

**Safety Climate Measurement**  
**User Guide and Toolkit**



## SUMMARY

This document presents the results of a joint industry/Health and Safety Executive (HSE) project which was concerned with the development and with the practical utility of safety climate measures in offshore organisations. The project was carried out in collaboration with the Offshore Safety Division of the HSE, Chevron UK, Chevron Gulf of Mexico (Ship Shoal/Eugene Island), Mobil North Sea and Oryx UK. The main objectives of the studies were:

- to examine current techniques used in the assessment of safety climate and culture;
- to produce an assessment technique which provides both a practical tool for the assessment of safety climate and aids the promotion of a positive safety culture in the offshore environment;
- to produce appropriate tools for assessment; and.
- to produce process guidelines for the use of such a technique.

An assessment technique, based on the use of multiple methods, was developed. This technique was based on information derived from the relevant literature on organisational culture and climate, as well as previous studies in the offshore sector. The technique includes three methods for assessing safety climate offshore and seeks to build on current industry initiatives, such as the cross industry leadership initiative. These methods underwent a series of tests and refinements before the production of the ‘Safety Climate Assessment Process and Toolkit User Guide’ and the ‘Safety Climate Assessment Toolkit’.

This document describes the separate stages of the safety climate assessment process, including some tools that may be used in that process, and provides some pointers to the feedback and improvement process. It is set out in two parts:

- Part A contains the Safety Climate Assessment Process and Toolkit User Guide; and
- Part B is the Safety Climate Assessment Toolkit

Part A provides an introduction to the area of safety climate assessment and discusses in detail the stages involved in that process. Part B contains a selection of tools that can be used as part of the assessment process.

The Safety Climate Assessment Toolkit (Part B) is a practical tool for in-house use. It is designed to gauge the safety climate/culture in offshore organisations and should be used in conjunction with the Safety Climate Assessment Process and Toolkit User Guide (Part A). Both parts of this document take readers, where possible, through a series of questions and answers to fully describe the processes.

The user guide and toolkit have been developed, in collaboration with oil industry personnel, specifically for use in offshore environments. They build on cultural concepts and frameworks from existing offshore organisations and allied industries. The development of the tools and processes included here, is described in detail in the technical report ‘Assessing Safety Culture in Offshore Environments’.



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**Part A**

**Safety Climate Assessment  
Process and Toolkit User Guide**



# A1 INTRODUCTION

This guide has been prepared to support users of the 'Safety Climate Assessment Toolkit' (shown in Part B) in their assessment of the health and safety culture within their organisation. The underpinning theory and research, which, taken together, form the basis of the assessment process, are described in the main technical report 'Assessing Safety Culture in Offshore Environments'.

This document describes the separate stages of the assessment process and provides some pointers to the feedback and improvement process. It does so by taking the user through a series of questions and answers. The 'Safety Climate Assessment Toolkit' contains a selection of tools that can be used as part of these processes and it is essential that all users of the toolkit familiarise themselves with this user guide prior to commencing any assessment.

The guidance is set out in three sections:

- Section 1 'Introduction' provides the broad introduction to the guidance and describes how this document should be used;
- Section 2 'Background' deals with the background and rationale to the assessment process; and
- Section 3 'The Assessment Process' discusses in detail the stages involved in that process.

Each stage of the assessment process is described in this guidance, together with a description of the activities that should be completed at each stage. A glossary of terms (highlighted in **bold** when first used in the text) is included at the end of the document.



## A2 BACKGROUND

### A2.1 BACKGROUND AND RATIONALE

There is a broad interest in developing an appropriate **safety culture** throughout industry in general, and in offshore organisations in particular. This interest is currently focused on four key areas:

- the nature of safety culture and **safety climate** (that is, the underpinning concepts and characteristics);
- the potential of safety climate assessments in securing continuous improvements in health and safety;
- the development of appropriate safety climate indicators and measures; and
- the application of practical (and industry specific) methodologies of safety climate assessment (for example, in benchmarking and monitoring).

Furthermore, practitioners and specialists within the industry are exploring a number of approaches to culture and climate assessment to secure potential benefits. This user guide describes one such approach. It has been applied in a number of offshore settings and has been shown to offer some practical benefits to the user.

This section of the guide provides the background knowledge and rationale for the safety climate assessment process. It is directed especially at the user and introduces the tools and techniques described in ‘Safety Climate Assessment Toolkit’ (Part B). It adopts a question and answer approach and leads the user through the stages involved in the safety climate assessment process. More information concerning the process and the development of the tools is available in the technical report ‘Assessing Safety Climate in Offshore Environments’.

### A2.2 SAFETY CULTURE AND SAFETY CLIMATE

*Q: What is culture?*

A: The term ‘culture’ refers to ‘shared values and beliefs’ which are seen to characterise organisations. These are often framed within company vision statements and policies. Some experts in **organisational culture** describe how people acquire ‘mental programmes’ or ‘software of the mind’, which create patterns of thinking, feeling and action. These patterns of behaviour are unique to the organisation and often distinguish one group (or category) of people from another.

*Q: What is safety culture?*

A: Safety culture can be viewed as a subset of the overall culture of the organisation. It might be described as shared values or beliefs which characterise safety in organisations. It has been defined by the Advisory Committee on Safety in Nuclear Installations (ACSNI) as:

‘the product of individual and group values, attitudes and beliefs, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation’s health and safety management’.

This definition relates safety culture to personal (and work group) attitudes, thoughts and behaviours. These are all set in the style of the work organisation, including its approach to safety management. Safety culture thus has two major, and interrelated, components:

1. the framework determined by organisational policy, procedures and management actions (what the organisation is); and
2. the collective individual and work group responses (their values, beliefs and behaviours).

*Q: Safety culture or safety climate?*

A: The terms safety culture and safety climate may both be used to describe the ways in which members of organisations make sense of the overall safety of their work environment. Safety culture, however, exists at a higher level, relating in part to overarching policies and goals. Safety climate, on the other hand, is often used to describe the more ‘tangible’ outputs of an organisation’s safety culture. For example how people perceive and describe the importance given to safety issues by the organisation at a particular point in time, and how local arrangements are seen to reflect this. Safety climate exists at a more localised level, and thus provides a tangible focus for the assessment of some aspects of safety culture.

*Q: How can we describe safety climate?*

A: Climate in organisations has, in fact, been described as ‘the way we do things around here now’, or the ‘shared’ perceptions of policies, practices, and procedures. As such, safety climate describes an aspect of the organisation which is influenced by the way people behave, how they think and feel about safety issues.

### **A2.2.1 Underpinning Models**

*Q: How can we model culture?*

A: Figure 1 illustrates the essence of a **systems** based model of culture. It shows how individual safety awareness can be promoted within the immediate work group. This awareness, and the work group sub-culture, shapes individual safety beliefs, attitudes and perceptions of responsibility and control. This, in turn, drives the individual’s behaviour, which is either sanctioned or reinforced (or supported) by the safety management (SM) process.

*Q: How does this model work?*

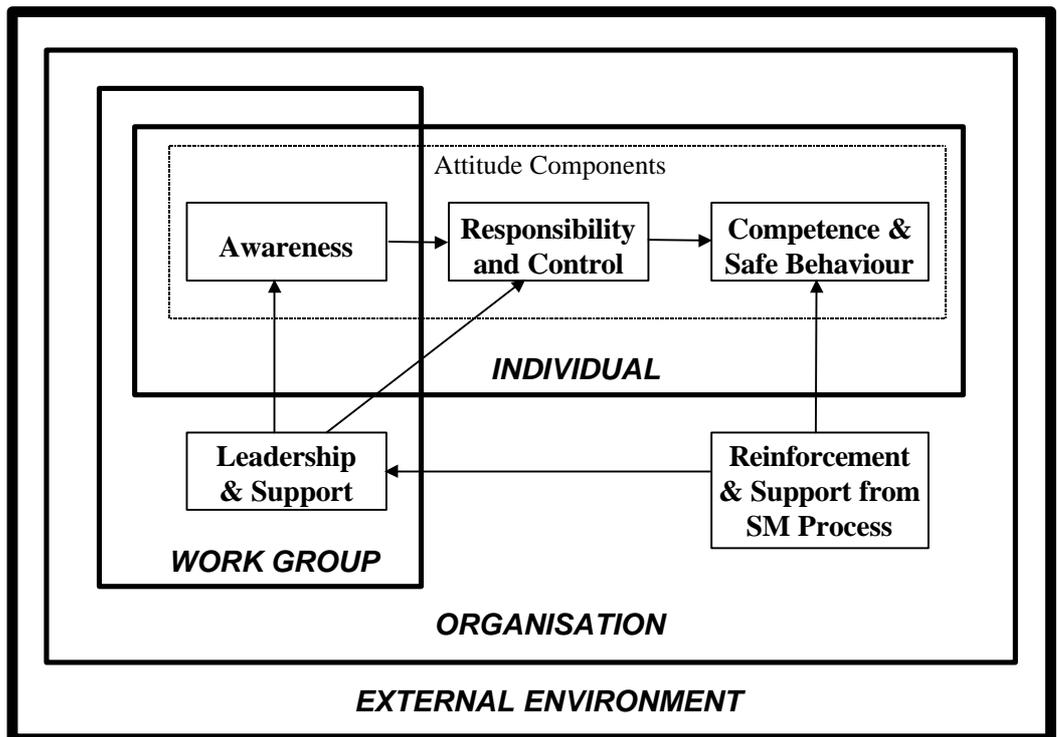
A: In a culture which supports group empowerment, for example, the main role of the SM process will be to nurture and support leadership and safety awareness at the work group level, while sanctioning the resultant worker behaviours. Similarly within the work group, individual attitudes and safety related behaviours can be strongly influenced by ‘safety champions’ and the visible commitment of line and senior managers to safety.

### **A2.2.2 The Value of Safety Climate Measures**

*Q: What benefits does assessing safety climate bring?*

A: Organisations which embark on the safety climate assessment process will probably already be committed to continuous improvements in health, safety and environmental compliance through a variety of techniques. They will obviously continue to support the development and monitoring of safety technology and systems and employ competent people. However, sound practices and procedures are not adequate if merely practised mechanically. These practices require an effective safety climate to flourish. There is also a strong possibility that safety performance may have appeared to plateau and further improvements may seem difficult to achieve. Promoting or maintaining the prevailing safety climate may enable the organisation to move safety performance off this plateau and is thus an important part of the safety management process. The immediate benefits are the profiling of safety climate and the action planning that this profile allows. Achieving

and maintaining a positive safety climate will provide an environment where improvements in safety performance can be made.



