

# The Business Case for Psychology-Based Safety Training



In this white paper, we build the business case for investing in psychology-based training programs that target employee attitudes, beliefs and behaviours around safety. ▶

# Key Points

## SAFETY CONTINUES TO BE A SERIOUS WORKPLACE ISSUE

**Worldwide:** A worker dies from a workplace safety issue every 15 seconds.<sup>3</sup>

**Australia:** 531,800 safety incidents were recorded in 2014.<sup>4</sup>



## MISMANAGED SAFETY COSTS EMPLOYERS SIGNIFICANTLY

**Australia:** \$4,400 - \$26,600 per injury, depending on industry and injury type.<sup>6</sup> Figures vary markedly between industries and employers.<sup>7</sup>

## MISMANAGED SAFETY COSTS NATIONAL ECONOMIES BILLIONS OF DOLLARS ANNUALLY

In 2012-2013, workplace injury and illness cost \$61.8 billion, which was 4.1% of GDP.<sup>6</sup>

## THE COSTS OF MISMANAGED SAFETY BORNE BY EMPLOYERS ARE TYPICALLY DIVIDED INTO TWO CAMPS— DIRECT AND INDIRECT

**Direct costs:** Compensation payouts, legal fees, recruitment, investigation etc.

**Indirect costs:** Morale, reputation, productivity, prevention initiatives etc.

## HOWEVER, SAFETY CAN DO MUCH MORE FOR AN ORGANISATION'S BOTTOM LINE THAN SIMPLY 'PAY FOR ITSELF'

Psychology-based safety training programs have been shown to produce returns of between 46% and 1277%.<sup>9,10,11,12</sup>

Survey data suggests that safety training has spill-over effects on organisational performance and revenue, via increased productivity and morale.

## THREE PARTICULAR PSYCHOLOGY-BASED SAFETY INTERVENTIONS REPRESENT THE BEST 'BANG FOR YOUR SAFETY BUCK' IN TERMS OF CARRY-OVER EFFECTS TO COST REDUCTIONS (VIA INJURY REDUCTION) AND PRODUCTIVITY INCREASES

**Safety citizenship training programs:** Encouraging employees to adopt safety tasks and duties that sit outside what is expected as minimum standard on the job.

**Safety leadership training:** Equipping leaders with the soft skills required to motivate, inspire and support employees to achieve strong safety performance.

**Safety coaching:** Supporting employees and leaders to take ownership of safety across an organisation, and drive the changes necessary to achieve strong safety performance.

## The Business Case for Psychology-Based Safety Training Programs

It's time to revisit the view that safety is a cost. For far too long, safety and production have been considered by many as two extremes on the same continuum—two incompatible objectives locked in a tug of war for the organisation's resources. So, it is not surprising that safety training is commonly perceived as a significant outlay that has little utility above the prevention of costs associated with workplace injuries.<sup>1</sup> The pervasiveness of this view has been compounded by a notable lack of research on the economic utility of safety interventions: an oversight that has persisted for decades and has only started to be addressed recently.<sup>2</sup>

Thinking about safety as a cost threatens to derail any attempt to achieve the pinnacle of safety performance—safety citizenship. Safety should instead be considered an asset. Safety is something that, if done well, protects the organisation and its employees from adverse events (both financial and personal) and may even carry over into productivity and performance. Effective safety interventions touch each part of an organisation to achieve true and lasting change, and produce tangible financial gains.

Many safety initiatives, while deemed cost-effective, are ultimately less effective over the long-term because they do not deal with the core issue—the attitudes and behaviour of people. In this case, the intervention tends to focus on environment and practices-related issues, such as upgrading equipment, introducing new safety systems or automating risky tasks. Although these initiatives can be clearly linked to financial returns (such as increased volume or speed of work), the underlying element of risk—the person—has not been considered and so remains within the system.

Another issue faced by financial decision makers is that many developers and providers of psychology-based safety interventions are simply not used to thinking in economic terms.

Therefore, it is difficult for them to articulate the concrete financial returns achieved through programs such as safety training. The murkiness of attitude and behaviour change is sometimes difficult to appreciate in terms of concrete outcomes and to put a dollar value on. For example, what is the value of a one-unit increase in safety climate? Clearly, an approach that unites financial accountability with the powerful positive change of psychology-based safety interventions is desperately needed.

