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Safe Behaviour As A function Of Consequences - B:f(C)

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Abstract

When seeking to achieve excellence in HS&E performance it is crucial to understand the nature of human behaviour and what drives our behavioural choices. There are many influences over behaviour but none quite as significant as our expectation of what the consequences of our actions will be for us as individuals and our teams.

Behaviour is mainly a function of such consequences (B:f(C)) and understanding this means that we are able to significantly influence people's choice of behaviour when it comes to risk taking. HS&E excellence in high performing safety cultures requires a thorough appreciation of this simple fact in order to sustain continuous improvement and provide the opportunity for zero accidents.

It is possible in fact to achieve 100% safety critical behaviours that become habitual practices in relatively short time periods. However this can only be achieved and sustained if we truly understand the consequence drivers for individual and group behaviours and how to use these to the advantage of HS&E performance. It is also essential to embrace all parties in this process so that contractors import safe behavioural practices into client organisations and this requires careful consideration at the contract negotiation stage.

It is possible through effective consequence and therefore behaviour management strategies to achieve zero accidents in any operational environment.

Introduction

Performance in any area of business is a product of individual and team behaviours and appreciating the main drivers for behaviour is crucial if we are to optimize performance and create a safe, profitable organization. Where we tend to approach production and quality issues with a high degree of scientific rigour, looking to maximize our performance and striving for excellence we are often less rigorous with our approach to safety performance management. We will often ignore fundamental principles of behavioural science and approach safety with a belief that trained and competent individuals will act safely through knowledge based decisions and a sense of what is in their own 'best interests'. This ignores the fact that training and experience are merely *antecedents* for behaviour and as such can be extremely weak in their ability to drive the level of safe behavioural choices that we require for eliminating workplace accidents. What then should be our focus and is it anything new?

The simple answer to this is that it is not new to any of us who are used to designing systems and processes to shape behaviour in the workplace and it relies on long established scientific principles of human behaviour and that is that behaviour is primarily and largely driven by our expectation of the outcome, ie, *behaviour is a function of consequences* (or in short-hand $B:f(C)$)

Whereas we are usually quite adept at identifying those behaviours necessary to optimize production and therefore build in measurement and reinforcement programmes (positive reinforcement being the consequence capable of motivating discretionary effort and 100% of the required behaviour) we often approach safety in a totally different way preferring to focus on outcomes such as accidents and then ignoring the behavioural aspect altogether and resorting to retraining and re-instructing our staff in the hope that they will get it right next time. When statistics from OSHA in the USA and the HSE in the UK show us that 90% of accidents are behaviour based it would make much more sense to focus on behaviour and how best to influence it if we are to achieve excellence in this crucial area of business.

There are three *key* steps in a behaviour focused programme that need to be thoroughly thought through and implemented to effectively take advantage of consequence driven behaviour:

- Get the measurement of success and failure for safety right – emphasize input/risk variables for performance indicators
- The use of consequences to drive behaviour improvement – focus on positive reinforcement for success indicators
- Ensure that every team and individual is accountable for their own contribution to the safety effort – making sure there are no 'weak links' in the organisation from senior management through to workforce and contractor organisations.

Getting measurement right

Measurement is key to achieving information about performance improvement and feedback about the effectiveness of current strategies. Measurement is also crucial as a means through which safety improvement can be driven through motivating effort. However, in the context of safety, measuring performance can be a complex proposition. There are three distinct issues that need to be the focus of attention for measurement. These relate to the need to:

- focus on measuring levels of risk and variables that serve to lower risk within the organisation
- measure these variables accurately, reliably and in a timely fashion
- make the reporting of safety performance results meaningful within the organization and at *every* level

Most organisations now recognize the limitations of restricting the measurement of safety performance to output variables (such as the number of accidents / incidents, reportable events etc), especially in organizations where the number of unplanned events is typically low. Due to these limitations safety measurement is now increasingly including a focus on input measures. The key issue here is to measure the inputs that most directly effect outputs and therefore serve to lower risk, and to measure them in such a way that produces good *quality* data. For example, counting the number of safety audits / walk rounds / management tours may be regarded as an appropriate input measure but such counts presuppose that these input behaviours counted are of good “quality” and that such activities will serve to drive improvement. These may not be valid assumptions.

In view of this, input measures need to go beyond the simple measurement of activities and move towards reliable measures of risk and of those interventions that have been clearly established as lowering levels of risk. This is where crucial effort is required in establishing reliable and valid indicators of safety performance that remove any doubt over current safety standards (eg – are we having no accidents due to thorough and effective risk management or are we being ‘lucky’?).

