

Behavioural Safety Implementation: Leaders and Managers



COURSE HANDBOOK & WORKBOOK

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Course Aim

To explore and contrast different approaches to Behavioural Based Safety management thereby allowing a business to implement a system that fits within its cultural and management safety structure.

Learning Outcomes

By the end of the training, the delegates should be able to:

By the end of the training the delegates should be able to:

- Identify key drivers and principles supporting Behavioural Based Safety;
- Explore the psychology of human behaviour including 'human error' and 'violations' in the workplace;
- Identify leadership and management approaches which can play a part in implementing any 'Behavioural Safety' programme;
- Recognise key components of 'safety culture' and consider its implications for your behavioural safety approach;
- Explore how behavioural safety modification approaches different safety areas, approaches include;
 - ABC analysis;
 - Science of Persuasion;
 - Nudge Theory;
 - Coaching Behavioural Improvements
- Identify a Behavioural Safety auditing approach including which uses both proactive as well as reactive measurement tools;
 - Setting personal behavioural safety objectives;
 - Designing a proactive near miss management system;
- Develop an outline behavioural safety strategy for their business using the change cycle



Session One

Identify key drivers and
principles supporting
Behavioural Based Safety



Session One –

Introduction: Behavioural Safety Drivers

Safety Management is at a crossroads in its development with many of the gains from effective systems seeming to have run out of steam in reducing serious errors and fatalities. As the first graph below shows the impressive changes in reducing injuries from the engineering and systems approach has taken the UK Health and Safety management arena as far as it can go. The rate since 2014/15 has continued along a similar track in terms of both fatalities and Serious Injuries so that overall SIF rates appear fairly static.

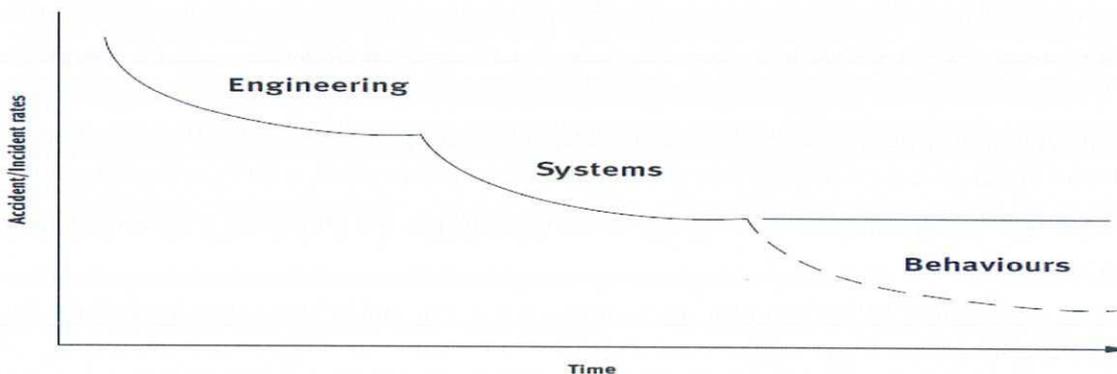
Number and rate of fatal injuries to workers



Source: RIDDOR r = revised p = provisional

Slides 7 - 19

The second graph show below show how effective engineering and systems approaches have been and then suggest that human factors is the next stage in this evolution in reducing these types of injuries and fatalities.



Behavioural Safety is therefore becoming ever more important in the developing safety area and this course is designed to explore different approaches to this subject giving delegates an opportunity to



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identify how they might use different behavioural approaches in their business and safety management. The course and booklet has also been cross referenced to the HSE view on 'Human Factors' in their booklet HSG 48, they define human factors as:

" The environmental, organisational and job factors, and human and individual characteristics, which influence behaviour at work in a way which can affect health and safety"

The HSE identify these aspects in more detail and include:

- **The job:** including areas such as the nature of the task, workload, the working environment, the design of displays and controls, and the role of procedures. Tasks should be designed in accordance with ergonomic principles to take account of both human limitations and strengths. This includes matching the job to the physical and the mental strengths and limitations of people. Mental aspects would include perceptual, attentional and decision-making requirements.
- **The individual:** including his/her competence, skills, personality, attitude, and risk perception. Individual characteristics influence behaviour in complex ways. Some characteristics such as personality are fixed; others such as skills and attitudes may be changed or enhanced.
- **The organisation:** including work patterns, the culture of the workplace, resources, communications, leadership and so on. Such factors are often overlooked during the design of jobs but have a significant influence on individual and group behaviour.

Human factors are therefore concerned with what people are asked to do (the task and its characteristics), who is doing it (the individual and their competence) and where they are working (the organisation and its attributes), all of which are influenced by the wider societal concerns, both local and national.

Human factors can, and should, be included within a good safety management system and so can be examined in a similar way to any other risk control approach. We suggest therefore that any definition of Behavioural Safety management system and any associated practice must include control of those three components of human factors, the challenge is therefore to undertake this in the best way possible for your organisation.

Conclusion:

In conclusion, this course is an opportunity to explore different approaches to behavioural safety in the context of your own organisation and we will therefore start by look at what your organisation does well.

Then we explore different psychological theories and what is called the old and new view approaches to behavioural management.

As the HSE outline 'Behavioural Safety' is not a quick or easy fix and a long-term plan is essential if your approach is to be successful.

Good luck!

Alan Bartholomew

RoSPA consultant



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What is effective safety management – Exercise

Consider your own organisation in terms of safety management:

- What does it do well in overall safety management?
 - What could it do better?

Does Well	Could do better

- What does it do well in terms of behavioural safety and human factors management?
 - What could it do better?

Does well	Could do better



Behavioural Safety Implementation

IOSH – Looking for higher standards – Behavioural Safety Improving performance

Raising Health and safety in the workplace is influenced by a number of factors, from the organisational environment through managers' attitude and commitment to the nature of the job or task and the personal attributes of the worker. Safety-related behaviour in the workplace can be changed by addressing these major influences.

One way to improve safety performance is to introduce a behavioural safety process that identifies and reinforces safe behaviour and reduces unsafe behaviour. Behavioural safety processes aren't a 'quick fix' and it's important not to overlook fundamental elements. You should begin by concentrating on policies and systems – assessing and improving management and operational factors, training, design and so on.

First researched in the 1970s in the US, the behaviour-based safety approach emerged in UK organisations in the late 1980s and is now widely used in a variety of sectors in the UK. This guide introduces the background and basic principles behavioural safety.

Behaviour can be defined as an action by an individual that is observable by others. It's estimated that in up to 80 per cent of work-related accidents, employees' behaviour – in the form of acts or omissions – is a contributing factor. Such behaviour can pave the way for many pre-existing factors to come together in a negative event. There are many reasons why employees might engage in 'at-risk' behaviour at work. Some examples are: - cutting corners to save time: how often do employees decide not to use personal protective equipment (PPE) because a task may only take seconds to complete?

In this example, the at-risk behaviour (the failure to use PPE) has the instant perceived benefit of saving time - ergonomic factors: inappropriately placed machine controls may lead to improvised and potentially dangerous access arrangements - accepted practice: 'we've always done it that way' - reinforcement of at-risk behaviour by the actions of supervisors: this may also undermine employees' confidence in the management's commitment to manage concerns such as safety - misunderstanding at-risk behaviour: employees may be unaware, or have a low perception, of the risks associated with a particular task or activity. This could be due to insufficient information or training - instinctive risk-taking behaviour: some people are more naturally inclined than others to take risks.

The behaviour-based approach to safety focuses exclusively on the observable, measurable behaviours critical to safety in a particular setting. This is a task-oriented view of behaviour, and it treats safe behaviour as a critical work-related skill. Don't confuse it with inspections and audits of the workplace for unsafe conditions.

Behavioural safety is part of a natural progression of safety management from highly prescriptive approaches, through the engineered or procedural systems which most progressive companies have long since established, to a system which recognises workers as mature human beings with a genuine interest in their own wellbeing, who contribute best when they can see that they themselves can influence their own safety. To achieve this transition is to change the culture of the work group involved – so it won't achieve instant results. In addition, behaviour-based approaches to safety improvement are most effective when the engineered and procedural systems are working properly.



A Definition of Behaviour Safety – Dominic Cooper

Dominic Cooper 1999 – Social Psychological Definition

- Defined as: 'the systematic application of psychological research on human behaviour to the problems of workplace safety.'
- Central to all previous 'behavioural safety' systems;
 - The belief that injuries and illnesses are a result of 'unsafe decisions' by workers underpinned by a variety of factors.
- To prevent this unsafe behaviour 'staff' at all levels should identify and target unsafe behaviours and work together to reduce the impact of these.

Group Questions:

- 1) What behavioural safety initiatives (if any) are currently in place in your business?
- 2) How successful have these been?
- 3) How well does the above definition link to your current initiatives?

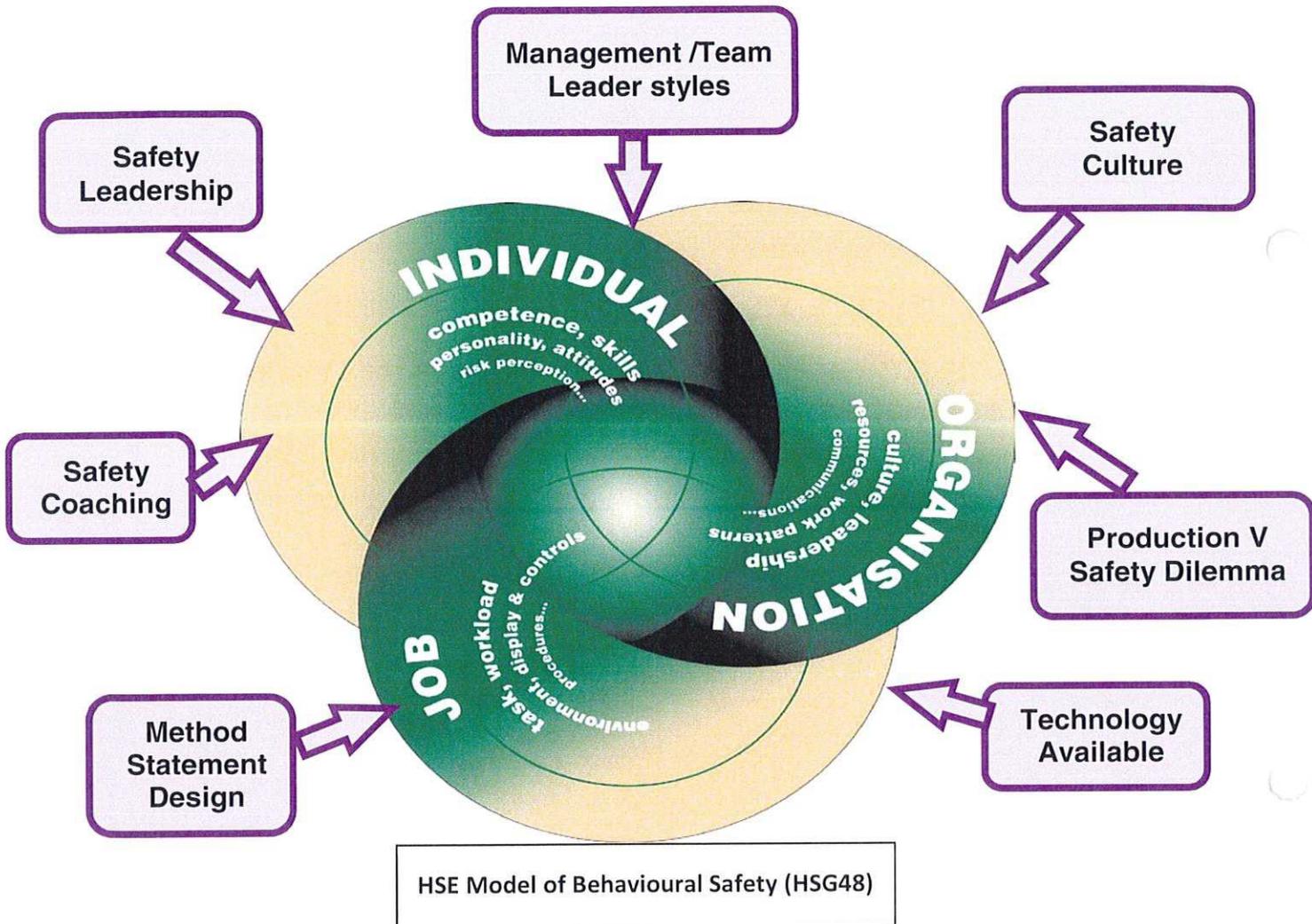


Behavioural Safety Implementation

HSE - Summary of Key Influencing Elements in Behavioural Safety

Influence over behaviour can be exerted within different aspects of your organisations Health and Safety Management System. It is also relevant to consider how your HSMS influences the below aspects at different levels.

How for example do the following areas of your business influence the Job; Organisational and Individual characteristics of your organisation?



How well you use your potential organisational influencers will ultimately impact on your safety culture. In addition how do your senior people and all levels of supervision view workers and their practices?

Do they see workers as 'recipients of safety practice' following RAMS and doing what they are told and then blaming them when they get decisions incorrect?

Or do they see workers as 'participants in safety practice' supporting and influencing how safety is managed on a day by day basis? Your view of this dilemma probably decides what behavioural safety practice will work in your business.



Behavioural Safety Implementation

Exercise - HSE Impact Factors

Questions:

Looking at the model on the previous page discuss in groups the links between the Individual; Job and Organisational factors.

Then write your answers on the provided post it notes to reflect these?

1. Which of these aspects of behavioural safety have the greatest impacts on safety management in your organisation and why?

2. What attempts have you made to control organisational and job factors as a means of controlling behaviour?



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HSE Impact Factors – HSG 48 pages 5 and 6

Organisational Safety Impact Factors

- Senior management 'Safety commitment'
- Management style
- Visible 'Safety Management'
- Effective 'Safety' Communication
- Ownership of safety by and for all
- Effective Balance between Production and Safety

Job Safety Impact Factors

- Design
- Workflow operation
- Ergonomics
- Instructions
- Equipment
- Workload
- Conditions

Individual Safety Impact Factors

- Competence
- Capability
- Interest and motivation
- Attitude and commitment
- Core Safety Values
- Responsibility and teamwork



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The Zero Harm Debate

Much has been written on the issue of Zero Harm and the targets that organisations set around this number. An article by Andrew Petrie is on page 56 (taken from SHP online) which discusses his view on this

In groups discuss the following questions

1. Does your organisation have a Zero Harm Target?
2. What are the implications for managers of setting a 'Zero accident and incident' rate target in a business?
3. What are the implications for staff if they believe 'Target Zero' will never be achieved?



Session Two

The Psychology of Behaviour Human Error & Violations



Session Two

The Psychology of Behaviour Human Error & Violations

Behavioural Safety – Different Approaches

Behavioural Psychology

The Heinrich (1930's) and Bird (1960's) triangles on the alleged relationship between low level events and higher levels serious and fatal injuries (SIF's) have been influential approaches to human error management suggesting that it is personal failures by front line workers that are the problem to control.

The idea behind this says that controlling workers failures in small area such as 'near misses' will automatically influence and reduce the level of more serious incidents (SIF's). The research of both Heinrich and Bird which was based upon reports based upon reports of front line supervisors about failures by workers also heavily supported the first level of psychology applied to human errors and violations.

Historically, evidence such as Heinrich and Bird collected on accidents and incidents has been used as part of a 'behaviourist' explanation of human behaviour and workplace management. It has strongly suggested that safety performance was largely a function of how front-line staff behaved at work and therefore how workers should be controlled by management.

The psychology of 'Behaviourism' as it came to be known viewed human beings as 'Having no free will' and became primarily concerned with using observable behaviour to identify how human error displayed itself in this human behaviour'. Pure 'Behaviourism' has always viewed human decision making as being a direct result of external influences such as direct and close supervision and its impact on the internal working human beings with the actions and thinking of the mind viewed as irrelevant.

Frederick Taylor (Taylorism 1911) thought this particularly true of production workers behaviour which he perceived could be controlled by external training and managing the '**one best method**' approach to workplace production. His psychological perspectives also influenced by the work of BF Skinner have also underpinned more recent approaches to behavioural control of human error in safety management particularly during the 1960s to 1980s.

In more recent times this underpinning 'behaviourist' managerial approach could be linked into the risk management concepts of Health Safety Management Systems (HSMS) with companies creating hundreds (in some cases) of Safe Operating Protocols (SOP's) and Safe Systems of Work (SSOW). These have general outlined what is the safe method for undertaking a specific workplace task with deviation away any aspect of these viewed as either a human error or violation.

Connected to this has been the concept of reward for good practice and punishment for violations of the 'one best method' which has been underpinned by observation of worker's practice and then dealing with any errors or violations accordingly.



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Cognitive Psychology:

With the growth of Cognitive Psychology in the 1960's and 1970's a more recent approach to understanding human behaviour has suggested that human decision making is a more complex area with the safety choices people make linked to both the application of external influences and the understanding of the internal human mind and how this mind 'cognitively' processes this external information in any given organisational or cultural context.

Cognitive Psychology sees such information processing as a conscious act, and from this flows a decision to behave in one way or another. This approach emphasises the impact of good training and the creation of effective thinking as being the keys to creating habitual safety behaviour.

The most recent safety approach which I have called the 'New View' adds to the thinking around behavioural safety by suggesting that both these approaches have failed to fully appreciate the impact of organisational and job processes on the safety behaviour of individual staff.

As James Reason, whose work underpins the HSE's view on Behavioural Safety HSG48 suggests; *"Rather than being the main instigators of an accident operators tend to be inheritors of system defects created by poor design, incorrect installation, faulty maintenance and bad management decisions. Their part is usually that of adding the final garnish to a lethal brew whose ingredients have already long been cooking."*

Production and delivery pressures for all staff can operate at both a covert and overt level and these can vary from day to day. Often it is the covert pressure of a manager saying; ***'we don't want to cut corners on safety but we really need to get this job done today' that can be the greatest influence on an individual's safety decisions.*** On page 15 we have included an overview of the social psychological approach through the work of a psychologist **Dr. Rod Gutierrez (2011)** from DuPont chemicals.

