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GAVIN MYERS

I've written before that I'm lucky enough to travel quite often – one of the perks of the job, you could say. Recently, my passport has seen a fair bit of action, as some of these trips have involved some or other intercontinental flights.

Any international traveller should know that researching the in-transit or final destinations on their travel plan is a must. No, I'm not talking about the type of research that highlights the local weather, or where the best night-life activities can be found ... rather, I'm referring to what travelling to a specific destination means for your personal health and safety.

Luckily, it seems that business travellers worldwide do at least recognise the importance of this. International SOS and Control Risks – the alliance that brings together two of the world's leading medical and security specialists – notes that, on average, more than 100 business travellers and international assignees have been supported with advice each day in the past year.

In the past two years, demand for security advice has grown by almost 30 percent. More impressively, when considering the past decade, the demand has increased by a whopping 800 percent!

According to David Johnson, CEO of Security Services at International SOS, globalisation and an increasing emphasis on duty of care are among the reasons for this boom. "The necessity of robust security risk-management programmes has been brought to the forefront of the corporate agenda, and business leaders have become increasingly aware that this is an essential aspect of business resilience," he says.

Richard Fenning, CEO of Control Risks, adds that the global workforce is realising the benefits of service providers

such as International SOS and Control Risks. "Bringing together the capabilities of our two organisations has given international corporations the bedrock they need to ensure that their global workforce receives the medical, security and emergency assistance they need to be successful wherever they operate.

"We have been successful in preventing significant disruption and distress for our clients through awareness building, training and intervention," he notes.



Indeed, since the launch of the partnership a decade ago, it has supported members with more than 5.3-million pre-travel advisories and more than 100 000 situation development/crisis alerts.

My next trip, in a couple of weeks' time, will be to Amsterdam, capital of The Netherlands. While the most well-known risks of that infamous city might in fact be certain aspects of its red-lit nightlife (well, depending on who you ask...), it's good to know that I'll be among the world's thousands of astute travellers and that information and assistance will always be available if needed.

Bon voyage!

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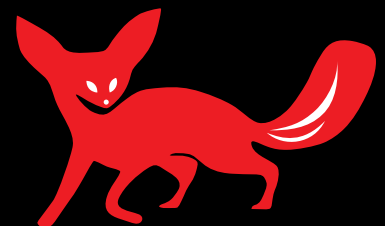
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WATER AND OIL DO NOT MIX

According to the Recycling Oil Saves the Environment (ROSE) Foundation, used oil contains harmful compounds and carcinogens that can easily contaminate the environment, especially if thrown down drains, into landfills, or onto the ground where it leaches into the water table.

"Because of its harmful properties, used oil is classified as a hazardous waste and is strictly governed by environmental laws – with its storage and disposal needing to meet the requirements of the Waste Act," says Bubele Nyiba, the CEO of the ROSE Foundation.

She explains that, due to a lack of education, many people who generate used oil may dispose of it improperly and illegally.

"It is estimated that South Africa generates an average of 120-million litres of used lubricant oil in a year. This is a large amount of used oil that, if not collected and recycled responsibly, could make its way into our environment," Nyiba says.

The ROSE Foundation offers some practical tips on storing used oil:

- Drain oil into a clean container with a tight-fitting lid, but do



not use a container that previously held chemicals.

- Keep these containers accessible by NORA-SA used-oil collectors and store them under cover and away from heat or sources of ignition.
- Keep oil-change pans tightly sealed and covered to protect them from rain water. Oil that is contaminated with water is far more difficult to recycle.

- Do not mix used oil with other automotive fluids.
- A bund wall around bulk used-oil storage tanks will contain a spill or leak. In this event contact your used-oil collector.

Used oil can be dropped off at approved municipal garden refuse sites. Otherwise, most reputable service centres have used-oil storage facilities and will take used oil, as they are paid according to volume by the collectors who take it away for processing.

Nyiba says that the safe disposal of hazardous waste has become a critical environmental issue in South Africa. "The legislation in place in South Africa means that responsible waste management is no longer a nice thing to do, but a necessary thing to do."



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VW GASSES OUT COAL

Did you know that the Volkswagen Group owns a power plant at each of its two production plants in Wolfsburg, Germany? They provide most of the power consumed at these plants – as well as five others in Germany – and generate heat for the plants and the city of Wolfsburg.

The power plants are currently run on coal, but plans are now in the works to switch over to natural gas – which will cut annual CO₂ emissions by 1.5-million tonnes, representing a reduction of 60 percent, or the combined annual CO₂ emissions of 870 000 cars! Seen from a global perspective, this means that the Group's CO₂ emissions will drop by a whopping 15 percent.

"The reconstruction project will allow us to sustainably generate power and heat in an eco-friendly manner at the Wolfsburg site, which will also benefit the city of Wolfsburg as a whole," says Michael Heinemann, spokesman of the Board of Directors at VW Kraftwerk GmbH.

The modernisation package decided by the Group's directors includes the construction of multiple gas and steam turbine plants that will replace the existing coal-fired boilers. The investment amounts to about €400 million (R5,8 billion), and the new plant is scheduled to be completed between 2021 and 2022.

"Should a technology for the cost-efficient production of synthetic natural gas emerge in the future, for instance one based on power-to-gas systems, we could even achieve complete CO₂ neutrality. This would represent a viable long-term complement to the shift to renewable energy sources," says Heinemann.

However, carbon dioxide is not the only substance that will be cut at the new plants: water consumption, waste generation and all other emissions will also be reduced by around 50 percent on average.

"We are pushing the electrification of our vehicles, while at the same time making traditional engines cleaner and more efficient. This also entails setting new, ambitious goals for production. We are dedicated to reducing the entire environmental load of the Volkswagen Group by 45 percent in 2025 as compared with 2010," comments CEO Matthias Müller.



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MAGIC EIGHT FOR A-OSH

For eight years the annual A-OSH Expo has provided a platform for knowledge exchange and relationship building, as well as for the sharing of information on the latest thinking, products, trends and legislation within the occupational health and safety (OHS) sphere.

Last year, more than 2 600 visitors descended on the Gallagher Convention Centre, Midrand, and the organisers are expecting a repeat performance between May 22 and 24.

In 2018, Africa's largest OHS show will offer visitors access to new and established suppliers and service providers in

the field, as well as to a range of content through its free-to-attend seminars. These are again organised by the Institute of Safety Management (IOSM) and the South African Protective Equipment Marketing Association (SAPEMA).

Among others, this year's topics include: New and upcoming OHS legislation and regulations; ISO 45001 – the new OHS management system standard is here; Smart PPE: what we can expect in the future; Becoming a really competent occupational health and safety practitioner; and The impact of the new ergonomics regulations on business.

The PASMA Working at Heights Theatre makes a return, too. There is always something new to learn about this most interesting area of work, which is definitely not for the faint-hearted.

In addition, the Saiosh annual conference (which is a paid-for event) runs alongside the A-OSH expo for the eighth year in a row, and presents its own content session for attending members. More details can be found on the Saiosh website.



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IRCA GLOBAL RELAUNCHES TO OFFER MORE SOLUTIONS AND SERVICES

IN ITS QUEST TO BE A PREFERRED OPERATIONAL RISK-MANAGEMENT CONSULTING GROUP, IRCA GLOBAL IS ON THE MOVE. WITH ITS NEW PARTNERS - HOFINCONS GROUP - AND ITS GLOBAL STRUCTURES, IT WILL BE OFFERING EVEN MORE WORLD-CLASS PRODUCTS AND SERVICES

In the past, IRCA Global specialised only in safety, health, environment, quality and technical risk assessment (SHERQ) services. Originally established in 1993, the company has assisted hundreds of organisations to reduce exposure to operational risks.

Justin Nash, MD of IRCA Global Sub-Saharan Africa, says: "We assist, assess and advise organisations on how to manage operational risk in a cost-effective and practical manner through integrated management systems and innovative products and services. In this way, we help to enhance sustainable business performance."

He adds: "We want to continue to be recognised as a world-class operational risk-management consultancy group."

IRCA Global is now expanding by offering additional products to reach more clients in various countries.

Nash explains: "We will continue to specialise in the areas that we have been covering, and, in addition, we will now offer asset and energy-management solutions. This is supported by our new partnership with the Hofincons Group, which delivers specialised services in a wide range of industries, for example, oil and gas, petrochemicals, steel and allied industries and utilities such as energy and water."

"The new partnership will give IRCA access to new countries and clients where Hofincons is already present. IRCA Global has also added new consultancy services on international ISO standards, which include areas of operational and process safety, food and fire safety."

Following the acquisition in April 2017, the newly launched partnership is now called Hofincons IRCA Group with the head office based in Dubai. All the IRCA operating entities globally will still be trading as IRCA Global.



ABOVE: Justin Nash, MD of Irca Global Sub-Saharan Africa (left) and Douglas Ramaphosa, chairman of IRCA Global Sub-Saharan Africa.

The company has also extended its training offering and now provides e-learning and distance learning.


NEW BRANDING / LOGO REPRESENTS THE PRESENT AND THE FUTURE

Thomas van Niekerk, sales manager at IRCA Global, says: "As IRCA is expanding and is no longer confined to operating in the areas of SHERQ. We are changing the company's logo to one which is aligned with Hofincons Group, our new partners.

"It is a fresh new look, which shows that IRCA aims to remain the market leader in operational risk management, and that we want to ensure that we stay at the forefront of technology."

Nash emphasises: "In achieving this, we want to make sure that we meet and exceed our clients' expectations in terms of quality and service."

NEW NON-EXECUTIVE CHAIRMAN

Douglas Ramaphosa has been appointed chairman of the board of IRCA Global Sub-Saharan Africa. "He had been involved in IRCA previously and therefore has a good understanding of the business," Nash adds. "He is in a vital role at IRCA. The guidance and leadership he provides will be of the upmost importance to the company." 

Course Categories	Detail
Risk Assessment	Fundamentals of Risk Assessment, HIRA, HAZOP, Advanced Risk Assessment Training
Consulting	RISKMAQTM Part 1 - 4, Modern SHEQ/RISK management (MSRMTM), IRCONTM
Incident/Accident Investigation	Root Cause Analysis Technique (RCATTM), Incident Investigation
International Standards	ISO 9001, 14001, 18001, 45001, 27001, 22301, and many more standards Various levels ranging from Awareness, Facilitation / Implementation, Internal Auditor as well as Lead Auditor
Auditing	CAPTm, the IRCA CAP Auditing Protocol.

MORE LESSONS FROM THE MILITARY

IN THE LAST ISSUE WE DISCUSSED THE FACT THAT, JUST AS IN THE MILITARY, GOOD LEADERSHIP IN BUSINESS IS IMPORTANT TO ENSURE THAT EMPLOYEES AND CONTRACTORS RETURN HOME SAFELY AT THE END OF EACH DAY. IN BOTH CASES IT IS THE LEADERS WHO ARE RESPONSIBLE FOR THE SAFETY OF THEIR TEAMS

In the military environment there are no safety professionals in the combat forces, because it is not practical and, more importantly, there is a clear understanding that the various leaders are responsible for the safety of their teams.

For example, the battalion commander is responsible for the safety of his troops. Likewise, the company and platoon commanders are responsible for their soldiers and the corporals for their individual sections of ten men.

Finally, each combat soldier is responsible for his/her own safety as well as that of others. None of these people require a safety professional to be responsible for the safety of their teams.

Could you imagine the military having a patrol go out, led by the corporal, with his ten riflemen kitted out for combat, and then, on the side, having a safety advisor in a reflective vest taking care of the safety of the team?

If companies wish to see a quantum improvement in their safety performance and in their drive for sending everybody home safely at the end of each shift, the leaders should follow the example of those in the military to ensure that they understand their roles and responsibilities for the safety of their teams, and that they take their duties seriously.

Yes, there is, without a doubt, the need for safety departments in organisations. However, safety professionals must be used as a support in terms of understanding the requirements, legislation, developing desired safety cultures, and much more.

However, line managers must understand that they are responsible for the safety and health aspects of their teams during normal daily business. Leaders must place a high value on the safety and health of their employees and contractors and provide a safe and healthy working

environment for all.

Only the leaders can develop the desired safety culture among their respective teams. However, to do so, leaders need to get out onto the floor and engage with their teams and have discussions related to safety and health issues. My advice is for leaders to put on their safety boots and get out onto the shop floor on a regular basis. This will, without doubt, make a difference.

