



It's all about RISK!

Professional Development Series

Workshop 1: *Operational Risk Management & Bow-Tie Analysis*

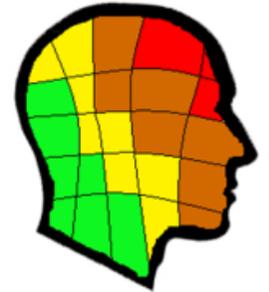
Workshop 2: *Understanding Risk-taking Behaviour*



It's all about RISK!

"Risk management is not, and will never be, a magic formula that will always give you the right answer.

It is a way of thinking that will give you better answers to better questions, and by doing so, help you shift the odds in your favour..."



Dan Borge – *The Book of Risk*

There is an element of risk in all we do. Workplaces, especially those at sea, are dynamic and risks constantly change in shape, probabilities and exposure. But it's clear from the evidence that the current safety measures alone aren't managing risk effectively and delivering the required outcomes.

The management of safety is perhaps the most practical of all the risk management disciplines. Accidents, injuries, equipment damage and environmental pollution are all visible consequences of inadequate risk management.

Both the IMO *Guidelines on the Basic Elements of a Shipboard Occupational Health and Safety Programme* (MSC-MEPC.2/Circ.3) and the ILO *Maritime Labour Convention* (MLC 2006) expressly advocate a risk-based approach to safety on board.

In response to this, **Pro-Safe Marine** is now offering a specialist 2-part training package aimed at Maritime Safety Managers, DPA's, Superintendents, Senior Officers, and all those seeking an in-depth understanding of Risk Management and Risk-taking Behaviour at sea.

Workshop 1: <i>Operational Risk Management & Bow-Tie Analysis</i>	(2 days)
Workshop 2: <i>Understanding Risk-taking Behaviour</i>	(1 day)

Whilst delegates are encouraged to undertake both workshops together; either workshop can be attended separately if required.

These workshops will provide you with the required knowledge, practical skills and tools to carry out the risk assessment and management tasks effectively.

It's about a new way of thinking. It's all about RISK...

In addition to the training outlined here, we can also work with your teams in the practical application of physical risk audits. These can be particularly useful in identifying vessel-specific hazards, assessing risks and identifying control measures. We can conduct an audit, and present you with a comprehensive report (with photographic evidence), based on the results from the exercise. We can also assist with the development of detailed company-specific risk management programs, mentoring and additional training.

It's all about RISK!

This 3-day training package (delivered in 2 separate workshops) will provide a comprehensive introduction to practical Risk Management Practice, as well as an in-depth overview of Risk-taking behaviour – trying to understand why people take clear risks in dangerous environments.

We will make extensive use of case studies to provide a practical, engaging and interactive overview of key topic areas – ultimately promoting the application of this vital information in the workplace, on land or at sea.

Throughout the training, we will make extensive use of industry examples and case-studies, as well as best-practice standards and guidelines. Delegates will be provided with:

- Course slides & accompanying notes
- Practical case studies / exercises
- Access / links to Risk / HF information

Workshop 1: *Operational Risk Management & Bow-Tie Analysis*

This **2-day workshop** covers 2 important Risk Management tools: ORM & Bow-Tie Analysis.

The ORM 4-STEP “SAFE” PROCESS

Operational Risk Management (ORM) is a practical **decision-making tool** used by maritime personnel at all levels to increase operational effectiveness by identifying, assessing, controlling and monitoring risks. The ORM processes adds structure to the process required to make informed decisions – on a continuous basis. The **SAFE** process is simple – and can be used immediately as needed when faced with a dangerous situation, or alternatively it can be proactively discussed before the operation proceeds, and recorded formally.

Step 1: SEE the Hazard: A hazard is defined as any real or potential condition that can cause degradation, injury, illness, death or damage to or loss of equipment or property. Experience, professional competence, and specific analytical tools help identify risks.

Step 2: ASSESS the Risk: This is the application of quantitative and qualitative measures to determine the level of risk associated with specific hazards. This process defines the probability (likelihood) and severity (consequence) of an accident that could result from the hazards arising from the exposure of humans or assets to the hazards.

Step 3: FIX the Problem: Investigate specific strategies and tools that reduce, mitigate, or eliminate the risk. This analysis must take into account the overall practicality and benefits of remedial actions, providing alternative choices if possible. These will include behavioural, engineering, and administrative controls, as well as the appropriate PPE and Safety Gear.

Step 4: EVALUATE the Fix: Once controls are in place, the process must be periodically re-evaluated to ensure their effectiveness. Vessel personnel must fulfil their respective roles to assure that the controls are maintained over time. The risk management process continues throughout the life cycle of the vessel, system or activity.

