

Affective and Effective Management Safety, Occupational Health and Wellness

Affective and Effective

- Affective
 - upstream / proactive / leading
 - observable, measurable behaviours
 - focus on process / activity / behaviour
 - quality assurance approach
 - requires whole organisation involvement to deliver the potential

Affective and Effective

- Effective
 - compared to what?
 - Some or all of: company targets,, internal historical baseline over time, external benchmark
 - certification against an external national / international standard
 - or what?
 - judgement
 - direct (measure)
 - indirect (indicator)

References

- Affective Safety Management
 - Author Dr Tim Marsh of Ryder Marsh (Safety) Ltd
 - Published by the International Institute of Risk and Safety Management
 - Available on www.amazon.co.uk
 - Other publications by IIRSM
 - Saving Lives Through Leadership: Leadership for Health and Safety Practitioners
 - Case Studies in Health and Safety Management

Affective Safety Management

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Publisher: International Institute of Risk & Safety Management

Part 1. Theory of Affective Safety Management

Safety Leadership and Learning

Safety Culture and Behaviour

Safety Culture and Psychology

Human Factors and Safety Behaviour

Behavioural Safety

- Simple combination of several areas of research and best practice. Four key themes:
 - Visible Safety Leadership
 - Senior commanders and managers conspicuously seen and heard, modelling safety behaviours consistently, challenging tolerance of avoidable risk
 - Day-to-day Behaviours Define a Safety Culture
 - Assumed: basic traditional safety building blocks are in place e.g. risk assessments, training, induction, accident reporting
 - Not Assumed: those basic building blocks are user friendly
 - Usually an individual has reasons for taking or creating risks
 - more complex than stupidity or laziness
 - ABC of Behavioural Safety {Antecedent – Behaviour – Consequence}
 - Antecedent triggers the Behaviour, Consequence drives the Behaviour
 - Advertising agency psychology works in influencing behaviour
 - Verbal abuse and public humiliation less effective long term

- Get out there and be seen leading from the front
- Risk accumulates, lots of apparently small risks mount up
- Focus on and challenge day to day issues as well as the big stuff
- Ask the right questions in the right way, to obtain valid information without conveying blame
- Analyse intelligently before acting, to understand underlying reasons
- Good coaches rarely throw their toys out of the cot, but do engage emotionally as well as rationally

1. SAFETY LEADERSHIP & LEARNING

- Touring the Workplaces
 1. Leaders might learn something
 2. Leaders can be coaches
 3. Symbolism
- Learning by Listening
 - 'Group Think' can lead to intelligent and experienced people sleepwalking into bad decisions, and no one person has all the answers. Problem solving teams should follow 3 basic rules
 - Allow everyone to contribute
 - Listen actively, then consider
 - Don't humiliate, don't discourage
- Symbolism
 - If the boss takes an interest, it must be important
 - People are less likely to 'cheat' if they feel they are being observed
 - People need encouragement to pause and reflect on their actions

Why focus on safety?