In this white paper, we build a convincing financial case for organisational investment in psychology-based safety interventions. First, a suite of safety statistics is presented to highlight the ongoing prevalence of workplace injury and illness. Next, these data are evaluated in light of the exorbitant costs of mismanaged safety, which we believe rationalises organisational expenditure on safety. We then argue that organisations should instead view safety as an investment that if done right, pays off in dividends. In closing, we summarise emerging research on safety training and present a list of the 'Top Three Safety Payoffs'.

### Safety Refuses to Play Nicely

There is little disagreement that safety continues to be a serious workplace issue. Despite decades of progress in the science and practice of safety management, many organisations continue to experience safety incidents that result in serious consequences. To highlight the prevalence of the global safety problem, consider these sombre statistics.<sup>3</sup>

**EVERY 15 SECONDS,  
A WORKER DIES FROM AN INCIDENT  
OR DISEASE INCURRED AT WORK.**

**EVERY 15 SECONDS,  
160 WORKERS EXPERIENCE  
A WORK-RELATED INCIDENT.**

Worldwide, these figures translate to 2.3 million work-related deaths and 317 million incidents each year. Regional statistics, while improving for developed countries, are still nowhere near the elusive zero harm target aspired to by industry.

In Australia, over half a million employees experienced a work-related incident or illness during 2014.<sup>4</sup> The manufacturing; transport, postal and warehousing; and agriculture, forestry and fishing industries experienced the highest rates of safety incidents (see Table 1). These figures show that safety management still has a way to go within Australia.



## The Price of Mismatched Safety

From a social perspective, safety-related tragedies have ongoing aftershocks that ripple outwards from the family epicentre and impact colleagues, friends and entire communities. Notwithstanding these terrible personal and social consequences, mismatched safety carries a huge cost to business. Often these costs are hidden or worse, purposefully concealed, which means that the true nature and impact of a safety event is often miscalculated.

The costs of mismatched safety borne by employers are typically divided into two camps—direct and indirect.<sup>5</sup> Direct costs are those that are tangible and for the most part easily estimated. Examples of direct costs include worker’s compensation payouts, property repair or replacement and fines/penalties from regulatory bodies. Indirect costs are less visible and tangible, and can be difficult to articulate in financial terms. Examples of indirect costs are decreased morale and reputation. There are also flow-on costs such as increased wages for high risk jobs and over-hiring of staff (see Table 2).

**TABLE 1. TOP THREE AUSTRALIAN INDUSTRIES ACCORDING TO RATE OF SAFETY INCIDENTS BETWEEN 2013/14.**

RANK	INDUSTRY	RATE OF INCIDENCE
1	Manufacturing	82 per 1,000 employees
2	Transport, Postal and Warehousing	76 per 1,000 employees
3	Agriculture, Forestry and Fishing	72 per 1,000 employees

**TABLE 2. DIRECT AND INDIRECT COSTS TO THE EMPLOYER ASSOCIATED WITH SAFETY INCIDENTS.**

DIRECT COSTS	INDIRECT COSTS
<ul style="list-style-type: none"> <li>• Worker’s compensation payouts</li> <li>• Legal fees</li> <li>• Recruitment</li> <li>• Retraining</li> <li>• Administrative/ supervision time</li> <li>• Emergency services</li> <li>• Investigation</li> <li>• Insurance administration</li> <li>• Property damage</li> <li>• Payouts until insurance claim is processed</li> <li>• Sick leave</li> <li>• Fines/penalties</li> <li>• Return to work program administration</li> <li>• Immediate production loss</li> <li>• Intra-organisational communication</li> </ul>	<ul style="list-style-type: none"> <li>• Morale</li> <li>• Organisational commitment</li> <li>• Turnover</li> <li>• Productivity</li> <li>• Competitiveness</li> <li>• Reputation</li> <li>• Injury prevention/ safety initiatives</li> <li>• Overtime payments to other staff</li> <li>• Over-hiring</li> <li>• Insurance premiums</li> <li>• Compensating workers for high risk jobs</li> </ul>

