Boral
Building solid safety foundations

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Digital disruption: coming to OHS: Technology and digital disruption has the potential to reshape OHS as we know it, writes Asciano’s Richard Coleman

The rise and rise of penalties under OHS laws: Companies prosecuted under OHS legislation will need to balance a number of important factors, writes Steve Bell

Recognition for a life dedicated to engineering safety: Geoff McDonald recently received the SIA inaugural Lifetime Achievement Award

Managing human factors: where do we start? Why organisations do not take the time to understand and address the underlying causes of human failures in safety incidents

Taking the lead on safety: The OHS leaders of Electrolux, Crown Equipment and Z Energy explain how they drive effective business-wide safety outcomes

Boral: building solid safety foundations: There is a clear link between leadership, OHS and financial performance, according to Boral’s CEO and HSE director
The construction industry is one of the most dangerous for workers in Australia. According to Safe Work Australia, it is the third most deadly (with seven fatalities) to date this year. However, there are examples of exemplary safety leadership in the sector – as evidenced by the cover story for this issue, which features Boral’s CEO Mike Kane and group health, safety and environment (HSE) director, Mike Wilson. Boral has demonstrated that there is a clear link between strong leadership, good OHS and financial performance, and in an industry where the average Lost Time Injury Frequency Rate (LTIFR) stands at 8.4, Boral’s LTIFR for the 2015/16 financial year stands at 1.27. For the full story on how Kane and Wilson work together to drive safety outcomes, see page 14.

On the topic of exemplary safety leadership, the profile for this issue features Geoff McDonald, who recently received the SIA inaugural Lifetime Achievement Award in recognition of his dedication to improving OHS in a number of ways. This award is designed to celebrate OHS practitioners or professionals who have made an outstanding lifetime contribution to the practice of OHS in Australian workplaces, and McDonald has demonstrated a longstanding passion for workplace health and safety – spanning more than four decades – founded on a deep commitment to improving safety outcomes in the Australian workforce. For the full feature see page 22.

Businesses are on a constant drive to improve OHS results and drive down metrics such as LTIFR. In our leadership feature for this issue, we talk with Mark Goodwin, work health and safety manager for Electrolux Australia & New Zealand, Anthony Keating, national safety, risk, environment and quality manager for Crown Equipment, and Julian Hughes, GM HSSE for Z Energy on how they drive effective safety outcomes in their businesses. They share their insights into effective safety leadership and what is required from OHS professionals to improve safety at every level of a business.

In the March 2016 edition of OHS Professional magazine, the cover story explored the OHS Professional Capability Framework: A Global Framework for Practice. The feature failed to mention that: the Industrial Foundation for Accident Prevention (IFAP) is one of the Australian members of INSHPO and that the framework was formally launched at the Fluoro Conference in Perth in November 2015, an event that was co-hosted by IFAP and the SIA (with minor contribution from fellow INSHPO member, the New Zealand Institute of Safety Management).
A journey that all professions take

CEO David Clarke takes a look at the ingredients that make up a mature profession

In the last 18 months I have learnt much about the profession of health and safety and the highly skilled people within it who are passionate about making workplaces safer and healthier. I have also become more aware of the impact of workplace accidents and illness on the lives of so many Australians, and this sharpens my focus on how the institute and the profession can develop in its ability to make a difference.

I recently spoke at a safety leader’s event and described my impression of the profession as “adolescent” – passionate and sometimes emotional, unsure of itself, still learning and growing, sometimes quick to squabble, and full of competing thoughts not always fully formed. (Remember, I am proposing this idea about the profession and not individuals within it!)

That may seem unfair. The Safety Institute was formed 70 years ago, and the issue of health and safety in workplaces has been with us since the first workers’ guilds defined safe practice in the 1700s. Extensive research and science has been done. High-level structures and systems drive practice today. On the international stage, we are in relatively good standing in health and safety.

That’s true, but not true enough yet. We can achieve so much more. Take a look at professions which are demonstrably “mature” and we see certain characteristics in most or all of them. Think of a profession other than the health and safety profession, that you think is well defined and developed, and see if these apply:

- a high-quality formal educational framework providing a core knowledge base – accepted as the educational standard by the profession and the industries that employ that profession
- an interest from the profession itself in the content of that education, applied with the benefit of the knowledge of its relevance to practice, contributing input to maintain its standards over time
- a clear definition of the role(s) of the profession – a framework for practice which describes the range of roles and tasks and, in particular, the levels at which they are applied – accepted by the profession and by the industries that employ the profession
- a clear framework for career learning (CPD) that is articulated against (a) the knowledge base for education and training, and (b) the framework for practice
- a healthy “research into practice” community which drives new research in developing areas of the profession, continually improving the evidence base for practice, and influencing the continuous improvement of the profession’s formal education and CPD
- a definition for, and oversight of, ethical practice for the profession
- a framework for assessing and confidently presenting the profession to industry as well educated and trained, and experienced – capable and reliable
- an accepted and credible voice in regards to legislative and regulatory matters that relate to the practice of the profession
- a sense of shared pride in belonging to the profession
- a network of connected people within the profession, supporting the culture and practice of exchange of knowledge and wisdom between the experienced and inexperienced.

Each of these elements cannot easily be realised without the others – they are pieces of a puzzle that is not quite complete until they are all in place.

It is from these things that the benefits of a mature profession flow. When in place, the profession is better understood, has more status and more influence. Its members are better connected, educated and trained, more capable, and better positioned to give higher quality advice and influence more effectively. The potential of the profession begins to become realised, and in the case of the health and safety profession, that potential means genuinely safe and healthy people in productive workplaces.

Take a look at the list now in the context of the health and safety profession, and apply your own scorecard. From where I sit, there aren’t nearly enough boxes yet ticked, and the only way for us to “grow up” is to get to work, together.

At the Safety Institute of Australia, this is our vision and we are at work on it. If you’d like to know what we think in detail, it is jumping off the pages of our strategic plan just developed by the board of the Institute, in the form of our key objectives for the next five years.

So much is changing, and there’s still so much work to be done. Get involved.

David Clarke, CEO of the Safety Institute of Australia

“So much is changing, and there’s still so much work to be done”
Employee health and safety helps drive sharemarket returns

Employers that invest significantly in health and safety programs outperform other companies in the marketplace and have better stockmarket performance, according to a recent US study. It found that companies which have been recognised for their leading approach to OHS outperformed the S&P 500 average rate of return – by a factor of up to three times – in investment simulations. The study analysed the stockmarket performance of companies that had applied for or received the American College of Occupational and Environmental Medicine’s (ACOEM’s) Corporate Health Achievement Award (CHAA), which annually recognises the healthiest and safest companies in the US. Over this 13-year period, hypothetical investment returns for these companies were significantly higher than average S&P 500 returns investment scenarios.

99% of agriculture workers exposed to carcinogens

Almost every single worker in the agricultural sector has likely experienced exposure to at least one carcinogen, according to Safe Work Australia (SWA). The most common carcinogens to which workers were probably exposed were solar ultraviolet (UV) radiation (99 per cent), diesel engine exhaust (94 per cent), benzene (82 per cent), polycyclic aromatic hydrocarbons (76 per cent) and wood dust (71 per cent). The main circumstances or tasks associated with probable exposure included working outside, using diesel-powered equipment, refuelling petrol-powered equipment, repairing motors and other farming equipment and cutting wood. The reported use of controls to prevent or minimise exposures varied considerably by task and circumstance, according to The Australian Work Exposures Study: Carcinogen Exposures in the Agriculture Industry report.

Pillars of good work design and OHS

While there is a general interest and curiosity about good work design and its link to OHS, most organisations have not determined a tactical or integrated approach to this, according to Sara Pazell, principal occupational advisor: human factors ergonomics at Viva Health at Work. In most cases a design project opportunity may arise but in an ad-hoc fashion, driven by the passion of one key individual, or it has arisen in a reactive manner post-fatality or other severe event, she said. “When I interview national procurement managers, I am told that the safety in design component of their tenders is often considered an area of address for the engineers,” said Pazell, who was speaking ahead of the SIA Visions Conference 2016, which will be held on the Sunshine Coast in Queensland from 14 to 15 July. As such, she said opportunities to address issues of safety, comfort, efficiency and profitability may be missed.

QLD: Manufacturing employers prompted to reduce claims spike

Employers in Queensland’s manufacturing industry must focus on injury prevention, and workers need to stay safe as the industry gears up to take an anticipated 10–15 per cent hike in workers’ compensation claims, according to WorkCover Queensland. Data shows that claims lodged in March 2015 were significantly higher than the number of claims lodged in January 2015. In fact, the 1093 claims lodged during the month of March 2015 represented the highest monthly claim lodgements in that calendar year. “In March last year, the manufacturing industry experienced a significant increase in the number of claims lodged compared with January,” said WorkCover Queensland industry manager, Laurent Cazier. “With monthly claim costs of approximately $2700 per claim, these numbers can have a significant impact on an employer’s premium and the manufacturing industry as a whole.”

Workplace mental health issues on the rise

Diagnoses of depression and anxiety due to an incident or incidents at work are becoming increasingly common, particularly in the context of performance management or administrative bullying, according to an OHS lawyer. However, whether this is reflective of an increased awareness of mental health or is something more concerning, remains to be seen, said Wallmans Lawyers partner Michael Kay, who spoke at the South Australian Safety Symposium. “Fortunately, I suspect it is the former, but there is still plenty of work to be done,” he said. “Smaller businesses without the resources of larger employers often cannot afford to obtain the appropriate advice, assistance or training to adequately address psychological risk,” said Kay.

Safe Work Australia urges caution over vehicle safety

All those who work with vehicles should consider WHS practices in their workplace and measures to improve safe work outcomes in their lives, according to Safe Work Australia. Vehicles kill more workers than any other cause and have been involved in 65 per cent of all work-related fatalities over the last 10 years, according to Safe Work Australia data. “Our data shows that in the 10 years to 2014, 1848 people died in work-related incidents involving vehicles on roads in Australia,” said Safe Work Australia director of research and evaluation, Dr Fleur de Crespyignon. Drivers can implement a range of controls to ensure their safety around a vehicle, such as: scheduling major deliveries in “off peak” times; undertaking safe work practices in and around the vehicle and on the work site; and not driving when fatigued or distracted.
It’s not all about technology

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Digital disruption: coming to OHS

Technology is changing the playing field in many professions, and OHS is no different in that digital disruption has the potential to reshape OHS as we know it, writes Richard Coleman

There is a scene in The Matrix where Neo says, “I know that you’re afraid... you’re afraid of us. You’re afraid of change. I don’t know the future. I didn’t come here to tell you how this is going to end. I came here to tell you how it’s going to begin...”