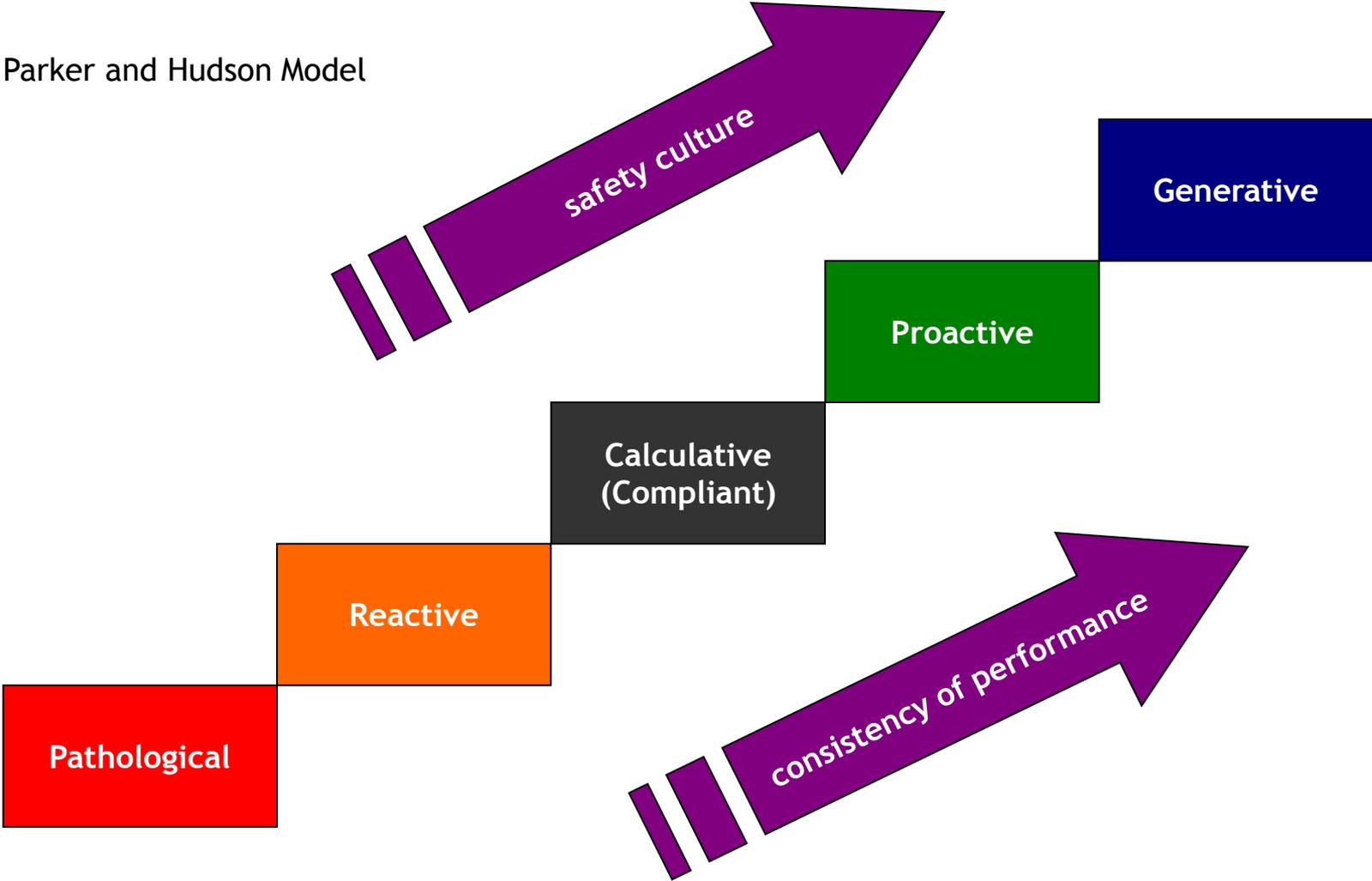
- Mixed messages from leaders favour productivity over safety
 - “I’m experienced so can get away with this, but never do it yourself
 - “OK, just this once, but be careful”
 - “Do it today but safely” –v- “Do it safely but today” (Behold The Underlying Truth)
 - “Let’s get this safety stuff out of the way first” –v- “Safety comes first”
 - RNZAF ‘Mission First; Safety Always’ –v- ‘Safety First; Mission Always’?
- Mistakes and unintended outcomes are more likely from distracted or tired people
- Sales people will time the pitch of a strong message after morning coffee, and a weaker one after a long lunch
- Conflicting priorities can detract from good intentions
 - The Offshore Installation Manager of the Piper Alpha oil platform toured his platform every evening, when production work has finished
- Generally there will be low positive impact if many workers miss out on safety interactions with leaders
- ‘Getting the job done’ is 10/10 and generally implicit if not explicit. If safety is 9/10 and push comes to shove, 10 trumps 9.
- Leaders strive for the level of performance they really really want, and people try to deliver

- People performing the work have a huge amount to contribute: they are the experts
- Leaders get the safety culture that they demonstrate they want by their actions, more so than by what they say they want
- Leaders need to demonstrate commitment by walking the walk as well as talking the talk, getting exposure to many people not a few, and having focused safety discussions

2. Safety Culture and Behaviour

Model of Safety Culture

Parker and Hudson Model



- At the calculative level, organisations have:
 - Moved past being entirely reactive
 - Existing reasonable systems, procedures, training and inductions
 - Documentation aimed at delivering a certificate or two to display on the wall
 - An underlying knowledge that there are significant gaps between what the documented system expects, and what actually happens
 - A flat safety performance typically wavering within a narrow horizontal corridor

“What part of *‘dieting doesn’t work in the long term’* don’t you understand? You need to change your lifestyle. Eat slightly less and exercise slightly more, and do it most of the time, forever”