These direct and indirect costs quickly accumulate. From a national perspective, safety incidents cost the Australian economy over \$61.8 billion, which was 4.1% of GDP for the 2012-2013 financial year.<sup>6</sup>

Moreover, the costs to employers per safety incident are rising. Australian estimates are \$4,400-\$26,600 per workplace safety incident (see Table 3) and are increasing each year.<sup>6</sup> Researchers have shown that these estimates vary significantly by company, industry and incident type—in one study, the cost per workplace incident ranged from \$1,440 to \$10,740.<sup>7</sup> In Australia, the average total cost of injury and disease is highest in the communication, mining, finance and insurance, and utilities industries (see Table 4).

**TABLE 3. ESTIMATED COSTS OF WORKPLACE INJURIES AND DISEASE, BORNE BY EMPLOYERS, PER INCIDENT.**

	INJURY	DISEASE
Short Absence	\$700	\$700
Long Absence	\$8,800	\$11,200
Partial Incapacity	\$16,400	\$12,100
Full Incapacity	\$13,400	\$31,900
Fatality	\$26,600	\$72,400
Average	\$4,400	\$9,600

Note: These data represent all Australian industries, therefore the estimates will vary depending on average salary within the particular industry and other contextual factors, such as fines/penalties and insurance premiums.

**TABLE 4. TOP FIVE INDUSTRIES ACCORDING TO TOTAL COMBINED COSTS OF WORKPLACE INJURY AND DISEASE.**

RANK	INDUSTRY	TOTAL COMBINED COST PER CASE
1	Communication Services	\$175,200
2	Mining	\$170,000
3	Finance and Insurance	\$157,100
4	Utilities	\$147,400
5	Agriculture, Forestry and Fishing	\$126,100

Note: These data represent all Australian industries, therefore the estimates will vary depending on average salary within the particular industry and other contextual factors, such as fines/penalties and insurance premiums.

To avoid these significant financial, social and personal costs, increased and ongoing investment in safety—particularly for interventions that target the less visible, indirect costs—is paramount.

## Safety as a Cost

According to some, safety programs are seen as a way to minimise unnecessary costs.<sup>7,8</sup> From this perspective, expenditure on safety is justified because it reduces wastage of resources and avoids expenditure on people, equipment, and regulatory penalties in the aftermath. As long as the outlay on safety is less than the combined cost of injuries and illnesses, the initiative is deemed to be a success.

However, this approach effectively stalls the organisation's progression along the safety maturity curve. Without investment in safety training and development, employees and leaders can, over time, develop unhelpful or hindering attitudes, beliefs and behaviours relating to safety.

## Safety as an Investment

Safety can do much more for the organisation's bottom line than simply 'pay for itself'. In fact, organisations can put safety to work and generate returns over and above the cost of conducting the training.

Although firm economic utility data on psychology-based safety training is lacking, a mounting body of research evidence shows that targeting underlying attitudes and behaviour in combination with traditional investments in environment and practices produces the greatest effect on safety outcomes. Of the limited work done to date, studies have shown that the return on investment (ROI) of safety training interventions is positive, and in some cases, particularly lucrative (see Table 5).

**TABLE 5. ROI OF SELECTED SAFETY MANAGEMENT INITIATIVES.**

SAFETY INITIATIVE	RETURN ON INVESTMENT
Safety education about musculoskeletal disorders with a focus on injury prevention. <sup>11</sup>	46%
Training in the use of a health risk assessment tool to prevent back injuries. <sup>12</sup>	179%
Employee wellness programs. <sup>13</sup>	327%
Training program aimed at increasing employees' general safety behaviours. <sup>14</sup>	1277% (after two years)

In addition, safety training and related interventions, such as coaching, produce many spill-over effects that are often hidden from employers. For example, a survey of 45 contractor organisations operating in the US construction industry revealed that 79% reported increased employee productivity and 83% reported increased workplace morale following a safety training event.<sup>13</sup> Further, 73% reported that safety training contributed greatly to increased profits and work quality. Indeed, our own research on the efficacy of ZIP Safety for Teams showed that participation in the program enhanced employees' general wellbeing, as evidenced by significant decreases in depression, stress and anxiety, and significant increases in general life satisfaction. Although performance outcomes were not captured in this study, other researchers have shown that well-being translates to increased productivity<sup>14</sup>, and decreased stress-related compensation claims and use of uncertified sick leave.<sup>15</sup> Translated to economic terms, these outcomes exert a direct effect on revenue and profitability.