I recently had my Matrix moment when I started to realise the scale of digital disruption that is coming to our profession.

For three decades or more we have all witnessed the slow creep of capitalist destruction and technological disruption. And while the business pages of newspapers are full of worthy insights into the meaning of digital disruption and business transformation, it’s worth noting that there are personal stories behind all of this change.

My own story started in a small village called Rhodesia in North Nottinghamshire in the UK. My father, both my grandfathers and many uncles and family friends were coal miners; the economy of the whole region was literally and figuratively fuelled by coal. When we emigrated in 1981, the British coal industry was in terminal decline – it was frankly being outcompeted by the USA and Australia. It sputtered along for another 10 years or so, but today the mine that my grandfathers and father worked in is gone, erased from the landscape with nothing but a nice park and a touristy canal boat marina to mark its passing. Australian mines had better geology, thicker seams, newer technology and lower costs. They were always going to win.

Anyone who has lived through that kind of upheaval understands the consequences far beyond the calculations on a spreadsheet or the dry pitch to a boardroom. For my family it meant geographic dislocation and a move halfway around the world. It caused many others to struggle economically for years and, in some cases, generations. It radically reshaped the social, political and physical environment.

Digital disruption today

Today we are all living through a similar radical change in industry, in work, in skills and in technology. It’s not localised to an industry or a place – it’s global. The digital disruption of work has moved beyond the realm of prediction. It’s happening.

Jobs won’t change in 10 years – they are changing today, and in 5 years work will be unrecognisable to a time traveller from 1990. Already, much of the traditional work of doctors, lawyers, accountants, logistics planners, engineers and designers is done by artificial intelligence. The traditional work of the OHS professional is next.

Change is accelerating and gaining scale. This will be the new normal within the time it takes for today’s secondary students to enter the workforce. The signs are unmistakable. Employees wear fitness trackers, many businesses have smartphone- and tablet-based OHS management system software, and some of us have started dabbling with big data analytics.

At the simplest level, social networks including Facebook, Twitter, Instagram, Snapchat and the like provide real-time information in ways that organisations have not been able to replicate internally. This information is mostly unfiltered, often rich in individual sentiment and, more often than not, immediate and emotional... basically the opposite of typical corporate communication. Most importantly, it is social and subject to rapid and vast amplification depending on the content. Increasingly, that information comes loaded with metadata as well.

Recently, my organisation was involved in a rail-related incident in rural NSW. A Twitter search minutes after we received notification but before the incident had reached the media and before our incident controller had arrived, showed us the site and the obvious damage. It also provided enough information for us to locate the exact spot on Google Maps and begin to form a view about what might have happened. Information is moving faster than ever before.
What’s in store?

Roles are going to be automated, safety-related tasks that we think require human intervention today – such as physical inspection of plant – will disappear in a world where that piece of plant is fitted with a range of sensors that are connected to the internet and telling an AI system about hundreds of parameters in real time.

As the “Internet of Things” expands to incorporate tens of billions of sensors (60 billion to 200 billion within a decade, depending on whose prediction you read), much of the manual work required in assessing equipment will end, replaced by remote sensing.

These things exist today, but the depth and spread as both AI and sensor technology becomes cheaper and cheaper will catch many people by surprise.

Consider also the health check – the bread and butter of many safety people and small safety businesses. Human involvement in the data collection phase and the analysis and interpretation of that data will practically disappear in a decade.

Real-time data collection from wearable tech, analysed by AI, reported on by a digital avatar and potentially only reviewed by a human if the data is extremely concerning, will be the standard model sooner rather than later. The person-to-person health intervention model, requiring invasive testing, booked appointments and waiting for results, is as doomed as the taxi industry.

The personal health Uber is being built today. Even wellness coaching – another staple source of income for many health professionals – is being disrupted principally through online support and gamification. Recently, PeopleScape (a local startup) has in association with SuperFriend launched Teamtopia, an online team-based wellness application. This is live disruption.

“The technology alone is not the innovation; the innovation will come through effective use in organisational settings”
5 takeaways for the OHS professional

- Automation of professions is coming and it will hit us hard.
- Digital literacy, not just how to swipe left or right, will be a career differentiator.
- Digital brings massive opportunities to control and understand risk. We need to embrace it.
- Actively seek digital solutions to big organisational problems.
- Have a digital strategy.

Richard Coleman is GM HSE for Asciano and a member of OHS Professional magazine’s editorial board.

The professional roles are mediated by the platform and the application; they are now one to many, not one to one, and most importantly power and control has shifted from the professional to the participant.

Virtual reality has finally arrived in a mass market way, and several Australian businesses are building HSE-related content that can be viewed on relatively cheap headsets. Melbourne-based The Interchange has created VR content for safety training on wharves and in rail environments. In Ballarat, Virtual Reality Ventures is providing a range of VR, 3D scanning and other cutting-edge technologies. The successful businesses in this space will increasingly blend deep knowledge about how people learn, how organisations change and how the technology can assist. The technology alone is not the innovation; the innovation will come through effective use in organisational settings.

The growth in VR usage and interest is exponential. Web search traffic for “virtual reality” has grown by 400 per cent in under a year, and while at still much smaller absolute volumes, we are starting to see similar growth in searches for “wearables” and “augmented reality”.

“The convergence of neuroscience and technology is here now”

Wearable tech, gadgets, clothes, sensors and integrated computing power is addressing the fact that today’s uniforms are essentially the same as those worn two generations ago. Some protective gear has benefited from material technology improvements, but until recently it hadn’t gotten smarter. This is changing. There is now wearable clothing enhanced with sensors that are beaming first-responder vital signs to remote control rooms, and a company called Pivothead produces glasses that beam real-time point-of-view video.

Finally we are seeing a convergence of access to massive enterprise-grade computing power through Cloud-based services such as Amazon, providing access to processing power – which was once the domain of large corporations and research institutions – through ubiquitous devices like smartphones.

Facial recognition technology that controls access to buildings, meeting spaces, equipment and services in real time, accessed through handheld technology, puts at risk the receptionist, the security person, the site training officer and many of those roles that we think are fixed and stable. Today we deliver human factors training face to face in order to, amongst other things, support situational awareness in high-risk situations.

In the future, if those risky roles remain, it’s very likely that Cloud-based AI systems will be providing those people with extra information and decision support, such that the traditional training will be superfluous. Even before that happens, technology will disrupt what we consider to be safety training. enHone is a US-based startup that has built clinically validated brain training games to enhance attention, focus, visual accuracy and ability to respond appropriately in stressful circumstances. These are about to be piloted in the workplace.

The convergence of neuroscience and technology is here now. Neuroscience has been playing around in the safety space for several years, and its power is magnified when it begins to bring that knowledge to people through technology.

OHS and the future

Those who studied OHS in the early 1990s were regularly told they had made a great career choice – it was a growth area and we’d always need those skills. For those of us whose careers have spanned the last 20 to 30 years, that has proved to be true, but it may not be true in future for the future. Technology has always increased accessibility to professional and technical information. This started with the printing press, went global with Encyclopaedia Britannica and went digital with Encarta, but it has accelerated to the point where I can access the latest information on quantum computing at the click of a link. If safety people believe that their value is located in the information that they hold – whether that be fact-based information, such as what does asbestos look like, or process-based, such as how do I present this information to communicate a given message – then they are as doomed as the British coal industry in 1981.
The rise and rise of penalties under OHS laws

Companies prosecuted under health and safety legislation will need to balance a number of important factors, writes Steve Bell

There is an increasing trend, both locally and overseas, in which courts and governments are treating health and safety neglect in the workplace more severely. OHS professionals should be aware of this trend and the increased exposure to greater liability.

Changing attitudes towards penalties

This trend is not new. In 2010, Orbit Drilling Pty Ltd became the first Victorian employer to be convicted for “recklessly endangering a worker”. Orbit was fined $750,000, while Orbit’s sole director, Martin Smith, was fined $120,000.

In that tragic case a 21-year-old worker was instructed to drive a truck down a steep slope during which he lost control of the truck, was thrown from the cabin as the truck rolled and was killed on impact. Mr Alford was untrained, and it was later revealed he was driving a truck with defective brakes.

Orbit admitted it had recklessly engaged in conduct which placed Mr Alford in danger of serious injury. While its director Mr Smith admitted to breaching his director’s duty, on appeal of the sentence, the court held: “The company was aware that it was placing Mr Alford at grave risk, that there was a high likelihood that the danger would eventuate and that, if it did, Mr Alford would be very seriously injured.”

At the time of sentencing, the maximum penalty available against an officer and a company for reckless endangerment was $193,374 and $966,870, respectively. President of the Court of Appeal, Justice Maxwell, proclaimed the maximum penalties to be insufficient.

The court demanded that the maximum penalties be examined “as a matter of urgency, to ensure that it accurately reflects the seriousness of the offence as..."
The upwards trend in penalties arose in a recent Victorian Court of Appeal matter, in which the court significantly increased the total fine from $450,000 to $1.5 million.

At first instance, both the defendants were found guilty of failing to provide safe systems of work, appropriate instruction, supervision and training under s21 of the OHS Act. The businesses were fined a combined total of $450,000. Following an appeal from the Director of Public Prosecutions, the Victorian Court of Appeal increased the fine to $750,000 per business, totalling $1.5 million in penalties for a single incident.

Finally, one of the largest fines for a safety breach in Australia was handed down last year when Kenoss Contractors Pty Ltd was ordered to pay $1.1 million from an available maximum of $1.5 million. In that case, a worker was electrocuted when, during a site delivery, the tip truck he was driving either connected with or came close to the power lines, creating an electrical arc strong enough to deflate the tyres and leave burn marks on the road. The worker jumped from the truck, collapsed, and later died.

The business was charged under the ACT safety laws for failing to provide a safe work environment and a safe system of work, exposing an individual to a risk of death or serious injury.

This overall trend has been demonstrated overseas. In the UK there has been an increase in the number of custodial sentences for health and safety offences. In a recent case, the owner of a scaffolding business was fined and jailed for 15 months following the death of a worker at a construction site. The owner was found guilty for failing to properly plan, supervise and carry out work at height in a safe manner.