‘Try harder’ without an underlying change of attitudes and values only works short-term

Even very high impact events such as Pike River Mine have limited long term impact

- Behaviours that characterise proactive organisations for safety are also characteristics that signal high grade product and service quality, employee satisfaction, efficiency and effectiveness
- The behaviours are, in theory, all easy to do
- Moving beyond a culture focusing on machine guarding and legal compliance involves addressing behaviours on a daily basis
- About 50% of all lost time accidents in offshore oil & gas industry result from people falling downstairs.
 - Holding the handrail would have prevented most if not all
 - Assume
 - likelihood of a fall is 1:10,000; of someone suffering a seriously debilitating fracture is 10 times less at 1:100,000; and of someone fracturing their spine is a further 10 times less at 1:1 Million.
 - within the industry, stairs are used 1 Million times over a year.
 - With no behavioural intervention, there will be 100 falls, 10 debilitating fractures, and one spinal fracture.
 - If 90% of people hold the handrail, the injury burden will be 10x lower.

- Heinrich's Triangle is the key theory behind the focus on behaviours
- There is a pyramidal relationship between the number of risky behaviours (very many) at the base, minor injuries (some), major injuries (a few), and fatalities (one occasionally) at the apex.
- The example of holding the handrail when using stairs illustrates how unrealistic it can be to expect zero risky behaviours.
- Defence-in-depth helps. In the construction industry internationally, numerous people will die as a result of being struck in the head by an object falling from a scaffold deck. In some of those, some if not all of the following chain of behaviours will combine:
 - People on the scaffold deck not keeping their workplace clear and tidy
 - Someone hurrying along the deck, eyes and thoughts not on foot placement
 - The scaffold erector not fitting a toe board; and the supervisor(s) not requiring it
 - The scaffold erector not barriering off the base of the scaffold
 - The person hit not wearing a hard hat
- Many people would simply blame the victim for not wearing a hard hat
- Nearly all initiated event sequences will not result in a fatality

- Many obvious behaviours:
 - Housekeeping
 - manual handling
 - sounding a horn at a blind corner
 - donning safety glasses and other Personal Protective Equipment (PPE) etc
- Many subtle behaviours:
 - the boss turning up late to the safety meeting because of a minor production problem
 - the poorly-prepared trainer mumbling through the presentation before getting people to sign the attendance record without any real opportunity to discuss and confirm understanding
 - recognition of achievement for meeting production targets no matter what the non-financial cost etc
 - Ridiculing a person for raising a concern
 - Having obvious double standards (leaving values at the exit door after each workday)

- The social pressure to conform to social norms has in the past been underestimated and can be a major force (positively or negatively i.e. safe or risky behaviours)
- The same individual can behave safely at work and not safely at home (sound familiar?)
- The same contractor (or transferred staff member) can behave safely at one work site and not safely at another with no apparent change in supervision
- Most people will actively observe what is happening around them and 'model' the behaviours of the group so they don't stick out. The behaviours of experienced confident persons are especially powerful in modelling.
- If 50% of the group models a certain behaviour a new starter has free choice from a social norm perspective. If 95% models the behaviour, the pressure to conform can be irresistible
- There will be a 'tipping point', which seems to be around 85%, where a new individual will generally feel compelled to conform and act safely.

- Simply trying to get people to work harder at safety won't work in the medium to long term – things have to be changed
- The bottom of the Heinrich triangle represents risky behaviours. Shrink the base and the apex will follow. Fewer risky behaviours = fewer accidents
- Defence-in-depth creates multiple opportunities to prevent an accident. Stopping just one risky behaviour can stop the accident
- Get past the tipping point (the critical level) and safe behaviour becomes the norm. Social norms are more important than we think

3. Psychology Basics

- Emotional Intelligence (EI)
 - Everyone has strengths and weaknesses
 - The best teams collectively maximise the strengths and minimise the weaknesses
 - Being naturally intelligent is not enough; it has to be effectively applied
- Neuro Linguistic Programming (NLP)
 - We control how we respond to the world around us. We don't have to be passive
 - We can never know what positive thinking can achieve unless we try
 - For example, in every conversation Nelson Mandela had with a prison guard, he aimed to influence. He tried to ensure his incarceration on Robben Island was productive
- Expectations and self-fulfilling prophecies
 - We often see only what we want to see. Perception is reality
 - We actively seek out evidence that supports our position rather than evidence that would contradict it.
 - We get the behaviour we expect – primarily because we expected it

Seeking evidence to reinforce position

Example

There are four cards placed on the table. They are double-sided with a letter on one side and a number on the other.

