



Situation Awareness  
at every level

Trainer's Guide

**SAMPLE PAGES ONLY**

Produced by  
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In association with  
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# A – Copyright and Licence

The copyright of the DVD and the Trainer's Guide belongs to Nicholas and Smith Pty Ltd.

## **Reproduction, duplication and transmission**

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## **Licence for use**

### **A Corporate licence**

Purchase of a Corporate Licence permits an organisation to use this DVD package for in-house training of its employees only. The package may not be rented, loaned, sold or used in any circumstance where fees are charged.

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### **C Education licence**

Purchase of the Education Licence permits Universities and Colleges of Education to use this DVD package for staff and students within its campus.

## B –The training package

### **What does the training package contain?**

The training package consists of:

- DVD including chapters and extras
- CD containing:
  - Trainer's Guide for facilitation
  - Participant's Guide (also for self-paced learning)
  - Slide presentation in MS PowerPoint and Apple Keynote

This trainer's guide summarises the key points from the DVD. It contains exercises to build upon these points and to reinforce the main concepts.

The trainer's guide and presentation together enable the trainer to further expand the content and to tailor the program for staff by editing the guide and slides and adding specific examples from their own organisation.

### **Who is this training resource for?**

- Operators engaged in safety and quality critical tasks.
- Managers of people at all levels.
- Managers of health, safety, risk, quality, environment.

### **Learning objectives**

Following this training session, participants will be able to:

- Explain each stage of situation awareness.
- Explain each type of situation awareness error.
- Explain the main factors that impact on situation awareness.
- Apply situation awareness to their workplace to reduce human error in safety and quality critical tasks.

## C – Outline of the video

Situation awareness is often referred to as “knowing what is going on around you”. Situation awareness has been found to be a leading factor in a large proportion of accidents and failures associated with human error. It is particularly relevant for workers performing tasks in high risk work settings.

*Unclear and Present Danger* examines a number of real events where a lack of situation awareness led either to loss, injury or even death.

The video covers the **stages** of situation awareness, the specific **error** types that can occur at each stage, and the **factors** that have an impact. It also raises a leader's situation awareness and what leaders can do to influence the situation awareness of their teams.

A question and answer style interview with Professor Rhona Flin, a leading expert and author, links the key concepts of situation awareness presented in the video.

*Unclear and Present Danger* is designed for use across all industries where there is training in safety, risk, quality and environmental management.

## Exercises

A number of exercises throughout the training session allow the participants to check their knowledge and understanding. They also provide on-going feedback to the trainer.

The symbols used in this guide:



Read or paraphrase



Trainer's note



Ask participants



White board



Exercise



Play DVD

## G – Suggested training sessions

**This training package is designed for flexibility in delivery and is useful for both safety and quality training.**

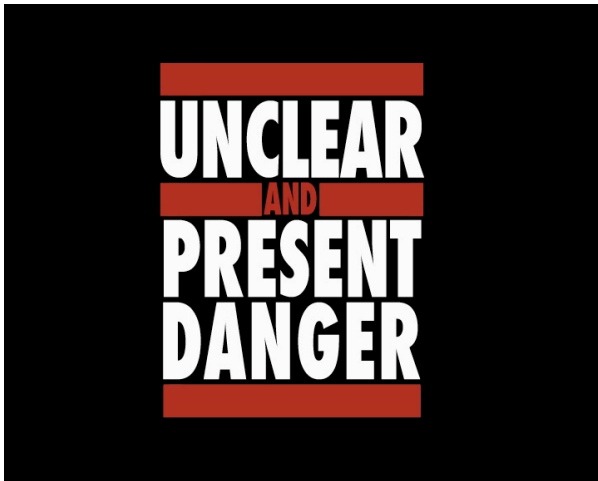
Segment title	Timing (approx)
<b>Segment 1</b> Introduction to the training session	5 – 10 mins
<b>Segment 2</b> Unclear and Present Danger DVD	25 mins
<b>Segment 3</b> Stages of situation awareness	10 – 15 mins
<b>Segment 4</b> Errors in situation awareness	10 – 15 mins
EXERCISE 1 – Stages and errors	30 mins
EXERCISE 2 – Stages and errors in Sea King case study	20 – 30 mins
<b>Segment 5</b> Sterile cockpit	10 – 15 mins
<b>Segment 6</b> Situation Awareness Factors	5 – 10 mins
EXERCISE 3 – Factors influencing situation awareness in Sea King case study	15 mins
EXERCISE 4 – Revision of situation awareness (nitrogen asphyxiation case study)	20 – 30 mins
<b>Segment 7</b> Situation awareness – at every level	5 – 10 mins
EXERCISE 5 – Applying situation awareness in your workplace	30 mins
<b>Segment 8</b> Closing	5 mins