**Figure 1**  
**A systems model of safety culture**

*Q: What can we use to measure climate?*

A: The Safety Climate Assessment Toolkit has been designed to provide appropriate measures of safety climate and is included in the second part of this document. These measures may stand alone or may be incorporated into an existing audit system. Safety climate assessments complement existing audits; they are not a substitute, however but an addition to regular safety audits.

### **A2.3 GENERAL APPROACHES TO ASSESSING SAFETY CLIMATE**

*Q: What approach does the toolkit take?*

A: There are a number of general methods that can be used to gain insight into, and information on, safety climate. More specifically ‘users’ can:

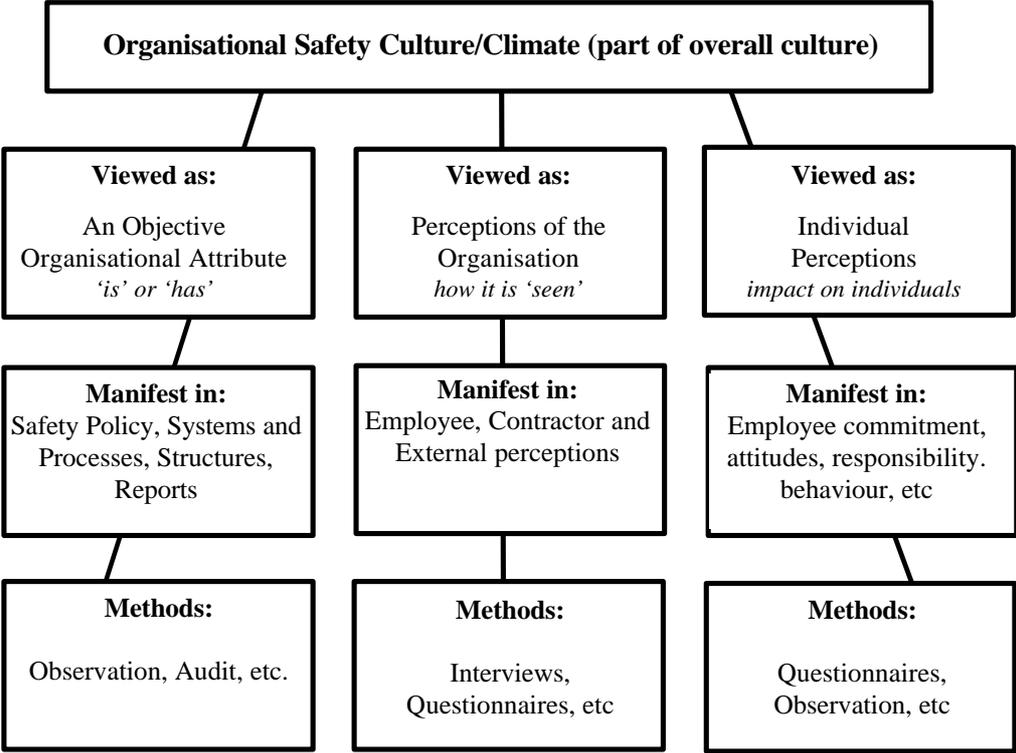
- question individuals to assess their attitudes and perceptions;
- observe people and facilities and assess behaviour and working conditions; and
- examine documents used in the organisation, for example the examination of safety procedures, event records and accident databases.

The toolkit seeks to exploit a variety of these approaches and methods so as to give a more complete picture. In particular it utilises:

- attitude surveys and rating scales;
- in-depth, informal discussions with individuals;
- focus group meetings;
- examination of written records and databases; and
- document analysis.

Technically this approach is known as **triangulation**; the use of a number of methods to improve the effectiveness of a particularly study; in this instance the assessment of safety climate. A more in-depth description of the nature of triangulation is presented in Section 3 of the technical report ‘Assessing Safety Culture in Offshore Environments’.

The combining of different approaches to assessment to provide a view of the whole organisation is illustrated in Figure 2. This multiple perspective model illustrates how three different perspectives can be developed to provide complementary methods for assessing different aspects of the organisational safety culture. Figure 2 illustrates how, depending on how it is viewed, culture can be measured using a variety of methods.



**Figure 2**  
**Multiple perspective assessment model**

**A2.4 CLIMATE INDICATORS AND MEASURES**

*Q: How do the measures relate to the model?*

A: The system based model of safety culture, described in Figure 1, may be developed to incorporate appropriate climate indicators and measures for offshore organisations. These may include, for example, how individuals view the safety management process, or how the organisation complies with its policy objectives. The assessment of safety culture/climate can be developed from this model using a variety of appropriate methods. The resultant measures include: individual attitudes and perceptions of safety; and individual and organisational behaviours (including safety management system compliance). The measures may be incorporated into an assessment matrix which relates them to the methods used, and to the main systems interfaces.

The relationships between the various system interfaces (that is, the target of the assessment process), the methods used, and the resulting measures (or climate indicators) can be plotted on a climate matrix. An example of this type of recording device is shown in Figure 3. It should be noted that several complementary measures can be incorporated in each cell of the matrix - those shown in Figure 3 are only examples of what might appear there. The climate indicators shown in Figure 3 have been derived from each of the three methods, for example 'Management Commitment' has been measured using a sub-set of items in the attitude questionnaire.

		<b>Systems Interfaces</b>		
		<b>Organisation/ Environment</b>	<b>Work Group/ Orgn Systems</b>	<b>Individual/Group/ Orgn Systems</b>
<b>M e t h o d s</b>	<b>Attitude Questionnaires</b>	Management Commitment, Work Environment	Supportive Environment, Involvement	Appreciation of Risk, Personal Priorities
	<b>Focus Group/ Interviews</b>	Management Style	Co-operation	Shared values
	<b>Direct/Indirect Observation</b>	Safety Systems Compliance	Safe Behaviours	Safe Behaviours

**Figure 3**  
**Example Safety Climate Matrix**

#### **A2.4.1 Measuring Changes**

*Q: Can we measure safety climate often?*

A: Plotting and monitoring safety climate using the indicators and/or the matrix described above, provides a snap-shot of the organisation's safety climate at one particular point in time. The measures which you take can, and should, be repeated after a period of time and a new matrix constructed to illustrate any changes that have taken place within the organisation. Repeating the assessment process allows users to monitor and assess any interventions and improvement programmes they may have implemented as a result of the first assessment, as well as checking that performance in strong areas is being maintained. A full reassessment of safety culture may not be very useful within a year of the original exercise, since some time has to be given for any interventions to be completed and changes to occur. While a period of around 12 to 18 months is advised before a full reassessment of organisational safety climate, it is possible to target particular areas, on a shorter timescale, using only some of the tools in the Safety Climate Assessment Toolkit. When the toolkit should be used is considered in Section 3.4.1.



# A3 THE ASSESSMENT PROCESS

## A3.1 INTRODUCTION

*Q: Where do we start?*

A: Before beginning any assessment of safety climate you, as the user, need to spend some time preparing yourself. This pre-assessment preparation is an essential part of the process. It allows you to consider the existing culture and thus to place any climate data collected into an appropriate context. An incomplete, or rushed, preparation may result in a less useful output from subsequent use of the climate assessment tools.

*Q: How can we prepare?*

A: As a first step you should focus on your view of the safety culture/climate in your organisation. This step requires a questioning approach. There are at least four questions which can help you in these initial deliberations:

1. What is our current safety culture?

How can we describe our culture? What words best capture this description?

2. What drives our culture?

Who or what drives our culture and influences its development? How would a new member of the organisation pick up on our culture?

3. How can we assess our safety culture?

What tools can we use, what sort of data will they provide and what will these data tell us?

4. What is our optimal culture?

What do we ideally want our culture to be like?

Taken together, these questions describe a assessment process which commences with an initial focus on organisational safety culture and the underpinning drivers, through a description of appropriate checks to the final state of planning further improvements (see Figure 4).

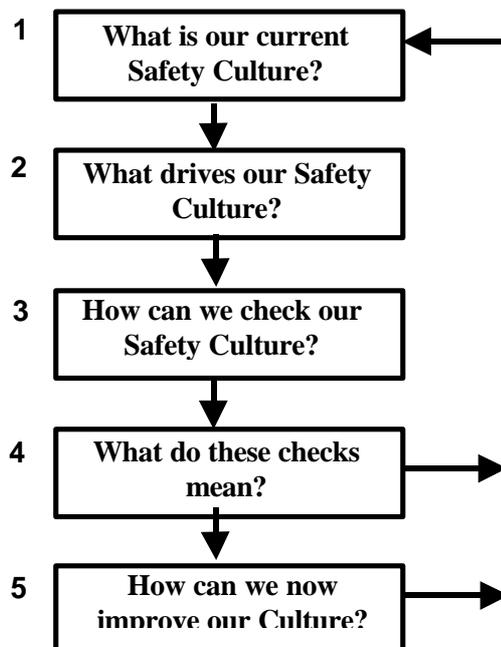


Figure 4  
Safety Climate assessment process

*Q: What is involved in this process?*

*Step 1 What is our current safety culture?*

You need to approach the assessment and monitoring of the prevailing safety culture/climate against a background of prior understanding and cultural expectations. For example, is your current safety culture characterised by commitment, care and learning, rather than blame? At this stage you should attempt to identify aspects of the culture you feel to be positive as well as those that might be improved (see Section 3.2).

*Step 2 What drives our culture?*

At the same time you should decide what you think are the main drivers and corporate controls for safety culture. These may include both organisational and individual drivers.

Example of organisational drivers and controls are:

- management activity/process;
- patterns of communication;
- standards and codes; and
- integration of safety function.

Example of drivers at an individual level include:

- champions (or heroes) of health and safety;
- senior managers; and
- safety personnel.

Cultural drivers are covered in more detail in Section 3.3.

*Step 3 How can we check our safety culture?*

As a necessary and practical third step you should select the preferred assessment tools. This might involve selecting the appropriate tools from the Safety Climate Assessment Toolkit to give an indication of the current, safety climate and associated culture. It may also involve the adaptation of current in-house metrics such as a proven safety attitude questionnaire, or behavioural programme indicators. The Safety Climate Assessment Toolkit is described in Section 3.4.

