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# Risk Made Simple



# Risk Made Simple

## Contents

Introduction.....	01
Risk Assessments: A Simple Process.....	02
Making it Formal.....	02
Drinking a Cup of Coffee: A Risky Operation?.....	03
Risk Assessment Top Tips.....	04

## Introduction

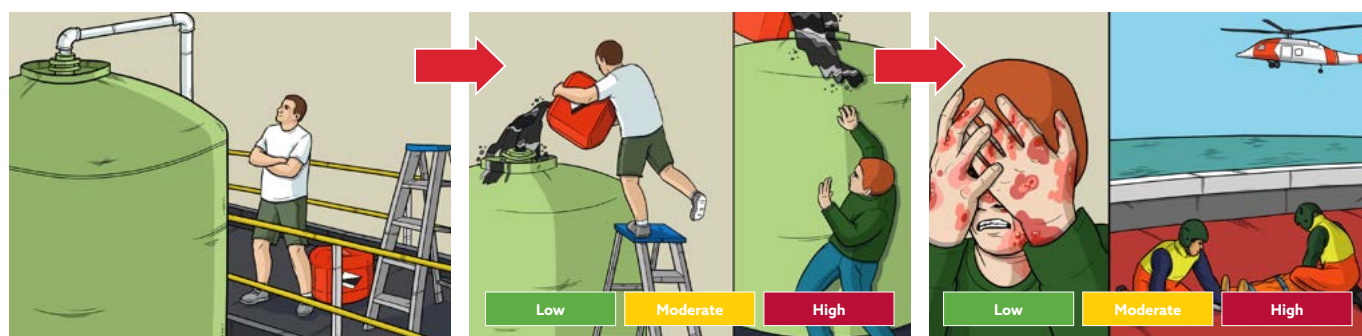
The need to carry out risk assessments comes under a number of different rules and regulations. But risk assessments should not be viewed as just another paperwork exercise to satisfy legal requirements. When done properly by people who understand risk, they are an invaluable tool in safe working on board vessels.

Everyone carries out risk assessments all the time without even knowing it. Crossing the road? You assess the risk and then you decide how, where and when it is safe to cross. So, why is it difficult to transfer this natural and simple process into safe working practices on board a vessel?

This briefing shows that risk does not have to be complicated and how easy it can be to produce a risk assessment. Sometimes it is better to keep it simple.

## Risk Assessments: A Simple Process

These basic steps form the basis of any risk assessment. Before you start a task – stop and take time to think.



### 1. Think about the task: What can go wrong?

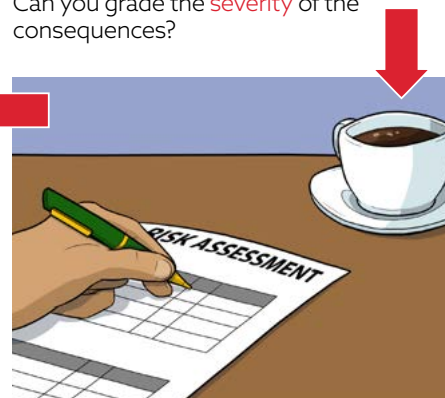
This is the **hazard**.

### 2. Think: What is the chance of it happening?

Can you grade the **likelihood** of something bad happening?

### 3. Think: How bad can it hurt me, others or the vessel?

Can you grade the **severity** of the consequences?



### 6. Think again: Is it now safe to carry out the task?

With the control measures in place, calculate the risk again.

Risk = Likelihood of hazard occurring x severity of consequences.

YES or NO?

If the answer is 'NO' think again.

### 5. Think: What can I do about this?

How can I prevent it from happening? If it does happen, how can I limit the effects?

These are control measures.

### 4. Think: Is it safe to carry out the task?

Risk = Likelihood of hazard occurring x severity of consequences.

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# Risk Made Simple (cont.)

## Making it Formal

The simple process shown on the previous page can help people assess the risks when planning a task or when circumstances change in the middle of carrying out a task.

Risk assessments can be formalised by recording each step and calculating the risk through a standardised risk matrix. It makes good sense to formally record the findings of risk assessments for higher risk tasks. People doing the same or similar task in the future can use it as the basis for their risk assessment.

There are situations where the recording of risk assessments will be compulsory. They might also be needed to comply with safety management requirements, such as the ISM Code or mandatory domestic health and safety legislation.

### Think about the task you want to do. What can go wrong?

You have identified the hazard(s). A hazard is something that can potentially cause you, others, the vessel or the environment harm.

Remember, a task could have a number of different hazards and each one would need to be assessed individually. For example, entry into a tank or hold can have at least two obvious hazards; the poisonous/asphyxiating atmosphere hazard and a falling hazard.

### What is the chance of it happening?

### How bad can it hurt me, others or the vessel?

These questions should be asked for each identified hazard.

This is because risk has two elements:

- The likelihood of the hazard occurring.
- The severity of the consequences if the hazard occurs.