For their involvement in the running of the company, Mr Paul O’Boyle was sentenced to prison for 16 months and Mr Russell Lee received a 12-month suspended sentence for breaching UK safety laws (including aggravating circumstances). A fine of £100,000 was imposed on the company.

Following these cases, new sentencing guidelines for health and safety offences have been introduced in the UK. The Sentencing Council’s objective for the new
The new sentencing guidelines establish a nine-step approach for the court to follow when calculating sentences. The approach applies to health and safety offences committed by organisations and individuals, as well as to corporate manslaughter and food safety/hygiene offences. It seems probable that the introduction of these guidelines will see more prison sentences for directors and managers.

Across the Atlantic in Canada, the Ontario Superior Court sentenced a project manager to three-and-a-half years in prison for his role in a scaffolding collapse at an apartment building in Toronto.

Mr Vadim Kazenelson was convicted of four counts of criminal negligence causing death and one count of criminal negligence causing bodily harm.

Six workers were under Mr Kazenelson’s supervision when he allowed them to board a swing stage 13 storeys high, with only one worker wearing a safety harness and enough lifelines for only two people.

The sentence marks the first time in Canada that someone has been sentenced to a prison term under the “Westray Law”, an amendment to the Canadian Criminal Code which makes parties criminally liable for, and imposes serious penalties in, cases of occupational health and safety violations causing bodily harm or death.

Practical implications
Of course, companies who manage their business safely need not worry about the trend of increasing penalties. However, it is clear that breaches of safety laws are being viewed very seriously by courts. There is nothing to suggest this trend will not continue.

Now more than ever, companies prosecuted under health and safety legislation will need to balance a number of factors, including the financial and reputational cost of defending a charge compared to the possible liability to the company and individual if found guilty.

Steve is a partner in the work health and safety and employment practice at Herbert Smith Freehills, and a member of OHS Professional magazine’s editorial board.
Boral: building solid

Boral has taken an integrated and strategic approach to improving safety and the bottom line. Craig Donaldson speaks with the company’s CEO and HSE director about this process and how they work together to drive tangible improvements in workplace safety.

There is a clear link between strong leadership, good OHS and financial performance in international building and construction materials group Boral. In the construction industry where the average Lost Time Injury Frequency Rate (LTIFR) stands at 8.4, Boral’s LTIFR for the current financial year to date stands at 1.27. Its Recordable Injury Frequency Rate (RIFR) has also fallen from 17.4 in FY2013 to 8.52 for FY2017 year to date.

Boral, which has operations across Australia, New Zealand, Asia, the Middle East and the US, is also tracking well financially and reported revenues of $4.41 billion for FY2015, while its profit after tax was up 45 per cent to $249 million and shareholders received a full-year dividend of 18.0 (up 20 per cent).
safety foundations
This is no coincidence, according to Boral’s CEO Mike Kane and group health, safety and environment (HSE) director, Mike Wilson, who points out that Boral’s best-performing business (its NSW construction materials division) is also its safest business. “If you manage safety well, you manage your business well – and vice versa. There is a link between safety improvements and growing and improving profitability. It’s a good case in point for what we do here at Boral,” says Wilson.

With more than 12,000 employees and 7400 contractors across 172 distribution centres and 565 operating sites across the group’s four major divisions (Boral Construction Materials and Cement, Boral Building Products, Boral Gypsum and Boral USA), the group has taken an integrated and focused approach to driving improvements in safety. It established a group strategy in FY2014 for managing HSE to embed relevant activities within operations, with a view to achieving a goal of zero harm. This strategy incorporates 20 improvement programs within five focus areas: capable and confident leaders; an engaged, empowered and competent workforce; fit-for-purpose systems; sustainable solutions; and fit-for-purpose plant and equipment. Championing this HSE strategy falls to Kane, who says he works closely with Wilson in holding line management accountable for safety. “It flows from me, down through the line executives,” he says.

“A second key pillar is a behavioural-based safety program called SafeStart, and Kane says this cognitive-based behaviour modification program is designed to help employees identify and avoid risky work behaviours, particularly when conditions have been changed or upset in some way. The third key to driving Boral’s safety program lies in engagement, according to Kane. “We try to get engagement through a variety of mechanisms. We get a certain amount through the lean manufacturing process. We get a certain amount through the SafeStart process, but then we have executives involved in executive safety interventions throughout the organisation. They meet with employees to discuss safety. We have a safety summit with the top executives in the organisation, where we pull them all in from around the world, for several days each year, just focused on safety. That’s to engage the senior team.

“Then they go back and cascade that through the organisation. It’s all based on values. Why are we delivering safety? Because it’s a corporate value. The respect for human life, respect for the people who work for us, with an eye also to the fact that failure in this area can affect reputational failure for the company and can have dire consequences,” says Kane.

**OHS risks and interventions**

Boral faces a significant and diverse range of OHS risks across its four divisions globally, and the main one of concern is truck safety, according to Kane. Its fleet of about 2500 concrete and tipper trucks presents significant exposure that could jeopardise the company’s licence to operate if not managed safely, says Kane. And a major traffic accident involving Boral’s fleet is possible – with potentially severe consequences. “This could be the grounding of a fleet. I think I wake up in fear of that happening at any moment, because we have so many trucks on the road which are constantly encountering the general public. There have been a lot of failures in recent history around Australia involving companies with trucks on the road,” he says.

“So we put a lot of work into driver safety. We put a lot of work into the mechanics of how we’re changing the performance of the vehicles that we buy so that they’re safer than they ever have been.” Examples of this include lowering the centre of gravity of concrete trucks so that they are less subject to tipping, putting cameras in every vehicle cab to help understand circumstances should an accident occur, and installing monitors (similar to a black box) on every vehicle to provide real-time

“**Our focus is on those high-consequence, low-likelihood events which could cause serious injury**”

“The safety department doesn’t hold the accountability for delivering the results. They hold the accountability for delivering the imagination, the ideas, the programmatic approaches, and to make sure that we have a consistent penetration across the organisation. The actual results are what line managers are held accountable for. That’s how we work together. Mike’s job is to figure out where there are gaps in our program, if there are things we could be doing differently, or the latest thinking in the area of safety and health that we need to incorporate in our approach. That’s the way I think we can most effectively deliver the results we’re trying to achieve.”

**3 key safety drivers**

There are three main ways in which safety improvements are driven throughout the group, according to Kane, who says the first lies in taking advantage of significant progress made in lean manufacturing. “We believe that there’s a perfect marriage between lean manufacturing principles and safety principles in an industrial setting. Those would be 5S standard work, 3C boards, where you engage the workforce in improving the process, the way they deliver their work, and the conditions in which they work. That’s the preliminary phase,” he says.

A second key pillar is a behavioural-based safety program called SafeStart, and Kane says this cognitive-based behaviour modification program is designed to help employees identify and avoid risky work behaviours, particularly
“We’re rotating a wet cylinder with heavy material inside as we’re driving down the road, and the centre of gravity is constantly changing on the truck as it’s moving”
data about how the trucks are performing outside the view of supervision. These send alert reports if a truck is clearly speeding and are also able to provide speed reports as adjusted for conditions such as rain.

Another recent development is the introduction of stabiliser technology, which is being trialled in concrete truck fleets around the world. “Mack Trucks is working with us on introducing the safer design, and we’re going to be the guinea pig for this. We’re rotating a wet cylinder with heavy material inside as we’re driving down the road, and the centre of gravity is constantly changing on the truck as it’s moving. It’s a rather unique challenge, so we spend a lot of time looking at truck safety and a lot of time on safety training for the drivers themselves,” says Kane.

“When it comes to our fixed-plant operations, we have much better long-term performance because we have a lot more control over the setting of employees in a factory within four walls. So there’s a lot that goes into safety for our trucking fleet. Every day we send thousands of drivers out on the road with our concrete. They show up on job sites and we’re not there. They might experience uneven surfaces and maybe some poor construction practices, or materials strewn around the area when they get out of their trucks. The hazards are multiplied for this group of employees, so it’s probably the one area we double up our efforts to make sure that we’re in good shape.”

Road transport is the most dangerous occupation by far in Australia, according to Wilson, who notes that Boral has been successful in bringing down injury rates for truck drivers. “The challenge for us is while that rate is coming down, we need to make sure we don’t have any fatalities or any events that cause people’s lives to change forever. It’s managing the dynamics between getting our injury rates down through all the environmental issues that we have around poor conditions where we deliver, but not tolerating these. I’d say our focus is on those high-consequence, low-likelihood events which could cause serious injury – we just can’t have those at all. We’re being quite relentless
What it takes to become a good safety leader

There are a number of steps OHS leaders can take to drive effective safety outcomes, according to Boral’s group HSE director, Mike Wilson. “In terms of personal attributes, you’ve got to be a good communicator and you’ve got to be a good influencer. The safety organisation is not necessarily a function of me and what I do. It’s a function of everybody in the organisation working towards that goal. No matter what ideas I have or what great thoughts I have, it’s got to be well communicated and well delivered so others understand it and are motivated to do it. So communication and influencing are critical,” he says.

It is also important to keep the bigger picture in mind in the process of delivering different safety initiatives, Wilson adds. “I see sometimes in the profession, people who are at risk of losing sight of why you do certain things. So they focus on the activities around delivering a program, but often there’s a temptation to stop there. That’s not the purpose of it. The purpose of it is that you deliver good safety outcomes. You’ve got to push through that and focus on what outcomes you want, not just delivery of a program of whatever kind it happens to be,” he says.

The ability to lead and manage change is also an important skill and attribute for OHS professionals, according to Wilson. “Organisations have finite resources and always will. So it’s important to focus on the right things and the right outcomes, so that the organisation can take advantage of those. Often there is a focus about the next new thing, but that may not be suitable for the organisation because it can’t absorb it or turn it into real outcomes. Focus on outcomes rather than just the programs,” he says.

Similarly, every organisation and individual is different, so it’s important to keep in mind shared goals but be flexible in how an organisation gets to that goal. “We all know what our goal is. It’s zero harm today. All the different programs we have in place are designed to deliver that, but each part of the organisation may be starting in a different place. They may have different challenges in terms of the operating environment or the resourcing case. Whatever the case may be, as long as they’re clear about where they’re going, what the goal is, you need to provide some flexibility around how they get there,” says Wilson.