*Step 4 What do these checks mean?*

Once the assessment tools have been applied, the results need to be interpreted. This will involve the construction of a safety climate profile and the comparison of this profile with the description derived in the first stage of this process. The construction and interpretation of climate profiles are discussed in Section 3.5.

*Step 5 How can we improve our culture?*

The final step in the process is focused on ‘closing the safety culture loop’ and enables you to formulate action plans and possible improvement strategies (see Section 3.6).

Each of these five process steps is expanded on in the following sections.

## **A3.2 WHAT IS OUR CURRENT SAFETY CULTURE?**

Before attempting to measure organisational safety climate, it may help to consider the current culture for safety in your organisation. The Health and Safety Executive (HSE)

highlight four descriptions which categorise organisational culture in their publication *'Managing Health and Safety'*<sup>1</sup>. These are:

- Power Culture - based on a small group wielding central control in running things;
- Support Culture - where the organisation exists to support the needs of the individuals;
- Role Culture - highly structured so that there are clear cut-off points for decision making; and
- Achievement Culture - where people work together to achieve results and operate flexibly.

None of these four broad categories is definitive - the important thing is that the description matches what the organisation is. The culture in your organisation may incorporate aspects of two or three of the above types. For example, would any of the phrases elaborated in Table 1 be used to describe it? It may be possible to describe the specific culture using more than one of these, or indeed, other terms that may be more appropriate.

**Table 1**  
**Cultural descriptions**

<b>Would you describe your culture as:</b>	
Collaborative?	where collaboration and teamwork are fostered
Blaming?	where the apportioning of blame is seen as important
Compliant?	where everyone strives to follow rules and procedures
Considerate?	where employees' views are sought and valued
Co-operative?	where everyone is involved and work together
Constructive?	where interaction to solve problems is encouraged
Learning?	where employees learn from mistakes
Responsible?	where unacceptable behaviour is recognised

It may be more appropriate to use a number of guide words or prompts to prepare a description of your current safety culture, for example:

1. Norms - for example, what is considered acceptable behaviour;
2. Values - for example, what is considered to be important;
3. Working atmosphere - for example, the social environment of the workplace;
4. Management style - for example, the accessibility of managers;
5. Structure and systems - for example, reporting systems; and
6. External perceptions - for example, what competitors think.

The more intangible of these guide words (for example, shared norms and values) may be enshrined in an organisation's vision or mission statements. Goals such as 'to be better than the best', or 'to be the industry leader' give us an indication of organisational principles and values that are expected to be demonstrated on a day to day basis.

You should consider all of the above when completing the activity described overleaf.

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<sup>1</sup> *Managing Health and Safety: An Open Learning Workbook for Managers and trainers*, HSE.

## **ACTIVITY - Describing the current culture for safety**

Take some time now to sketch out what you think your current culture is for safety. You will want to consider:

- Which of the models or cultural descriptions above would best describe it?
- What shared values are you aware of?
- How would you describe the management style?
- What is the working atmosphere like?
- How is the organisation perceived externally?

Remember you may want to use several categories or descriptions to capture your particular safety culture. When you have completed your own view of your organisation's culture you should ask some colleagues to do the same exercise and then see if you can derive a consensus view of the culture.

Once you have an idea of your current culture, why not think about what sort of culture your organisation wants to achieve.

These two descriptions will give you both a baseline from which to judge your first objective assessment of safety climate and something for which to strive.

### **A3.3 WHAT DRIVES OUR CULTURE?**

Cultural drivers may focus on two main areas - those which are related to the organisation and those which relate to 'key individuals'.

#### **A3.3.1 Organisational 'Drivers'**

Organisational drivers may be characterised by management systems and procedures in a variety of areas of organisational activity. These drivers include both internal and external influences.

Internal drivers might include:

- corporate business plan
- organisational structure/change
- organisational standards
- performance metrics
- systems and procedures

External drivers might include:

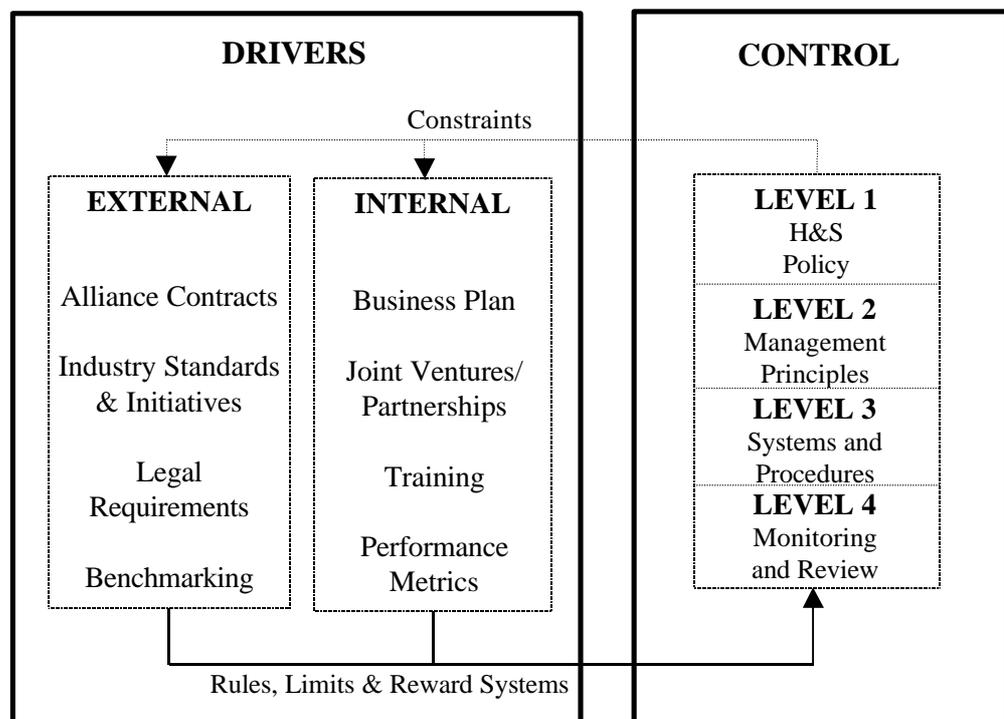
- the extent of alliance contracts
- industry standards (for example, as produced by The Exploration and Production Forum)
- legal requirements
- regulatory regime

### A3.3.2 Individual 'Drivers'

Individuals, and key groups, within the organisation can influence and drive culture both directly and indirectly through their actions, words and commitment. Some key individual drivers might be:

- Chief Executive
- Senior Managers
- OIMs
- Safety Personnel
- Elected Safety Representatives
- Champions
- All employees
- Medical team
- Visitors - external enforcement personnel, etc.

Figure 5 describes a possible framework for Health and Safety Management - a similar framework may be considered for other areas of activity, for example business goals, or systems and procedures.



**Figure 5**  
**Health and Safety framework for drivers and controls**

The cultural drivers in your organisation need to be considered in the activity for this stage of the process, which is described overleaf.

## **ACTIVITY - Identifying the main drivers**

Can you identify who or what drives your organisational culture? Whom or what do you think has most influence on safety issues?

Make a list of the key individuals and the key external and internal drivers that you think might influence safety culture in your organisation. As before, you should ask some colleagues to do the same and compare the lists you produce.

If you know who or what drives culture then they may be able to help you change or maintain it.

### **A3.4 HOW CAN WE CHECK OUR SAFETY CULTURE?**

Safety climate assessment provides one approach to checking the prevailing culture for safety. It encompasses a number of methods, in order to build as complete a picture as possible, and will provide a variety of **valid** and **reliable** measures.

You should familiarise yourself with the Safety Climate Assessment Toolkit and select appropriate measures. These measures will provide appropriate checks of the prevailing climate. You may, however, also make use of appropriate 'in-house' methods that have already been developed, for example an existing attitude questionnaire or perception survey. Such tools can be combined with those included in the SCM Toolkit to complete the assessment matrix described in Section 2.4 and illustrated in Figure 3.

#### **A3.4.1 Using the Toolkit**

*Q: How is the toolkit used?*

A: In order to gain a complete picture it will be necessary to get the views of employees from all levels and job/task areas in the organisation. As well as providing a rounded picture of the current safety climate, this may also help to identify different problems in different areas. For example, those working in production may have a different perception of issues from those working in maintenance.

*Q: Who should use the toolkit?*

A: The toolkit is designed to be used by someone within the organisation, usually the person who has gone through the preparation and activities set out here. It may be useful to recruit a team of assessors to help with the assessment process and this team might include an installation safety officer, or the members of work teams who carry out inspections. Some of the skills that this team will need are highlighted in Section 3.4.2.

*Q: When should the toolkit be used?*

A: The toolkit can be used at any time but the following points should be considered:

1. it is perhaps easiest to use the toolkit when other inspections/audits are being carried out;
2. the length of time between applications should be decided upon by those using the toolkit but if some improvement in the climate measures is to be observed, then it may be wise to give any new initiatives time to impact; and
3. subsequent measures taken with the toolkit can be plotted on the same charts to clearly show any changes (see Section 3.5).

Each stage of the toolkit involves assessing an aspect of safety climate, using the various assessment methods included in the Safety Climate Assessment Toolkit.

### **A3.4.2 Training Toolkit Users**

*Q: What skills are needed to use the toolkit?*

A: Several members of the organisation will need to be trained to use the Safety Climate Assessment Toolkit. The core competencies for you as the 'user' include:

- the skills to carry out the safety climate review -  
these include questionnaire distribution; interviewing skills and observation; and individual administration details. These are included with each method described in the Safety Climate Assessment Toolkit (in Part B);
- the ability to summarise data using the safety climate measures -  
this includes transferring measure scores to appropriate graphs and matrices (see Section 3.5);
- the ability to prioritise actions as a consequence of the review -  
this includes setting up any feedback mechanisms (See Section 3.6) and deciding which, if any, interventions are needed to improve performance; and
- the skills to monitor the ongoing process -  
this includes deciding when to reuse the toolkit and which parts of the kit to use in any interim assessments.