Of the gamut of safety interventions available to organisations, we have identified the top three programs that we believe provide the largest ROI. These interventions show the most promise of going beyond traditional safety initiatives by reducing costs associated with workplace injury and contributing to increased performance and revenue.

## Safety Citizenship Training Programs

Organisational citizenship refers to employee behaviours that go 'above and beyond' expected tasks and duties as detailed on the job description.<sup>16</sup> Applied to safety, employees show citizenship behaviours when they help others to complete tasks safely, keep up to date on safety knowledge by attending non-mandatory training, and volunteer for safety committees.<sup>17</sup> Interventions that stimulate citizenship behaviours are particularly promising from a financial perspective. Not only can they reduce the prevalence of injuries, and hence lost time and production, citizenship behaviours also increase the quality and quantity of production.<sup>18</sup> Therefore, safety interventions that promote citizenship behaviours (e.g. team-building, safety communication skill development) not only reduce the costs of workplace injuries, but may also increase the productivity of entire groups of workers in one swoop.

## Safety Leadership Training

Leaders are a natural point for safety intervention. In particular, frontline leaders (e.g. supervisors, team leaders) exert a powerful force over the behaviours of workers, motivating increased productivity and driving the achievement of organisational goals.<sup>19</sup> So, it makes financial sense to target leadership as the effects are likely to flow 'down the chain' to workers across the organisation. Initial results from studies of safety leadership training are promising, as the effects on workers seem to be marked and long-lasting. Of these training interventions, programs that equip leaders with advanced 'soft-skills' seem to produce the greatest effect on employee performance. Example interventions include safety-by-walking-around<sup>20</sup>, safety conversations<sup>21</sup>, and direct training of safety leadership skills that motivate, inspire and generally establish higher quality relationships between leaders and subordinates.<sup>22</sup>

## Safety Coaching

Coaching-based safety interventions equip internal stakeholders with the skills and knowledge required to successfully 'own' and 'drive' increased safety performance across an organisation. Coaching also consolidates and intensifies the effects of traditional training interventions. Outside the safety domain, the ROI of coaching has been established<sup>23</sup>, and in some cases, coaching has increased productivity by nearly 90%.<sup>24</sup> Emerging research on safety coaching has mirrored these results, with outcomes such as decreased near-misses and injuries, and enhanced organisational safety culture<sup>25</sup> following implementation. Further, these effects seem to persist for years post-intervention.

Focusing on the person element represents a promising opportunity for many organisations to 'have their cake and eat it too' when it comes to safety. As psychologists continue to work with organisations and become increasingly 'business savvy', evidence of the financial return of such programs should start to emerge from the academic literature and the work of consulting firms. Nevertheless, the evidence shows that these programs work, and partnerships between safety training providers and organisations will stimulate in-depth ROI research to demonstrate the economic value of these interventions.

## Conclusion

Safety is an ongoing challenge across all industries. In fact, safety is actually costing organisations more as time goes on. At one level, the traditional view of safety as a cost rather than an investment is holding many businesses back from achieving the next level of safety performance and a raft of performance and financial benefits. At another level, safety training providers and financial decision makers need to consider the issue from new perspectives. An integration of worldviews here would do much to help psychologists and trainers to be more financially accountable, and accountants and economists to better appreciate the complexity and power of psychology-based safety interventions. Although much work remains to be done to explicitly link safety interventions to tangible and measureable financial outcomes, research shows that safety training works, and more importantly, influences employee attitudes, beliefs and behaviours to produce positive safety and financial outcomes.

**Sentis** specialises in safety culture measurement and transformation. Experts in applied psychology and neuroscience, Sentis helps organisations to enhance and move beyond compliance to empower employees to work safely—not because they have to, but because they want to. Offering training, coaching and consulting, Sentis has helped more than 300 companies and 150,000 people think differently about safety since 2003.

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