On pages 18 and 19 we have included some comparison boxes which contrast the two views, old and new, across a range of safety areas. Please note that these views are strong but simple contrasts to highlight these views and more depth of reading is needed to fully understand the complexities of human behaviour in the workplace.

This science is also known as Heuristics and the article by Andrew Sharman explores this issue in more detail.



Contrast between Behavioural and Cognitive Psychology

Behavioural Psychology	Cognitive Psychology
<ul style="list-style-type: none"> • All behaviour can be observed and is influenced by external events and people • Internal thinking not relevant to behavioural safety management • Worker 'errors and violations' best controlled by using the 'one best method' approach (SOP's) • Behaviour shaped by repeated and consistent organisational response • Control of behaviour uses reward and punishment for errors/violations • Dominant theory of behaviour until the 1960's 	<ul style="list-style-type: none"> • Behaviour is an internal process which cannot be seen • It is a response to both internal and external stimuli • People are complex with value and belief systems, which influence practice • Links to workers ability to cognitively process information • Tries to 'train out' errors and violations by influencing thinking • Use of reward and punishment last resort control option – not effective long term • Most popular theory since 1980's

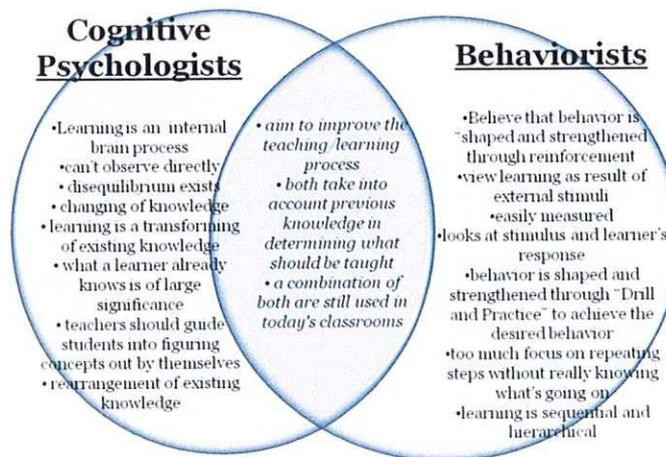


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In groups please discuss the following and record your answers on flip chart:

1. Comparing the different safety approaches on the previous page, what type of psychology does your business follow Behavioural, Cognitive or a mix?
2. Give examples of how the organisation currently demonstrates its approach to behavioural safety management?

Behavioural Psychology	Cognitive Psychology	Other Approaches
Examples:	Examples:	Examples:



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Whatever psychology underpins your approach there is still the way that this approaches see the human contributions to accident and incidents.

Professor Sydney Dekker a behavioural safety professor from Griffith University in Australia has written several books on this area and suggested that behavioural systems see workers in one of two ways. He contrasts these as 'Old View' or 'New View'

View one is called the '**old view**' of human error and its linked psychology of behaviour with human error being seen as:

- Individuals are predominantly responsible for most workplace accidents and incidents. Linked to this they should be passive recipients of safety management (HSMS) systems, generally receiving management designed safe systems of work with top down control. **Old View: Behavioural Psychology**

The '**new view**' as it is called by one of its strongest proponents, Sydney Dekker, gives an alternative view of human error and behaviour:

- Workers should be seen as active participants in their own safety within the context of the organisational HSMS, making everyday active safety decisions and keeping themselves and their colleagues safe through their own practice. **New View: (Sydney Dekker)**

Old View

New View



(Continuum of Behavioural Safety Beliefs and Practice)

This contrast between the above two perceptions is according to DEKKER deliberately extreme and clearly if viewed as a continuum as above with these extremes at either end then most organisations may be operating a mix of these two safety approaches within their safety culture.

Senior management, managers and staff may be unclear on both what they believe about human error and its linked psychology in the role of staff in safety management. There may also be large variations across the organisation subject to how individual managers and team leaders operate around safety with their staff. The range of behavioural practice in any organisation will be linked to the overall organisational management styles and therefore culture, leadership and management are explored in section 3 of this booklet and linked to their impact on behavioural practice.

'Systems Bureaucratisation' tends to see people as a problem to control (e.g. by standardizing and fixing rules, expecting compliance) and generates secondary effects that run counter to its original goals. Its effects include bureaucratic entrepreneurism, an inability to predict unexpected events, a focus on bureaucratic accountability, quantification and numbers games, the occasional creation of new safety problems and constraints on organisation members' freedom, diversity and innovation.

The most useful prescription is to strike a balance between bureaucratically controlled safety and worker-managed safety (Amalberti, 2013), or between deference to protocol and procedure on the one hand, and practical expertise on the other (Galison, 2000).

As Corrie Pitzer from ASSE (Australian Safety Organisation) would ask, are you telling people that you will lead them into safety, and as a result making them **risk averse**? **Or**, are you being honest about actually leading them into danger each day, and wanting them to be **risk competent**?



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Having watched the video the table below some of Dekker's ideas on the impact of Bureaucracy in Health and Safety Management Systems (HSMS) are outlined in table form and contrasted against some of the older ideas about Behavioural Safety Management.

Old View	New View
<p>Organisational Safety Responsibility:</p> <p>If your management generally asks:</p> <ul style="list-style-type: none"> • Who is responsible for safety problems? • It is likely that people are seen as the safety problem to control. • Blame has been a part of the management culture historically and some issues from that are still prevalent. 	<p>Organisational Safety Responsibility:</p> <p>If your management generally asks:</p> <ul style="list-style-type: none"> • What is responsible for the safety problem? • The system recognises that people may be the recipients of trouble deeper inside the organisation that they were unable to control. • This could be design, planning, management or production pressures.
<p>Safety Interventions:</p> <ul style="list-style-type: none"> • Safety interventions generally aimed at controlling human beings and their errors or violations. • System assumes that tools and tasks are fixed as they are high cost equipment, and that people must be fitted to them. • Generally poor worker consultation processes. 	<p>Safety Interventions:</p> <ul style="list-style-type: none"> • Safety interventions aimed at people's working conditions and equipment. • The environment; tools; machinery; tasks must be shaped so as to fit people's needs better. • Good consultative processes over issues such as equipment purchase.
<p>Safety Management:</p> <ul style="list-style-type: none"> • Safety measured by the absence of bad events • Data management and data collection systems focus on Accident; Incidents and Near Miss recording plus audits, inspections and people observations. • Senior management believes that the data tells them that the system is safe and they operate a good Health Safety Management System (HSMS). 	<p>Safety Management:</p> <ul style="list-style-type: none"> • Safety focuses on the presence of positive capacities in people, teams and the organisation • Questioning safety when everything seems fine is seen as positive behaviour (<i>Current good safety is not a guarantee of future safety</i>). • Management accepts that safety issues must outweigh production pressures. • Leaders and Managers always listen to fresh perspectives from all staff levels re safety and production balance • Leaders and managers have a visible presence in safety and communicate effectively their safety role



Behavioural Safety Implementation

Old View	New View
<p>Safety Policies and Procedures:</p> <ul style="list-style-type: none"> • Safety policies are organized around limiting, constraining and controlling what people do using RAMS or SSOW/SOP's. • Follow the system and the worker will be inherently safety • Procedures may also be lengthy documents and may be written by supervisors and managers. 	<p>Safety Policies and Procedures:</p> <ul style="list-style-type: none"> • Policies, Procedures RAMS and SSOW should empower safe worker practice. • RAMS and SSOW/SOP's are living documents that encourage workers to discuss how the processes work. • Innovation and feedback is encouraged from workers as this may find quicker ways to complete tasks just as safely.
<p>Safety Observations:</p> <ul style="list-style-type: none"> • Safety observations are used as a means of giving feedback to workers on their safety practice particularly breaches. • This includes telling worker what is good or bad practice (assumes observer knows everything) • Rule breaches are dealt with by disciplinary procedures. • Supervisors and managers are general looking to spot breaches of RAMS or SSOW. 	<p>Safety Observations:</p> <ul style="list-style-type: none"> • Observed breaches or variations around RAM's or SSOW are opportunities to understand what make sense to workers and why a worker sees the task in a particular way so they can see how other can avoid pitfalls. • It is recognized that workers generally do not come to work to do a bad job. • Potential safety variations point to systemic safety issues that need further consideration. It might for example mean that a procedure needs revision.
<p>Violations and Errors</p> <ul style="list-style-type: none"> • When a gap is observed between how people work and what the rule tells them they should do; this is generally called an error or violation and is counted as a potential breach of discipline. • This means it has already been decided who is right, by the Supervisor or Manager or system and nothing new may be learned. • Violations are not viewed as learning opportunities by supervisors, managers, the person themselves or the organisation. 	<p>Violations and Errors</p> <ul style="list-style-type: none"> • Potential errors or violations are viewed provide insight and learning into deeper system problems. e.g. equipment or management style • Supervision seeks to understand why it made sense for someone not to follow the rule at that moment in time. • Approach gives greater insights into safety management training and supervision issues. • Gap between practice and procedure treated as potential resilience issue with workers recognising and adapting to situations that fall outside of what designed training. • Approach does not preclude the possibility of discipline but seen as the very last resort.



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Read the summary on the previous pages and in groups consider these questions:

1. What approach to managing safety behaviour does your company adopt old view or new view?

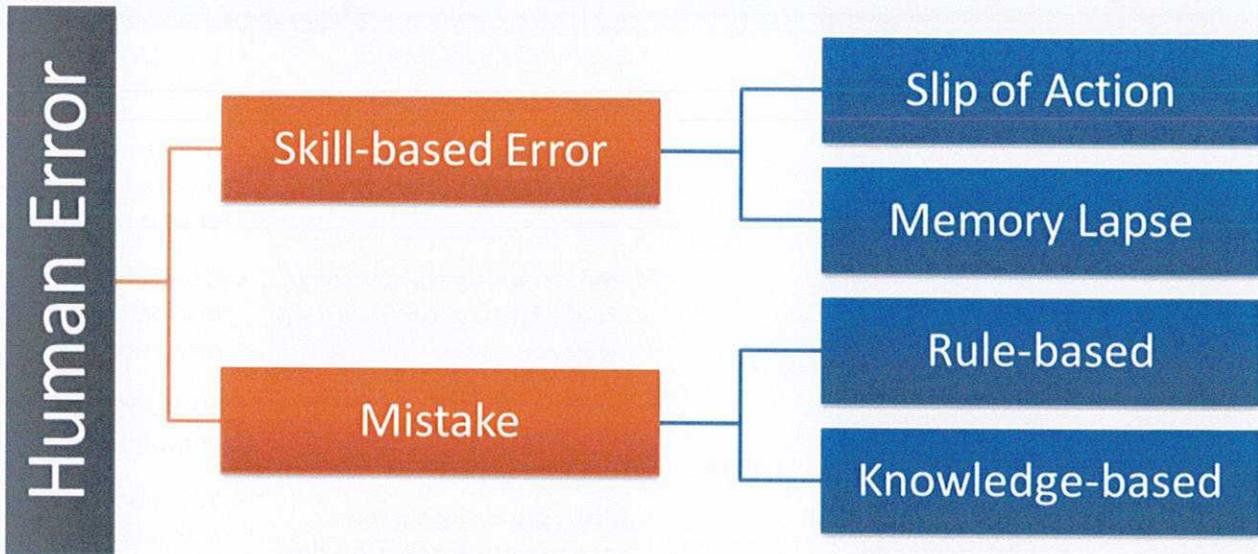
2. What safety benefits might there be in considering Dekker's views on safety management in human behaviour terms?

3. What areas of safety might his views be most relevant to?



Errors and Mistakes

The HSE in their booklet HSG 48 distinguish between safety errors and safety violations and use the following models to explain these.



Errors fall into three categories: **slips, lapses and mistakes.**

Slips and lapses occur in very familiar tasks which we can carry out without much need for conscious attention. These tasks are called 'skill-based' and are very vulnerable to errors if our attention is diverted, even momentarily. Slips are failures in carrying out the actions of a task. They are described as 'actions-not-as-planned'.

Lapses cause us to forget to carry out an action, to lose our place in a task or even to forget what we had intended to do.

Mistakes are a more complex type of human error where we do the wrong thing believing it to be right. The failure involves our mental processes which control how we plan, assess information, make intentions and judge consequences. Rule and knowledge-based mistakes are two types.

Rule-based mistakes occur when our behaviour is based on remembered rules or familiar procedures. We have a strong tendency to use familiar rules or solutions even when these are not the most convenient or efficient.

Knowledge Based mistakes occur in unfamiliar circumstances we have to revert to consciously making goals, developing plans and procedures. Planning or problem solving needs us to reason from first principles or use analogies. Misdiagnoses and miscalculations can result when we use this



Errors

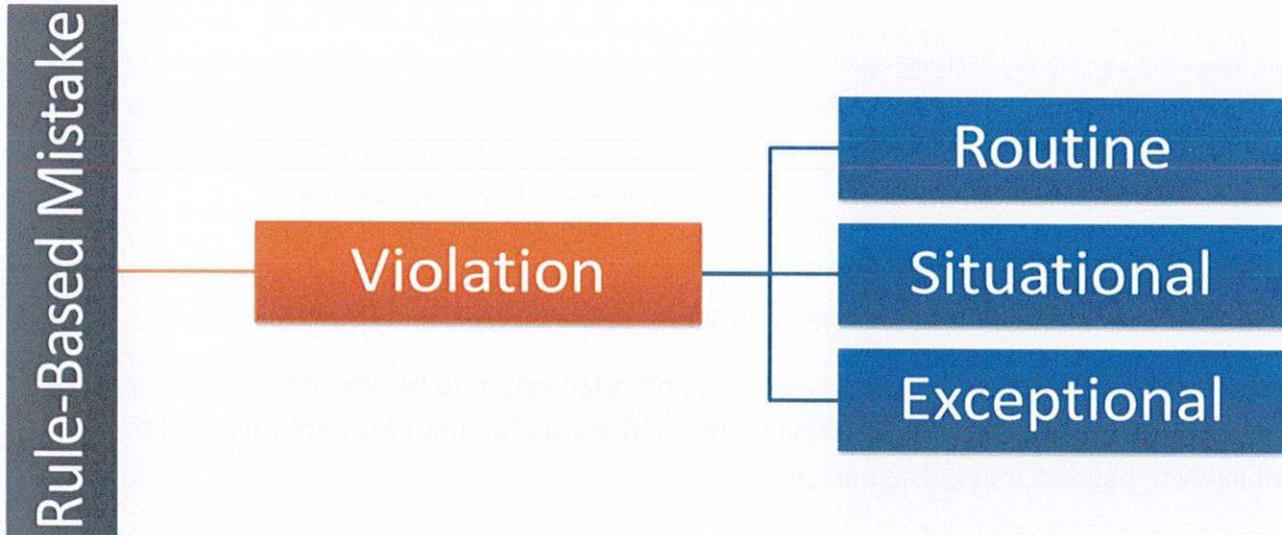
	Characteristics	Failure Type	Examples	Typical Control Measures
Action Errors	<ul style="list-style-type: none"> Tasks that require little conscious attention. “skill based errors” occur if attention is diverted, even momentarily Resulting action is not intended “not doing what you meant to do” Common during maintenance and repair activities 	Slip	<p>A frequently performed physical action goes wrong:</p> <ul style="list-style-type: none"> ✓ Pull lever instead of push (wrong action on right object) ✓ Take reading from wrong dial (right action on wrong object) 	<ul style="list-style-type: none"> Checklists, or (tick sheets) Human centred design (up always equals off, etc) Remove distractions and interruptions Sufficient time to complete tasks Warnings and alarms to help detect errors PTWs
		Lapse	<ul style="list-style-type: none"> Short term memory lapse, omitting to perform a required action: Miss step or lose place carrying out inspection due to distraction or inattention 	

Mistakes

	Characteristics	Failure Type	Examples	Typical Control Measures
Thinking Errors	<ul style="list-style-type: none"> Errors of judgement (mental processes linked to planning, information gathering, communication etc) Actions carried out as planned using conscious thought process but wrong course of action is taken. “Do the wrong thing believing it to be right” 	Rule Based Mistakes	<p>Behaviours based on remembered rules and procedures.</p> <p>e.g. Operator expected tank filling procedure to take 30 minutes. Tank pipe diameter enlarged and tank filled more rapidly than he anticipated - ignored alarms.</p>	<ul style="list-style-type: none"> Plan for relevant “what ifs” (Emergency procedures) Regular drills for emergencies Clear overview (clear displays, system feedback, handover procedures etc) Diagnostic tools and decision making aids Competence Organisational learning
		Knowledge Based Mistakes	<p>Individual has no rules or routines available to handle unusual situation - resorts to personal experience to solve problems</p> <p>✓ SSOW does not cover a new procedure so worker uses experience to perform task but makes error</p>	



Violations – HSG 48



In the workplace rules are broken for many different reasons. Most violations are motivated by a desire to carry out the job despite the prevailing constraints, goals and expectations. Very rarely are they wilful acts of sabotage or vandalism.

Violations are divided into three categories: routine, situational and exceptional.

	Characteristics	Failure Type	Examples	Typical Control Measures
Non Compliance	<ul style="list-style-type: none"> • Deliberate deviation from rules (violations) • Knowingly take short cuts, or not follow procedures, to save time • Often misguided but well meaning (exacerbated by unwitting encouragement from management to “get the job done”) 	Routine	<ul style="list-style-type: none"> • Non-compliance becomes the norm, (lack of meaningful enforcement) • PPE not regularly worn as rules not enforced 	<ul style="list-style-type: none"> • Improve risk perception • Effective supervision • Eliminate cutting corners (poor job design, unnecessary rules, • Improve attitudes / organisation safety culture (active workforce involvement) • make non-conformance socially unacceptable i.e. drink driving.
		Situational	Dictated by (time pressures, unsuitable tools, weather), only solution to a task set Poor safety design (CDM) means workers take shortcuts to complete task in time	
		Exceptional	<ul style="list-style-type: none"> • Calculated risk in breaking the rules as situation unusual • In a fire emergency a warden rushes outside and forgets to shut fire door 	



Session Three

Leadership, Management and Culture in Health, Safety and Management Systems (HSMS)



Session Three

Leadership and Management in health and Safety and both make a significant contribution to safety in any business. It is important however to be clear about the difference between these two much discussed phenomena.

