Sustaining Safety in the New Millennium

Manie Mulder

Managing Director: Behaviour Intervention Technologies
A division of IRCA (Pty) Ltd

SUSTAINING SAFETY IN THE NEW MILLENIUM

by

Manie Mulder, B.Sc., B.Proc., AMP (Yale)
Managing Director: Behaviour Intervention Technologies
A division of IRCA (Pty) Ltd

To achieve and sustain world-class performance in safety, requires continuous attention in three domains:

- workplace conditions,
- the skill and knowledge of employees, and
- the behaviour of employees in the workplace.

The first of these refers to the tools, equipment, materials and other resources provided in the interest of safety, and also to the systems, standards and procedures that organisations develop to ensure sound safety management. The second domain refers to the training and development of employees. Both of these are extremely important, and are *sine qua non* for sound safety management.

The third domain refers to the things people do or don"t do at work, that is, their behaviour. The focus of the paper will be on this, the third domain of modern safety management.

Traditionally, organisations pay attention only to the first two of these domains: much is being done to improve workplace conditions and to ensure sound systems and procedures, while vast resources are sometimes spent on skills development. Both of these initiatives are top-down management interventions, and, while they may yield excellent results if managed properly, invariably lead to a plateau in performance which resists all attempts at further improvement.

In contrast, organisations that have shifted their focus to the behaviour of employees, have achieved substantial and dramatic improvements in performance, even where that performance was already at at a very good level.

The basic principle is that the safety performance of an organisation results from the dynamic interaction of workplace, behaviour, and person factors. The behaviour and person domains represent the human aspect, while the workplace factors represent the physical conditions under which people work. This categorisation reflects the two divergent approaches to understanding the psychology of harm prevention. The behaviour-based approach is however more cost-effective than the person-based approach in effecting change for world-class safety performance. But it can only be effective when everyone believes in the behaviour-based principles and willingly applies them to achieve the mutual mission.

We need to understand a problem as completely and from as many perspectives as possible before we can solve it. We have to explore dimensions of the problem by considering the complexity of people: human nature does not usually support safety. The natural relationships between behaviour and its motivating consequences usually result in some form of convenient, time-saving, and at-risk behaviour. Consequently, to achieve a world-class safety culture, one should prepare for an ongoing fight with human nature.

The two most important dimensions on the subject of human barriers to safety are the cognition and interpersonal dimensions. They explain the special challenges of achieving a world-class safety culture. The phenomenon of cognitive failures shows the potential danger of the popular slogan, "All injuries are preventable." Conformity and obedience, two powerful phenomena from social psychological research, further help us to understand the individual, group, and system factors responsible for at-risk behaviour. The human barriers to safety should lead us to be more defensive and alert in hazardous environments. They also show how difficult it is to find root causes of incidents.

It is important to explore the concept of selective sensation or perception, and relate it to perceived risk and injury control. Past experience and contextual cues influence risk perception. We should appreciate diversity and realise the value of actively listening during personal interaction. We need to work diligently to understand the perceptions of others before we impulsively jump to conclusions or attempt to exert our influence.

Perceptions of risk vary dramatically among individuals: one cannot improve safety unless people increase their risk perception and reduce their tolerance for risk. Changes in risk perception and tolerance will occur when individuals get involved in achieving a world-class safety culture with the principles and procedures of behaviour-based safety.

There are many factors which determine whether employees react to workplace hazards with alarm or apathy. Taken together, these factors shape personal perceptions of risk and illustrate why improving safety is such a difficult task. This justifies a process of behaviour-based intervention to motivate continuous employee involvement in safety assurance.

The basic principles underlying the behaviour-based approach to the prevention and treatment of human problems will be discussed during the presentation.

At-risk behaviours contribute to most if not all injuries; to achieve a world-class safety culture therefore requires elimination of at-risk behaviours. Organisations have attempted to do this by using disciplinary action to motivate behaviour change. This approach may be useful, but less pro-active and acceptable to workers than a behaviour-based approach that emphasises safe behaviours. It will be easier to get employees involved in safety achievement if credit is given for doing the right thing rather than reprimands for doing wrong.

The three types of learning are relevant to understanding safety-related behaviours and attitudes: classic conditioning, operant conditioning and observational learning. Most of our safe and at-risk behaviours are learned operant behaviours; performed in particular settings to gain positive consequences or avoid negative consequences. Classical conditioning often occurs at the same time to link positive or negative emotional reactions with the stimulus cues surrounding the experience of receiving consequences. These cues include the people who deliver the rewards or penalties. We often learn what to do and what not to do by watching others receive recognition or correction for their operant behaviours. This is observational learning; an ongoing process that should motivate us to try to set the safe example at all times.

