



Getting to Why?

Professional Development Series

Workshop 1: *Structured Accident Investigation (Marine ICAM)*

Workshop 2: *Human Factors for Accident Investigators*



Getting to Why?

"I cannot accept that accidents only befall the incompetent and increasingly I find myself wondering how it is that competent people in beneficial surroundings can make serious mistakes."

Rod Johnson - U.K. Coastguard Agency Training Officer

A crewmember has fallen off an oil drum whilst repairing a hydraulic line on your vessel and has been seriously injured. You've finished your investigation. You know what happened, and how it happened, but do you know WHY it happened? This is the step often overlooked – simply because it's actually quite difficult to fully understand individual human behaviour and decision-making...

After all, to err is human...or is it?

We know from experience that whenever safety is discussed, it's not long before somebody produces a statistic showing that most accidents in industry are caused by *human error*. A typical statement may suggest that up to 90% of all workplace accidents have human error as a primary cause, which in turn gives rise to an impression of inevitability. We are told that "accidents will happen", or that "anyone can make a mistake" or "to err is human". But simply writing off accidents to operator or worker error is a simplistic, if not naive, approach to accident causation. However, suggestions that anything can be done to correct this situation are often dismissed with the defeatist adage that "*we can't change human nature*". **Or can we?**

Human Error?

A departure from accepted or desirable practice on the part of an individual or a group of individuals that can or does, result in unacceptable or undesirable behaviour.

Pro-Safe Marine is now offering a specialist 2-part training package aimed at maritime Accident Investigators, Safety Managers, Responsible Persons, and all those seeking an in-depth understanding of the Human Factor in accident causation.

Workshop 1: *Structured Accident Investigation (Marine ICAM)*

Workshop 2: *Human Factors for Accident Investigators*

Whilst delegates are encouraged to undertake both workshops together, they can also be taken separately if needed. The workshops flow effortlessly into one another, so for those who don't need the Accident Investigation course, but want only the Human Factors course, simply start at day 3. The HF course can easily be applied to any accident investigation methodology.

This 4 day training package (delivered in 2 separate workshops) will provide a comprehensive introduction to practical Accident Investigation techniques, as well as an in-depth examination of the role of Human Factors in accident causation.

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.



NOTE: Both of these courses can be offered as bespoke in-house training packages, built on the standard courses, but also offering 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

Workshop 1: Structured Accident Investigation (Marine ICAM)

Whether it's an accident, incident, or a near-miss, proper investigation is crucial.

We are constantly told that “accidents don't just happen, they are caused”. Yes, they probably are. But it's important to put it all into perspective – after all, nobody intentionally does something to injure or kill them self in the workplace (under normal circumstances, that is). There are **always** a number of factors that ultimately combine in some way to “cause” the accident. There is **never** a single accident cause. A professional investigation – even for incidents and near-misses – will allow you to identify what went wrong, and to proactively resolve hazards before another, potentially more serious event occurs.

The primary purpose of an investigation is to ascertain the cause(s) of an accident to determine if remedial measures should be taken to prevent the future occurrence of a similar incident. Investigations are to be seen as a primary means of safety promotion and not a means to determine liability per se. The information obtained from investigations can be used to measure the effectiveness of the safety management system, as well as a means to monitor existing policies, adequacy of existing regulations, and the operational practices on board.

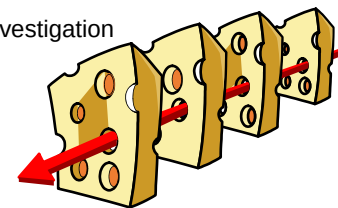
This 2-day workshop describes the key elements of an investigation in detail: remit, evidence gathering, interviewing techniques, analysis of immediate and underlying causes and recommendations. It emphasises the need for cooperation in the achievement of good accident investigation and improved safety management.

We will use the ICAM approach in this workshop. ICAM is based on the Reason Model, and is increasingly becoming the “standard” used in investigating accidents to personnel in other high-risk industries. It provides an easily-followed step-by-step approach to gathering and sorting information, analysis, and the development of recommendations. Whether you're new to the subject, or just need a refresher, this workshop is a must.

