Walking the safety talk
Leading safety at Aggreko

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Derek Viner on OHS and the science of risk
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Talk is cheap: why safety culture must be measured: Anecdotal opinions on safety culture are too commonly used as a substitute for data and fact on safety culture, writes Siemens' David Scott

The growing importance of safety through the supply chain: Organisations should shine a light into the dark spaces of their supply chains to uncover OHS and other risks, write Freehills' Steve Bell and Sam Witton

Improving gender diversity in the safety ranks: OHS has long been a profession dominated by men, but there is a shift in the demographics of OHS, with more females joining the profession

Time for OHS to understand the science of risk: Risk control and safety management expert Derek Viner on the challenges and opportunities before the OHS profession

Leading safety by walking the safety talk: Aggreko's AusPac MD and QHSE manager on how the company achieved a milestone of one million man-hours, or two years, without an LTI

OHS disruption in the spotlight: The annual SIA National Safety Convention brought together some of the best national and international speakers to explore the theme of disruptive safety
Leading safety by example

There’s always a lot of talk about OHS from executives, and they like to be seen as the champions of safety in any business

Most annual reports trumpet the importance of OHS to a business and how it is an integral part of their organisations. However, the safety performance and metrics often tell a different story about the leadership quality of a business and how important OHS really is.

One company that genuinely does “walk the safety talk” is power supply multinational, Aggreko, which recently clocked up a milestone of one million man-hours, or two years, without an LTI in its AusPac business. A core plank of its safety platform is visible safety leadership, and its executive team participate in regular management safety walks (which are also built in to safety KPIs). More than 330 safety observations and interventions have been conducted over the past eight months, and 54 management safety walks completed by the AusPac executive leadership team. This is a demonstrable example of the company’s motto, “safety for life”, according to its MD George Whyte. For the full story see page 22.

Also in this edition we explore the issue of gender diversity in OHS, which has historically been a profession that has been skewed towards the male demographic. It has been estimated that 75 per cent of the health and safety profession are men. But times are changing, according to a number of experts, including Richard Coleman, former GM HSE of Asciano and now CEO of The Interchange, who believes that there are real barriers to women’s success and they have to do more to achieve, and men are generally given an easier run. See page 12 for the full article.

In the leadership feature (page 28) of this issue, the Australian National University’s Andrew Hopkins explains that companies that set out to create a “safety culture” often expend huge amounts of resources trying to change the way operatives, foremen and women, and supervisory staff think and feel about safety. However, the results are often disappointing, and Hopkins says a far more effective strategy is to focus directly on “the way we do things around here”, which is one of the best-known definitions of culture.

Craig Donaldson, editor,
OHS Professional

“Safety performance and metrics often tell a different story about the leadership quality of a business and how important OHS really is”
Warning issued over safety in lead-up to Christmas

Workers are more likely to die in November and December than any other time of the year, according to WorkSafe Victoria. As such, the regulator has urged workers and employers to put safety first in the busy lead-up to Christmas to prevent workplace fatalities. Over the past decade almost 25 per cent of all workplace fatalities occurred in November and December. It is critical that employers and employees understand the risks associated with the busy pre-Christmas period and work together to prevent a workplace fatality, said WorkSafe executive director health and safety, Marnie Williams. “It is a tragic reality that this time of year is deadly for Victorian workers. Our statistics show almost 25 per cent of workplace fatalities occur in the final eight weeks of the year. Safety is everyone’s responsibility, so it’s up to all employers and workers to work together to make sure fatalities do not happen.”

Employers cautioned over piecemeal approach to sun protection

Employers and employees need to adopt much more comprehensive defences against sun damage, as new research has found that both are applying piecemeal approaches to protecting workers’ skin. While 55 per cent of Australian adults are employed in jobs that sometimes, regularly or always require them to be outdoors, almost a third of employees required to work outside report that their employers provide no sun protection at all. Just over half of outdoor workers say their employers do not provide sunscreen, while 65 per cent do not provide protective clothing and 74 per cent do not provide sunglasses. The survey was statistically representative of the Australian adult population and released by the Skin & Cancer Foundation in its 2016 Skin Health Australia Report Card.

Drug use posing testing challenges for resource employers

Employers in Australia’s mining and oil and gas sectors are under increasing pressure to manage the impacts of drugs and alcohol in the workplace as society’s general use and acceptance of illicit and prescription substances increases, according to a recent survey. The Australian Mines and Metals Association (AMMA) 2016 drug and alcohol testing survey reports qualitative and quantitative survey responses from 53 Australian resource employers, and also reveals only 40 per cent of respondents test for synthetic cannabis amid concerns about the ability of testing to keep up with rapidly changing substances. While employers are effectively managing the workplace risks, increased societal use of both illicit and prescription drugs is creating challenges, said AMMA’s director of workplace relations, Amanda Mansini.

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Different OHS philosophies and frameworks

It’s important to remain open to the strengths and weaknesses of different OHS frameworks in order to learn the most from them, writes Dave Clarke

I recently saw a comment on social media (very strongly supported, including by some health and safety people) that health and safety was “just %&$ common sense”. We know that common sense is a great start, but anyone who has worked in the field in any form of complex environment knows that constantly improving and protecting the health and wellbeing of a workforce requires a sophisticated mix of knowledge, experience and tools.

Our own profession may not have been helping with this perception in the past, with a historically strong focus on the linear processes of setting rules and monitoring compliance. Again, this is critically important, but only part of the story. An over-emphasis on this type of approach has made its contribution to the stereotyping of the health and safety profession as the safety policeman with the clipboard, telling people what they cannot do.

The profession has been addressing this issue for a while. It is now understood that the tools our people need to succeed need to include better understanding of individual and social psychology, individual and group decision making and how human behaviours affect organisational culture and health and safety outcomes. Getting the right outcomes requires a greater understanding of the science of health and safety and the psychology of health and safety.

“This isn’t simple. Our approaches to health and safety must merge these two elements, and this is a strong current focus. The profession is now exploring this in new ways, embodied in concepts that emerge to become a part of the discourse in training, conferences, literature, networking discussions and workplace health and safety programs. Examples include Behavioural Safety, Zero Harm, Safety I and Safety II, and Safety Differently, to name just a few.

The existence of these theories and their different approaches has created its own tension. Which is correct? Every healthy profession has emerging concepts and theories. It’s true that the health and safety profession has more than its share, but this is because the profession is still developing, and it is a profession that has an underpinning knowledge base which must straddle both science and psychology.

There is a natural tendency in the commentary of the health and safety profession for people to become strong supporters of one and critics of the rest, presuming that one is right and the rest are wrong. However, in a complex field it can take many years to develop the level of sophistication required with a conceptual framework, which can withstand the interpretations and limitations of those implementing it. Most conceptual frameworks also have inbuilt conceptual flaws, and how these are dealt with can be the determinant of success when applied at the shop floor. There are examples today of highly successful health and safety programs functioning within businesses under all of these frameworks, and there are also examples of failures.

The more these conceptual frameworks are evaluated, tested and researched, the more their strengths and weaknesses are understood. The task of the SIA is to provide the space for discussion on all of them, urging research and evaluation to build the evidence base. In a field where lives are at stake, building the evidence base for practice is one of the most important things of all.

Just as the practice of health and safety is not linear and solely process focused, it’s not likely there is a magical conceptual framework which answers all of our challenges and questions. Let’s remain open to the strengths and weaknesses of all of these programs. By staying open in this way, we will learn the most from all of them.”
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There is no doubt that “watercooler” and similar conversations in any Australian business, large or small, are an insight into the pulse of individuals and teams on all things that matter: including work health and safety. But it’s a very limited insight.

The knowledge and insights shared in these informal networks and interactions can be really valuable, but by their nature impossible to harness or aggregate in a way to make sense of them on a meaningful scale.

Yet, the information exchanged here is often used as the basis for leaders forming a view on the “way we do things around here”, including with respect to health and safety.

Sure, not the only source, but in my opinion anecdotes on safety culture – like those that come to ears of leaders from the “watercoolers” in their businesses – are too commonly used as a substitute for data and fact on safety culture and its relative strength.

In addition to the inherent biases in choosing which anecdotes are heard, in organisations that are operationally diverse and geographically dispersed there are significant barriers to this information being anything like representative of the thinking and behaviour of most people and teams.

In addition to the inherent biases in choosing which anecdotes are heard, in organisations that are operationally diverse and geographically dispersed there are significant barriers to this information being anything like representative of the thinking and behaviour of most people and teams. So even in organisations that are genuinely committed to go past the frequent, easy rhetoric of aspiring to “build a strong culture”, there is a strong reliance on assumptions as to what their culture actually is.