Defining critical behaviours for observation and intervention is not easy. A MAT analysis [Mission / Activities / Tasks] is a useful tool in this process: teams first identify their own Mission [a single sentence], then record the various Activities that they are involved in to achieve their mission, and then break each activity down into individual Tasks. Once all these tasks have been identified, they are prioritised in terms of safety criticality. The next step is to identify all the critical behaviours associated with each task. Experience has shown that the behavioural property most often observed for safety is frequency of occurrence, including a sampling of whether or not the target behaviour occurred. It is important to remember that tasks should be prioritised for safety criticality, and not in terms of job importance. Having identified the behaviours critical to preventing injuries in their work, the team selects the first three tasks for behaviour modelling and observation and feedback.

A critical behaviour checklist is used to do the behaviour modelling and to observe and record the relative frequency with which critical behaviours occur at the workplace. If the checklist contains only a few behaviours, it is possible to conduct observations without engaging in one-on-one coaching sessions. This is often the best approach to use when first introducing behaviour-based safety. It's not as overwhelming or time-consuming as one-on-one coaching with a comprehensive checklist. Over time and through building trust, a short checklist can be readily expanded and lead to one-on-one safety coaching. Safety coaching is a very effective way to implement each stage of the process.

Changing people's behaviour is largely dependent on influencing activators and consequences of the behaviour. This is the so-called ABC model of behaviour.

Activators occur before desired or undesired behaviour. The following are the six principles for maximising effective activators:

- Specify behaviour
- Maintain novelty
- Vary the message
- Involve the target audience
- Activate close to response opportunity
- Imply consequences

We need more effective activators to promote safety. It would be far better to make a few safety activators more powerful than to add more activators to a system already overloaded with information. We need to plan our safety activators carefully so that the right safety directives receive the attention and ultimate action they deserve. For an activator to motivate action, consequences should be implied. The most powerful activators make the observer aware of consequences available following the performance of a target behaviour. Consequences can be positive or negative, intrinsic or extrinsic to the task, and internal or external to the person. When we earn genuine appreciation and approval from others for what we do, we not only become self-motivated; we also maximise the chances that our activities will influence the behaviour of others.

Consequences motivate behaviour. Consequences can be positive or negative, intrinsic or extrinsic to a task, and internal or external to a person. These characteristics need to be considered when designing and evaluating intervention programmes. We need to take careful note of the principles and practical procedures for motivating people over the long term. We should know how to influence behaviour so that it is consistent with a world-class safety culture.

Coaching is a key intervention process for developing and maintaining a world-class safety culture. In fact, the more employees who effectively apply the principles of safety coaching, the closer an organisation will come to achieving a world-class safety culture. Systematic safety coaching throughout a workplace is feasible in most settings. Large-scale success requires time and resources to develop materials, train the necessary personnel, establish support mechanisms, monitor progress, and continually improve the process and support mechanisms whenever possible.

Some of the questions that need to be answered at the start of developing an initial action plan for a behaviour-based safety process are the following:

- Who will be on the site steering team?
- Who will the site champion be?
- Who will be the back-up site champion?
- When and where will the site champion be trained?
- Who will be trained as coaches?
- When and by whom will the management team and middle managers be trained?
- How and where will the supporting software be installed and commissioned?
- With which team will we start to develop a critical behaviour checklist? [Start with a so-called "pocket of excellence."!]
- What information will be used to define critical behaviours?
- Who will enter the results of behaviour modelling and observation and feedback into the software system?
- How will teams receive feedback reports from the software?
- Will team feedback reports be publicly displayed?

This does not cover everything, but will go a long way towards getting the process started. It is strongly recommended that experts be engaged to help with the process. A company such as Behaviour Intervention Technologies is ideally placed to assist in this regard.

The implementation procedures must be customised: organisational cultures vary widely. There must be significant input from the people affected by the process and from whom long-term participation is needed. It will take significant time, effort, and resources to implement a behaviour-based safety process. With this end in mind, it is recommended that organisations start small to build confidence and optimism on small-win accomplishments; and then, with patience and dedication, long-term goals for continuous improvement can be set. Increase the impact of activators and manage the consequences [such as celebrating achievements] on the way to effectively to increase safe work practices and decrease at-risk behaviours.