The chart below from the Leadership and Worker Engagement Forum outlines the difference between the two.

Leader	Manager
Creates and communicates a vision for the future.	Develops a plan and allocates resources.
Encourages others to commit to the vision.	Sets objectives and organises a schedule.
Motivates and inspires workers to overcome barriers. Encourages innovation.	Monitors situations.
Helps the organisation to develop by adapting to changing circumstances.	Focuses on order and efficiency. Ensures standards
A healthy and safe organisation requires both effective managers and leaders.	

The same leaflet suggests the following top tips to become an effective health and safety leader:

- Challenge the status quo
- Create a vision
- Inspire workers to be healthy and safe
- Be a good role model
- Show consideration
- Communicate regularly

This course focusses on safety leadership as in practice it does not matter your positional level or whether you are designated as a manager or leader in an organisation everyone can demonstrate safety leadership to their colleagues.

Overleaf we will focus on the work of Thomas R Krause who has been involved in behavioural health and safety for over 30 years



Behavioural Safety Implementation

Thomas R Krause - Leadership Change Exercise

If you had one button you could push to make the biggest change to safety inside your organisation what would it be. Discuss in pairs the following areas and decide which you would push in your business and why

Option	Reasons for choice
Design	
Behaviour	
Culture	
Leadership	
Systems	



Safety Leadership – Thomas R Krause

Thomas R. Krause has been involved in safety leadership issues since the 1980's and was involved in the Columbia shuttle disaster investigation at NASA. He has written extensively on the subject and the following is taken from his book the '7 Insights into Safety Leadership'.

What is it that senior leaders need to "get" about safety?

What is it that key safety leaders need in order to influence the organization and improve performance?

In their new book, Tom R. Krause and Kristen J. Bell bring together decades of experience in the field with industry-leading research to distill the 7 essential insights that all leaders need to know about safety.

Packed with easy-to-read insights, the book will provide your leadership with an executable roadmap to improved safety performance.

Creating a Strong Safety Culture:

According to Krause and Bell, the key to achieving excellent safety performance isn't just improving technologies or focusing on worker behaviour. In order to excel in safety, your company needs to develop a strong safety culture. And that starts at the top.

While safety may not be their primary role, the CEO of a company is your most important safety officer. The leadership that sets the tone of your safety culture. And your culture informs and influences how everyone in your organization, from bottom to top, values and thinks about safety.

THE 7 INSIGHTS

Krause and Bell's 7 Insights are based on decades of experience working to transform the safety culture and systems of some of the biggest companies in the world. Some are intuitive. Others may be new, even controversial. But all of them are based on exhaustive research and the latest data in safety performance:

- Safety performance leads to business performance
- Safety Leadership starts with attention to serious injuries and fatalities (SIF's)
- Leadership sets safety improvement in motion
- Safety Culture sustains performance, for better or worse
- Safe decision-making is built on core safety concepts
- Behaviour plays a role, but a different one than expected
- Cognitive bias affects safety decisions



Behavioural Safety Implementation

Thinking of people you have known that have held a role in leading safety:

1. **What characteristics did they demonstrate on a regular basis a good safety leader do on a regular basis?**

Characteristics of a Good Safety Leader



Behavioural Safety Implementation

Positive Impact of Safety Leadership Styles – Dominic Cooper

Several researchers have used meta-analysis to examine published, peer-reviewed academic studies on safety leadership, and their findings show that transformational and transactional safety leadership styles moderately influence employee engagement and people’s safety behaviour, which in turn reduces incident rates (e.g., Clarke, 2013).

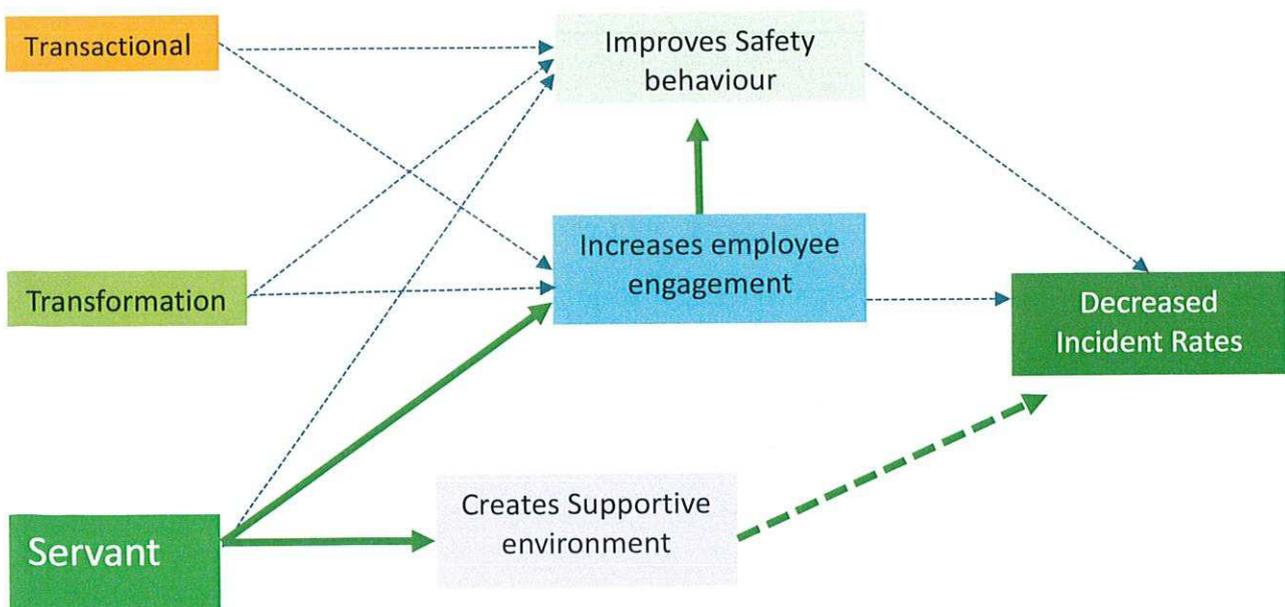
Servant leadership, on the other hand, creates a supportive environment that exerts a much stronger influence on employee engagement, safety behaviour and incident reduction (e.g., Walumbwa, Hartnell & Oke, 2010). Engaging in meaningful dialogues, fostering a collaborative learning environment and facilitating other people’s safety needs all help to create the supportive environment that appears to be so important for improving safety performance (Figure 1).

Other meta-analyses also show that the presence of known hazards and risks suppresses the impact of all three safety leadership styles (e.g., Nahrgang, Morgeson & Hofmann, 2011). The associated negative effects for hazards and risks were much larger than those for the positive effects of transactional and transformational leadership, and they also outweighed those of servant leadership.

Therefore, known workplace hazards and risks left for another day neutralize supportive environments, decrease employee engagement and increase unsafe behaviour, resulting in higher incident rates. This negative impact is best explained by employee scepticism about the company’s true commitment to safety.

When known hazards and risks are not addressed, yet safety leaders simultaneously promote the virtues of safety, employees struggle to believe management is sincere and simply withdraw from the process (Cooper, 1997). For its leadership efforts to flourish, a company must eliminate or reduce known hazards and risks to a reasonably practicable level.

To facilitate this, a company must provide a supportive environment and sufficient resources to managers so that they can address the known hazards/risks to maximize their safety leadership efforts (Figure 2, p. 52).



Behavioural Safety Implementation

Transactional Leadership:

- Managers engage in a transaction with their employees
- They explain what is required of them and what compensation they will receive if they fulfil these requirements

Benefits:

- Gain compliance
- Set goals
- Get agreement on what is to be accomplished
- Monitor performance
- Administer reinforcement

Effectiveness:

- This style will only produce expected performance levels as it only appeals to individual goals and aspirations

Transformational Leadership:

Managers lead their staff towards different goals including safety practice.

Benefits

- Appear passionate, inspiring, stimulating, considerate
- Encourage awareness and acceptance of the purpose and mission
- Provide a sense of purpose and self belief
- Articulate shared goals, mutual understanding and an attractive future
- Question traditional assumptions and encourage new approaches

Effectiveness:

- Effective use of transformational leadership encourages employees to set aside personal goals and adopt those of the group / organisation
- This motivates higher levels of effort and performance



Servant Leadership:

Benefits

- As a servant leader, you're a "servant first" – you focus on the needs of others, especially team members, before you consider your own.
- You acknowledge other people's perspectives and give them the support they need to meet their work and personal goals,
- You involve them in decisions where appropriate, and build a sense of community within your team.
- Leads to higher engagement, more trust, and stronger relationships with team members and other stakeholders. It can also lead to increased innovation.

Effectiveness:

- This has shown itself in over 50 studies to be the most effective leadership approach in health and safety as show by the diagram on page 28 having the greatest impact decreasing incident rates inside an organisation.
- We would suggest that this also involves the greatest long-term commitment to organisation leadership processes if there is a current difference between general leadership and safety leadership styles. (See note below to explain this)

Problems:

However, servant leadership is problematic in hierarchical, autocratic cultures where managers and leaders are expected to make all the decisions. Here, servant leaders may struggle to earn respect.

Summary:

As with all change processes the greatest benefits come from potentially the greatest change and its associated work. Your starting culture in the next chapter will determine which leadership approach you already have or are prepared to move towards.

You can undertake a small leadership styles assessment on the next page (p31) with the leadership values exercise.



Behavioural Safety Implementation

Safety Leadership Exercise – Your style

No	Leadership Statement (Rate yourself on these questions below)	Rating Scale 1 = Poor 5 = Excellent
1	As a safety leader, I consult all my staff to ensure they fully understand the definition of a 'Near Miss'.	
2	As a safety leader, I stress the need for managers to considered 'near miss reports' for human factor issues and learn how to prevent these from occurring.	
3	As a safety leader, I am confident that staff would always tell the truth about an incident as we operate a 'no blame' culture regarding errors and mistakes.	
4	As a safety leader, I regularly consult with staff and managers to ensure that safety will always be prioritised over production targets.	
5	As a safety leader, I am confident that my staff would always challenge me if they thought I was asking them to take an unnecessary risk.	
6	In my safety leadership role, I am confident of support from senior management to change any procedure in the interests of safety.	
7	As a safety leader, I always brief people before they attend safety training and then debrief them afterwards to listen, understand and support their safety practice.	
8	As a safety leader, if I see someone failing to wear required PPE I recognise my own role in setting the team culture and will therefore always listen to their reasons before deciding on my action. These incidents will however always be reported as a near miss.	
9	As a safety leader, I am confident that I can challenge my most senior directors on safety issues and know that my views will be carefully considered.	
10	As a safety leader, I am confident that 'Safe Operating Procedures (SOP's) are consulted over before being signing off and are then updated through 'Point of Work' Risk Assessment processes.	

The above assessment does not have a right or wrong score but may give you an idea on how close you are to a servant style of leadership. The higher the score then the closer your style probably is to 'Servant Leadership'

The higher the score the closer to being a servant style leader you are.

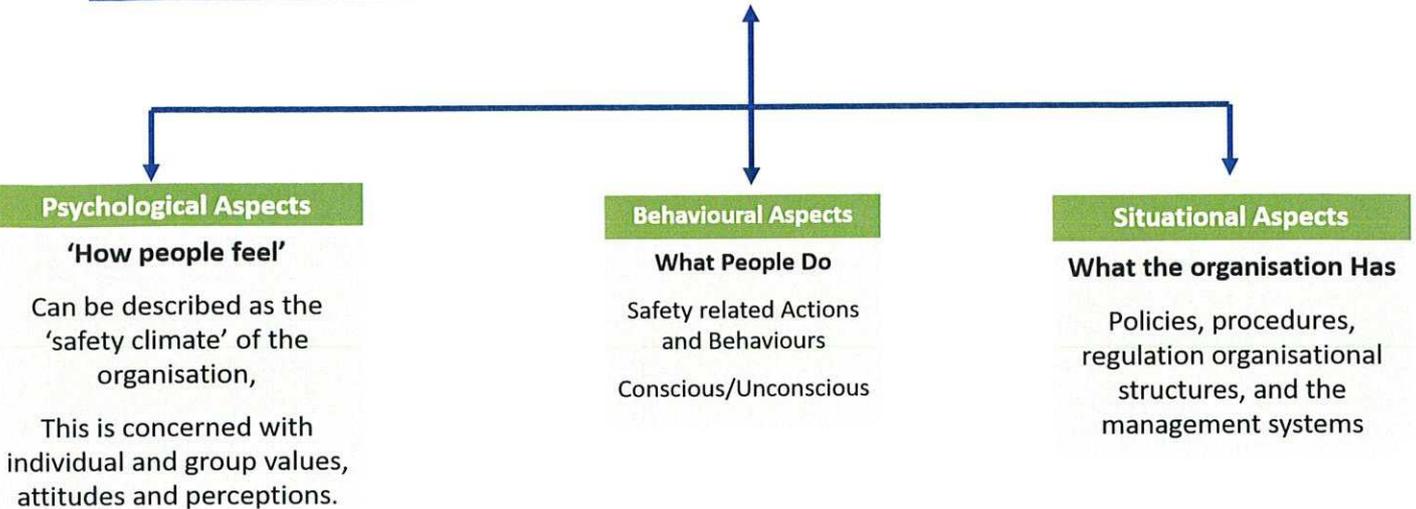


Safety Culture Definition:

Safety Culture

“The product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that can determine the commitment to, and the style and proficiency of an organisation’s health and safety management system”.

ACSNI Human Factors Study Group, HSC (1993)



Safety Culture Exercise

In groups please answer the following questions:

- How does your organisational 'Safety Culture' compare to Dominic Cooper's model?

- In comparing your organisational culture and safety culture where are the priorities Production or Safety?



Behavioural Safety – What is your ‘Safety Culture’ ready for?

Behavioural Safety Maturity Level

Behavioural Safety Maturity Level				
<p>Safety Culture</p> <ul style="list-style-type: none"> <input type="checkbox"/> Little safety leadership, individuals look out for themselves <input type="checkbox"/> Production always more important than safety <input type="checkbox"/> Little workforce Involvement <input type="checkbox"/> Accidents and incidents seen as part of the job <input type="checkbox"/> Generally poor safety compliance with little safety monitoring or auditing <input type="checkbox"/> Accident investigations usually blame workers <input type="checkbox"/> Generic or no RA/SSOW <input checked="" type="checkbox"/> Low Maturity of HSMS <p>Behavioural Safety: • Not ready for Behavioural Safety</p>	<p>Safety Culture</p> <ul style="list-style-type: none"> <input type="checkbox"/> Leadership mainly concerned about safety after accidents <input type="checkbox"/> Production often prioritised over safety <input type="checkbox"/> Some workforce consultation <input type="checkbox"/> Staff disciplined for safety breaches both errors and violations <input type="checkbox"/> Safety Monitoring focus on reactive indicators such as accidents <input type="checkbox"/> Accident Investigations often blame workers <input type="checkbox"/> Some Consultation on RA/SSOW <input type="checkbox"/> Basic HSMS in place <p>Behavioural Safety: • Can start to plan implementation</p>	<p>Safety Culture</p> <ul style="list-style-type: none"> <input type="checkbox"/> Safety leadership essentials in place <input type="checkbox"/> Production sometimes prioritised over safety <input type="checkbox"/> Safety compliance by campaigns and supervisory control <input type="checkbox"/> Some effective workforce involvement <input type="checkbox"/> Safety Monitoring includes focus on accidents/ near misses <input type="checkbox"/> Accidents and Incident root causes often investigated <input type="checkbox"/> Workers contribute to RA/SSOW <input type="checkbox"/> HSMS well established <p>Behavioural Safety: • Ready for basic BS implementation</p>	<p>Safety Culture</p> <ul style="list-style-type: none"> <input type="checkbox"/> Safety leadership ongoing and visible <input type="checkbox"/> Safety more important than production <input type="checkbox"/> Proactive workforce safety engagement <input type="checkbox"/> Safety monitoring on leading and lagging indicators <input type="checkbox"/> Root cause analysis for all types of Accidents and Incidents. Investigations linked to ‘Job; Personal; Organisational’ factors <input type="checkbox"/> RA/SSOW recognise Behavioural Safety including latent issues <input type="checkbox"/> HSMS mature and evolving <p>Behavioural Safety: • Can implement more complex BS</p>	<p>Safety Culture</p> <ul style="list-style-type: none"> <input type="checkbox"/> Safety leadership a value for all <input type="checkbox"/> Safe production is always the top priority <input type="checkbox"/> Safety learning applied daily <input type="checkbox"/> Business and Safety performance always linked <input type="checkbox"/> Latent and Active safety issues understood by staff at different levels <input type="checkbox"/> Accidents and Incidents generally seen as evidence of flaws in system safety <input type="checkbox"/> Behavioural Safety issues integrated into Risk Management through RA/SSOW <input type="checkbox"/> HSMS is be continually challenging itself <p>Behavioural Safety: • Behavioural Safety operating fully</p>



Behavioural Safety Implementation

Safety Culture V Organisational Culture

Watch the video from Thomas R Krause and then record your thoughts in the space below.