## Part 2 – Training session

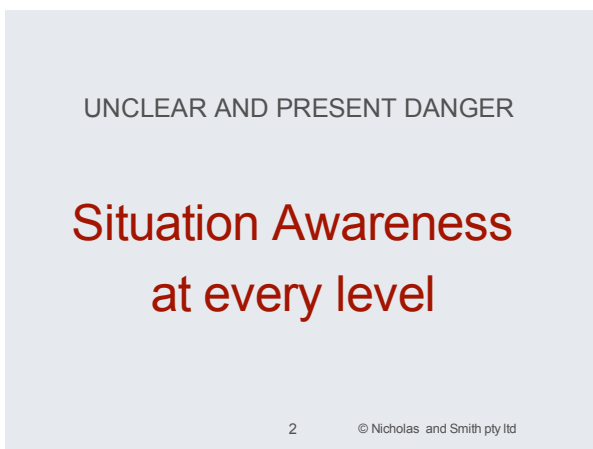
### Segment 1

#### Introduction to the training session

- 1 Welcome the participants.  
Describe what the session will cover.
- 2 Show slide 1 – Unclear and Present Danger



- 3 Show slide 2 – Situation Awareness at every level







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**Read or paraphrase the following:**

Situation awareness is often referred to as “knowing what is going on around you”. Situation awareness has been found to be a leading factor in a large proportion of significant events that have resulted in loss and injury associated with human error. In some industries that association is very high. For example, it has been found to be a cause in nearly 90% of aviation accidents associated with human error. It is not just the individual and team that must have high situation awareness. Supervisors and managers also need to have a high level of situation awareness.

5 Show slide 3 – The objectives of the training session.

A slide with a light blue background. The title 'OBJECTIVES' is in red. Below it are four bullet points, each preceded by a checkmark icon. At the bottom, there is a small number '3' and the copyright notice '© Nicholas and Smith Pty Ltd'.

**OBJECTIVES**

- ✓ EXPLAIN EACH STAGE
- ✓ EXPLAIN EACH ERROR
- ✓ EXPLAIN THE FACTORS
- ✓ APPLY SITUATION AWARENESS TO YOUR WORKPLACE TO REDUCE HUMAN ERROR IN SAFETY AND QUALITY CRITICAL TASKS

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**Read or paraphrase the following:**

After this session, you will be able to:

- Explain each **stage** of situation awareness.
- Explain each type of situation awareness **error**.
- Explain the main **factors** that impact on situation awareness.
- Apply situation awareness to your workplace to reduce human error in safety and quality critical tasks.

## Segment 3

### Stages of situation awareness



- 1 **Ask** participants to reflect on the case studies presented in the DVD and ask if anyone could give an example from their own work experience where situation awareness has been connected to a loss or injury?



2

#### **Trainer's Note**

You might like to have an example prepared that would be familiar or relevant to your participants.

Listen for examples and comments which contain phrases such as:

'We did not realise that ..'

'We were not aware that ...'

