





# **Course: Operational Excellence in the Process Industry**

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This course presents the best practices from High Reliability Organizations (HROs) with respect to both excellence and safety. HRO is a term that refers to industries such as oil and gas, process, nuclear and aviation, where they possess a high degree of reliability despite their hazardous environment. It shows how organizations can learn from failures and near misses, as well as from other industries. Operational excellence will cover aspects of safety, risk, reliability, and quality management. This will include best practice at both strategic and operational levels, as well as in specific areas that relate to management skills, reliability and decision analysis, benchmarking, and information systems.

#### This course will feature:

- Understanding of safety, risk and continuity of operations
- Development of people management skills
- Mastering techniques that can enhance plant reliability
- How to conduct benchmarking and quality systems auditing
- Applying decision analysis approaches

## What are the Goals?

- Explain the benefits of acquiring best practices from HROs
- Show how activities play a part in helping their organization perform at a higher level
- Determine methods for generating and implementing effective performance metrics
- Use a process improvement methodology back at work
- Analyze critically the methodologies employed in the organization & implement improvements

# Who is this Course for?

This course is highly recommended for all Operations, Maintenance, Reliability, Engineering and Technical Support staff. Also, this course is applicable to any person actively involved or contemplating safety, performance measurement, improvement and/or quality and reliability related activities.



# • This course is suitable to a wide range of professionals but will greatly benefit:

- Operations & Process Professionals
- Reliability & Safety Professionals
- $\circ~$  Other professionals involved in process improvement

#### How will this be Presented?

This course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. This includes tutor facilitation, direct input, delegate discussions, case studies, reviews, interactive exercises and video.

# **The Course Content**

#### • Day One : Safety Systems and Risk Management

- $\circ$  Safety first
- Learning from failures
- Analyzing near misses, incidents & accidents
- Taxonomy of theories
- Risk assessment, Choice of case studies
- Types of recommendations

# • Day Two : Continuity of Operations - Plant Systems Reliability

- Coping with risks
- $\circ~$  Defining reliability and resilience
- $\circ~$  Reliability Centered Maintenance (RCM) techniques
- Fault Tree Analysis (FTA)
- Reliability Blok Diagram (RBD)
- Practical examples and case studies

## • Day Three : Case Studies from High Reliability Organizations (HROs)

- Case from Aviation industry
- Case from Process industry
- Case from Oil and Gas industry
- Case from Nuclear industry
- Group work and group presentations

## • Day Four : The Concept of Generic Lessons & Benchmarking

- Attributes of the generic lessons
- Best practice of learning from failures from different industries
- Best practice can be learned from worst practice
- $\circ\,$  The ten generic lessons and the three underpinning factors
- $\circ~$  What is benchmarking? History of benchmarking
- Different methods of benchmarking and how they relate to each other

## • Day Five : A Model of Learning and Unlearning Excellence



- $\circ\,$  Adaptive organizational learning
- $\circ$  Routine dynamics
- $\circ\,$  The Decision-Making Grid (DMG) model
- $\circ\,$  A framework for analyzing near-misses and failures
- High severity with low frequency versus high severity with high frequency



The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

- Theoretical Lectures:
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- Scientific Assessment:
  - $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.
- Brainstorming and Interaction:
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- Practical Cases:
  - $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ\,$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.