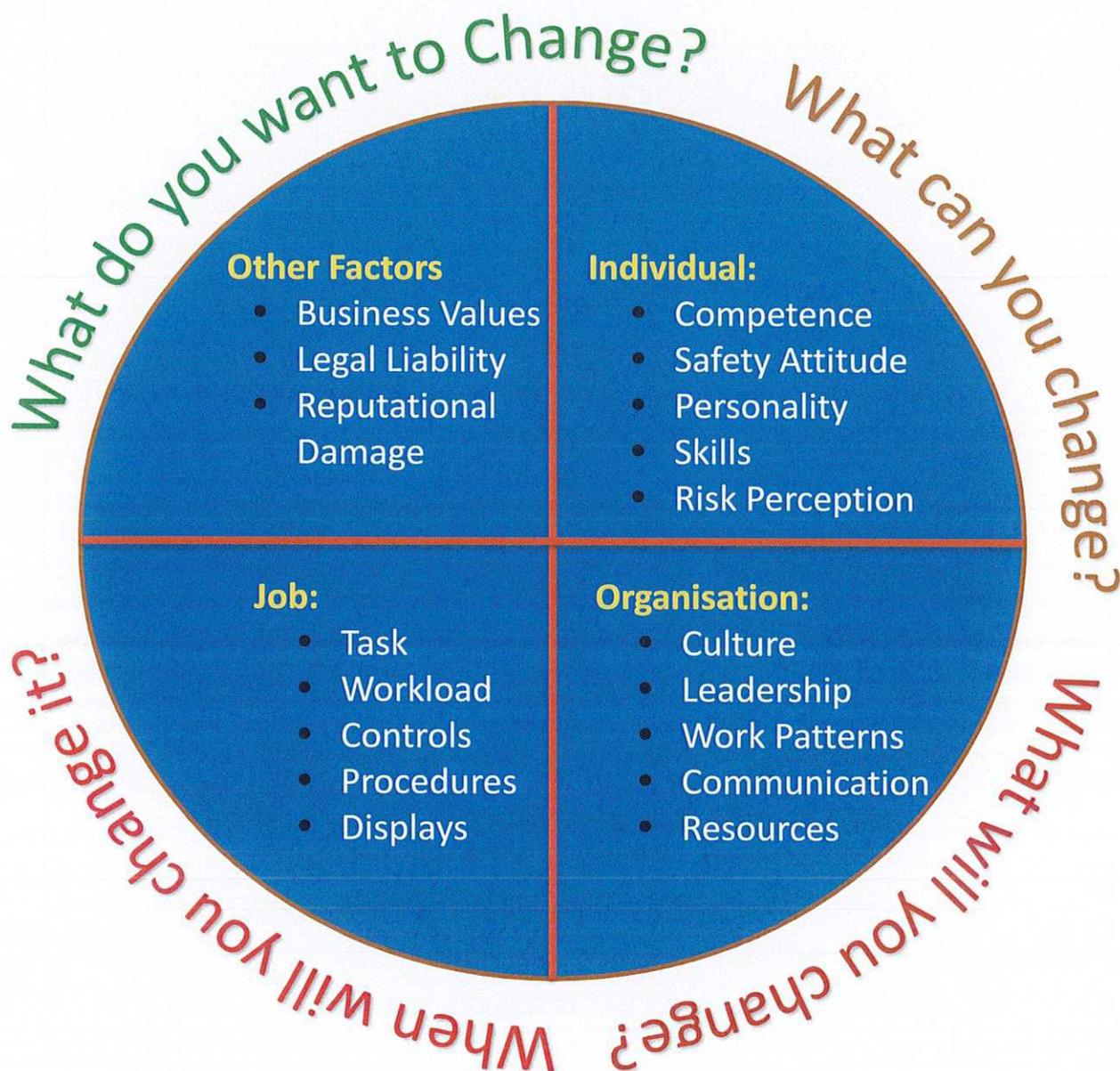
- How does your organisational culture differ from your safety culture?
- Do your leadership styles differ between the way that leaders and managers normally operate or do these match?

Delegate Comments:



Behavioural Change Cycle

In your booklets makes some notes on page overleaf about anything you can identify already that you might want to change (the first part of the change cycle below)



Behavioural Safety Implementation

What can you already identify that you would like to change in your organisation regarding behavioural safety management?

When we start tomorrow we will pick up on these ideas and begin to develop them into part one of the change cycle.

Record all ideas even for other parts of the change cycle and these can then be used later in part two of the planning process.

What do you initially think you would might want to change? Try to identify at least three areas at this stage



Session Four

Planning Your Behavioural Management System Part One



Behavioural Safety Implementation

Planning Change - Part One

- ✍ Based upon what we have discussed so far what have you identified that you might improve or change regarding your behavioural safety management?
 - ✍ Link this back to the things you identified yesterday morning
- ✍ Be very specific on whether this would be Organisational; Job or individual
 - ✍ You can also Refer to page 46 and 47 of HSG 48 for some ideas
- ✍ **Planning a Behavioural Safety Programme – Key areas to consider**
- ✍ Programme design
 - ✍ Planning your implementation
- ✍ Programme Leadership
 - ✍ Who will be responsible for managing your programme at all levels
- ✍ Programme Effectiveness
 - ✍ What metrics will you put in place to measure success
- ✍ Programme Application
 - ✍ Who will the programme apply to e.g. contractor chain

Planning Behavioural Safety Part One – (Plan; Do; Check; Act;)	
<p>Change Cycle Part One:</p> <ul style="list-style-type: none"> ✍ Based upon what we have discussed so far what have you identified that you want to improve or change regarding your 'behavioural safety' management? ✍ Link this back to the things you identified yesterday morning 	



Behavioural Safety Implementation

Planning Behavioural Safety Part One Cont. – (Plan; Do; Check; Act;)

- ✍ Be very specific on whether this would be Organisational; Job or individual
- ✍ You can also Refer to page 46 and 47 of HSG 48 for some ideas



Session Five

Approaches to Behavioural Change



Behavioural Safety Implementation

The ABCs of Behaviour Modification Management

The ABC technique of behavioural control historically came from a behavioural psychology background as it views behaviours as both learned and therefore open to external stimulus from those in charge or control of an organisation or team.

Unlike other theories of management, behaviour modification principles and procedures were first developed in systematic and carefully controlled laboratory research. There are two basic factors in the behaviour modification model of what causes behaviour: learning and environment.

Social-learning theory states that behaviour is learned through interactions with the environment. This means that counterproductive behaviours are regarded as having been learned. Thus, a learning approach should be used in effecting behaviour change. Applied to the job situation, this means that one would alter undesirable employee behaviour by teaching employees to behave in desired ways. Because environment plays a critical role, one would view the behaviour of a subordinate within the context of the work environment.

The ABCs is a conceptual way of thinking about behaviour and its causes.

Antecedents are cues that inform the individual which behaviours are appropriate in a given situation. For example, the ringing of a bell at 8:00 a.m. could be a cue that informs staff that work is about to begin. An antecedent that is always present when a person behaves in a certain way can actually evoke that very behaviour, or at least set the occasion for it. For example, an advertisement for a delicious steak dinner may evoke desire for such a steak even in the absence of physiological hunger; rock music may evoke dancing; the presence of an ashtray may evoke smoking; and so forth. Usually we are unaware of the cues that elicit our behaviour unless our attention is specifically directed toward them.

Behaviour is divided into two broad categories: respondent and operant behaviour. This is an important distinction, because there is a difference in the underlying processes by which these behaviours are learned. Respondent (also called reflexive or involuntary) behaviours are not learned; they are present at birth, or develop as a result of physical maturing. A person ordinarily has no control over whether to engage in them. They include physical reflexes such as the constriction of the pupil when a bright light is directed into the eye, the jerking of the knee when a doctor taps it in a specific way, or the startled reaction to a loud and unexpected noise.

Although respondent behaviours themselves are not learned, a person can learn to perform the behaviour in the presence of something (an antecedent stimulus or cue) that ordinarily would not elicit it. For example, to respond with some manifestation of fear to a loud noise is inborn, but through a process called classical conditioning a person can learn to respond fearfully in situations that are not physically dangerous. In short, although respondent behaviours themselves are unlearned, a person can learn to carry them out in a wide variety of situations.

Operant behaviours (also called instrumental or voluntary) are learned, and are not a result of physical functioning. Operant behaviours include such things as hitting a baseball, programming a computer, dancing, or typing. The process by which one learns operant behaviours is called operant conditioning. Most behaviours of concern to managers are operant behaviours.

Consequences are events that immediately follow a behaviour. The kind of consequence (positive, negative, or neutral) exerts a powerful influence on whether a person will engage in that behaviour again.



Behavioural Safety Implementation

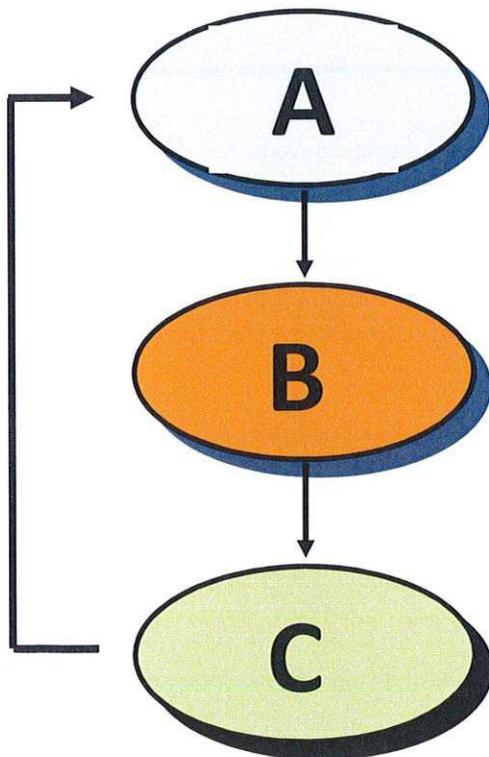
People are more likely to repeat a behaviour that is followed by a positive consequence and less likely to repeat a behaviour that is followed by a negative consequence. For example, when the bell rings at 8:00 A.M., the staff will receive positive consequences if they begin work immediately and negative consequences if they continue to socialise.

Until recently, most controlled practical application has been restricted to behaviour problems within the traditional domains of psychology, education, and corrections. Although the field of organisational behaviour modification is in its embryonic stage, the results to date have been dramatic.

Companies that have instituted behaviour modification programs have been able to reduce absenteeism, improve customer services, and increase quality control. This is why, it is important to understand the theory that underlies the management techniques.

In terms of the use of ABC behaviour modification approaches these can be linked to the type of leadership and management approaches used in a business. Generally a transactional approach to leadership and management has been linked to this model but there is no reasons why a Servant Leadership cannot be used as well.

The model below gives you an idea of how this theory works.



Antecedent or Activator
<ul style="list-style-type: none"> objects or events that come before behaviour and influence behaviour to occur (mobile phone rings whilst driving)
Behaviour
<ul style="list-style-type: none"> any action that you can see someone doing or hear them saying (answers Mobile)
Consequences
<ul style="list-style-type: none"> whatever happens (something or nothing) to the performer that always follows the behaviour – often discipline or reward (caught by police – fined)



Behavioural Safety Implementation

The ABC model specifies that behaviour is triggered by a set of antecedents or activators (something which precedes a behaviour and is causally linked to the behaviour) and followed by consequences (outcome of the behaviour for the individual) that increase or decrease the likelihood that the behaviour will be repeated.

The antecedents are necessary but not sufficient for the behaviour to occur. The consequences explain why people may adopt a specific behaviour.

One final issue required to make the ABC process work is feedback that works in a consistent way such as either rewards for good behaviour or discipline for bad behaviour.

An example of how this might work is given over the page and looks at the wearing of a PPE object (Ear Defenders)

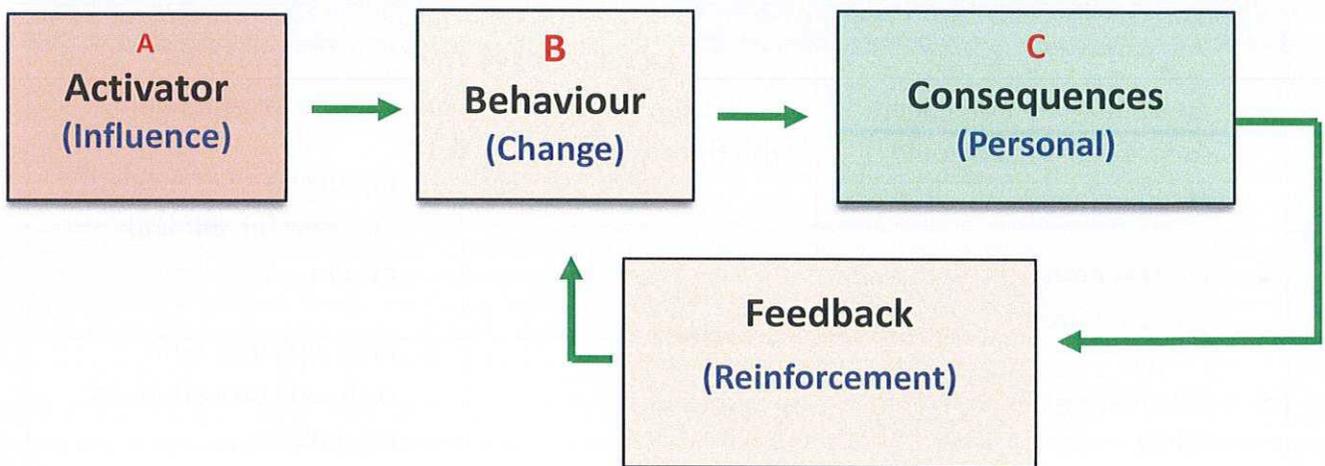


Table 1 Example of ABC analysis (HSE Example)

Antecedent/Activator	Behaviour	Consequence
<ul style="list-style-type: none"> • I feel under time pressure • I want to get the job done • Other people are / have been using it, so I will • Job will be delayed getting a replacement • More paper work to fill in 	<p>Use ladder with damaged rung</p>	<ul style="list-style-type: none"> • Get the job done quicker • Fit in with rest of group • Increased risk of incident / accident for self and others • In breach of company procedures / statute law • Increased risk of disciplinary / legal action
<ul style="list-style-type: none"> • Knowledge that damaged rung is unsafe and could result in injury • I'm feel empowered to stop the job if unsafe • I want to get the job done safely 	<p>Don't use the ladder with the damaged rung</p>	<ul style="list-style-type: none"> • The job takes longer • Reduced risk of incident / accident for self and others • In compliance with company procedures & legal duties • No risk of disciplinary / legal action

ABC models have usually been applied from a behaviourist (behavioural psychology) perspective but we suggest that they can also work from a cognitive psychology 'new view' approach with the right activators applied.

In this context activators might be a different type of management that uses a 'Servant' leadership approach rather than a 'Transactional; type of approach (see exercise over following pages linked to the 'Science of Persuasion' by Robert Cialdini.



ABC – Exercise

Exercise:

- Create a flip chart linked to the **ABC principles** and suggest how could you move this 'unsafe' ladder use to 'safe' ladder use?



Behavioural Safety Implementation

'Science of Persuasion' by Robert Cialdini

Researchers have been studying the factors that influence us to say "yes" to the requests of others for over 60 years. There can be no doubt that there's a science to how we are persuaded, and a lot of the science is surprising.

When making a decision, it would be nice to think that people consider all the available information in order to guide their thinking. But the reality is very often different. In the increasingly overloaded lives we lead, more than ever we need shortcuts or rules of thumb to guide our decision-making.

His research has identified just six of these shortcuts as universals that should guide the influencing of human behavior, they are:

Reciprocity

- Simply put, people are obliged to give back to others the form of a behavior, gift, or service that they have received first.

Scarcity

- Simply put, people want more of those things they can have less of.

Authority

- This is the idea that people follow the lead of credible, knowledgeable experts.

Consistency

- People like to be consistent with the things they have previously said or done.

Liking

- People prefer to say yes to those that they like.

Consensus

- Especially when they are uncertain, people will look to the actions and behaviors of others to determine their own.



Behavioural Safety Implementation

Cialdini - Exercise

Watch the video and then complete the following exercise using only Robert Cialdini's science of persuasion:

Cialdini has identified just six shortcuts as universals that guide human behavior, they are:

- reciprocity
- scarcity
- authority
- consistency
- liking
- consensus



Exercise:

- Create a flip chart on how you would use Cialdini's principles to move this 'unsafe' ladder practice to 'safe' practice?



Is Behaviour a Matter of Choice?

The unconscious (the non-conscious processing of information by the brain) enables humans to process the 11 million bits of data received by the senses every second – prior to conscious thought.

This unconscious processing influences and informs the way people feel, perceive, judge, decide, behave, their memory, creativity and their perception of what they hear and see around them – factors critical in making sense of and managing risk.

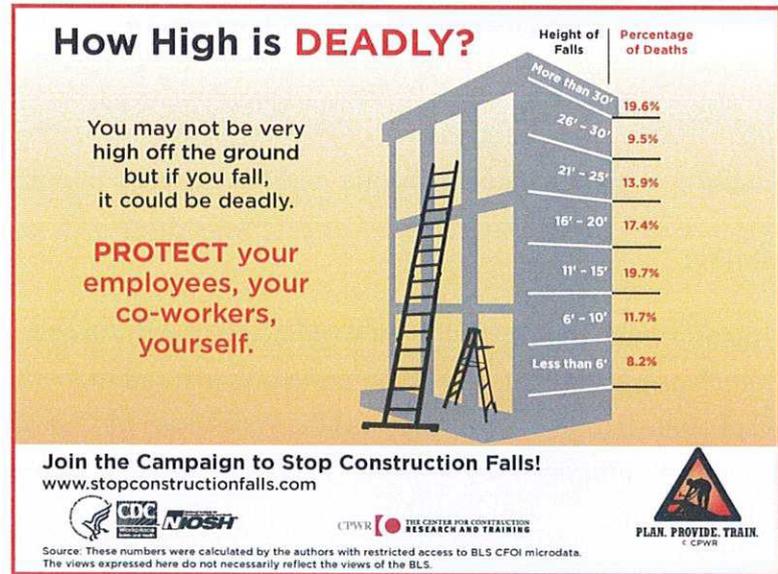
In terms of risk assessment which parts of the brain is most likely to recognise high risk situations quickly?

In risk assessments our limited knowledge base determines what we see as hazard and risk and therefore eliminates those aspects of risk that we do not understand.