That must compromise or at least limit the programs that are designed to positively impact culture, and waste some of the resources, time and attention that go with those programs.

Part of the new challenge for health and safety practitioners is to genuinely add value to organisations in ways other than building ever-better management systems. Surely measuring safety culture is a good place to start.

Let’s work on the basis that the rationale for “why” measuring safety culture is easy enough to make and accept, then “how” and “what do we ask” are the two practical hurdles.

On the “how” question, focus groups haven’t been the same since being brilliantly parodied in The Hollowmen. And, while leader-led, one-on-one conversations are great to create trust, build engagement and establish what makes people tick, most senior leaders won’t have the bandwidth to have enough conversations to build a business-wide view on culture.

So for me, the humble survey represents a valid, reliable and repeatable method for providing a large number of people to opportunity to have their voice in health and safety heard. Make it digital and we can take a company, business division or team view and track change over time.

Measuring safety at Siemens

At Siemens Australia and New Zealand we’re poised to run our third organisation-wide safety culture survey in early 2017, following an original baseline in 2013 and follow-up in 2015.

We’ve partnered with GSI and used their safety culture index.

I believe that, to at least some extent, the questions contained in the culture survey or the theoretical model that those questions are based on is not so critical. Indeed, I think some of the inertia on measuring safety culture comes from wanting to have a universal model or approach which is proven to be effective.

Beyond deriving a score, the power in this approach for Siemens has been to demonstrate to our people that we want direct feedback on how we tackle and deliver on our promise to keep them safe and healthy at work. Not only that, but there must be a belief and demonstration that we will act on what they say. The significant increase we’ve had in participation from 2013 to 2015 is testament that our people are happy to respond when asked, and that they see the resulting action.

It also lets us quickly identify and focus on our weak cultural underbelly – those attributes that most of our people identify as limiting factors – and develop sustainable fixes.

That drives the first tangible benefit of making fact-based decisions on how we
allocate resources to things that both matter and make a difference.

The tool gives us instant leading indicators which provide balance to our lagging measures and that are, in my view, much more powerful than “transactional” leading indicators like “number of audits run” or “training run v planned”, which measure activity at best, not outcomes.

The final benefit is that this intent of measuring culture and responding to the results has underpinned a real and sustainable reduction in recordable injury frequency rates at Siemens: 67 per cent to date. So for us it’s clearly working.

While we still have some distance to go to achieve our aspirational targets, measuring our safety culture has been an indispensable lever of change.

David Scott is head of EHS and quality, Siemens Australia/New Zealand, and a member of OHS Professional’s editorial board.
The growing importance of safety through the supply chain

Organisations can take a number of steps to shine a light into the dark spaces of their supply chains in order to uncover and minimise OHS and other risks, writes Herbert Smith Freehills’ Steve Bell and Sam Witton

Imagine this. You are a construction manager for an Australian design and construction business. You are responsible for some of the most exciting buildings in Australia – new public buildings, hotels and office complexes. A major TV network screened an exposé alleging your organisation is complicit in the use of child labour to make soft furnishings that adorn lobbies in your buildings and that your buildings are riddled with harmful carcinogenic materials. You have no idea where these products came from, or the conditions in which they were made – should you?

In this article we explore the shadows at the end of the supply chains, setting out the current work health and safety legal duties, and ask the question: what might be next?

What are the issues?
The issues stem from the complexity of supply chains. This is caused by their length, the lack of visibility that the “final consumer” has to the end points of the chain and the disparate legal requirements across borders. The issues fall into two broad categories:

• the risk of exploitation of workers, poor working conditions and adverse impacts on health, safety and welfare of workers that are “out of sight and out of mind”;
• the safety of end consumers caused by the product.

On the worker side
Securing health and safety through global supply chains is not a new concept. As early as 1999, Naomi Klein in her seminal work, No Logo, painted a gloomy picture of the impacts of globalisation on the health and safety of workers at the end of far-flung supply chains.

Several tragic events, including the collapse of the Rana Plaza building in Bangladesh in 2013, have continued to highlight the issues that workers at the end of the chain suffer.

We have also seen increasingly agile NGOs and media outlets (quite rightly) seeking to shed light on working conditions for those at the end of global brand name supply chains, perhaps most poignantly with secret footage (ironically probably filmed on a smart phone) of the poor working conditions in factories producing electronic consumer goods to be shipped and sold far away from where they are produced.

On the consumer side
Closer to home, building products containing asbestos have made their way across the Australian border to be used in the construction of (among other things) new hospitals.

And who could forget “Raspberrygate” of 2015 where frozen berries potentially infected with hepatitis A led to widespread recalls of frozen fruit.

What are the common threads?
These very different issues share a common cause: those relying on dispersed supply chains don’t necessarily have enough visibility over the source of the product and, as a result, don’t know what they are ultimately getting or how it has come to them.

What is the legal position?
On the consumer side
The law in Australia in this space is in its relative infancy – although its reach is certainly growing. The Model Work Health and Safety Act (which has been enacted in all jurisdictions with the exception of Victoria and Western Australia) imposes duties “upstream” so that designers, suppliers and importers all owe duties to ensure, so far as is reasonably practicable, that goods they supply do not pose a risk to the health and safety of the end user. Supply chain safety has also been declared to be a priority area for Safe Work Australia’s strategy to 2022.

In road transport, specific laws have been adopted which require all parties in the transport chain to take reasonable steps to ensure that the way they require goods to be transported does not create risks to health and safety. It is proposed that these laws be expanded so that directors and other officers face increased responsibility for actions within the supply chains of their businesses (see the Heavy Vehicle National Law and Other Legislation Amendment Bill 2016 (Qld)).

“Several tragic events, including the collapse of the Rana Plaza building in Bangladesh in 2013, have continued to highlight the issues that workers at the end of the chain suffer”

However, these laws remain locally focused. The work health and safety regulators do not have extraterritorial powers and can only investigate matters within their state or territory. This does not facilitate enforcement through complex supply chains. It remains to be seen how the regulators will respond to issues of imported products and whether the courts will decide that it is reasonably practicable for the importer to do more than obtain a certificate to show that the goods do not contain harmful materials.

Interestingly, new laws proposed in the resources industry in Western Australia appear to extend the obligations of an end user, by proposing a specific provision that the resources facility operator must ensure
that any plant or structure design meets the safety and health requirements before the plant is manufactured and installed.

**On the worker side**

Further afield, steps have been taken to drive greater transparency in supply chains with a view to empowering end-consumers and regulating the behaviours of those involved in the supply chain.

An example is the *Transparency in Supply Chains Act 2010* (California), which requires retailers and manufacturers that do business in California (and that have a worldwide turnover of more than $US100 million) to disclose on their websites efforts to eradicate slavery and human trafficking from their direct supply chain for tangible goods offered for sale. Reporting is required in relation to five areas: verification; audits; certification; internal accountability; and training.

Another example is the *Modern Slavery Act 2015* (UK), which similarly requires all businesses supplying goods or services operating in the UK with global turnovers of GBP36 million and above to report on processes to combat slavery and trafficking. It goes further than the Californian legislation by (among other things) covering:
- all sectors, not just retail and manufacturing
- both goods and services (not just supply chains for goods).

**What might the future hold?**

In some respects the future is already here – some Australian companies are within the ~12,000 businesses estimated to be caught by the provisions of the UK legislation and must therefore report on the steps they have taken to combat slavery and trafficking.

Further legislation may also be forthcoming. In Australia, a Joint Standing Committee on Foreign Affairs, Defence and Trade reported in 2013 on the Inquiry into Slavery, Slavery-like Conditions and People Trafficking in its report *Trading Lives: Modern Day Human Trafficking*. It recommended (among other things) that a review be undertaken with a view to introducing legislation to improve transparency in supply chains. The government agreed with the recommendation in principle. A legislative response may follow in time.

In America, there is growing activism with claimants relying on statements that have been made in transparency disclosures – such as those required by the Californian and UK laws – to bring claims against organisations arguing that the disclosures were in some way misleading.

**What steps can be taken?**

So back to our example: should you know how the cushions were stitched and where the ceiling panels came from? The answer to both those questions is likely “yes” – if not to comply with legal obligations then to comply with good corporate citizenship requirements.