TRAINING

There are numerous elements that can be covered under the heading of training. I will focus here on four phases of safety and health training: induction; specialised and on the job training; competence; and refresher training.

1. Induction training (basic training)

When joining the military, soldiers are put through their paces for up to 12 weeks, which is commonly called "basic training". This period focuses on ensuring the understanding of the rules when in the military, including procedures on how to maintain and handle the weapons safely, as well as the importance of working as a team.

It goes without saying that, in the corporate world, induction training is an important aspect of safety management. It is during the induction training sessions that companies should explain the safety and health-related information, including the general safety rules and site regulations. This is the perfect opportunity to demonstrate that the safety and health of employees and contractors is important to the company.

Gone are the days of just showing a simple safety and health induction video and believing it is sufficient to cover the responsibilities of ensuring clear communication, and that it will result in a proper understanding of the rules.

During basic training in the military, newly recruited soldiers are often not permitted to wear the normal uniforms and are required to wear overalls, or different headgear. This ensures that they stand out and everybody can easily distinguish the new recruits from the other soldiers. In some battalions, soldiers are not permitted to wear the infantry colours badge on their berets until they have completed the training.

Some of the operations in the company at which I am employed require all new employees on the floor to wear a different colour t-shirt for a given time, and until they have been "passed out" as competent to conduct the work. This makes it possible for other employees to identify them as new employees and to provide guidance and support when they are observed working in an unsafe manner.

2. Specialised and on-the-job training

When talking about specialised training, I am referring, for example, to the hazards and rules the operators are being trained in for the specific plant in which they are going to be employed.

This is usually when they are trained in the safe operating procedures for the tasks that they will be required to conduct, or on the equipment that they will be operating in the future.

In many instances, employees are also sent to training centres to receive specific training on how to operate equipment, conduct fault-finding, or maintain and repair specific equipment. This is very common in the auto industry where mechanics are sent on training for a new model of car being launched.

This is no different in the military, where, in the so-called Phase 2 training, the soldiers are taught the specifics of the specialised core activity that they have chosen, for example, the infantry, or parachute battalion.

Those in the parachute battalion are, for example, trained in the safe and correct use of the equipment, including the various firearms, and how to wear the parachute harness correctly. They receive training in the rules and procedures for jumping out of an aeroplane safely, techniques to handle the wind, the correct body position when landing and what action to take once on the ground.

First, the soldiers receive jumping training inside a hangar and/or jump-tower training before being permitted to jump out of an aeroplane. They are also prepared for what to do in the case of an emergency, including parachute malfunctions.

Leaders in industry need to challenge themselves on whether their training programmes are well structured and of a suitable period and that they cover all the specific topics. This will ensure that employees who are required to work in the plant receive the necessary training (both theoretical and on-the-job training) and are deemed competent to conduct the work. This will ensure employees are not placed at any risk of injury.

This is the case in the military. Training programmes are well structured and followed to ensure soldiers are well prepared prior to going into combat. Can you imagine a soldier joining the parachute battalion and, without any training, being asked to conduct his first jump out of a C160 aircraft? This just would not happen.

3. Deemed to be competent and "pass out"

Going back to my example from the parachute battalion, under no circumstances can I imagine that a soldier, who has failed the training in the hangar, would be permitted to continue with the next phase of jumping out of an aeroplane; flying above the so-called drop zone.

Once passing the various phases, including a number of night jumps, the soldiers are "passed out" and deemed to be competent. After a predefined number of jumps, the soldiers who have passed graduate from jump school and are issued with the paratrooper wings to be worn on their uniform with pride.

The question is whether employees in industry are required to complete assessments to ensure understanding before being deemed competent to conduct their work. Leaders should ensure that training programmes are not just tick-box exercises, but rather that they ensure employees have a proper understanding of their tasks.

If we don't test for understanding, how can we as leaders satisfy ourselves that employees and contractors are competent and can conduct their activities without possible injury to themselves and others?


4. Refresher training

None of this means that once an employee (or soldier) has received the necessary training and is deemed competent, they no longer require any additional training.

Depending on the risk levels of the tasks undertaken by employees, refresher training should be conducted at pre-defined frequencies and competence evaluations conducted to ensure understanding.

Refresher training should cover all the procedures to be followed in the case of an emergency. For example, employees operating a boiler should be retrained in the emergency shut-down procedures in the event of a water leak, as they might never have to conduct such a procedure in a real event and could forget the steps to be followed.

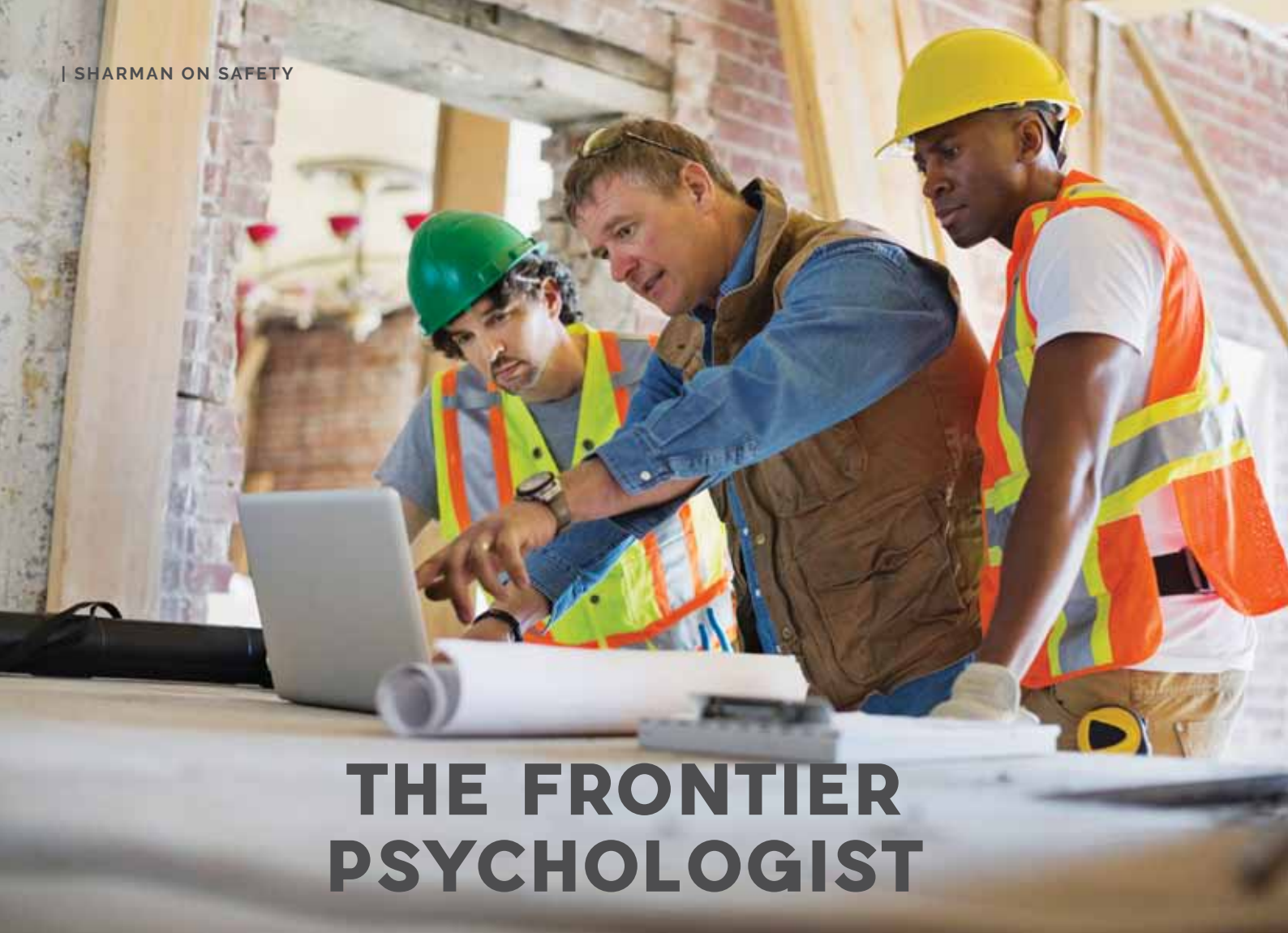
The same applies to the paratrooper being reminded on the procedures to be followed should the parachute malfunction.

I end off with the following quote from Dwight D Eisenhower: "Farming looks mighty easy when your plough is a pencil and you're a thousand miles from the corn field". 

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Brian Darlington is the group head of safety and health for the Mondi Group, based in Vienna, Austria. He has filled the role since 2012 and is responsible for safety and health in more than 30 countries. Brian started working at Iscor before joining Mondi in 1987, working in Gauteng. In 2000 he transferred to the Kraft Division in Richards Bay. During 2005, Brian transferred to Europe, taking up the position of business unit SHE manager, responsible for SHE in paper mills in Austria, Hungary, Israel, Slovakia, Poland, South Africa and Russia, as well as forests operations in South Africa and Russia.



THE FRONTIER PSYCHOLOGIST

**HOW CAN WE REVITALISE EMPLOYEE MOTIVATION AND INTEREST IN WORKPLACE SAFETY?
ANDREW SHARMAN BELIEVES HIS NEW RESEARCH SHOWS THE WAY FORWARD**

Traditionally, companies, around the world and across international borders and industries, have focused on building effective safety-management programmes to reduce workplace accidents.

However, now that the safety performance of many companies has levelled off, they're wondering what to do next.

DYING FOR THEIR JOBS

The International Labour Organization (ILO) reports that almost 2.8-million fatal accidents occur at work every year. This means that every day almost 7 700 people die of work-related disease or injury. By the time you've finished reading this article 80 people will have lost their lives at work.

In addition, there are around 374-million non-fatal, work-related injuries and illnesses each year. Many of these result in extended absences from work. It's certainly a sobering picture of the modern workplace – where workers have the potential to suffer serious consequences as a result of simply "doing their job". It's quickly apparent that the way we're doing things isn't working.

In a bid to understand why, we conducted research interviews with more than 60 safety directors, CEOs and operational vice presidents from leading multinational blue-chip companies based in Europe, Asia, North and South America, as well as the Gulf region and across Africa.

The findings are indicative of views from a diverse range of industries, with over 30 different industry sectors represented, including food and beverage production,

power generation and supply, automotive, oil and gas, aviation, public transport, chemicals, mining, heavy engineering and fast-moving consumer goods.

The questions posed reflected four strategic themes: Drivers for and challenges to great workplace safety; Safety innovation and inspiration; Confidence and competence; and Future focus.

By assuring the participants' anonymity, the ensuing dialogues provided a rich source of thought and opinion from some of the most influential international safety practitioners and business leaders around the world.

CURRENT WORKPLACE SAFETY MOTIVATORS

A number of important themes emerged from the interviews. The first was that safety performance in around half (49 percent) of the companies is driven by the desire to reduce injuries and fatalities through a "zero harm" campaign or initiative.

A third of respondents see this as their moral duty and feel the need to meet stakeholder and industry peer expectations.

The same percentage (34 percent) also believes that good safety performance is necessary to protect corporate reputation. Penalties in the form of regulatory fines and also the fear of enforcement action are a relatively small motivator, being cited by only around a fifth (18 percent) of interviewees.

However, the proportion of companies to have enshrined safety in their organisational values (as opposed to simply

reciting a slogan of "Safety First!") is equally small at just 17 percent.

THE BIGGEST CHALLENGES

Asked what their top three challenges were, 65 percent of safety leaders cited the lack of sufficient capability of senior leaders to take on a guiding role in safety, or their inability to provide middle management with the right tools for safety improvement.

Interestingly, this picture was reflected by the operational leaders, too. Without doubt, there's a massive opportunity here for forward-focused safety practitioners.

Approximately half of all organisations interviewed struggled to maintain consistent levels of safety performance across a large, multinational organisation.

Further down the scale of common challenges came the ability to keep safety at work fresh, inspiring and interesting (31 percent) and influencing behaviours (31 percent). An ageing workforce, governance and relevance of safety initiatives were also named, each by 20 percent of respondents.

The advent of artificial intelligence (AI) featured occasionally in the operational leaders' feedback, with an underlying concern and a fear of "not knowing" what AI might mean for their businesses.

THE CUTTING EDGE OF SAFETY

How do organisations feel they can use the motivators that they are aware of, and tackle the main challenges they face?