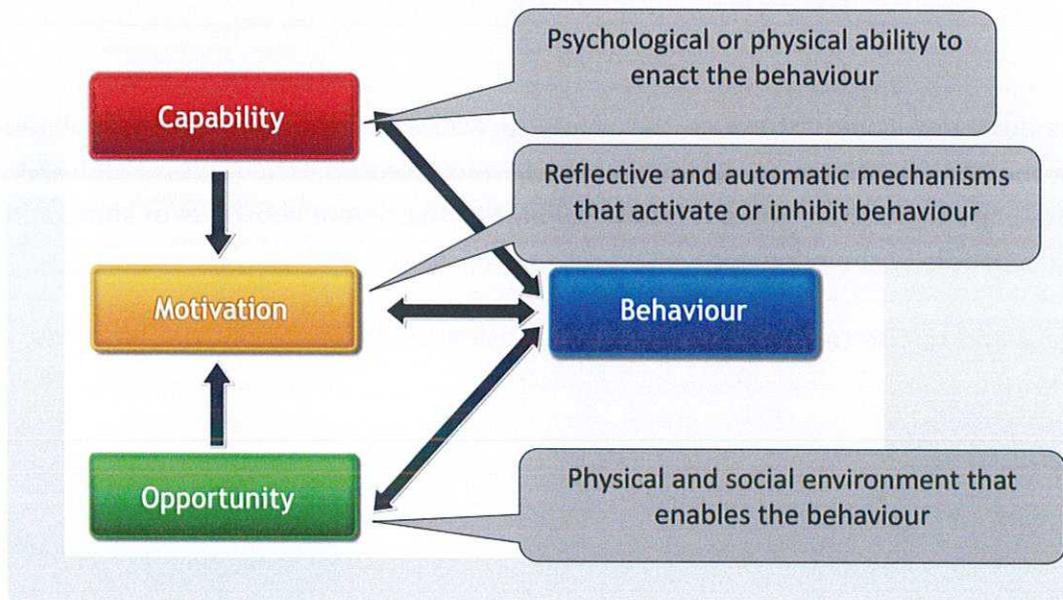
Sub-Conscious Behaviour - Nudge Models and Theories

- Nudge theory has been around for some time and is now being applied to safety practice.
- A successful nudge could be any aspect of the environment that influences a desired sub-conscious behaviour, e.g. to indicate hazards.
- This links to the science of signs and symbols (Semiotics) and how visual environmental issues nudge us subconsciously into doing the right thing
- An example would the sign opposite placed on every ladder on a site



Another nudge model to influence behaviour is called COM – B and is show below.

COM-B: A simple model to understand behaviour...



Behavioural Safety Implementation

The COM B model of behaviour change posits that three things are required for a behaviour change to take place:

- The capability (physical and/or psychological);
- The motivation (both reflective and automatic);
- The opportunity (which might be physical and/or social).

To encourage change therefore you need to intervene in one of these areas.

Capability:

You might reduce the capability for a behaviour by physically changing the situation in which people work such as putting barriers along walkways instead of just lines on the floor. In this situation the physical ability to take a shortcut has been reduced by the barrier. Alternatively, you might use a psychological influence by putting painted footsteps along the walkway rather than just an occasional figure.

Motivation:

To tackle motivation regarding the walkway you might get all the staff together and provide some toolbox talks on the importance of sticking to assigned walking routes as well as getting all vehicle drivers (FLT's or Lorries) to highlight where pedestrian blind spots are and then map these to highlight in your training. You could also hold a team competition which rewards the reporting of occasions when people are seen not following the assigned walkways.

Capability:

To tackle this area, you could introduce the safety of walkways as a key part of your induction process using the blind spot maps that drivers have already created. The physical element means that where there are blind spots you put a physical barrier to prevent shortcuts or some additional signage to warn people of the blind spot.

Over the page is an exercise to get you to think about using safety nudges in your business



Behavioural Safety Implementation

Safety Nudge Exercise:

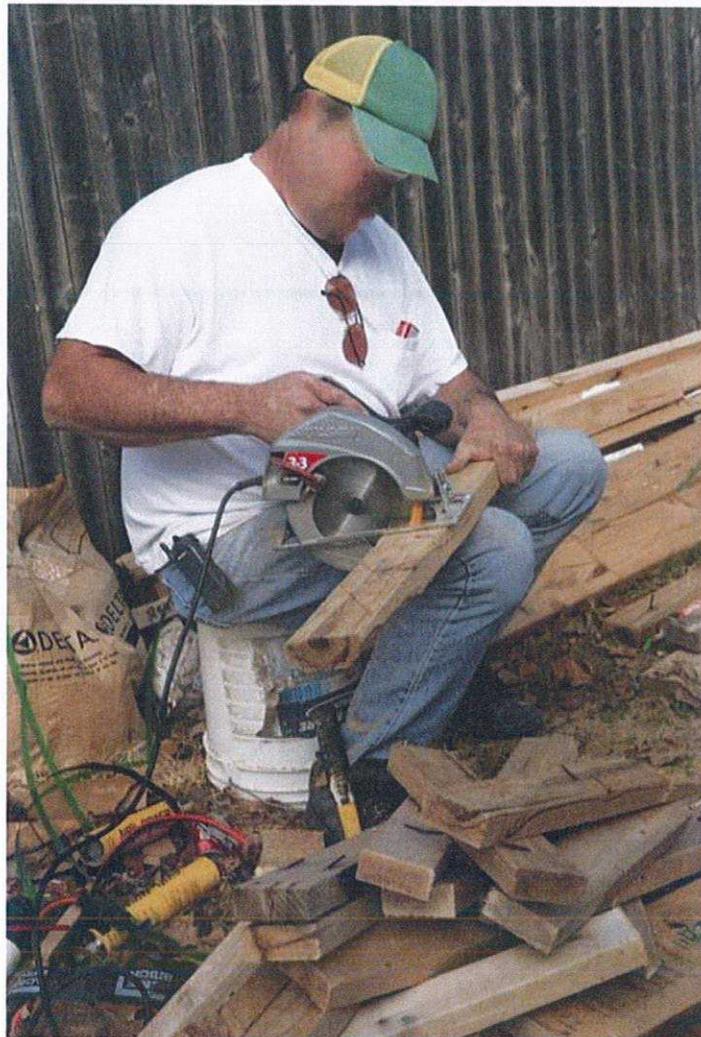
In your business, how do you use safety nudges to try to influence behaviour? You probably have safety notice boards, you may also have posters or injury figures as well or signs and symbols on safety to do with PPE around your site. Do these signs and symbols work or are they really just safety window dressing that nobody looks at anymore once they have completed their induction?

If you really want to influence behaviour then safety nudges as a science can make a contribution.

Below is an image of a worker who is clearly putting themselves in danger.

Exercise:

Design a poster to try to influence this persons' safety practice



**Human Factors
and Safety
Coaching**



Behavioural Safety Implementation

Human Factors and Safety Observations

What is coaching?

Coaching is not a simple process but can be very rewarding in safety. Below are some key principles which might apply in your approach to safety coaching in your business. The model on the next page shows the range of options available from pushing to pulling options. The suggestion is that wherever possible the pulling option where you are acting to suggest and support is the best way of coaching.

Principle 1: Coach the individual

The first basic for coaching is to realize that each person is different and they will require some individual attention and approach in regard to feedback and coaching

Principle 2: Know several ways to coach

As a coach and knowing the key point about coaching others as individuals means that you then need to have several tools in your toolkit of ways to effectively coach and give feedback.

Principle 3: Don't just tick boxes

Ask yourself the question, "What is it I really want to see as a result of this coaching session?"

Principle 4: Encourage self-discovery

The ability to get the other person to try and figure out an answer or solution will help them immensely over just telling them.

Principle 5: Look for the cause of the problem

In your role as a coach, one of the key aspects is to try to uncover the reasons why somebody may not be doing what they should.

Principle 6: Be present and focus

We expect our staff members to focus on their tasks - so it's right that we are focusing on the individuals in coaching.

Principle 7: Give direction

Being a coach or a leader means that you need to ensure the individual goes away with something specific they can do, but this needs to be their idea not yours hence this comes after self-discovery

Principle 8: Change their perspective

Sometimes people struggle to 'get it' from someone else's perspective, so they may not see the point you want to make. The trick is to find a scenario that will allow them to tap into their way of thinking and turn it around. What would make sense to them? What is the equivalent in their language or their world?

Principle 9: Use positive language

Avoid using words like, 'should, maybe, possibly, perhaps'. Always try to use positive language such as 'that's a good idea' or 'well done' 'lets put that into practice'.

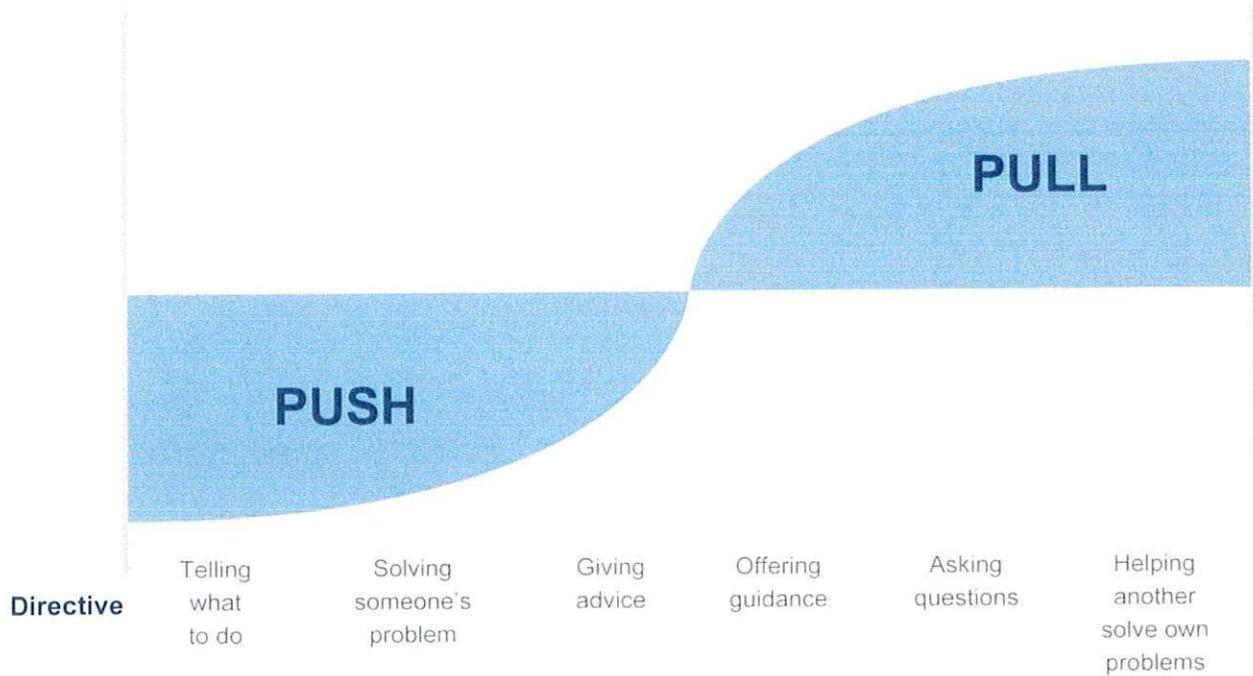
Principle 10: Keep it simple

When you're coaching someone, there may be a list of 10 or 12 things that they need to work on. Forget it. That's just not practical. Get them to focus on the one or two things that will make the biggest impact in their role or to their performance.



Behavioural Safety Implementation

Non-directive

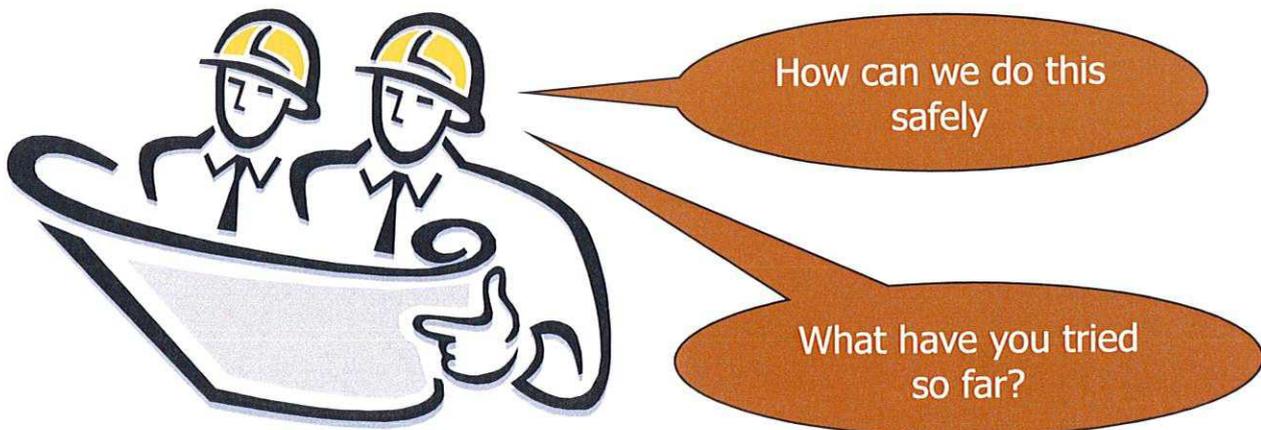


The most usual place where a coaching approach can be used is in safety observations which have been shown when used properly to be very helpful in changing safety practice. Some examples of how this might work are reproduced on the next few pages. Some question options are given in the models below to emphasise different aspects of the coaching spectrum.

The term coach can use the following model: **C**ompetence – **O**utcomes – **A**ction – **C**hecking

Some examples of questions in each of these areas are given below.

Competency:



Behavioural Safety Implementation

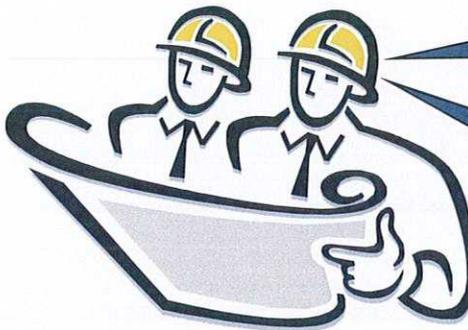
Outcomes:



How important is safety for our team?

How well do we challenge people over safety?

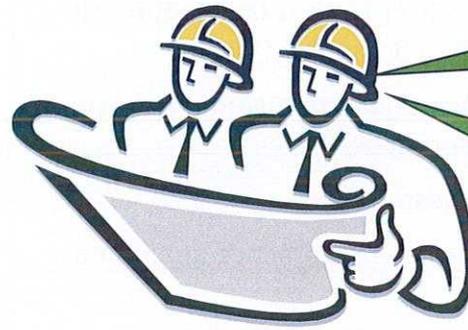
Action:



What have we tried so far?

What can you do to help make us safe?

Checking



How are you getting on?

What do you suggest we should do?

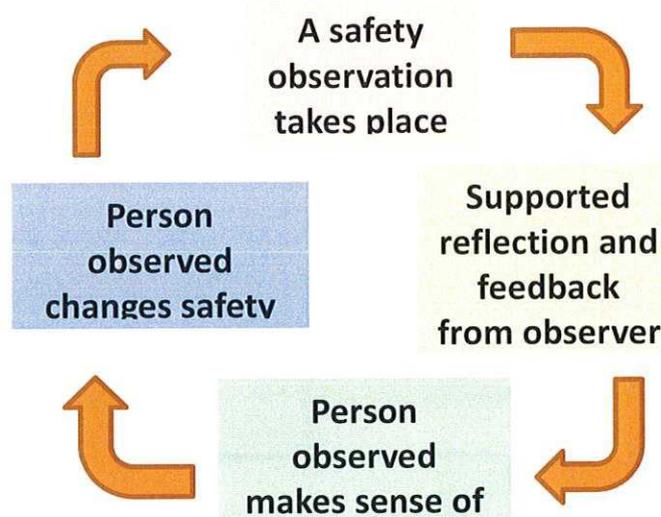


Using Coaching in Safety Observations

Safety Observations and Feedback:

Below is a model of how a behaviourally sensitive safety observation process should take place. This uses a process called reflective feedback which is a more effective method of giving feedback than the usual method of an observer just telling the observed person what they have seen.

Below the feedback model is a contrast between a process using the 'old view' method and 'new view' methods of safety observations and feedback.



Based Upon Kolb's Reflective Learning Cycle

Telling Feedback Process: (AC)

- ✗ Observe a 'behaviour'
- ✗ Tell the person what you saw
- ✗ Tell them whether they followed rules (SOP) or not
- ✗ Tell them how to change their safety practice and what to do better next time
- ✗ Thank them for undertaking the observation and leave them with positive message

Learning Feedback Process: (AA)

- ✓ Observe a 'behaviour'
- ✓ Ask them how the process went and how safe they felt doing that task?
- ✓ What might you do more safely?
- ✓ How does your team usually approach safety when doing this task?
- ✓ What other equipment would help you with safer practice?
- ✓ Positive message –
- ✓ Encourage the safe practice at all times.



Behavioural Feedback – Coaching Exercise

Using a coaching approach design some questions to give feedback to the staff in the picture below:

1. Looking at the coaching approach and the **push/pull** options in coaching, design some questions you might use with the two individuals in the picture opposite to change their behaviour in the long term?