But this level of knowledge is hard. It likely requires:
- ongoing reviews and audits of the supply chain – whether through “on the ground” assessment or through the provision of detailed information from your supply chain partners and a “dip sample” of this information
- assessment that key products do not pose a risk to health and safety, including checks to verify the accuracy of compliance certificates for materials that potentially contain harmful substances
- appropriate due diligence and reporting to senior members of the organisation so that the leaders of the business can demonstrate they are across supply chain safety
- transparent reporting to external stakeholders to satisfy ongoing corporate citizenship requirements.

Undoubtedly, each of these steps adds costs. As an OHS professional there is a balance to be struck between the steps advocated for and the costs to the business of implementing those steps. In this case there is most likely a good business case for implementing the above steps, because the costs must be balanced against the reputational damage and resultant costs that can flow if that TV exposé materialises.

It may therefore be timely to shine a light into the dark spaces at the edge of your supply chain before an activist or aggrieved consumer does.

*Steve Bell is a partner and Sam Witton is a senior associate with Herbert Smith Freehills.*

*Steve is also a member of OHS Professional’s editorial board.*
Driving change: gender diversity in OHS

The OHS profession is becoming more gender diverse, and there are a number of steps women can take to get ahead both within organisations and in the broader profession, writes Craig Donaldson.

OHS has historically been a profession which has been skewed towards the male demographic. It has been estimated that 75 per cent of the health and safety profession are men, but times are changing, according to a number of experts.

Andi Csontos, HSE partner at EY, notes that OHS roles were born out of high-risk industries such as mining and energy, which are blue-collar, male-dominated work environments. When OHS legislation was introduced, these industries were among the first to enforce requirements, often seeking members of their workforce to act in safety superintendent roles and as health and safety representatives. “They provided them with training and kick-started the profession,” says Csontos.

“As the OHS profession evolved, we saw engineers engaged in the development of physical barriers and engineering controls to improve safety. Traditionally, engineering is also a male-dominated field. Hence, it is no surprise we have a skewed professional group, especially at the senior, experienced end of the career continuum.”

Kelly Lovely, a non-executive director for the Safety Institute of Australia, also observes that the OHS profession has not matured in a way that suits any type of diversity, whether it be gender, age or cultural diversity. “From my perspective, and this will be different across individuals and their industries – as it is a ‘hit or miss’ topic, the OHS profession has simply made itself, structurally, too inflexible and too set in its ways for women,” she says.

“There is a strong unconscious bias – and, too often enough, a conscious one – among men in OHS that women cannot effectively ‘do’ health and safety, and the lack of strong, high-profile
“I’ve seen men given trust until they fail and women earning trust when they succeed”
women willing to speak and champion the issue of gender inequity means the shortage of women has become obvious across the profession."

Each industry has different challenges for women, according to HSE director Australia for food services and facilities management multinational Sodexo, Ria Smith, who has worked in the medical industry, manufacturing and facilities management. "I have found that women have to work twice as hard to be recognised as talent, and it often takes longer for women to progress into leadership positions than for men," she says.

"Organisations should create opportunities to fast-track young talented women into roles that are challenging"

"It is also more difficult for women to be heard and get buy-in into their ideas, as men generally gain greater confidence from others. Unfortunately, women also experience hostility in the form of aggression, intimidation and harassment especially in male-dominated environments."

Richard Coleman, former GM HSE of Asciano and now CEO of The Interchange, a consulting firm which specialises in employee behaviour and organisational culture change, says that from a career pipeline perspective, the problem is not with the numbers of women choosing the profession. "It's been a failure of our leadership that we haven't helped them progress," he says. "I find that personally confronting, because I owe a great deal of my career success to two incredibly influential women who nurtured and mentored me. A woman took a punt on me straight out of university and gave me a meaningful and challenging job, beyond what my experience probably deserved, and later in my career another woman recognised in me a capacity for executive leadership outside of the profession and encouraged me to pursue those roles."

"What really fascinates me about the paucity of women senior executives in OHS is that the ones who do achieve those positions are often so much more qualified, experienced and talented than their male counterparts," says Coleman, who argues that this speaks to two key points: (1) there are real barriers to women's success and they have to do more to achieve, and (2) men are given an easier run. "I expect that point two might get a few noses out of joint, but it’s true. I’ve seen men given trust until they fail and women earning trust when they succeed. I’ve seen executive teams make assignment decisions based around limited information and assumptions about people based on gender and caring responsibilities. These are not done to deliberately discriminate but they are discriminatory."

"Slowly changing times"

There was – and continues to be – a shift in the demographics of OHS, with more females joining the profession, sometimes from a health or hygiene background or a psychology background, says Csontos. This is in response to the shift in approaches to OHS, with increased focus on health, mental health and softer skills. "However, most of these women are up to 10 to 15 years into their careers, whereas most males are now 20 to 30 years in. When we look for examples of leaders, most women are not there as they simply haven’t been around long enough," she says.

Csontos also notes that women remain in junior/lower-grade/part-time roles as they take a break to start families and/or fill carer roles for ill family and parents, whereas their male counterparts are less likely to break their career and consequently progress further. "Women may take a break and then struggle to return to work, re-engage in meaningful careers, often their skills become outdated or they lose confidence in their abilities having been out of employment. Needless to say, this is not just an OHS phenomenon," she says.

Although historically there has been a shortage of women in the OHS profession, Smith believes there has been improvement in the gender balance of females to males in safety roles. "There is still room for improvement as women are generally fairly represented in soft services and under-represented in hard services and heavy industry. I think that the historical under-representation of women in hard services and heavy industry has not only been in the OHS profession but across the board in most hard services and heavy industry roles. I do believe this is improving for all professions," she says.

Coleman says that the OHS profession has to realise that “we are only hearing white middle-aged male voices. It’s not lost on me the irony of being interviewed about this issue,” he says. "We should be doing everything we can to encourage, showcase and promote gender-diverse voices. I am a supporter of quotas. I’m not going to speak on panels without women."

"I’m adamant that the problems that come from single-voice perspectives are enormous but largely invisible to us. Our biases, because we work in this echo chamber of like perspectives, are definitely holding us back. I see it in terms of simply things like where we focus our efforts. I see it in those whose voices are considered authoritative," he says.

Making an organisational shift

For organisations and OHS leaders looking to increase gender diversity among their teams, there are a number of steps they can take, according to Lovely, who says OHS teams and individuals within organisations must do more to employ, create and think around the diversity norm – as the business case for the OHS profession is compelling. To make a start on gender equity, though, she says organisations should immediately:
• interview for diversity and, no matter what the role is, interview at least one female for every vacancy and succession-planning opportunity. “To get that candidate I have personally challenged recruiters, placed ads under the noses of allied health professionals like occupational therapists, nurses, exercise scientists, rehabilitation providers, physiotherapists and within the allied health schools at major universities, and I have reached out personally to tap on the shoulder of skilled women,” she says.

• build up their OHS teams with women

• put in place mentoring programs for new/young safety professionals (these should be in place for men and women, however)

• address the structural issues that occur inside organisations to allow for greater flexibility for women in safety, and address the glaring pay inequities that exist between women and men in the same role if and when they arise

• consider coaching & establishing rules of conduct for men when they have not been clear on the accepted and desirable behaviours of effectively working alongside women

• redesign position descriptions to ensure non-technical skills (like relationship building, team engagement) are included and heavily weighted to benefit women in safety

• call out unconscious bias in OHS when it arises – and it does often.

Within organisations, it is important to regularly and consistently check biases and assumptions about what women want and need in terms of work, Coleman observes. “Importantly, I think it’s about multiple one-on-one conversations – not just blanket gender-based decisions or policies. These are important, they are necessary but they are not sufficient. While we have to make sure we are not discriminating against women as a whole, we also have to make sure we are crafting individual careers to support people to grow and develop. This means having a really clear view of the skills, capabilities and career aspirations of everyone,” he says.

Csontos also says a multipronged approach is required – one that includes up-skilling and mentoring women in their roles, particularly before, during and after maternity leave. “Organisations should create opportunities to fast-track young talented women into roles that are challenging – if they show the potential, we should accelerate their development and experiences,” she says.

“Finally, we need to rethink the design of senior
roles to be flexible and remove biased/constraining structures and systems that naturally reward those who have been around the longest – and in OHS are, hence, more likely to be men. We should be asking at every opportunity: Does a senior leader have to show 20 plus years of experience? Does the best candidate always have the tenure? Does the role have to be full time? Are there alternative ways to design a role? We should allow blind recruitment and promotion, where the best candidate without knowing the sex is given the opportunity. We often see this practice results in far more diverse candidates.