A **B** **7** **8**

The rule is that if there is an A on the front, there will be a 7 on the back.

QUESTION: How many (and which) cards do you need to turn over to test the rule?

- A new contractor, new starter or previous transgressor isn't given the benefit of the doubt, but who (objectively speaking) should be
- The popular, experienced worker who is allowed excessive benefit of the doubt
- A researcher (McGregor) discussed 'theory X' and 'theory Y' management styles.
 - Theory X managers tend to expect workers to be lazy and in need of constant supervision and discipline
 - Theory Y managers tend to expect workers to be reliable, conscientious and motivated.
 - Studies show that
 - while a few workers will take full advantage of the trusting Y type, the vast majority don't
 - Almost everyone treated in a Theory X way behaves accordingly

- 'Above The Line' Behaviours also known as 'Organisational Citizenship Behaviours'
- Premise: 'Above The Line' Behaviours will naturally flow from a proactive and 'just' safety culture

Ownership

Accountability

Responsibility

Shared effort



Blame

Excuse

Denial

Disconnection

Summary of Psychology Basics



- Being clever is not the same as being able to apply that cleverness effectively
- We are what we do (not what we think we are deep down)

Human Factors and Safety Behaviour

- There is a difference between climate and culture.
 - Climate: short-term horizon, can be heavily influenced by single events
 - Culture: more resistant, more enduring
- A death in the workplace can severely impact on the safety climate, but over time the culture will prevail
- Behavioural safety open to criticism of 'victim blaming'
 - Just because 80-95% of accidents have a human factor element, behavioural safety should not be about 'making the people safer'
 - Behavioural change is primarily brought about by changing their environment
- Addressing behaviours is not an alternative to:
 - Effective engineering design, build, repair and maintenance
 - Competency based training
 - Person suitability for tasks
 - Safe standard operating procedures
 - Applying lessons learned from incident and accident investigations
 - Safety audits and reviews; etc.

- 'No Name No Blame' (NNNB) does not equal guaranteed anonymity
- Environmental issues should be fully explored before the person is deemed at fault
- Risky behaviour can fall into one of two categories: errors and violations.
- Errors are unintended. Causes include:
 - Human fallibility, fatigue, poor equipment design, inadequate training
- Violations are of particular interest. These can be categorised as:
 - Individual (committed by someone bent on rights doing something their own thing for their own reasons). Only 10% of violations might fall into this category
 - Optimising (committed by someone taking a risk because they think that's what the organisation wants them to do)
 - E.g. getting repeated positive feedback from management for doing whatever had to be done to achieve the result at any cost!
 - Situational (committed by a person in a situation where cutting corners is considered unavoidable or hard to resist)
 - Unrealistic deadlines, 'job & finish', badly paid piecework with big bonuses

- 'No Name No Blame' (NNNB) does not equal guaranteed anonymity, BUT:
- Management will naturally want to know 'who it is that we aren't blaming'! This must be resisted, especially if useful observations are to be conducted for the purpose of generating lead indicators. (People will artificially modify their behaviour whilst being observed if they could get into trouble if they don't)
- Employees will respond more frankly and honestly, which assists root cause analysis
- Grass roots participants are more likely to volunteer information if they aren't going to be seen by their colleagues as 'dobbers'.
- A 'Just' Culture is an alternative to NNNB only if it is genuine.

- A key principle: the primary cause of an accident is rarely the worker being foolish or reckless (individual violations), it is the environment they find themselves in
 - This implicates the way that the organisation is run, and the way tasks are set up
- Mistaken risk perceptions lead to poor decisions
 - **Problem 1. Availability Heuristic.** Means giving more weight to evidence that is most readily available to us to recall, when making intuitive judgements (could be based on personal atypical experience, media hype etc.)
 - **Problem 2. Emotional Reasoning.** Means optimistic overconfidence that nothing bad will happen. 'The cloak of invincibility'.
 - **Problem 3. Selective Learning.** Means Bias to the Positive. We generally prefer to learn from our own positive experiences than the negative experiences of others.
 - **Problem 4. Hindsight and Fundamental Attribution Bias (FAE).** FAE means the mindset of a belief that it is always the person not following the rules that is causing all the problems, never perhaps the rules themselves. Studies indicate that the worse the outcome the worse the bias.
 - **Hindsight bias: after the event, people will insist they knew something bad was about to happen but that no-one listened to their warnings, or they didn't speak up because no-one would have been interested. People judging the actions of others with hindsight often insist they would not have acted in the way the person did. Perception becomes reality.**