2. What type of coaching and leadership is most likely to work in your current culture and promote long term change?



Human Factors in Risk Management



Behavioural Safety Implementation

Human Factors and Risk Assessment:

Key Principles in integrating Human Factors in Risk Assessment: (taken from HSE Website)

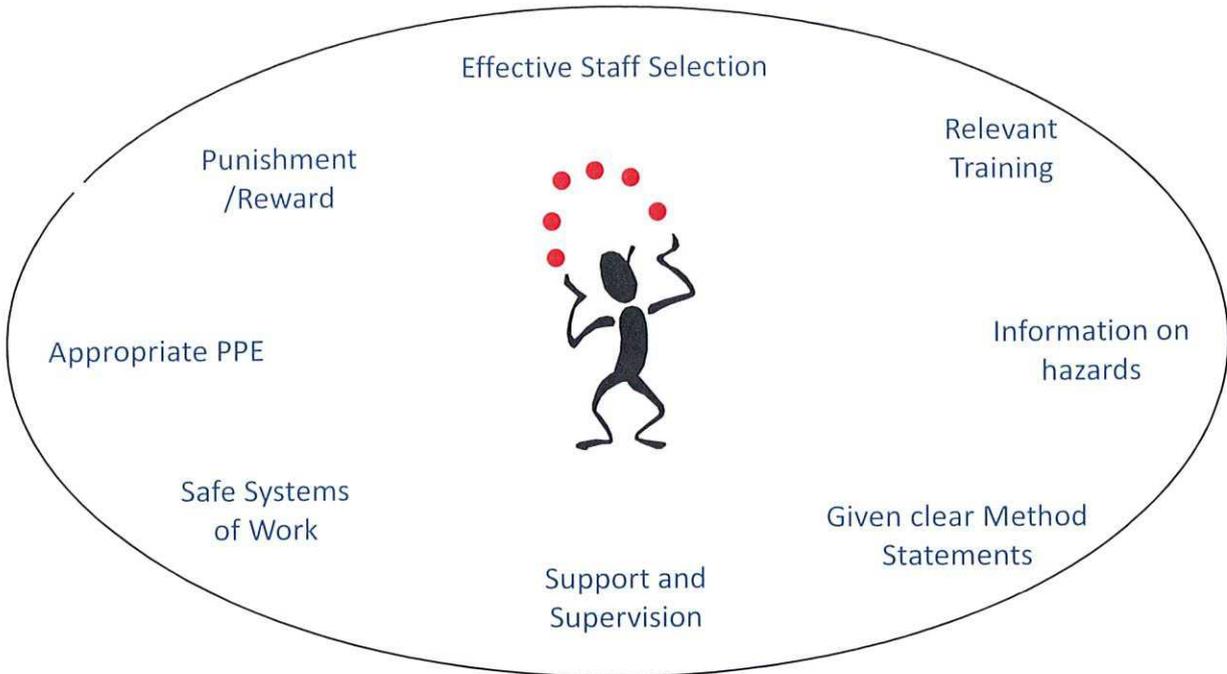
<http://www.hse.gov.uk/humanfactors/topics/03humansrisk.pdf>

<http://www.hse.gov.uk/humanfactors/topics/06maintenance.pdf>

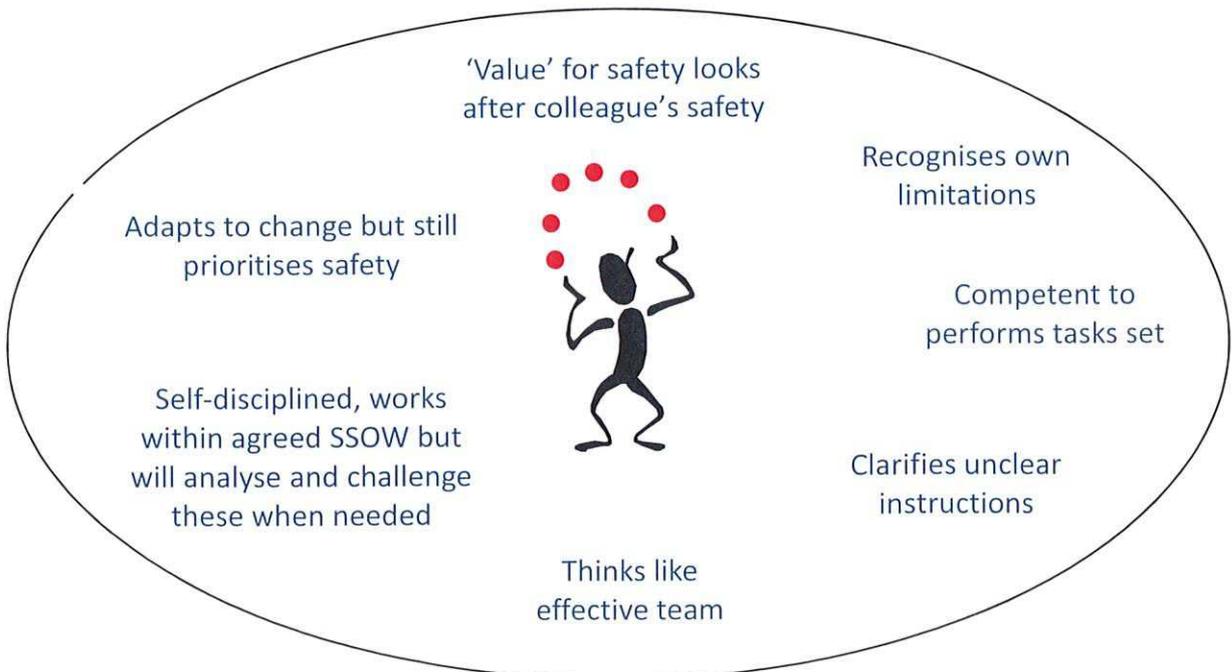
- Through your risk assessment, you should have identified those tasks which are safety critical or expose people to occupational health hazards;
- Ensure you have an understanding of how these tasks are carried out and the environment in which they are performed. This may include walking and talking through the task where it is carried out.
- Involve the workforce in carrying out the assessment and the identification of appropriate controls;
- The people carrying out the assessment should have an understanding of the different types of failure and the factors that make them more or less likely to occur;
- Identify the human failures that could be made in the task which might lead to an accident or incident and the performance influencing factors that make those failures more or less likely to occur.
- Identify appropriate control measures which prevent or mitigate the human failures you have identified;
- Where possible you should aim to design out the potential for human failure and design in the potential for recovery should human failure occur. This includes design of the plant, system, environment and task, taking into account the needs and capabilities of users. Reliance on procedures and training are unlikely to be sufficient.
- Check that your control measures work. Regularly review your risk assessment to see if any further improvements can be made.
- The approach you take to human factors in risk assessment should be proportionate to hazards you face. For most industries a qualitative approach will be sufficient. An example of a qualitative framework that has been found to be useful and effective is the approach outlined in Core Topic 3 of Human Factors Inspectors Toolkit (pdf).
- For some major hazard industries, a quantitative approach may be appropriate.



Safe Person Concept – Old View



Safe Person Concept – New View



Behavioural Safety Implementation

Risk Management – Behavioural Performance Influencing Factors (PIFs)

Performance Influencing Factors (PIFs) are the characteristics of the job, the individual and the organisation that influence human performance. Optimising PIFs will reduce the likelihood of all types of human failure and should be considered when identifying risks in any risk management process.

Which of the following might be relevant to your risk assessments? **NB. This list is not exhaustive**

Job factors

- Clarity of signs, signals, instructions and other information
- System/equipment interface (labelling, alarms, error avoidance/ tolerance)
- Difficulty/complexity of task
- Routine or unusual tasks
- Divided attention – multiple roles e.g. maintenance
- Procedures inadequate or inappropriate
- Preparation for task (e.g. permits, risk assessments, checking)
- Time available/required for task
- Tools appropriate for task
- Communication, with colleagues, supervision, contractor, other
- Working environment (noise, heat, space, lighting, ventilation)

Person factors

- Physical capability and relevant health condition
- Fatigue (acute from temporary situation, or chronic)
- Shiftwork
- Stress/morale – think of organisational change or job uncertainty
- Work overload/underload
- Competence to deal with specific circumstances
- Motivation vs. other priorities

Organisation factors

- Work pressures e.g. production vs. safety
- Level and nature of supervision / leadership
- Communication
- Manning levels
- Peer pressure
- Clarity of roles and responsibilities
- Consequences of failure to follow rules/procedures
- Effectiveness of organisational learning and communication (learning from experiences)
- Organisational or safety culture, e.g. everyone breaks the rules



A 'Just Culture' in Accident Investigations



Human Factors and Accident and Incident Investigation

A Just Culture - HSE

What are the aims and benefits of a 'just culture'?

'Just Culture' programmes have been initiated in many safety-critical organisations, including maritime organizations, a number of aviation authorities and the health sector. These programmes usually describe a journey or ladder, together with supporting tools designed to change the safety attitudes of the entire workforce.

The journey is typically depicted as moving through a number of organisational approaches to safety. This may start with the 'pathological' stage, where people don't really care about safety at all and expect someone to get fired if there is an accident. At the end of the journey is the 'generative' stage where people actively seek information, and failures lead to far reaching reforms

The following benefits of a 'just culture' are anticipated;

- a) Increased reporting of unsafe incidents and accidents –including trends that indicate future problems developing,
- b) Increased trust between all levels of the workforce – which accelerates the organisation's journey towards greater safety maturity,
- c) Decreased actual numbers of adverse incidents and accidents d) Decreased operational costs – due to safer behaviour, higher workforce motivation and morale, and increased productivity.

What are the problems in developing a 'Just Culture'?

The journey to a 'just culture' involves some difficult challenges. Research carried out in several safety-critical industries shows that a central task is designing an incident-reporting system and integrating it with a process for assessing individual accountability across the whole organisation. The new reporting system may be quite different from any existing incident reporting system.

Another key task is the design of a series of easy-to-use diagnostic and reflective tools. These help the workforce – at all organisational levels – understand where they are in the journey, together with the nature of the gaps between their current attitudes and behaviours and those they need to acquire. Tools are also needed to support the acquisition of the required behaviours. For example, it should be aimed at improving the following;

- a) Operator and manager behaviour,
- b) Safe working,
- c) Supervisory behaviour,
- d) Rule-breaking,



Behavioural Safety Implementation

- e) Situation awareness,
- f) Understanding and assessing personal risk,
- g) Making change last,
- h) Seeing yourself as others see you,
- i) Understanding own organisational culture.

It is no accident that the same qualities that make us human are also the main focus of enlightened organisations' recognition that their employees need to work together equitably within a culture that is judged to be 'just' by all.

Steps towards a 'just culture'

Address corporate and legal issues

- Need to obtain unambiguous boardroom commitment
- Need to create indemnity for incident reporters against legal proceedings – this may require changes to existing legislation
- Need to separate reporting system staff from disciplinary staff

Design and integrate reporting system

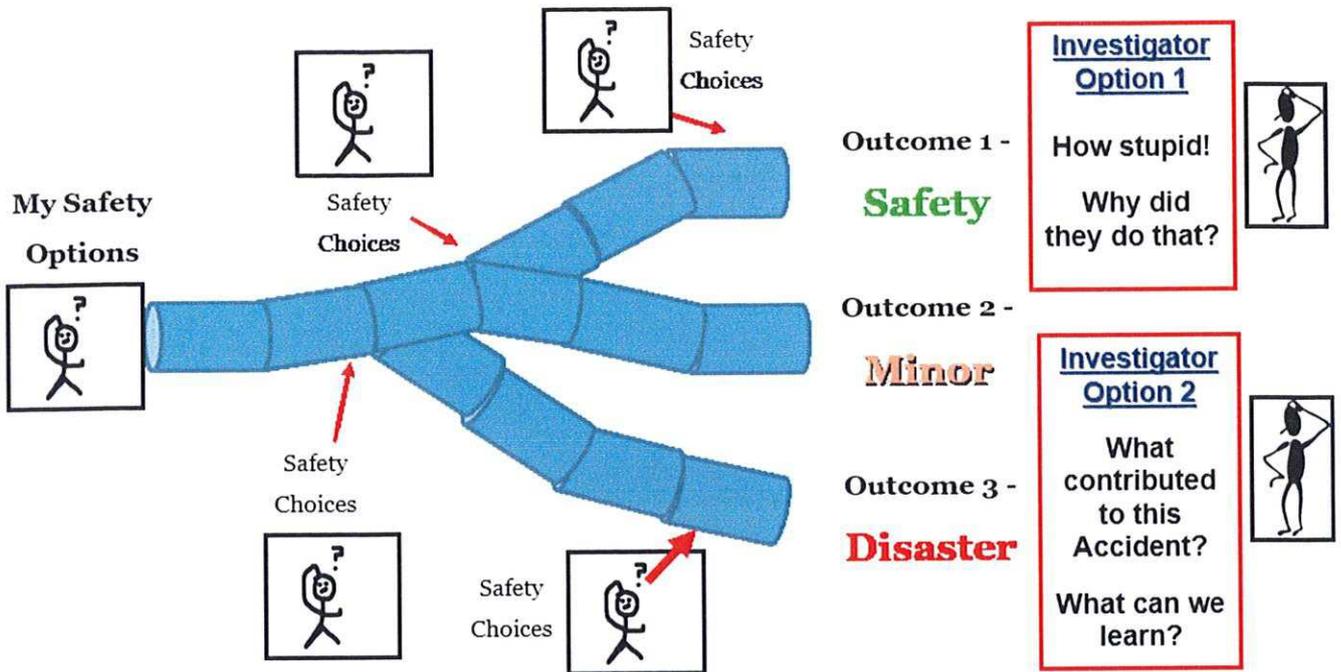
- Need to identify responsibilities and incident report investigators with domain expertise in safety, operations, management and HR
- Need to create a rapid, efficient reporting process that captures and yields useful information at the right level of detail ☐ Need to create clear, easily-accessible process that will be used and trusted
- Need to decide if new process will be integrated with current incident-reporting procedure
- Need to create investigative and assessment processes for deciding accountabilities and action

Develop, promote and roll out reporting system

- Need to identify and assign development resources
- Need to identify champion(s) and communications strategy
- Need to educate users
- Need to collect feedback from users
- Need to feedback useful results to users at all organisational levels – including impact on production, efficiency, communication and cost benefits



Behavioural Safety Implementation



Session Six

Measuring Behavioural Performance



Creating behavioural Safety Measurements:

Why measure behavioural performance?

- Meet corporate requirements on human behaviour
- Compare performance against pre-set behavioural standards and past performance
- Assess the effectiveness of safety management strategy and specific interventions around behaviour
- Identify behavioural safety patterns and trends e.g. higher risk behavioural safety issues and hazards
- Identify behavioural priorities for the organisation
- Provide feedback to reinforce any behavioural safety initiatives

Writing Behavioural Objectives that you can measure

Measurement of safety data is often seen as key to achieving safety performance however one area that is often missed is that of behavioural safety objectives for all staff levels. In the context of behavioural safety and measuring performance however is a complex proposition.

There are three distinct issues that need to be the focus of attention. These relate to the need to:

- focus on measuring levels of behavioural risk and variables in behaviour that can that lower risk
- measuring these variables accurately, reliably and in timely fashion
- measuring how these contribute to the overall behavioural safety strategy and practice within the organisation.

How for example is the safety performance measured of the following participants in safety management?

- Process designers
- Operations Managers'
- Executives contribution to safety

As an example, how many 'near miss' reports are submitted on:

- Poor design issues,
- Poorly written 'Safe Systems of Work'
- Poor management production decisions?
- Equipment purchase that do not meet operation needs of staff



Behavioural Safety Implementation

Watch the Dominic Cooper Video on performance indicators and then undertake the following exercises.

Setting staff 'Behavioural Safety' objectives.

Look at the examples of staff behavioural safety objectives in appendix four. In groups identify how setting behavioural safety objectives would work in your organisation.

Exercise Part One:

1. Identify your top ten positive safety behaviours that a leader could demonstrate regularly to promote could affect safety performance most in your workplace?

Ten Leadership Behaviours that promote effective safety practice (See also Page

How would you measure the above behaviours so that this could be presented as part of your safety auditing processes?



Behavioural Safety Implementation

Exercise Part Two:

Using the information from the exercise above and the behavioural objective examples from appendix five on pages 99 – 102 in your book write a behavioural competency for a member of one of these staff groups?

Group One: CEO

Group Two: Production Manager

Group Three: Team Leader

Example: A _____ should try to undertake the following behaviours _____ at least _____ times every _____. This must be measured (how) _____ and (when) _____?



Session Seven

Planning your Behavioural Safety Change programme



Session Seven

Performance Management: Planning your Behavioural Safety Interventions in Context of your Existing SMS

Planning Your Behavioural Safety Management System

On Page 45 of HSG 48 is a table which looks at the planning of a Behavioural Safety System using the acronym from HSG 65; the Plan; Do; Check; Act planning sequence. This is reproduced overleaf to help support your action planning around behavioural safety.

You can see this as the backdrop to your planning process.

You can also look at the checklists from on Page 46 and 47 of HSG 48 as this will also give you potential areas to explore as part of your planning process.

You might also wish to consider the following questions:

- What do you think will be the best approach for your own organisation 'Behavioural Safety Management' approach?
- How you will promote the value of a 'Behavioural Safety' approach to your senior leadership, managers, supervisors and staff?

You can work alone on this process or work with others in small groups to plan your potential management approach to behavioural safety.

Please also consult and ask questions of your trainer who has a lot of experience in this area.

Notes



Behavioural Safety Implementation

<p>Plan</p>	<ul style="list-style-type: none"> • identify key problem areas or issues for human factors in your workplace (talk to staff and their representatives, look at accident and near miss reports, look at risk assessments); • prioritises these issues; • allocate resources; • identify expertise; • develop possible solutions or action plans (consider people, their tasks, the work environment and organisational attributes); and • encourage staff and other people with a stake in the changes to participate in planning and solution development.
<p>Do</p>	<ul style="list-style-type: none"> • raise awareness of the issues and gain acceptance for the changes; • implement solutions; • involve staff and their representatives; and • communicate about the actions and successes.
<p>Check</p>	<ul style="list-style-type: none"> • evaluate the effectiveness of actions by asking for the opinions of staff and their representatives; • check relevant data sources; and • observe relevant activities.
<p>Act</p>	<ul style="list-style-type: none"> • If the situation is not satisfactory then identify possible reasons; • Identify alternative steps; and • Encourage participation to solve the situation.