Smith also believes organisations should provide greater opportunities for women to enter into safety roles, especially in heavy industries, and provide mentorship programs to graduates and young safety professionals. “There needs to be greater awareness of the business benefits of gender diversity. Executives should have visibility of the diversity of their workforce and set realistic objectives and plans to improve the gender balance within their organisations. Within teams, managers should encourage all members of the team to be heard, some may have a different approach to doing things, be more open to others’ ideas and really listen,” she says.

Making a professional shift
Smith believes it would be beneficial to establish a national safety forum for women with the aim of providing networking opportunities for women to share challenges and learn from others, to provide professional development opportunities and to link potential mentors and mentees. “Additional research identifying the blockages that may be preventing women from entering the OHS industry would be very helpful to unlock new pathways and actively increase numbers,” she says.

As an industry, Csontos also says there need to be stronger networks and forums for learning and development, and mentoring programs that help young adults learn from experienced seniors. “We need forums and networks to talk about diversity and equality, to debate the issue and critically examine our biases, conscious and unconscious. We need men in the room, they are the holders of the keys – we cannot progress in any way without the support, sponsorship and action of men," she says.

Coleman says that his experience of gender issues in safety is one of increasing awareness and discomfort. “I have been blind to this for much of my career, and less effective at doing things about it than I should have. Particularly around equal pay, I have led functions where there were significant differences in remuneration, and while I made efforts to align pay, it takes several years when you’re making even reasonably large percentage changes within an overall remuneration budget,” he says.

“For me the critical issue is awareness of personal bias and in particular in recruitment. What concerns me the most is the language of ‘meritocracy’, because while it’s superficially hard to argue with recruitment based on merit, merit is actually loaded with meaning and valued judgments. Managers need clarity about what merit means and what potential means in each organisation and how these promote or hinder women.”

Advice for aspiring women in OHS
In Csontos’ experience, she says a number of women won’t go for an opportunity unless they feel 100 per cent confident they will succeed. “They take less risks with their career than male counterparts, and it shows in the outcomes,” she says. “Men are far more likely to apply for a job regardless of if they meet gender balance and safety at Sodexo

Gender balance is an important issue at food services and facilities management multinational Sodexo, according to HSE director Australia Ria Smith, who says diversity and inclusion is at the heart of the organisation’s mission “to improve quality of life”.

Sodexo employs 420,000 people across 80 countries (including more than 4000 in Australia). In 2007, 16.5 per cent of Sodexo’s top 300 leaders were female, while this increased to 23 per cent in 2014 and is projected to stand at 40 per cent in 2025. “Within Sodexo’s Australian safety team, 43 per cent of the team is represented by women,” says Smith, who explains that she was fortunate to have had an excellent mentor early in her career who invested in her personal development. “and although he was hard as nails on me, he gave me an excellent opportunity to develop both technically and personally. “I have worked very hard, always went the extra mile and took pride in my work to ensure that I always met deadlines and achieved my objectives. Thinking ahead of the curve, offering solutions to potential issues, mitigating risk through strategic and practical approaches gave me the opportunity to demonstrate my skills and experience in this area and stand out as talent.”

Smith says she has acquired the necessary knowledge and skills to excel and obtained tertiary qualifications to give “confidence to myself and others that I was a master of my subject”, she explains. “Over the years, I developed very strong personal resilience to cope with challenges and have built strong relationships with my stakeholders to ensure that we could work effectively together to achieve common goals. I took a team approach and focused more on the outcome than getting credit. I have also built a strong team around me and personally invested in their development through ongoing mentorship; in the end, their success is my success. I succession planned to ensure that the business was comfortable to promote me to the next level without leaving a gap.”
Sodexo developed a gender balance in management study to determine whether gender-balanced entities (40 per cent to 60 per cent women in management) had higher key performance indicator results than those without the same balance. The results indicated that entities with gender-balanced management were 23 per cent more likely to show an increase in gross profit over the previous three consecutive years, and 13 per cent more likely to show consistent organic growth over the same timeframe.

Another report, conducted by global leadership consulting firm DDI, found that organisations which are among the most successful financially have almost double the number of female leaders of commercially underperforming businesses. It found that businesses which are among the top 20 per cent of financial performers indicated that 37 per cent of their leaders were women, compared to 19 per cent of female leaders in the bottom 20 per cent. The DDI report, Ready Now Leaders: Cultivating Women in Leadership to Meet Tomorrow’s Business Challenges, was based on responses from 1528 global HR executives and 3452 women leaders around the world, and found there were no significant differences between men and women related to skill and ability – yet women are still represented in leadership much lower than men.

Smith has learnt a number of lessons and shares some strategies for success:

• Consistently work hard and note that planning and preparation are key to success.
• Learn from mistakes and from others.
• Build your personal resilience, take time to objectively think and don’t react emotionally.
• Stay current on safety issues, as safety is very dynamic in nature.
• Relationships are critical to getting support for ideas and achieving goals.
• Network and get involved in safety associations to improve your visibility.
• Keep your skill set current and get tertiary qualified.
• Learn from more experienced professionals, seek out a mentor.
• Take a team approach, listen and respect others, focus more on the outcome than getting credit for an idea.
• Invest in your teams and succession plan.
• Be brave and believe in yourself.

The business case for gender diversity

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Time for OHS to understand the science of risk

Craig Donaldson speaks with risk control and safety management expert Derek Viner about his greatest professional achievements, challenges and goals, and the evolution of the OHS profession in Australia

What was your motivation for getting into OHS in the first place?

I became involved in the field of OHS by chance when I was a senior lecturer in the School of Engineering at the then Ballarat College of Advanced Education (BCAE). My department head, the late Tom Norwood, had attended a safety conference at which speakers were expressing the need for tertiary education in the field. At that time there were only some trade courses in safety being offered by technical colleges. As far as we knew (in those pre-www days), there was no tertiary education in safety anywhere in the world. Tom stood up and said that BCAE would be happy to develop such a course. At the time I was overseas studying, and when I returned Tom asked me to take the project over. The graduate diploma in Occupational Hazard Management was first presented a couple of years later, in 1979, and no one expected it to last for more than five years. It is still being offered. I’ll always recall one of the first intake of students asking me in front of the whole group, “what makes you think you can teach us anything about safety?”. The reality was that students contributed experience and we lecturers contributed structure and theory. The synergy greatly contributed to the development of a substantial base of concept and knowledge.

As course co-ordinator it was easy to get people to lecture on law, toxicology, statistics and so on, but there was no one able to lecture on the core subjects of accident phenomenology (what on earth is an accident?) nor risk philosophy (what is risk and how do we perceive and manage it?). So, by default, I had to develop and present courses in these subjects. There was almost no material of a tertiary standard and most ideas had to be developed from first principles. After a couple of years doing this I realised the need to get involved in the real world of industry to give the theory a good foundation, and so I left full-time work with the university and became a consultant, in 1981 I think it was.

What are your ongoing personal drivers in the OHS profession?

My motivation is to reduce the burden arising from our current lack of safety on those who are exposed to risk, and my interest remains because of the need to promote effective ideas to replace the old ones whose effectiveness is diminishing.

The field remains of interest to me, but not because I am still wondering what an accident is or because I am still trying to understand risk. Neither of these subjects is a mystery anymore. What remains a mystery for me and perhaps why I still find it of interest, is why it takes the community as a whole (legislators, OHS people, managers, industries, academics) so long to recognise and understand the underlying simplicity of “accident” and risk. Why do the boards of management and senior levels of management feel that their adherence to truly ancient industrial safety ideas is “right” and should be imposed on their organisation? Why do legislators still feel that there is little more to legislation than designing a bigger club with which to hit the PCBU and reiterate the roles and powers of the officials who wield it? Look at Queensland in the aftermath of the Dreamworld disaster, as a case in point. Consultation and the influence of Lord Robens is by now very old, but little has been done to think laterally since then.

Why are academics more interested in the complexity and mystery of the subject than in the underlying (and essentially simple) laws of nature and the effect of applying logic and science to understanding the uncertainty (risk) that underlies it all, and thereby allow organisations to concentrate on effective sharp-end control measures? I wish I knew!

The term agnotology (the study of culturally induced ignorance or doubt, particularly the publication of inaccurate or misleading scientific data) has been coined recently by a university psychologist and does much to bring all this into focus.