Among the innovative solutions named in the survey, the one that was cited most frequently was the psychology of safety and a focus on proactive behaviours. Various approaches were mentioned, including nudge theory, heuristics and our own perspective, "cultural safety".

More than a third (35 percent) of companies listed gamification, app-based mobile technology and other novel approaches as a good way to enliven communication, as well as conducting mindset assessments (or attitude surveys) to truly understand what their workers are thinking.

Other innovative solutions named were predictive analytics to forecast the likelihood of the next accident (30 percent), rolling governance programmes (20 percent), balanced, integrated, leading key performance indicators (20 percent), competency building to improve personal judgement capabilities (20 percent), and driver safety risk programmes (20 percent). Six Sigma and Lean methodologies were also mentioned, but, surprisingly, by only ten percent of respondents.

NEW INSPIRATION

Companies have learned about these new developments by various means. More than 60 percent of respondents use informal networks and peer-to-peer forums to find new inspiration for workplace safety.

More than half (53 percent) read online blogs, articles and use *Twitter* for information from thought leaders such as Andrew Hopkins, Daniel Kahneman, Leandro Herrero, Daniel Pink, Dominic Cooper and Sidney Dekker. (Full disclosure: the author's name did occur in several feedback sessions on this topic).

Approximately a third of interviewees attend executive-

level safety conferences – such as those held by Saïosh, the American Society of Safety Engineers, the Institution of Occupational Safety and Health and the Institute of Leadership and Management – for their professional networking as much as their technical knowledge base.

As one respondent remarked: "Benchmarking and networking with peers is the best way to see where challenges are, and how people are handling them in new and unique ways."

CONFIDENCE IN SAFETY SYSTEMS

The survey interviewers asked leaders about their views on different areas of workplace safety in their own organisation. Despite recent push back against the merit and value of lagging indicators, around 50 percent of those surveyed continue to judge their company's safety performance by its injury and fatality rates.

Formal reviews and independent audits give 35 percent of respondents the confidence that their systems are effective, while safety observations and perception assessments provide around a third with good insight into the effectiveness of current safety efforts.

Several respondents mentioned their expected confidence in the new ISO 45001 standard as a way to bring about a robust structural framework for managing workplace safety risks.

However, more than half of the safety directors questioned believe that their senior leaders and managers lack workplace safety competency. They also cited a lack of internal capability in process safety, governance and competency among themselves as health and safety professionals. Interestingly, both of these positions were supported in the views from operational leaders. It's time to raise the game, isn't it?

A third of respondents said that the philosophy behind safety required attention. They see the need to further develop the safety culture in their organisation through the consideration and incorporation of employee attitudes, decision-making in safety, behavioural influences and organisational thinking.

Taking these points together, there's a very clear sign pointing in the direction of better understanding of the cognitive psychology behind workplace safety.

CHALLENGES TO FUTURE OCCUPATIONAL SAFETY AND HEALTH RISK MANAGEMENT

As a result, when asked about planned future efforts, 40 percent of the safety directors mentioned the intention to focus on psychology, new behavioural safety models, human-error reduction and culture, while 35 percent said safety leadership is also a key area.

However, the same percentage believe that a change in safety culture and behaviour is held back by a reluctance of front-line managers to "own" safety, while more than a quarter also said that senior leaders do not demonstrate commitment to leading the safety effort.

Geographical, cultural and behavioural diversity also play a role in making a company-wide change in safety culture difficult, according to a third of interviewees. Clearly, there's more to be done to engage operational leaders everywhere.



WORKPLACE SAFETY: WHAT MORE CAN WE DO?

All of the companies interviewed have invested in building a strong safety culture in their organisations, yet all believe that their culture needs an invigorating impetus to help maintain and further improve it. They are, almost without exception, casting around for inspiring, innovative ideas that will appeal to employees and give them a fresh approach.

As one safety director put it: "Our safety maturity has changed. We're better and stronger – though we still have more to do – but there isn't really anything available for us at this advanced stage."

Another said: "We need some leading-edge innovation in modern safety philosophy. Something from occupational psychology that will help people to know what to do in the face of workplace risk – because it is 'the right thing to do'."

Respondents said they believe that innovative offerings are lacking in the safety industry. One interviewee said: "Very little is innovative right now in safety to be honest. This is an area that gets overused and overthought. What else could we do?"

A similar reaction came from another respondent, who added: "We don't see much that is innovative or leading edge in safety anymore."

What the companies surveyed want is "real, helpful, practical, experienced and well-focused advice, as there is a dearth of this available from regulators, standard setters, researchers, academics, consultants and professional bodies. We don't want to just reuse or recycle something tried in the 1980s (for example behavioural-based safety, human factors, safety training), we want to find new, novel and inventive solutions to culture change, through care and belonging, for example".

A BRAVE NEW WORLD

Although behaviour is still integral to changing workplace safety performance, safety professionals now want solutions that take into account the psychology affecting worker behaviour to achieve continuous improvement.

They are also ready and willing to try innovative ideas, such as new technologies to detect the mental state of employees pre- and post-accident, and are keen to find ways to influence not just the hands, but also the hearts and minds of workers and make organisational safety fresh and appealing for everyone involved.

This is where psychology-based approaches to safety come in. Using a blend of holistic psychology and cognitive science – to bring about a focus on the intrinsic motivators that determine behaviour, affect decision-making, and build risk literacy – is key.


In order to build sustainable safety improvement, we need to engage people through three different psychological aspects of safety: the cognitive (how we think), the affective (how we feel) and the behavioural (what we do) to help companies understand what drives employees' risky actions and allow them to approach safety from a new angle.

Although the research shows that some safety professionals are, indeed, aware of new approaches to influencing workers, many are not yet embracing or understanding how these might truly benefit their own organisations.

While they cite a lack of safety improvement tools as one of the main challenges facing their organisation, commitment to safety by senior leaders is another – and perhaps of more major significance. This may be the biggest barrier preventing many companies from trying a new approach.

With the research concluded, what is clear is that a new impetus is needed to break through the performance plateaux and achieve sustained safety improvement for organisations around the world.

Safety practitioners need to think outside the box to understand what triggers unsafe actions in their workplaces and to find solutions to engage employees in order to improve risk literacy and positively change behaviour.

An awareness of the cognitive, affective and behavioural aspects of psychology could well be key to future approaches. This is the new frontier of safety. Are you ready? 

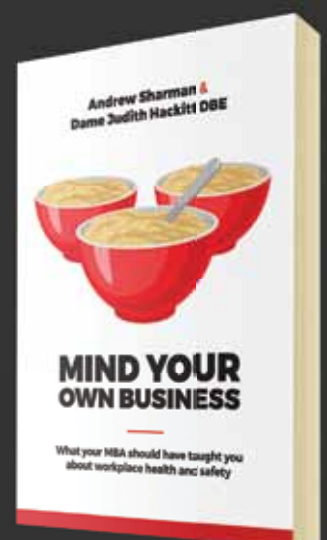


Professor **Andrew Sharman** is Chief Executive of RMS – consultants on leadership and cultural excellence to a wide range of blue-chip corporates and non-government organizations globally. He's an international member of SAIOSH; Vice President of the Institution of Occupational Safety and Health; and Chairman of the Institute of Leadership & Management. Contact him at andrew@RMSswitzerland.com

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WATCH OUT - THE EMOTIONAL CIRCUS IS IN TOWN

HOW DOES OUR EMOTIONAL STATE IMPACT OUR DECISION-MAKING ABILITY IN THE WORKPLACE? SIGNIFICANTLY, SAYS BRETT SOLOMON

In a study, the universities of Ben Gurion and Columbia scrutinised over 1 000 rulings of judges presiding over parole applications. A startling fact was uncovered: 65 percent were granted at the beginning of the day, steadily declining to almost none in the afternoon. Approvals shot back to 65 percent again after the judges took a break, only to steadily dwindle back down again.

Jonathan Levav, the associate professor of business at Columbia, argued that there could be multiple reasons for this. However, the primary contribution is that judges, like all people, get tired during the course of the day. Other studies have shown that having to make repetitive decisions can be mentally taxing, causing people to become weary.

When we, like the judges, are fatigued, we are prone to resorting to the easiest way of doing something, or to choosing the simplest answer. It is far easier for the judges to reject parole requests and maintain the status quo.

This is equally true when it comes to our safety. When we are tired, we are more inclined to take the easy path even if it is unsafe. Therefore, in these moments we need to be more vigilant.

In another study, Ozkan Eren and Naci Mocan examined 8 200 cases adjudicated by 207 different judges who went to Louisiana State University. They focused only on first-time offenders between the ages of ten and 17. Trying to avoid other mitigating factors, they excluded all serious offenders who had been convicted of murder, aggravated assault, or rape.

Eren and Mocan found that when the local football team, the Tigers, lost a game, the judges tended to hand down harsher sentences. Analysing 16 years of rulings, on average, 36 days were being added to prison terms after the Tigers had lost. This spiked to an average of 63 extra days on judgements the week following a major loss.

The implications are disturbing. We believe we are rational and that we make decisions based on sensibly working through the different alternatives and logically making the right call. The reality is that this is not the case at all.

We are far more emotional and susceptible to other factors, when it comes to decision-making, than we think we are. The way we feel at the moment primes our judgements. The same applies to safety. The way we feel at a particular time influences the degree of risk we are willing to take.

Caroline Comaford used the analogy that the pathway going from our emotional brain to our intellect is like a six-lane superhighway, but the route from our intellect to our emotional brain is similar to a single trail through the bush.

We are highly emotional beings – emotions drive our behaviour, influence our attention, determine our motivation, colour our memories and impact our relationships.

Because emotions fuel our decisions, we can be upset with our car breaking down and then take it out on a colleague who has done nothing wrong, even though the two are entirely unrelated. Leaders with high emotional



intelligence are less likely to respond in this manner as they recognise the source of their frustration.


A world-renowned emotional intelligence expert, Daniel Goleman, explains that emotional intelligence is our ability to interpret and manage our emotions "so that they are expressed appropriately and effectively, enabling people to work together smoothly toward their common goals".

Emotional intelligence helps us to understand the triggers of our emotions better and to manage our automatic reactions. This puts us back into the driver's seat and enables us to stop and choose a response instead of just reacting. Being aware of our emotional state allows us to weigh up our options; we can be more mindful of the decisions we make, especially those that can impact our safety.

Joshua Freedman notes: "Emotions offer valuable data that help us see more clearly. When we stop fighting them, ignoring them, or feeling suffocated by them, we gain an amazing resource to focus our attention and motivate action." When we are aware of our emotions, we can use what they are "telling" us to guide our thinking and decision-making.

Emotional intelligence plays a pivotal role in creating a resilient safety culture and curbing unnecessary risk taking.

Here are a few tips and recommendations to consider:

1. Be attentive to how you interact with others, knowing you can influence their mood. We need to avoid using threatening language, or behaviour that could cause people to feel they have to take short cuts. Don't allow personal issues to boil over onto others.
2. Be a source of reason by reinforcing the key values that drive major decisions. Emphasise the importance of making safe decisions, irrespective of how you are feeling. Be resolute about safety when the pressure is on and in times of high stress.
3. Learn to trust your intuition by recognising your "gut feelings". If something does not feel right, it most probably isn't. Encourage team members to do the same.
4. Learn to manage your own emotions, particularly when you are stressed and fatigued. Know that in moments like these we are more inclined to take shortcuts.
5. Build healthy relationships by allowing others to share their opinions and voice their concerns when it comes to safety. Be open to bad news as this creates a learning environment.
6. Don't let drama and negativity prevail – rather be solution orientated. Quickly address issues that can cause people to lose focus on working safely. 



Dr Brett Solomon is the CEO of The Kinetic Leadership Institute and is a recognised leader in combining neuroscience, change management and leadership theory to drive cultural transformation processes. Brett specialises in neuroleadership, especially when it comes to an understanding of what motivates human behaviour and how to influence it. He has been involved in numerous culture change and leadership development initiatives throughout Africa, Australia, Canada, Saudi Arabia and the United States.



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AN EMPHASIS ON VALUE CREATION

EXPLORING THE NEW ISO 31000:2018
RISK-MANAGEMENT STANDARD

One of the guiding principles behind risk management is the creation of value to the relevant stakeholders. This is why formal risk-management frameworks are put in place to enable stakeholders to identify the probability of risks surfacing and assess their associated consequences – not forgetting establishing the controls to mitigate them.

Regardless of their scope of work and geographical locations, organisations have in the past implemented risk-management frameworks guided by the International Organisation for Standardisation (ISO) 31000:2009, Principles and Guidelines.