Behavioural Safety Implementation

Planning Change - Part Two

- ✍ Based upon what we have discussed so far what have you identified that you might improve or change regarding your behavioural safety management?
 - ✍ Link this back to the things you identified yesterday morning
- ✍ Be very specific on whether this would be Organisational; Job or individual
 - ✍ You can also Refer to page 46 and 47 of HSG 48 for some ideas
- ✍ Start putting these planning pages of the booklet on page

Planning Behavioural Safety Part Two – (Plan; Do; Check; Act;)

Change Cycle Part One:

- ✍ Based upon the ideas from earlier today revisit these and apply the Plan; Do; Check; Act; principles to them?
- ✍ Looking at the change cycle what do you want to change as a result of this course?
- ✍ How well are contractors included in your behavioural change planning?



Behavioural Safety Implementation

Planning Behavioural Safety Part Two – (Plan; Do; Check; Act;)

Change Cycle Part Two:

- ✍ In considering behavioural change please consider your organisational culture assessment on page 41 and 42 of your booklet
- ✍ Using the change cycle what can you change?
- ✍ Please include contractors in your planning?



Planning Behavioural Safety Part Two continued: – (Plan; Do; Check; Act;)

Change Cycle Part Three:

- ✍ Try to set a minimum of three initiatives in priority order to start when you get back.
- ✍ Using the change cycle what will you change?
- ✍ Please include contractors in your planning?



Behavioural Safety Implementation

Planning Behavioural Safety Part Two continued: – (Plan; Do; Check; Act;)

Change Cycle Part Four:

- ✍ Looking at your initiatives and considering the change cycle what will you change first?

- ✍ Please include contractors in your planning?



Appendices

Appendix	Page	Title	Author
One	P83 - 85	Nothing SMART about Zero	Andrew Petrie
Two	P86 - 87	Safety Differently	John Green
Three	P88 - 90	Heuristics - Unconscious Thinking	Andrew Sharman
Four	P91 - 94	Implementation Advice	RoSPA
Five	P95	HSE Advice	HSE
Six	P96 - 98	Leadership Standards	RoSPA
Seven	P99	Bibliography	RoSPA



Appendix One:

Nothing SMART about Zero (SHP online March 13, 2015) Andrew Petrie - *Andrew Petrie is head of safety and assurance for Network Rail Consulting in Sydney, Australia and previously worked for the rail industry in the UK.*

I moved to Australia from the UK just over a year ago to take up a new role with a consultancy in Sydney. Prior to that I had been working in the rail industry in the UK where I had numerous challenging discussions about the use of Zero in one of its many guises as a corporate safety objective. When I refer to Zero in this article I am referring to any safety campaign based with Zero in the title or as an objective (e.g. Zero Harm, Target Zero, etc.) I have in the past undertaken a fair amount of research into Zero, or more correctly the arguments against it, and found that it was widely used throughout Australia, with some jobs even titled as 'Zero Harm Managers'.

I recently gave a presentation at the 4th Safety Psychology Conference in Sydney and my talk covered the journey that the UK rail industry has made over the last few years. I talked in detail about Network Rail's recent 'Safety 365' initiative and how this was effectively a version of a Target Zero campaign which rewarded staff and contractors for not having incidents for 365 days.

I discussed how this had led to gross under-reporting of incidents across the industry in order that projects and organisations appeared to have no safety incidents, while in reality they were often being covered up. The Rail Safety Standards Board (RSSB) covered this in an [independent report](#).

Given my preconceptions of the Australian safety profession I expected the delegates at the conference to disagree with my views and challenge my opinions on the Zero approach, however I found the vast majority were of a similar view. Over the two-day conference, four other speakers also mentioned Zero, and all of them from a similar position that it didn't work and we needed to move away from it.

I was very pleased to see that these industry thought leaders shared my point of view and we discussed the concept at some length. There was a general consensus that safety professionals wanted to move away from the Zero approach but that senior management were pushing it and couldn't comprehend why it would be an issue.

From my own experience, I have seen leaders who have heavily promoted a Zero approach. In some cases, I think that as they have personally invested so much time and energy into the approach they would consider themselves to be losing face if they changed tack. One comment I like to use in this context is that it's like trying to convince a priest not to believe in God. Some priests do actually lose their faith during their career, but because they've invested their life in the church, they feel they have to publicly maintain their front and nothing will convince them to leave.

At the conference in Sydney we discussed how to approach the problem of convincing management not to use Zero, but at the time we were stuck for ideas. There are people out there also working to this end, in particular Dr Robert Long.



Behavioural Safety Implementation

Since then, I have been thinking about an approach to help convince people that Zero is not the way to go, but it has not been an easy thing to do. On the surface Zero sounds like a great idea and that is the reason why it's been so widely adopted. It's only when you take the time to look into the psychology of Zero and the case studies of how it can actually make things worse that you begin to see the problem. The vast majority of people don't have the time or resources to do this and so we need to find a way to make the message as simple as possible.

A SMART Objective

I have always been told that when setting an objective, it has to be SMART; that is Specific, Measurable, Achievable, Realistic and Time-bound. Some people have different interpretations of these terms, but this is the one I am used to working with and what I am going to use for this discussion. For each of these measures I am going to give my views on whether a Zero approach meets the relevant SMART requirement to be considered a good objective.

Specific – Is Zero specific? Well, the number certainly is and the common objectives of Zero Harm or Zero Accidents therefore seem pretty specific. At first glance, it seems to pass this test but I will come back to this later.

Measurable – This is a tricky one, a lot of people would say of course it is measurable, why would there be any doubt that it's not? The problem is that it relies on people to report incidents, and only if they are reported can they be measured. People cannot be relied upon to report all accidents, even those with the best intentions will under-report and there will always be more potential reasons for this under-reporting than any organisation is able to manage. This is backed up by evidence such as the RSSB report into Network Rail that I mentioned earlier.

Achievable – To me the word 'achieve' means working towards something, to put in effort to reach a desired outcome. Training all of your life to run 100m in less than ten seconds is an achievement. You can't claim something is an achievement because it just happens, I don't get an Olympic gold for walking 100m. You need to differentiate an achievement from an event. Can you get a 'Zero' accident? Yes, of course you can, but this is more often down to luck (and under-reporting) than anything else.

Realistic – Is it realistic for people not to have accidents? No, of course it's not, most people injure themselves on a regular basis, whether it's a paper cut, a scalded finger, a burn from the iron, or a twisted ankle. For most of us, not a week goes by without us injuring ourselves in some way. Why do we accept this as part of life for 138 hours of the week, but not the 40 that we're at work?

This is where Zero really begins to be a problem as now we have to start changing the goalposts to suit our needs. I have heard numerous people justifying Zero by stating things such as measuring Zero actually only applies to major accidents or lost time accidents, not all minor cuts and scratches.



Behavioural Safety Implementation

I'm going to take us back to that first test: is Zero specific? It now turns out that it's not. It's obvious to most people that you can never have a 100 per cent injury free workplace, so people change the meaning of Zero to suit their needs by filtering out minor incidents and increasing the bar of what is being measured.

Time-bound – Most Zero programmes are a bit schizophrenic when it comes to measuring Zero. The objective will be set as Zero forever, but then they measure success each year, although as often as not they fail to meet the target of Zero. So how exactly do you set a timescale? On the one hand, the longer you make the timescales, the harder it is to achieve and on the other, the longer you go without an incident the more likely people won't report it because they don't want to mess up their statistics.

If your objective is to go a full year with Zero incidents, then what do you think happens on day 364 when somebody has an accident? The pressure on them to leave it unreported is immense and it's simply not fair to put the pressure of an organisation's objective on the shoulders of one person. If you have a positive objective like achieving a financial target, if it fails to be met then the entire company is responsible, if you fail to meet a Zero target then only the people who have reported their accidents are responsible.

What's not SMART?

For an objective to be SMART it has to meet all five of the tests described above. In my view, Zero fails on all five counts. I have no doubt that many people would fervently argue that I am wrong on all five points, but I do hope that rather than going on the defensive immediately, people will take the time to review each of my arguments and see that at least some of them make sense to them and as such, Zero does not pass all five tests and therefore cannot be considered a SMART objective.

If, as an organisation, you still wish to continue to use a Zero objective then why don't you consider if it passes the DUMB objective test instead:

- Deluding ourselves that our programme must be working because we've invested significant amounts of money in it.
- Unable to actually measure the output because it relies on people reporting accidents, and people won't do this 100 per cent of the time.
- Management focused objective, designed to make the board feel like they're doing something about safety with no real consideration for the views of the workforce.
- Blindly following the crowd and not looking at the latest research and the use of positive safety objectives.

So what are the alternatives to Zero? Well, there are plenty of different approaches out there, and while I don't have the space to cover them here, my recommendation would be to make the safety message a positive one, something that people can look to and understand, and if you do put in place any objectives make sure that they pass the SMART test.



Appendix Two - John Green: Safety Differently, a Vision for the Future

By John Green, director HSE, Laing O'Rourke Europe (2016)

In most large organisations safety is touted as the 'number one' priority: the issue that transcends all others in the organisations search for perfection. As accident numbers fell it became increasingly difficult for companies to show that performance was improving through the traditional medium of falling incident rates.

The 'safety differently' movement was formed fundamentally out of frustration. A frustration borne out of the inability of safety to respond to the challenges of the modern world of work.

Safety has always been presented in terms of numbers: the lower the number the better and, if at all possible, aim for the nirvana of zero. This seemed to those who gathered in Melbourne in 2012 to be ridiculous. Safety had become the absence of something. Good safety was now measured as the absence of accidents. Our future seemed bleak...

Vision for the future

So, rather than construct a future based on a numerical outcome, a narrative was built around the current characteristics of traditional safety and building an alternative version that was more suited to current practice and thinking. This framework took the form of three principles:

- people are the solution, not the problem;
- safety is about positives, not about the absence of negatives; and
- safety should be an ethical responsibility, not a bureaucratic activity.

Traditionally, people are seen as a risk to control in organisations. They are controlled by limiting their choices and behaviours or by placing constraints between them and the actual work. People are responsible for all your problems and if we could only get them to follow the perfect systems that we have created then all would be well. What would happen if we saw people as part of the solution?

Why can't we see that people are responsible for success far more often than they are involved in failure? They close the gap between work as done and work as planned successfully every single day and yet the only time work is examined or analysed is when things break down.

Safety cannot be about the absence of something but about the presence of positives or capacity of an organisations to operate within a framework that is resilient and capable of responding to change.

Resilient organisations do not invest in fine-tuning their lagging indicators of negatives (weak signals), but rather invest in identifying and bolstering their strong signals of resilience—the ability to keep harmful influences at bay without knowing in detail what those might be or when and where they might appear.

An over-burdening bureaucracy has been created in the name of safety. Not only does this do nothing to actually make work safer, it also creates a huge performance drag in organisations making them inefficient and cumbersome. Safety needed to return to being an ethical responsibility for those doing work. We needed safety and not liability management.



Behavioural Safety Implementation

Making it a movement

Over the years this philosophy has gained ground both in Australia and now here in Europe. A view that sees these three principles as continuums and not simply binary statements – allowing organisations to position themselves where they are comfortable as well as charting a challenging route to success.

The discussions in a backroom in Melbourne 5 years ago have now become a movement.

We need a new era in safety, a new era where human beings create safety. Continuing to do what we have always done is not going to lead to different outcomes and it is unlikely that we can break through the asymptote on safety progress with them. We should not of course simply abandon everything we have done so far; much of it has been highly successful and productive in reducing unnecessary injury and whatever we do moving forward cannot be at the expense of increasing injury rates. But we must realise that that it will do little more than hold us steady.

New technologies may hold the answer but they also run the risk of introducing more complexity. But there are also other avenues that will allow us to govern safety differently.

This new era then calls for a form of governance that sends power over many decisions back to the shop floor, back to the projects. It realises that people exist as a source of diversity, insight and wisdom about safety, not purely as sources of risk. It calls for governance that trusts people and mistrusts bureaucracy. It will take time. We are part of a larger system that feeds the bureaucratic beast. But it is something that has to be done.

It is only right that the profession should examine and assess the tools that it has at its disposal and if these tools are no longer appropriate for the challenges that we face we must have the courage to leave them behind no matter how well they may have served us in the past and move forward with a different approach.

Anything less will see safety becoming increasingly irrelevant and marginalised as the industrial world moves forward and we will still be focusing exclusively on the negatives for decades to come, wondering why we have not made the differences that we all wish to make.

John Green has worked in the oil, gas, petrochemical, electronics, heavy engineering, construction and aviation sectors and has 38 years' experience of industrial safety. He is currently the Director HSE for Laing O'Rourke Europe and Global major projects.



Appendix Three - SHP Online – Heuristics - Unconscious Thinking and Safety

Every day we make quick decisions based on little information, leading to both good and bad consequences. Andrew Sharman examines heuristic thinking and its significance in the world of safety.

You may recognise the name Daniel Kahneman from his best-selling book entitled *Thinking, Fast and Slow*. Published in 2011, it's still at the top of reading charts around the globe.

Back in 1974, a seminal year for health and safety, Daniel Kahneman and his partner Amos Tversky made a ground-breaking discovery while researching why humans struggle to think statistically. They identified that the human brain was capable of taking mental short cuts to solve problems or issues that we are faced with.

A 'heuristic', to give them their proper name, is by Kahneman's definition: "A simple procedure that helps find adequate, though often imperfect, answers to difficult questions."

Heuristics are the little 'rules of thumb' that allow us to quickly process and conclude an efficient decision without having to pore over information or deliberate what our course of action should be. It's interesting to note that the word heuristic is derived from the same root as the word *eureka*. Perhaps this reflects exactly why when our minds make these little short cuts for us, we feel so pleased with ourselves for being so quick thinking.

Kahneman and Tversky suggested that there are three main types of heuristics:

Availability Heuristics help us to estimate the probability and likelihood of something happening based on information we can recall. Studies suggest that those events we can bring to mind quickly and easily are those that have occurred most recently. For example, if the news reports several road accidents on a certain stretch of highway, then we may believe that it is more likely to suffer a crash on that particular road and avoid that route for the near future. Or if we sustain a number of forklift truck incidents in the workplace, we may believe that generally there is a high probability of another forklift incident occurring and focus all of our attention there.

Anchoring Heuristics are based on the idea that we often take decisions related to specific reference points within our memory. These reference points act as anchors to connect historical information to the present. For example, if a manager was involved with a serious fall from height incident earlier in her career, future discussion on this topic will often trigger her thought process to pull against this anchor in her mind.

This may result in either a raised level of awareness and knowledge, or conversely, perhaps a degree of over-sensitivity and a reluctance to engage.

Representativeness Heuristics help us to predict the probability of something happening based on the proportion of relevant items in play. For example, if I take a jar of coloured candies, some red, some blue and ask you to tell me which colour of candy will be drawn next from the jar, you would no doubt want to know how many of each colour I had placed in the container.



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When I tell you that 75 per cent of the candies were red, you would likely guess that red would be the colour of the next one to be drawn. This proportion is known as the *base rate*.

The representativeness heuristic is significant in our world of safety. Where a *base rate* appears to be in our favour we can be lulled into a false sense of security – for example, when we experience a period of time without an accident at work. Our confidence begins to grow and it becomes easy to believe that we have the ability to predict random events (accidents, or blue and red candies) from the *base rate* data to hand (our chart of historical rates or the data I gave you on sweets in the jar).

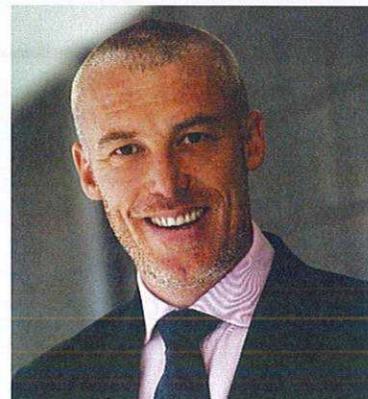
I noticed a busker on a street play with the representativeness heuristic recently. With a crowd gathered around him, he tossed a coin into the air. Six times in a row the coin landed 'heads-up'. He paused and asked a member of the audience to bet one dollar on the next toss. The audience clamoured to participate, and one man handed over his dollar, adamant that the coin would have to land showing 'tails' because it had landed showing 'heads' too many times already. The coin was tossed and landed. 'Heads' again! The crowd went wild and a sharp-looking lady moved forward from the edge of the group. Handing over a five dollar bill she exclaimed that she would bet 'heads'. The showman took the bet and flipped the coin. 'Tails' this time.

Despite both participants having inspected the coin before each toss, and presumably noting that it indeed did have two sides and therefore a 50/50 chance of landing on either, they both appeared resolute that the odds were in their favour. Representativeness heuristics had taken away their capacity to think – and their dollars.

By their very nature, heuristics are used without our conscious thinking. As Kahneman says, they are a "consequence of the mental shotgun, the imprecise control we have over targeting our responses" to the questions or issues we face.

On one side, they make it easy for us to respond quickly to difficult situations, avoiding the need for long, deep thought. But like the coin used in the street show, heuristics have a flipside. They may lie behind the unconscious errors that we create as we go about our daily business and lead us into taking decisions and setting targets rather naively.