“They can use a program which looks the same, but they own it and will give it their best shot. Let them run with that rather than being overly prescriptive and saying, ‘You must use form one, two or three, or program A, B and C’. Be absolutely focused on the goal and never give up on that, but let the organisation embrace that. Empower them to do so and let them deliver on that, because it may be a different pace or path but they will reach that same goal.”
“That actually makes it real, achievable and tangible and not this philosophical concept of zero harm, which takes out the urgency of getting it today. If you say, ‘Well, our objective long term is zero harm, and we’re at so many injuries per million hours today’, you can get caught up in this issue that at what point in the future can you get there? How about today? How about just doing it today? Tomorrow we’ll just rededicate ourselves to trying to see if we can deliver it.”

Wilson acknowledges that there is debate about the merits of zero harm in the industry. “I do lament this. I’m dismayed about that. People put forward this argument that it’s not achievable. The moment you do that is the moment you’ve lost your way. Of course it’s achievable. You can see this in any incident, and it could have been avoided. It does trouble me enormously as a safety professional to see that argument gaining momentum. Our goal is to make it relevant today, to make it immediate,” he says.

This is the key to Boral’s approach to zero harm, and Wilson says this approach has worked well. “The outcome we want is zero harm, but it’s not just zero harm in five years’ time. It’s zero harm today, right now, today, every day. That’s the clarity of the message and we’re working with our people around that. It’s fundamentally simple but very important for us,” he says.

“Every day across our business we see people achieving zero harm. To have that argument playing out in the industry and amongst our profession, when we’re seeing it on a day-by-day basis, it’s absolutely real, and having a contrary view does give me cause for concern. If we can just capitalise on zero harm today, people get engaged around this and they’re motivated by it. They know they can achieve that. The change in culture is absolutely palpable.”

“Remuneration and safety KPIs”

Kane has a strong view on remunerating leaders for meeting safety KPIs. “We intentionally don’t,” he says firmly. “You get to keep your job by delivering on the safety commitment. It’s that essential. This is not about getting a bonus for doing better. I think there’s a certain misguidedness to approach safety fundamentally this way. I had an experience in my early career with a company which tied bonuses to safety. While that had a certain impact, it also had a negative impact of driving questionable behaviour in the organisation because this was linked to achieving financial outcomes.”

Kane firmly believes there will come a point in time when institutions will be held accountable for the by-product of their work. “If that is industrial havoc, disabling injuries and fatalities, it will be impossible for organisations to operate if that is the outcome of the work that they do. Their licence to operate will be removed by society – maybe not today, but ultimately – because this is something that can be managed. You can figure out a way to go about business without hurting your people. So you remove those who do not take this obligation seriously. This is not something that you give a discretionary bonus for,” says Kane, who recounts a favourite saying from one of Boral’s managers in Western Australia.

“That is, ‘You either change the people or change the people’. If you can’t change their behaviour then you’ve got to get different people, particularly in management. We hold management highly accountable for results. I view employees as victims of their own mistakes and our mistakes, but they’re not the ones that I hold accountable for the result. I hold accountable the management of this organisation. They’re the ones who will get my attention, but it’s not around a discretionary bonus,” he says.

Kane acknowledges that some organisations talk about good safety performance and linking this to bonuses, but he asserts that world-class organisations are not paying bonuses for this. “It’s not a discretionary activity. It’s the fundamental right to keep your job if you deliver this result. If you fail in this area, you won’t work at Boral. You’ll get a bonus based on other financial outcomes – we have systems for that – but I’ve seen evidence in the past where that’s done and it threatens the values of the organisation.”

Kane takes leadership and safety seriously in Boral, whose workforce faces a considerable array of OHS challenges in the course of performing their roles. His drive to embed a strong focus on
safety in the culture is working, and Kane says this is reinforced at many levels in a number of ways. “One thing that’s clear in our organisation is safety,” he says.

“There’s an understanding that if you want to come in here for a meeting with me about failure in your organisation, it’s probably only going to happen because of safety. I don’t bring in plant managers and operations managers from different parts of our organisation if they don’t get their monthly numbers, or hit their forecast or other performance criteria. I let the normal line of succession deal with that. But when it comes to major safety failures, they come in here. One of the key roles Mike [Wilson] plays here is bringing to the table the most dangerous, highest risks with the most concerning implications for the organisation. If something happens, we get down to the plant manager or the supervisor of the operation on the phone, to explain what happened and what we need to do to avoid it happening again in the organisation.”

Results and outcomes

Boral has benefited from its integrated and strategic approach to OHS in a number of ways, which are evident in both its business and safety success. Its injury rates have been improving at around 20 per cent year on year, and its RIFR has fallen from 17.4 in FY2013 down to 12.1 for FY2015 and currently stands at 8.52 for the FY2017 year to date, while its LTIFR was just 1.8 for FY2016 and currently stands at 1.27 for the FY2017 year to date.

Boral also measures a number of other safety indicators, including percentage hours lost, which reduced to 0.03 in FY2015 (a 40 per cent improvement on the prior year and a 36 per cent improvement over the average of the prior three years). Its Medically Treated Injury Frequency Rate (MTIFR) has also reduced from 17 per million hours worked to 10 over the past three years (the severity of these medical cases has also been cut in half), while Hours Away on Restricted or Transfer (HART) rate also improved in FY2015, reducing by 20 per cent. “We’re also seeing a reduction in severity of those injuries, both in terms of people on restricted duties or people on workers’ compensation-type claims. They’re coming down. All the indicators suggest it’s not just numbers coming down but also how serious they are and, more importantly, reducing severity,” says Wilson.

This is at a time when Boral is actually growing and business volumes and staff numbers have increased in its Asian, North American and Australian businesses. “We’re bringing more people on, additional shifts and factories,” says Kane. “With increased employment comes increased risk. We’re able to back that trend in terms of our safety performance, despite the higher risk associated with more demand in our workplaces and more employment, more hours worked.”

Mike Kane, CEO of Boral

Safety and the sharemarket

While there is a lot of talk about investor interest in safety, Boral CEO Mike Kane says he has seen little evidence of this in reality. “Rarely do I get a question from investors about occupational safety and health. I’m not looking for the investor community to give us guidance or input necessarily, on this journey. They are more, in my view, a lagging indicator of concern. If we have reputational issues or if we have performance issues in a very public way, it’s going to affect our reputation with investors. It’s going to affect investment in us as a company, so it can threaten our profitability. There’s no question about that. But in three-and-a-half years as CEO, I may have had a safety question once – and we do a lot of meetings with investors. Then again, they don’t have the background or the understanding of that specific area of occupational safety, particularly in an industry like ours. That’s our responsibility to deliver,” he says. Boral’s group HSE director, Mike Wilson, echoes Kane’s sentiment and underscores the importance of internal drivers in improving safety. “The market doesn’t value great safety performance, but they’ll certainly penalise poor safety performance, including the environment space as well. I think it’s just a fitness test,” he says.
On Monday 9 May 2016, longstanding SIA member Geoff McDonald was awarded the SIA’s inaugural Lifetime Achievement Award at Intersafe in Brisbane. This prestigious award is designed to celebrate OHS practitioners or professionals who have made an outstanding lifetime contribution to the practice of OHS in Australian workplaces, and will be bestowed annually.

McDonald has had an extraordinary career in the field of health and safety and, after due consideration, the board of the SIA chose to honour his professional contribution. His longstanding passion for workplace health and safety – spanning more than four decades – reflects a deep commitment to improving safety outcomes in the Australian workforce. His abiding dedication to the field of health and safety makes him a beacon of inspiration for other OHS professionals and practitioners.

At the award ceremony, SIA Chair Patrick Murphy and SIA College of Fellows Chair Kelly Johnstone presented McDonald with the Lifetime Achievement Award, while Chair of the SIA Queensland branch Bryce McLaren, retired SIA Life Member Cip Corva and Ken McDonald (Geoff’s brother) also spoke about Geoff’s achievements and his significant contribution to improving OHS outcomes in the course of his career.

In presenting the award to McDonald, Murphy said it was important for the SIA to recognise those who have worked tirelessly to build and develop safer workplaces. “Recognising the achievements and contributions of people in this country who seek to advance the science of safety is so vitally important with respect to understanding where we have come from in our efforts to have workplaces free of death and injury,” he said.

“This is why the board resolved to install such an award. As chairman of the peak OHS body in this country, I am committed to ensuring we continue in our efforts of rebuilding and
transforming our institute, and today’s events are symbolic of just that.”

McDonald joined the SIA in 1968 and has been a fellow of the SIA for more than 20 years and a member for close to 50 years, according to Murphy, who said it was fitting and appropriate that McDonald be honoured as the inaugural recipient of the SIA’s Lifetime Achievement Award. “We must place on the record our sincere thanks for your efforts in pioneering what many in the profession now take for granted,” he said.

In presenting McDonald with the award, Johnstone also thanked him for his many and varied contributions to advancing the science of safety in Australia. “Geoff has dedicated his life to improving standards in health and safety. He has worked hard, day after day, year after year, trying to improve health and safety – and his impact has gone beyond just one organisation. He has written something like 90 research papers on what causes serious incidents in the workplace. With his engineering background, he has developed an interest in the mechanisms of various serious injuries, or ‘Class 1 injuries’ – which are fatal or permanently disabling non-fatal injuries,” she said.

“He has done a lot of work around developing taxonomy, in which he has examined thousands of incidents in the workplace, the mechanisms behind these incidents and their causes. And then these are categorised, so you can get a picture of what causes accidents more broadly by looking at thousands of them. Through this, he has dedicated his life to advocating improved ways to help companies manage and reduce Class 1 injuries. And this is what people who have known him and worked with him say – over time he’s had a great impact on them, and that’s impacted the way they themselves have worked within industry.

Ken McDonald speaks about his brother Geoff’s career achievements.
“McDonald is an inspirational Australian because of his commitment and passion and the professionalism with which he addresses the plight of those permanently damaged at work”

“A lot of people in the workplace might think, ‘I don’t like how this is done, it should be done better’, but they don’t do anything about it. Whereas Geoff has stepped out, had the passion and drive to say, ‘I don’t think what we’re doing is right. We could be doing this better.’ He’s gone to the effort of researching this, getting the data to back his thoughts up, and then spreading that information more broadly to have a bigger impact on the OHS profession. So he’s made a broader contribution outside the SIA and outside the defined circle of professional practice and work. He has changed the way we talk about safety.”