Fundamental reasons for measuring safety performance

The need to measure safety performance is unquestionable: measurement is an essential component of any management system. There are a number of purposes served by measuring safety performance:

- To meet legal and corporate obligations
- To compare performance against minimum standards
- To compare current performance with past performance
- To compare performance with that of others or with established benchmarks
- To assess the effectiveness of management strategy and specific interventions
- To identify patterns and trends
- To identify priorities
- To trigger the application of appropriate consequences for the performer(s)

The measurement of safety performance therefore meets a variety of important purposes. Whilst the same measures can have wide significance in terms of meeting a range of different purposes, it is also important to recognize that there is a need to establish different measures to meet specific needs. For example, a small work team will be most interested in how they are doing as a unit day by day whereas the performance of the wider organisation may be of less interest to them. Similarly, the management board may be interested only in output data aggregated across the whole organisation for a time period (quarterly, annually) and will be less interested in detailed inputs. The implication here is to carefully design the measurement system in the context of how it is to be used and to achieve the desired effect that is the application of continued or improved behaviours to achieve the goal of zero accidents.

Whilst all of the above purposes may be important, the assessment of the relative effectiveness of management strategy and specific interventions is of particular significance – the need is to know what works and what doesn't is paramount if safety is to be effectively controlled in large complex organisations.

Measurement results need to be used as a source of motivation and this is crucial given the earlier statement that it is how people behave that is likely to be the biggest factor in ultimately determining safety output performance. To be effective, performance feedback needs to be rapid and meaningful in order that teams and individuals are able to make the link between the efforts they have put in and the outcomes generated.

What this means in simple terms is that measurement plays a part in providing management intelligence but also has a crucial role in providing the opportunity to make people feel good about what they are doing and therefore to sustain their positive/safe behaviours.

Critical Issues in Measurement

To provide “good intelligence” and to motivate effort, measurement needs to conform to a number of important principles.

Fairness – given that measurement is used to reflect upon the activities and efforts of management and employees, it is important that the measures used focus on those variables that are under the control of these people. There is a need for people to feel that they can *make a difference* to that which is being measured.

Consistency – it is also important that the measures are applied consistently across operations so as to give a representative picture of performance from one area to another. One explanation for differences in performance can be that the measures have been applied differently and this can be driven by political interest given that a certain level of emotion is associated with the reporting of safety performance.

Reliability – the reliability of a measure relates to whether it will produce the same results for the same situations.

Validity – in this case the issue is the extent to which the variable being measured is a true indicator of safety. This is particularly important when the focus is upon “input” or “leading” measures for it is critical that the variables being measured have a direct or indirect relationship with outputs. If this is not the case, then there is little value in the measure in question.

Relevance – the measures need to be associated with outcomes for people at different levels of the organisation – there needs to be meaning attached to the measures such that people are then inclined to try and influence them. Typically, this will mean

that there are consequences of one sort or another associated with the measures and that these consequences should be of direct interest to the individuals and teams concerned.

Cost – this relates to cost-benefit. If the data collection for a particular measure requires a very expensive activity then the value contribution needs to be assessed.

Output measures, input measures and measures of risk

The most obvious form of safety measurement involves the reporting of accidents and incidents (output measures). As organisations have developed their approaches to safety management, they have recognized the need to introduce various systems directed at controlling or influencing safety and from this has developed the emphasis on measuring inputs (input measures). However, whilst an emphasis on outputs and inputs measures is important, there is a third variable – risk, that also needs to be measured if an organisation is to achieve a complete picture as to how well it is performing. This is particularly important as organisations gain more control over safety performance and output measures typically become low numbers with little variance between time periods.

The measures adopted need to be assessed against the critical issues outlined above to assess the contribution they are able to offer to the measurement of safety performance. The following are some key issues around each of the measurement types that need to be carefully considered when constructing the measurement system:

Output measures

- Small numbers reduce the reliability of this measure - variations between small numbers can appear more significant than they actually are - eg does a decrease from 4 Lost Time Accidents (LTA) in year 1 down to 2 in year 2 really indicate that there has been a dramatic improvement in safety?
- Different variables are afforded different weighting, which may not necessarily reflect the degree of safety – eg a LTA given more prominence than a serious Near Miss when assessing safety performance producing a potentially skewed impression.
- Improved performance may not necessarily be representative of better management – a lack of incidents may be the result of luck or other intervening variables such as reduced workload or even unusually calm/good weather producing less than anticipated time delays for the work.
- Considerable value and specific beneficial consequences can be associated (eg – bonus) with a lack of incidents and this may in turn lead to a tendency to under-report, especially with regards to near misses, damage incidents and low level injury outcomes.
- Because of the prominence attached to incidents and accidents, there is a tendency for them to trigger a lot of emotional energy that can lead to a resulting lack of focus on real issues - eg knee-jerk reactions and the introduction of poorly evaluated interventions.