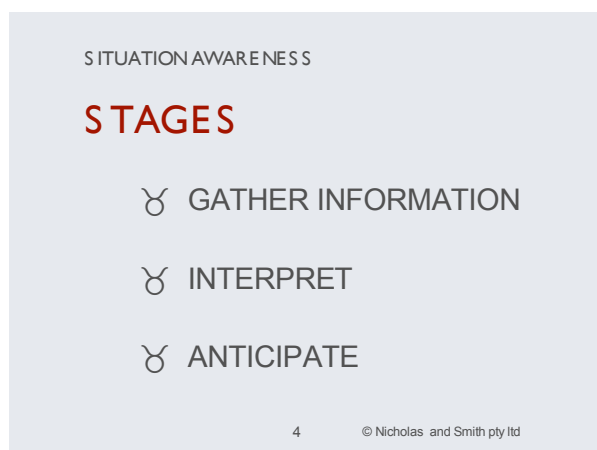
'We did not notice ...'

'We did not appreciate ...'

'We missed the fact that...'

These phrases indicate failures in situation awareness.

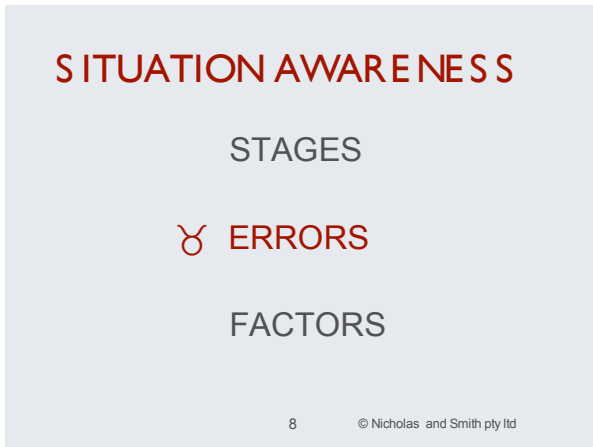
- 3 Show slide 4 – The stages of situation awareness



## Segment 4

### Errors in situation awareness

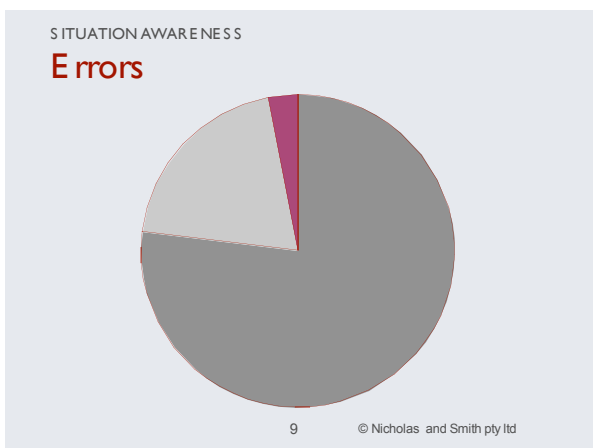
- 1 Show slide 8 – Errors in situation awareness



- 2 **Read or paraphrase the following:**

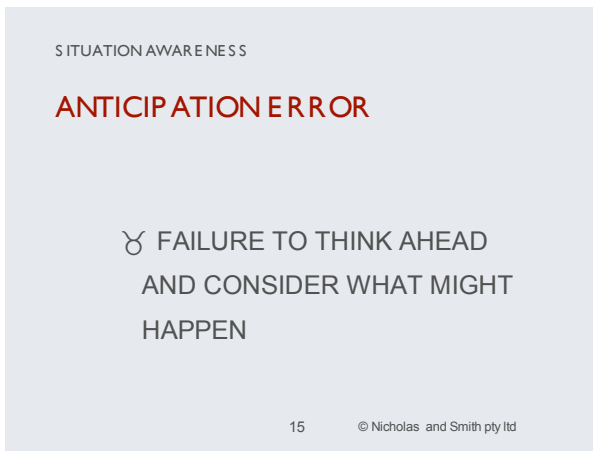
Within each stage of situation awareness, errors can and do occur. By far the majority of errors occur within one of the situation awareness stages.

- 3 Show slide 9 – Pie chart of situation awareness errors



- 4 **Ask** participants which sector they think represents the gathering information errors, which represents interpretation errors and which represents the anticipation errors?

16 Show slide 15 – Anticipation error



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**Trainer's note**

The final error, anticipation error, relates to a failure to correctly project a situation. This may also involve an incomplete mental model or to rely too much on current trends and a failure to take into account events that might impact the model.