As mentioned in Section 3.4.1, you will probably want to enlist the help of other members of the organisation when conducting a full scale assessment. The particular skills these assessors require will depend on the tasks they have to complete, but typically their competencies will include:

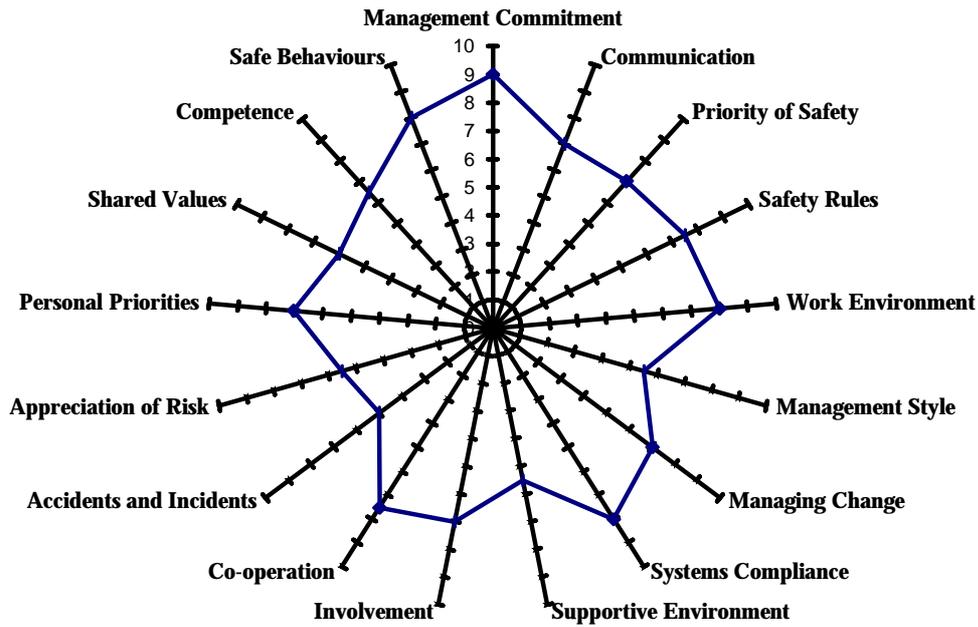
- basic interviewing skills, including direction on mediating discussion groups;
- ability to deal with scoring systems and compute average scores; and
- the ability to observe others in the work place.

### **A3.5 WHAT DO THESE CHECKS MEAN**

*Q: How should we deal with the results?*

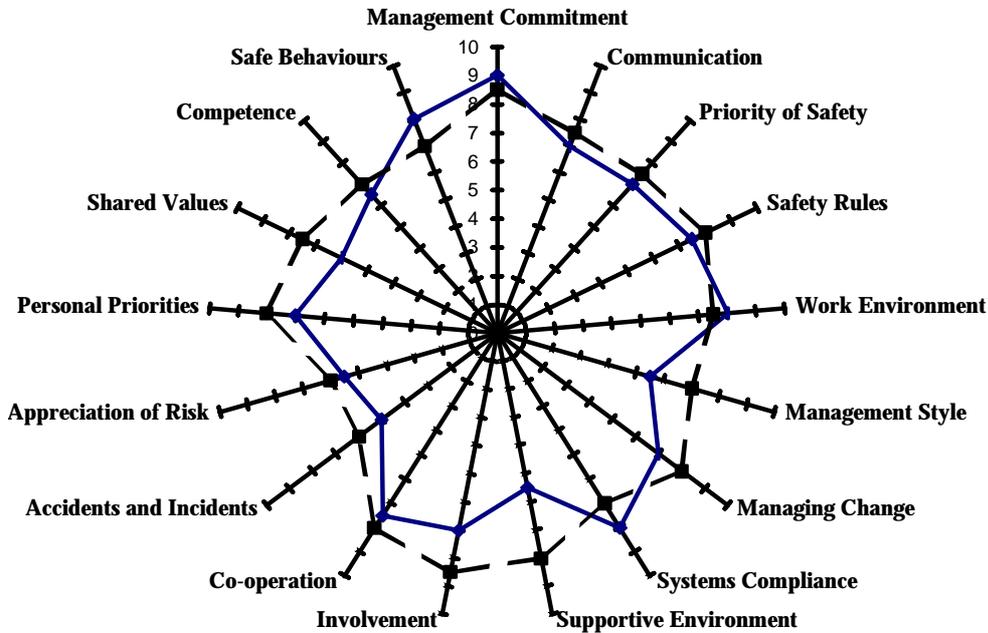
A: Interpreting the results of the safety climate assessment should not be done in isolation from other safety appraisal systems. If you are conducting a site audit at the same time as the safety climate assessment, you might want to look at the strengths and weaknesses highlighted by each exercise and examine any possible or probable links between the two.

In each of the assessment sections of the Safety Climate Assessment Toolkit, several measures are derived using the different assessment methods, and a score is computed for each of these measures (the detailed scoring of the safety climate measures is dealt with in detail in the Safety Climate Assessment Toolkit. These (and any in-house or site specific measures) can be transferred to a graph, similar to that shown in Figure 6. Figure 6 shows how the scores derived from the climate measures can be plotted to provide a graphical representation of each dimension and an overall picture of the current state of the organisation.



**Figure 6**  
Results radar plot

The picture provided by this graph can be used as a comparison for future safety climate assessments. Figure 7 shows the same organisation's subsequent profile (the dotted line), again shown on a radar plot. On the whole, the profile has improved, although some measures are slightly lower, none are in the lower part of the scale. Improvements are shown on this graph as higher scores on each measure, thus the better the profile the closer scores are to the outside of the graph.



**Figure 7**  
Comparative radar plot

*Q: Is this the only way to present the data?*

A: Other graphs may be used to display the results of the safety climate assessment exercise. Bar charts, for example, might highlight any changes in score in a format which your organisation uses for other performance indicators. A safety climate assessment matrix can also be completed using the results to illustrate strengths and weaknesses in each of the areas and how these relate to the organisation, the work group and the individual (a score below 6 (representative of the mid point on many of the scales used) may be considered poor). An example of a matrix was shown in Figure 3. This is reproduced below in Figure 8 showing strengths (denoted by a '+') and weaknesses (denoted by a '-').

		<b>Systems Interfaces</b>		
		<b>Organisation/ Environment</b>	<b>Work Group/ Orgn Systems</b>	<b>Individual/Group/ Orgn Systems</b>
<b>M e t h o d s</b>	<b>Attitude Questionnaires</b>	Management Commitment(+), Work Environment (+)	Supportive Environment (-), Involvement (+)	Appreciation of Risk (-), Personal Priorities(+)
	<b>Focus Group/ Interviews</b>	Management Style (-)	Co-operation (+)	Shared Values (-)
	<b>Direct/Indirect Observation</b>	Safety Systems Compliance (+)	Safe Behaviours (-)	Safe Behaviours (+)

**Figure 8**  
**Example Safety Climate Matrix showing Strengths and Weaknesses**

### **A3.5.1 Completed Matrices and Cultural Descriptions**

*Q: How does this relate to how I described our culture?*

A: The completed matrix in Figure 8 highlights where the strengths (those areas marked (+)) and weaknesses (those marked (-)) of that hypothetical culture lie. But how does this relate to the cultural descriptions we discussed in Section 3.2? You already have a baseline description of your culture but how would this relate to a completed matrix?

We can see from the complete example matrix that this culture would appear to be a collaborative, co-operative and compliant one, judging from the strengths in Co-operation, Involvement and Safety Systems Compliance. However, given the weaknesses apparent in Management style and Supportive environment we might deduce that it is not really a considerate culture.

It should be possible for you to look at your own description of your organisation's culture and your own completed matrix and see where the similarities, and differences, lie. Similarities between your description and the results of the climate would suggest that little has changed since you, and your colleagues, described your culture. Differences, would suggest that something has changed in that time. If this is the case you might want to think of what could have caused these changes. For example, have any safety related initiatives been undertaken? If there are differences and you can attribute them to a particular cause then this will help you when you decide on an action plan based on your climate assessment (see Section 3.6.1).

## **A3.6 HOW CAN WE IMPROVE OUR CULTURE?**

*Q: What can we do with the results?*

A: Once the initial safety climate assessment has been completed and interpreted, an action plan needs to be developed, with milestones established, that may be linked to the organisation's business plan, vision or mission. These milestones should be realistic and understandable.

The value of the climate assessment process can only be fully realised if it is used as part of ongoing organisational communications. It is important to communicate the results of the climate assessment, not only to decision makers, but also to those who took part. The nature of the information from this review can be communicated in a variety of ways including written reports, team briefings and individual feedback. Some action planning techniques and strategies for feedback and improvement are outlined below.

### **A3.6.1 Developing Action Plans**

*Q: Why use an action plan?*

A: Once the process is underway, its degree of success in improving the safety climate will depend on using data to develop action plans for continuous improvement. There are two primary reasons for this:

1. the people who shared their views and contributed to the exercise will expect there to be some actions or changes based on their efforts and activities; and
2. the data is likely to uncover areas for improvement that have to be resolved in order that a lasting improvement in safety can be achieved.

*Q: Where do we start?*

A: Where you focus your efforts in changing things will depend on what sort of safety culture you wish to develop. In the example given in Figure 8 it may be enough that the culture is collaborative and compliant without the need to nurture a considerate culture. In that case the focus would be on maintaining and improving current strengths. On the other hand it may be desirable to improve perceptions of management style as well as maintaining other strengths.

The first step in the action planning exercise may be to go back to the questionnaire or interview items and identify any questions where respondents or interviewees constantly gave negative responses. Also, if an issue has been commented on by several different people it might highlight an area for action. For example, if there were consistently negative responses to item 28 ('My manager/supervisor does not always inform me of current concerns and issues') in the formatted questionnaire, included in the Safety Climate Assessment Toolkit, there are several actions which could be included in your plan to address this issue. You might initiate regular safety briefs to be included at shift handover, or promote the production of regular safety bulletins.

Once specific areas have been identified, you can set about trying to improve them. The identification of cultural drivers, carried out earlier in the process, will highlight who may be the most appropriate instigator of climate change. Also, the systems interface to which the weak indicators are aligned, will give the initial direction for such initiatives. For example in the completed matrix shown in Figure 8, Shared Values and Appreciation of Risk are both highlighted as weak and both suggest that some attention should be directed to the individual.

Finally, when re-examining the data for indications of areas requiring attention, it may be useful to compare responses from different groups within the organisation, or installation. It is possible, given the nature of the work and the workforce, that several sub-cultures are

present on any one installation. If this is the case, then the process of improvement and maintenance may be better described as one of ‘cultural alignment’, where different cultures are brought into line with each other, and the desired organisational culture.