A testament to dedication
Roger Kahler (brother-in-law, and business associate in McDonald’s consulting firm) shared his thoughts on why Geoff should receive the Lifetime Achievement Award in the nomination that was put to the SIA for consideration:

“McDonald graduated in the 1960s as a Mechanical Engineer from the University of Queensland. He completed a Master of Engineering while funded by the then Queensland Canegrowers’ Council to study tractor accidents in Australia. Over the next decade, he compiled the most comprehensive study of Australian tractor fatalities (520) ever completed. In the process, he achieved several major objectives including pioneering and influencing changes in legislation which flowed throughout this country with respect to rollover protective structures (ROPS) for tractors. This has undoubtedly saved many lives.

In the 1970s, Geoff became an industry consultant and expert witness to the Queensland Supreme Court. Over the next 25 years, Geoff McDonald influenced the Common Law in Queensland as he presented factual information on serious industrial accidents. His philosophies, models and conceptual thinking influenced the judgements handed down by Supreme Court Judges in Queensland in particular.

Geoff McDonald challenges preconceived notions and gives people the opportunity to be less judgemental, and more objective and scientific in their approach to prevention of personal injury. He has significantly and positively influenced his peers throughout his career. He has mentored many professionals and been exceedingly generous with his distribution of intellectual property, including his yet-to-be-published book.

Many groups have recognised his contributions over the years. In 1975, he was a delegate of the Industrial Design Council at the International Council of Societies of Industrial Design in Moscow. In 1985, he was awarded the Industrial Design Council certificate for services to the research committee.

He has been awarded the ‘First Fellow’ of the Safety Institute of Australia, and he was also awarded the 1992 annual award from the Ergonomics Society of Australia (Queensland branch) for his outstanding contributions.

Typical research projects which McDonald has completed include:

- 1983 – ‘Fatal & Hospital Admission Road Accidents’, funded by the Road Safety Council of Queensland and administered by the Department of Social & Preventive Medicine.

The significance of his contribution is reflected in him being a Fellow (not member) of a number of professional organisations:

- Fellow of the Institution of Engineers, Australia
- Fellow of the Human Factors and Ergonomics Society of Australia (founding member)
- Fellow of the Safety Institute of Australia
- Fellow of the Ergonomics Society, United Kingdom
- Certified Safety Executive of the World Safety Organization.

In the 1990s, he took over three months from his consulting practice (unpaid) to develop his thinking with respect to information management
and personal damage reduction. This thinking was eventually provided to the Federal Government’s Productivity Commission Inquiry into National Occupational Health & Safety.


McDonald is an inspirational Australian because of his commitment and passion and the professionalism with which he addresses the plight of those permanently damaged at work. He has held a particular ‘course’ throughout his professional life of 50+ years. In all of that time, he has not wavered in his commitment, dedication and passion for those who are seriously injured.

He is inspirational because he has not accepted the commonly held notions which apply to the understanding of accident phenomena but has been prepared to stand up for what he firmly believes is the most favourable, ideological, philosophical and scientific position with respect to championing the cause of those who are permanently damaged at work.

In the face of criticism, he has influenced the thinking of many thousands of Australians with respect to permanent personal damage arising from work. He has developed models to organise information with respect to that damage which clearly describe the phenomena involved in serious injuries and early death of workers.”

**A focus on outcomes**

Unfortunately, McDonald was too ill to participate in an interview for this story, however, his nomination for the Lifetime Achievement Award sheds much light on his broader contribution to OHS and why the SIA chose to bestow this award on him. McDonald firmly believes the central focus of safety should be minimising energy exchanges which go above or below tolerable limits and damage tissue and/or function and thereby damage life – particularly Class 1 damage, which accounts for more than 90 per cent of the total cost of damage to people from work.

With his background in both engineering and psychology, and experience in safety research, he developed the “Analysis Reference Tree Trunk” (ART-T) system of damaging occurrence investigation, and the “Information Based Damage Control” (IBDC) system of reducing injury and damage. His consulting activities have majored in combining experience from within the organisation and industry with expertise from the body of scientific knowledge to enable organisations to reduce damage to people.

A disciplined system based on unemotive terminology, clear concepts and enabling models are used within the framework of the IBDC to optimise the reduction in damage to both the personnel and the organisation. Since slips and falls, back damage and musculoskeletal damage account for a large proportion of personal damage in industry, McDonald has undertaken study into these problems and developed courses to assist in the understanding of these phenomena.

Other activities include advice and guidance on specific design problems and provision of specialised evidence to courts on personal injury in a wide variety of cases, including slips, trips and falls, back damage, motor vehicles and trucks, house and factory fires, the construction, mining, agricultural, timber and sawmilling and many manufacturing industries.

Geoff McDonald & Associates also has over 6000 litigation cases on file with over 4000 of these being work-related. McDonald has provided evidence to courts in three states of Australia (Queensland, South Australia and New South Wales) and has also prepared reports for cases in Tasmania. Evidence has been given in Supreme, District and Magistrate jurisdictions in both civil and criminal matters. He has provided evidence to the Federal Court of the United States and prepared reports for the Court in Texas, USA.

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**About the SIA’s Lifetime Achievement Award**

The SIA’s Lifetime Achievement Award is awarded to a person who has made an outstanding lifetime contribution to the practice of health and safety in Australian workplaces. This could be an OHS practitioner or professional, an academic, researcher, representative of a regulatory body or union, employer representative, politician, or any other person that the board believes has made an outstanding contribution to the practice of health and safety in Australian workplaces.

The Lifetime Achievement Award is to be generally awarded to one person each year, by the board of the SIA, unless the board determines otherwise. Nominations will be called for annually, at the same time as life membership awards nominations are called for. A shortlist of nominees will also receive formal acknowledgment of their nomination at the awards ceremony.

The Lifetime Achievement Award may be issued to a person who has achieved any combination of the following:

- **long-term contribution to the work of the SIA and its aims and objectives; and/or**
- **development of new knowledge or practice which has contributed directly to practice and to healthier and safer workplaces; and/or**
- **service to the institute is not a prerequisite, however, is viewed favourably when considering a candidate's overall lifetime contribution to the field.**
Global appliances group Electrolux is the world’s second-largest appliance maker by units sold – with more than 50 million products sold annually to customers across 150 countries. With 60,038 employees globally, it generated $18.6 billion in revenue in FY2015 and a return on equity of 15.7 per cent. The group has also been on a journey to improve safety and has reduced its LTIFR from 7.14 at the end of April 2012 to 1.14 at the end of 2015 and 0.38 at the end of April 2016 across its ANZ operations, while its LTIs have also fallen from 17 in 2013 to 3 in 2015. “We’ve really focused our attention on learning from incidents as well, irrespective of the nature or severity,” says Mark Goodwin, work, health and safety manager for Electrolux Australia & New Zealand. “We’ve set about ensuring all sites have people competent in conducting investigations to ensure recommendations are meaningful and consider the effects.”

The business faces a number of OHS risks, and Goodwin says the interaction between people and plant is always a significant risk given the potential consequences. As such, significant work has been done with the business’s distribution centres to emphasise the need to plan traffic management for continually evolving needs. “The natural lifecycle of products between seasons often calls for adjustment of our stacking layouts, which in turn create the need to revisit traffic flows,” he explains.

Sedentary work is also a significant area of OHS focus in Electrolux’s office environments, particularly with a large call centre operation. “A focus of ours has been in ensuring we provide appropriately assessed working environments that don’t negatively impact on the worker and also don’t assume a one-size-fits-all approach. For several years now we’ve also placed an emphasis on intervention strategies to educate our workers about the inherent risks of sedentary work and providing opportunities to get moving, such as the Global Corporate Challenge,” he says.

A small but dedicated team of workers also face another area of risk in providing a specific service to customers, according to Goodwin, who says the design preference for inbuilt appliances, particularly in apartments, has seen the need arise to deal with dryers on walls and front-load washing machines built into cupboards. This has created manual tasking challenges when trying to leverage appliances into a position to work on them. “The increasing complexity of componentry work, fatigue associated with travel times between jobs, maintaining a high standard of service in sometimes challenging circumstances and an ageing workforce, it’s little wonder that it’s an area we’re investing in,” he says.

There are a number of strategies and initiatives that contribute to OHS outcomes in Electrolux, and Goodwin says engagement is critical – both from a worker and a leader perspective. “We have worked to ensure everyone is given the same safety message through our induction and re-induction program. Our executive team meet monthly in a forum entirely dedicated to health and safety, known as the safety executive.
“Our injury rates dropped to our lowest in 10 years and the completion of scheduled inspections and reporting improved”

Through this group they keep up to date on safety matters in our business and then in turn are well informed when visiting our sites to lead discussions on safety. A recent addition to their phones enables them to complete an inspection while visiting sites, which has really improved engagement,” he says.

Building competency at Electrolux's sites has been a key focus in 2016 with the introduction of “safety champions”. This is a group comprised of representatives from each site, who have been studying their Certificate IV in WHS together. The initiative was introduced to create a network between site representatives to enable sharing of best practice and also increase the availability of on-site expertise. “While it’s early days yet, the initial feedback has been enormously positive,” says Goodwin, who adds that the executive team are key to setting the culture of the business by their actions and the level to which they hold other managers accountable.

“It’s imperative for them to be well informed from a legal perspective and also to demonstrate that the safety of our workforce really does matter to them. Our managing director is terrific in reading the minutes of the site WHS committee meetings and engaging directly with the committees and site managers to find out why an action may not have been closed out. The credibility that brings is enormous in maintaining an environment where safety is highly visible and workers see a genuinely positive attitude to identified issues,” he says.
conveying the safety message to an audience that has differing needs, he adds. “We’ve focused a lot on developing health initiatives where we engage directly through cooking classes, blood pressure checks and other activities where we’ve been provided feedback on worker interests. Other communications range from using locally produced videos to revamping items such as noticeboards and newsletters,” says Goodwin. “Our team take a really strong customer service ethos into everything we do to maximise the connection we make. Simply quoting legislation or threatening legal repercussions is no incentive – we push to make content relevant to as many people as possible.”

Electrolux has met with a number of benefits as a result of the above, and Goodwin says the business has focused its KPIs very heavily on positive indicators to drive positive behaviours among all levels of the business. “Focusing on inspections, time taken to report incidents and other initiatives have seen our metrics improve. Our injury rates dropped to our lowest in 10 years and the completion of scheduled inspections and reporting improved. Last year our average time taken to report an incident was within 24 hours, bettering our previous average of two days,” says Goodwin.