A big motivation for me to remain involved is to share my experience with those entering the field.
“I remember being enveloped by the acrid and poisonous fumes from a coke oven when on top of it and wondering for how long I could hold my breath”
Over the years my practical experience has covered almost every type of industry, local to state government and has taken me to three other countries. Add that to the theoretical discipline demanded by academia and throw in a little expert witness work and interface with insurance companies as spice, and one has a valuable mix. Apart from all of this, of course, it is the fact that if you get it right and stop stumbling up conceptual blind alleys (I see a lot of people up those alleys!) that you actually stop people being killed and hurt. This is a worthwhile profession with real meaning to real people. In this respect it can be likened to the medical profession. Occupationally speaking, they pick up where we fail.

What do you consider your greatest professional achievements?
Certainly, the most gratifying was taking an (well managed) integrated steel plant from a state in which multiple fatalities and very serious injuries occurred every year to none of them in a matter of about one year. To be honest, all I did was to tell the CEO and his general managers how to think about the problem, how to look at their workplaces and what to do about it, and they did the rest. Their minds were not hindered by old safety preconceptions.

People tell me my academic work has had a major influence on the mindset and subsequent practice of students over the decades. If true, that of course makes me very pleased. Certainly, I'm pleased to see that many ideas I've put forward to students over the years are now mainstream thought in places – examples being energy damage and risk, distinguishing between operational risks and general risks, hazard management plans in structured risk-management programs, quantified risk estimation and what has come to be called the “bow-tie” diagram.

What would you say has been your greatest professional challenge?
As a consultant, trying really hard over many months to think of how to help an organisation whose management style and capability resisted every single idea I came up with – a huge bureaucracy absolutely incapable of change. I never did succeed.

What are some of the most interesting reflections in your professional life?
I've nearly been killed twice. Once I was very nearly blown up in a deep hard rock mine, when in the company of the safety officer – I called him the danger officer after that.

On another occasion one of Tasmania's beautiful and very giant trees very nearly killed a group of us – it landed exactly where we had been standing a few moments before it hit. Maybe it was getting its own back for mankind's destruction of some of the stunning forests there?

I remember being enveloped by the acrid and poisonous fumes from a coke oven when on top of it and wondering for how long I could hold my breath.

What is your view on the state of the OHS profession globally, and how does Australia compare?
I'll confess disappointment that in the last 35 years, “OHS” has shied away from the hard choices of engaging with its science and so elevating itself to a truly professional activity in favour of a comfortable slide sideways into an enhanced version of the 1940s safety officer. This is despite the excellent and world-leading efforts of the SIA. We're still using Safety Officer 1.1, whereas by now we could have been beta testing Safety Professional 10.4.

Obviously I need to generalise here, but OHS seems to have become big business for training and certifying organisations and a large consumer of routine processes like induction and committee meetings. There is not much evidence of the profession being seen as the provider of better management advice or making much of a contribution to safety management strategies nationally.

Nevertheless, I think that Australia compares well with what I am aware of internationally, in that there are notable places where the profession is being allowed to assist in high-level management decision-making, for example, in the mining industry, which is itself managing this field on an international scale.

What do you believe OHS professionals can do to take the profession to the next level?
If OHS people are to remain as providers of induction, runners of safety committees and investigators of accidents using proprietary methods and approaches imposed on them by higher levels of management, the profession will not advance. The answer to what could promote movement away from this is evident in part in what I have said in previous paragraphs.

In part, also, the answer lies in a different form of federal and state leadership. As a small indication, imagine if to be an OHS adviser (let's call it that) you had to have certain qualifications and experience. For example, as they do in the state of Maharashtra in India – if you want to advise in an industry you need to have a bachelor's degree relevant to that industry (say in science or engineering or whatever) and at least 10 years’ experience in it.

As a strategy to improve the quality of OHS advice, I don't think the answer lies in government promoting the documentation of OHS knowledge, it lies in ensuring that OHS is a possible high quality specialisation on top of existing mainstream undergraduate degrees. As in all professions, tertiary

“Our employees often come up with some of the best and most innovative ideas that we hadn’t thought of before”
education should be based on principles that will stand the test of time, not on recounting existing knowledge.

Is there an absence of science in current OHS decision-making? If so, why and where?

There is no doubt in my mind that science can be usefully applied to the field of OHS. First, in the matter of decision-making when faced with uncertainty. Significant (meaning expensive) risk-related decisions are being made in industry using the risk matrix as the justifying tool, no doubt by a very risk-averse decision maker. What if one does say no to the expenditure? What if the OHS people or others proposing the change have not researched the options well? I think science and a logical and systematic approach can do much to assist here, using formal risk analysis and formal risk estimation with Monte Carlo simulation leading to a cost-benefit analysis under uncertainty. This also means that managers and accountants need a basic understanding of risk.

Second, the reality of and science behind human error appears to have been largely ignored in understanding prevention strategies. As a result, we still have error-prone strategies in place, with blame in close formation. Third, the very important role of engineering design strategies and of reliability and maintenance activities in the maintenance of them has not been recognised. The tragedy in Dreamworld is apparently a recent case in point.

How can this be improved in practice, and what is the role of OHS in this?

It has been put to me by engineers who are exposed to the, let’s face it, primitive methods espoused by OHS practitioners that they, the engineers, would benefit greatly from the availability of a nationally approved protocol for numerical support of risk decision-making, namely one that would give their managers comfort that the methods were “correct”. As it is, they have to rely on the principles I have been teaching them and hope that I am correct.

An OHS professional could assist if they understood risk decision-making principles, the science of human error and had a smattering of reliability knowledge, but this assumes an adequate grounding in scientific logic, mathematics and statistics, not to mention the technology of the system to which this is applied.
“When I’m asked what keeps me awake at night, I always respond ‘the safety of our people’, particularly when we’re working on specific projects or large-scale jobs”
Walking the safety talk: leading safety at Aggreko

Power supply multinational Aggreko recently achieved a milestone of one million man-hours, or two years, without an LTI. Craig Donaldson speaks with the company’s AusPac MD and QHSE manager about its holistic approach to OHS and how it drives effective safety outcomes.

Aggreko is a global provider of modular, mobile power and adjacent product solutions. It employs more than 7300 people from 204 locations around the world and has customers in about 100 countries. Headquartered in Scotland and listed on the London Stock Exchange, its 2015 financial year revenue was £1.56 billion ($2.7 billion).

The group measures its overall performance based on five key performance indicators (KPIs): safety, followed by staff turnover, customer loyalty, earnings per share and return on capital employed (ROCE). The main KPI Aggreko uses to measure safety performance is the Frequency Accident Rating (FAR), which is calculated as the number of lost time accidents multiplied by 200,000 (being the base for 100 employees working 40 hours per week, 50 weeks per year) divided by the total hours worked. In 2015, the group’s FAR was 0.39 (this compares favourably to the benchmark of 1.0 reported for the US commercial and industrial machinery and equipment rental and leasing sector, published by the US Department of Labor in 2014). Globally, Aggreko’s FAR has fallen from 0.40 in 2014, 0.68 in 2013, 0.94 in 2012 and 0.98 in 2011.

Locally, Aggreko AusPac recently achieved a milestone of one million man-hours, or two years, without a Lost Time Injury (LTI). George Whyte, managing director Aggreko AusPac, explains that the company’s motto is “safety for life”, and it is committed to sustaining a zero harm environment. “Our objective is to operate in a safe, responsible manner which protects the environment as well as safeguarding the health and safety of our employees, our customers and the communities in which we operate. We work diligently to prevent all incidents by engaging with employees and educating them in the implementation of policies and procedures,” says Whyte, who adds that Aggreko’s customers’ health and safety standards are also an important factor in upholding and improving company practices.

“We work closely as an executive team on different strategies to manage and mitigate risks or incidents throughout the business and are committed to promoting a culture and maintaining a framework that ensures continual improvements in environmental, health and safety performance.”

Leading OHS

“When I’m asked what keeps me awake at night, I always respond ‘the safety of our people’, particularly when we’re working on specific projects or large-scale jobs,” says Whyte. “As a priority, we always kick-off our internal meetings with a safety tip, which has now become a natural part of process. Our executive team participate regularly in management safety walks – which are also built in to our safety KPIs – and encourage everyone to observe and report any positive or other safety practices immediately.”

About Aggreko

Aggreko is a global provider of modular, mobile power and adjacent product solutions. Headquartered in Scotland and listed on the London Stock Exchange FTSE100, its 2015 financial year revenues stood at £1.56 billion ($2.7 billion), profit was £270 million ($454 million) and return on capital employed was 16 per cent. It has customers in about 100 countries and employs more than 7300 people from 204 locations around the world. It is comprised of two business units: rental solutions (in which its equipment is hired out to customers, mostly in oil and gas, petrochemical and refining, mining and events) and power solutions (in which it installs and operates modular, mobile power plants for both utility and industrial customers).