The remainder of this section makes some suggestions for follow-up and ongoing improvements. These are presented in two parts; the first focuses on feedback processes and follow-up (Section 3.6.2) and the second includes a safety climate maintenance checklist (Section 3.6.3). The final part of this section deals with strategies for encouraging acceptance of change (Section 3.6.4).

### **A3.6.2 Feedback and Follow-up**

*Q: Who should get involved in the follow-up process?*

A: Follow-up actions may be actively promoted through the channel of health and safety representatives or to individuals directly.

A recent survey of potential cultural improvement strategies in the chemical process, manufacturing and offshore oil production industries, found that communication, consultation and involvement of as many employees as possible, ensured some success in health and safety initiatives.

*Q: How can we involve people?*

A: Involving all employees in implementing any action plan may not always be possible, however it does ensure some form of ‘ownership’ in the initiative. Individuals can be involved in project teams, **focus groups** (the operation of which is described in the Safety Climate Assessment Toolkit) or through direct interviewing to gain their views. Involving them in focus discussion groups may be an expedient way of maximising numbers of participants.

Focus groups are a form of group interview in which a moderator facilitates discussion among about five to ten group members, ensuring that the group focuses on the topic of interest. The technique is characterised by the use of group interaction to produce insights that would be less accessible without the interaction found in a group. As a group interview, focus groups sit between the two principal methods of qualitative data collection. That is, individual interviews and participant observation in groups.

In a focus group, the moderator directs the discussion to the extent considered necessary, and thus exerts some control over the outcome. While the moderator will not be able to decide exactly what is discussed, the degree of bias that results from the participation of the interviewer will be far less than in a structured interview. The use of focus groups as a follow-up from safety climate profiling will allow the issues raised to be discussed, actions to be formulated and perhaps, in some cases, problems to be resolved.

A further method of highlighting possible strengths and weaknesses leading to particular safety climate profiles, is through the use of the maintenance checklist detailed in Section 3.6.3.

### **A3.6.3 Safety Climate Maintenance Checklist**

*Q: What else can I use to find out about safety issues?*

A: There are many quality tools that can be used to help analyse the data and develop action plans (as described in Section 3.6.2). Such tools should be used to their full advantage. The safety climate checklist, shown in Table 2 on pages 22 and 23, is intended to complement the methods described in earlier sections and also act as a probe for

underpinning some safety issues. In this sense, it delves more deeply into the issues surveyed during the assessment process. The results may themselves prove to be a useful aid in preliminary action planning.

**Table 2**  
**Safety Climate Prompt List**

<b>SMS Organisational Environment</b>
<p><b><i>Policy, Organising and Communication</i></b></p> <p>Is there available evidence to suggest that:</p> <ul style="list-style-type: none"><li>a. policy is shaped at the highest level and that the commitment of the Senior Executive is visible throughout the management chain?</li><li>b. safety is as important as other areas of business activity?</li><li>c. safety advisors, safety representatives and committees have a high status, operate proactively, work and communicate effectively?</li></ul> <p>Do managers, supervisors and team leaders regularly communicate safety-related messages?</p> <p>Are communications on safety from all levels of personnel communicated back to the OIM?</p> <p>All communication systems are considered for the key safety messages - this includes formal and information systems.</p> <p><b><i>Competence, training and co-operation</i></b></p> <p>Has the importance of safety been effectively translated into necessary competence requirements?</p> <p>Does all critical training and retraining culminate in formal assessment and approval?</p> <p>Are adequate resources allocated to training/safety related training?</p> <p>Is the quality of training monitored?</p> <p>Is there a periodic review of training needs?</p> <p>Are contractor training programmes reviewed?</p> <p>Can staff cite any operating error that has led to a training programme modification?</p> <p>Are all staff trained in the special importance of following procedures?</p> <p>Are behavioural programmes in place to support compliance?</p> <p><b><i>Safety rules/local practices</i></b></p> <p>Does the installation have safety related rules/initiatives that go beyond the requirements at corporate level?</p> <p>Is there a requirement to report near misses/errors when they were immediately corrected or had no detectable effect?</p>

What is the general status of the plant in terms of general appearance and tidiness, steam and oil leaks, the tidiness of logs, records, etc.

### ***Review of safety performance***

Does senior management receive regular reviews of the safety performance of the installation? Do these include comparisons with the performance of other installations and industry norms?

Are the results of safety reviews acted on in an appropriate/timely way? Is there feedback to managers on the implementation of lessons learned? Can managers identify changes that resulted from reviews?

Do staff routinely read and understand reports on operational issues and resumes of the safety case?

Is there a system of safety performance indicators with a programme for the improvement of performance?

Are the safety performance indicators understood by all staff?

Are managers aware of the trends of safety performance indicators and the reasons for the trends (i.e. can improvements be linked to positive actions)?

What arrangements exist for reporting safety related events on the platform? Is there a formal means for evaluating such events and 'learning the lessons' from them?

Is there a formal mechanism by which the staff who were involved in a significant event are consulted on the final contents of a report? Can they see the benefits of their inputs?

### **Individual appreciation**

Has the organisation considered measures for managing individual perceptions of risks including:

- a scheme to identify personnel who may be experiencing life-event stresses;
- individuals underestimating the nature of work place risks;
- individuals lacking confidence in risk control areas;
- individuals having an exaggerated sense of their own control?

Have peer pressures to engage in risk-taking been eradicated?

Are health and safety committees tasked to discuss individual risk assessments with teams?

Can focus groups identify major risk control strategies?

Is each individual a competent risk assessor?

The checklist is designed to be used after the initial climate assessment exercise is complete, as a continuous monitoring process before the next climate assessment. Issues raised by the checklist may be indicative of the need for more action or may help show how successful any climate change programme has been.

### **A3.6.4 Encouraging Acceptance of Climate/Culture Change**

*Q: How can I encourage people to embrace changes?*

A: It is almost inevitable that some resistance to changing the current safety climate will develop. Change, whether positive or negative, is stressful because it upsets the ‘world’ we know and are comfortable with. Since some unease is inevitable, it is important to understand that it will occur, and then recognise it and deal with it positively.

Typical ways people react include:

- Bringing up unimportant objections or considerations
- Saying one thing (such as voicing support) but doing something else
- Escalating differences of opinion into an emotional situation

To keep the process on track, here are some ways to encourage acceptance of changes:

- Clearly explain what needs to be changed and why. For example, if there is a clear need to improve performance in one specific area, be able to explain why a change (improvement) is needed. When that is done, the fact that a change is needed is not negotiable. Since the need for some change is accepted, it may be easier to describe how a change in the safety climate can really make a difference. Often this works best when management sends a strong message that safety improvement is needed. Also, if the employees themselves have some ownership of the decision, change may be more clearly explained.
- Communicate the benefits of a climate change, details of the process, and as much other information as possible.
- Be open to constructive discussion to improve understanding. Also ask for suggestions and follow up on them.
- Ask for co-operation in focusing on improvements, rather than asking people to change their attitudes.
- Have a realistic schedule for change, realising that major cultural shifts cannot happen quickly.
- Be flexible - be willing to negotiate on details of the process that will help improve acceptance and participation.

Although the primary aim is to identify and measure the key safety related behaviours everyone in the organisation needs to participate in some safety activities to support the process or improve aspects of safety. When goals are established they can be a positive safety metric and give equal weight to other important business priorities.

Now that you have familiarised yourself with these guidelines, you are ready to consider carrying out your own safety climate assessment. The Safety Climate Assessment Toolkit is included in this document and comprises of a series of assessment tools which you should consider using in your assessment.

## **Part B**

# **Safety Climate Assessment Toolkit**



## B1 INTRODUCTION

The Safety Climate Assessment Toolkit is a practical tool for in-house use. It is designed to gauge the safety climate/culture in offshore organisations and should be used in conjunction with the ‘Safety Climate Assessment Process and Toolkit User Guide’. Like the user guide, the toolkit takes readers, where possible, through a series of questions and answers to fully describe the process.

The toolkit utilises data from three separate, and independent, sources to give an overall “measure” of the prevailing climate for safety. The data are derived from: employee attitude surveys; face to face interviews and focus discussion groups; and, structured observations.

The toolkit has been developed, in collaboration with oil industry personnel, specifically for use in offshore environments. It builds on cultural concepts and frameworks from existing offshore organisations and allied industries. The development of the tools included in the toolkit, is described in detail in the technical report ‘Assessing Safety Culture in Offshore Environments’.

The assessment of safety climate is facilitated by using:

- well developed methods for assessing attitudes and work practices;
- appropriate behavioural indicators; and
- techniques for monitoring and plotting safety climate measures.

The toolkit is set out in the following three sections.

- Section 2 deals with attitude assessment and questionnaires;
- Section 3 covers interviews and focus groups; and
- Section 4 discusses behavioural and observational assessment.



## B2 ATTITUDE MEASUREMENT AND QUESTIONNAIRES

*Q: What are attitudes?*

A: Attitudes have been described as mental states which may exert an influence upon individuals' responses to particular objects and situations. In short, the attitude an individual has to a particular thing or situation may influence how he or she deals with it. However, safety is complex and multi-faceted, and it may be somewhat meaningless to talk about attitudes as if they were a simple concept. In the present context, attitudes to safety are not going to give the definitive measure of safety climate but rather they provide us with some indications of how people view their work and work environments, value safe working practices, and the extent to which they work safely or unsafely.

*Q: How can the toolkit be used to measure attitudes to safety?*

A: Several safety attitude surveys have been carried out in offshore organisations. These surveys, together with group discussions carried out in the background research, have identified a number of general attitude dimensions, outlined in Section 2.1. Employee attitudes in your organisation can be gauged against these dimensions, using a series of key questions directed at a representative sample of workers.

*Q: What are attitude measures?*

A: Attitude measures, based on the general attitude dimensions, refer to the data you will gather from individuals regarding their views on, and feelings about, safety where they work, using the questionnaire tool described here. These can include how they view management commitment to safety, the problems they might have with safety communication, and so on.

*Q: What do attitude measures tell us about safety climate?*

A: These measures will give you some indication of how people feel overall, that is, to what degree certain views and beliefs are shared among the workforce. Furthermore, people's attitudes will affect, to some degree, how they behave at work; gauging attitudes to safety will give us an important indicator of an organisation's safety climate.

### B2.1 GENERAL ATTITUDE DIMENSIONS

*Q: What areas does the questionnaire cover?*

A: In general terms, the attitude measures, or dimensions, used in this toolkit fit into the following broad areas:

- Organisational Context;
- Social Environment;
- Individual Appreciation; and
- Work Environment.