- This emotional aspect can encourage inappropriate behaviour and reinforce the wrong messages and values - eg a lot of energy directed at definition of an accident and how registering an LTA can be avoided by getting people back into the workplace (possibly prematurely).
- An apparently “poor” year can lead to the rejection of good management strategies that were introduced in the belief that they are not effective when the reality may be very different. Similarly, good performance can lead to a rush to generalize throughout the business what appears to be good practice without careful evaluation of its true impact/benefit.
- A lack of sense of control in that the performance unit is large and arbitrary in terms of a lack of interdependence – this can lead to a sense of “I cannot influence the outcomes in other parts of the performance unit” which in turn can diminish the relevance and fairness in the eyes of the individual. Corporate output measures especially suffer from this.

Input measures

- Many of these tend to be counts of certain activities (eg Management Tours) and the danger is that quantity rather than quality is the focus, and the data can be misrepresentative - eg majority of activity conducted in short period at end of month to achieve the ‘target’.
- The variable being measured may or may not have a strong dependent relationship with outputs – if the relationship is poor then the measure lacks validity as a measure of safety. (Safety activities although the subject of audit activity typically are not evaluated to determine their effectiveness – the efficacy of the activity is assumed).
- Input measures can lead to the production of a variety of metrics. This presents a problem in that it can be difficult to achieve an overall measure. The need here is to be able to aggregate different metrics to produce a single performance score that is accessible and meaningful to a wide audience. ‘Balanced scorecards’ can be one solution to this problem.

Measures of risk

- This is now generally recognized as an essential component of safety measurement. When there are few incidents and accidents, a measure of risk is very important in determining the degree of safety assurance and the effectiveness of input activities.
- Near miss reporting produces some indication as to risk occurrence but there are often problems with reporting and the drive typically is to increase (or at least maintain) the number of near misses reported. As such, near miss reporting is not a reliable measure of the amount of risk.
- Where the focus is directed at identifying risk, the tendency is towards the reporting of unsafe conditions even when the output data indicates that the majority of incidents and accidents derive from risk taking behaviour.

The above issues serve to provide a starting point in the development of a more effective approach to safety performance measurement and the ability to deliver consequences to performers that are appropriate and serve to motivate improved behaviour around safety. The need to produce a valid and reliable measure of risk, and the need to establish a direct (or at least indirect) relationship between input measures and outputs represent the key issues to be addressed.

Using consequences to drive behaviour improvement

Human behaviour in the workplace is influenced by a variety of factors that flow from the task, the organisation and the individual themselves. All of these factors play an important role in defining and maintaining the safety culture and each has the ability both naturally and through design to impact on what behavioural science identifies as the main motivator for our choices of behaviour – *consequences*.

Our anticipation of consequences is of central concern when we make choices about our safety behaviour:

- Does the recognition/reward on offer benefit me personally and/or the task I am focused on?
Eg; Can I get the job done quicker by behaving unsafely?
Will I contribute to team/individual rewards or recognition through my behaviour?
- Will failing to follow safety rules for my behaviour be identified?
Eg; Will others (esp supervision) allow me to ‘get the job done’ whilst ignoring the safety rules?
Can I simply behave safely only when management/supervision are present?
- What punishing outcomes do I feel are likely to occur through my behaviour?
Eg; Have I done this unsafely before and suffered no injury or sanction?
Will behaving in a safe manner delay task completion and lead to pressure or criticism?
- Will my efforts fail to receive the reinforcement that I want/anticipated?
Eg; When I report safety concerns do I get little or no timely feedback?
Do high production rates where safety is compromised get rewarded in preference to adequate production rates achieved through 100 % safe behaviours?
As an exceptionally productive/successful individual will I get overlooked for promotion or other reinforcement due to my tendency to display unsafe behaviours in the workplace?