- A key principle: the primary cause of an accident is rarely the worker being foolish or reckless (individual violations), it is the environment they find themselves in
 - This implicates the way that the organisation is run, and the way tasks are set up
- Mistaken risk perceptions lead to poor decisions
 - **Problem 5. Cognitive Dissonance.** Means our actual behaviours diverge from our stated attitudes.
 - Example: driving while just under the legal alcohol limit.
 - **Problem 6. Groupthink.** Means where a group of like-minded individuals get together and basically blindly agree on something – with little regard to alternative views and hard facts.
 - The more cohesive the group, the more prone to groupthink.
 - ***The Bay of Pigs failed invasion of Cuba was officially labelled Groupthink***

- So, what to do about *Availability Heuristic, Emotional Reasoning, Selective Learning, Hindsight Fundamental Attribution Bias, Cognitive Dissonance, and Groupthink?*
- Manage diversity. Bring in fresh eyes
 - Benchmark with similar and not-so-similar organisations
- Conduct 'what-if' scenarios
 - Check assumptions with quantitative and qualitative assessments
 - Encourage and support problem-solving in teams
- Brainstorm the pros and cons of your own viewpoint and the counter position.
 - Don't just focus on the pros of your viewpoint and the cons of the counter
- Maximise objectivity over subjectivity
 - Easier to say than do, needs systematic methodical approach

Are there accident prone people?

- Human Error is unavoidable. Vital:
 - Not only minimise likelihood of an error, but
 - Maximise the chances that the error will be detected by the person and they will be able to recover
- From a 'just culture' perspective, the last person who should be examined is the individual who committed the final error, as so much is systemic
- That said, there are a few 'muppets' you wouldn't want performing high hazard work because they are:
 - Easily distracted, low in conscientiousness, prone to day dream, are very high risk tolerant, have low intelligence, are easily tired, prone to mood swings; them aside
- Typically, individual characteristics are important:
 - Physical – size etc.
 - Physiological – health, fitness etc.
 - Psychological – intelligence, personality, and motivation

- Physical and physiological – can be obvious that:
 - Clumsy, uncoordinated, large individuals performing complicated tasks in restricted spaces are more likely to have more bumps
 - Unfit or unwell individuals will be more prone to tiredness and fatigue – and such people make more mistakes and have more slips.
 - Badly designed shift patterns and excessively draining (physically or psychologically) jobs can make people unnaturally tired
- Intelligence, personality and motivation are multi-faceted and complex, and can interact in an indefinite number of ways.
 - Basic types of intelligence are:
 - Verbal
 - Numerical
 - Spatial
 - A particular type can be associated with a particular profession e.g. Engineers can often be highest in spatial, accountants in numerical, marketers in verbal.
 - Intelligent people tend to make fewer mistakes (as long as not bored or stressed)
 - Research indicates optimum 'emotional arousal' range is 40-70%
- Lesson: matching the person to the task is important

- Personality – collated research has tended to focus on the ‘Big Five’ factors:
 - Extroversion
 - Anxiety
 - Conscientiousness
 - Open-mindedness
 - Agreeableness
- Research by Clarke & Robertson in 2005 found that conscientiousness and aggression did correlate significantly with accident rates
 - Careless, over-confident sloppy people have more accidents than careful cautious people
- The correlation is not perfect, and it’s usually the operating environment that is most important

- What motivates people at work (based on Peter Warr's 'Vitamin' Model). Range includes
 - Money
 - Prestige
 - Control
 - Role clarity
- Vroom's simpler model could explain why many safety initiatives fail. Motivation is a factor of multiplying:
 - Clarity of what needs to be done; multiplied by
 - An expectation that it will lead to success; multiplied by
 - The outcome is valued
 - Because the calculation is a multiplication, a 'zero' for any factor returns an overall score of zero
- So if training is vague or there is a lack of belief that the initiative will succeed, a usually motivated supervisor may appear to be less than enthusiastic

