Optimising behavioural performance

Imagine achieving around 12 percent productivity improvement, 30 percent reductions in insurance premiums, 30-70 percent reductions in undesired incidents and significantly reduced operating costs, all within a year or two for relatively little investment. Really! How? you ask.

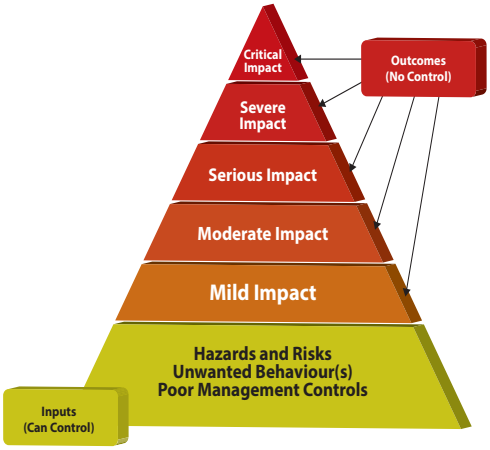
Well, now imagine your management team and workforce aligned with and engaged in a common purpose to improve performance, with both identifying and fixing bottlenecks, and challenging unwanted behaviours within a mutually trusting and supportive atmosphere. Does this sound like your place of work? or, is it something you aspire to?

Behavioural approach

Derived from the Industrial/Organisational Psychology discipline, the behavioural approach used to achieve these proven real world results, have been implemented over the past five decades in a wide variety of work settings. Applicable to quality, productivity, and safety performances, the purpose is to reduce the number of incidents caused either by poor management controls and/or hazards present in the working environment; those triggered solely by 'unwanted' behaviours; or those triggered by an interaction between poor controls, hazards and behaviours.

Defined as an 'unexpected and unwanted event' an incident can be property damage, a quality reject, a personal injury, or a catastrophe. For example, in a bottling facility a worker was removing plastic bottle stoppers with a sharp knife pointed toward his stomach, from glass product bottles rejected by quality control. With the unsafe behaviour noticed by a safety psychologist during a site visit, discussions revealed one bottle per minute was being rejected due to misaligned or damaged labels (1440 per day!). The root problem was traced to the labelling machine, where, with minor variations along the horizontal and vertical axis, it became clear that the stack of labels were not sitting in their feed-tray properly. Smoothing these so they sat flush fixed the labelling issues, and eliminated the potential for an injury from the workers unsafe use of the knife when handling the rejects. The annual cost savings were around €2.6 million.

Incident pyramids, such as that shown, illustrate that most incidents have a relatively mild impact, and that critical impacts (i.e. catastrophic) are relatively infrequent events. It is a matter of chance, however, whether a mild impact event may have been more serious, as the severity of outcome cannot be controlled in the same way as the inputs. Preventative opportunities arise, therefore, from controlling unwanted behaviours, eliminating hazards, and tightening management controls at the base of the pyramid. By simultaneously focusing on all three, the possibility of a critical impact event is significantly reduced, while greatly improving performance and efficiencies.



In the occupational safety arena, research shows that people's behavioural choices account for around 56% of all potential serious injuries and fatalities (SIFs), with poor management controls (e.g. job planning, poor quality rules & procedures), and physical hazards and risks accounting for the remainder. Well-designed and executed Behavioural Safety approaches systematically address these three factors in a proactive and planned manner by targeting people's behaviour at each layer of the incident causation chain.

Incident causation

As shown, the universal model of incident causation consists of five layers: [1] the Strategic level relates to Senior Management decision-making; [2] the Operational level refers to line-management implementation issues; [3] the Tactical level reflects support functions such as Human Resources, Purchasing & Supply, Finance, etc.; [4] the Behavioural Level, primarily concerns employees operational behaviours;

and [5] the Defensive level represents the presence and types of control measures.

Incidents occur because system faults (represented as holes in the graphic) reside, or are created by people's behaviour, in each layer. On their own they are harmless, but combined with others they can breach any defences to cause an incident. Very often, unwanted behaviour is the trigger that causes two or more of these system faults to combine. The greater the number of system faults at the top three layers, the greater the variety of local triggers there are at the behavioural layer, which could potentially breach a greater number of loopholes in the defensive layer. If there is an alignment of the breaches at each layer, an incident will occur.

This tells us that safety is a social activity: the behaviour of one person can affect many. It makes sense, therefore, to help remove any system faults by focusing on the safety-related behaviours of people at each level.

By focusing on people's behaviours at each layer in the incident causation chain, Behavioural Safety processes also create a safety partnership from a combination of management's safety leadership activities and employee engagement in the safety effort. Developing this partnership is important as safety leadership can impact people's behaviour by as much as 86%, and engaged employees are 5 times less likely to be involved in an incident.

Targeting behaviour

At both the 'Strategic' and 'Operational' levels, well-designed and executed Behavioural Safety processes help by targeting safety leadership behaviours of the management team, to ensure safety is on their radar and is consistently demonstrated. At the 'Tactical' level,

Behavioural safety processes focus on the behaviours of those support functions directly impacting the safety of operations workers (e.g. purchasing of fit-for-purpose equipment). At the 'Behavioural' level the focus is on operational safety behaviours (e.g. filling product tanks). At the 'Defensive' level the behaviour of those responsible for corrective actions, management of change procedures, emergency procedures, etc., are targeted to ensure the defensive systems are functioning as intended.

To achieve this, project teams examine a facilities previous incident history to identify specific behavioural problems resulting from the interaction between people and their wider working environment. These include those arising from various management systems (safety and non-safety), the quality and effectiveness of leadership, the resources available (financial and non-financial) and the overall safety culture.

Once identified, attempts are made to discover the triggers (e.g. unavailable equipment) driving the unwanted behaviour(s) (e.g. using improvised tools), and what factors are maintaining them (e.g. getting the job done to meet deadlines), so appropriate corrective actions can be taken.

Executing the change strategy usually involves removing any inappropriate behavioural triggers and establishing a monitoring process to help improve the frequency of the desired behaviours. The results are used to facilitate feedback, appropriate corrective actions (e.g. remove hazardous materials, etc.), and the tracking of progress. Long term data trends are used to adapt the process to suit the particular circumstances (e.g. shift focus to other problem behaviours).

Conclusion

Organisations good at managing safety also tend to manage operations well – in other words, operational and safety excellence go hand-in-hand. Well-designed and executed Behavioural Safety processes are known to provide a return on investment of around €1.3million per 100 workers, per year, from incident reductions. In addition, there is strong evidence showing productivity improvements, as well as reductions in insurance premiums and operating costs. It achieves these cost-benefits by identifying and eliminating system faults, while fully involving all personnel in the safety improvement journey within a mutually trusting and supportive atmosphere.

In the next four editions, we will be providing further articles on how to optimise or introduce a Behavioural Process to achieve maximum benefits.

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