A good example of partnering with the business can be found in the development of a new forklift attachment. A change to shipping methods for refrigerators identified an issue with container utilisation, and to achieve capacity in the container Goodwin says the top layer of fridges had to be either manually unloaded or a variety of clamp attachments used at various stages of the process. “The end result was a bespoke solution that has just been developed that keeps people out of the container and enables one clamp to load and unload. The efficiency in our supply chain is enormous (around two hours saved unloading each container), and the elimination of manual tasking is a major benefit,” he says.

Crown Equipment
Crown is one of the world’s largest material handling companies and produces a broad range of forklifts as well as automation and fleet management technologies. It employs more than 12,000 people worldwide and operates a service and distribution network in excess of 500 retail locations in over 80 countries.

Following a comprehensive review, a complete overhaul of Crown’s safety management systems commenced in 2010, which has resulted in a more planned and quantifiable approach to managing workplace health and safety, according to the business’s national safety, risk, environment and quality manager, Anthony Keating. “Our current system provides the architecture for a consistent approach to managing workplace health and
Crown Equipment’s national safety, risk, environment and quality manager, Anthony Keating

safety. It includes the integration of practices and processes that have helped us achieve our goal of moving beyond working with a simple focus on legislative compliance to becoming a values-based learning organisation,” he says.

At the heart of the Crown WHS management system is the provision of a safe and healthy workplace to prevent or reduce the incidence of illness and injury to workers and visitors. “Then there are the daily tasks of identifying hazards, assessing and controlling risk. We focus on involving all staff in health and safety matters, as well as providing information, instruction and ongoing training,” says Keating.

Additionally, Crown’s zero harm safety program guides the behaviour of all workers, at every level of the organisation, he adds. “Zero harm at Crown means that all injuries are preventable, no task is so important that it cannot be done safely, all hazards can be identified and their risks managed, and everyone has a personal responsibility for the health and safety of themselves and their co-workers,” Keating explains.

Another important part of the company’s strategy is to analyse past performance by reviewing all injuries from the previous five years, and prioritise areas of greatest risk by introducing new safety programs and enhancing existing ones. One of the most significant programs focused on hand safety, and in the past, hand injuries were seen as a part of doing business, as mechanics can bruise and cut their hands from time to time. “We knew we could do better,” says Keating.

“We released an online training package on hand safety for field and workshop technicians to complete, which included a short questionnaire to ensure our employees understood the risk of hand injuries in the tasks they perform. We also provided new PPE – Crown service gloves – for our technicians. There is no single type of glove which provides the protection our workers require for the many tasks they perform, so we provide a range of gloves to cover different tasks; this...
decreases the risk of injury, boosts morale and increases efficiency and compliance. Since the introduction of our hand safety program we have reduced hand injuries by 50 per cent.”

Another area of focus has been injury management, and Crown launched a national return-to-work training program which aimed to provide supervisors and managers with practical guidance on handling return-to-work cases. “In this program we outlined the importance of early notification of injury, the ways that Crown can assist in the process, providing support and empathy to the injured worker and their family, counselling for injured workers and colleagues, building a return-to-work plan and outlining meaningful return-to-work duties,” he says.

Crown employs a number of positive performance indicators such as developing WHS business plans, establishing KPIs for line managers and certification against relevant Australian standards, to help embed safety within the business’s culture. These KPIs are managed through the implementation of a strong, two-tiered audit program which includes self-conducted monthly inspections at branches around the country, as well as annual safety audits by the risk department. “Changing culture is no easy task. However, we knew we had to change it to improve our safety performance. Currently, all new employees at Crown undergo an induction program which takes a week, where we now set core mandatory training and competencies for all employees,” says Keating.

“Crown’s executive management team assisted with this culture change by allowing it to happen in a red tape-free environment, with the right personnel and with full financial support. They also provided strong endorsement for this culture change at all levels of the company.”

Since December 2012, Crown has held accreditation in AS/NZS4801 and ISO18001 (Safety Management Systems), plus ISO9001 (Quality). “Crown’s safety management system touches every corner of our organisation. We audit our program development, delivery and outcomes every quarter and track these against our annual targets,” says Keating, who adds that over the past five years the above initiatives have dramatically reduced injuries across all areas of operations. “Since we introduced the current safety system, we have reduced our total recordable injuries by over 50 per cent. Lost time injuries are also at a record low.”

Since 2010 the number of workers’ compensation claims per $100,000 of wages has reduced by 53.14 per cent, claims per $100,000 of basic tariff premium (BTP) have come down by 49.10 per cent and total weekly payments per $1000 BTP by 99.46 per cent. In the same timeframe, average gross incurred cost (GIC) per claim has substantially reduced, while the number of premium-impacting claims per $100,000
Engagement, clear purpose, partnering and commercial acumen are four keys for OHS leaders looking to drive effective safety outcomes, according to Mark Goodwin, work, health and safety manager for Electrolux Australia & New Zealand. “Get to really know your business and don’t be afraid to ask questions,” he says. “Being prepared to add value means being able to articulate your recommendations in a way that brings direct benefit to the business. The voice of safety at the table needs to be as informed about the current state of the business more than ever before and be forever looking for ways to be innovative in keeping the safety ‘brand’ strong and relevant.”

Anthony Keating, national safety, risk, environment and quality manager for Crown Equipment, recommends listening to everyone in the business, because they will give you the solutions to the problems you are trying to solve. “Once you start the conversation on safety within your business, change will come – the first step you need to take is getting everybody thinking about safety,” he says.

Julian Hughes, GM HSSE for Z Energy, says it is important to build OHS into the business so that it’s integrated, and key parts of OHS can be moved into the line so they can be managed and owned by the people who have the real ability to own them. “People who are exposed to risks need to have a real and meaningful way of engaging in how to manage those risks,” he says. “Move it into the line, so that the managers who are responsible for those risks understand their responsibility and understand how they manage those risks. HSSE needs to be visible in the business’s plans and not sit out to the side.”

It is also important not to be known solely as “the safety guy”, says Hughes. “Think about how you contribute to the business outcomes – not solely in the function that you’ve been hired to operate in. What are the skills and opportunities you have to contribute to other factors of the business, that are important? Things like planning, review or risk management. So think about what skills you have that you can contribute to wider business success,” he says.
of wages and premium-impacting claims per $100,000 of BTP have also fallen. The average GIC per claim for premium-impacting claims has also dropped significantly and total GIC has come down, Keating adds.

In 2015, Crown was officially recognised by WorkCover NSW at the SafeWork awards, where Crown received the award for the Best Workplace Health and Safety Management System (private sector).

Z Energy

Z Energy is a relatively young company in New Zealand’s fuel distribution market, and today, it is one of New Zealand’s top 20 publicly listed companies with an equity value of $2 billion. It sells around 30 per cent of New Zealand’s total transport fuel to a wide range of business customers as well as retail customers through a national network of more than 200 retail service stations and 70 truck stops.

As Z Energy transports and sells hazardous products, its risk profile is broad with many high-end risks associated with day-to-day operations. “If you get anything wrong with those products, you can have very, very significant outcomes,” says Z Energy’s GM HSSE, Julian Hughes. “Then the other challenge we have is that we operate across a national network of sites, where we want people to come onto our sites. It’s not like we’re managing high-hazard materials in a factory or in a manufacturing plant with a big fence around it. We’re managing high-hazard materials across a network of 220 sites and 70 truck stops, and these areas are where we want people to come and interact with us.”

Z Energy has a number of measures in place to help mitigate risk and improve safety results, and Hughes says one of the more interesting ones is its approach to the PCBU. “Our business has arranged itself using six different types of PCBUs, so if you think about a supply chain, you can actually risk-rate that supply chain, based on the type of PCBU that we’re engaged with. So we have devised a strategy to determine what level of engagement and what level of management oversight we have of that risk, depending on that categorisation,” he says. This approach was set up in response to New Zealand’s legislative environment, and Hughes says it’s a new way of thinking about engagement, emergency management and the different aspects of its management system.

Another area of focus has been in understanding and developing the risk profile for the business, so it knows and understands what these are and how they are categorised accordingly. “From catastrophic, acute or chronic, we’ve identified 11 top risks for our business and this is just a lens into what the risks are in the business,” says Hughes.

Supporting all of this is Z Energy’s four-year strategy, which is focused on leadership, engagement and practice. “HSSE is about what you do. It’s not about an outcome necessarily – although clearly you want to achieve a good outcome – but it’s about the practice that you do and we talk about that practice as being leadership and engaging people with world-class practice,” he says.

Leadership also plays an important role in Z Energy’s safety culture, according to Hughes. “The first thing I do is live and breathe it myself. As the functional leader of HSE at Z, I exhibit the behaviours that we expect of all of our people all
the time to help build that culture,” says Hughes, who adds that the leadership team also reinforces the company’s safety culture. “They’ve got the best chance of engaging their teams, and we need everyone to be aligned to what we’re trying to achieve through exhibiting the right behaviours.”

It is also important that leaders of the high areas of risk in the business in particular are provided with a structure for how they can lead and are given feedback on how they are leading when it comes to safety. “Culture is defined by what people understand about why they do what they do. You can generate that through two ways: an emotional connection to why HSSE matters, so we do a lot of work on that. But an emotional connection is not enough, so we ensure that we have the practices that back up our statements about being a business that operates without harming people or the environment.”

Over the past 24 months, Z Energy has employed a number of positive performance indicators (PPIs) across different operating aspects of the business. These PPIs are particular indicators relevant to each area of business and the risks associated with that business. “We’re seeing improvements in many of those and they’re the classic positive indicators that many OHS professionals will be aware of, such as safety critical equipment checks, engagement meetings, and closed-out reports being completed. So more people are doing the right things, and we think that’s a really good sign of our performance,” he says.

The business has reaped a number of benefits as a result, including a HSSE action close-out rate of 100 per cent, a Total Recordable Case Frequency (TRCF) rate of 1.26 in FY16 and an LTIF of 0.49. ■

### Setting the example in leading OHS

Mark Goodwin, work, health and safety manager for Electrolux Australia & New Zealand, says he aims to partner as effectively as he can by taking time to get to know the business and how each area functions and what operational challenges impact them. “I am extremely mindful of the value health and safety can bring commercially and from a holistic perspective. Knowing that not all of our business units may have had the same exposure to safety issues as me, my role is to present information to them meaningfully and with relevance in the context in which they operate,” says Goodwin, who adds that it is also important to keep abreast of operational change in working environments, so commercially relevant recommendations which also consider the welfare of workers can be made.