- Behavioural approaches support and enhance other processes
 - But are not a magic bullet
- Good behavioural approaches are about analysis not blame
- Commitment from leaders is crucial and key

Behavioural Safety Programmes

- Two broad categories
 - 'top down'
 - 'bottom up' (AKA 'full' programmes in that they fully involve both management and the workforce)
 - 'Advanced'
- Every programme has one or more of following 6 elements:
 - Workforce ownership and involvement
 - Root-cause analysis (RCA)
 - Behavioural measurement
 - Feedback and goal-setting
 - Awareness raising
 - Management and supervision

- Summary of 'full' programme methodology:
 - Cultural survey, leading to gap analysis, leading to draft action plan
 - Half-day workshop for senior leadership team – action plan confirmed and resourced
 - Behavioural safety leadership training for all managers
 - Awareness presentations to whole workforce. Volunteers enlisted for steering committee and other roles
 - Steering committee training. Materials such as behavioural check-sheets, promo leaflets etc. refined and finalised
 - Measures validated and deployed to collect baseline data
 - Goals set, scores displayed on feedback charts
 - Root causes for non-compliance investigated, cost effective solutions identified and implemented
 - Additional benefits derived from one-to-one mentoring conversations and positive feedback

- Typical strengths of 'full' programme:
 - High level of ownership
 - Better quality measurement leading to better information and more accurate targeting of resources
 - Peer-to-peer, more likely to reflect natural activities
 - More bodies resulting in more representative sampling
 - Better root cause analysis
 - 'No name, no blame' peer-to-peer conversations
 - More credible awareness raising campaigns
 - Designed and delivered largely by the workforce representatives
- In combination, 'full' programmes can often give dramatic and continuously improving standards of safety. BUT:
- Time consuming, generally requires a substantial culture change regarding levels of trust and anonymity. Managers need to find time and resources to meet workers' expectation that ideas will be responded to, 'high impact low cost' solutions will be implemented immediately, and 'high impact high cost' suggestions will be processed in a reasonable time. This can seriously strain management commitment.

- Summary of 'top down' programme methodology:
 - Often similar to 'full', but largely management driven
 - Off-the-shelf package, tailored following some consultation with workforce reps
 - Workforce participation usually compulsory, data collected through opportunistic audits
 - Many variations, often very close to standard good safety management practice
- Overlap with 'full' programmes. Both
 - Follow the principles of Heinrich's Triangle
 - Focus on reducing unsafe behaviours or unsafe conditions that are hard evidence of behaviour
 - Seek to raise awareness of behavioural items
 - Stress the importance of supervision and management
 - Focus on root cause analysis as well as 'follow the rules – there's a reason'
 - Hard data can be collected (however, can often be of limited use)

- Typical strengths of 'top down' programme:
 - Fits well with existing management systems
 - Emphasises the importance of line management influencing and modelling safety on a daily basis
 - Relatively easy to undertake; can be included into a manager's daily site tour
- Typical weaknesses of 'top down' programme (all can also be associated with a badly planned 'full' programme):
 - Major weakness – seen as patronising if done clumsily
 - Delivers little if any front-line ownership.
 - Can lead to confrontation and defensiveness
 - Can lead to 'tit-for-tat' retaliation, or 'back scratching' deals
 - Check sheets completed from memory or even imagination
 - Managers may only talk to people about subjects they are comfortable with
 - Observation tours may not be stratified (i.e. always done at same time on same day), skewing the information
 - Information rarely based on accurate representative data, but not always recognised as such
 - Root cause analysis can be compromised as operatives defensive and wary

- Emerging intellectual property
 - Focuses heavily on the individual
 - Uses discovered learning / coaching / NLP style of discussing safety with an individual to get them fully appreciate the risks they are running
 - Aims to change the individual's mindset from 'this will be OK' to 'this could end badly'.
- Strengths
 - Many of the generic benefits (break the chain, behavioural root cause analysis, one-to-one coaching etc)
- Weaknesses
 - Similar to all person-centred approaches to safety:
 - Too focused on the individual
 - Not focused enough on the environment

- Anything that seeks to focus systematically on reducing risky behaviour is a behavioural approach
- Focus on behaviour, so can seriously backfire if done clumsily
- A more complex approach can be more effective as it uses more sophisticated tools and techniques, BUT
 - That makes it more difficult to implement, and requires greater management commitment