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References

- Abelson R, Frey K, and Gregg A, 2004. *Experiments with People, Revelations from Social Psychology*. Lawrence Erlbaum Associates Publishers, London.
- Bargh J A, (ed.) 2007. *Social Psychology and the Unconscious: The Automaticity of Higher Mental Processes*. Psychology Press, New York.
- Brown V, Harris J, and Russell J, 2010. *Tackling Wicked Problems Through Transdisciplinary Imagination*. Earthscan, London.
- Cameron K, and Quinn R, 1999. *Diagnosing and Changing Organisational Culture: Based on the Competing Values Framework*. Addison-Wesley, Reading, Mass.
- Deci E, 1995. *Why we do What we Do, Understanding Self Motivation*. Penguin Books, New York.
- Ellul J, 1964. *The Technological Society*, Vintage Books, New York.
- Higgins, E T, 2012. *Beyond Pleasure and Pain, How Motivation Works*. Oxford University Press, London.
- Jung, C, 1959. Volume 9, Part I. *The Archetypes and the Collective Unconscious*. Translated by R. F. C. Hull. Ed. Herbert Read, Michael Fordham, & Gerhard Adler. New York: Pantheon Books.
- Long R, and Long J, 2012. *Risk Makes Sense, Human Judgment and Risk*. Scotoma Press, Canberra.
- Long R, 2013. *For the Love of Zero, Human Fallibility and Risk*. Scotoma Press, Canberra.
- Long R, 2014. *Real Risk, Human Discerning and Risk*. Scotoma Press, Canberra.
- Long R, 2014a. *Following-Leading in Risk*. Scotoma Press, Canberra.
- Moskowitz G, and Grant H, (eds) 2009. *Psychology of Goals*. Guilford Press, New York.
- Riggio R, Chaleff I, and Lipman Blumen J, (eds) 2008. *The Art of Followership*. Jossey-Bass, San Francisco.
- Slovic P, 2000. *The Perception of Risk*. Earthscan, London.
- Slovic P, 2010. *The Feeling of Risk: New Perspectives on Risk Perception*. Earthscan, London.
- Standards Australia, 2009. *AS/NZS 31000:2009 Risk Management – Principles and Guidelines*.
- Weick K, 1979. *The Social Psychology of Organizing*. McGraw Hill, New York.



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Appendix Four - Behavioural Safety: - Suggested Implementation Guidelines

Behavioural safety is much more complex than most businesses, organisational leaders and safety people think with many organisations not understanding the key issues involved in cultural change and its links to improve behavioural safety management. Many still consider that the focus in behavioural safety is mainly on the workers despite the HSE advice to focus on the interaction between the Job, Organisational and People factors outlined in HSG 48 since 1999.

The tables below are designed to allow course delegates or organisational safety leaders to determine very quickly what cultural safety elements they could apply to their organisation is and whether and what type of behavioural safety processes it might be sensible to link to or try to implement.

It is suggested that for an organisation to improve its behavioural safety management all parts of the organisation need to reach each level before moving on. As an example, the high-risk operations on an upper tier COMAH site might be at level 4/5 in terms of behavioural safety management but its engineering workshop might be at a lower level such 2/3.

In an instance such as this it would be suggested that safety in the engineering workshop is improved to bring it in line with the COMAH parts of the business before considering organisational behavioural objectives or initiatives.

Some suggested behavioural safety considerations are listed below

Level 1: HSMS and Safety Culture not yet ready for Behavioural Safety

If an organisational has any traits of level 1 they should not be considering a Behavioural Safety approach at this stage as their organisational Health and Safety Management System (HSMS) and its linked safety culture is not ready for even a basic Behavioural Safety approach. They should ensure that the following basic elements of HSG 65 or ISO 18001 are in place first:

- Clear Safety Policy with outline of everyone's responsibilities;
- Clear and distinct safety implementation procedure with a strategy that includes; targets, actions and implementation timescales in place;
- Basic Safe Systems of Work (SSOW's or SOP's) have been consulted over and are in place;
- Auditing and Monitoring is in place and operating well with data regularly submitted in the form of near miss or hazard observation reports;
- Management and Supervisor trained in basic investigation techniques;
- Staff have a clear understanding of their safety roles and responsibilities;
- Basic staff engagement in place as per relevant regulations;
- Accident Investigations are basic (if at all) and generally looks to blame the employee



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Level 2/3: Can start considering (level 2) and planning, designing and trialling (level 3) a behavioural safety implementation process.

- Top management is committed to safety improvements and is looking at Behavioural Safety as a vehicle for this;
- The business has ensured that all aspects of the HSMS is in place (See HSG 65 or ISO 18001 (ISO 45001)) and that an appropriate safety culture has begun to develop;
- Managers recognise their role in safety and are starting to actively implement safety improvements and conduct safety briefings on a regular basis;
- Staff safety representatives (1977 or 1996 regulations) have been effectively consulted (not told) and are committed to the implementation of Behavioural Safety initiatives;
- The basics of an effective and well understood safety observation process is in place and capable of producing safety learning;
- Some basic training of staff on behavioural safety and 'Safety Observation' processes has been undertaken and this has been tried as a pilot process and lessons learnt before being fully implemented;
- Basic Safe Systems of Work (SSOW's or SOP's) linked to the Hierarchy of Risk Control are in place and have been consulted on by safety and production staff;
- Accident investigations are superficial with human factors not well understood and therefore some investigators still tend to blame the workers



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Level 3/4: Should be considering planning and trialling (level 3) and implementing (level 4) behavioural safety beyond basic processes:

- All elements of HSG 65 and or ISO 18001 (45001) are in place and the basic principles of HSG 48 (Behavioural Safety) are recognised by senior and middle management; supervisors; and staff and trade unions where applicable;
- Managers and leaders have implemented effective workplace consultation on RAMS and SSOW's and these now have a strong front-line staff input;
- The implications of a behavioural safety approach and the need for it to clearly link to a 'no blame' culture is understood;
- Effective safety training is in place around accident and incident investigation which are approached on a learning basis not a blame approach. Key concepts of HSG 245 around behavioural safety are utilised in this;
- An effective 'safety observation' process is in place and learning is implemented jointly from reviews by safety observers and front-line managers under the supervision of the safety manager/advisor;
- A clear safety management plan for enhancing all aspects of behavioural safety exists and the board and senior managers are committed to this.
- A Safety observation program is in place (level 4) and is used to identify issues that the observers, staff and managers can tackle jointly supported by the organisational safety staff;
- Safe Systems of Work (SSOW's or SOP's, Method Statements) are linked to the Hierarchy of Risk Control and have been reviewed from a human behaviour point of view. *i.e. they make sense to the operatives who are working with them;*
- The basics of 'Latent Safety' are understood within the management levels of the organisation and work is in progress to prevent or minimise their impact on active production safety.
- Accident Investigations always consider human factors from a root and underlying cause perspective, the organisation is trying to move away from blame although some staff may feel this still exists.



Level 4/5: Proactive Safety Culture with ongoing behavioural initiatives

- Managers and leaders at all levels see workers as the solution to safety challenges and this approach (level 5) is part of the integral values of all staff;
- The CEO and other senior leaders accept personal responsibility for all accidents and incidents that occur and where time permits take part in safety meetings and other aspects of the safety process; This can be measured as part of their behavioural actions;
- At all organisational levels HSG 65 and ISO 18001 are well understood and in place. At level 5 HSG48 is also understood and an effective feedback loop exists to ensure that nothing is missed due to poor organisational communication;
- At level 4 the organisation is close to achieving a genuine 'no blame' culture whilst at level 5 this is fully in place with managers and workers believing in the organisations commitment to this;
- Training has taken place on HSG 48 at all levels and is fully understood by all; (level 5) this has included those staff whose latent actions such as planning and design, financial and contract management can impact on safety;
- Latent and active issues are considered by the safety implementation group on a regular basis and investigations into accident and incidents understand the 'latent bias' issues within all investigations;
- The safety manager has, where needed, immediate access to Chief Executive and or board level (appointed safety board member) to raise any relevant safety issue that they feel needs immediate attention;
- The behavioural safety plan has built in initiatives which are identified and implemented by front line staff and managers. These are refreshed on a regular basis based upon data produced by the safety observation process;
- The safety observation process uses an experiential feedback process to help all staff self-identify potential errors and try to eliminate these at source;
- Behavioural targets have been agreed for all levels and staff see these as trying to eliminate both active and latent errors and mistakes prior to them having an impact on front line safety;
- Safe Systems of Work (SSOW's or SOP's) linked to the Hierarchy of Risk Control have been designed from a behavioural point of view and tested by the staff as practical and realistic documents;
- Contractors risk management and associated RA/SSOW's are considered from a behavioural point of view particularly when involving high risk activities (PTW's);
- Accident Investigations will always consider human factors and whilst responsibility and accountability are key parts of the investigation learning from accidents is the key underlying investigation ethos



Appendix Five

Health and Safety Executive Advice on Behavioural Safety:
www.hse.gov.uk/humanfactors/topics/behaviouralintor.htm

Some Do's and Don'ts

Do

- Be sure that it is *really* what you need right now
- Find out (from employees) whether signals they get from management about safety are the first issue to address
- Network with others - not only those suggested by the consultants
- Learn what you can from alternative techniques available
- Make sure the system is **your own**, in style, language, presentation etc.
- Pilot, and only roll-out when confident of success
- Use it as a dialogue – and that means LISTEN to your employees!
- Spend considerable effort to get good, strong facilitators *who understand safety*
- Make sure that participants focus on *root causes* of behaviours

Don't

- Underestimate the effort and planning required
- Be over-optimistic
- Get carried away and lose focus on other aspects of safety
- Believe that the 'Heinrich triangle' works for occupational ill-health, minor personal injuries **and** major accidents
- Bother at all unless:
 - o You're confident that you already have a strong HSMS and a *safe workplace*
 - o Senior management can be made to think it was their idea all along

Increasing the effectiveness /chance of success

- Ownership - developed in-house is best
- Good fit with organisation's needs, culture and HSMS
- Commitment (*involvement* is better) from management
- Good communication and understanding of programme
- Approach seen as 'fair and just' - trust
- Managers actively act as role models on safety within the business

Summary

- There are many advantages to doing Behavioural Safety
- But these programmes (and any cultural change) take time, resources and a concerted effort and senior management commitment



Appendix Six – Supervisor Assessment and Leadership Standards

Safety Awareness:

1. Disregards safety and has little awareness of team safety practice.
2. Often needs reminding of the safety aspects of their role
3. Works safely and has a general awareness of their team's safety practice.
4. Works safely and has a good awareness of their team's safety requirements
5. Proactive approach, sets a good and effective example, their teams always works safely and implements safe practice in all situations.

Acceptance of responsibility in Safety:

1. Avoids safety responsibility wherever possible.
2. Accepts some safety responsibility but needs close guidance and supervision.
3. Accepts some responsibility does not accepts their responsibility on team behavioural safety practice.
4. Accepts responsibility and uses own initiative, tries to manage team behaviour but this is limited.
5. Proactive approach, integrates behavioural safety management and supervision within whole team

Safety Conduct and Behaviour

1. Blatantly flaunts the rules and has total disregard for their own and team behaviour's.
2. Does things they have to but will regularly try to cut corners around behavioural safety practice
3. Does enough to get by in their own and teams safety practice
4. Does most of what they say and tries hard to align this with team safety behaviour.
5. Always does what they say, aligns safety behaviour's of team to whatever project they are involved in.

Safety Forward planning:

1. Tends to only react to events, little forward planning in team's behavioural actions and safety.
2. Some consideration of behavioural safety planning and can do more if highlighted by manager.
3. Able to plan and anticipate teams behaviour's in line with safety practice.
4. Good forward planner and often considers team behaviour's in line with safety practice
5. Highly proactive in behavioural planning makes effective use of 'Point of Work Risk Assessments'.

Safety Reliability:

1. Totally unreliable and cannot be trusted in relation to behavioural safety management.
2. Needs constant supervision and management around behaviour of their team.
3. Satisfactory performance and generally considers team behaviour around safety.
4. Reliable and consistently identifies team behavioural safety issues.
5. Proactively encourages team to consider behavioural safety issues and will challenge other teams or parts of the business when needs around safety behaviour.



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Leadership standard to be attained is: Encouraging a supportive safety environment that permits and promotes safe behaviour.

Unacceptable practice: Leaders (Directors, Managers, Supervisors) fail to show commitment to health and safety and are not appropriate role models for others. Staff feel the environment is not supportive and a blame culture exists.

Standard	Below Expected Minimum	Minimum Acceptable Standard	Good
<p>Commitment</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders fail to recognise the legal, moral financial & business reasons for health and safety. <input type="checkbox"/> Leaders demonstrate little or active behaviour to improve health and safety. 	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders show a genuine understanding of the legal moral and financial reasons for and show demonstrable support for their health and safety manager/team. <input type="checkbox"/> Leaders are involved in safety tours occasionally 	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders consistently demonstrate a visible ongoing commitment to all aspects of health and safety performance. <input type="checkbox"/> Leaders regularly attending safety events, safety training. <input type="checkbox"/> Supervisors are clear role models and drive team safety standards.
<p>Worker Engagement</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders are seen as remote figures and fail to communicate their expectations to workers. <input type="checkbox"/> Leaders often fail to follow their own safety rules but expect enforcement of these for staff 	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders give workers prompt, honest feedback on their performance praising them for safe behaviour's. However, they don't always have a visible presence in the production cycle <input type="checkbox"/> Safety communication is actively encouraged but feedback is not always given back following staff safety suggestions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Everyone is inspired and empowered by good leadership to make and act upon decisions on how to improve their health and safety at work. <input type="checkbox"/> Workers can confidently and regularly give feedback on health and safety issues to peers/leaders in all circumstances.
<p>Prioritisation of health and safety</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders recognise health and safety as important. <input type="checkbox"/> Legislation is always complied with to the minimum standard but production is usually seen as the top priority. 	<ul style="list-style-type: none"> <input type="checkbox"/> Health and Safety has equal status with productivity. <input type="checkbox"/> Leaders are quick to respond to health and safety concerns. <input type="checkbox"/> Supervisors recognise the importance of cutting health and safety corners, even on lower risk tasks. <input type="checkbox"/> Everyone is empowered to stop work in situations they perceive unsafe without fear of recrimination. 	<ul style="list-style-type: none"> <input type="checkbox"/> Leaders believe and emphasise health and safety as the priority in decision making <input type="checkbox"/> Leaders demonstrate care and commitment and are quick to anticipate health and safety concerns. <input type="checkbox"/> Supervisors ensure safety standards are understood, implemented and maintained by their own team and contractors.



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Standard	Below Expected Minimum	Acceptable Practice	Effective Good
Planning and organising	<input type="checkbox"/> Leaders expect health and safety staff to plan safe work, assess risks and explain methods to their workers.	<input type="checkbox"/> Leaders take time to improve health and safety by organising schedules so that everyone has the time to do the job safely. <input type="checkbox"/> The necessary resources to work in a healthy and safe way are provided.	<input type="checkbox"/> Leaders continually strive to identify ways to make the organisation safer and improve the working environment. <input type="checkbox"/> The impact that all operational and managerial decisions have on health and safety are systematically considered when planning. <input type="checkbox"/> Decisions made are transparent.
Measurement	<input type="checkbox"/> Leaders performance is not measured against health and safety performance e.g. accident/incident numbers and near miss reporting.	<input type="checkbox"/> Health and safety performance objectives are set for all leaders e.g. monthly site walkabouts by directors/managers, number of safety observations by supervisors. <input type="checkbox"/> Performance results are feedback throughout the organisation.	<input type="checkbox"/> In addition to performance targets and feedback, observation and feedback principles are applied to leadership behaviour. <input type="checkbox"/> Safety Leadership behaviour is regularly monitored e.g. safety climate tool, 360 assessments.
Organisational learning	<input type="checkbox"/> Managers/supervisors do not recognise how their performance impacts on safety practice and do not encourage feedback on their own leadership skills.	<input type="checkbox"/> Leaders frequently review their performance and look for ways to improve their leadership skills. <input type="checkbox"/> Training in leadership skills (e.g. communication and feedback is received). <input type="checkbox"/> Leaders take responsibility for failings and ensure that lessons learned are openly communicated to all staff levels.	<input type="checkbox"/> Training in leadership skills is provided. <input type="checkbox"/> Leaders consistently seek advice from others (e.g. workers, peers, other organisations) <input type="checkbox"/> They consider best practice within the supply chain to identify how they can improve safety practice.



Appendix Seven - Further Reading

1. HSE (1999) **Reducing Error and Influencing Behaviour (HSG48)**
Published by HSE Books. ISBN 0-7176-2452-8
2. HFRG (2000) **Improving Maintenance: A Guide to Reducing Human Error**. Published by HSE Books. ISBN 0-7176-1818-8
3. HSE (2012) **Successful Health & Safety Management (HSG65)**. Published by HSE Books. ISBN 0-7176-1276-7
4. James Reason (1990) **Human Error**. Published by Cambridge Univ Press. ISBN 0-521-31419-4
5. James Reason (1997) **Managing the Risks of Organisational Accidents** Published by Ashgate Publishing Ltd. ISBN 1-84014-105-0
6. Aubrey Daniels (2000) **Bringing Out the Best in People**. Published by McGraw-Hill. ISBN 0-07-135145-0
7. Behaviour Based Safety – **Setting the Record Straight** – Aubrey Daniels International 2012 Magazine
8. Sue Cox & Robin Tait (1991) **Safety, Reliability & Risk Management**. Published by Butterworth-Heinemann. ISBN 0-7506-4016-2
9. Dominic Cooper - www.shponline.co.uk/dominic-cooper-global-insights-into-behavioural-safety/
10. Andrew Sharman - www.shponline.co.uk/unconscious-thinking/
11. Robert Long – The Social Psychology of Risk, Safety and Leadership Maturity - BULLETIN MAGAZINE APRIL 2016.pdf
12. Dekker Sydney (2014) 'Professional Safety' AUGUST 2014 www.asse.org
13. Dekker Sydney (2013) **The Bureaucratization of Safety** – Elsevier – Science Safety
14. Dekker Sydney (2002) **Reconstructing Human Contribution to Accidents** – The New View on Error and Performance – Pergamon Press
15. Dekker Sydney (2014) **The field guide to understanding Human Error** – Ashgate Publishing ISBN 978-1-4724-3904-8
16. Dekker Sydney (2014) **Safety Differently: Human Factors for a New Era**, Second Edition CRC Press ISBN 978-1-4822-4199-0
17. *Dr. Rod Gutierrez Why don't people just follow the rules?* – A psychologist's explanation of safety management beyond Behaviour Based Safety *Dr. Rod Gutierrez Principal Psychologist DuPont Sustainable Solutions 2011*
18. Kruse – Thomas R - krausebellgroup.com/wp-content/uploads/2016/08/7-Insights-into-Safety-Leadership_Chapter-2.pdf





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