Different systems use different scales but in simple terms it is the grading of the likelihood of something bad happening and how harmful it could be.

### Is it safe to do the job?

The fundamental risk assessment is:

**Risk = Likelihood of hazard occurring x severity of consequences**

It is commonly expressed in a risk matrix, a typical example being:

	Likely	Moderate Risk	High Risk	Extreme Risk
Likelihood	UnLikely	Low Risk	Moderate Risk	High Risk
	Very UnLikely	Very Low Risk	Low Risk	Moderate Risk
		Slightly Harmful	Harmful	Very Harmful
		Consequences		

A high chance of it happening coupled with a high level of harm would clearly be an unacceptable risk. Something will have to be done to lower this risk.

### How can you prevent it or make it less harmful? What can you do to make sure these measures remain effective?

The steps taken to lower the risk are commonly referred to as 'control measures'. These are the actions that can be taken to lower either the likelihood of it going wrong or to make it less harmful if it does go wrong.

Going one step further, each of the actions can be analysed to identify what could stop them from being effective. For example, a welding job is needed on a diesel oil tank. One measure that can be taken to prevent an explosion would be to test the atmosphere in the fuel tank to check it is free from flammable gases. But what if the gas testing equipment was faulty and gave false readings? Therefore the next measure would be to make sure that the testing equipment is regularly calibrated by a trained person.

The person carrying out the risk assessment should make sure these measures are reasonable and practical. The cost and resources needed should be proportional to the benefit they bring.

These control measures can form the basis for work procedures and checklists. They can also be used for creating permit to work systems for higher risk activities, such as entering a space where there might be a dangerous atmosphere or for working at height.

### Is it now safe to do the job?

The risk needs must be assessed again after applying the control measures. If the risk remains unacceptable then think again.

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# Risk Made Simple (cont.)

## Drinking a Cup of Coffee: A Risky Operation?

Having difficulty applying the process? Think about an everyday situation and then transfer the process to the task in hand.



**You have a cup of hot coffee. You place it at the edge of a table.**

**What could go wrong?**

- The most obvious thing that could go wrong is that the coffee could be knocked from the table and spill out.

**Therefore the hazard is coffee spill. A hazard is something that can cause you or others harm.**



**What is the chance of it happening?**

- Quite likely if it is close to the edge of the table. It's even more likely if there are people passing close by regularly.
- The likelihood can be higher still if you are on board a vessel that is moving in heavy seas.



**How badly will it hurt you or others if it spills out?**

- It could scald you or someone nearby.
- The severity of the scald depends on the temperature of the coffee.
- It also depends on if the cup is completely full or nearly empty.
- It might be worse if you are wearing shorts and t-shirt.
- Is your mobile phone, radio or laptop on the table and could they be damaged? Could someone slip on the spilled coffee?



**What can I do to reduce the chances of it happening?**

- The simplest thing to do is to move the cup away from the edge of the table and away from your electronic devices!

**These are known as preventative control measures.**

How does the coffee risk assessment relate to your work on board a vessel? Think about the tasks you do – both routine and those that are not routine. **Take time to think about what could go wrong.**



**If a spill does happen, what could I do to limit the effects and prevent it from getting worse?**

- Is there a first aid kit nearby that is properly stocked and regularly checked? Is there a first aider available to help?
- Would the type of clothes you are wearing make a difference?
- A spill that is cleaned up quickly or immediately removing the wet clothes might reduce the impact.

**These are known as mitigating control measures.**



**Are these reasonable measures?**

- Wearing personal protective equipment (PPE) or using safety barriers are clearly not reasonable measures for drinking coffee.
- Use common sense!
- Think about the tasks you do in your job – when would PPE or guards be reasonable to make sure you and others stay safe?

**Is the risk acceptable? If not, THINK AGAIN!**

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# Risk Made Simple (cont.)

## Risk Assessment Top Tips

- The best person to carry out a risk assessment is the person who is physically on site. A full and proper risk assessment cannot be carried out by someone sitting in an office ashore.
- Remember that a task might present more than one hazard. It is quite likely that a number of hazards can be identified with a particular task and each one should be risk-assessed.
- The people who are actually carrying out the task must be involved in the risk assessment process. Encourage everyone to think about risk and that it's not somebody else's responsibility.
- Educate the crew so they understand the basics of risk and why risk assessments are important.
- Remember that a pre-written risk assessment might not cover all the risks for your specific task. Don't assume that by following the existing form the job will be safe.
- Keep reviewing your risk assessments – things can and do change!
- If during the task the circumstances change, take time to stop and think. Is the job still safe? Have new hazards and therefore new risks been introduced?
- A written risk assessment can act as valuable evidence in the event of litigation or a claim. It sometimes isn't enough to have safe working practices in a safe working environment – you have to be able to prove it.
- Routine tasks can introduce complacency. Sometimes a fresh set of eyes will identify new hazards or notice that existing control measures are not being followed.

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