These are fundamental considerations that determine our choice of behaviour and in behavioural science terms are assigned the following terms:

- Positive Reinforcement (R+), where we get what we want and our behaviour increases to 100%
- Negative Reinforcement (R-), where we recognize a threat of punishment and act to avoid it through minimal compliance
- Punishment (P+), where we receive a consequence that we didn’t want and the behaviour reduces as a result
- Extinction (P-), where we don’t receive the reinforcement that we anticipated/wanted and behaviour gradually reduces over time

Positive Reinforcement (R+) as the preferred consequence

Clearly all consequences have their impact and therefore potential uses but positive reinforcement (R+) is the most effective means of helping individuals/teams/organisations achieve their respective goals and objectives in safety. Positive reinforcement (R+) is the only consequence that maximizes the performance (ie – delivery of the safe behaviours); negative reinforcement (R-) only produces a level of performance that is required to avoid some form of punishment that is associated with the behaviour. Many organisations are dominated by negative reinforcement in the way in which not just safety is managed but also production and quality aspects meaning that ultimately the achievements of the workforce are falling short of their true potential.

Punishment (P+) and extinction (P-) clearly also have their uses but also numerous disadvantages when seeking to optimize workplace safety behaviours. It is sufficient for this paper to simply note that punishment and extinction have the affect of reducing behaviour. The goal in most organizations is (or should be) to increase positive work related behaviours rather than simply reduce those that are not wanted.

Positive reinforcers (R+) are readily available to everyone in the work place and usually cost little in terms of either time or money. Not only do they produce higher (potentially 100%) levels of the desired behaviours but there are numerous incidental benefits most notably improvement in employee satisfaction/morale, staff retention and attendance levels.

Measurement, covered earlier, becomes particularly meaningful to individuals if it relates to achieving set goals and other positive outcomes such as awards, rewards and recognition of one form or another (R+). This principle is well established in behavioural science. Providing incentives to drive safety performance can however be a difficult thing to get right although many organisations have introduced into their safety strategy some aspect of recognizing individual, team and company performance. The critical issue here is how to set up such systems that maximize performance through positive reinforcement (R+).

This is far from a straightforward issue and requires an understanding of what motivates people to exert effort and how best to design and manage such systems. Using this knowledge it is possible to both evaluate and improve existing incentive systems or to introduce some safety performance recognition system where this does not already exist.

This complex area gives rise to a number of specific issues that need to be addressed. Among these are the following:

- How to avoid the problem of early losses in the measurement cycle leading to a lowering of motivation and effort
- How to avoid lowering of motivation once targets have been achieved
- How to avoid internal competition leading to a sense for some of always being bottom of the 'league table' whatever effort is applied
- How to balance the apparent disproportionate effect of occasional losses for groups where levels of activity typically are low
- How to avoid J-curve behaviour – a lot of activity at end of period to achieve target
- How to maintain quality whilst driving measures of quantity

- How to influence a sense of interdependence – how to influence high performers to support low performers rather than encouraging negative competition

These are key issues for consideration, however, the priority when designing and implementing any approach that is focused on positively reinforcing (R+) safety performance is how this will influence future behaviour. Whilst part of the purpose of providing some form of recognition is to make people feel good about what has been achieved, the main purpose is to influence future behaviour such that the level of performance is at least sustained and preferably improved.

Unfortunately, the systems that are often in place lack sophistication and at best have little effect on people's behaviour and in some situations the overall effect can even be negative (eg – underreporting of events, unsafe habits going unchecked etc). The problem is often one of poor concept, design and knowledge around behavioural science. The danger in basing any positive reinforcement (R+) system on output performance is that people may not necessarily know what they have done that has led to the performance level. The requirement here is to focus primarily on effort and progress (ie – input and risk measures) as well as achievement and to manage this systematically. To do this requires an appreciation of how consequences in particular situations can be utilized to motivate effort for the most desired behaviours.

A further issue concerns the use of positive reinforcement at different levels of organisation. It is essential to consider the issues at the level of the individual, the team, and the performance unit and also between companies where there is a client-contractor relationship. The focus here is upon designing a system that serves to influence the efforts of the contractor organisation to achieve the high safety performance expectations of the client. As with individual employees (management or worker alike) this does not necessarily mean the introduction of some financial bonus system as the means of positive reinforcement (R+). Reinforcers identified can instead relate to being associated with and recognized by the client organisation as a means to achieving repeat business and high status within the wider market sector. This approach can be highly successful in influencing the contractor companies to go beyond achieving the minimal requirements that may previously have been regarded as the aim to satisfy the client and retain the existing contract.