George Whyte, managing director of Aggreko AusPac, says customers’ OHS standards are an important factor in upholding and improving company practices.
Whyte explains that Aggreko has also become more transparent with health and safety records, providing greater visibility on results for shareholders and investors. “We are constantly focused on/striving for zero incidents, and are always looking at new ways technology can help and improve our safety practices,” he says. “We are also working in partnership with stakeholders including suppliers, customers, subcontractors and agents, to develop safe, reliable and sustainable products and services to the marketplace, while ensuring all environmental issues of concern are addressed wherever possible.”

Tasked with overseeing QHSE for the Australia/Pacific region, David Richards helps promote and implement safe approaches to work across all Aggreko sites, offices and depots. “My role is to communicate through the business, safety committees, internal meetings, podcasts and our monthly newsletter, ensuring everyone has a channel to receive current and relevant QHSE information. I try to stay connected with all employees in person as much as possible, so I can observe all practices first hand,” he says.

Management safety walks
Aggreko takes a top-down approach to OHS, which is driven from the CEO down through the senior leadership teams, and Richards explains that one of the ways this is achieved is through management safety walks. These put managers in the operations areas of the business to observe and understand work practices, operations in progress and gain a better appreciation of the general working environment.

“They essentially provide an opportunity to discuss ways to enhance safety with the employees directly involved and help to demonstrate Aggreko’s commitment to continued improvement in our safety performance. Safety walks must be seen by all as a partnership between management and employees focusing on safety improvement,” says Richards, who explains that more than 330 safety observations and interventions have been conducted over the past eight months, and 54 management safety walks carried out by an eight-person executive management team across more than 18 locations.

Engaging conversations with employees are an essential part of the safety walk and provide managers with a good understanding of the overall effectiveness of the safety effort, he adds. “The individuals closest to the work activities know better than anyone the hazards associated and how well the current controls are working – and remember to keep questions ‘open’. When employees see themselves as partners in safety improvement and a genuine part of the safety solution, they will contribute in a positive way.”

Safety systems
Aggreko has implemented a comprehensive global environmental, health and safety management system that standardises best operating practices, objectives, data collection, reporting, audits, performance indicators and goals.

Aggreko has also introduced a new HSE mobile app to encourage easier and real-time reporting of risks and positive safety observations. The app is pushed out to all company-provided devices and can also be downloaded to personal devices, and it can be utilised offline and there is functionality to attach photos to enable better understanding of the risks and issues being faced.

“All risks and incidents go onto a global database which we can then utilise to analyse the data and focus on the areas and provide resources to mitigate the risks, and through this system we can share best practice where an issue has been raised which may have a global impact. It also provides us tracking of one of our leading key performance indicators which is risk reporting, and a lagging indicator which is actual incidents..."
that have occurred,” he says.

Aggreko also has safety management systems with accreditation for ISO 9001 for quality, ISO 14001 for environmental management and 18001 for occupational health and safety – “this shows our customers that we are operating to a system that ensures we assess and manage our risks,” says Richards.

Another important contributor to safe behaviour is Aggreko’s “Orange Rules”, which focus on modifying worker and supervisor behaviours in the workplace by raising awareness of activities which are most likely to result in serious or major injuries and fatalities. For Aggreko, these include working safely with energy; working at heights; controlling lifting activities; driving safely in a vehicle; dealing with fatigue; and preventing slips, trips and falls. “They also highlight simple actions individuals can take to protect themselves and others. Orange Rules are intended to supplement and support the existing company management systems,” says Richards.

**OHS risks and challenges**

Aggreko’s business involves the frequent movement of heavy equipment that, in its operation, produces lethal voltages of electricity and contains thousands of litres of fuel, and which is often operated in dangerous environments. Rigorous safety processes are essential to avoid accidents or incidents, and safety processes are also a basic benchmark of operational disciplines globally.

Due to the electrical licensing requirements in Australia this does provide some level of safety when working with energy, and further to this, Richards says Aggreko has developed energy safety rules which are designed to ensure that people working on its equipment and systems are safe from potentially hazardous sources of energy, such as
electrical, mechanical and pressurised systems. The energy safety rules introduce a number of processes, which are mandatory across the Aggreko group globally, including an Electrical Certification and Authorisation Matrix (ECAM) and Gas Certification and Authorisation Matrix (GCAM). Richards says ECAM and GCAM are designed to manage Aggreko’s electrical and gas compliance, with a view to having competent people carry out those tasks.

The energy safety rules take a risk-based approach to controlling personal exposure to potentially hazardous sources of energy – the most simplistic control measure being the application of Lock out Tag out (LOTO), which enables self-management of the secure isolation, typically associated with standard lower-risk activities. “As the complexity of the activity or the level of energy increases – and as such the level of risk – the need to control the secure isolation of energy in a more formalised manner becomes necessary,” he says. This formalised approach is through the issue and receipt of safety documents, such as Permit to Work (PTW), Sanction for Test (SFT) and Limitation of Access (LOA).

“ECAM is a key part of our operational business and outlines the specific requirements for individuals to work on various Aggreko electrical equipment and systems,” says Richards, who explains that ECAM is the standard system Aggreko uses to manage, control and authorise its employees working on electrical systems ranging from low-voltage to extra high-voltage equipment and associated systems.

“ECAM has a robust competence and authorisation tracking mechanism that utilises external standards and benchmarking. This is to ensure that the business has a more transparent view of the competence and authorisation levels of its employees working on Aggreko electrical equipment and systems.” Other OHS risks in Aggreko include manual handling, through cables, materials, machinery and the like. “Mechanical aids are not always available in some areas, putting workers at risk with heavy lifting and moving of equipment,” he says.

A third major risk, particularly in Australia, revolves around driving. Richards adds. “We have a high number of vehicles driving in harsh and remote environments for long periods, which are at risk of other drivers, unpredictable weather and of course wildlife such as kangaroos.”
LEADERSHIP

Why safety cultures don’t work

Companies that set out to create a “safety culture” often expend huge amounts of resources trying to change the way operatives, foremen and women, and supervisory staff think and feel about safety. The results are often disappointing. A far more effective strategy is to focus directly on “the way we do things around here”, which is after all one of the best-known definitions of culture. This focuses on what people do, not on what they think. What people do is something company leadership can indeed control, while what people think is neither here nor there.

A clear example of how “the way we do things around here” can change is seatbelt legislation. I remember very clearly a time when the small minority of people who used seatbelts would be thought of as fusspots. Seatbelt avoiders may have been aware of the statistics that proved seatbelts save lives, but not having been injured in a car crash themselves, or knowing personally anyone who had, such evidence could be ignored.

Then in many countries wearing seatbelts became the law. Since refusing to wear them brought unpleasant consequences, people started belting up. At first there was grumbling, then it became habitual. Now most people think and feel that it is correct and sensible to wear seatbelts. Faced with a new reality (wear seatbelts or get fined), people – eventually – updated their perception of it (“seatbelts are a good idea”). Interestingly, then, the focus on changing behaviour ended up changing the way people think.

This dynamic has been shown to work in industry, even in oil and gas. In the last 30 years the focus on personal safety has produced a marked change. In some operational environments, such as drilling, it used to be a badge of honour to have lost a finger. Now, thanks to a persistent, top-down, “this is the way we do things around here” insistence on certain behaviours, that is no longer the case.

Four years on from Macondo, however, evidence of a similar groundshift in the realm of major incidents is very hard to find.

Left to their own devices

The drilling industry is highly focused on speed – drilling as many feet per day as possible – while hydrocarbon production is focused on maximising output. Bonuses, supervisory responses, and quarterly and yearly results all bring enormous pressure to bear on reinforcing and intensifying those focal points.

Meanwhile, left to their own devices, people will set out for themselves “the way we do things around here”, and it will be based on experience, which is the most powerful learning mechanism nature supplies. Because major accidents are extremely rare, they figure, statistically speaking, in almost nobody’s experience. So in order to produce the results required from on high, people take shortcuts and even deviate from best practice when the chances of penalties seem remote. For instance, they may rely on just one well barrier when theoretically two or three are required because, in their experience, that has always worked before.