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**Ask** the participants if anyone could give an example where they have failed to think ahead. That is, where they had all of the information and believe they interpreted the information correctly but failed to take into account some future change in conditions or event?



## EXERCISE 1 – Stages and errors



### Trainer's note

The following exercise will evaluate the level of understanding and reinforce the information about situation awareness stages and errors.

### Important note regarding system failures

You may like to make the following point to your participants.

While each of the case study examples relate to situation awareness, there were also significant safety and management system failures. If these failures had been prevented, then the possibility of the situation awareness errors and the events that unfolded would have reduced.

## Worksheet (in Participant's Workbook)

### Situation awareness

	Stage	Error
	Gather information	
<b>A</b>		Information not available
<b>B</b>		Information not observed
<b>C</b>		Information difficult to detect
<b>D</b>		Memory error
	Interpret	
<b>E</b>		Incorrect mental model
	Anticipate	
<b>F</b>		Anticipation error

### Instructions

Match the errors with the video case studies. Select the letter from the table above and write it in the last column, next to each case study, below. Note that there may be more than one error for each of the case studies EXERCISE 2



## EXERCISE 2 – Stages and errors in Sea King case study



### Trainer's note

The following exercise will evaluate the level of understanding and reinforce the information about situation awareness stages and errors.

## Worksheet (in Participant's Workbook)

### Situation awareness

	Stage	Error
	Gather information	
<b>A</b>		Information not available
<b>B</b>		Information not observed
<b>C</b>		Information difficult to detect
<b>D</b>		Memory error
	Interpret	
<b>E</b>		Incorrect mental model
	Anticipate	
<b>F</b>		Anticipation error

### Instructions

Match the errors with the Sea King case study. Select the letter from the table above and write it in the last column, next to each statement, below.



### Trainer's note

The following table includes the suggested answers (as those shown in the video)

## Segment 6

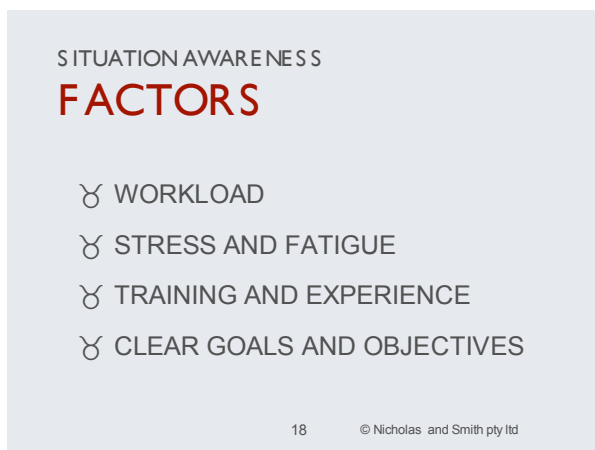
### Situation awareness factors

- 1 Show slide 17 – Factors and situation awareness



Ask the participants to think back to *Unclear and Present Danger* and the case studies and ask if they can list any or all of the factors that influence situation awareness.

- 3 Show slide 18 – Factors influencing situation awareness



**Read or paraphrase the following:**

There are a number of factors that influence situation awareness. These include workload, stress and fatigue, training and experience and having clear goals and objectives.



## EXERCISE 3 - Factors influencing situation awareness in Sea King case study



### Trainer's note

The following exercise will test the level of understanding and reinforce the information about situation awareness factors.

### Worksheet (in Participant's Workbook)

#### Situation awareness

	Factor
<b>A</b>	Stress and fatigue
<b>B</b>	Training and experience
<b>C</b>	Workload
<b>D</b>	Clear goals and objectives

### Instructions

Match the factors with the Sea King case study. Write the letter from the above table in the last column, next to each example. Note that there may be more than one factor for each of the examples.



### Trainer's note

The following table includes the suggested answers (as those shown in the video).





## EXERCISE 4 – Revision of situation awareness



### **Trainer's note**

The nitrogen asphyxiation case study provides an opportunity to revise the stages, errors and factors in situation awareness.

Show slide 19 and play video clip – Nitrogen asphyxiation information



Show slide 20 and play video clip – Nitrogen asphyxiation case study

