PACEUP
YOUR OIL & GAS TRAINING SOLUTIONS

BOWTIE BARRIER-BASED RISK MANAGEMENT

For Practitioners

15 - 16 August 2023 | 2 Days | Kuala Lumpur

Program Overview

The Swiss Cheese Model, propounded by Professor James Reason of the University of Manchester in the United Kingdom, is widely accepted as the basis of incident or loss causation. In a nutshell, the model posits that unwanted accidents, incidents, failures or business upsets happen because the controls, safeguards, defenses (which Professor Reason collectively termed as "barriers") that an organization typically sets up to prevent such occurrences FAIL!

Risk management is performed to ultimately prevent incidents. Whereas there exists a number of tools for this purpose, depending on circumstances or situations, the risk management technique that faithfully captures the essence of the Swiss Cheese Model is the Bowtie, which uses a diagrammatic format. If done correctly, the Bowtie incorporates all the elements of a particular risk scenario. It also serves as a means of communicating to the workforce and other stakeholders how risks are being managed by a particular organization.

Setting up basic Bowtie risk models is easy enough, but is that all there is to it? According to the Swiss Cheese Model, INCIDENTS HAPPEN BECAUSE BARRIERS FAIL. Barrier management, with the objective of ensuring their integrity, availability and reliability, is therefore an important facet of risk management or incident prevention. Effective barrier management involves linking the barriers on the Bowties to specific elements of the management system such as HSE-critical activities/tasks and their accountabilities/responsibilities, standards, policies and remedial actions to address any shortfalls.

The Bowtie technique is currently widely used in such diverse sectors as oil and gas, chemical process, power generation, mining, aviation/aerospace, utilities, road/rail transportation, healthcare, manufacturing, IT security, finance and government, among others.

This two-day course is aimed at practitioners and specialists in in the management of HSE, Process Safety, Operations, Maintenance, Engineering Design, Projects and Enterprise Risk. It highlights the key principles of Incident/Loss Causation, the Hazards and Effects Management Process (HEMP) and how the Bowtie technique can augment risk management in their organizations, at the same time facilitating effective risk communication. Participants will be required to undertake a number of worked exercises in order to gain practical experience with the use of Bowties. The training will end with a participants' examination.

COURSE OVERVIEW

Course Objectives

This course is designed to help participants to:

- Achieve an understanding of the key principles of Incident/Loss Causation, the Hazards and Effects Management Process (HEMP) and Barrier-based Risk Management;
- Acquire hands-on experience in performing Bowtie risk analysis and in developing enhanced Bowtie models to manage significant hazards associated with the client's business activities;
- Gain proficiency in the use of the BowTieXP software tool, and;
- Gain a firm grasp of barrier management and acquire practical know-how of it can be effectively achieved.

Who should attend?

This course is designed for practitioners and specialists in the management of HSE, Process Safety, Operations, Maintenance, Engineering Design, Projects and Enterprise Risk

Course Methodology

- Interactive Learning
- Real Case Studies
- Worked Exercises
- Q&A Session

COURSE OUTLINE

INTRODUCTION AND THE PRINCIPLES OF LOSS CAUSATION AND LOSS PREVENTION , BARRIER-BASED RISK MANAGEMENT

- Early Barrier Thinking
- The Swiss Cheese Incident Causation Model
- Cause & Effect Pathways
- Tripod Beta, BSCAT and Barrier Failure Analysis with examples
- Combined FTA/ETA – the case for Barrier-based Risk Management
- History and development of the Bowtie technique
- The Hazards & Effects Management Process (HEMP)
- Visualizing risk scenarios using the Bowtie technique
- Examples of enhanced Bowtie models
- Risk Management & ALARP
- Defense in Depth and Complexity of Controls
- When Bowties are Used
- Advantages of the Bowtie technique
- Risk Communication, Advantages & Limitations of the Bowtie technique

INTERACTIVE BOWTIE WORKSHOP – USE OF THE BOWTIEXP SOFTWARE

Bowtie nomenclature and definitions:

- Hazard
- Top Event
- Threat
- Consequence
- Re-configuring the Risk Assessment Matrix in the BowTieXP
- Control Barrier
- Recovery Preparedness Measure
- Hints and tips on Barriers
- Incorporating Barrier Acceptance Criteria in the BowTieXP
- Escalation Factors
- Escalation Factor Control
- Mini-exercises on nomenclature and definitions and on creating basic Bowtie models using the BowTieXP software – key functions and features

THE ESSENTIALS OF BARRIER MANAGEMENT

- Linking Barriers to the Management System
- Activities and Tasks and Assignation of Responsibilities
- Safety Critical Elements (SCEs) in the Bowtie
- System and Parts
- Independent Barriers
- Barrier Effectiveness
- Corrective/Remedial Actions
- Key Functions and features in the BowTieXP software for incorporating these essential features of barrier management, including generating reports and presentations

BOWTIE ANALYSIS AND BUILDING BOWTIE MODELS USING THE BOWTIEXP SOFTWARE

- Syndicate Exercises

SUMMARY & REVIEW

- Learning points and takeaways

YOUR EXPERT TRAINER

FAIZAL FARID WAJIDI

Faizal Farid Wajidi is an Independent Principal Consultant, specializing in HSE & Risk Management, Environmental Assessment, Health Physics and nuclear applications. He has more than 35 years of professional experience, mainly spent in the major hazard sector.