For the offshore oil and gas sector, “the way we do things around here” has not even begun to grapple with the prevention of major accidents. That is just a fact, no matter what companies say. There has been much talk recently about “high-reliability organisations” (HROs), with the airline industry an oft-cited example. It’s true that HROs represent an ideal, but it’s equally true that some organisations and sectors are much, much closer to this ideal than others.

One sector I’ve studied closely is air traffic control. A bread-and-butter requirement of this industry is to maximise the number of take-offs and landings that occur at a busy airport.
“Stories are so powerful because they convert raw data into pictures and feelings, which our brains are hardwired to receive”
But overriding that is the absolute, inviolable necessity to prevent a mid-air collision which, from the air traffic controller’s point of view, is the worst conceivable outcome.

It’s also extremely rare for two large aircraft to collide. The last such event occurred in 2002 when a Bashkirian Airlines jet carrying 60 passengers and nine crew collided with a DHL aircraft over Überlingen, Germany. The error, attributed to Swiss air traffic control, led to the deaths of all 71 people on board the two planes. As if it were not tragic enough, the incident had a shocking coda when, in 2004, a man – a husband and father to some of the victims – murdered, out of revenge, an air traffic controller on duty at the time of the accident.

Such events may be extremely rare, rarer by far than catastrophic events in the oil and gas sector, but still the air traffic control industry is totally focused on them. How might that “total focus” be measured? The following is one instance. A key indicator of how safe the airways are is whether aircraft remain separated from each other by the requisite distance, let us say, two miles. Using that figure, if two or more aircraft come within one-and-a-half miles of each other, that’s called a “breakdown of separation” and, although the planes are still a long way away from each other, it’s considered a serious failure of process and a precursor event to a major accident.

It’s accurate to say that the air traffic control sector is obsessed with breakdowns of separation – it is the single-most important indicator within the air traffic control fraternity. Each incident is recorded, charted and studied very carefully. Movements up or down in the rate of their occurrence are analysed closely.

This is a clear example of the way a high-reliability organisation operates. It works out what the most catastrophic event is likely to be, regardless of how rare such events are in recent experience, and devises good indicators of how well the prevention of that catastrophe is being managed. It is a way of thinking that is highly unusual in the oil and gas industry.

We’re trying to get organisations to develop adequate process safety indicators, but we haven’t got very far. Take drilling: if the hazard of greatest concern is the blowout, then one obvious precursor event is the well kick, when the drillers temporarily lose control of the well. The drilling industry should measure and monitor well kicks closely, and not only kicks but the time it takes to recognise them. At Macondo, the drillers experienced a kick a month earlier and it had taken them 30 minutes or so to recognise it, which is far too long.

Another indicator could be cementing failures. It has been estimated that approximately half the blowouts in the Gulf of Mexico are preceded by cementing failures so, again, these should be treated as precursors to catastrophe and studied carefully. But treating kicks and cementing failures as seriously as air traffic controllers treat breakdowns of separation will strike many as something like overkill.

There are other indicators that could be studied as precursors to catastrophe, such as the ratio of planned maintenance activity to unplanned or breakdown maintenance activity, or the number of authorisations granted to override or decommission safety systems for seemingly justifiable operational reasons.

All of these are indications of increased risk. How sensitive an organisation is to risk can be measured by how seriously it takes this increase. If you are going to take these things seriously then you count them, and you make sure the numbers you are getting are accurate. It is that simple. Identifying, counting and managing these indicators is the urgent need.

What can managers do?
The trouble – or, put more optimistically, the challenge – is that the further upstream in the causal process you set the precursor event, the more tenuous is its connection with the catastrophe you are trying to prevent, and the tougher it is to get people to take it seriously. The good news, however, is that companies can make people take things seriously. Operational discipline is very familiar territory for business leaders. Changing the way people think is

“If a CEO is really concerned, he or she will set up a structure that gives prominence to this heightened sensitivity to risk”
nigh impossible, but setting up organisational structures that monitor compliance with procedure, even if that procedure is seen as redundant or unnecessary, is doable.

To some extent this involves a shift in focus away from production and towards the management of effective procedure. This shift will be difficult for the oil and gas sector, but it is what high-reliability organisations and sectors do. If a CEO is really concerned, he or she will set up a structure that gives prominence to this heightened sensitivity to risk. There will be strong, functional lines focused on process safety that report right to the top of the organisation – to him or her, in fact.

Prior to Macondo, BP’s process safety structure was decentralised. The safety experts had very little power. They lacked strong reporting lines to the centre and answered to commercial managers who tended to put production ahead of engineering excellence. After Macondo, BP reversed this. Now, what I call the “voices of safety” are powerful and heard loud and clear in the boardroom.

Instilling operational discipline will make more sense to corporate leaders, and will be more effective than trying to instil a safety culture, but it is still a prickly nettle to grasp. Identifying the upstream risk indicators, counting them, measuring them and monitoring the response to them takes vast resources in terms of money, time and talent.

Other things like incentives need to be rethought. Performance agreements and bonuses now reinforce the priorities of speed and production. They’ve been made to reinforce personal safety in recent years. They need now to be rethought again to incentivise the avoidance of catastrophe.

There is a cultural aspect to the effort, as well. The oil and gas sector should be telling the stories, over and over again, of the iconic accidents relevant to the industry. Storytelling is a powerful way of educating and reinforcing attitudes.

In air traffic control, the iconic story is still Überlingen. Recently, I was doing some work with air traffic controllers in Melbourne and an event occurred that was recognised as a remote precursor to an accident. Immediately, managers mobilised and the name on everybody’s minds – and I know because it was on people’s lips as well – was “Überlingen”.

Those people were super-sensitive to any hint of similarities in circumstance to that tragedy. It was unforgettable anyway, but its “unforgettable” had also been intentionally harnessed, to useful effect, in a way that the oil and gas industry’s unforgettable accidents such as Piper Alpha and Macondo, generally, have not.

As a rule I avoid naming companies because there are pockets of best-practice in any company, and also because companies go through cycles and are often very good in the years following an accident. But on the storytelling front, Shell is doing something very impressive.

They have identified a set of process safety basic requirements and they have linked each of these with a major accident. One concerns the safe siting of portable occupied buildings, which is one of the critical lessons coming out of the Texas City refinery fire of 2005 in which 15 workers were killed. Another stipulates emergency shutdown valves on platform risers, which stop the flow of hydrocarbons to an offshore platform coming from other sources. The reference here is Piper Alpha, where the fire was fed for hours by fuel piped in from another platform.

Stories are so powerful because they convert raw data into pictures and feelings, which our brains are hardwired to receive.

Offshore regulators have a crucial role to play, because when they say what “the way things are done around here” must look like, the industry has to listen. To get the companies to focus on major hazard risk you need to get the regulators to focus on major hazard risk. In some countries they have already pushed behaviour in certain directions, by requiring gas releases to be recorded and reported, for instance. That is a step in the right direction, but a gas release is still too close to a catastrophic event. The further upstream in the causal process you set the precursor event, the better.

Many regulatory regimes, however, particularly that of the US, are not functioning as they ought to. Regulators need to be highly skilled and resourced and must be able to match the best minds in industry in order to have competent discussions about the risk-management strategies of the corporations. In the US they’re not doing that yet. The best practice recognised worldwide is the safety case regime, in use in the UK and Norway.

To conclude I’ll say that culture change, if it is to mean anything at all, emanates from the top. The leadership of a company must put in place systems to ensure it is getting the behaviour it wants. It is not cheap, nor is it easy, but it works. The fashion for “safety culture”, insofar as it relies on a campaign for hearts and minds, is at best wishful thinking and at worst a thinly disguised version of the blame-the-worker strategy which we’ve been combatting for years.

“\textbf{We’re trying to get organisations to develop adequate process safety indicators, but we haven’t got very far}”

Andrew Hopkins is Emeritus Professor of Sociology at Australian National University in Canberra. His books include Disastrous Decisions: The Human and Organisational Causes of the Gulf of Mexico Blowout, and Failure to Learn: The BP Texas City Refinery Disaster.
OHS disruption in the spotlight

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

The annual SIA National Safety Convention brought together stakeholders in the health and safety profession including business, regulators and unions, to talk about what’s working with existing approaches as well as new ideas and leadership. Held from 6 to 7 September 2016 at Sydney Showground, Sydney Olympic Park, the convention was complemented by a series of events including the OHS Education Awards, the annual Eric Wigglesworth Memorial Lecture, conference dinner, SIA annual general meeting, an OHS leaders’ and CEOs’ breakfast, as well as the Women in Leadership Forum.

What are the big trends on the horizon for OHS?