The revision of this guideline was long overdue! Hence, in February 2018, ISO published the revised ISO 31000:2018 Risk Management – Guidelines, following the hard work put in by members of the Technical Committee ISO/TC 262, Risk Management.

What does this revision mean for those organisations that have built their risk-management frameworks based on the old ISO 31000:2009 standard?

The first step, for any standard that has been revised, is to determine the key differences between the old and new.

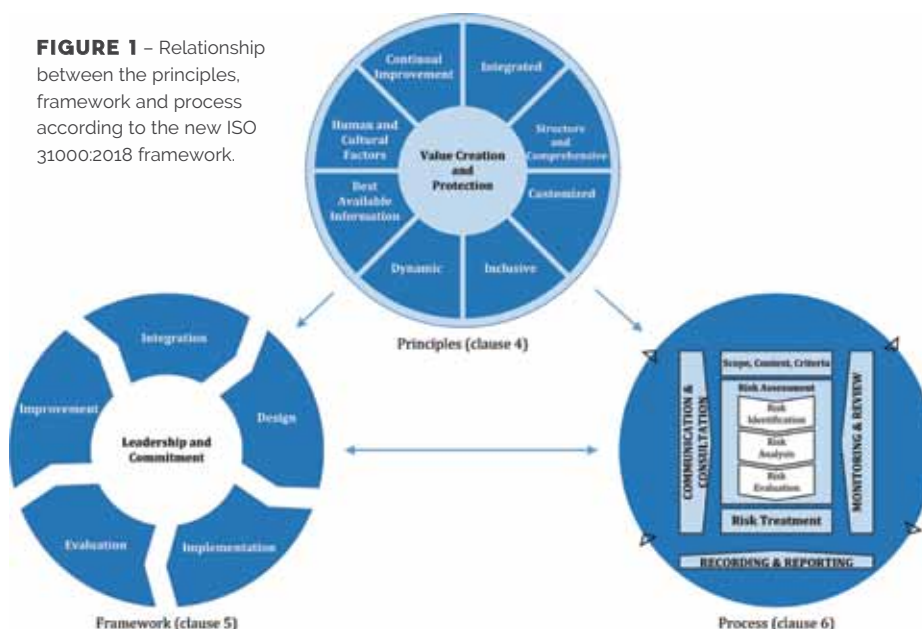
The following changes have been highlighted by ISO, when comparing the revised standard to the earlier ISO 31000:2009 version:

- Review of the principles of risk management, which are the key criteria for its success;
- Highlighting the leadership role of top management and the integration of risk management, starting with the governance of the organisation;

- Greater emphasis on the iterative nature of risk management, noting that new experiences, knowledge and analysis can lead to a revision of process elements, actions and controls at each stage of the process; and
- Streamlining the content with greater focus on sustaining an open-systems model to fit multiple needs and contexts.

There are numerous benefits the transition from ISO 3100:2009 to ISO 31000:2018 will bring, particularly with regard to the emphasis on leadership and commitment as illustrated in Figure 1.

FIGURE 1 – Relationship between the principles, framework and process according to the new ISO 31000:2018 framework.




In my view, this affirms the opportunity to ensure that we all manage risks in our respective functional areas and do not leave it to the risk specialists. This will not weaken top management's accountability in the direction in which they manage risk, but should complement it.

The emphasis on value creation is visibly noticeable as the basis of the additional principles.

Does that mean that the earlier edition of 2009 (as shown in figure 2), with 11 principles, is obsolete? Not entirely. There is a need to integrate or align with the new edition, but, more especially, to look at the added benefits that these initial principles have had in guiding the organisation's risk-management framework.

I guess the question we might ask is: "How did the previous ISO 31000:2009 improve the way we managed risk?"

Our answers will enable us to embrace the transition to ISO 31000:2018. It is worth noting that the ISO 31000 standard is a guideline and is not meant for certification. 

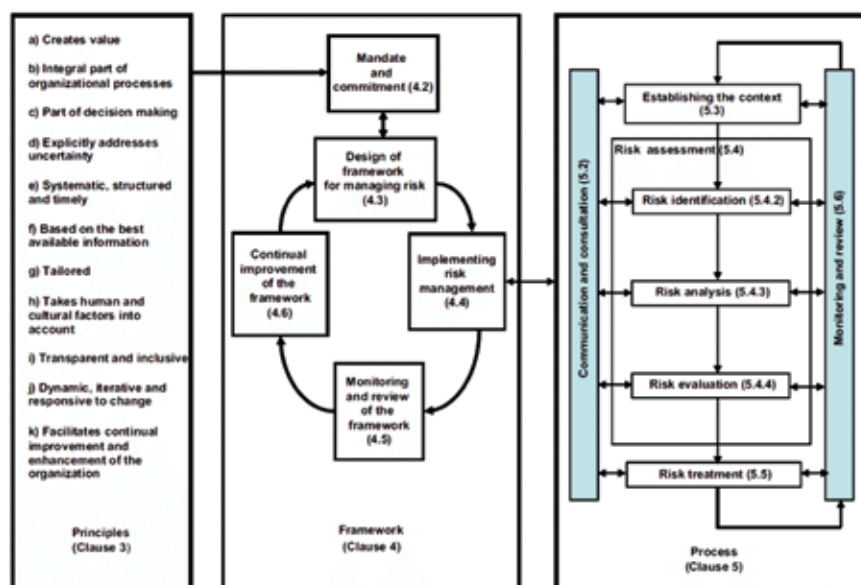


FIGURE 2 – Relationships between the risk-management principles, framework and process according to the old ISO 31000:2009 framework.



Hope Mugagga Kiwekete is a managing consultant at the Centre for Enterprise Sustainability. Prior to his current role, he was a principal consultant: risk management at Transnet Freight Rail, and a management systems specialist and senior EHS auditor at the South African Bureau of Standards (SABS).

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OHS AS PART OF A SCHOOL CURRICULUM

IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY (OHS) AT A SCHOOL LEVEL HAS BECOME A PASSION OF SANJAY MUNNOO

Analysing the millions of preventable injuries that take place around the world on an annual basis is mind boggling. South Africa is no different, whether it is an injury related to work, home or travel.

I'm of the view that health and safety is the responsibility of all citizens. The World Health Organisation (WHO) defines health as "a state of complete physical, mental and social well-being".

Education at our schools has an essential role to play in enabling the majority of people to tend towards that state, by preparing new generations for their adult lives.

For young children, education should address general concepts of health, safety and well-being, as well as social aspects. Then, for teenagers and young adults, the focus should be on promoting the concept of health, safety and well-being at work, and in life in general as an adult and citizen.

This requires appropriate content to be taught and for educational establishments to be healthy and safe. Teachers and learners can then engage in a more comprehensive approach covering the facilities and equipment, as well as the procedures, management and the culture of the educational institution.

Learners should play an active role in the health and safety aspects of their school, take ownership of their environment and how it is managed, and feel motivated to play their part in school safety and health.

A study conducted by the European Agency for Safety and Health at Work recommended a whole-school approach to occupational safety and health (OSH), according to the objective below it:

- Combines risk education and managing safety and health in schools for both learners and staff;
- Brings together risk and health education, safety management and the concept of a healthy school;
- Actively involves staff and learners in school safety management;
- Trains and involves teachers in OSH management in their schools. This improves their understanding of OSH and develops practical skills, which improves their ability to provide risk education to learners;
- Develops learners' understanding of OSH and its importance by example;
- Involves learners in hazard spotting and proposing

solutions. It also develops their skills and gives them ownership over school safety rules;

- Integrates risk education and school safety and health throughout the school's activities and the way it functions, to become part of school life.

Most school leavers are desperate to find employment and sometimes take on extremely risky work about which they have no knowledge.

The past president of Saiosh, Robin Jones, had a keen affinity for searching *YouTube* for videos of workplace accidents, or near misses. Searching for "workplace fails" or "excavation fails" reveals hundreds of videos with horrific footage.

Most of these videos make one question what the person in the video was thinking. However, the sad reality is that people are taking these risks to earn a living and support their families. **SM**



ABOVE: Saiosh retained its recognition as a SAQA Professional Body in terms of the National Qualifications Framework Act, Act 67 of 2008. The certificate was handed to the Saiosh CEO, Neels Nortje, at the 12th SAQA forum meeting in March. From left: Joe Samuels, CEO SAQA; Neels Nortje, CEO Saiosh; Julie Reddy, deputy CEO SAQA.



Sanjay Munnoo has over 15 years' experience in the risk and financial services industries. He started his career at Alexander Forbes and now works at FEMA as Regional Manager. He held several leadership positions including that of chairman of the board at the Workers Accident and Rehabilitation Centre, and chairman of the KZN MBA Health and Safety Committee. Sanjay is a Chartered Member of Saiosh (CMSaiosh) and was appointed as president of Saiosh in June 2017. He is currently completing a PhD in Construction Management.



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MINING AND CONSTRUCTION IN THE SPOTLIGHT



WITH THE MINING AND CONSTRUCTION INDUSTRIES SHOWING ENCOURAGING SIGNS OF RECOVERY - AND EVEN A LITTLE GROWTH - THE JOHANNESBURG EXPO CENTRE WAS ABUZZ IN MARCH, AS ALL SUPPLIERS TO THESE INDUSTRIES WERE BROUGHT TOGETHER FOR THE 2018 BAUMA CONEXPO AFRICA

The 2018 edition of Bauma Conexpo Africa attracted 454 exhibitors from 34 countries. Each exhibitor brought the best they have to offer – whether sky-high cranes or earth-moving “yellow metal” equipment; compliance and auditing solutions; or health, safety and environmental solutions.

The 14 167 visitors reflected the importance of these industries and interest in what the exhibitors had to offer. As Stefan Rummel, MD of show organiser Messe München, suggests, there's a good reason for that.

“The trade fair reflected a sense of renewed optimism and highlighted the opportunities in the industry, despite recent economic challenges,” he said.

Petra Kaiser, senior director of International Exhibitions & Events at the Association of Equipment Manufacturers (AEM), added: “It is significant to have a consistent and engaged presence in the region in order to take advantage of long-term business potential. Bauma Conexpo Africa creates a platform to help facilitate these opportunities.”

With that in mind, here is a glimpse of just some of the opportunities that were up for discussion:

CDE

Among some of its more mainstream solutions targeted at the mining industry, the South African arm of leading materials wet-processing equipment and engineering company, CDE introduced the company's high-tech water-management systems, which significantly reduce the necessity for fresh-water usage.

“With the global mining and construction industries showing reassuring signs of recovery, there is no better time to look to new ways of processing minerals, sand and

aggregates for end products of higher quality, while saving water, energy and money,” explains Nicolan Govender, CDE's regional manager Africa.

The company's EvoWash sand-washing plant can produce up to 250 t of material per hour and up to two products at the same time, while the AquaCycle can recycle a massive 90 percent of process water for immediate reuse in the system, allowing for maximum dewatering and a product ready to be sold directly from the belt.

FOGMAKER

Fogmaker South Africa conducted live demonstrations of its innovative triple-action fire-suppression system.

“Our launch of Fogmaker to the South African market at Bauma 2015 was a huge success, which motivated us to participate in Bauma 2018,” explained MD of Fogmaker South Africa, John Russell.

“Fogmaker makes use of water, the purest extinguishant, to attack all three components in the fire triangle; namely heat, oxygen and fuel. Suitable for any engine compartment, the system uses high-pressure water mist (50-micron droplets) to effectively suppress a fire and cool down the compartment to prevent re-ignition.

“Equipped with automatic fire detection, which is independent of any power source, this low-weight, low-maintenance system is simplicity itself,” says Russell. “Moreover, there is no powder or mess to clean up after actuation, which keeps costs and downtime to an absolute minimum. After a discharge, it's a simple matter of replacing the detector hose and refilling the piston accumulator.”

LOADTECH

The Loadtech stand consisted of three sections: the loadcells; onboard weighing and tyre-inflation systems; and the Loadrite weighing systems. The products are designed to allow mine operators to accurately and safely manage the loads that are moved around their operations.

Christiaan Luttig, Loadrite brand executive, explained that the Loadrite system combines front-end loader load cells, conveyer-belt cells and web-based software reporting, to give a live view of the operation's productivity, processing and loading sections.

"This is a management tool that ensures trucks are loaded accurately. It gives a complete report and allows mine operators to see exactly what's being moved around and going into the processing plant. It therefore increases production and productivity," he said.