Workshop 1 Framework

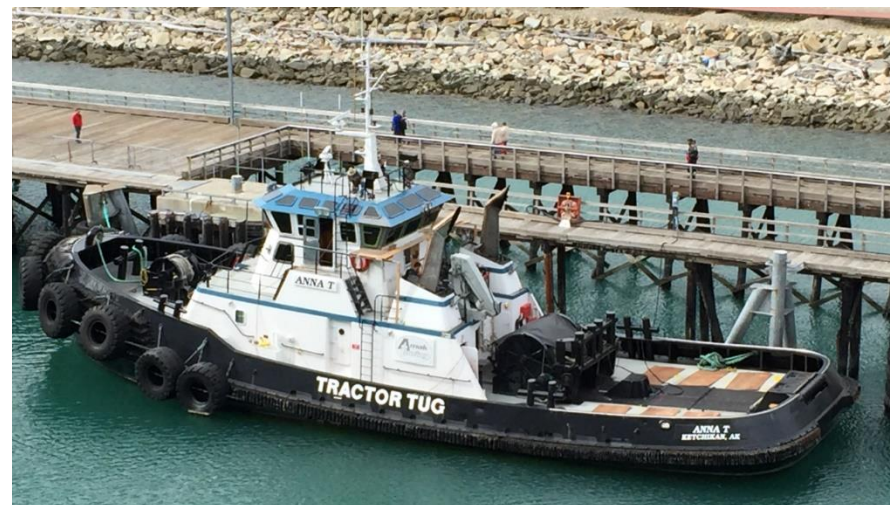
Day 1: Introduction to Structured Accident Investigation

- The need for effective accident investigation
- Overview of theory and practice in accident investigation
- Examining various investigation models
- Outlining the ICAM approach



Day 2: Putting Knowledge to Practice

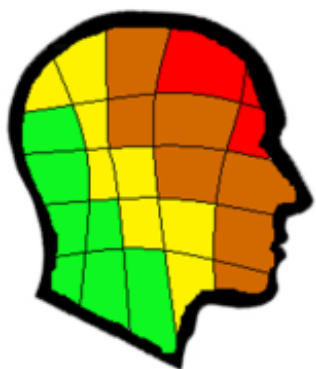
- Applying the ICAM methodology
- Providing the relevant ‘tools’ to undertake investigations
- Interviewing witnesses, gathering and analysing information
- Determining root cause(s)
- Making recommendations to prevent recurrence
- Practical Case Studies and Exercises



Workshop 2: Human Factors for Accident Investigators

Given that the majority of accidents have the human as a major causation factor, any accident investigation process would be incomplete without a strong examination of the Human Factor.

This intensive 2-day workshop will focus on the analysis of accidents to personnel on board and will clarify the process of identifying root causes using practical examples. We will provide an overview of available analysis methods and the application of these to identify the underlying human deficiencies responsible. It will highlight how each facet of an accident is influenced by human factors and that you need to question not only what people did, but why they did it.

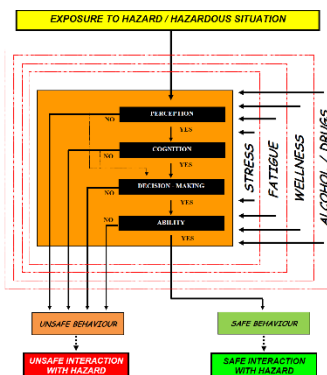
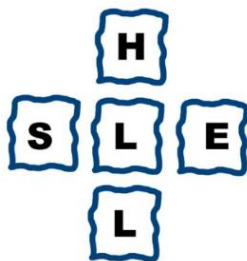


While Human Error is implicated in the majority of accidents, stopping the investigation at that point won't provide the necessary information to prevent recurrence. We all make mistakes – it's part of the human condition. We will therefore also examine the theory behind human error and risk-taking behaviour using the latest scientific knowledge and models to provide in-depth understanding of these human traits.

Throughout this workshop, we will examine a number of workplace accidents from the human factors perspective to identify possible errors and recommendations for safety improvements.

To provide a structure to this subject, the workshop will be built around existing Human Factor models:

- SHELL
- HFACS
- Ramsey



Workshop 2 Framework

Day 1: Overview of Human and Organisational Factors

- Introduction to incident and accident investigation and analysis
- Human Factors from an Accident Investigator's Perspective.
- Overview of problems with accident investigations
- Interviewing witnesses to identify patterns of behaviour
- Introduction to Human and Organisational Factors
- Human Performance and Information Processing
- Examining Human Error and Risk-taking Behaviour
- The link between Human Factors, Safety Management and Safety Culture
- Practical Case Studies

Day 2: HF Models & Practical Application

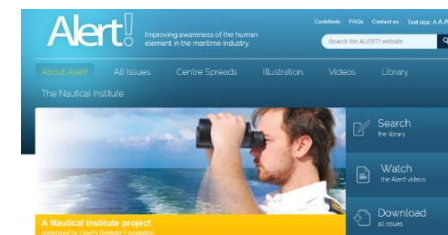
- Human Factor frameworks / models:
 - SHELL Model
 - HFACS Model
 - Ramsey Model
- Selecting an appropriate analysis method
- Practical Human Factor recommendations
- Practical Case Studies



WORKSHOP MATERIAL

Throughout the training, we will make extensive use of Industry best practice material, including The Nautical Institute's award-winning **Alert!** Material (online bulletins, videos & charts). Delegates will be provided with:

- Copies of **Alert!** Articles
- Course slides & accompanying notes
- Practical case studies / exercises
- Access / links to HF information



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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