One of the speakers at the convention was KPMG partner and demographer Bernard Salt, who observed that as the economy shifts from a reliance on mining and infrastructure to a focus on knowledge-based work over the coming decade, mental health and wellbeing in the workplace will be increasingly important issues for OHS.

“In the burgeoning knowledge-worker industries there will be less of a focus on workplace accidents and a stronger focus on mental health and managing stress and pressure in the future,” he said. “I did some work maybe six or seven years ago where I interviewed office workers, and a surprising proportion of them made the comment to me – which I found very sad – that they felt lonely and disconnected in the workplace.”

Given the trend towards remote working and the rise of what is called the “office nomad”, where people can work from home or a client’s office, hotel or airport lounge, Salt said this potential for disconnection from other people is heightened. “There’s a disconnection from the workplace tribe that provides almost like a familial support network, so inclusivity and connectivity in a workplace that is increasingly remote will be more of a focus,” he said.

With the ageing of the workforce, there will be more mature-age employees in the workplace – which will also present specific challenges for OHS professionals. “In industries such as warehousing, logistics or even hospitals, where nurses could be lifting, bending over and picking up things, for example, exposure to stresses and strains will be felt on older bodies,” said Salt. Similarly, truck drivers tend to suffer from muscular and skeletal problems past the age of 50, according to Salt, who said companies ideally need suitable employment policies for truck drivers between the ages of 25 and 48.

“After the age of 50, they’ll need to find other duties which do not involve long-haul trucking, which would expose a company to OHS risks,” he said.

Salt also spoke about the rise of robotics and artificial intelligence, and downplayed some of the more dire predictions about their impact on the workplace. He noted that over the past 15 years the Australian workforce has increased by 3 million workers while unemployment has dropped from 6 per cent in 2000 to about 5.8 per cent today. “So there has been an increase in use of artificial intelligence and deployment of robots – with significant structural change in some industries such as car manufacturing, for example. So there might be fewer jobs on assembly lines, but the Australian workforce is just as employed as it ever was – in fact, there’s more people employed.

“There’s an argument that there are more people working part time than full time, which may well be the case, but my argument is that part time actually suits a lot of people. Some people might want more full-time employment, but basically the workforce is very resilient and very adaptable. If you lose your job on a car assembly line, or in a gold or iron ore mine, what seems to be happening is that workers are finding jobs in other industries and the industries that are burgeoning are certainly health, education, professional services and personal services in particular.

“So we might be working in occupations that preceding generations might not have regarded as glamorous, but in fact, I think we are working in jobs that we want to work in rather than jobs that we have to work in,” said Salt.

These kinds of changes are now a permanent feature of Australian society, and he said OHS professionals need to accept this kind of change as reality. “It is not a matter of waiting for a robotic or artificial intelligence revolution, and then waiting for calmness on the other side. There is continual churn and change, so it’s about being able to adapt to whatever circumstances arise. We need to simply manage whatever work we choose to do in a safe and fulfilling way,” said Salt, who asserted that HR and OHS need to work hand in glove to mitigate safety risks in the future.
“At the end of the day, what we want is a productive, content and safe workforce that actually delivers quality output – and not just from a brutal, commercial point of view, but from the perspective of a society whose people are safe, engaged and hopefully happy in their work.”

3 big trends that will impact OHS in the future

Peter Gahan, director of the Centre for Workplace Leadership and professor of management at the University of Melbourne, also spoke at the convention. He said there are three significant trends impacting the practice of OHS, and professionals will need to think more systematically about health and safety issues that will arise as a result of these trends over the coming years.

The first trend is technological disruption, which will impact a range of areas both in and outside of the business world. We need to simply manage whatever work we choose to do in a safe and fulfilling way. “Technology is a key driver of the future, because of its effects and how it will disrupt the way things are done,” he said. “We know there are a lot of things happening around this, from how automation is creating and destroying jobs, through to more disruptive impacts and start-ups like Uber and Airbnb, on established incumbents.”

Gahan said technology will also increase scope for virtual work or telework to a range of different areas. “There are some potential workplace health and safety issues that need to be addressed as a consequence of those,” he said.

Another significant trend is around the rise and fall of specific jobs, according to Gahan, who said this will be linked to emerging consumer demand for specific goods and services. “For example, we know we’ve got an ageing population, and with that, an ageing workforce, a more age-diverse workforce,” he said.

There are a number of services that an ageing population will want, and Gahan said the delivery of these services will not be replaced by robots. “These are often person-to-person type services, and individuals will be involved in the delivery of those. Having a more age-diverse workforce presents a range of different challenges for organisations, including some OHS ones, particularly in occupations that have a degree of physical or manual components to the way they work.”

Gahan also said that issues such as global warming and environmental change mean that natural resources will become more valuable with their use and protection. “A range of sources predict that there are a number of jobs that are likely to emerge in certain areas of natural
resources, urban planning and urban environments. Those sorts of jobs potentially raise very different occupational health and safety-type issues."

Another significant issue in the future will be population growth, and Gahan said that cities around the world will continue to get bigger. “Sydney, for example, is about to hit 5 million, and Melbourne is catching up and also about to hit 5 million. These are big cities, and this is a phenomenon happening around the world. We are seeing large cities get larger and small cities get smaller. It means that when you’ve got really large cities, to get infrastructure to work, it’s got to be better and there’s got to be more of it. So building and construction is a growth industry, but think about where we locate workers in large growing cities.

“If we’re focusing in on CBD areas as core points for people to work, then, obviously, you’ve got issues around transport, commuting, safety and a whole range of issues that are likely to have a whole range of consequences for workplace health and safety. A lot of organisations are beginning to think about, ‘how do we distribute our workforce differently as cities get larger? Can we utilise different types of teleworking or distributive working to make that more effective?’ So workplace health and safety probably needs to be thought about more systematically in light of these issues, and the OHS issues that are likely to arise as a result,” he said.

Unique ways OHS professionals can add value
OHS professionals need to think more holistically about their role and how they can add value as both a business function and a broader profession, according to global safety educator, researcher and consultant Dr David Borys, who also spoke at the convention. While OHS professionals genuinely wish to add value, he said one particular dilemma they face is how “value” is defined, who gets to define it, and what it actually means.

“Society, shareholders, managers and workers may all define it differently,” said Borys, who currently serves as adjunct associate professor of RMIT University and adjunct teaching instructor at East Carolina University in the USA. “For example, it could be argued that businesses who invest in OHS professionals expect to see cost savings in return. “These savings could be related to lower rates of fatalities, injuries, disease and ill-health and/or increased productivity and a contribution to the business’s bottom line.” One aspect of adding value then, rests on what OHS professionals “do”, according to Borys. With this in mind, he suggested OHS professionals adopt three approaches to add value from a more holistic perspective – the first of which is to become experts in waste management.

“Rather than continuing to add to the OHS bureaucracy, be prepared to ruthlessly remove the OHS bureaucratic waste – often found in the form of lengthy and complicated rules and procedures,” he said. “Stop rolling stuff out and instead roll stuff back and out of the business.”

The second step is to become gap management experts, according to Borys, who said this means helping the business to understand and manage the gap between “work-as-imagined” and “work-as-done”. “Talk to workers about their work and the extent to which they adapt what they do in response to difficulties posed by their work environment. This knowledge will allow the organisation to change the work environment and make it easier for workers to do their work – all before anything goes wrong.” Such an approach will return benefits to the business in terms of satisfied workers, increased productivity and decreased risk, he said.

The third step is to become “evaluation experts”. “Now that the vital few processes are in place for risk management and information is flowing around the business about work-as-done, rigorously evaluate the effectiveness of this new strategy. Most likely this will require new performance measurements,” said Borys, who added an example of this was the lag time between becoming aware of adaptions associated with work-as-done and corrective actions taken to improve the work environment.

Borys acknowledged that this kind of thinking and approach challenges the current identity of the OHS profession and OHS professionals, as these ideas are not currently accepted practice within the OHS profession. “Furthermore, I think businesses are driven by OHS law, which often translates into OHS professionals being tasked with developing firewalls of OHS documentation and ensuring compliance,” he said.

Borys acknowledged that it can be difficult for individuals to step outside their comfort zone – but to not do so is to stay on the treadmill of the status quo. “Nothing changes, you are going nowhere. I don’t think this is ethically or morally right,” he said. “So if the OHS profession is driven by ethics and morals, which I believe it is, then there is no rule that says you can’t ‘have a go’. Workers will thank you, managers will thank you, and, if successful, regulators will thank you because it makes their job easier,” said Borys.
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