SWEET-ORR

Sweet-Orr, a proudly South African manufacturer of protective workwear, was also present at Bauma Conexpo – and we were thrilled to meet the family that has owned this massively impressive company since 2015. On the stand were MD John Jacobs, along with his son (Denver) and daughter (Vanessa), who are both directors of the company.

They revealed that the company has a 5 500-m² factory in Elsies River, which produces high-quality workwear – including flame-retardant, acid-repellent and flame-acid clothing. This clothing is used in various sectors, including mining, petrochemical, aeronautics, hospitality, medical, construction, combat and disaster management.

Sweet-Orr has a fascinating history. It was founded in Wappingers Falls, New York, in 1871. Its name is derived from the founders – James Orr and his nephews, Clayton and Clinton Sweet.

Today, it is 100-percent South African owned, and the company is really going places. Recently, Sweet-Orr exhibited at the A+A exhibition (you've read all about this incredible event

in SHEQ MANAGEMENT before; it's the world's largest safety show), so it is aiming to conquer the global protective clothing market.

Sweet-Orr is opening a showroom in Johannesburg next month. Read all about it in the next issue of SHEQ MANAGEMENT!

TRYSOME

The big news at the Trysome stand was the introduction of new products. The first is the Sy-klone family of air-quality systems. Gordon Postma, key account manager, explains that Sy-Klone consists of two main components: cab filtration and an engine pre-cleaner.



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"The cab filtration system cleans the air before it enters the cab, filtering up to 0,3 of a micron and protecting against asbestos, silica dust and other toxic substances. It creates a positive pressure to keep dirt out, while a secondary system extracts air, then filters and recirculates it. The system can be fitted to anything that requires filtration – for example, vehicle cabs and containers," he said.

The Sy-klone engine pre-cleaner cleans air prior to it reaching the air filter by creating a centrifugal force that

pushes out dust and dirt before it reaches the filter.

Another significant product on the stand was the FireTrace fire-suppression system. "This is fully automated. When it detects heat of a pre-set temperature the tube bursts, expelling the content of the suppressant cylinder. It comes with alarm systems and pressure gauges, and can be fitted to any vehicle or area that needs such a system. Furthermore, the suppressant used is friendly to humans and electronics," Postma said. SM

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ENERGY LEADERS HIGHLIGHT THE POWER CRISIS IN AFRICA

TOP AUTHORITIES FROM THE AFRICAN ENERGY SECTOR GATHERED IN JOHANNESBURG FOR THE AFRICA ENERGY INDABA WHERE THE CURRENT POWER CRISIS WAS ON THE TOP OF THE AGENDA

With 500-million Africans without access to power and countries losing millions in opportunity and productivity losses, it is no surprise that universal access to electricity was a top concern for the delegates at the tenth Africa Energy Indaba (AEI).

The AEI was hosted at the Sandton Convention Centre in Johannesburg, on February 20 and 21, with leaders of both the private and public sector in attendance.

The Indaba started off with an address from the former South African Minister of Energy David Mahlobo, who highlighted the key challenge for the energy sector – funding. His address was delivered by Elizabeth Marabwa, chief director of programmes and projects at the Department of Energy.

She explained that the African Union-approved Programme for Infrastructure Development in Africa (PIDA),

which focuses on the energy crisis, will need approximately US\$ 42,2 billion (R492 billion) annually to achieve universal access by 2030.

However, not investing in energy could cost Africa even more. Amadou Hott, vice-president of power, energy, climate and green growth at the African Development Bank (AfDB), noted: "Every day that we delay implementing some of these independent power or regional projects, the cost of lost opportunities is unbelievable."

Governments will not be able to provide the necessary funding to make electricity universally accessible; therefore, businesses, development financial institutions and other stakeholders need to be included. However, this will require projects and economies that are investor friendly and provide a good and quick return on investment.

Governments will need quick decision-making processes and politically stable governance. Louis van Pletzen, >



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co-founder of Quantum Power, explained: "The investor community has funds to deploy in these projects if they can happen at an acceptable pace and offer an acceptable return."

He used the example of the renewable energy programme in South Africa, which saw companies flock to invest. However, long, drawn-out decision-making processes led to many investors losing out on a return on their investment.

"If you call another programme today, the investors will not come in such abundance, as they now know that, in the past, the deployed development capital couldn't be converted into permanent equity, because of the two-plus years of decision-making," Van Pletzen said.

In contrast, when Senelec, the national electricity

company of Senegal, decided to transform the power grid, various companies were signed and four power stations were built in 36 months. Hott adds: "We are appealing to everyone to fast track and shorten energy projects and to do everything today and not wait until tomorrow."

During one of the captivating panel discussions at the Indaba, energy advisor to the president, Silas Zimu, noted that South Africa can expect big changes in its energy sector starting with the restructuring of state-owned enterprises.

He explained: "The same actions taken in February on governance at Eskom are going to come to the rest of the 700-odd state-owned enterprises, including ten energy-related enterprises."

He added that the dream is for South Africa to become the energy hub for the entire sub-Saharan Africa. Although this is "technically" possible, Zimu also highlighted the importance of making electricity affordable. He used the example of many poorer South African communities that received power, but now have many residents in extreme debt as they were unable to pay for the electricity.

He said: "About 40 percent of the supplied electricity is used for boiling water. So, South Africa will be rolling out another 100 000 solar heaters before the end of the year." He did not elaborate on the various structures in place to increase the energy production in South Africa.

While African energy leaders debated the best approach to making electricity available to everyone, delegates also

had the opportunity to visit various exhibits that showcased innovations, ground-breaking technologies and various organisations – all aimed at improving energy access on the continent.

The exhibitors included BBF Safety, which showcased its personal protective equipment, and Dekra Industrial RSA.

Vanessa Ronald, senior brand manager at BBF Safety, noted: "BBF Safety Group operates from four factories across South Africa and exports products to 18 African countries, the Middle East, the Americas and Australasia. The African Energy Indaba provided a platform for the company to meet, interact with and market our products to the individuals and companies that are actively involved in energy-related solutions for Africa."



LEFT:

Whether it was through exhibitions or panel discussions, the goal of the 2018 Africa Energy Indaba was to find sustainable solutions to Africa's energy crisis.

"The expo attracted companies from beyond South Africa, which gave us the opportunity to talk people from other African countries who we may not have spoken with before.

"Our main ambition at this event was to showcase our latest brand extension – Bova Safety Wear – and give a sneak-peak into the Sisi Safety Wear range that will be launching in April 2018," she added.

The non-destructive inspector, Dekra Industrial RSA, was at the Indaba to create awareness about some of the services and solutions provided by the company. Johan Gerber, operations director at Dekra Industrial RSA, noted: "The Indaba presented another platform to show the energy industry the specific solutions that Dekra offers."

The company has several different types of robotic equipment to assist with inspections to ensure safety and efficiency. For example, there is a robotics solution that does inspections in the high-temperature environments found in nuclear power plants. Another solution uses robotics to inspect a rotor without removing it from the turbine.

Gerber explained: "Taking the rotor out could mean a delay of four to five weeks. Using this technology will mean a delay of about three days. Dekra is at the Indaba to show the industry that it is not only a non-destructive inspector, but can also provide solutions by designing and building new technologies." SM



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A SIMPLE ENERGY SOLUTION FOR AFRICA?

A LARGE PERCENTAGE OF PEOPLE LIVING ON THE AFRICAN CONTINENT STILL HAVE LITTLE OR NO ACCESS TO ENERGY. WITH THE POTENTIAL TO REDUCE POVERTY AND UNEMPLOYMENT, AND TO SAVE COMPANIES MILLIONS IN LOST PRODUCTIVITY, AFRICA IS IN DESPERATE NEED OF A VIABLE AND SUSTAINABLE ENERGY SOLUTION

Former South African Minister of Energy, David Mahlobo, estimates the African population is set to grow by 800 000 people by 2040. With a large percentage of the population on the continent currently without electricity, the increase in demand by 2040 will cripple many countries, unless something is done – and soon.

Kweku Bedu-Addo, CEO of southern Africa at Standard Chartered Bank, notes that Africa will need around 250 GW of energy by 2030. He adds: "We are already lagging behind and will need massive investment in the energy space to catch up. At the same time, we have one of the lowest, if not the lowest, per capita consumption of electricity in the world."

The World Bank estimates that countries in sub-Saharan Africa consume a combined average of 480 kW of electricity per hour per capita, according to 2014 statistics. Nigeria uses around 144 kW per hour and Kenya uses only 167 kW per hour per capita. South Africa far outweighs its peers with a use of 4 198 kW of electricity per hour per capita.

Bedu-Addo points out: "The average electrification across the continent is estimated at about 32 percent compared to 82 percent globally. While a sixth of the world's population lives in Africa, the continent generates only about four percent of the electricity globally."

This is not because Africa lacks natural resources. Bedu-Addo estimates that there are about eight-trillion cubic metres of natural gas, 75-billion barrels of crude oil, an abundance of water for hydroelectricity and sunlight for solar power.

Instead, Africa faces a lack of implementation and ineffective or outdated power stations with many countries relying heavily on a single power source for their energy. This leads to many countries remaining in a rut of unemployment and weak economic growth.

Amadou Hott, vice-president of power, energy, climate and green growth at the African Development Bank (AfDB), says: "A recent study showed that out of 39 power utilities in southern Africa only two were credible."

“ While a sixth of the world's population lives in Africa, the continent generates only about four percent of the electricity globally.



Louis van Pletzen, co-founder of Quantum Power, notes: "In the last four years, we have added 7 000 MW of new power generation to Africa, excluding South Africa, and we have decommissioned about 5 000 MW."

To add to this burden, many sub-Saharan countries rely on hydro-electricity. Recent droughts have led to a number of power outages, with some lasting several days. A 2015 article by *BusinessTech* estimated that at that time Eskom blackouts were costing the South African economy R80 billion per month.

According to Sello Hatang, CEO of the Nelson Mandela Foundation, investment in energy could decrease unemployment in South Africa from 25 to 12 percent, while reducing the number of people living below the poverty line from 49 to 18 percent.

"Research illustrates that energy provides many with a way out of poverty and takes countries out of the unemployment rut. Research also shows that if parents are at the bottom of earnings distribution, their children have a 95-percent chance of getting stuck there," he says.

One solution considered by leaders in the African energy sector is a regional integrated programme, which will allow countries to share energy resources. Mosad Elmissiry, head of energy programmes at the New Partnership for Africa's Development (NEPAD), explains: "The goal is to pool all the energy in Africa in order to generate it where it is most efficient and economical to do so; thereafter transmitting it to where it is needed."

It has been said that South Africa has the potential to become the energy hub for the entire southern African region. While there are many plans for creating a well-lit African continent, the biggest challenge is funding.

It is estimated that the African Union-approved Programme for Infrastructure Development in Africa (PIDA) will need between US\$ 65 billion (R757 billion) and US\$ 95 billion (R1,1 trillion) to provide electricity to the entire African continent by 2025.

Governments will need to rely heavily on investors, which will require an investor-friendly environment. This includes quick decision-making processes to ensure a quick return on investment.

One example of an energy programme that created an ideal environment for investors is the Benban Solar Park programme in Egypt. Elham Ibrahim, vice chair for Africa at the World Energy Council, explains: "What made the programme easy or achievable was that it set an environment that encouraged investment. The project was divided into numerous programmes each of which had 50 MW. The various divisions were sold to different companies."

The 37,2 km² solar-panel park was divided into a total of 41 plots. This division offered smaller companies the opportunity to invest and reduced the risk for all investors. Development financial institutions, such as the AfDB, have the ability to place pressure on government, which can fast track decision-making.

Hott uses the example of a 700-km electricity connectivity project between Chad and Cameroon, in which the AfDB was involved. The initial expectation was for approval to be passed in April 2018. Hott says: "We hired consultants, shorted the process and by mid-December we went to the board and obtained approval."

While South Africa is still largely powered by coal, it is considering the renewable energy space.

While delivering the speech of former South African Minister of Energy, David Mahlobo, at the 2018 Africa Energy Indaba, Elizabeth Marabwa, chief director of programmes and projects at the Department of Energy, said: "Empirical studies have concluded that the renewable-energy market penetration is capable of creating more than 6,5 million jobs globally."