Creating accountability throughout the organisation

The measurement and accurate application of consequences for safety behaviour are crucial elements of an organization's approach to safety management and for the creation of a high performing and sustainable safety culture it is important to ensure that thorough consideration of these two issues is given at every level of the organisation.

By creating this aligned approach throughout the organization it is possible to translate the high level vision for safety excellence that is often cited in the board room into routine/habitual safe behaviours at the front line where risk taking behaviour can directly lead to accidents and their associated losses.

By way of describing this accountability issue (*definition of accountability: the application of consequences for the carrying out of defined actions) the following are examples of where appropriate measurement and consequences have been applied by various client organizations to drive improvements in both direct safety behaviours (those that can immediately give rise

to accidents) and indirect safety behaviours (those that are more associated with root causes of accidents), achieving excellence in HS&E performance as a result.

Senior management

Typically a 'balanced scorecard' approach is used for senior management whereby 5 or 6 carefully considered behaviours (usually indirect safety behaviours in nature) are identified that help to demonstrate senior management's commitment to safety through their own efforts. The consequence issue is introduced through publishing the senior manager's commitment to these behaviours and then providing feedback to the organisation on how well each individual manager is doing with regards delivering on their commitment.

Senior managers want to be seen to be trustworthy and playing their part in helping to keep people safe and this alone is usually enough to ensure that underperformance on agreed targets will be intrinsically punishing and more importantly the consistent delivery of supporting behaviours will create a sense of satisfaction and pride on the part of each manager involved (positive reinforcement for the management).

Examples of senior management behaviours selected by clients include:

- Senior management to produce an article each month on safety management and its potential contribution to the financial success of the organization. This to be published in the monthly company magazine.
- Quarterly feedback on safety performance to be provided to the workforce/business unit to which they are responsible. To include actions for improvement identified.
- Operational site visits to be carried out monthly to discuss safety issues/concerns with the workforce and an action plan identified/feedback within 48 hours.
- Deliver formal/informal recognition for high performing teams in safety by senior management each week.
- One day per quarter to be spent working with operational crews (under close supervision) and to experience the challenges of working safely for a full working shift, providing feedback and appreciation of those challenges to the workforce at the end of the shift.

Working teams

For individuals and working teams it is important to identify those input/risk measures that are safety critical and usually this means getting teams to identify the safety behaviours themselves that are most often not carried out. These may or may not have produced near misses or loss accidents to this point but are none the less good indicators of risk and therefore if they can be improved through consequence management they will prevent future events.

Positive reinforcement that has proven to be most effective in this area usually centres on kudos or skill differentiation, ie, measure the improvement of safe behaviour and give the performers the opportunity to be recognized amongst their peers or other teams as high performers. It is important to appreciate here that we are often dealing with habitual behaviours which are highly resistant to change and as such it is not reasonable to attempt to improve more than 4 or 5 habits at a time.

Examples of safety critical behaviours changed into safe habits and the positive reinforcement consequence used include:

- Drivers transporting passengers from base into the field and back:
 - completing the 'journey management board' details prior to leaving base/field
 - driving within the speed limit
 - wearing seat belt whilst driving
 - ensuring passengers are wearing seat belts
 - completing vehicle condition check prior to leaving base/field

Drivers were measured by security personnel against these safety critical behaviours and those who demonstrated levels of safe behaviour across all 5 in excess of 98% over a three month period were designated as 'Gold Standard' drivers and given priority choice over which vehicles to drive from those available (particularly useful at this time was that new vehicles were being purchased to gradually replace the old fleet and they looked very 'smart' in comparison).

Of particular interest to this organization was the prevention of vehicle 'roll over' where in the previous five years there had been four separate incidents resulting in fatal outcomes. It was clear that a driving culture existed where speeding and disregard of other safety requirements was being equated with being a 'skillful/capable' driver. This view was completely reversed over a period of 12 months and the safe behaviours associated with driving into/back from the field became 100% safe (safe habits).

- Workforce working on and around the derrick agreed to focus on improving the following behaviours:
 - wearing eye protection
 - standing outside exclusion zones during lifting activities
 - only designated banksman to direct the movement of vehicles on site
 - waste to be discarded in appropriate recycling bin at the time of generation

These four behaviours were identified and selected by the workforce as being behaviours that were regularly not carried out. This was despite the fact that less than eighteen months previously a serious injury had occurred to someone when a vehicle had reversed without direction/warning and crushed a member of the workforce against another stationary vehicle.

