Safety Climate Measurement
- HSE Dashboard Design
- HSE Data Quality Control
- Performance Benchmarking
- Safety Intervention Evaluation
- Board HSE Reporting

Why Attend This Course:

- Deliver an HSE KPI framework, dashboard and programme evaluation plan to the HSE director and the management review team for approval
- Decide which HSE indicators to keep, retire or add using validation evidence rather than habit
- Avoid funding safety initiatives that show no effect and targets that drive under-reporting of incidents
- Brief supervisors, contractor managers and data owners on shared indicator definitions, thresholds and data rules

Conclusion:

Back at work, the participant gives the HSE director and the management review team an HSE KPI framework, dashboard and programme evaluation plan they can use to judge performance, allocate prevention budgets and challenge targets. Supervisors, contractor managers and data owners work from the same indicator definitions and data quality rules, so site comparisons hold. After the first reporting quarter, the unit should review which leading indicators moved ahead of outcomes, how many data errors the quality rules caught and whether the evaluated intervention showed a measurable effect.

Frequently Asked Questions FAQ:

What should participants know before HSE KPIs and safety performance measurement training?

Participants should already compile, review or act on HSE statistics such as injury rates, inspection results or near-miss reports. Basic spreadsheet skills help. Bringing anonymised indicator definitions and recent monthly data from their own organisation lets participants test the case methods on familiar figures.

How does HSE KPIs and safety performance measurement training differ from safety management system or audit courses?

It concentrates on choosing, validating, displaying and evaluating HSE indicators and safety initiatives. Management system courses cover building the whole system and audit courses cover checking conformity on site, so both appear only where they feed indicator data or management review.

Why are leading indicators needed alongside lagging HSE KPIs?

Lagging rates such as TRIR show harm after it happens and swing randomly at small sites. Leading indicators track whether preventive controls work before incidents occur, so the organisation can act earlier, provided each one is clearly defined and validated against outcomes.

What do participants take back from HSE KPIs and safety performance measurement training?

Participants take back an HSE KPI framework, dashboard and programme evaluation plan for a case company, covering indicator definitions, thresholds, data quality rules, benchmarks, targets and a board report. It can be adapted to their own organisation for management review.