Newly appointed South African Minister of Energy Jeff Radebe announced earlier this year that 27 renewable projects would be signed off without further delay. With the current energy plans, South Africa will have an energy

capacity of more than 60-GW by 2022. The current demand is below 30 GW, which is a decrease compared to previous years.

The decrease is due to an increase in electricity costs of over 500 percent in recent years. Mining & Energy Advisory has noted that prices have ballooned from around 15 c/kWh to an average of over R1/kWh, and in some cases to over R3/kWh, depending on the demand profile.

This massive increase has created a "profit umbrella" for power utilities as the cost of coal power for Eskom is below 35c/kWh. Ted Blom, a partner at Mining & Energy Advisory, forecasts: "The consequence of this recipe spells disaster for South African consumers and businesses.

"It will lead to a 20-year depression, as electricity tariffs get blown sky high to compensate a dying Eskom and inflation-linked renewables with guaranteed off-takes. If the renewables had such a compelling story, government should just have opened the grid to competition, which would have benefited everybody."

With many plans in place and eager investors, Africa has the potential to be a global energy leader, particularly in the renewable energy sector. However, in order to successfully address these issues, governments need to create an investor-friendly environment and establish a diversified energy pool that offers affordable electricity to residents. 



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A BARRIER AGAINST WORKPLACE SKIN CONDITIONS

GLOVES IN A BOTTLE LOTION, FROM MEDLOYD HEALTHCARE, OFFERS ALL-IN-ONE PROTECTION AND CARE FOR DRY SKIN LIKE NEVER BEFORE, EXPLAINS DIRECTOR ROB OOSTHUIZEN

The rate at which the world has been industrialised over the past few decades has meant that employees involved in the manufacturing processes are continually exposed to moisture-depleting irritants. This has led to a drastic increase in adverse work-related skin conditions, which include dry, cracked, red, itchy and flaky skin.

WHAT IS A MOISTURE-DEPLETING IRRITANT?

It is an irritant that has the ability to remove the natural moisture, lipids and oils from the skin.

Those irritants considered to be high up on the list include: chemicals, resins, adhesives, soaps and detergents, solvents, paint, dirt, grease, grime, powdered latex or vinyl gloves, cement, caustic cleaners and petrochemicals.

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Gloves In a Bottle is an all-in-one shielding and skincare



lotion for dry skin that keeps the "good stuff in and the bad stuff out".

It locks out moisture-depleting irritants, while simultaneously locking in the natural moisture, lipids and oils of the skin for long-lasting and deep-rooted nourishment through all seven layers of the skin.

It does not wash off and will endure multiple washes. A single application will last for four to 12 hours.

HOW DOES IT WORK?

When applied, it attaches to the very outer surface of the skin, creating a microscopic, undetectable, web-like protective barrier over the surface of the skin. It allows the skin to breathe and perspire naturally.

By simultaneously locking in the natural moisture and oils and locking out the moisture depleting irritants, it creates the perfect platform for a naturally nourished, healthy and vital skin.


WHAT IS THE DIFFERENCE BETWEEN GLOVES IN A BOTTLE AND A CONVENTIONAL ARTIFICIAL MOISTURISER?

The technology associated with these two types of products is almost completely opposite. Conventional artificial moisturisers simply flood the external surface of the skin with artificial moisture. Studies show that these artificial moisturisers do not penetrate beneath the first layer of skin. Artificial moisturisers do not offer a protective barrier and they wash off.

Gloves In a Bottle protects against the removal of the natural moisture and oils of the skin and also locks these in to achieve natural nourishment of the skin – from the inside out – through all seven layers of the skin. It does not wash off and the results are long lasting.

REASONS FOR USING GLOVES IN A BOTTLE

Gloves In a Bottle is not a replacement for protective apparel, but protective apparel does not always provide sufficient protection to ensure that the skin is not adversely affected. Gloves In a Bottle should be used as a first line of protection.

A company with healthy employees has increased productivity, and Gloves In a Bottle reduces downtime for employees affected by work-related skin conditions. 

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A SMALL DEVICE, BUT A BIG THREAT



EMPLOYEES ARE OFTEN ENCOURAGED TO USE MOBILE DEVICES FOR WORK PURPOSES, BUT THIS INCREASES A COMPANY'S RISK OF A CYBER SECURITY ATTACK. COMPANIES SHOULD CONSIDER THE SECURITY NEEDED TO SAFEGUARD SENSITIVE INFORMATION. SHEQ MANAGEMENT TAKES A CLOSER LOOK

More companies are encouraging employees to use mobile devices, such as smartphones and tablets, for work. This trend of "bring your own device" (BYOD) allows employees to access company information remotely, which can increase productivity and offer a flexible workplace for the employee.

Similar to desktop computers, mobile devices are at risk of cyber security attacks. However, BYODs present many other challenges.

Dean Workman, in his article for *IT News Africa*, reports that 82 percent of South African businesses were victims of security breaches in August 2017.

In addition, 76 percent of South African participants in the 2017 Global Enterprise Security Survey, conducted by Fortinet, have increased their IT budget to provide for better cyber security, including security staff, auditing and training.

Workman quotes Paul Williams, southern African country manager at Fortinet: "South Africa has really caught up to the rest of the world in terms of a security focus within their IT departments."

Simeon Tassev, MD at Galix Networking, identified a few of the main cyber security threats for South African companies in an article for *IT News Africa*.

These included cloud security, data protection, internet connectivity and BYOD attacks. He writes: "In the wake of recent ransomware attacks and the increased uptake of

mobility and BYOD within organisations, businesses will seek to implement mobile security to prevent infiltration via external networks outside of their control."

Basie von Solms, director at the Centre for Cyber Security at the University of Johannesburg, notes that mobile devices are at greater risk of cyber security attacks, as users can download apps, which can be infected with malware.

"Cellphones can be (and often are) infected, which allows the criminal to gain access to company information. Therefore, companies should have very strict rules, regulations and policies in place regarding the access point to, and information stored on, the device. There is also the risk of the device being stolen," Von Solms says.

He adds that companies can implement management systems to wipe a device remotely, but that this does not always work. The best approach is to ensure that the latest anti-virus protection is used, and that information is separated and encrypted on the device.

Von Solms explains: "Companies should ensure that the employee has the latest anti-virus protection on their phone. An employee can visit a personal website, which is infected, and infect their mobile device. Companies should have comprehensive protection apps and software. Employees should always use the most up-to-date software."

"There is now research on separating the information on smart phones into different 'containers'. The corporate

container with company information will be much more secure and possibly encrypted. Information is downloaded into a separate container, thereby protecting company information."

However, policing the security and updating the software (including anti-virus software) on a personal BYOD is difficult. An employee will need to give their consent to the company to monitor and update software. The company will also be responsible for protecting the employee's personal information on the device.

"When an employee owns the device, a company should try to protect their privacy, but that is not always possible. How to best protect the privacy of an employee and protect company information is a grey area. Companies prefer to provide a device and keep the software updated," Von Solms notes.

Company-owned mobile devices are often open for personal use. However, the user has fewer privacy expectations and it is therefore easier for the company to enforce cyber security protection.


Currently, there are no laws or policies in place to protect the personal information on a private BYOD. However, there is the Protection of Personal Information (PoPI) Act, which is expected to be passed this year. The Act aims to ensure that the personal information of customers and employees is not compromised or shared with a third party without their consent.

"The Act will improve the protection of the private information of customers. However, this presents another challenge. If an employee downloads private information of the client onto their mobile device and that information is compromised, the company is liable," Von Solms says. He adds that the PoPI Act could possibly result in the end of BYOD.

The Act is based on the European Union (EU) General Data Protection Regulation (GDPR). Companies that employ European nationals should also be aware of the GDPR, as they can be held liable under this regulation.

"GDPR will come into play this year. EU companies will have one year in which to comply. The GDPR will also affect companies in South Africa. If a company employs a person from the EU, it will be liable under the EU Act, and will need to ensure that it protects this person's personal information," Von Solms notes.

He concludes: "It is getting more and more scary and we will see very real consequences with the introduction of the PoPI Act."

Companies are well advised to start preparing for the PoPI Act now by introducing safety measures to protect company, employee and client information. Organisations that rely heavily on BYODs should also re-evaluate their cyber-security processes to ensure the safety of sensitive information. 



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A COMFORTABLE WORKSTATION IS THE BEST MOTIVATION

WHILE A SAFE WORK ENVIRONMENT REDUCES PRODUCTIVITY LOSSES, AS EMPLOYEES ARE ABLE TO DO THEIR WORK SAFELY, GOOD ERGONOMICS ALLOWS THEM TO PERFORM AT THEIR BEST, THEREBY IMPROVING PRODUCTIVITY EVEN MORE

Ergonomics is the study of the work environment. It considers ways in which the environment can be optimised to ensure that an employee is sitting or standing comfortably and able to perform at their best.

Jessica Hutchings, president of the Ergonomics Society of South Africa (ESSA), and Sally Lombaert, secretary of the ESSA, explain that ergonomics has many benefits.

"Integrating ergonomics into the safety culture of an organisation has several benefits, such as employee engagement, improved quality of work, increased productivity and reduced costs relating to absenteeism and/or injuries," they say.

Hutchings and Lombaert further add: "An employee that does not suffer fatigue or discomfort in the workplace tends to be more productive and shows appreciation towards the organisation for taking an interest in their health and safety, thus further boosting the safety culture of the organisation.

"By considering ergonomics in the workplace, businesses can benefit from improved employee performance and a more efficient workforce, which results in greater productivity."

Tracey Palay, a physiotherapist at Ergotherapy Solutions (which provides ergonomic chairs and accessories), notes that, according to recent studies, 80 percent of employees become increasingly uncomfortable as the day progresses. Between 60 and 90 percent of people will experience work-related lower-back disorders during their professional career.

"Technological advances have made work processes efficient in many ways, but, as a result, employees are moving less. The human body is not designed to remain in one position for long periods of time. The modern workplace is, therefore, becoming dangerous with extended periods of

sitting (often in an awkward sitting posture), small repetitive movements and glare from the computer screen," Palay says.

Luckily, companies and individuals can counteract these negative effects of modern workstations. Ergonomics requires companies to consider the user, their task, the environment, the necessary equipment and the organisation, itself, when setting up a workstation.

Seating is, for example, a very important tool for most employees. Palay explains that incorrect seating posture can cause the spine to curve outwards instead of inwards. This puts pressure onto discs in between each vertebra. She adds: "If the problem is not resolved it can result in a 'slipped' or herniated disc."

As the body is not designed to remain seated for long periods, the muscles start to get tired. The first muscles prone to fatigue are the core stability muscles. These assist the spine to stabilise the neutral position.

"As a result, employees end up slouching and start to compensate by using other muscles, which become overloaded and painful. This is exacerbated if they are sitting at awkward angles, as certain muscles are either overstretched or shortened, causing them to become weaker or less flexible and predisposing them to injury," Palay states.

She suggests maintaining a neutral spinal position in line with the lumbar spine through correct positioning of the chair, monitor, keyboard, mouse and paperwork to optimise back, neck and head postures. Strength and flexibility can be maintained with specific stretches.

"Sitting in the correct chair, for example the Get One by Ergotherapy Solutions, will best facilitate the neutral spinal position," Palay notes.


Palay continues: "Both excessive sitting and excessive standing can cause injuries. The key to addressing this is balance. I would recommend a Varidesk, which allows an employee to switch between sitting and standing in less than three seconds. When standing for several hours a day (especially on a hard floor), use an anti-fatigue mat to protect the body from common ailments."