Remember common sense ain't so common! Basing decisions on common sense can sometimes be a fallacy. Rather than adopt intervention programmes that sound good, we need to use procedures that work. The intervention process should be founded on sound research and rigorous evaluation, not common sense. Only through rigorous process evaluation can we know whether an intervention is worth pursuing. What kind of process evaluation is most appropriate for a particular situation? The need for achievement-oriented methods to keep score of your safety efforts is important: this enables people to consider safety in the same context as production and quality. This implies, of course, the need for evaluation data that people can understand and learn from, which will lead to continuous improvement.

Many safety consultants ignore several key evaluation principles. For example, their measures typically:

- target only one of the three dimensions [workplace, behaviour, or person factors];
- has a short-term focus;
- focus on downstream factors such as injury rates, fatality rates, etc., instead of upstream measures of cause and measures of control;
- include statistical analyses that take substantial time to collect and complete and are not readily understood by the average person; and
- often do not include a cost-benefit analysis.

One should not overlook basic principles when evaluating practical interventions to achieve continuous improvement. Specifically, safety practitioners need to:

- clearly specify the performance that the intervention is intended to address, while allowing for the problems associated with individual versus organisational performance;
- measure all three dimensions of improvement - workplace, behaviour, and person factors;
- do a thorough cost-benefit analysis to justify the intervention;
- apply process measures periodically, especially audits of workplace conditions and work practices;
- evaluate and give feedback with data that are meaningful to all process participants and that provide for continuous improvement by refining interventions.

Guidelines to initiate and sustain a culture-change process aimed at achieving a world-class safety culture will be given during the presentation. The support processes needed to maintain long-term commitment are leadership, communication, and recognition. Each of these processes will be discussed during the presentation, and aspects that will be covered include characteristics of effective leaders; language that increases resistance and should be avoided; and levels of resistance that can be influenced by leadership, communication, and recognition.

Research has shown that the most effective leaders are enthusiastic, honest, motivated, confident, analytical, informed, and flexible. Although these characteristics are sometimes viewed as permanent personality traits, they can be increased through education, communication, recognition, and involvement in a behaviour-based process. While it may be useful to look for natural leaders when selecting members of a steering team, it is important to realise that leadership qualities could have been suppressed in some people by their lack of empowerment. New processes and eventual culture change might bring out leaders you didn't know existed.

Involvement and commitment are essential to aspects of building a world-class safety culture, and it can be increased in many ways. One can start by using more positive language, and focusing less attention on the active resisters. People react to change efforts in different ways; there are five levels of involvement:

- the innovators: commitment and dedication from those who see the change effort as an opportunity to improve;
- the enthusiastic followers: those who are committed but not totally involved until direction and support are given;
- the neutrals: people, usually the majority, ready but on the sidelines until prodded and encouraged by others;
- the doubters or passive resisters: those who see change as a problem and use learned helplessness and criticism as excuses to remain detached; and
- the active resisters: those who see change as an opportunity to resist, complain, and promote mistrust.

The way to deal with resisters is to ignore them; rather, recognise and support those willing to try the new process. The innovators should help and encourage the enthusiastic followers. These two groups can then work with the neutrals who need examples to follow. It is important to cultivate leadership, communication, and recognition skills among the innovators, as they will become the best recruiters to build the base of support for a world-class safety culture. In time, even the resisters will change and join the process, or, in extreme cases, leave the organisation.

The behaviour-based process is essentially an employee empowerment tool which gives ordinary workers the opportunity to contribute to the protection of their own safety in a meaningful way. It is a bottom-up process that focuses on the critical behaviours related to every task, and the elimination of factors in the workplace that act as barriers to safe working.

Behaviour-based safety focuses on upstream process measures rather than traditional outcome measures. By eliminating all at-risk or non-conformance behaviours from the workplace, all injuries can be prevented.

The behaviour-based process is not intended to replace or supersede any of the measures that organisations have in place to manage safety; rather, it enhances and adds a new dimension to existing initiatives.

The process is implemented at the lowest hierachical level in an organisation and uses the group dynamics in a team to obtain compliance behaviour. Teams identify the critical behaviours of every task they have to perform and then, through a process of behaviour modelling, observation, and feedback, the required behaviour is habituated among the team members.

The behaviour-based process is cutting-edge technology based on years of psychological research. Implementation of its principles, however, is a straightforward, practical process if carried out by experts.