Bow-Tie ANALYSIS

Bow-Tie Risk Analysis has become popular as a structured method to assess risk where a qualitative approach may not be possible or desirable. Bow-Tie diagrams clearly display the links between the potential causes, preventative and mitigative controls and consequences of a major accident.

The success of the diagram is that it is simple and easy for the non-specialist to understand. Bow-Ties are a great way to involve the broader team in risk management – it gives a visual summary of all foreseeable hazards, consequences and controls derived from a variety of plausible accident scenarios.

This session will provide you with the tools to look at risk from a macro operational perspective – starting with the identification of the things that can go wrong at sea.

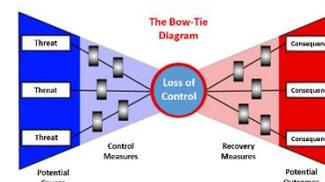
Workshop 1 Framework

Day 1: Operational Risk Management

- An introduction to Risk Management principles
- Overview of theory and practice in ORM
- SAFE in practice
- Practical application of ORM using case studies



Day 2: Bow-Tie Analysis



- Overview of theory and practice using Bow-Ties
- Applying the Bow-Tie methodology
- Providing the relevant ‘tools’ to assist in the process
- Practical Exercises, extensive group work

This is a must-do workshop for everyone interested in practical risk management practice.

Workshop 2: Understanding Risk-taking Behaviour

As indicated, there is an element of risk in all we do. Workplaces, especially those at sea, are dynamic and risks constantly change in shape, probabilities and exposure. So while the standard risk models – matrices, bow-ties, etc. are helpful in starting the process, often these aren't enough as they generally produce a static set of safe operating procedures. And these may not be enough to effectively control the ever-changing risk at sea. We need to educate seafarers to think about risk, to UNDERSTAND risk – and this skill can be taught.

This interactive, intensive **1-day workshop** explores the interface between human factors and risk by examining the cognitive and behavioural processes behind risk-taking behaviour. It focusses on developing a full understanding of risk, and the practical strategies needed to identify and manage the factors behind the often unpredictable workplace behaviours identified as factors in accident causation. It will also explore the concept of risk homeostasis, as well as the role of incentives in reducing risk-taking behaviour.

The workshop will work towards developing a model – based on cognitive psychology – where the focus is on the 'cognition' (*understanding*) of risk in the workplace, and the accompanying psychological processes required for full understanding.

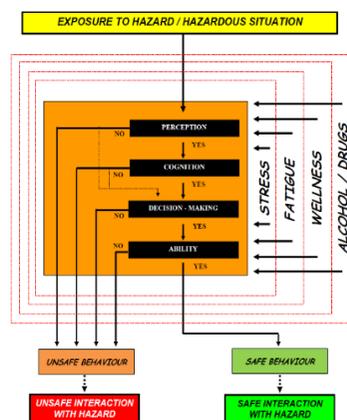
We will focus the first two steps in the modified Ramsey model in particular: perception and cognition of the risk – the most important factors in the *situational awareness* equation.

The human perception of risk is a complex process and how the human mind processes that information, is essential in understanding why workers often take risks that would seem strange in hindsight.

Perception is generally defined as *the process by which an individual selects, organises and interprets stimuli into a meaningful and coherent picture of the world*, but unfortunately we see the world (and thus the workplace), not as it is, but as we are – or as we are conditioned to see it.

And even if we do perceive the situation correctly, this is not enough – we need to fully understand it. Cognitive thinking is *the process of making sense of the information we receive – transforming sensory input into meaningful conscious content which is converted to memory content and ultimately influences behaviour*.

Understanding risk and risk-taking behaviour is the key to achieving sustained employee behaviour improvement and changing attitudes toward safety.



Workshop 2 Framework

Introduction to Risk-taking Behaviour

- Understanding Risk & Risk-taking behaviour – using the Ramsey Model
 - Perception
 - Cognition
 - Decision-making and
 - Ability
- Human Performance and Information Processing
- Practical Case Studies



Strategies to manage Risk-taking Behaviour

- Risk Homeostasis as a concept
- Incentive programs and risk-taking behaviour.
- Practical recommendations to reduce risk-taking
- Practical Case Studies

BESPOKE IN-HOUSE TRAINING

Our bespoke training packages are built on the standard courses as outlined above, but also offer additional benefits:

- Flexibility in content, depending on your requirements
- Expert advice on solutions specific for your organisation
- Personalised case studies
- A more cost effective solution for larger groups of delegates
- Delivery at your premises and at a time convenient to all delegates
- If required, separate sessions can be delivered over a specified period

ASSESSMENT

The courses will be assessed by multiple choice examinations, and group discussion on each module. Successful participants will receive a certificate of completion from **Pro-Safe Marine**.

INFORMATION / CONTACT DETAILS

For more information, please contact Eric Holliday AFNI, **Pro-Safe Marine**

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