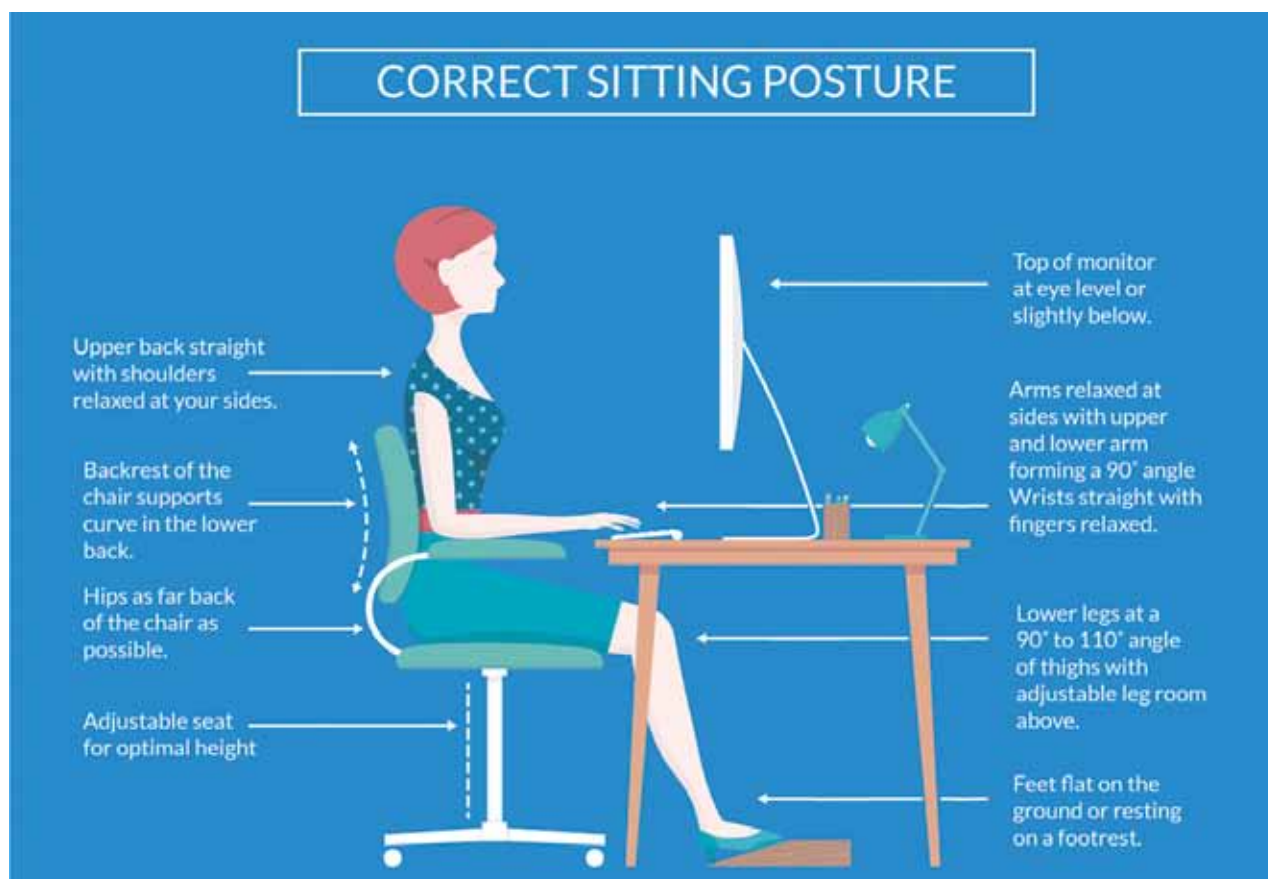
The best approach to implementing an ergonomic-friendly workplace is by sourcing the expertise of an ergonomist. Hutchings and Lombaert say: "An ergonomist can assist companies by conducting a basic risk assessment, which highlights any hazards and the associated risks in the workplace, and provide possible countermeasures to assist in improving the workplace."

They add that an ergonomist will commonly look for low or no-cost solutions for a company. A slight adjustment to a

seat or monitor can make a significant difference. Something as simple as overhead florescent lights can contribute to headaches and eye strain.

"Ensuring that the employees are trained on good ergonomic practices has also helped many employees to ensure that their workplace is comfortable, healthy and safe, resulting in direct benefits for both the employer and employee," Hutchings and Lombaert add.

They conclude: "Both the employee and the employer have a responsibility to ensure that the work environment is safe, comfortable and adheres to sound ergonomic practices. Training in the basic principles of office ergonomics creates a culture of 'self-reliance', which enables employees to make workstation adjustments that can improve their own comfort." 



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OUTLINING THE LISTERIOSIS OUTBREAK

LISTERIOSIS CAUSED PANIC IN SOUTH AFRICA, AS THE WORLD HEALTH ORGANISATION (WHO) CONFIRMED THAT THE COUNTRY EXPERIENCED THE LARGEST OUTBREAK EVER RECORDED. WILLIAM GEORGE SPOKE TO THE DEPARTMENT OF HEALTH AND BUREAU VERITAS ABOUT PRECAUTIONS TO TAKE IN ORDER LOWER THE RISK OF CONTAMINATION AND HELP TO CURB THE EPIDEMIC

Dr Aaron Motsoaledi, Minister of Health, announced in March that the source of the listeriosis outbreak was at the Tiger Brands Enterprise Foods production facility in Limpopo. Other facilities around the country were also identified as possible sources of contamination.

Since then, the Department of Health (DoH) has urged the public to remove the potentially contaminated cold meats from their homes, place them in a bag and preferably return them to the stores from which they were purchased.

By March, the investigations led by the National Institute for Communicable Diseases (NICD) uncovered 900 laboratory-confirmed cases of listeriosis, from which more than 180 people have died. New cases of infection have since also been reported.

Initially, the public was warned that the listeria bacteria can be contracted from soil, water, dairy products, meat, poultry, seafood and fresh produce.

The symptoms of listeria infection include headaches, muscle aches, fever, nausea and vomiting. If the infection spreads to the nervous system, it can cause a stiff neck, disorientation and seizures.

THE WORLD'S LARGEST LISTERIOSIS OUTBREAK

Previously, the largest outbreak recorded was in the United States of America in 2011. The source was from cantaloupes from Jensen Farms in Colorado. A total of 147 cases were reported and at least 33 people died.

According to the DoH, typically 60 to 80 cases of listeriosis are detected and treated annually in South African hospitals.

"Between January 1, 2017 and February 5, a total of 852

laboratory-confirmed listeriosis cases had been reported to the NICD. Most of the cases (59 percent) were reported in Gauteng, while 13 percent were reported in the Western Cape, followed by seven percent in KwaZulu-Natal.

"Sixty-six percent of the cases were diagnosed in the public healthcare sector, while the rest were diagnosed in the private sector," the department reported.

THE ROOT OF THE PRESENT OUTBREAK

In July 2017, doctors from neonatal units in the Chris Hani Baragwanath and Steve Biko Academic hospitals notified the NICD about the unusually high numbers of babies born with listeriosis.

This triggered a review of all cases diagnosed in both public and private hospitals and led to the official announcement of the outbreak in December 2017.

The NICD interviewed 109 people with the illness to obtain information about their diet in the month before falling ill.

The department confirmed that listeria can affect anybody from any socio-economic background. There are, however, certain categories of people who are particularly vulnerable. "These are the neonate, pregnant women, the elderly and people with compromised immune systems, such as those living with HIV/Aids, diabetes and chronic diseases like cancer, kidney and liver disease," the department noted.

THE RECALL OF LISTERIOSIS-CAUSING FOOD

In terms of Section 60(2) of the Consumer Protection Act, the National Consumer Commission (NCC), issued manufacturers of food contaminated with listeriosis with

safety recall notices. This was followed by a shutdown of the Tiger Brands factories in Polokwane and Germiston.

Food stores such as Pick n Pay and Woolworths have since recalled the products produced at the factories identified by the Department of Health.

ONGOING TESTING

"Bureau Veritas recently launched a food-testing laboratory in Cape Town to help to determine food-borne illness (such as listeria) up-front, to ensure safe delivery and transportation of food products," says Joanne Barton, director of M&L Laboratory Services, a Bureau Veritas group company.

Barton says Bureau Veritas has revealed numerous listeriosis results to the NICD and the WHO.

She adds that testing turnaround time for food is critical and Bureau Veritas can offer short lead times on results to ensure quick intervention to stop releases and consumption.

"It is critical to ensure factory hygiene and also to monitor this. More importantly, the disinfectants used must be 'fit for purpose' and rotated on a regular basis. Bacteria resistance is half of the problem, and rotation and using good disinfectants is critical," she stresses.

The National Department of Health has tasked provincial Departments of Health to follow up on cases where outcomes are not known. This is ongoing. The NICD is assisting with this follow-up investigation where possible.


Healthcare workers caring for patients with laboratory-confirmed listeriosis are requested to complete a standardised Case Investigation Form, which includes information on the outcome of disease.

PRECAUTIONARY MEASURES FOR THE PUBLIC

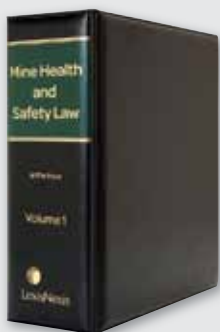
The public should further note that listeriosis is found in other foods besides cold meats, including pre-prepared foods, deli foods such as cheese, milk products, fresh vegetables and fruit.

The department has urged members of the public to practice basic food-hygiene principles as outlined in the WHO's "Five Keys to Safer Food" programme.

The core "commandments" of food hygiene include:

- Keep clean: wash hands before handling food and often during food preparation;
- Separate raw meat, poultry and seafood from other foods;
- Cook food thoroughly, especially meat, poultry, eggs and seafood;
- Keep food at safe temperatures: refrigerate and reheat foods correctly;
- Use safe water, or make it safe (by boiling);
- Choose foods processed for safety, such as pasteurised dairy products; and
- Wash fruits and vegetables thoroughly, especially if eaten raw. 

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By WP le Roux

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VENTRIA AIMS TO BRING LIFE BACK IN THE AGRICULTURAL FIELD

Like any other industry, the agricultural sector is prone to health conditions, which may result in death. Farmers are faced with risks that include sudden cardiac arrest (SCA).

SCA is caused by an acute and unexpected malfunction of the heart. The heart stops pumping blood and the person loses consciousness and stops breathing. The window to provide treatment is very small, so without early defibrillation, chances of survival are lowered significantly.

"In built up areas emergency services struggle to get there on time, this becomes more challenging in remote areas as emergency services usually arrive too late to administer life-saving interventions, so early defibrillation provided by people already at the scene can be what helps save a life," says Blake Grace, director of Ventria, a company that supplies automated external defibrillators (AED).

Grace explains: "Ventria has chosen to market the Philips HeartStart defibrillator, which is made for people who have never used a defibrillator before. The device is easy to set up and includes automatic life guidance features – like voice prompts and cardiopulmonary resuscitation (CPR) coaching – to help guide the user through the treatment of sudden cardiac arrest."

Since many of Ventria's clients are in the corporate and public-services spheres, part of the company's service offering includes management of the AEDs. The company's managed AED services include equipment, maintenance, replenishment and post-event support.

"In order to comply with the Resuscitation Councils and British Heart Foundation, we offer a revolutionary new remote-monitoring tool called SmartLink. This automatically monitors the status of the AED every day, notifying us when an error occurs. This means we can ensure all AEDs are ready for use, anywhere in the world," Grace adds.

"It is important for first responders to be able to rely on the device and trust that the technology will deliver what it is designed for.

"With the Philips HeartStart AED under our carefree managed AED services this will provide them with the confidence that they are adequately prepared for an SCA, anywhere and at any time," Grace concludes.