Anthony Keating, national safety, risk, environment and quality manager for Crown Equipment, works closely with the business’s managing director and management team and also collaborates with customers and subcontractors. “Our zero harm safety program is geared to provide customers peace of mind that Crown operates to the highest of safety standards, and that we bring those standards to their business. My aim is for them to know that any one of our 400-plus field service technicians that may work in their facilities is trained to the highest of standards and works with safety in mind, every step of the way,” he says.

Julian Hughes, GM HSSE for Z Energy, is a member of the business’s executive team and part of this role is ensuring HSE is a critical part of the business strategy, so that it is integrated into what Z Energy does and forms part of the decisions and the strategies that are made as a business and how its goals are going to be achieved.

“Part of my role is to provide coaching, advice, and challenge the executive team around HSSE,” he says. “In some ways play the classic role of an adviser, as well as an executive member of the management team. I then play a role, setting the conversation for HSSE with our board, which has a HSSE committee, so I have a role there in leading the HSE conversation with our chief executive and other risk owners within the business,” says Hughes.
Many organisations do not take the time to fully understand and address the underlying causes of human failures in safety incidents, write Kirsty McCulloch and Emily Novatsi

Most of the time, people get things right. We plan to act in a certain way to get a particular outcome, and we get the outcome we want. But every so often things go wrong. We make mistakes. We forget things. We bend rules. In most cases these behaviours have no negative result. In hazardous industries, however, these types of behaviours can result in disaster.

Human factors are often cited as underlying causes of major accident events. Even smaller-scale workplace incidents share these causal factors. All too often, organisations believe that human failures are too difficult to manage. With this belief, many organisations do not take the time to fully understand and address the underlying causes of these failures. So if they are going to improve, where do they start?

We all have experience in human factors, a catch-all phrase for a body of knowledge from several scientific disciplines including psychology, ergonomics and engineering. We have all been influenced by fatigue, the prevailing norms and culture of our peer group, saving time or money, or being distracted or preoccupied. These are

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
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<tbody>
<tr>
<td>Managing human failures</td>
<td>Structured inclusion of influences on human failure (intentional and unintentional behaviour) in design, risk assessment and incident investigation</td>
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<tr>
<td>Organisational and safety culture</td>
<td>Programs and methods that define, assess and develop critical behaviours to support an organisational culture focused on process and personal safety</td>
</tr>
<tr>
<td>Human factors in design</td>
<td>Ergonomic principles used for the design of control rooms, human–machine interface, alarm management, and lighting, thermal comfort, noise and vibration</td>
</tr>
<tr>
<td>Fatigue and shift work</td>
<td>Work patterns and individual considerations designed to prevent/mitigate fatigue and reduce error</td>
</tr>
<tr>
<td>Procedures</td>
<td>User-friendly procedures are provided, which support error-free performance</td>
</tr>
<tr>
<td>Organisational change</td>
<td>Human aspects of organisational change are risk-assessed and controlled; may include changes to organisational structure, technology, work practices, geographic locations and acquisitions</td>
</tr>
<tr>
<td>Safety critical communications</td>
<td>A structured process for shift handover, task handover and permit-to-work are in place and working as intended</td>
</tr>
<tr>
<td>Training and competence</td>
<td>The ability to meet role responsibilities and consistently perform to a specified standard; training to meet the competency requirement needs to include development of the required knowledge, skills and attitudes</td>
</tr>
<tr>
<td>Maintenance, inspection and testing</td>
<td>A structured process in place to minimise such errors, together with widespread awareness of risk of maintenance error; also includes the organisation’s capability to have a clear understanding and knowledge of the product or service being supplied, relevant to use of contractors</td>
</tr>
<tr>
<td>Staffing and workload, including supervision and contractor management</td>
<td>The right level of skilled people available for task; manageable workload, especially during upsets and emergencies; experienced supervisors regularly present at worksite; and competent contractors, properly supervised</td>
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Table 1. UK Health and Safety Executive’s key human and organisational factors topics
“Many of the key influences on human performance are not only found within the individual, but also within jobs and organisations”

examples of important motivators and influences on our behaviour.

While we use the term “human factors” it is perhaps more accurate to use the term “human and organisational factors”, because many of the key influences on human performance are not only found within the individual, but also within jobs and organisations. Human factors methods aim to optimise human reliability and performance, and thus improve safety, quality and overall business performance.

To increase human reliability it is often said, “You cannot change the human condition, but you can change the conditions under which humans work”. In the UK, the government health and safety regulator – the UK Health and Safety Executive (UK HSE) – has provided a working definition of the human factors domain. It has identified the key issues that are often mismanaged or found wanting, based on investigation findings, audits and inspections in hazardous industries (see Table 1). Successful managers, supervisors, engineers and safety practitioners in hazardous industries must have a working knowledge of these subjects.

Evidence of the topics outlined in Table 1 is clear in numerous major incidents. A sample of incidents in different industry sectors is reviewed in Table 2 against the UK HSE’s key human factors topics. Most of the incidents have included multiple human factors failings. Using these incidents as a learning tool can help companies target human factors improvements, and this presents an opportunity to make a vital difference in safety performance.

The Montara Commission on human factors and safety

The 2009 oil and gas leak following a blowout on the Montara wellhead platform in the Timor Sea is considered one of Australia’s worst drilling disasters. The subsequent Report of the Montara Commission of Inquiry, 2010, stated: “The incident is an example where multiple...

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<table>
<thead>
<tr>
<th>Major accident</th>
<th>Managing human failures</th>
<th>Organisational and safety culture</th>
<th>Human factors in design</th>
<th>Fatigue and shiftwork</th>
<th>Procedures</th>
<th>Organisational change</th>
<th>Safety critical communications</th>
<th>Training and competence</th>
<th>Maintenance, inspection and testing, including management of suppliers</th>
<th>Staffing and workload, including supervision and contractor management</th>
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<td>Beaconsfield (2006)</td>
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<tr>
<td>Montara (2009)</td>
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**Table 2. Review of human factors topics indicated for 11 incidents reviewed**
human factors failings were evidenced. The team had installed smaller casing than planned and failed to thoroughly test the integrity of the cemented casing shoe, allowing hydrocarbons to enter the well.

“The pressure-testing results were abnormal, and the team deviated from standard procedure to close in the well, to troubleshoot. During this process, they miscalculated the tail cement and relied on the absence of detectable signs of well flow – rather than confirmed pressure tests or systematic monitoring of well pressure – to confirm a successful job. Training and competence of the supervisor and operators was an issue in that every person failed to recognise the failure of float valves, despite several key signs. When the float valves failed, the response made the situation worse, as the team had little appreciation of ongoing risk. There was workload pressure to rush the cement job to stay within the planned drilling program – it was not possible to wait on the cement job for 24 hours before pressure testing to 4000 psi again.

“Safety critical communications were missed in shift handover processes, such as the status of cement casing shoe testing. There was no formal communication of deviations to the rig manager until after the fact. Reports were generated, indicating major ongoing problems with the cemented shoe, and it was evident that barrier integrity tests had not been completed. However, the reports were not reviewed in detail and were signed off by the drilling supervisor. Similar reports, highlighting weaknesses, were passed to onshore personnel but were not picked up by anyone.

“As part of organisational change processes, there was no strategy to ensure site leaders had skills to identify and manage risk for drilling operations. At a higher level, there had been changes to the CEO and project management structure, shifting reporting from Australia to Bangkok. The new structure was found to provide inadequate oversight.

“There were significant issues with the team and company culture. The construction manager noticed an oversight of the drilling team but did not raise his concern because he did not want to ‘give the impression...he was trying to teach them how to do their jobs’. Saving rig time also influenced his decision. Supervisors assumed their team members would stay focused on proper process, despite pressures to meet efficiency demands. There was a strong corporate culture to achieve time/cost savings, with little emphasis given to quality assurance of well control.”

Where to start
Understanding the causes and appropriate responses to any incident relies on thorough understanding of human failures. Regardless of best intentions, people make mistakes. They may forget to do something, press the wrong button, or fail to identify a problem. There are also occasions where people intentionally break the rules to achieve a better outcome for the company or themselves. Management strategies for each of these types of behaviour would be different. Understanding the type of behaviour and why it occurred is necessary to recommend effective management strategies and prevent recurrence.

Organisations often realise the need to focus on human factors through experience of incidents and near misses. When starting to explore the human factors subject area, many feel overwhelmed. Using a topic-based approach can help to identify priorities and develop a manageable plan. For example, organisations can:

• assess their current human factors capability against the key topics, and focus on areas of vulnerability
• educate key people about human factors, who can then use this knowledge to improve performance
• build human factors knowledge and capability into operational, HSE and HR management systems and practices
• recognise that forthcoming organisational or technical change provides an opportunity to improve safety by additional focus on human factors (for example, control room redesign)
• recruit or develop internal human factors specialists, who can translate human factors knowledge into operational reality, rather than relying excessively on external specialists
• ensure that when incidents occur, the underlying human factors are recognised and addressed and subsequently built into the hazard and risk analysis process, and the management of new projects.

It may be helpful to start with one human factors topic that is salient for the organisation, and this usually brings other relevant topics into focus. What matters is getting started, rather than spending undue amounts of time identifying the issue.

Dr Kirsty McCulloch is principal human factors specialist and Dr Emily Novatis is an organisational psychologist at The Keil Centre, a company of psychologists and ergonomists which specialises in human factors in incident investigation.

“You cannot change the human condition, but you can change the conditions under which humans work”
Leading disruption

The annual SIA National Safety Convention is the premier conference for the year and brings together some of the best national and international speakers to explore the theme of disruptive safety.

Driving innovations in safety

Speaking at the convention on safety leadership is lecturer in the school of humanities at Griffith University, Dr Drew Rae, who says there has been a reintegration of design-based and human-based approaches to safety improvement. For many years, safety engineering and occupational health and safety were entirely separate communities, according to Rae, who says they lost a lot from the separation. “Without design thinking, behavioural safety becomes about controlling individuals instead of understanding how they work in order to improve the work environment. Without human-centred thinking, engineering occurs in isolation of the way work is actually performed. Putting them together results in systematically better places to work – safety that is built in to the environments and operations,” he says.