These areas are based on previous research in the offshore environment and other allied industries. Their development is described in full in Section 5 of the technical report 'Assessing Safety Culture in Offshore Environments'. A brief description of each dimension, listed under the broad area to which it relates, is given below:

#### *Organisational Context*

- *Management Commitment* - Perceptions of management's overt commitment to health and safety issues

- *Communication* - The nature and efficiency of health and safety communications within the organisation
- *Priority of Safety* - The relative status of health and safety issues within the organisation
- *Safety Rules and Procedures* - Views on the efficacy and necessity of rules and procedures

#### ***Social Environment***

- *Supportive Environment* - The nature of the social environment at work, and the support derived from it
- *Involvement* - The extent to which safety is a focus for everyone and all are involved

#### ***Individual Appreciation***

- *Personal Priorities and Need for Safety* - The individual's view of their own health and safety management and need to feel safe
- *Personal Appreciation of Risk* - How individuals view the risk associated with work

#### ***Work Environment***

- *Physical Work Environment* - Perceptions of the nature of the physical environment

#### ***Organisation Specific Factors***

Attitudes to specific safety related systems and procedures (for example, permit to work systems) may be included as necessary.

## **B2.2 ASSESSING ATTITUDES**

*Q: How do we measure these attitudes?*

A: A full survey of employees can be carried out using the following questions and a five point, Likert-type scale (ranging from strongly agree to strongly disagree) which allows respondents to indicate the extent of their agreement with each statement. An example formatted questionnaire, including these items in random order, is shown on pages 101 to 105. The formatted questionnaire includes a standard covering letter and is ready for use with only a few, organisation specific, changes.

#### **Management Commitment**

- 1 Management acts decisively when a safety concern is raised
- 2 Management acts only after accidents have occurred
- 3 Corrective action is always taken when management is told about unsafe practices
- 4 In my workplace management acts quickly to correct safety problems
- 5 In my workplace management turn a blind eye to safety issues
- 6 In my workplace managers/supervisors show interest in my safety
- 7 Managers and supervisors express concern if safety procedures are not adhered to

*Communication*

- 8 Management operates an open door policy on safety issues
- 9 My line manager/supervisor does not always inform me of current concerns and issues
- 10 I do not receive praise for working safely
- 11 Safety information is always brought to my attention by my line manager/supervisor
- 12 There is good communication here about safety issues which affect me

*Priority of Safety*

- 13 I believe that safety issues are not assigned a high priority
- 14 Management clearly considers the safety of employees of great importance
- 15 Safety rules and procedures are carefully followed
- 16 Management considers safety to be equally as important as production

*Safety Rules and Procedures*

- 17 Sometimes it is necessary to depart from safety requirements for production's sake
- 18 Some health and safety rules and procedures are not really practical
- 19 Some safety rules and procedures do not need to be followed to get the job done safely

*Supportive Environment*

- 20 Employees are not encouraged to raise safety concerns
- 21 Co-workers often give tips to each other on how to work safely
- 22 I am strongly encouraged to report unsafe conditions
- 23 When people ignore safety procedures here, I feel it is none of my business
- 24 A no-blame approach is used to persuade people acting unsafely that their behaviour is inappropriate
- 25 I can influence health and safety performance here

*Involvement*

- 26 I am involved in informing management of important safety issues
- 27 I am never involved in the ongoing review of safety
- 28 I am involved with safety issues at work

*Personal Priorities and Need for Safety*

- 29 Safety is the number one priority in my mind when completing a job
- 30 Personally I feel that safety issues are not the most important aspect of my job
- 31 I understand the safety rules for my job
- 32 It is important to me that there is a continuing emphasis on safety
- 33 A safe place to work has a lot of personal meaning to me

*Personal Appreciation of Risk*

- 34 I am rarely worried about being injured on the job
- 35 In my workplace the chances of being involved in an accident are quite large
- 36 I am sure it is only a matter of time before I am involved in an accident
- 37 I am clear about what my responsibilities are for health and safety

*Work Environment*

- 38 I cannot always get the equipment I need to do the job safely
- 39 Operational targets often conflict with safety measures
- 40 Sometimes conditions here hinder my ability to work safely
- 41 Sometimes I am not given enough time to get the job done safely
- 42 There are always enough people available to get the job done safely
- 43 This is a safer place to work than other companies I have worked for

## **B2.2.1 Administering the Safety Climate Questionnaire**

*Q: How do we collect questionnaire data?*

A: Questionnaires are often best distributed to employees through a series of team briefings and meetings. The objectives and nature of the study should be introduced first, before staff are given time to complete the survey. The actual method of distribution is perhaps best negotiated at a local level and may vary from department to department, although an organised gathering like a briefing or a tool box talk, where individuals are given time to complete the questionnaire may maximise the response rate. Incentives, for example the inclusion of respondents in a prize draw, might also maximise response rates. It should be stressed throughout the distribution process that questionnaire returns are anonymous, and confidential to the study. Providing an envelope for the sealed return of completed questionnaires will emphasise this.

*Q: Must we use the full questionnaire?*

A: The full questionnaire provides a rich source of data, especially if you wish to examine individual questions in detail, and allows dimensions to be plotted (see Part A). You may, however, wish to use the short form assessment matrix, shown on page 46, if you have limited time to complete an assessment or if you are conducting an interim assessment and do not wish to survey the entire workforce. The short form assessment matrix contains two of items which best characterise each dimension of the questionnaire, sometimes in an alternative form from the full survey. To use the assessment matrix you should question as many individuals as you think necessary to gain a full picture, the assessment matrix shown on page 46 contains room for 17 responses but more or less individuals may be used, depending on your target sample. This might include, for example, one production shift crew.

*Q: How do we analyse the data?*

A: The following bullet points provide a step-by-step guide to scoring questionnaire responses:

- Each item should be scored by giving a value of 5 to the 'strongly agree' category, 4 to the 'agree' response, 3 to the 'neither agree nor disagree' category, 2 to the 'disagree' response, and 1 to the 'strongly disagree' category.
- Some of the items in the questionnaire are negatively worded and care should be taken to reverse the scoring for negative items in the questionnaire when coding the item responses, this is usually achieved by subtracting the item score from 6 to reverse the scoring. For example, a score of 2 on a negatively worded item would be reversed to a score of 4.
- Scores should be averaged for each item, across the whole group (or groups).
- These average item scores can now be used to calculate dimension scores. Dimensions in the current questionnaire have different numbers of items and, therefore, scores need to be standardised before plotting and comparing these dimensions. Converting the scores to a 1 to 10 scale can be achieved by dividing the actual score by the total possible score and then multiplying by 10. Table 1 shows how the dimension scores are calculated from the questionnaire items, for each of the nine dimensions. The item numbers given refer to those used in the formatted questionnaire on pages 41 to 45.

**Table 1**  
**Calculating dimension scores**

Dimension	Add	Divide by	Multiply by	Score
Management Commitment	Item 9 + (6 - Item 16) +(6 - Item 19) + Item 26 + Item 33 + Item 38 + Item 42	35	10	
Communication	Item 1 + Item 10 + (6 - Item 25) + (6 - Item 28) + Item 31	25	10	
Priority of Safety	Item 4 + Item 5 + (6 - item 20) + Item 40	20	10	
Safety Rules and Procedures	(6 - Item 17) + (6 - Item 21) + (6 - Item 35)	15	10	
Supportive Environment	Item 3 + Item 15 + (6 - Item 22) + Item 29 + (6 - Item 32) + Item 41	30	10	
Involvement	Item 8 + Item 13 + (6 - Item 39)	15	10	
Personal Priorities and Need for Safety	Item 2 + Item 11 + Item 12 + (6 - Item 23) + Item 36	25	10	
Personal Appreciation of Risk	(6 - Item 6) + Item 18 + (6 - Item 24) + Item 34	20	10	
Work Environment	(6 - Item 7) + Item 14 + (6 - Item27) + (6 - Item 30) + Item 37 + (6 - Item 43)	30	10	

Alternatively, once dimension scores are computed for each respondent, average scores can be computed for the whole group. If the survey sample is small these calculations can be done by hand. However, the larger the sample, the more time consuming data analysis will become. In that case, data from the survey may be best analysed using a simple spreadsheet computer software package, with the formula for each calculation preset.

*Q: How do we score the short-form matrix?*

A: The responses for each item on the short form questionnaire should be averaged and the two averages added together to give each dimension a score. You should note that two of the dimensions (Safety Rules and Procedures, and Personal Appreciation of Risk) include only negative items and you should subtract the totals of these two dimensions from 12 to obtain a positive dimension score. For example, if the averages for the two items on Safety Rules and Procedures were 2.2 and 1.8, you would add them (equalling 4) and then subtract this from 12, giving a dimension score of 8.

*Q: What about open questions at the end of the questionnaire?*

A: The open responses at the end of the questionnaire can provide you with further information on particular issues which are prominent in people's minds. These can be particularly useful when planning follow up action (see Section 3.6 in Part A).

*Q: Can we get any help profiling the data?*

A: A full profiling service is available from the Centre for Hazard and Risk Management at Loughborough University, where a database of comparative data will be held. This data base will hold aggregated scores from a range of organisations which have already used the Safety Climate Assessment Toolkit. For further information on this, please contact the centre on 01509 222162 or email [safetyprofile@bsb.lboro.ac.uk](mailto:safetyprofile@bsb.lboro.ac.uk). The team at Loughborough will also be happy to keep users up to date on developments in the toolkit.

*Q: What do we do with the dimension score now?*

A: The standardised scores you obtain, from either the full questionnaire or the short form assessment matrix, can then be plotted on the graphs described in Section 3.5 of the Safety Climate Assessment Process and Toolkit User Guide (Part A). These scores form part of your organisation's safety climate profile, together with scores derived from the methods described in Sections 3 and 4.

## B3 INTERVIEWS AND FOCUS GROUPS

*Q: Why use interviews?*

A: There are two main reasons for conducting interviews and focus discussion groups;

1. they elicit subjective meanings, and
2. they permit exploration of issues not always possible using standard formatted questionnaires.

This section discusses interviews carried out with individuals, and focus group discussions. Both methods may be used to attempt further understanding of how people think and feel about safety.