SCAN HERE FOR MORE MEDICALLY
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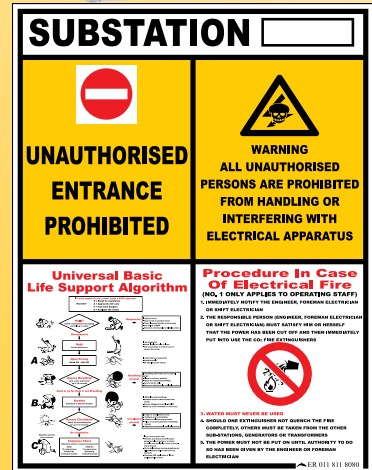
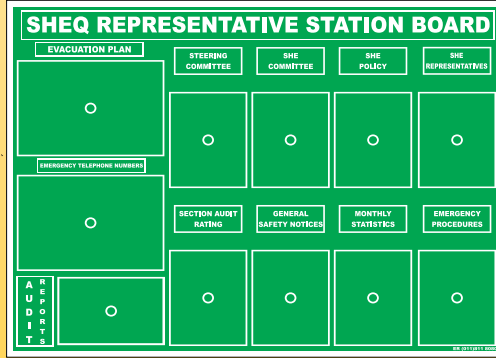
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- 2
- 3
- 4

YOUR FIRST AIDERS ARE

- 1
- 2
- 3
- 4

YOUR FIRE CO-ORDINATORS ARE

- 1
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YOUR EVACUATION LEADERS ARE

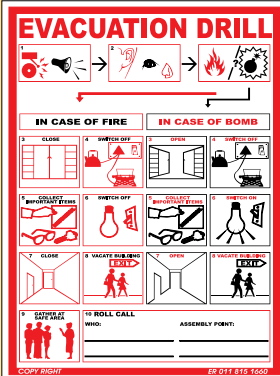
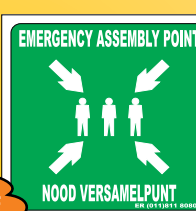
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ENVIRONMENTAL

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SANS 1186-1 of 2013 - SAFETY SYMBOLIC SIGNS

FIRE-FIGHTING INFORMATION	GENERAL INFORMATION	MANDATORY (DO)	PROHIBITORY (DON'T)	WARNING
<p>FB1 LOCATION OF FIRE-FIGHTING EQUIPMENT</p> <p>FB2 FIRE EXTINGUISHER</p> <p>FB3 FIRE HOSE</p> <p>FB4 FIRE HYDRANT</p> <p>FB5 FIRE ALARM</p> <p>FB6 SPINKLER STOP VALVE</p> <p>FB7 FIRE TELEPHONE</p> <p>FB8 FIRE PUMP CONNECTION</p>	<p>GA1 FIRST AID EQUIPMENT</p> <p>GA2 GENERAL DIRECTION</p> <p>GA3 DIRECTION TO ESCAPE ROUTE</p> <p>GA4 DIRECTION TO ESCAPE ROUTE</p> <p>GA5 MANNED FIRST AID STATION</p> <p>GA6 DRINKING WATER</p> <p>GA7 BLASTING POINT</p> <p>GA8 TRAVELING WAY</p>	<p>MV1 EYE PROTECTION SHALL BE WORN</p> <p>MV2 RESPIRATORY PROTECTION SHALL BE WORN</p> <p>MV3 HEAD PROTECTION SHALL BE WORN</p> <p>MV4 PROTECTION SHALL BE WORN (NOTES AND DETAILS)</p> <p>MV5 HAND PROTECTION SHALL BE WORN</p> <p>MV6 FOOT AND LEG PROTECTION SHALL BE WORN</p> <p>MV7 FOOT PROTECTION AGAINST CRUSHING SHALL BE WORN</p> <p>MV8 DELETED BY AMENDMENT</p>	<p>PV1 SMOKING PROHIBITED</p> <p>PV2 FIRE AND OPEN FLAMES PROHIBITED</p> <p>PV3 THUNDERBOLT AND LIGHTNING PROHIBITED</p> <p>PV4 WATER PROHIBITED AS EXTINGUISHING AGENT</p> <p>PV5 DRIPPING OF TMS WATER IS PROHIBITED</p> <p>PV6 PROCEEDING BEYOND THIS POINT IS PROHIBITED</p> <p>PV7 CYCLING PROHIBITED</p> <p>PV8 CARRYING OF LONG MATERIALS PROHIBITED</p>	<p>WW1 GENERAL WARNING OF HAZARD</p> <p>WW2 WARNING OF FIRE/EXPLOSION HAZARD</p> <p>WW3 BEWARE OF FALLING LOADS</p> <p>WW4 BEWARE OF CORROSIVE HAZARD</p> <p>WW5 BEWARE OF POISONOUS SUBSTANCES</p> <p>WW6 BEWARE OF RADIATION</p> <p>WW7 GENERAL WARNING OF HAZARD</p> <p>WW8 BEWARE OF SUSPENDED LOADS HAZARD</p> <p>WW9 BEWARE OF COLLAPSE HAZARD</p>

SANS 1186-5 of 2013 - PHOTO LUMINESCENT



NOTICE! IMPLEMENT SIGNS TO IMPROVE WORKPLACE SAFETY



PROPER SIGNAGE IN THE WORKPLACE IS OF UTMOST IMPORTANCE, AS IT CAN IMPACT ON THE SAFETY OF EMPLOYEES

Safety signage plays an important role in a workplace and helps to reduce the number of injuries and life-threatening occurrences by communicating relevant information to employees.

Even if a company has robust safety training programmes and provides courses in health and safety, signage can still help to remind employees about hazards in the environment in which they are working.

In addition, the signs can offer more details on what needs to be done in the case of an emergency, such as the common "exit" sign, or the details of the relevant person to contact in terms of safety-related issues.

For employees to be constantly aware of hazards in their workplace, they need ongoing training. This is where signage comes in handy, as it reinforces messages that have been communicated verbally.

However, signs cannot be placed in just any form, or anywhere. "There are laws governing signage that should be followed," says Elsa Jacobs, director of ER Signs.

"In order to provide a safe working environment, companies need to work according to the relevant laws, such as the South African National Standard (SANS) specification, the Occupational Health and Safety Act and other Acts relating to mining, construction and road transport. "These guidelines will assist companies to correctly implement signage in a workplace," notes Jacobs.

"We supply signage to anyone wanting to avoid injuries relating to hazards, which, if they occur, may result in fines from the Department of Labour. Proper signage will help companies to comply with safety guidelines and to provide a safe working environment.

"We offer services to a wide variety of facilities including factories, mines, office blocks and new buildings," says Jacobs.

ER Signs provides signage on acrylonitrile butadiene styrene (ABS) plastic for indoor use and chromadeck sheet metal and baked enamel for outdoor use. These materials are durable and allow for the signs to remain in






rough environments and poor weather conditions. In addition, the company offers photo-luminescent signs, which comply with SANS 1186/5 specifications for materials that glow.

According to Safety Signs, there are some issues to consider when sizing and positioning signage. Companies should ask:

- Where is the sign going to be used?
- How much text and how many symbols will be required on the sign?

- How far in advance should employees be warned of a potential hazard?

A company can also help to make signs eye-catching through the use of colour or illustrations and create a similar effect to billboards that are seen on the side of the road. It is also important to consider where a sign will be mounted, how close people are going to be to the sign, and how much information needs to be displayed. 







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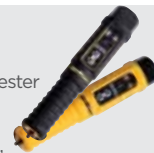
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PROTECTION FOR PEOPLE WHO PREPARE FOOD



THERE IS A NEED FOR ROBUST PERSONAL PROTECTIVE EQUIPMENT (PPE) TO HELP PROTECT EMPLOYEES WORKING IN THE FOOD AND BEVERAGE INDUSTRY. WILLIAM GEORGE LOOKS AT THE IMPORTANCE OF PPE IN THIS INDUSTRY

In 2016, the United States Department of Labour's Occupational Safety and Health Administration (OSHA) fined Schwan's Global Supply Chain, a supplier of frozen speciality foods, more than US\$ 172 000 (over R2 million) after two employees suffered amputations, and one suffered burns and cuts at one of the company's facilities.

Judy Freeman, OSHA area director, says: "Each year, thousands of workers like these suffer amputation and other injuries that are preventable when basic safeguards are in place and proper procedures are followed."

South Africa has recently experienced one of the largest outbreaks of listeriosis worldwide, which puts more emphasises on the importance of health safety in the food and beverage industry. This demonstrates that a lack of proper controls can result in health hazards for both employees and consumers.

According to a Stats SA survey, the food and beverage industry employed 174 601 people in 2015, indicating an increase of seven percent, from the last survey conducted by Stats SA in 2012. The sector with the highest number of employees (104 352) was restaurants and coffee shops, and the sector which showed a substantial increase in employment was that of takeaway and fast-food outlets,

where some 15 000 jobs were created.

The employees in this industry are exposed to hazards including heavy machinery, slippery working conditions, heating and cooling devices, noise, and environmental hazards. Therefore, they need PPE that will help to ensure and maintain their safety, as well as that of the food and beverages they handle.

The Department of Labour (DoL) notes that the common causes of occupational health hazards in the food and beverage industry, include:

- Musculoskeletal disorders affecting the body movements;
- Occupational asthma, which is caused by inhalation of bakery and grain dust;
- Occupational dermatitis from handwashing (especially with harsh soaps);
- Rhinitis caused by irritants such as flour and grain dusts, spices and seasonings; and
- Noise, which could result in hearing loss.

According to PPE supplier and developer Du Pont: "Controlling a broad variety of bacteria is a major challenge in complex food systems sold via long supply chains.

"Food protection covers a combination of physical, chemical and biological hurdles to control both spoilage



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“The employees in this industry are exposed to hazards including heavy machinery, slippery working conditions, heating and cooling devices, noise, and environmental hazards.

and pathogenic microorganisms and extend shelf life, while complying with microbial safety policies.”

The company offers PPE tailored for employees in the food and beverage industry, including that which provides protection against cuts and abrasions, fire, noise as well as liquid, gas and chemical hazards.

The DoL suggests ways in which the food and beverage industry can manage risks in the workplace, as follows:

- Identify which tasks present a serious risk of severe injury, for example, repetitive upper-body work;
- Assess these tasks in detail to decide what factors lead to the risk;
- Introduce mechanisation where this is reasonably practicable, such as powered trucks, conveyors, vacuum lifters, bulk handling or automation;
- Where mechanisation is not possible, introduce measures to prevent injury by reducing weights of sacks or boxes, improve ergonomic design of work stations and work areas, implement job rotation, undertake training, introduce medical surveillance and job transfer.

Alternatively, companies can consult with the trade union safety representatives or other worker representatives to ensure effective and workable solutions to safety problems. SM

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BETTER QUALITY INFRASTRUCTURE HELPS CURB NON-COMPLIANCE

AS CONSUMERS BECOME MORE DEMANDING, PRODUCT QUALITY TESTING BECOMES EVEN MORE IMPORTANT. HOWEVER, THIS REQUIRES CAPABLE QUALITY INFRASTRUCTURE, SUCH AS TESTING FACILITIES

Quality testing is becoming increasingly important as consumers continue to demand high-quality products. A simple in-house quality test is no longer enough. Therefore, many South African companies subject their products to South African National Standard (SANS) testing by the South African Bureau of Standards (SABS).

As Lengwadishang Ramphela notes in an interview for 702 radio station, the SABS and SANS stamp assures customers that the product is safe, complies with standard specifications and successfully fulfils its function.

There are a number of testing facilities in South Africa, which can be used to ensure product quality and compliance with SANS and international standards.

A 2016 study, by the members of the International Association of Engineers (IAENG), compared South African

quality infrastructure (QI) with that found in Sweden. Makibane Ntlhane, Stephen Akinlabi and Charles Mbohwa wrote: "QI is important as it provides technical support to companies in order to improve their production processes and to ensure compliance to regulations, or international requirements."

The infrastructure considered in the study included accreditation and inspection bodies, testing laboratories and certification institutions. One big difference between QI in South Africa and Sweden is government involvement. In Sweden, about 30 percent of QI is structured within government, compared to 98,4 percent in South Africa.

"When these institutions are under one government ministry, it can be easy to influence their policies," the study reveals. A minister can, for example, influence a body to use an ill-equipped facility with the sole purpose of making a profit.

Another concern is the lack of highly educated staff in the South African QI sector. Only 14,8 percent of respondents from South Africa have a postgraduate education, with 45,9 percent obtaining only a diploma. Of the respondents from Sweden, 45,8 percent had a postgraduate degree.

“A minister can, for example, influence a body to use an ill-equipped facility with the sole purpose of making a profit.

“It is recommended that the South African institutions encourage their staff to further their studies after completing their undergraduate qualifications,” the researchers noted.

While the respondents from both countries believe their organisations play a role in reducing non-compliance and that they contribute to the economy of the respective countries, South Africa definitely has room for improvement.


Ntlhane, Akinlabi and Mbohwa note: “There are a lot of non-compliant products that are imported into South Africa. These products pollute the economy and cause extensive and long-term harm to consumers and the environment.”

The United States (US), for example, is accused of

dumping poultry at unfairly low prices in South Africa, threatening the local poultry industry. However, the US Poultry and Egg Export Council defended its cheap exports by noting that the consumption of 1,8 million tonnes of poultry a year in South Africa outweighs local supply.

South Africa also is yet to sign the African Continent Free Trade Area (AfCTFA) Agreement. While the decision to postpone signing the agreement is based on obscurities in the document, some believe the Agreement will be counterproductive to preventing non-compliant products.

In March, *Fin24* reported: “Matthew Parks, parliamentary officer of the Congress of South African Trade Unions, warned that the agreement could lead to the dumping of cheap imports that destroy local industries.”

While the government is responsible for preventing dumping of non-compliant products, companies can invest in highly educated staff, better quality infrastructure and demand the independence of this infrastructure. In this way companies will be able to further reduce non-compliance and ensure consumers receive the best products. 

[READ THE FULL STUDY HERE](#)



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