



# Tripod Beta Practitioner Training

Consultant / Trainer:

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This course provides the skills needed to investigate and analyse incidents in a structured manner, with the aim to prevent recurrence and allow organisational learning. You will learn how to collect evidence and analyse that in order to identify barriers that should have prevented the incident, but which failed or were missing. This happens in most cases due to human activity – and we must understand that to identify the preconditions and underlying causes at the organisational level that explain why that activity – in hindsight an error – did occur. This systematic approach efficiently discriminates between relevant and irrelevant factors.

Tripod Beta is one of the few incident investigation methods that is explicitly aimed at identifying causes at the organisational level. Improvements at operational level usually have only a local and limited impact. Sustainable improvement, however, can only be achieved if deficiencies at the organisational level are resolved.

This Tripod Beta training is accredited by the Stichting Tripod Foundation, which maintains and develops the knowledge of Tripod Beta. Course participants who pass the knowledge assessment on the last day acquire Bronze Practitioner Accreditation. All course participants receive a certificate of attendance.

### Participants

This **Petrogenium** course can be tailored for awareness/inexperienced staff, for intermediate and for experienced personnel. Furthermore the course can be customized for a specific refinery, plant or unit. The option for post-course consultancy/help-desk support is also available.

Participants may include:

- HSEQ professionals
- Process/Process Control engineers
- Maintenance managers
- Production managers
- Consultants

### Learning Objectives

- Understanding accident causation and human factors
- Obtain investigation and analysis skills
- Enable sustainable learning in your organization

### Training Materials

The training material provided consists of a training slide pack, the official Tripod Beta Manual (softcopy) and a test version of the IncidentXP software.

## Programme

### Day 1 Accident Theory

- Why investigate accidents?
- Investigation as part of a Safety Management System
- Accident Causation
- “The Impossible Accident”
- Human Behaviour Model
- Error types: Slips, Lapses, Mistakes and Violations
- When to use Tripod Beta?
- Investigation Management: Process, Terms or Reference, Team
- (Exercises throughout)

### Day 2: Fact Finding and Timeline

- Investigation Plan
- Fact Finding: Persons, Positions, Parts and Papers
- Interview: theory, practice and exercises
- Establishing the Timeline/Sequence Time Events Plot (STEP)
- Introduction to BowTieXP/IncidentXP
- Tripod Trios, Controls and Barriers
- (Exercises throughout)

### Day 3: Tripod Beta Analysis

- Tripod Beta Core Diagram: Event-Object-Agent
- Causation Path: Immediate Cause, Precondition, Underlying Cause
- Basic Risk Factors
- Case Work

### Day 4: Recommendations and Reporting; Case Work

- Case Work
- Recommendations and Remedial Actions
- The Investigation Report
- Bronze, Silver and Gold accreditation
- Knowledge assessment