*Q: Should we use Interviews or focus groups?*

A: Conducting interviews can be time consuming and difficult. Interviews should be planned carefully and are perhaps best aimed at senior managers and individuals who do not fall easily into a group. One way of cutting down on the resource demands of interviewing individuals, while still obtaining the same type of data, is to conduct group interviews, or ‘focus discussion groups’ with groups of employees from the same parts of the organisation.

*Q: What is involved?*

A: Both interviews and focus discussion groups vary from structured (where all questions are planned out in advance), through semi-structured (where further probing is permitted), to unstructured (where questions are not planned at all and are just focused on a particular area). Generally the ease with which the resulting data can be analysed increases the more structured the interview or focus group becomes. Given the resource demands of interviewing and conducting focus group discussions, this section sets out an interview/focus group structure with scoring criteria, allowing a relatively simple analysis of the data, while still allowing some general discussion. Further details of conducting focus group discussions are given in Section 3.6.2 of the Safety Climate Assessment Process and User Guide.

### B3.1 ASSESSMENT METHOD

*Q: What areas are covered by this method?*

A: The interview/focus group structure focuses on the following areas of health and safety systems:

- co-operation;
- competence and training;
- management style;
- managing change; and
- shared values.

These five areas were selected, based on the research described in Section 5 of the technical report, *Assessing Safety Culture in Offshore Environments*. They can be assessed by interviewing, or involving in group discussion, a representative sample of as many employees and managers as practical, using the questions in the tables on pages 47 to 51. Individual responses should be graded according to the scale given below each question and scores should then be averaged to produce the total for each item. There are spaces for 8 responses on the tables provided, although more or less may be necessary, depending on the size of the desired sample. These totals are then summed to produce the

score for each of the areas. There is also space in each table to note any further comments respondents might want to make. When the climate assessment process has been established you may wish to introduce your own questions and/or areas into the schedule.

The set of questions relating to shared values, also allows comparisons to be drawn between individuals and what these individuals think of others. Some notion of how 'shared' values are perceived to be will be given by comparing the scores for the three individual questions. If there seems to be agreement then the values are perceived to be shared.

*Q: Can we add new questions?*

A: The questions covered in the schedule provide a starting point for the use of interviews in your climate assessment. There may be other areas that you and the assessment team think are important and should be covered. You should develop questions along the same lines as those shown in the schedule and test them out on a small sample. In this way you might customise the interview schedule over a number of toolkit uses.

### **B3.1.1 Conducting Interviews and Focus Groups**

*Q: How should we go about conducting interviews and focus groups?*

The five tables of questions relating to co-operation, competence and training, management style, managing change and shared values provide you with a structure for the interview or focus group process. Issues to bear in mind when planning interviews or focus discussion groups include:

- Timing - be realistic, even a short interview will probably take about 30 minutes, a structured focus group will take a little longer.
- Introduction - be sure to introduce the topic areas to be covered in the interview or discussion and explain the purpose of asking people for their views.
- Taking notes - it will not be necessary to write all comments down verbatim but you should try to be as objective as possible. If the interview schedule is to be used as a focus group structure it may be better to involve a second observer to take notes.
- Group composition - it may be better to limit focus discussion group composition to those of a similar grade or standing within the organisation. Some participants may feel inhibited when in a discussion group containing their superiors.

### **B3.1.2 Constructing a Climate Profile**

*Q: What do we do with the scores we have generated from interviews and focus groups?*

A: As with the dimension scores you derived from the questionnaire in Section 2, scores from the second part of your organisation's safety climate profile can be plotted on the graphs described in Section 3.5 of the Safety Climate Assessment Process and Toolkit User Guide (Part A). Section 4 of the toolkit presents the final method for collecting assessments to complete the safety climate profile.

## B4 OBSERVATIONS

The collection of data described in this section uses both direct and indirect observation. For example data can be collated from reports, such as organisational records (indirect observation), as well as from direct observation of individual behaviour.

### B4.1 BEHAVIOURAL INDICATORS

*Q: What are behavioural indicators?*

A: Behavioural indicators refer to a set of performance indicators which give us some idea of how the organisation is behaving. These might include, for example, the number of planned training courses that have actually taken place, etc. The indicators included in this section are the result of discussions with offshore safety professionals and research into good practice in other industries. There is scope for the user of this toolkit to add organisation specific indicators to the list if this will aid the monitoring process.

Behavioural indicators of safety climate not only augment the overall picture being built up by the measures described in Sections 2 and 3, but they are valuable in their own right. They can, for example, help you to identify the major factors in accidents and incidents as well as providing yet another avenue for continuous improvement.

Behavioural indicators in offshore environments can be derived from a number of sources:

- Direct Observation
  - of safe and unsafe acts
  - using a behavioural checklist for critical tasks
- Indirect Observation involving:
  1. Examination of Documentation/Compliance and Practices, including:
    - Unplanned emissions
    - Process Compliance
    - Safety inspections/tours
    - Training sessions
  2. Accident and incident reports
    - Accident reports
    - Near miss incidents

### B4.2 ASSESSMENT METHODS

*Q: How do we assess these indicators?*

A: Assessment of direct sources is described in Section 4.2.1, while indirect sources are covered in Section 4.2.2

#### B4.2.1 Direct Sources

Direct observation of individuals can be achieved using a behavioural checklist. Even in organisations with extremely good reporting systems, many minor accidents go unreported. One way of identifying the nature and number of such minor accidents and of

near miss incidents is through direct observation of work behaviour. The behavioural checklist comprises a list of behaviours most commonly associated with preventing accidents, incidents and near misses in a particular area. To be ‘ticked off’, the items on the checklist must be observable and specified in observable terms, for example “wears eye protection when working with chemicals”. Many organisations now have behavioural programmes in place and these are suitable for inclusion in the climate assessment exercise. The development of checklists independently of behavioural programmes may be too time consuming for a short climate assessment.

These checklists are best developed by employees who carry out the tasks. Tasks which have not been associated with incidents should not be disregarded since there may still be risks involved. An example behavioural checklist is shown in Table 2 below and general items on a checklist might include:

- Personal Protective Equipment (PPE) - appropriateness for the job, condition and fit;
- seating/standing posture;
- body movements - lifting, reaching;
- tools/equipment - conditions, use;
- breaks/ relief period - repetitive work; and
- housekeeping.

**Table 2  
Structure for a Behavioural Checklist**

Tasks	Behaviour	Safe	Unsafe	Not Seen
Lifting and slinging	Observes correct banksman procedures			
Constructing scaffold	Adheres to PPE requirements and operates within the bounds of the permit to work system			
Using chemicals	Adheres to all PPE requirements			

The number of times each type of behaviour is observed, either safe or unsafe, should be counted and recorded in the appropriate column. Observable behaviours can be scored in this way, in terms of % safe behaviours to provide another climate indicator to add to those collected in Section 2 and 3. The total from this exercise should be divided by 10 to produce a score on the same scale as the others in this section.

## B4.2.2 Indirect Sources

### Documentation

Figure 1 lists some indicators which can be accessed from company documentation (this may of course depend on the nature of company records, and further investigation may be necessary). Evidence of these indicators should be compared with the stated criteria in order to formulate a score for each and an overall score for the evidence collected from an examination of documentation. The overall score is calculated by dividing the total by 6 and then multiplying it by 5.

Indicator	Scoring Criteria	Score
How many spills and discharges have been reported in the past six months?	None	2
	One to five	1
	Six or more	0
Are safety lessons extracted and disseminated from incidents or enforcement activity?	Yes, always	2
	Yes, occasionally	1
	Never	0
Have there been repeated failures, or repeated contact with the Regulator over the same issue?	No	2
	One to four times	1
	Five times or more	0
Are safety critical competencies included in job specs, recruitment selection criteria and performance appraisals?	Yes, included in all	2
	Yes, included in some	1
	Not included in any	0
Is there a Safety Suggestion Scheme in operation?	Yes and suggestions are acted on	2
	Yes but little action	1
	No	0
How many high visibility tours have been undertaken by senior management in the previous six months?	More than two	2
	One or two	1
	None	0
Are safety committee recommendations acted upon in a timely fashion?	Yes, always	2
	Yes, occasionally	1
	Never	0
<b>Total</b>		

**Figure 1**  
**Documentation scoring criteria**

### Practices

Table 3 lists the indicators which can be accessed from indirect observation of organisational practices through the examination of company records and databases.

**Table 3  
Organisational Practices**

<b>Indicator</b>	<b>% Observed</b>
Percentage of planned training undertaken	
Percentage of planned inspections undertaken	
Percentage of planned safety meetings undertaken	
Percentage of staff trained in behaviour based safety techniques	
<b>Total (average of % observed)</b>	<input style="border: 2px solid black;" type="text"/>

The total from this table should be divided by 10 to produce a score on the same scale as the others in this section.

Accident and incident reports

Accident and incident analysis involves the following steps:

1. Review overall accident performance
2. Consider the pattern of accident/incidents
3. Isolate those incident reports related directly to behaviour, that is those accidents whose cause can be directly linked, at least in part to unsafe behaviour.

Behaviour related incidents can then be recorded per 1000 employees and scored as follows:

<b>Accidents/1000</b>	<b>Score</b>
0	9
1-5	8
6-10	7
11-15	6
16-20	5
21-25	4
26-30	3
31-35	2
35+	1

Actual behaviour-related accidents per 1000 employees:   
**Score:**

*Q: What happens to the scores from direct and indirect observations?*

A: The final set of scores from this section can be added to your organisation's safety climate profile, described in Section 3.5 of the Safety Climate Assessment Process and Toolkit User Guide (Part A). Feeding back the scores and action planning using the results are also described in the user guide.

Once you have completed your assessment exercise and profiled your organisation's current status, you should think about action planning to improve or maintain your safety culture. Some pointers to this are given in Section 3.6 of the Safety Climate Assessment Process and Toolkit User Guide (Part A)

# ASSESSMENT TOOLS

## FULL ATTITUDE QUESTIONNAIRE

## SAMPLE QUESTIONNAIRE COVERING LETTER

Dear Colleague

### **Safety Questionnaire**

We are undertaking a number of initiatives aimed at raising health and safety standards. The company has decided to focus on employee attitudes and perceptions as one of these initiatives. We are conducting a confidential survey, aimed at all levels of staff working here.

To help with this task, we would like you to complete the following questionnaire - confidentiality is assured. We ask only for basic job information in order to help interpret the results.

The questionnaire is in four parts and is relatively simple to complete and asks about your attitudes to safety issues; as well as any suggestions you might have to improve things.