Another trend Rae has observed is the “re-imagining” of the role of a safety practitioner, and he says the “new view” practitioner is not trying to detect and correct problems, but facilitate discussions and insights. A key example of this is the set of practices that are becoming collectively known as appreciative investigations. “Appreciative investigations are an alternative to both incident investigations and audit-style activities. They don’t so much replace these practices as displace them – diverting organisational time and attention away from what has or could go wrong, and towards how to build positive capacity to work safely,” he says.
in safety

“The ‘new view’ practitioner is not trying to detect and correct problems, but facilitate discussions and insights”
However, encouraging innovation requires providing staff with the freedom to try new things, and Rae says this requires time and resources to do things differently, a mandate to experiment, and permission to sometimes fail. "‘Time and resources’ for innovation means we need to stop doing some of the things we are doing now. In safety, it is very hard to stop doing things. We are afraid to abandon even the most ridiculous and over-bureaucratic practices, even as we complain about how much better our jobs would be if we could spend our time on other things," he says.

"The first step in innovation is to take stock of what we are doing now and be honest about the fact that much of it does not make people safer. We need to ask each other to provide evidence that what we are doing adds value, and commit to either obtaining that evidence or abandoning the activity."

Rae also notes that a "mandate to experiment" means that roadblocks should not be put in the way of people who want to improve work. Many formal innovation schemes actually stifle innovation, he says. "They say, ‘Step one in improving work is to submit your idea for management consideration. Your idea must neatly match the idea template, and it will be judged at some future point in time by people who don’t actually do the work.’ Why do good ideas need to be evaluated before they can be tried? Now, some organisations see uncontrolled variation as a risk. They don’t want workers trying new things without first carefully checking that the new things are safe. That’s fine, appropriate, and in some businesses absolutely necessary for safety. But it doesn’t lead to innovation. You can choose to be innovative or you can choose..."

“It’s not just about doing things differently, it’s about doing things better.”
to keep tight control over variation, but you can’t have both at the same time,” he says.

Not all safety innovations are going to work, he adds. “That’s OK. A lot of what we’re doing right now doesn’t work particularly well either. Of course, when our job is to keep people safe, failure is not an attractive outcome. This is where academics and practitioners need to work together. The value-add of an academic is not theories or our own ideas for innovation – it’s our knowledge about how to ethically conduct experiments and collect and evaluate data. Innovation isn’t just about doing things differently, it’s about doing things better. That means we need to understand how well our new approaches are working – to know what to do more of and when to back off.”

Leadership in times of disruption

Also speaking at the convention is Peter Baines, who founded Hands Across the Water – an Australian, New Zealand and Thai charity that provides assistance to at-risk Thai children and their communities. Baines, who also spent 22 years with NSW Police leading teams in response to acts of terrorism and natural disasters in Thailand, Saudi Arabia, Japan and Bali, witnessed leadership in action in extraordinary circumstances, and says that “leadership without authority” is what makes true leaders.

“It’s not about the title or the position they have. It’s about their actions and reactions. I talk about the importance of clarity of purpose and whether this is congruent with what we say we’re about and what we do. This leads into engagement with teams and motivating your workforce,” says Baines, who adds that another important element of leadership is speed.

When there’s an opportunity, often it’s the first to move that will then hold the position of leadership, he explains. “If you wait until you’ve got all of the answers to all of the possible questions, someone will beat you to it. And then there’s the presence of leaders. Whether we’re talking about teams that we’re leading or clients that we’re working with, the importance of being present in a physical sense conveys to the teams you’re working with that you understand the challenges that they’re facing. It demonstrates to them that you care,” he says.

There are a number of parallels between natural disasters and acts of terrorism, and disruption to businesses, according to Baines, who says that taking the initiative is particularly important in such circumstances. “When it comes to leadership in times of disruption, no one has all the answers. You don’t even know what the questions are going to be, but the sooner you take action, this leads to clarity. I think it’s exactly the same with disruption. If you wait too long until you’ve got everything sorted, there’s a risk that someone will beat you to it and then they will hold that space of leadership,” he says.

Baines gave the example of the Australian response to the Thailand floods of 2011, and notes that there was nothing special about the abilities, skill levels, expertise or resources of the Australians on the scene. “We had no greater experience than the Dutch, the Germans, the Swedes or the English. It was the fact that we just started and got on with the job, and people looked to us and said, ‘OK, you guys are leading’, and we became known as the leaders. The connection there to disruption is very similar,” he says.

Clarity of purpose, and congruence between what is said and what is done in both work and life are important considerations for leaders, and Baines says this translates to organisations as well. “I’ve worked on a number of mine sites doing
leadership programs, and on all these sites that I’ve been on, there is absolute congruence between when they say ‘no harm’ and ‘no injuries’ – they do everything to make this happen, and the way they run their business is congruent with that. It’s not about saying, ‘We don’t want injuries and we really value our people, but it’s profit and production first.’

This has important implications for OHS professionals, and Baines says this kind of thinking has to be part of a business’s DNA and led by everyone. “It’s got to start at the top and it really has to be without compromise,” he says. “However, there also has to be an acceptance of risk. You can remove all risk by not doing the job, but at one point you have to have an acceptance and tolerance for a degree of risk, and helping you understand that is to identify what your tolerance of risk is. Otherwise, there’s got to be a balance between doing the job productively and around risk.”

Leading OHS disruption at Laing O’Rourke

Technology is currently impacting the application of OHS in the workplace in a number of ways, according to director of the engineering excellence group at Laing O’Rourke, Andrew Harris – also speaking at the convention. He gave the example of trials in Laing O’Rourke and says that one of these involved work in very hot, rural, remote environments across Australia where temperatures exceeded 40 degrees in summer. “We trialled the use of phase-change material. So you put these vests in the freezer where they absorb cold energy – which is then released slowly during the day,” says Harris, who explains that a number of different vests and options were tried, and following a survey of the workforce it was found that a cravat was

...were tried, and following a survey of the workforce is very damaging. There are deaths every year across many different sectors, so if you can do something clever about that in helping keep workers safe, I think that’s a really positive thing. Nobody goes to work to get hurt, ever. So we’re actively working to make the work environment a safer place, and we’re supported very well in this,” he says.

In the future, it will be easier to predict unsafe outcomes in the workplace, according to Harris, who notes that there are many applications from other industries and fields to safety. “If you’re looking at a truck fleet, for example, you have this thing called predictive maintenance. You’re taking data from the computer chips in the truck on where they drive, how much they drive, how they’ve driven – feedback on the drivers. This can predict very accurately when some preventative maintenance is required, before the truck breaks down. The computer algorithms for that are pretty sophisticated, but they’re pretty well understood now – that’s almost a commoditised service if you’re running a huge logistics fleet. The big miners such as Rio and BHP know all about this and do it already,” he says.

“There’s no reason you can’t apply those same computer models to people as well. You should be able to predict when an accident will occur, before it does, and implement some sort of intervention using the same sort of system. I don’t think anybody’s done it yet, but that’s sort of the stuff that we’re working on. And we’re looking at ideas we can use from other places, applied in different ways, and how we can introduce them to make the work environment more secure.”

The model applied in Laing O’Rourke is similar to a prototyping model, according to Harris: “so we explore a bit of tech, we play with it in house, and if we think it might be suitable for a trial, we run it by the OHS team first. We let them explore it, they try and pick holes in what we’re trying to do, and then if it passes that hurdle we’ll pick a project team, we’ll have a chat with our director and ask to run a trial on the side to see how it goes. We’re using a project management model to deploy, and if the tech gets through all of those hurdles and shows some real value then we’ll commercialise it and deploy it more widely across the business.”

The annual SIA National Safety Convention will be held from 6 to 7 September 2016 at Sydney Showground, Sydney Olympic Park. For more information visit https://sia.org.au/events/calendar/sia-national-safety-convention-2016.html

3 ways OHS can help deliver effective safety innovations

Leadership in safety innovation requires three elements, according to Dr Drew Rae, lecturer in the school of humanities at Griffith University:

1. A thorough and critical understanding of the field. This means far more than knowing how to apply a set of practices. Knowing how to do safety is the exact opposite of knowing how to do safety differently. A critical understanding involves knowing the history of the big ideas in safety, how they formed, how they developed, how they challenge and inform each other.

2. An ability to persuade other people. Having good ideas doesn’t help if you are screaming in the wilderness.

3. An earnest and ethical desire to sacrifice certainty and comfort now, in order to make the world better in the future.

“To achieve all of these things for yourself, you have to be part of a community that wants its members to learn and challenge each other,” says Rae. “This is where I need to be honest and self-serving at the same time. The most straightforward way to become part of such a community is to attach yourself to a university that is providing thought leadership in safety. This can be as a taught student, as a part-time researcher focusing on an industry project, or as an industry affiliate providing funding and opportunities to try out new ideas.”
Corporate members of the SIA receive a number of significant benefits. Corporate memberships are open to government and private sector corporations, organisations, companies and associations, and there is a range of membership levels available. In return for each corporate membership, we invest in you.

**Diamond Category - Sharing our vision**
Annual investment commitment: $10,000 (excl. gst)
As a Diamond member of the SIA, your company is recognised as making a significant contribution to workplace health and safety in Australia by investing with us in our aims and objectives, and sharing our vision for the elimination of injury, illness and death in Australian workplaces.

**Gold Category - Investing in health & safety**
Annual investment commitment: $5000 (excl. gst)
As a Gold member of the SIA, your company is recognised as working with us to invest in workplace health and safety in Australia. The funds you invest contribute to our operational activities across a range of critical areas.

**Silver Category - Get connected**
Annual investment commitment: $2500 (excl. gst)
As a Silver member of the SIA, your company is connected to and engaging with individuals and organisations that are part of the workplace health and safety profession, delivering effective workplace health and safety to Australian workplaces. The funds you invest contribute to our operational activities across a range of critical areas.

**Bronze Category - Be part of the network**
Annual investment commitment: $1250 (excl. gst)
As a Bronze member of the SIA, your company is investing in being part of a network of individuals and organisations that are part of a capable and credible profession delivering effective workplace health and safety to Australian workplaces. The funds you invest contribute to our operational activities which are designed to advance the health and safety profession, and contribute to making Australian workplaces safer and healthier places to be.

For more information
Contact the SIA National Office on (03) 8336 1995 or email membership@sia.org.au to discuss the many options available.
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(Ask about Government subsidies and loan assistance currently available)

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Fatigue Management  Drivers, Supervisors  