Measurement was carried out by both workforce and supervision via whiteboards located conveniently on site with simple ticks to be placed against 'yes' or 'no' if the behaviour is seen to happen or not seen to happen. The location safety officer used his own observations to validate those given by the workforce.

Where levels of safe behaviour for each were established at 98% for 5 consecutive days the workforce were able to select from an array of celebrations such as BBQs, other special meals, additional DVDs for the TV room etc. All such reinforcers were suggested by the workforce rather than being decided upon by management. Senior management would come to site on a weekly basis and congratulate the workforce for their efforts once a clear improving trend was established.

At this particular location there was some concern that supervision were some of the worst for failing to routinely behave safely and they would often allow the 'pressure of work' to justify ignoring safety requirements. To try and counter this problem and give the rest of the workforce the opportunity to see that supervision were prepared first and foremost to get things right there was a dedicated board put up for the observation of supervisory behaviour only. Not surprisingly the measurement showed that this group of workers developed safe habits very quickly. Supervisors were also commended for their efforts by visiting senior management with specific reference to improvements in the level of safe behaviour being observed.

Contractor organisations

Contractor organizations, similarly to the client typically aspire to excellence in safety performance and the key here is not about ensuring that contracts simply have severe punishing consequences for underperformance but that additional effort and energy around safety will be recognized by the client in a sincere and accurate manner in response to an agreed improvement framework.

One way of ensuring that the behavioural principles discussed here are adopted by the contractor without being too onerous for the client is to ask each contractor to develop a 'behaviour based improvement plan' that can be measured/evaluated and as discussed earlier contributes positively to the reduction of risk. It is then crucial that the client makes the additional effort 'attractive' to the contractor organisation by rewarding improvement and goal attainment on a frequent/regular basis.

It is important that once levels of improvement are attained that the contractor is formally notified and rewarded appropriately by the client and that this is widely published within both organisations. It is preferable that not only should contractors be required to demonstrate their suitability to be a supplier in order to be accepted onto the supply chain register but once accepted it should be possible to differentiate between those contractors who are clearly striving for excellence in safety performance and those that are more reactive or merely meeting minimum standards.

Examples of where this is highly successful are the adoption of 'gold standard' rating schemes where approved suppliers are able to achieve bronze/silver/gold ratings based on the delivery of a quarterly improvement plan that tackles behaviour based issues such as those described previously for senior management and also those for the workforce. It is possible (and to be encouraged) that input/risk measures would cover both direct and indirect safety behaviours. Examples of where this has been applied with great success across the supply chain from small contractors to very large include:

- Demonstrating through audit 100% compliance with Permit To Work documentation
- Workforce sampling showing 100% knowledge of risks as identified in written risk assessment
- 100% of pre-use equipment checks completed prior to use
- Senior management to visit location once per month and address workforce on safety performance
- Demonstrate through sampling that complex lifting activities are undertaken with a lift plan in place
- Create 4 safety critical habits every month, 12 each quarter where safe behaviour is in excess of 98%
- Apply monthly recognition programme for high performing individuals and teams

To encourage 'buy-in' and participation from the start it is often advisable to assign the bronze standard to all those contractors that create the initial improvement plan. From this baseline the degree of goal attainment for those improvement measures identified should result in the award of subsequent recognition (silver and then gold) for contractors able to show progressive delivery whilst at the same time demonstrating satisfactory output performance in terms of near miss and loss accidents.

In terms of how the effort of contractor organizations can be positively reinforced it is clear that contractors can win further business based on reputation within the business community and the ability of the contractor to use client commendation and 'gold standard' rating for safety performance can be used to this effect. Contractors can utilize this positive reinforcement via their websites and other publicity means, especially when tendering for work on behalf of other clients or attaining a level of preferred supplier status for the existing client that should make winning repeat business easier for them.

Summary

This paper has sought to outline the importance of translating our knowledge of what drives human behaviour on an individual basis into a robust and aligned approach through the management of behavioural risk. What is clear is that to achieve safety excellence there is a need to consider this knowledge and its application to senior management through to the workforce and supply chain.

Behaviour is fundamentally a function of consequences (B:f(C)) and staying true to this simple principle of behavioural science we have a genuine opportunity for world class safety performance through habitual safe behaviours and the subsequent strength in depth of safety culture that this ultimately produces.

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