Please try to answer all of the questions, being as open and honest as you can. The conclusions will be fed back to you on completion of the survey.

Many thanks for your assistance.

## **SAFETY SURVEY**

We would like to find out how you feel about your company safety practices and principles, and in order to do this we would like you to complete this questionnaire.

It is important for you to be completely honest about your feelings. All responses will be treated in strict confidence and there is no requirement to put your name to the questionnaire. The responses will be processed in confidence by the review team.

It should take 15 to 20 minutes to complete this questionnaire.

We would like you enter your company, department/team and job function to assist us with the interpretation of the results.

Thank you for your co-operation.

Company \_\_\_\_\_

Department/Team \_\_\_\_\_

Job Function \_\_\_\_\_

You will be presented with a series of statements on the following pages about health and safety. You should indicate your response by ticking the appropriate box. For example, if you agreed with the following statement you would tick under the 'I agree' category, thus:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. Health & Safety issues are very important.		✓			

*Please tick the appropriate box to indicate your level of agreement*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. Management operates an open door policy on safety issues					
2. Safety is the number one priority in my mind when completing a job					
3. Co-workers often give tips to each other on how to work safely					
4. Safety rules and procedures are carefully followed					
5. Management clearly considers the safety of employees of great importance					
6. I am sure it is only a matter of time before I am involved in an accident					
7. Sometimes I am not given enough time to get the job done safely					
8. I am involved in informing management of important safety issues					
9. Management acts decisively when a safety concern is raised					
10. There is good communication here about safety issues which affect me					
11. I understand the safety rules for my job					
12. It is important to me that there is a continuing emphasis on safety					
13. I am involved with safety issues at work					
14. This is a safer place to work than other companies I have worked for					
15. I am strongly encouraged to report unsafe conditions					
16. In my workplace management turn a blind eye to safety issues					
17. Some safety rules and procedures do not need to be followed to get the job done safely					
18. I am rarely worried about being injured on the job					

*Please tick the appropriate box to indicate your level of agreement*

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
19. Management acts only after accidents have occurred					
20. I believe that safety issues are not assigned a high priority					
21. Some health and safety rules and procedures are not really practical					
22. Employees are not encouraged to raise safety concerns					
23. Personally I feel that safety issues are not the most important aspect of my job					
24. In my workplace the chances of being involved in an accident are quite large					
25. I do not receive praise for working safely					
26. Corrective action is always taken when management is told about unsafe practices					
27. Operational targets often conflict with safety measures					
28. My line manager/supervisor does not always inform me of current concerns and issues					
29. I can influence health and safety performance here					
30. Sometimes conditions here hinder my ability to work safely					
31. Safety information is always brought to my attention by my line manager/supervisor					
32. When people ignore safety procedures here, I feel it is none of my business					
33. In my workplace management acts quickly to correct safety problems					
34. I am clear about what my responsibilities are for health and safety					

<i>Please tick the appropriate box to indicate your level of agreement</i>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
35. Sometimes it is necessary to depart from safety requirements for production's sake					
36. A safe place to work has a lot of personal meaning to me					
37. There are always enough people available to get the job done safely					
38. In my workplace managers/supervisors show interest in my safety					
39. I am never involved in the ongoing review of safety					
40. Management considers safety to be equally as important as production					
41. A no-blame approach is used to persuade people acting unsafely that their behaviour is inappropriate					
42. Managers and supervisors express concern if safety procedures are not adhered to					
43. I cannot always get the equipment I need to do the job safely					

Do you have any other comments about health and safety in your workplace?

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Thank you for completing this questionnaire.

## SHORT-FORM QUESTIONNAIRE

Questioning a representative sample of employees and using the questions in the table below can assess each dimension. Respondents should be asked to what extent they agree or disagree with the statements using the following scale:

1                      2                      3                      4                      5  
 Strongly disagree    disagree            Neither agree nor disagree    Agree                Strongly agree

Individuals' scores should then be averaged to produce the total score for each item and these summed to produce the score for each dimension

Questions	Individuals' Scores												Average	
Management acts decisively when a safety concern has been raised														
In my workplace management acts quickly to correct safety problems														
Dimension -Management Commitment Total Score:														
Safety information is always brought to my attention by my line manager/supervisor														
There is good communication here about safety issues which affect me														
Dimension -Communication Total Score:														
Management here considers safety to be equally as important as production														
I believe safety issues are assigned a high priority														
Dimension -Priority of Safety Total Score														
Some health and safety rules and procedures do not need to be followed to get the job done safely														
Some health and safety rules are not really practical														
Dimension - Safety Rules and Procedures Total Score (Reversed (the total subtracted from 12)):														
I am strongly encouraged to report unsafe conditions														
I can influence health and safety performance here														
Dimension - Supportive Environment Total Score:														
I am involved in informing management of important safety issues														
I am involved with safety issues at work														
Dimension - Involvement Total Score:														
Safety is the number one priority in my mind when completing a job														
It is important that there is a continuing emphasis on safety														
Dimension - Personal Priorities and Need for Safety Total Score:														
I am sure it is only a matter of time before I am involved in an accident														
In my workplace the chances of being involved in an accident are quite high														
Dimension - Personal Appreciation of Risk Total Score (Reversed (the total subtracted from 12)):														
Operational targets rarely conflict with safety measures														
I am always given enough time to get the job done safely														
Dimension - Work Environment Total Score														

## INTERVIEW SCHEDULE

<b>CO-OPERATION</b>									
1. Does a senior manager participate in health and safety meetings?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
2. Are employees involved in setting health and safety standards and rules, accident investigation and measuring and auditing activities?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
3. Do managers conduct regular safety inspections?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
4. Do you feel that management involves you in matters relating to health and safety?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
5. Are suggestions relating to health and safety welcomed by your manager?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
Further Comments:									
<b>Total Co-operation score</b> (sum of item totals):									

<b>COMPETENCE AND TRAINING</b>								
1. Do managers ensure the competence of all people in health and safety matters?								
Never = 0			Sometimes = 1			Always = 2		
Individual responses								
Question total response (average of individual responses)								
2. Is health and safety training appropriate for your job?								
Never = 0						Always = 2		
Individual responses								
Question total response								
3. Do you feel competent in health and safety issues that affect your work areas?								
No = 0						In all issues = 2		
Individual responses								
Question total response								
4. What training is available to you in health and safety?								
In some areas = 1				In all areas = 2				
Question total response (average of individual responses)								
Poor = 0			Adequate = 1					
Individual responses								
(average of individual responses)								
Further Comments:								
<b>Total Competence and Training score</b> (sum of items)								
:								

<b>MANAGEMENT STYLE</b>									
1. Does your manager operate an open door policy with regard to health and safety issues?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
2. Does your immediate manager:									
Hardly talk to you = 0			Tell you what to do & how = 1				Tells you what to do & you decide how = 2		
Individual responses									
Question total response (average of individual responses)									
3. Does your immediate manager:									
Not discuss the job with you = 0			Discuss the job with you & tell you how to do it = 1				Discuss the job with you & you decide how to do it = 2		
Individual responses									
Question total response (average of individual responses)									
4. Do you feel that your manager sets a good example in relation to health and safety matters?									
Never = 0			Sometimes = 1				Always = 2		
Individual responses									
Question total response (average of individual responses)									
5. Do you feel that you receive enough information regarding health and safety matters?									
No information = 0			Some information = 1				Enough information = 2		
Individual responses									
Question total response (average of individual responses)									
Further Comments:									
<b>Total Management Style score</b> (sum of item totals):									

<b>MANAGING CHANGE</b>									
1. When there is a change in working procedures are you kept fully up to									
Never = 0					Sometimes = 1				
Individual responses									
(average of individual responses)									
2. When there is a change in the facilities here are you kept fully up to date?									
Never = 0					Always = 2				
Individual responses									
Question total response									
3. Do you think management implement changes efficiently?									
Sometimes = 1					Always = 2				
Individual responses									
Question total response (average of individual responses)									
facilities here?									
Sometimes = 1					Always = 2				
Individual responses									
Question total response (average of individual responses)									
No information = 0      Some information = 1									
Individual responses									
(average of individual responses)									
Further Comments:									
<b>Total Managing Change score</b> (sum of item totals)									

<b>SHARED VALUES</b>									
*Insert company or organisation safety policy or value statement*									
1. Do you think than the company really means this ?									
No = 1			Sometimes = 1				Yes = 3		
Individual responses									
Question total response (average of individual responses)									
2. Do you think that your immediate colleagues believe the company really means this?									
No = 0			Sometimes = 1				Yes = 3		
Individual responses									
Question total response (average of individual responses)									
3. Do you think that everyone in the organisation thinks the company really means this?									
No = 0			Sometimes = 1				Yes = 3		
Individual responses									
Question total response (average of individual responses)									
Further Comments:									
<b>Total Shared values score</b> (sum of item totals):									

## **ACKNOWLEDGEMENTS**

This project was funded and supported by four operating companies and the Offshore Safety Division of the Health and Safety Executive. The views presented here are those of the authors, and should not be taken to represent the policy of the Health and Safety Executive or the organisations involved in the studies. We would like to thank all the participants in the studies who took time to share their views and feelings with us, Mr William Cockburn, Ms Deborah Walker and other colleagues in the Centre for Hazard and Risk Management for their assistance in collecting some of the data, and Mr Martin Alexander (Chevron) for his assistance both in the UK and the US. We would particularly like to express our gratitude to the following members of the project steering group, and representatives of the participating companies for their help, support and advice over the course of the project: Mr Jay Swearingen (Chevron Gulf of Mexico), Mr Howard Harte and Mr Bob Miles (OSD, HSE), Ms Fiona Davies (MaTSU), Mr David Fitzpatrick and Mr Sandy Stewart (Mobil North Sea), and Mr Bill Brazendale (Oryx UK). Finally our thanks go to Dr Norman Byrom (HSE) and Ms Rachael Spencer (MaTSU) for useful comments on earlier drafts of this report.

## GLOSSARY

<b>TERM</b>	<b>DESCRIPTION</b>
<b>attitude</b>	<i>mental state organised through experience and exerting an</i>

<b>systems interfaces</b>	<i>key parts of the organisation which are the target of the assessment process</i>
<b>triangulation</b>	<i>the combination of several methodologies in order to study one phenomenon</i>
<b>valid</b>	<i>extent to which a claim, or conclusion, is based on sound logic</i>
<b>values</b>	<i>individual views and ideas, held as extremely important</i>