In the field HSE & Risk Management, Faizal has broad experience of applying risk management tools and has applied the software-based Bowtie tool for offshore HSE Case studies. Among the earliest users of the BowTieXP software, he is a qualified and experienced Bowtie workshop facilitator having led several HSE risk- and Enterprise risk-based Bowtie workshops for safety regulators and for major companies in the oil and gas, petrochemical, road transportation, infrastructure (co-generation, district cooling, biomass, piped gas, desalination), engineering, oil-well services, maritime and aviation/aerospace sectors in Malaysia, Indonesia and Singapore.

Faizal has previously worked with Shell, Schlumberger, ICI Physics and Radioisotope Services Group, Risktec and DNV GL He graduated from the University of Reading, United Kingdom, with a B.Sc (Hon) degree in Mechanical Engineering and Mathematics.

BowTieXP
Advanced Practitioner
Official Certified Partner

Faizal is the first of the Netherlands-based Wolters Kluwer Enablon (ne, CGE Risk)'s partners in the South East Asia region to undergo the Advanced Practitioner level certification, a scheme introduced in early 2020. He is now a proud bearer of the "Advanced Practitioner" badge.

IncidentXP
Practitioner
Official Certified Partner

As South East Asia's sole participant, Faizal completed an "AuditXP and IncidentXP Train-the-Trainers" online course conducted by Wolters Kluwer Enablon in April 2021, the first in a new series of stand-alone courses involving the AuditXP and IncidentXP tools on their own. He was subsequently certified to "Practitioner" level in May 2021, based on Wolters Kluwer Enablon's certification criteria.

FEEDBACKS FROM OUR PAST PARTICIPANTS

"'Good to have this training as introduction and familiarization to the risk assessment and bowtie technique."

QHSE Engineer, Vantage Oilfield Solutions Sdn Bhd

"'A very experience Instructor. Can answer all questions regarding this subject."

HSE Executive, RUHM Marine Sdn Bhd

"'This training is important thing to identify major accident hazard and can be applied to develop comprehensive risk assessment (Bowtie)"

Petronas Carigali Muriah Ltd

HRD CORP CLAIMABLE

REGISTRATION FORM

BOWTIE BARRIER-BASED
RISK MANAGEMENT FOR PRACTITIONERS

PACEUP
YOUR OIL & GAS TRAINING SOLUTIONS

TRAINING DETAILS

Title : Bowtie Barrier-Based Risk Management for Practioners
Date : 15 - 16 August 2023
Venue : Kuala Lumpur

Individual Price	Grouping Price (min. 3 pax)
RM 3,400 / pax	RM 3,200 / pax

RM 100 Discount** for **MOGEC Member (Individual Price)

*Register before **8 August 2023***

PARTICIPANTS

Name : .....
Job Title : .....
Telephone : .....
Email : .....

Name : .....
Job Title : .....
Telephone : .....
Email : .....

Name : .....
Job Title : .....
Telephone : .....
Email : .....

Note : Please attach a list of participants if insufficient space.

AUTHORISATION

Name : .....
Job Title : .....
Telephone : .....
Email : .....

ORGANISATION

Name : .....
Telephone : .....
Fax : .....

SEND INVOICE TO

Department : .....
Address : .....
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PAYMENT DETAILS

1. Participants are required to pay before or on the first day of the course.

2. (Please Tick Where Applicable)

☐ Cheque made payable to Pace Up Sdn. Bhd.

☐ Credit Card senangPay

☐ Bank Transfer : Pace Up Sdn. Bhd.
Sdn. Bhd. Bank : Malayan Banking Bhd.
Bank Address : Taman Setiawangsa Branch,
Wisma Prima Peninsular,
2, Jalan Setiawangsa 11,
Taman Setiawangsa,
54200 Kuala Lumpur

Account No. : 562188319491
Swift Code : MBBEMYKL

(All bank charges to be borned by payer.
Please ensure that Pace Up receives
the full invoiced amount.)

3. We do not give refunds for cancellations. However, you may substitute participant (s) at any time.

4. If we receive cancellations in writing more than (7) days before the training course, you will receive a 100% credit (valid for one year) to be used for another training course.

5. Cancellations received less than seven days before to the training course may result no credit for future training.

6. If we postpone training course, participant payments for the postponed course will be 100% credited towards the course at a rescheduled date.

7. We shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed.

IN HOUSE TRAINING SOLUTION

☐ Yes, I would like to organise this training course in-house and save up to 50% of total course fees! Please send me more information.

Please complete this form and fax to ***+603 2858 5285*** or, scan and email to ***azmirul@paceup.com.my***

For more info, please call ***Azmirul*** at ***+60 19 275 4900***

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MALAYSIAN OIL & GAS ENGINEERING COUNCIL

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